5.4 Cultural Resources

Note to reader: Text added to this Recirculated Draft PEIR is shown in double underline (example text) and deleted text is shown in strikethrough (~~example text~~.)

The following discussion of cultural resources within the Master Plan Area is based on the *Class I Cultural Resources Inventory of the Salton Sea Region*, prepared by Tetra Tech (August, 2002); and the *Paleontological Resource Assessment for the Master Drainage Plan and Programmatic Environmental Impact Report for the Coachella Valley Water District for the Region I-Oasis Area and Region II-Mecca/North Shore, Riverside and Imperial Counties, California*, prepared by Applied Earthworks (November, 2014). These reports are included as Appendices C.1 and C.2, respectively, of this Recirculated Draft PEIR.

This section analyses cultural resources including historical and archeological resources; tribal cultural resources; and paleontological resources. As discussed below, the Project's potential to have a substantial adverse effect, either directly or indirectly to cultural resources is considered to be less than significant with mitigation incorporated.

5.4.1 Setting

Cultural resources are past and present expressions of human culture and history in the physical environment and include prehistoric and historic archaeological sites, structures, natural features, and biota that are considered important to a culture, subculture, or community. The term also includes aspects of the physical environment that are a part of traditional lifeways and practices and are associated with community values and institutions. Cultural resources are often divided into categories of prehistoric and historic. For the purposes of this PEIR, the term "prehistoric" is used to describe any material remains, structures, and items used or modified by people before Euro-Americans established a presence in the region. The term "historic" is used to refer to material remains and the landscape alterations that have occurred since the arrival of Euro-Americans.

Historical resources are a regulatory subset of cultural resources that meet specific eligibility criteria for listing on the California Register of Historical Resources (CRHR) (Public Resources Code [PRC] 5024.1; California Code of Regulations [CCR] Title 14, Section 4850.3; and State *CEQA Guidelines* Section 15064.5(a)). These include resources within California that are listed on the National Register of Historic Places (NRHP) ("historic properties"; 36 CFR 60.4), which are automatically listed on the CRHR.

Unique archaeological resources are another subset of cultural resources that include prehistoric and historic archaeological resources that can contribute to current research questions, are considered unique or special in the field of archaeology, and are related to a specific event or person (PRC 21083.2(g)).

Tribal cultural resources are defined in terms of either of the following: (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following: a) included or determined to be eligible for inclusion in the California Register of Historical Resources; b) included in a local register of historical resources as defined in subdivision (k) of Section 5020.1. (State CEQA Public Resources Code § 21074).

Since July 1, 2016, consideration of impacts to paleontological resources (or unique geologic features), separate from tribal cultural resources, has been called-out in the thresholds checklist in Appendix G of the State CEQA Guidelines (§ 21083.09). CEQA does not provide an explicit definition of "unique paleontological resources," but a definition is implied by comparable language within the Act relating to archaeological resources. The likelihood of uncovering paleontological resources is largely dependent on the geologic units underlying the project area.

5.4.1.1 Prehistoric Context

A linear construct of a Colorado Desert cultural chronology has not been established and localized areas in the region typically demonstrate unique patterns. There is some evidence of continuity that suggests a cultural evolution that occurred through population migrations and invention or diffusion of ideas through trade. Further, a general lack of stratigraphy at most desert sites limits a better understanding of regional archaeological patterns across time. (TT, p. 4-1)

Human occupation of modern-day California began as early as 12,000 years ago during the Paleoindian Period. From the southern coast eastward into the Arizona desert, the San Dieguito complex, a cultural pattern focused on hunting, subsumed this early occupation with three periods of adaptation in response to climatic shifts during the Holocene Age. Following the decline of the San Dieguito complex around 9,000 years ago, the native peoples of the Archaic Period adapted to Holocene environmental shifts until the Patayan Period and its Yuman culture occupied the wide territory from North San Diego County across Salton Trough, along the Lower Colorado River Basin, and up Gila River to what is now Gila Bend (TT, p. 4-1). This final prehistoric phase likely began around 1,075 years ago or AD 925 (TT, p. 4-1) though linguistic evidence points to a Yuman migration out of Baja California at about 3,000 BC, settling the center of the Salton Trough northward. Takic speakers of the Uto-Aztecan linguistic family had moved westward with the Numic migration from the Great Basin around 5,000 years ago (TT, p. 4-2). Their movement appears to have been unopposed to the coast, pushing ancient Hokan groups to the north and south and settling along a wide belt from the Sierra Nevada Mountains to modern-day Orange and Ventura counties. Within the northern portion of the Salton Trough, the migrants, known today as the Desert-Cahuilla, occupied the Coachella and Indian Valleys. With the rise of prehistoric Lake Cahuilla around AD 700, lowland settlers were forced to move on to the mesa south of the Santa Rosa Mountains or to join other members of their clan and moiety to the northwest (TT, p. 4-2). The Cahuilla and Yuman tribes

both refocused adaptive desert strategies to the rise of Lake Cahuilla within the trough (TT, p. 4-2).

Paleoindian Period (12,000 to 7,000 bc)

The San Dieguito complex represents the Paleoindian Period in the Colorado Desert. San Dieguito technology consisted of a wide array of bifaces, choppers, scrapers, crescents, and other tools associated with a hunting-gathering economy. Three phases characterize this complex based on tool production and use that depicted a developmental sequence towards increased technological complexity and diversity (TT, p. 4-2). The earliest industry, termed San Dieguito I, consisted of chopping and scraping tools created through percussion flaking. In these assemblages, spear points were crude and relatively rare. The later San Dieguito II and III industries tended to produce greater amounts of finely flaked points, blades, and other artifacts. Overall, the San Dieguito complex shows strong affiliations with the Lake Mojave complex to the north (TT, p. 4-5). The similarity of these complexes and other Paleoindian industries has led researchers to propose the Western Stemmed Point Tradition (WSPT), which subsumed the San Dieguito and Mojave complexes as well as several other lithic industries in the Great Basin (TT, p. 4-5). Faunal assemblages at WSPT sites in the Project region typically contain remains of artiodactyls, small game, and freshwater mollusks from lake and marshland environments, suggesting individuals practiced a generalized hunting-gathering adaptation. This generalized adaptation is considered more characteristic of the Archaic Period, not the focused adaptation on big-game hunting suspected for the Paleoindian Period in other regions.

Paleoindian sites are rare in Southern California and generally consist of unstratified lithic scatters or rock features found on deflated desert pavements, near major drainage areas, or along Pleistocene lake shorelines (TT, p. 4-5).

Archaic Period (7,000 – 1,300 BC)

The Archaic Period is not well represented in the Colorado Desert, and there has been considerable debate over the proper designation and temporal range of the period (TT, p. 4-5). Faunal remains found at sites of this age are not generally well preserved, but do indicate an exploitation pattern similar to that of the Paleoindian Period in that a variety of game was hunted, including leporids and artiodactyls (TT, p. 4-5). The changes that define the transition from the Paleoindian to the Archaic Period have often been related to fluctuating climatic conditions. Regional paleo-environmental studies have helped to highlight the complex nature of broad climatic changes that occurred during the Holocene and adaptations that early peoples made to survive (TT, p. 4-6). Of particular relevance to the Archaic Period was the Altithermal, a climatic period of hot and dry conditions that lasted from about 7,500 to 5,000 years BC. During the Middle Archaic, around 4,000 BC, it is believed that vegetation within the Salton Sea region stabilized, which would have been directly related to the end of the Altithermal period (TT, p. 4-6).

Previous investigations have led to the determination that no Archaic Period sites are within the Salton Sea region and that this area may have been largely abandoned due to the warm and dry conditions that characterized the Altithermal period (TT, p. 4-6). Alternatively, if Archaic Period occupation of this region did occur, sites may have been lost or eliminated by natural processes or obscured by later settlements. Systematic studies conducted at several sites of the region, however, suggest that the area was not entirely abandoned (TT, p. 4-6).

Patayan Period (1,300 bc to Historical Period)

A major cultural change initiated the transition from the Archaic Period to the Patayan Period between 1,500 and 1,300 years ago. The focal points where this significant development occurred were along the lower Colorado River in Mohave and Quechan territories, and over the next 300 years its impact reached deep into neighboring lands through trade and travel. The riverine groups had been in close contact with the technically advanced Anasazi and Hohokam, learning agriculture and ceramic production from them (TT, p. 4-7). The incorporation of agricultural practices allowed the local peoples to become more sedentary. Once ceramic production was incorporated into the cultural practices, pottery soon displaced the reliance on basketry and expanded the range of trade and travel. Sherds are found along all desert trails, campsites, and work/ceremonial stations. Bows and arrows also replaced the atlatl during this period, adapting hunting to the small game that survived the increased xeric environment. Cremations remained the common burial practice as it had been during previous time periods. (TT, p. 4-7)

At the same time as these changes, Lake Cahuilla was rising within the basin now occupied by the Salton Sea. This combination of natural and cultural change introduced the last of the prehistoric periods and required groups to make their final adaptations to the dry desert environment. The riverine and mountain Yumans, as well as the Valley Takic groups, developed different strategies in utilizing each of these changes. (TT, p. 4-7)

5.4.1.2 Ethnohistoric Context

The northern portion and shoreline of the Salton Sea, which encompasses the Project area, was occupied by the Cahuilla. The Cahuilla were part of the Takic linguistic group with ties to the Uto-Aztecan linguistic family that spread from the Great Basin beginning around 5,000 years ago (TT, p. 4-8).

The Cahuilla territory is located near the geographic center of Southern California. Though the Cahuilla tribe centered in the north end of the Salton Basin, tribal elements also settled in the Whitewater Pass area and the mountainous regions of San Jacinto and north Laguna. Their outlying topographic areas included portions of the San Bernardino Mountains, Orocopia Mountains, and east to Palomar Mountain. Except for the southern boundary which the Kumeyaay shared, topography provided a natural enclave for these people. (TT, p. 4-8)

Territorial diversity provided Cahuilla with a variety of foods, at least 500 different plant and animal species below 10,000 feet above mean sea level, which encouraged intertribal trading.

Acorns, mesquite beans, piñon nuts, cacti, seeds, fruits, berries, and greens were part of their plant diet. Deer, pronghorn antelope, bighorn sheep, rabbits, rodents, insects, and reptiles were hunted seasonally. During Lake Cahuilla stands, fish, migratory birds, and marshland vegetation were also taken. (TT, p. 4-8)

Four groups of Cahuilla have been identified: Desert, Pass, Mountain, and Cupeño (Cupa). Tribal members distinguished themselves through their moiety and clan. Cahuilla had two patrilineal and exogamous moieties: Istam (coyote) and Tuktun (wildcat). In addition, numerous clans existed. Restricting marriageable youths to distant relatives as well as extending trade and family connections, a suitable partner had to reside outside one's own moiety and clan. Patrilocal residence assured a male continuity in family and village subsistence rights. (TT, p. 4-11)

Homes within permanent villages ranged from brush shelters to domed or rectangular structures along no apparent distribution line or spacing. Villages were situated near water sources on mesas, canyons, or alluvial fans (TT, p. 4-12). Desert Cahuilla villages on the mesa south of Santa Rosa Mountain were along 15 miles of the ridgeline above the lakeshore, interconnected with a well-used trail system. Today, these are two miles from the nearest Salton Sea lakeshore. The area is dense with fish traps that exist between village sites, although many have been dozed for rip-rap or agricultural development (TT, p. 4-12).

When Lake Cahuilla flooded the villages in the lower Coachella and upper Imperial valley around AD 700, most Cahuillas comfortably resettled in upper Coachella Valley with other villages, increasing the population and corresponding activities there. Others relocated on the mesa south of Wonderstone Wash and became interconnected with Kumeyaay bands during lake intercessions exchanging goods and cultural practices. (TT, p. 4-12)

Development of the fish trap became the most significant of all Desert Cahuilla adaptations to the lacustrine environment. Surveys have identified an experimental field where different designs were tested before settling upon the commonly used "check shaped" trap. As the lake receded, more technologic advances were made that allowed an even greater production of lacustrine fishing. The intensification of the lake resources shows up well in the archaeological record. (TT, p. 4-12)

To the tribe, ceremonialism was an important part of life. The central focus of most rituals was the performance of cosmologically-oriented song cycles that placed the universe in perspective and reaffirmed the relationship of all Cahuilla to the sacred past, the present, to one another, and to all things. A girl's first menses was the start of a vital ceremony that served as a rite of passage into womanhood. A menstrual hut was designated within the extended village, but furthest east of all ceremonial and sacred features. Conversely, at the west end was a men's hut, probably a sweat lodge. Other ceremonial features included a 12-foot-long rock alignment of a pregnant snake within a horticultural plot, rock rings (including solstice observatories), prayer circles, shamans' hearths. (TT, pp. 4-12 - 4-13)

5.4.1.3 Historic Period Context

While Native Americans could view as mere curiosities the non-threatening early probes of European explorers in the 16th and 17th centuries (Bolton 1930), the long prehistoric era in Southern California ended quickly following Spain's twin expansion northward along the San Diego coast and up to the inland juncture of the Colorado and Gila rivers in the late 18th century. (TT, p. 4-2)

The history of the Salton Sea region since European contact can be divided into several themes, including exploration, transportation, irrigation and creation of the Salton Sea, mining, and recreation. Each of these is connected, to some degree, with the development of one of the lease hospitable areas of North American into the productive population center it is today. (TT, p. 4-25)

Exploration

Sixteenth century Spanish explorers were the first Euro-Americans to venture into the Southwest U.S. and Great Plains. The 1540 Coronado expedition was the first to see the Colorado River on their way to northern Arizona and Wichita, Kansas. Over the course of the next two centuries, Spain established colonial outposts in Sonora and Arizona, east of Colorado River, and explored the coasts of Baja and Alta California, while the desert separating the two regions remained uncrossed and unknown to them. (TT, pp. 4-25 - 4-26)

Some exploration groups would travel westward in search of gold or silver. Others sought Native Americans to convert to Christianity or to establish a route across the Colorado Desert to the Pacific Ocean. Juan de Onate and his party reached the Colorado River in 1604 and traveled downriver to the Gulf of California. During this time and subsequent expeditions by others, the Colorado Desert and the Salton Sink remained inaccessible to Europeans however. (TT, p. 4-26)

Spain began to establish the string of missions and presidios along the coast of Alta California in 1769, spurred by Russian and English encroachment. Transporting supplies, soldiers, and colonists by ship to the new outposts was expensive and time-consuming. Thus, efforts to find an overland route across the Colorado Desert were renewed, leading to the first European crossing of the Imperial Valley and Salton Sink. (TT, p. 4-26)

Father Francisco Garces and his party were the first Europeans to see the Salton Sink region after entering the southern end of the Imperial Valley in 1771. However, the first to travel across the region was Juan Bautista de Anza and his large 1774 expedition party, led by a native guide, Sebastian. After reaching an oasis he named San Sebastian, about 12 miles west of the present southwestern shore of the Salton Sea, and interacting with the Native Americans there, de Anza and his party crossed Borroego Valley to enter the Santa Rosa Mountains. The party reached the San Gabriel Mission in March 1774 after 74 days of traveling 700 miles from Old Mexico, completing the first crossing of the Colorado Desert. No other trips through the Salton Sink are reported in official records for several decades. (TT, pp. 4-26 - 4-27)

By the Mexican Period (1821-1848), mail was being carried by Maricopa Indian messengers between Sonora and the California coast, via the northern Colorado Desert and the San Gorgonio Pass. During roughly the same period, from 1815 to the 1830s, Native Americans from San Gabriel Mission made annual trips into the Salton Sink to collect salt. (TT, p. 4-27)

It was not until November 1825 that another expedition passed through the Master Plan Area. Captain Jose Maria Romero and a party of soldiers and laborers crossed the Coachella Valley and traveled along the eastern side of the Salton Sink as part of an effort to find a more direct eastern route between Los Angeles and the Colorado River. The route approximately follows the later Southern Pacific Railroad. The last expedition across the Salton Sink during the Mexican Period was likely that of General Flores and his men, retreating from Alta California to Sonora during the Mexican War in 1847. (TT, pp. 4-28 - 4-29)

The first formal record of an Anglo-American exploring the Salton Sink was made by Lieutenant-Colonel W. H. Emory in 1846. In 1848, the first wagon road in the southern part of the sink in the Imperial Valley was established by the Mormon Battalion, led by Lieutenant-Colonel Philip St. George Cooke in an effort to aid John C. Fremont in the Mexican War. (TT, p. 4-29)

Transportation

An important event in the development of the Salton Sink occurred in 1853, when the United States government funded an expedition to survey a transcontinental railroad route. After passing through the San Gorgonio Pass into the Coachella Valley, the party traveled southeast through the valley, passing along what would become the eastern shore of the Salton Sea to the confluence of the Colorado and Gila rivers. One member of the party, Professor William P. Blake, a geologist from the Smithsonian Institute, was the first to describe Lake Cahuilla after observing the vestigial shoreline and listening to the oral histories of the local Native American groups. During the same year, a separate expedition surveyed the San Bernardino Base Line and built a wagon road through San Gorgonio Pass and across the Coachella Valley, although few wagons used the road. (TT, p. 4-30)

The Bradshaw Trail was established between California and the gold fields of Arizona after gold was discovered there in 1862 near the Colorado River. Created by William D. Bradshaw, it traversed almost all of Riverside County and passed the northern end of what would later be the Salton Sea. Cattlemen and merchants, in addition to gold prospectors, began using the Bradshaw Trail to supply the gold fields. The United States Army also used the trail as one of their main communication routes during this time period. Several passenger and mail stages also began using the trail, the most successful of which was the Express and Saddle Train, started by James Grant. The commercial company eventually grew to become the California and Arizona Stage Company, the most important line between Los Angeles and Santa Fe, New Mexico, throughout the 1860s and 1870s. After Grant's death in 1875, the company was purchased by Gilmner and Salisbury in 1878. Other stage companies that used the trail included the Arizona Overland Mail, Banning and Company, and the New Mexico Stage

Company. Some early maps label the trail as "Butterfield Stage Rouge;" however, the Butterfield Overland Mail Company never used the Bradshaw Trail. Accommodations for stage passengers along the Bradshaw Trail were rudimentary and uncomfortable. Thirteen way stations were constructed along the route, most in adobe and spaced up to 26 miles apart. Way station locations included Canyon Springs, Chuckwalla, Whitewater, and Agua Caliente (Palm Springs). Armed robbery and horse theft occurred frequently enough to make stage travel a risk to drivers, station operators, and passengers. By the 1880s, however, passenger coaches were discontinued, and commerce took the form predominantly of express and mail contracts carried by mule trains and freight wagons. The Bradshaw Trail was used as a freight route until the 20th century, and even accommodated automobile travel until the highway that eventually became Interstate 10 was built, farther to the north. (TT, pp. 4-30 - 4-32)

Southern Pacific Railroad tracks reached the San Gorgonio Pass by the end of 1875. By March of 1876, the railroad was in Whitewater and was completed to Seven Palms in May. By August, the first train had reached Indian Wells (Indio). Regular service to Dos Palmas, near what would later be the northern shore of the Salton Sea, was in operation by March of 1877. (TT, p. 4-32)

The early 20th century saw the development of automobile transportation across the Colorado Desert. Most car and truck traffic was along previously established wagon roads following the path of least topographic resistance from one watering place to the next between desert settlements. Most of these roads remained unpaved until the late 1920s. Crossing loose, sandy washes and sand dunes was treacherous in these early motor vehicles, leading the development of plank roads. The plank road was used for about 10 years until United States Route 80, which parallels modern-day Interstate 8, was completed through the area in 1927. (TT, p. 4-33)

Irrigation and the Creation of the Salton Sea

The first proposal to irrigate the Colorado Desert for agriculture came from Dr. Oliver M. Wozencraft after he saw Kamia Indians cultivating plots during an exploratory trip in May 1849. Dr. Wozencraft hired an engineer, Ebenezer Hadley, to survey canal routes, stemming from the Colorado River, but ultimately failed in his attempt to irrigate his lands. Many of the routes surveyed were used years later when irrigation was finally accomplished. (TT, pp. 4-33 - 4-34)

On behalf of the Colorado River Irrigation Company, Charles R. Rockwood devised a practical diversion and canal system in 1891 to supply irrigation water to the Salton Sink. It was not until April of 1900 however, after the financial depression of the 1890s, the collapse of the Colorado River Irrigation Company, and a period of Rockwood searching for financial backers, that work on the Imperial Canal began, diverting water from the river at Pilot Knob to the Imperial Valley. The California Development Company promoted real estate and agricultural development of the region. Little priority was given to maintenance of the canals and proposed levees to protect the main canal were never built, leaving it susceptible to flooding events during severe winter rains that resulted in the inundation of the Salton Sink. (TT, pp. 4-34 - 4-35)

After an attempt by the United States government in 1903 to stop diversion of the Colorado River and after finding the area of the original diversion point to have become choked with silt, a new temporary canal head was developed in Mexico in 1904. Although a larger, more permanent head was planned to be constructed before the next summer of 1905, it was never built. During the winter of 1904-1905, greater than usual rainfall in the watershed resulted a series of floods that deteriorated the intake point, allowing water to rush uncontrolled into the canal system and the Imperial Valley at the southern end of the Salton Sea. Without levees, the sides were quickly overflowed along its entire length. The entire discharge of the Colorado River began to pour into the Salton Sink, marking the creation of the Salton Sea. Disastrous episodic flooding occurred over the course of the next two years, each time destroying dams and levees that had been constructed to stem the flooding. It was not until 1907 that the flow into the sink was ended by an extensive dam system. At its highest point, immediately after the period of flooding, the sea was approximately 198 feet below sea level. (TT, pp. 4-35 - 4-37)

During the period of flood fighting, Coachella Valley on the northern end of the Salton Sea had been growing. This region was dependent upon the Whitewater River and artesian springs charged by runoff from the San Bernardino and San Jacinto mountains. Drawing upon the underground supply began to exceed replenishment rates by 1918 when about 418 square miles of the Coachella Valley were under cultivation. That year, the Coachella Valley County Water District was formed to conserve the valley's water supply. Because conservation was insufficient without replenishment, Coachella Valley Water District and Imperial Irrigation District planned and promoted a new canal on the United States side of the international border, and a large dam on the Colorado River to prevent further flooding catastrophes was also planned. In December 1928, Congress passed the Boulder Canyon Project Act, which initiated the construction of the Hoover and Imperial dams and the All-American Canal system. The Hoover dam began storing water in 1935, and the All-American Canal was supplying water to Imperial Valley by 1942. After being delayed by World War II, the Coachella Canal, a branch of the All-American Canal extending northward to serve the Coachella Valley, was completed in 1948. (TT, pp. 4-37 - 4-38)

Mining

Salt mining was once important in the immediate Salton Sea area, since salt has accumulated for millennia at the bottom of the Salton Sink. The first Euro-American exploitation of salt deposits was in 1884, when the New Liverpool Salt Company built a plant at the north end of the sink. A 1-mile rail spur connected the plant with the Southern Pacific Railroad at Salton. Large steam-powered salt plows were used to cut wide, shallow furrows in the play bed. Only 10-acre plots were worked at a time, where about 700 tons of salt were plowed up in parallel ridges each day, exposing saltwater spring seepage below. Cahuilla Indian laborers used hoes to work the salt loose from the soil in accumulated spring water. When that task was completed, the separated salt was piled in conical mounds prior to transportation to the nearby mill. To augment the supply of natural spring water, a 900-foot-deep well was drilled. Both spring and well water were so saline that new salt crust would form in the plowed areas almost

immediately. In addition to being the Southern Pacific rail connection, the settlement of Salton was the location of the salt milling works. After being collected and processed at the mill, the salt was bagged for transport to the marketplace in sacks sown at the mill by Japanese workers. In addition to the refined salt produced for use with food, unrefined salt was sold for industrial use. New Liverpool's primary competition in the salt mining industry of the Salton Sea was the Standard Company. Both companies operated until 1905 when the two salt works were inundated by the rising sea. (TT, p. 4-39) Salt mining was continued by other entities in other locations throughout the early 20th century (TT, pp. 4-40 - 4-42).

Sand and gravel production also accounts for a large portion of the mining output of the Salton Sea region. Most sand and gravel are extracted from the ancient shoreline deposits of Lake Cahuilla, but a small amount comes from alluvial fans at the bases of desert mountain ranges. Fine-quality sand and gravel come mostly from the east shore deposits, stretching southward from a point east of Brawley to the Mexico border. West shoreline deposits, stretching from Plaster City to Salton City, are more coarse, and are used mainly for roadbeds, subbase, asphalt aggregate, and imported borrow. The first sand and gravel production in the area was probably the Orange County Rock Company's operation 18 miles northwest of Niland in 1926. The majority of sand gravel exploitation, however, has taken place since World War II. (TT, p. 4-42)

Other dominant mineral mining activities in the Salton Sea region have occurred, but beyond the scope of the Project area. These include gypsum, gold, manganese, carbon dioxide deposits, and calcite. Other minerals extracted from the region in small quantities include silver, copper, lead, nickel, mica, barite, silica, pumice, building stone, tungsten, sulfur, volcanic granules for roofing, and kyanite. Between about 1907 and World War II, numerous oil wells were drilled in the Salton Sea area, but no oil was discovered. (TT, pp. 4-42 - 4-43)

Recreation

Recreation has been the reason for several of the developments around the Salton Sea shore. Fishing was advertised early on and the then-Department of Fish and Game was stocking the sea with numerous game species by the 1920s. Several federal and state wildlife refuges were established, and these were opened to waterfowl hunting. Other recreational activities that take place in the Salton Sea area include swimming, boat racing, water skiing, birding, hiking, and mineral and fossil collection. Several movies have been filmed at the sea and in the nearby desert. (TT, p. 4-44)

Recreational development accelerated significantly in 1958. Communities such as Salton City, Salton Beach Estates, Desert Shores, and North Shore Beach Estates were all established at about that time. These communities offered restaurants, motels and hotels, golfing, and boat – launching facilities for visitors, as well as planned residential communities, schools, shopping centers, marinas, and yacht clubs. For various reasons including distance from Southern California population centers, increasing salinity and pollution of the Salton Sea, and rising sea

level that has inundated some of the facilities, these resorts have not achieved the success their developers envisioned. (TT, pp. 4-44 - 4-45)

Communities in the Master Plan Area Today

Indio is the most populated town in the Coachella Valley, located approximately 15 miles northwest of the Salton Sea. In 1870, a San Bernardino County well was drilled near an existing Indian well, which gave the settlement its first name, Indian Wells.[1] The well was used as a watering stop on the Bradshaw Trail, and in August of 1876 became a stop on the Southern Pacific Railroad, which was then extending its line from Los Angeles to Yuma. The settlement was renamed Indio the next year, possibly because of the existence of a small Cahuilla village nearby. A plat map for the town site of Indio was filed with the San Diego County Recorder in 1888. In 1890, the United States Department of Agriculture imported the first date palms to America, and many of the seedlings were planted near Indio. The town, which is considered the date capital of the country, has been the site of the United States Date and Citrus Station since 1907, when it was moved from Mecca due to the rising Salton Sea. Indio hosted the National Date Festival in 1921 and 1922, but the festival was discontinued in 1938 when it was combined with the Riverside County Fair and became an annual event. The City of Indio was incorporated in 1930. (TT, p. 4-45)

Coachella is located four miles southeast of Indio along the Southern Pacific Railroad line. Coachella began as a railroad stop called Woodspur, but in 1901 the name was changed to Coachella during a meeting of local settlers. The name was formed from the “Coa” in Coahuilla (and early spelling of Cahuilla) and the “chilla” in conchills (Spanish for small shells), with the final “i” change to an “e” due to an uncorrected printer error on the townsite prospectus. Coachella, like Indio, is primarily a date-producing community. (TT, p. 4-46)

Thermal, a few miles farther southeast along the Southern Pacific Railroad from Coachella, was founded by Horace A. Green in 1902 at the site of Kokell, a railroad water stop. The name Thermal was chosen to describe the air temperature, which on many days is the highest recorded in the country. Thermal, like Indio and Coachella, is a date growing center. Cotton and grapes are also major crops, and Thermal is Riverside County’s leading livestock feed center. (TT, p. 4-46)

Mecca was originally known as Walters, which was a spur on the Southern Pacific Railroad about six miles southeast of Thermal. Walters was probably the name of a foreman during the railroad construction period of the 1870s. Coachella Valley’s first artesian well, called the “500-foot flowing well,” was drilled by the Southern Pacific Railroad in 1894. The well made Walters an important oasis and water stop not only for the railroad, but for desert travelers, including prospectors on their way to claims in the Little San Bernardino, Orocopia, and Eagle Mountains. Following a 1903 trip to Algeria and the Middle East, Bernard Johnson brought the

[1] Riverside County was not formed until 1893 from portions of existing San Bernardino County and San Diego County land. The County of San Bernardino was formed in 1853.

first commercially successful date palms to Mecca, where the United States Date Gardens were established in 1904 as a date agriculture experimental station. Following the suggestion of R. Holtby Myers, a member of the California State Legislature and developer who had financed Johnson's trip, the name of the town was changed to Mecca in 1904 to promote the desert date culture. When the Salton Sea was formed between 1905 and 1906, water reached all the way north to the small settlement. As a result, the United States Date and Citrus Station, as the United States Date Gardens had become known, was moved north to Indio. Eventually, the shoreline receded and the old town center of Mecca is now a few miles from the northern tip of the sea. (TT, pp. 4-46 - 4-47)

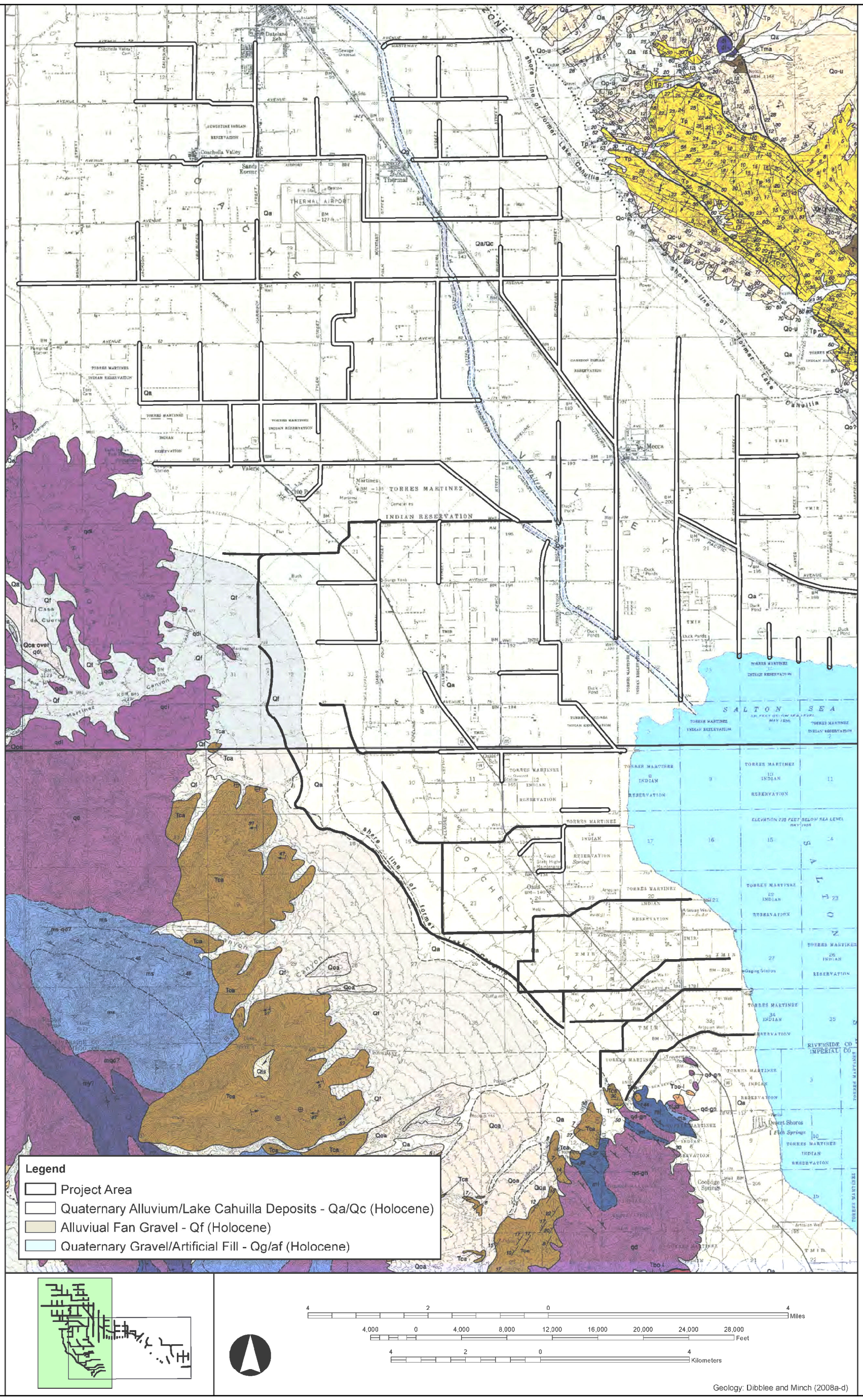
~~La Quinta, located south and west of Indio, is a 20th century resort and retirement development. The name is a Spanish term for the rest stops established at 5-day travel intervals on early desert trails; however, there is no evidence that the modern La Quinta was one of these way stations. In 1927, land owned by the Desert Development Company became the site of a hotel and golf course. A post office was established in 1930, and La Quinta was incorporated in 1982. (TT, p. 4-47)~~

5.4.1.4 Paleontological Context

Paleontological resources are the evidence of once-living organisms as preserved in the rock record. They include both the fossilized remains of ancient plants and animals and the traces thereof (trackways, imprints, burrows, etc.). In general, fossils are considered to be greater than 5,000 years old (older than Middle Holocene) and are typically preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks formed under certain conditions (AE, p. 6).

Significant paleontological resources are defined as "identifiable" vertebrate fossils, uncommon invertebrate, plant, and trace fossils that provide taphonomic, taxonomic, phylogenetic, paleo-ecologic, stratigraphic, or bio-chronological data (AE, p. 6). These data are important because they are used to examine evolutionary relationships, provide insight on the development of and interaction between biological communities, and establish time scales for geologic studies, and for many other scientific purposes (AE, p. 6).

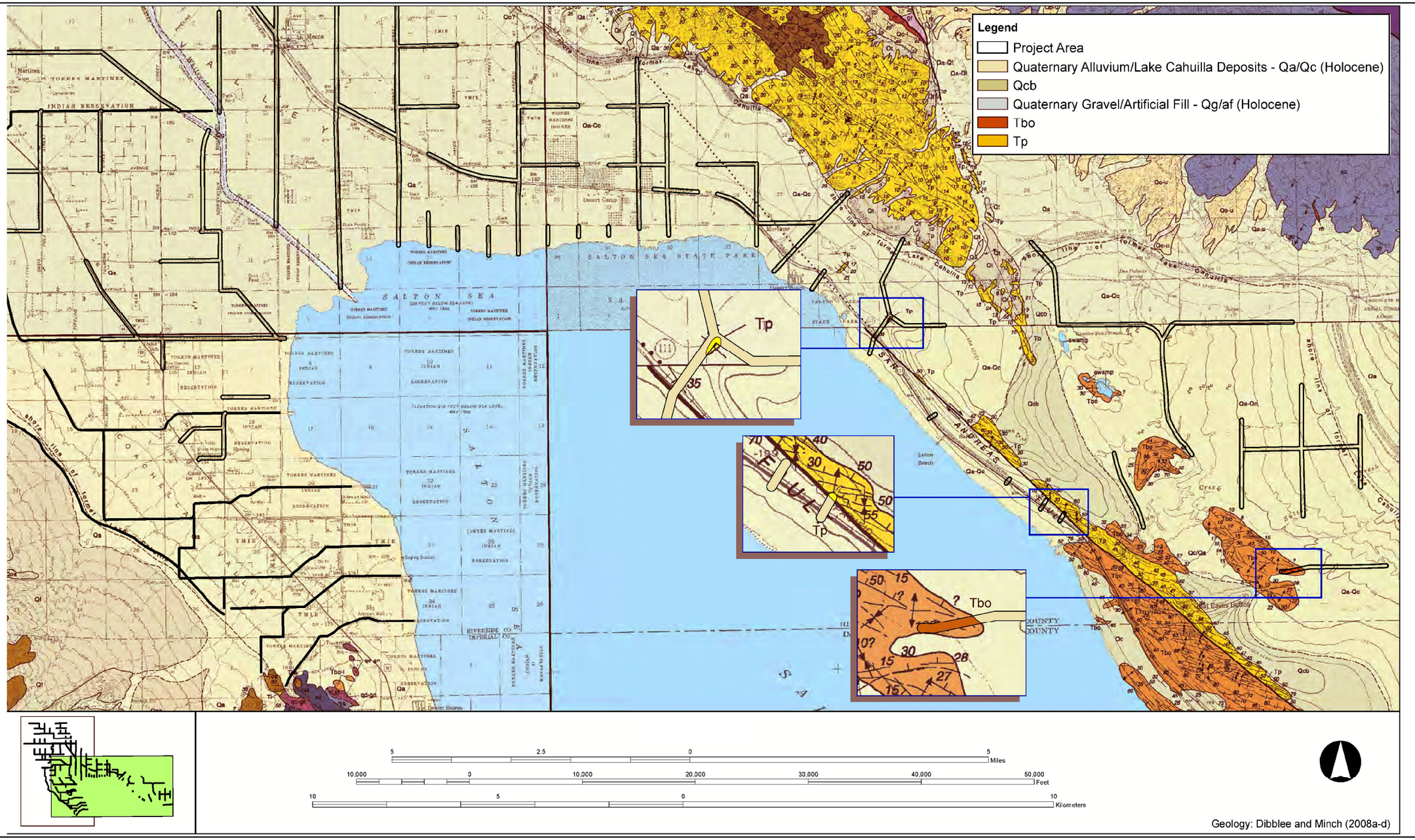
The Master Plan Area is directly underlain by sedimentary rock units of Pliocene to Holocene age, including the Palm Spring Formation, Borrego Formation, and Quaternary surficial sediments (AE, p. 9). The geology is depicted on **Figure 5.4-1 – Geologic Units in the ~~Master~~ Plan Area** and the geology and paleontology of these units is described in the pages following **Figure 5.1-1**.



Source: Applied Earthworks 2014

Figure 5.4-1a – Geologic Units in the Plan Area

Eastern Coachella Valley Stormwater Master Plan



Map created Dec. 8, 2014. G:\2012\12-0001\GIS\EIR_GeoUnits_south.mxd

Source: Applied Earthworks 2014

Figure 5.4-1b – Geologic Units in the Plan Area

Eastern Coachella Valley Stormwater Master Plan

Palm Spring Formation

The Pliocene-Pleistocene Palm Spring Formation (Tp) was deposited at least 3.58 million years ago to 0.78 million years ago, based on biostratigraphic correlation. The Palm Spring Formation records sedimentation of the ancient Colorado River delta and is one of the several terrestrial deposits in the Colorado Desert that record nearly continuous sedimentation from the Miocene to the Pleistocene. The Palm Spring Formation is well exposed throughout the Salton Trough where it is 1,800 feet to 6,500 feet thick and up to approximately 4,000 feet thick near the Master Plan Area. In the vicinity of the Master Plan Area, the Palm Spring Formation is conformably underlain by the Imperial Formation and conformably overlain by the Borrego Formation. (AE, p. 12)

The Palm Spring Formation is generally composed of resistant, fine to medium-grained, red to gray-buff arkose with interbedded green and red mudstone. The Palm Spring Formation has been informally divided into four members (from oldest to youngest): the Olla, Diablo, Tapiado, and Huesos members. The Palm Spring Formation has previously yielded over a hundred vertebrate species and thousands of marine and terrestrial vertebrate specimens from localities within Southern California. The majority of the vertebrate fossils have been recorded from exposures of the Huesos member, with smaller quantities identified within the Diablo and Olla members. Fossils are not common within the Tapiado member. Diversity and abundance of specimens within the Huesos member is likely the result of taphonomic processes, whereby sediments within the unit were typically derived from local sources and transported short distances under relatively quiet conditions. (AE, p. 12)

Borrego Formation

The Pliocene to Pleistocene Borrego Formation (Tbo) is exposed in the southeastern Plan. The Borrego Formation is up to 6,000 feet thick in the Borrego Badlands in eastern San Diego County and thins to approximately 2,500 feet near the Master Plan Area. The deposit is conformable with the overlying Ocotillo Conglomerate and Brawley Formation and forms a gradational contact with the underlying Palm Spring Formation. In addition to the type section in the Borrego Badlands in the Anzo-Borrego Desert State Park, the Borrego Formation is intermittently exposed in the Salton Trough between Ocotillo Wells and Borrego Springs and along portions of the northeast and southwest margins of the Salton Sea. The Borrego Formation consists of commonly rippled lacustrine sediments composed of light-gray, well-bedded mudstone and claystone, with thin interbeds of local and Colorado Riverderived siltstone and sandstone as well as intermittent deposits of sodium sulfate evaporates up to 5 feet thick. The massive siltstone and sandstones are pale orange in color and are locally abundant. (AE, p. 13)

The Borrego Formation has previously yielded numerous localities, which have contained specimens of terrestrial vertebrate, invertebrate, and microfossils. Invertebrate and microfossil specimens recorded at the type section include mollusks, small crustaceans, mussel shrimp, and rare foraminifera. Vertebrate localities within the fine-grained lacustrine deposits exposed

near the Borrego Badlands have been known to contain well-preserved, unspecified specimens of terrestrial vertebrates. (AE, pp. 13-14)

Quaternary Surficial Sediments

According to published geologic maps, the Master Plan Area is immediately underlain by undifferentiated Quaternary alluvial (Qa), alluvial fan (Qf), and lacustrine (Qc) deposits of Holocene age. The Holocene-age lacustrine sediments consist of Lake Cahuilla deposits that are 3 to 5 feet thick on average and up to 300 feet thick. The deposits are composed of undissected to dissected, weakly consolidated silts and clays, with abundant, non-mineralized mollusk fragments. Holocene-age Lake Cahuilla sediments also consist of local deposits of sandy beach, gravel bar (Qcb), and spit deposits. The Quaternary alluvium consists of gravel, silt, sand, and clay derived from alluvial fans and streams. Aeolian deposits are also a common constituent of the Quaternary alluvium. Based on previous stratigraphic, archaeological, paleontological, hydrogeological, and tectonic studies, where not explicitly mapped at the surface, Holocene-age Lake Cahuilla lacustrine silt deposits are known to underlie surficial alluvial deposits at shallow depth. In turn, older Pleistocene-age ancient Lake Cahuilla deposits underlie the surficial to shallowly-buried Holocene-age lacustrine silt at moderate depth. The depth of the contact between the Holocene-age and Pleistocene-age Lake Cahuilla deposits in the Master Plan Area is unknown; however, radiocarbon dating derived from Lake Cahuilla deposits located approximately 5 miles south of Indio indicate that lacustrine silt sediments at a depth of 20 feet below ground surface have an age of approximately 4,000 BC. Therefore, Pleistocene-age ancient Lake Cahuilla sediments are likely present at a relatively shallow depth below the Holocene lacustrine deposits. The Pleistocene-age Lake Cahuilla deposits are generally composed of weakly consolidated, lacustrine sands, silts and clays, with tufa and travertine rock coatings, coarse alluvial deposits, and beach sands. The Pleistocene- to Holocene-age Lake Cahuilla sediments range from several feet deep at the margin of the Coachella Valley to as much as 300 feet thick in the center of the Salton Trough. (AE, p. 14)

Late Quaternary-age lacustrine deposits derived from ancient Lake Cahuilla have proven to yield scientifically significant mollusk shells within the Salton Trough. Fossil specimens of diatoms, spores, pollen, land plants, sponges, ostracods, freshwater gastropods, fresher bivalves, fish, and small terrestrial vertebrate have been recovered from the Pleistocene-age Lake Cahuilla beds. In addition, Holocene-age, non-mineralized (non-fossil) mollusk shells are also found in the Lake Cahuilla silt deposits; their recovery and subsequent dating have helped researchers with studies in archaeology, geology, and seismology. (AE, p. 14)

5.4.1.5 Research Methods

Cultural Resources Assessment

A cultural resources records search was conducted by TetraTech via the Eastern Information Center (EIC) of the California Historical Resources Information System at the Department of Anthropology, University of California, Riverside, in December 2013 (File #EIC-RIV-ST-2421).[2]

The records search was conducted based on a conceptual design of the Project, and as such, returned more previously recorded sites and conducted surveys than actually cross the Project as proposed. A total of 163 cultural resources studies, as well as, an additional 15 overviews of the Project vicinity were identified. EIC records also indicated 109 cultural resources had been previously recorded within the Master Plan Area. Additionally, to account for subsequent changes in the Project design, the results of the records search were digitized and queried. This query indicated that 90 surveys have covered portions of the Master Plan Area since 1974, some surveys crossing multiple Facilities.

In addition to the surveys and resource records, Tetra Tech (2002) reviewed the NRHP, the California Office of Historic Preservation (OHP) Archaeological Determinations of Eligibility (ADOE), the OHP's Directory of Properties in the Historic Property Data File (HPD), and several historic maps. Maps reviewed include the 1941 and 1956 USGS Coachella 15-minute quadrangles, the 1958 USGS Cottonwood Spring 15-minute quadrangle, the 1904 USGS Indio 30-minute quadrangle, and the 1959 USGS Rabbit Peak 15-minute quadrangle.

Numerous studies of historical resources have been conducted in the Master Plan Area, as listed in **Table 5.4-A – Previously Conducted Cultural Resources Surveys within Each Project Component**.

Table 5.4-A – Previously Conducted Cultural Resources Surveys within Each Project Component

Survey #	Year	Author	Company	Report Title
Coachella Valley Stormwater Channel				
RI-01919	1974	Von Werlhof, Jay	Imperial Valley College Museum, El Centro, CA	*A Cultural Impact Survey, Phase 1*
RI-01922	1985	Dominici, Debra	Caltrans District 11, San Diego	*Report of an Archaeological Survey for the Proposed 86 Expressway in Riverside County*
RI-06962	2006	Everson, Dicken	Cal Trans	*Archeological Survey Report, for the State Route 86S at, Airport Boulevard (Avenue 56) Interchange Project, City of Coachella, Riverside County, California.*

[2] The EIC is the State of California's official repository of cultural resources records for Riverside County.

Survey #	Year	Author	Company	Report Title
RI-06963	2007	Figuerao, Earnest	Cal Trans	*State Route 86S at Airport Boulevard New Interchange: Draft Initial Study with, Proposed Negative Declaration, Volume 1 of 2*
RI-07770	2007	Formica, Tracy H.	Applied Earthworks	*Class III Cultural Resources Survey of the Airport Boulevard Water Transmission Pipeline Project Corridor for the Coachella Valley Water District, Thermal, Riverside County, California (ARPA Permit No. LC-CA-07-11P)*
RI-07929	2008	Tang, Bai "Tom" and Harry Quinn	CRM Tech	*Letter Report: Re: Historical/Archaeological/Paleontological Survey of Whitewater River Channel Thermal 551 Brookfield Project Near the Community of Thermal, Riverside County, California*
RI-08503	2010	Everson, Dicken, Billy Silva, and John Eddy	California Department of Transportation District 08	*Extended Phase I (XPI) Proposal fOr the State Route 86S & Airport Boulevard New Interchange Project Riverside County, California*
RI-08719	2011	McDougall, Dennis and Vanessa Mirro	Applied Earthworks	*Cultural Resources Monitoring of the Coachella Valley Water District's Airport Boulevard Agricultural Drainline Project*
RI-08721	2011	McDougall, Dennis, Vanessa Mirro, and Joan George	Applied Earthworks	*Phase I Cultural Resources Assessment for the Avenue 60 Domestic Water Transmission Main Project*
Open Channels in Mecca/North Shore Area				
RI-00067	1976	Wells, Helen and Patricia Martz	Archaeological Research Unit, U.C. Riverside	*Cultural Resource Inventory For The Cabazon Indian Reservation*
RI-00068	1986	Wilke, Phillip J.	Archaeological Research Unit, U.C. Riverside	*Letter Report: Archaeological Assessment of the Proposed Biomass-Fueled Electrical Power Plant, Cabazon Indian Reservation*
RI-01396	1982	Swenson, James	LGS Associates	*An Archaeological/Historical/Paleontological Evaluation of the East 1/2 of Section 27, T7S, R10 E, SBBM, Riverside County, California*
RI-01770	1984	Swenson, James D.	None Listed	*A Cultural Resource Survey of Section 25, Township 3 South, Range 5 East, on Edom Hill, Riverside County, California*
RI-01778	1993	Napton, Kyle L. and E. A. Greathouse	CSU Stanislaus Institute for Archaeological Research	*Cultural Resources Investigations of the Proposed Indio to Salton Lightguide System Project, AT&T Fiber Optic Route, 46.2 Miles in Riverside and Imperial Counties, California*
RI-01831	1984	Woodward, Jim and Kathleen Davis	Department of Parks and Recreation, Sacramento	*Cultural Resources Assessment of Four Potential Sites for a New State Prison, Riverside County, California*
RI-01919	1974	Von Werlhof, Jay	Imperial Valley College Museum, El Centro, CA	*A Cultural Impact Survey, Phase 1*

Survey #	Year	Author	Company	Report Title
RI-01921	1988	Dominici, Debra	Caltrans District 11, San Diego	*Negative Archaeological Survey Report First Addendum - Route 11-RIV-86 P.M.2.9/22.0*
RI-01922	1985	Dominici, Debra	Caltrans District 11, San Diego	*Report of an Archaeological Survey for the Proposed 86 Expressway in Riverside County*
RI-01923	1989	Rosen, Martin D.	Caltrans District 11, San Diego	*Negative Archaeological Survey Report - Second Addendum*
RI-01926	2000	Dietler, John, Andrew R. Pigniolo, and Michael Baksh	Tierra Environmental Services	*An Archaeological Survey of Four Signboard Locations Along SR-86, Cabazon Indian Reservation, Riverside County, California*
RI-02846	1990	White, Robert S.	Archaeological Associates, Ltd.	*An Archaeological Assessment of a 340+ Acre Parcel as Shown on TOM 24750 Located Near Mecca, Riverside County, California*
RI-03245	1990	Van Horn, David M., Laurie S. White, and Robert S. White	Archaeological Associates, Ltd.	*Cultural Resources Sensitivity Overviw for the Coachella Valley Enterprise Zone*
RI-04205	1999	Love, Bruce and Bai "Tom" Tang	CRM Tech	*Identification and Evaluation of Historic Properties: Cabazon Resource Recovery Park, Cabazon Indian Reservation, Riverside County, California*
RI-06528	2006	Tang, Bai "Tom," Michael Hogan, Deirdre Encarnacion, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report, Maravilla Specific Plan EIR, in and Near the City of Coachella Riverside County, California*
RI-06531	2006	Tang, Bai "Tom," Michael Hogan, Deirdre Encarnacion, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report, Maravilla Specific Plan EIR, in and Near the City of Coachella, Riverside County, California*
RI-06537	2006	Tang, Bai "Tom," Michael Hogan, Zachary Hruby, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report, Rancho Coachella Vineyard Specific Plan, in and Near the City of Coachella, Riverside County, California*
RI-06552	2006	Tang, Bai "Tom," Michael Hogan, Laurie Taylor, Daniel Ballester, and Laura H. Shaker	CRM Tech	*Historical/Archaeological Resources Survey Report, the Panorama Specific Plan, Assessor's Parcel No.s 717-270-002 to -004, -007, -008, -011 to -014, and 757-342-004, Near the Community of Mecca, Riverside County, California*
RI-06553	2006	Tang, Bai "Tom," Michael Hogan, Clarence Bodmer, Thomas Melzer, and Laura H. Shaker	CRM Tech	*Historical/Archaeological Resources Survey Report, Berger 330 Specific Plan, Near the Community of Mecca, Riverside County, California*

Survey #	Year	Author	Company	Report Title
RI-06589	2005	Tang, Bai "Tom," Michael Hogan, Deirdre Encarnacion, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report, Mixed Use Specific Plan: Coachella 273, Near the Community of Mecca, Riverside County, CA*
RI-06962	2006	Everson, Dicken	Cal Trans	*Archeological Survey Report, for the State Route 86S at, Airport Boulevard (Avenue 56) Interchange Project, City of Coachella, Riverside County, California.*
RI-06963	2007	Figuerao, Earnest	Cal Trans	*State Route 86S at Airport Boulevard New Interchange: Draft Initial Study with, Proposed Negative Declaration, Volume 1 of 2*
RI-07067	2006	Hogan, Michael	CRM Tech	*Letter Report: Supplementary Archaeological Survey and Subsurface Testing, Rancho Coachella Vineyard Specific Plan, City of Coachella, Riverside County, California*
RI-07149	2002	Duke, Curt	LSA Associates, Inc.	*Cultural Resource Assessment, AT&T Wireless Services, Facility NO. D026.1, Riverside County, California*
RI-07493	2007	Denniston, Elizabeth L.	Applied Earthworks	*Phase I Archaeological Assessment of Approximately Two Miles for the Pierce Street Transmission Water Main near the City of Coachella, Unincorporated Riverside County, California*
RI-07586	*Resource mapped, but no other additional details were provided by EIC.*			
RI-07770	2007	Formica, Tracy H.	Applied Earthworks	*Class III Cultural Resources Survey of the Airport Boulevard Water Transmission Pipeline Project Corridor for the Coachella Valley Water District, Thermal, Riverside County, California (ARPA Permit No. LC-CA-07-11P)*
RI-07930	2008	CRM Tech	CRM Tech	*Phase I Historical/Archeological Assessment: Mecca Master Plan (SP377), near the Community of Mecca, Riverside County, California*
RI-08194	2009	George, Joan, David Earle, and Vanessa Mirro	Applied Earthworks	*Phase I Cultural Resources Assessment for the LA Pena Housing Facility Water Supply Project Near Mecca, Riverside County, California*
RI-08386	2010	Goerge, Joan and Vanessa Mirro	Applied Earthworks	*Phase I Cultural Resources Assessment for the Lower Valley Irrigation System Expansion Project Near Mecca, Riverside County, California*
RI-08434	2010	Smallwood, Josh	Applied Earthworks	*Letter Report: Cultural Resources Monitoring at Site CA-RIV-3438H (Historical Walters/Mecca Railroad Station) for Construction of the Mecca Sewer Force Main Project near Mecca, Riverside County, California*

Survey #	Year	Author	Company	Report Title
RI-08458	2008	Hogan, Michael, Lisa Hunt, and Bai "Tom" Tang	CRM Tech	*Cultural Resources Monitoring Report: Paseo de Los Heroes II, Conditional Use Permit 03500; Portion of Acessor's Parcel Number 727-030-036, near the community of Mecca, Riverside County, California*
RI-08503	2010	Everson, Dicken, Billy Silva, and John Eddy	California Department of Transportation District 08	*Extended Phase I (XPI) Proposal fOr the State Route 86S & Airport Boulevard New Interchange Project Riverside County, California*
RI-08719	2011	McDougall, Dennis and Vanessa Mirro	Applied Earthworks	*Cultural Resources Monitoring of the Coachella Valley Water District's Airport Boulevard Agricultural Drainline Project*
Underground Pipelines in Mecca/North Shore Area				
RI-01770	1984	Swenson, James D.	None Listed	*A Cultural Resource Survey of Section 25, Township 3 South, Range 5 East, on Edom Hill, Riverside County, California*
RI-01778	1993	Napton, Kyle L. and E. A. Greathouse	CSU Stanislaus Institute for Archaeological Research	*Cultural Resources Investigations of the Proposed Indio to Salton Lightguide System Project, AT&T Fiber Optic Route, 46.2 Miles in Riverside and Imperial Counties, California*
RI-02198	1987	Taylor, Thomas T.	Southern California Edison	*Archaeological Survey Report and National Register of Historic Places Eligibility Assessment - Imperial Irrigation District Coachella-Midway-East Mesa 230 kV Transmission Line Project, Riverside and Imperial Counties, California*
RI-06537	2006	Tang, Bai "Tom," Michael Hogan, Zachary Hruby, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report, Rancho Coachella Vineyard Specific Plan, in and Near the City of Coachella, Riverside County, California*
RI-06539	2005	Tang, Bai "Tom," Michael Hogan, Deirdre Encarnacion, and Mariam Dahdul	CRM Tech	*Historical/Archaeological Resources Survey Report, Assessor's Parcel No.s 763-360-010 and -011, Near the City of Coachella, Riverside County, CA*
~~RI-07067~~	~~2006~~	~~Hogan, Michael~~	~~CRM Tech~~	*Letter Report: Supplementary Archaeological Survey and Subsurface Testing, Rancho Coachella Vineyard Specific Plan, City of Coachella, Riverside County, California*
RI-07493	2007	Denniston, Elizabeth L.	Applied Earthworks	*Phase I Archaeological Assessment of Approximately Two Miles for the Pierce Street Transmission Water Main near the City of Coachella, Unincorporated Riverside County, California*
RI-07930	2008	CRM Tech	CRM Tech	*Phase I Historical/Archeological Assessment: Mecca Master Plan (SP377), near the Community of Mecca, Riverside County, California*

Survey #	Year	Author	Company	Report Title
Debris Basins				
RI-03972	1996	Love, Bruce and Bai "Tom" Tang	CRM Tech	*Identification and Evaluation of Historic Properties: Torres Martinez Recycling Center Project, Alternative Sites 1 & B, Torres Martinez Indian Reservation, Riverside County, California*
RI-06616	2006	Tang, Bai "Tom," Michael Hogan, Laurie Taylor, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report: the Falls Project, Assessor's Parcel No.s 751-260-015, -016, -023, 751-270-001, -004, -005, 751-280-001, -008, 009, AND 751-290-017, Valerie Area, Riverside County*
Open Channels in Oasis/Valley Floor Area				
RI-01373	1981	None Listed	American Pacific Environmental Consultants	*A Cultural Resource Survey and Evaluation of the Torres-Martinez Indian Reservation, Riverside County, California*
RI-01778	1993	Napton, Kyle L. and E. A. Greathouse	CSU Stanislaus Institute for Archaeological Research	*Cultural Resources Investigations of the Proposed Indio to Salton Lightguide System Project, AT&T Fiber Optic Route, 46.2 Miles in Riverside and Imperial Counties, California*
RI-01779	1994	Dominici, Debra and Jan Kasper	CALTRANS	*Negative Archaeological Survey Report: Highway Route 195*
RI-01922	1985	Dominici, Debra	Caltrans District 11, San Diego	*Report of an Archaeological Survey for the Proposed 86 Expressway in Riverside County*
RI-01925	1992	Dominici, Debra	Caltrans	*Negative Archaeological Survey Report - Seventh Addendum, Riverside 86 Expressway Project*
RI-03972	1996	Love, Bruce and Bai "Tom" Tang	CRM Tech	*Identification and Evaluation of Historic Properties: Torres Martinez Recycling Center Project, Alternative Sites 1 & B, Torres Martinez Indian Reservation, Riverside County, California*
RI-04520	2001	Brock, James	Archaeological Advisory Group	*Phase I Cultural Resources Assessment of a 79.45-Acre Property in the Oasis Area of Unincorporated Riverside County, California (APNs 751-280-016 and 751-280-017, Conditional Use Permit 3338)*
RI-06616	2006	Tang, Bai "Tom," Michael Hogan, Laurie Taylor, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report: the Falls Project, Assessor's Parcel No.s 751-260-015, -016, -023, 751-270-001, -004, -005, 751-280-001, -008, 009, AND 751-290-017, Valerie Area, Riverside County*
RI-07928	2008	Brock, James	ArchaeoGroup	*Phase I Archaeological Assessment for APN's 751-280-016 and 751-280-017, Oasis Area of Unincorporated Riverside County, California [CUP 03589]*

Survey #	Year	Author	Company	Report Title
RI-07950	2008	Brock, James	ArchaeoGroup	*Phase I and Phase II Cultural Resource Assessment for the Off-Site Sewer Line, Mountain View Estates Mobile Home Project, Oasis Area of Unincorporated Riverside County, California*
RI-08325	2009	Earle, David, Vanessa Mirro, and Joan George	Applied Earthworks	*Phase I Cultural Resources Assessment for the Mountain View Estates Mobile Home Park Domestic Water and Sewer Project, Unincorporated Riverside County and Torres Martinez Indian Reservation, California*
RI-08859	2012	Tang, Bai "Tom," Michael Hogan, Daniel Ballester, Terri Jacquemain, and Nina Gallardo	CRM Tech	*Historical/Archaeological Resources Survey Report Assessor's Parcel No. 380-350-022, City of Wildomar, Riverside County, California*
RI-00244	1977	Leonard, III, N. Nelson, Phillip J. Wilke, Richard Lando, and Daniel Bell	Archaeological Research Unit, U.C. Riverside	*An Archaeological and Ethnographical Evaluation of the Thermal Airport Property*
RI-00584	1986	McCarthy, Daniel F.	Archaeological Research Unit, U.C. Riverside	*Environmental Impact Evaluation: An Archaeological Assessment of Tentative Parcel 21234, South of Indio in Riverside County, California*
RI-00661	1979	Napton, Kyle L. and Elizabeth Anne Greathouse	California State College, Stanislaus	*Archaeological Reconnaissance on the Torres-Martinez Indian Reservation, Riverside County, California*
RI-01373	1981	None Listed	American Pacific Environmental Consultants	*A Cultural Resource Survey and Evaluation of the Torres-Martinez Indian Reservation, Riverside County, California*
RI-01607	1982	Napton, Kyle L. and E. A. Greathouse	American Indian Resource Organization, Inc.	*Cultural Resource Investigations on the Torres-Martinez Indian Reservation*
RI-01778	1993	Napton, Kyle L. and E. A. Greathouse	CSU Stanislaus Institute for Archaeological Research	*Cultural Resources Investigations of the Proposed Indio to Salton Lightguide System Project, AT&T Fiber Optic Route, 46.2 Miles in Riverside and Imperial Counties, California*
RI-01779	1994	Dominici, Debra and Jan Kasper	CALTRANS	*Negative Archaeological Survey Report: Highway Route 195*
RI-01921	1988	Dominici, Debra	Caltrans District 11, San Diego	*Negative Archaeological Survey Report First Addendum - Route 11-RIV-86 P.M.2.9/22.0*
RI-01922	1985	Dominici, Debra	Caltrans District 11, San Diego	*Report of an Archaeological Survey for the Proposed 86 Expressway in Riverside County*
~~RI-01936~~	~~1985~~	~~Parr, Robert E.~~	~~Archaeological Research Unit, U.C. Riverside~~	~~*An Archaeological Assessment of a Proposed Wastewater Treatment Plant Site and Pipeline Alignment, La Quinta Area of Riverside County, California*~~

Survey #	Year	Author	Company	Report Title
RI-03835	1994	Becker, Kenneth M. and Anne Duffield-Stoll	RMW Paleo Associates	*Cultural Resources Reconnaissance of the Kohl Ranch, Riverside County, California*
RI-03866	1994	Drover, Christopher	None Listed	*Environmental Impact Evaluation: An Archaeological Assessment of the Coachella Valley Golf Club, Parcel No.s APN 759-100-002, 003, Thermal, California*
RI-04055	1997	Brock, James	Archaeological Advisory Group	*Cultural Resources Assessment for Tentative Parcel Map 27630 Thermal Area of Unincorporated Riverside County*
RI-04066	1997	Keller, Jean A.	None Listed	*A Phase I Cultural Resources Assessment of Tentative Parcel Map 28419 40.00 Acres of Land Located Near Valerie, Riverside County USGS Valerie, California Quadrangle, 7.5' Series*
RI-04078	1998	Love, Bruce and Bai "Tom" Tang	CRM Tech	*Identification and Evaluation of Historic Properties: Three Segments of SR 86 R/W with Special Emphasis on Parcel 26870, Torres Martinez Indian Reservation, Riverside, California*
RI-04520	2001	Brock, James	Archaeological Advisory Group	*Phase I Cultural Resources Assessment of a 79.45-Acre Property in the Oasis Area of Unincorporated Riverside County, California (APNs 751-280-016 and 751-280-017, Conditional Use Permit 3338)*
RI-04959	2000	Eckhardt, William T.	Mooney & Associates	*Cultural Resources Inventory Update for Augustine Indian Reservation, Riverside, County California*
RI-05784	2002	Love, Bruce, Bai "Tom" Tang, Daniel Ballester, and Mary Hillis Shockley	CRM Tech	*Historical/Archaeological Resources Survey Report: Dellar Reservoir Site and Pipeline Route, Near the Community of Valerie, Riverside County, California*
RI-05787	2004	Schmift, James J.	Compass Rose Archaeological, Inc.	*Letter Report: 2004 Automated Switch Project, San Bernardino and Riverside Counties*
RI-05891	2002	Love, Bruce, Bai "Tom" Tang, Daniel Ballester, and Mariam Dahdul	CRM Tech	*Historical/Archaeological Resources Survey Report, Tentative Parcel Map No. 30662, Near the Community of Oasis, Riverside County, CA*
RI-05932	2003	Hogan, Michael, Bai "Tom" Tang, Josh Smallwood, Daniel Ballester, and Laura Hensley Shaker	CRM Tech	*Identification and Evaluation of Historic Properties, Assessor's Parcel No. 753-100-009, Torres Martinez Indian Reservation, Riverside County, CA*

Survey #	Year	Author	Company	Report Title
RI-06341	2004	Tang, Bai "Tom," Michael Hogan, Deirdre Encarnacion, Casey Tibbet, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report, Tentative Tract Map 32693, Casa Del Lago Project, Valerie Area, Riverside County, CA*
RI-06342	2004	Tang, Bai "Tom," Michael Hogan, Deirdre Encarnacion, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report, Tentative Tract Map 32694, Rancho Santa Rosa Project, Valerie Area, Riverside County, CA*
RI-06434	2004	Tang, Bai "Tom," Michael Hogan, Deirdre Encarnacion, Casey Tibbet, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report: Thermal 551 Brookefield Project, Near the Community of Thermal, Riverside County, CA*
RI-06480	2005	Hogan, Michael	CRM Tech	*Letter Report: Historical/Archaeological Resources Survey, Parcel 23 of Parcel Map 17552, Santa Rosa Plateau Area, Riverside County, California*
~~RI-06563~~	~~2005~~	~~Tang, Bai "Tom," Michael Hogan,Todd Cooper, and Daniel Ballester~~	~~CRM Tech~~	~~*Historical/Archaeological Resources Survey Report, Mon/Salt Creek Village Project, Assessor's Parcel No.s 751-020-002, -003, -006, and -007, Near the City of La Quinta, Riverside County, CA*~~
RI-06615	2006	Tang, Bai "Tom," Michael Hogan, Deirdre Encarnacion, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report: Thermal Street, Water, and Sewer Improvements, Near the Community of Thermal, Riverside County, California*
RI-06862	2004	W&S Consultants	W&S Consultants	*Phase I Archaeological Survey of the TTM 32417 Study Area, Coachella, Riverside County, CA*
RI-06864	2004	W&S Consultants	W&S Consultants	*Phase I Archaeological Survey of the TTM 32454 Study Area, Coachella, Riverside County, California*
~~RI-07576~~	~~2008~~	~~Smallwood, Josh and Daniel Ballester~~	~~CRM Tech~~	~~*Phase I Archaeological Assessment: Tentative Tract Map No. 35577 (Polo Project), Near the City La Quinta, Riverside County, California*~~
RI-07655	2006	McGinnis, Patrick	Tierra Environmental Services	*Cultural Resource Survey Report of 110-Acres for the Proposed Mission Ranch North Development Riverside County, California*
RI-07659	2005	McGinnis, P. and M. Baksh	Tierra Environmental Services	*Cultural Resource Survey Report for the Proposed: The Palms Mission Ranch Development Thermal, Riverside County, California*
RI-07660	*Resource mapped, but no other additional details were provided by EIC.*			

Survey #	Year	Author	Company	Report Title
RI-07831	2008	George, Joan	Applied Earthworks	*Phase I Cultural Resources Assessment and Extended Phase I Testing of Approximately Six Miles for the Avenue 62 Trunk sewer Project Near Thermal, Riverside County, Riverside*
RI-07928	2008	Brock, James	ArchaeoGroup	*Phase I Archaeological Assessment for APN's 751-280-016 and 751-280-017, Oasis Area of Unincorporated Riverside County, California [CUP 03589]*
RI-07929	2008	Tang, Bai "Tom" and Harry Quinn	CRM Tech	*Letter Report: Re: Historical/Archaeological/Paleontological Survey of Whitewater River Channel Thermal 551 Brookfield Project Near the Community of Thermal, Riverside County, California*
RI-07950	2008	Brock, James	ArchaeoGroup	*Phase I and Phase II Cultural Resource Assessment for the Off-Site Sewer Line, Mountain View Estates Mobile Home Project, Oasis Area of Unincorporated Riverside County, California*
RI-08111	2008	Mirro, Vanessa and Michael Mirro	Applied Earthworks	*Buried Site Testing Report Airport Boulevard Water Transmission Pipeline Project*
RI-08166	2008	Hogan, Michael and Bai "Tom" Tang	CRM Tech	*Archaeological Testing and Evaluation Program Tentative Parcel Map No. 36034*
RI-08187	2000	Avalos, Victoria	Archaeological Associates, Ltd.	*Letter Report: Cultural Resource Assessment for AT&T Wireless Site # C971, Thermal, Riverside County, CA*
RI-08325	2009	Earle, David, Vanessa Mirro, and Joan George	Applied Earthworks	*Phase I Cultural Resources Assessment for the Mountain View Estates Mobile Home Park Domestic Water and Sewer Project, Unincorporated Riverside County and Torres Martinez Indian Reservation, California*
RI-08360	2009	Encarnacion, Deidre, Laura H. Shaker, Bai "Tom" Tang, and Daniel Ballester	CRM Tech	*Identification and Evaluation of Historic Properties: Agua Azul Project, Assessor's Parcel No. 749-320-002, Mecca Area, Riverside County, California*
RI-08559	*Resource mapped, but no other additional details were provided by EIC.*			
RI-08721	2011	McDougall, Dennis, Vanessa Mirro, and Joan George	Applied Earthworks	*Phase I Cultural Resources Assessment for the Avenue 60 Domestic Water Transmission Main Project*
RI-08859	2012	Tang, Bai "Tom," Michael Hogan, Daniel Ballester, Terri Jacquemain, and Nina Gallardo	CRM Tech	*Historical/Archaeological Resources Survey Report Assessor's Parcel No. 380-350-022, City of Wildomar, Riverside County, California*
RI-08948	*Resource mapped, but no other additional details were provided by EIC.*			

Survey #	Year	Author	Company	Report Title
Underground Pipelines in Oasis/Valley Floor Area				
RI-01016	1978	Colarich, Pam	Department of Transportation (CALTRANS), District 11	*Archaeological Evaluation of the Proposed Reconstruction of the Loftus Creek Bridge*
RI-01778	1993	Napton, Kyle L. and E. A. Greathouse	CSU Stanislaus Institute for Archaeological Research	*Cultural Resources Investigations of the Proposed Indio to Salton Lightguide System Project, AT&T Fiber Optic Route, 46.2 Miles in Riverside and Imperial Counties, California*
Training Levees				
RI-01014	1986	Rosen, Martin D.	Department of Transportation (CALTRANS), District 11	*Archaeological Survey Report ""Travertine Material Site"" 11-IMP-86-60.9/67.8*
RI-01015	1977	Cupples, Sue Ann	Department of Transportation (CALTRANS), Sacramento, CA	*Supplementary Archaeological Survey Report for a Proposed Material Site (Travertine)11-Imp-86 P.M. 67.7/67.8- 11-Riv-86 P.M 0.0/3.3*
RI-01687	1983	Davis, Alan	Archaeological Research Unit, U.C. Riverside	*An Archaeological Assessment of Tentative Parcel 18541, West of Oasis in the Coachella Valley, Riverside County, California*
RI-02871	1984	Reed, Judyth E.	BLM-Indio R.A.	*Cultural Resources Inventory and Evaluation of Several Parcels Near Oasis, California*
RI-03089	1990	Duffield, Anne and Gale Broeker	None Listed	*Letter Report: Cultural Resources Inventory of Martinez Canyon Parcel No. 1, T7S R8E Section 30*
RI-03090	1990	Duffield, Anne and Gale Broeker	None Listed	*Letter Report: Cultural Resources Inventory of Martinez Canyon Parcel No. 2, T7S R8E Section 32*
RI-03972	1996	Love, Bruce and Bai "Tom" Tang	CRM Tech	*Identification and Evaluation of Historic Properties: Torres Martinez Recycling Center Project, Alternative Sites 1 & B, Torres Martinez Indian Reservation, Riverside County, California*
RI-05783	2002	Love, Bruce, Bai "Tom" Tang, Daniel Ballester, and Mary Hillis Shockley	CRM Tech	*Historical/Archaeological Resources Survey Report, the Phillios Property, Near the Community of Valerie, Riverside County, California*
RI-06616	2006	Tang, Bai "Tom," Michael Hogan, Laurie Taylor, and Daniel Ballester	CRM Tech	*Historical/Archaeological Resources Survey Report: the Falls Project, Assessor's Parcel No.s 751-260-015, -016, -023, 751-270-001, -004, -005, 751-280-001, -008, 009, AND 751-290-017, Valerie Area, Riverside County*

Source: TetraTech, 2014.

5.4.1.6 Cultural Resources Known within the Master Plan Area

Cultural Resources

A considerable portion of the Master Plan area has been surveyed, including approximately 3 percent of the Coachella Valley Stormwater Channel (CVSC); 39.5 percent of the open channels and 47.5 percent of the underground pipelines in the Mecca/North Shore area; and 36 percent of the open channels and 4 percent of the underground pipelines in the Oasis/Valley Floor area; and 8 percent of the debris basins and 27.5 percent of the training levees. No Project component has been completely surveyed. Without complete coverage of the Facilities, it is possible that previously unidentified resources exist within the Master Plan Area.

Thirty-six previously recorded cultural resources are located within the Master Plan Area, some being overlapped by multiple Facilities. The CVSC crosses 1 resource, the open channels in the Mecca/North Shore area cross 7 resources, the open channels in the Oasis/Valley Floor area cross 30 resources, and the training levees cross 1 resource. No resources are crossed by the underground pipelines in Mecca/North Shore area, the debris basins, or underground pipelines in Oasis/Valley Floor area. It should be noted that the absence of resources within the areas of these Facilities does not preclude the presence of any resource. The majority of the identified resources are unevaluated for CRHR or NRHP eligibility. Of the 36 previously recorded sites, 18 are historic, 14 are prehistoric, 2 are multicomponent, and 2 are unknown. The historic resources include a historic district (Martinez Historical District/Indian Agency), the CVSC itself (recommended NRHP-ineligible), 3 other water conveyance system features, refuse scatters, and several buildings and roads. The prehistoric resources include ceramic scatters, lithic scatters, fish weirs, a trail, and two fishing camps/villages. The multicomponent sites are prehistoric ceramic and lithic scatters with historic refuse scatters. **Table 5.4-B – Previously Recorded Cultural Resources Crossed by Each Project Component** lists 36 previously recorded cultural resources within the Master Plan Area, some being overlapped by multiple Facilities.

Table 5.4-B – Previously Recorded Cultural Resources Crossed by Each Project Component

Primary # (P-33-)	Trinomial	Prehistoric/ Historic	Site/ Isolate	Site Type/Name	NRHP/CRHR Eligibility	Last Recorded	Last Recorder	Company
CVSC								
017259	N/A	Historic	Site	Coachella Valley Stormwater Channel/Whitewater River	Recommended Not Eligible	2008	Daniel Ballester	CRM Tech
Open Channels in Mecca/North Shore Area								
003438	CA-RIV-3438	Historic	Site	Railroad Station and Refuse	Unevaluated	2012	Scott Kremkau	CalTrans
006381	N/A	Historic	Site	Kamrar Building/Elks Hall	Individual property that is eligible for local listing or designation.	1983	Gerald D. Smith	Riverside County Historical Commission
011499	CA-RIV-6854	Prehistoric	Site	Ceramic Scatter	Unevaluated	2002	Robert Reynolds	LSA Associates
011501	CA-RIV-6855	Prehistoric	Site	Ceramic Scatter	Unevaluated	2002	Robert Reynolds	LSA Associates
020837	CA-RIV-10761	Historic	Site	Road	Unevaluated	2012	Patrick Stanton	Statistical Research, Inc.
012293	CA-RIV-79T	Prehistoric	Site	Trail	Unevaluated	1981	Unknown	EIC Basemaps
017259	N/A	Historic	Site	Coachella Valley Stormwater Channel/Whitewater River	Recommended Not Eligible	2008	Daniel Ballester	CRM Tech
Underground Pipelines in Mecca/North Shore Area								
None								

Primary # (P-33-)	Trinomial	Prehistoric/ Historic	Site/ Isolate	Site Type/Name	NRHP/CRHR Eligibility	Last Recorded	Last Recorder	Company
Debris Basins								
None								
Open Channels in Oasis/Valley Floor Area								
001292	CA-RIV-1292	Historic	District	Martinez Historical District/Indian Agency	Listed	1973	Unknown	Unknown
001525	CA-RIV-1525	Prehistoric	Site	Fishing Village	Eligible	2008	M. Linder, C. Bouscaren, and J. Coats	Applied Earthworks
001527	CA-RIV-1527	Prehistoric	Site	Ceramic/Lithic Scatter & Trail	Unevaluated	1986	Martin D. Rosen and Debra A. Dominici, Jan Kasper, Don Laylander, John Romani, and Robert I. Wlodarski	CalTrans
002641	CA-RIV-2641	Prehistoric	Site	Fishing Camp	Unevaluated	1983	Alan Davis	Unknown
003324	CA-RIV-3324	Prehistoric	Site	Fish Weirs	Eligible	1998	Drew Pallette and Collin O'Neill	ASM Affiliates, Inc.
020735	CA-RIV-10675	Historic	Site	Road	Unevaluated	2012	Patrick Stanton	Statistical Research, Inc.
020842	CA-RIV-10766	Historic	Site	Water Conveyance System	Unevaluated	2012	Patrick Stanton	Statistical Research, Inc.
017229	N/A	Historic	Site	Water Conveyance System	Unevaluated	2008	M. Linder, C. Bouscaren, and K. McLean	Applied EarthWorks, Inc.

Primary # (P-33-)	Trinomial	Prehistoric/ Historic	Site/ Isolate	Site Type/Name	NRHP/CRHR Eligibility	Last Recorded	Last Recorder	Company
001756	CA-RIV-1756/H	Multicomponent	Site	Ceramic/Lithic Scatter & Refuse Scatter	Unevaluated	2000	William T. Eckhardt, K. Ross Way, and Kimberly D. Lauko	Mooney & Associates
005142	CA-RIV-5142	Prehistoric	Site	Ceramic Scatter	Unevaluated	1993	B. Graham, R. Collett, and M. Pritchard-Parker	Brian F. Mooney Associates
005151	CA-RIV-5151	Prehistoric	Site	Ceramic Scatter	Unevaluated	1993	B. Graham, R. Collett, and M. Pritchard-Parker	Brian F. Mooney Associates
006520	N/A	Historic	Site	Building	Contributor to a district that is eligible for local listing or designation.	1983	Edith Zilloli	Riverside County Historical Commission
010804	CA-RIV-6521/H	Multicomponent	Site	Lithic/Ceramic Scatter and Refuse Scatter	Unevaluated	2000	William T. Eckhardt and K. Ross Way	Mooney & Associates
015038	CA-RIV-8001	Prehistoric	Site	Ceramic/Lithic Scatter	Unevaluated	2006	A. Van Wyke and T. Everette	Applied EarthWorks, Inc.
015039	CA-RIV-8002	Prehistoric	Site	Ceramic Scatter	Unevaluated	2006	A. Van Wyke and T. Everette	Applied EarthWorks, Inc.
017771	CA-RIV-9202H	Historic	Site	Refuse Scatter and Quarry	Not Eligible for NRHP. Unevaluated for CRHR.	2006	Daniel F. McCarthy	San Bernardino National Forest

Primary # (P-33-)	Trinomial	Prehistoric/ Historic	Site/ Isolate	Site Type/Name	NRHP/CRHR Eligibility	Last Recorded	Last Recorder	Company
020028	CA-RIV-10172	Historic	Site	Martinez Road	Recommended Not Eligible	2012	J. Eddy	Applied EarthWorks, Inc.
020750	CA-RIV-10672	Historic	Site	Road	Unevaluated	2012	Patrick Stanton	Statistical Research, Inc.
020751	CA-RIV-10673	Historic	Site	Road	Unevaluated	2013	Patrick Stanton	Statistical Research, Inc.
020762	CA-RIV-10684	Historic	Site	Road	Unevaluated	2012	Patrick Stanton	Statistical Research, Inc.
020846	CA-RIV-10770	Historic	Site	Road	Unevaluated	2012	Patrick Stanton	Statistical Research, Inc.
017370	*Site record not provided by EIC.*				*Assumed Unevaluated*			
017551	N/A	Historic	Site	Wayne Reed Residence	Not Eligible	2009	K.A. Crawford	Michael Brandman Associates
015043	N/A	Prehistoric	Isolate	Ceramic Sherds	Not Eligible	2006	A. Van Wyke and T. Everette	Applied EarthWorks, Inc.
017370	*Site record not provided by EIC.*				*Assumed Unevaluated*			
020758	CA-RIV-10680	Historic	Site	U.S. Highway 99/State Route 86S levees	Recommended Not Eligible	2012	Josh Smallwood	Applied EarthWorks, Inc.
001528	CA-RIV-1528	Prehistoric	Site	Ceramic Scatter with Milling Slick	Unevaluated	2008	M. Linder, C. Bouscaren, and J. Coats	Applied Earthworks
020758	CA-RIV-10680	Historic	Site	U.S. Highway 99/State Route 86S levees	Recommended Not Eligible	2012	Josh Smallwood	Applied EarthWorks, Inc.

Primary # (P-33-)	Trinomial	Prehistoric/ Historic	Site/ Isolate	Site Type/Name	NRHP/CRHR Eligibility	Last Recorded	Last Recorder	Company
010790	*Site record not provided by EIC*				*Assumed Unevaluated*			
017228	N/A	Historic	Site	Water Conveyance System	Unevaluated	2008	M. Linder, C. Bouscaren, and K. McLean	Applied EarthWorks, Inc.
Underground Pipelines in Oasis/Valley Floor Area								
None								
Training Levees								
000873	CA-RIV-873	Prehistoric	Site	Ceramic Scatter	Unevaluated	1974	Pamela Thomas	Unknown

Source: TetraTech, 2014.

Remainder of page intentionally blank.

In addition to the surveys and resource records listed in **Table 5.4-~~C~~B,** one NRHP-listed property was identified as part of EIC's database review: P-33-001292/Martinez Historical District. This historic district is crossed by the Oasis Drainage Channel. Of the resources impacted by Facilities, one was listed in the OHP's ADOE: P-33-017771 (CA-RIV-9202H). Site P-33-017771 has been determined not eligible for listing in the NRHP, but has not been evaluated for CRHR eligibility. The OHP's HPD also lists the Martinez Historical District as NRHP- and CRHR-listed. Additionally, the HPD lists two buildings as not eligible for listing on the NRHP: P-33-006381/Kamrar Building and P-33-006520. The Kamrar Building, crossed by the Mecca ADP Channel, is listed as not eligible for the NRHP; however, the site record indicates the Riverside County Historical Commission has determined the building is eligible for local listing or designation. P-33-006520, a historic building crossed by the Oasis Channel, is listed as not eligible for the NRHP; however, this site record also indicates the Riverside County Historical Commission has determined the building is eligible for local listing or designation. Further, EIC's review of historic USGS maps concluded no unique features were discernable in the areas to be crossed by Facilities.

Paleontological Resource Assessment

For the paleontological resource assessment, literature review and a records search were undertaken by Applied Earthworks for this Project. Paleontological resources are not found in "soil" but are contained within the geologic deposits or bedrock that underlies the soil layer. Therefore, in order to ascertain whether or not the Project has the potential to contain significant fossil resources at the subsurface, it was necessary to review relevant scientific literature and geologic mapping to determine the underlying geology and stratigraphy of the Master Plan Area. Further, in order to delineate the boundaries of an area of paleontological sensitivity, it was necessary to determine the extent of the entire geologic unit because paleontological sensitivity is not limited to surface exposures of fossil material. (AE, p. 8.)

To determine whether or not fossil localities have been previously discovered within the Project's Plan Area or a particular rock unit, a search of pertinent local and regional museum repositories for paleontological localities within and nearby the Master Plan Area was performed. For this Project, a museum records search was conducted using the University of California's Museum of Paleontology's (UCMP) online database, which contains paleontological records for Riverside and Imperial counties. (AE, p. 8.)

Records retrieved from the UCMP database do not provide the exact location of recovered fossil specimens; only a general description of the locality is given. As such, locality queries were performed for the entirety of Riverside and Imperial counties. Museum collections records maintained by the UCMP online database do not contain records for previously documented vertebrate fossil localities within the Master Plan Area nor have any localities been recorded in the vicinity of the Master Plan. However, the Palm Spring Formation and Borrego Formation have yielded vertebrate fossils in San Diego County, approximately 30 to 60 miles southwest of the Master Plan Area. A review of the UCMP online database reveals that there are five previously recorded vertebrate fossil localities from within the Palm Spring and Borrego

formations, which yielded fossil specimens of deer, horse, and other unspecified vertebrates. It should be noted that the UCMP online database does not contain any records for Holocene-age Lake Cahuilla deposits, and other regional repositories such as the San Bernardino County Museum, Western Science Center, or Natural History Museum of Los Angeles County may contain additional records. (AE, p. 15.) **Table 5.4-C – Vertebrate Localities Reported from within Geologic Units Underlying the Master Plan Area** lists the results of the online museum records search.

Table 5.4-C – Vertebrate Localities Reported from within Geologic Units Underlying the Master Plan Area

Locality No.	Geologic Unit	Age	Fossil Types
UCMP V78104	Palm Spring Formation	Pliocene- Pleistocene	Deer
UCMP V6847	Palm Spring Formation	Pliocene- Pleistocene	Horse
UCMP V65686	Palm Spring Formation	Pliocene- Pleistocene	Unspecified vertebrates
UCMP V5210	Palm Spring Formation	Pliocene- Pleistocene	Unspecified vertebrates
UCMP V5209	Borrego Formation	Pliocene- Pleistocene	Unspecified vertebrates

Source: Applied Earthworks, *Paleontological Resource Assessment for the Master Drainage Plan and Programmatic Environmental Impact Report for the Coachella Valley Water District for the Region I-Oasis Area and Region II-Mecca/North Shore, Riverside and Imperial Counties, California*, November 2014, Table 6-1, p. 15.

Tribal Resources Assessment

During preparation of this section of the Recirculated Draft PEIR, Tetra Tech contacted the local tribal organizations on December 17, 2014 [as part of the cultural resource survey] for information relative to the Master Plan, as outlined in **Table 5.4-D – Tribal Consultation Requests and Responses.** A copy of the letter send and response [if applicable] is provided in Appendix C.1. Tribal consultation is further discussed in the Regulatory section as it relates to Assembly Bill 52.

Table 5.4-D – ~~Initial~~ Tribal Consultation Requests and Responses ~~Communication~~

Tribal Organization	Response
Agua Caliente Band of Cahuilla Indians Attn: Jeff Grubbe Attn: Patricia Garcia	Response letter dated February 20, 2015 requests a cultural resources inventory of project area; copy of records search results; copies of any resource documentation generated in connection with this project; presence of an approved Native American Cultural Resource Monitor during ground-disturbing activities and standard procedures in the event items are uncovered; request a meeting with CVWD regarding this project.
Augustine Band of Cahuilla Mission Indians Attn: Mary Ann Green Attn: Karen Kupcha	Response letter dated January 14, 2015 requests use of a qualified on-site full-time monitor during pre-construction and construction phases, and notification to the Tribe if any resources are discovered.
Cabazon Band of Mission Indians Attn: Doug Welmas Attn: Judy Stapp	Response letter dated January 6, 2015 stated the project is outside of current reservation boundaries but within an area that may be considered a traditional use area. Tribe has no specific information of sacred sites or other sites of traditional cultural value located within the Project area.
Los Coyotes Band of Cahuilla and Cupeno Indians Attn: Environmental Director	Package was marked “unclaimed” by U.S. Postal Service and returned to Tetra Tech.
Morongo Band of Mission Indians Attn: Robert Martin Attn: Denisa Torres Attn: Ernest H. Silva	Response letter dated January 15, 2015 stated the project is outside of current reservation boundaries but within a larger traditional use area in which the Tribe has cultural ties. Requested standard conditions to appear on any development plans or entitlement applications for proper procedures if either human remains or Native American cultural resources are discovered during construction. • Letter dated July 6, 2015 generally requests formal notification pursuant to Assembly Bill 52, of Projects within the geographic area traditionally and culturally affiliated with the Tribe.
Santa Rosa Band of Mission Indians Attn: John Marcus	No response.

Tribal Organization	Response
Torres-Martinez Desert Cahuilla Indians Attn: Mary Resvaloso Attn: Matthew Krystal	No response.
Soboba Band of Luiseño Indians	Letter dated July 2, 2015 generally requests formal notification, pursuant to Assembly Bill 52, of Projects within the geographic area traditionally and culturally affiliated with the Tribe.

5.4.2 Comments Received in Response to the Notice of Preparation

A comment letter was received from the Augustine Band of Cahuilla Indians (dated August 12, 2015) in response to the Initial Study/NOP regarding cultural resources. The Tribe requested the DEIR address the following:

- How CVWD determined the location of the facility lines for the Master Plan, especially line L01 and L01-01; and
- The specific criteria that will be used for the Open Channel Facilities in the Oasis/Valley Floor Area of the Master Plan.

With regard to the location of the Master Plan Facilities, as discussed in Section 3 – Project Description, the Master Plan identifies conceptual locations, alignments, and sizes for primary stormwater facilities. Rationale used to identify the conceptual location included: avoiding existing structures and infrastructure and taking into account the natural drainage patterns of the area. For the Line L Stormwater System avoiding the airport was also a consideration.

With regard to the criteria for the Open Channel Facilities in the Oasis/Valley Floor Area of the Master Plan, as discussed under the Open Channel subheading in Section 3.3.2 Construction of Master Plan Facilities, The Master Plan proposes channels that are either trapezoidal- or rectangular-shaped and may be either totally earthen, partially-lined with concrete paving of the sides and an earthen bottom, or fully-lined with concrete paving on the sides and bottom. For trapezoidal channels, sides slope upward from the bottom at a variable rate depending on the lining type. The Master Plan's proposed channels have a bottom width ranging from 6 to 425 feet and a depth ranging from 6 to 20 feet. The channels may also include a low berm feature from 1 to 3 feet above grade to account for the topography along the alignment and ensure adequate freeboard (i.e., distance between the water level and top of the facility).[3] Open channel rights-of-way must accommodate the channel footprint plus areas needed for channel maintenance, including access roads and fences. In addition to their role as flow conveyors,

[3] Because certain open channels in the Mecca/North Shore area would include an above grade structure with heights greater than 5 feet, those channels were identified.

open channels provide an outlet for the underground facilities proposed in the Master Plan as well as local drainage facilities to be built by developers and others. All open channels proposed in the Master Plan are designed to carry the runoff from a 100-year return period storm.

Requests for information from local tribes located in the Master Plan Area that were made prior to the Initial Study/NOP are summarized previously in **Table 5.4-D – Tribal Consultation Requests and Responses**.

5.4.3 Thresholds of Significance

The significance of potential impacts to cultural resources was evaluated based on the State CEQA Guidelines, Appendix G criteria. Using these thresholds, the Project would be considered to have a significant impact if it were to affect the thresholds listed below:

- (Threshold A) Create a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
- (Threshold B) Create a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5.
- (Threshold C) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- (Threshold D) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074.

The Initial Study prepared for the Master Plan concluded potential impacts related to disturbing any human remains including those interred outside of formal cemeteries would be less than significant and are therefore not discussed within this EIR. The Initial Study determined however, that in the event that [during construction] suspected human remains are uncovered, all activities in the vicinity of the remains shall cease and the contractor shall notify the County Coroner immediately, pursuant to California Health & Safety Code Section 7050.5 and California Public Resources Code Section 5097.98. The Initial Study is provided in Appendix A of this PEIR.

5.4.4 Related Regulations

5.4.4.1 Federal Regulations

National Historic Preservation Act

The National Historic Preservation Act of 1966 established the NRHP as the official federal list of cultural resources that have been nominated by state offices for their historical significance at the local, state, or national level. Properties listed in the NRHP, or “determined eligible” for listing, must meet certain criteria for historical significance and possess integrity of form, location, and setting. Significance is determined by four aspects of American history or prehistory recognized by the NRHP Criteria (NPS):

- Association with events that have made a significant contribution to the broad pattern of our history; or
- Association with the lives of persons significant in our past; or
- Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possess high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction, or
- Has yielded, or has the potential to yield, information important to the prehistory or history.

Eligible properties must meet at least one of the above criteria and exhibit integrity. The integrity of a subject property is measured by the degree to which the resource retains its historical properties and conveys its historical character. Integrity also depends on the degree to which the original fabric has been retained, and the reversibility of any changes to the property.

Properties listed in the National Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture.

5.4.4.2 State Regulations

California Environmental Quality Act

CEQA applies to discretionary projects causing a significant effect on the environment and a substantial adverse change in the significance of a historical or archaeological resource. Resources listed on or determined to be eligible for listing on the CRHR (PRC §5024.1; Title 14, §4852 et seq., CCR) are those that must be given consideration in the CEQA process.

CEQA includes in its definition of historical resources, “any object [or] site [...] that has yielded or may be likely to yield information important in prehistory” (Title 14, CCR, Section 15064.5[3], subsequently 14 CCR 15064.5[3]), which is typically interpreted as including fossil materials and other paleontological resources. More specifically, destruction of a “unique paleontological resource or site or unique geologic feature” constitutes a significant impact under CEQA (CEQA Guidelines Appendix G). CEQA does not provide an explicit definition of a “unique paleontological resource,” but a definition is implied by comparable language within the act relating to archeological resources: “The procedures, types of activities, persons, and public agencies required to comply with CEQA are defined in: Guidelines for the Implementation of CEQA, as amended March 29, 1999” (14 CCR 15000 et seq.). Further, treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in the project; assessment of potential impacts on significant or unique resources; and development of mitigation measures for potentially significant impacts, which may include avoidance, monitoring, or data recovery excavation.

California Register of Historic Resources (Public Resources Code Section 5020, *et seq*.)

State law also protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources in CEQA documents. A cultural resource is an important historical resource if it meets any of the criteria found in Section 15064.5(a) of the State *CEQA Guidelines*. These criteria are nearly identical to those listed above for the NRHP. The CRHR is maintained by the State Historic Preservation Office (SHPO). Properties listed, or formally designated eligible for listing, on the NRHP are automatically listed on the CRHR, as are state Landmarks and Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

The CRHR includes historic resources of importance in accordance with the following designation criteria:

- Associated with events that have made a significant contribution to the broad pattern of local or regional history or the cultural heritage of California or the United States.
- Associated with the lives of people important to local, California or national history.
- Embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master or possess high artistic values.
- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or nation.

California Health and Safety Code Sections 7050.5, 7051, and 7054

These sections collectively address the illegality of interference with human burial remains (except as allowed under applicable sections of the Public Resources Code), as well as the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, treatment of the remains prior to, during and after evaluation, and reburial procedures.

Entities responsible for the construction of the proposed Facilities, i.e., CVWD, Riverside County, city of Coachella, or private developers, are responsible for compliance with these sections of the California Health and Safety Code, in the highly unlikely event human burial remains are encountered during the construction of Facilities.

California Public Resources Code Section 5097.98

California Senate Bill 297 (1982), which is codified in Section 5097.98 of the Public Resources Code addresses the disposition of Native American burials in archeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the California Native American Heritage Commission (NAHC) to

resolve disputes regarding the disposition of such remains. It has been incorporated into Section 15064.5(e) of the State *CEQA Guidelines*.

Entities responsible for the construction of the proposed Facilities, i.e., CVWD, Riverside County, city of Coachella, or private developers, are responsible for compliance with this section of the California Public Resources Code, in the highly unlikely event Native American burials are encountered during the construction of Facilities.

California Public Resources Code Section 5097.5

California Public Resources Code Section 5097.5 affirms that no person shall willingly or knowingly excavate, remove, or otherwise destroy a vertebrate paleontological site or paleontological feature without the express permission of the overseeing public land agency. It further states under Public Resources Code Section 30244 that any development that would adversely impact paleontological resources shall require reasonable mitigation. These regulations apply to projects located on land owned by or under the jurisdiction of the state or city, county, district, or other public agency (California Public Resources Code Section 5097.5 [California Office of Historic Preservation 2005]).

Assembly Bill 52

AB 52 (*Native Americans: California Environmental Quality Act.* Gatto, 2014) was approved and chaptered into CEQA in September 2014. This law defines a new category of cultural resources that requires evaluation under CEQA. Under this new legislation, a project that may cause a substantial adverse change in the significance of a tribal cultural resource would be a project that may have a significant effect on the environment. The law also requires lead agencies to consult with tribes on projects for which tribes request consultation.

The requirements of AB 52 went into effect on July 1, 2015, and are applicable only to those projects that have a NOP or Mitigated Negative Declaration filed on or after that date.

The NOP for the Master Plan Program EIR was submitted to the State Clearinghouse on July 17, 2015; and therefore this Project is required to conduct AB 52 consultation with local Native American tribes that have formally requested to be consulted. A summary of CVWD's outreach and formal consultation for AB 52 is discussed in the analysis section below. A copy of CVWD's AB 52 formal consultation letter is provided in Appendix C.3 Cultural Resources.

Senate Bill 922

Senate Bill 922 exempts from California Public Records Act information pertaining to Native American graves, cemeteries, archaeological sites, and sacred places in the possession of the NAHC and other state or local agencies.

Administrative Code, Title 14, Section 4307

Administrative Code, Title 14, Section 4307 prohibits individuals from removing, injuring, defacing, or destroying any object of paleontological, archaeological, or historical interest or value.

Government Code, Sections 6253, 6254, and 6254.10

Government Code, Sections 6253, 6254, and 6254.10 states that disclosure of archaeological site information is not required for records that relate to archaeological site information maintained by the Department of Parks and Recreation, the State Historical Resources Commission, or the State Lands Commission.

California Code of Regulations, Section 1427

California Code of Regulations, Section 1427 recognizes that California's archaeological resources are endangered by urban development and that these resources need preserving. This section establishes as a misdemeanor the willful injury, disfigurement, defacement, or destruction of any object or thing of archaeological or historical interest or value by someone who is not the owner, whether situated on private lands or within any public park or place. It also states that it is a misdemeanor to alter any archaeological evidence found in any cave, or to remove any materials from a cave.

Senate Concurrent Resolution Number 43

Senate Concurrent Resolution Number 43 requires all state agencies to cooperate with programs of archaeological survey and excavation, and to preserve known archaeological resources whenever reasonable.

Penal Code, Title 14, Section 622.5

Penal Code, Title 14, Section 622.5 establishes as a misdemeanor offense for any person, other than the owner, who willfully damages or destroys archaeological or historic features on public or privately-owned land.

5.4.4.3 Local Regulations

2015 Riverside County General Plan

The 2015 Riverside County General Plan contains policies in its Multipurpose Open Space Element that are intended to ensure the preservation of cultural, historical, archaeological, and paleontological resources in the county.

Multipurpose Open Space Element:

- **Policy OS 19.1**: Cultural resources (both prehistoric and historic) are a valued part of the history of the County of Riverside.
- **Policy OS 19.3:** Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.

- **Policy OS 19.4:** To the extent feasible, designate as open space and allocate resources and/or tax credits to prioritize the protection of cultural resources preserved in place or left in an undisturbed state.
- **Policy OS 19.5:** Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.
- **Policy OS 19.6:** Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.
- **Policy OS 19.7:** Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown in Figure OS-8, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified and a paleontologist shall be retained by the project proponent. The paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.
- **Policy OS 19.8:** Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.
- **Policy OS 19.9:** Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.

The SABER Policy (**S**afeguard **A**rtifacts **B**eing **E**xcavated in **R**iverside County) enacted in October 2011 by the Riverside County Board of Supervisors mandates that any paleontological resources found or unearthed in the County of Riverside be curated at the Western Science Center in the city of Hemet. This new policy would be included as an amendment to the Multipurpose Element of the General Plan Update.

Impacts of the Facilities to cultural, archaeological, and paleontological resources are analyzed in this section of the Recirculated Draft PEIR at the program level, and would be further analyzed as part of the subsequent analysis during the final design of a Facility(ies) prior to construction in order to identify any specific potentially significant impacts based on the final design and location of the Facility(ies), and to implement associated mitigation measure(s), as

appropriate, for the affected resource(s). In this regard, the Master Plan would be consistent with the above-listed Riverside County General Plan policies.

Imperial County General Plan

The Imperial County General Plan contains an objective in its Conservation and Open Space Element that is intended to ensure the preservation of cultural resources in the county.

Conservation and Open Space Element:

- **Objective 3.1**: Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.

Impacts of construction of the Facilities to cultural resources are analyzed in this section of the Recirculated Draft PEIR at the program level, and would be further analyzed as part of the subsequent analysis during the final design of a Facility(ies) prior to construction in order to identify any specific potentially significant impacts based on the final design and location of the Facility(ies), and to implement associated mitigation measure(s), as appropriate, for the affected resource(s). In this regard, the Master Plan would be consistent with the above-listed Imperial County General Plan objective. Imperial County does not have mitigation requirements that specifically address potential adverse impacts to paleontological resources.

City of Coachella General Plan

The city of Coachella General Plan Update 2035 contains policies in its Sustainability & Natural Environment Element that are intended to ensure the preservation of cultural, historical, archaeological, and paleontological resources in the city.

Sustainability & Natural Environment Element:

- **Goal 10:** Passive Open Space. Preserved open space areas that represent significant aesthetic, cultural, environmental, economic and recreational resources for the community.
- **Policy 10.3:** Archaeological resource preservation. Preserve important archaeological and paleontological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.
- **Policy 10.4:** Mitigation and preservation of cultural resources. Require development to avoid archaeological and paleontological resources, whenever possible. If complete avoidance is not possible, require development to minimize and fully mitigate the impacts to the resources.
- **Policy 10.5:** Grading. Require that proposed projects that involve a significant amount of grading shall have an archaeological and paleontological survey conducted before construction.

- **Goal 12:** Cultural Resources and Sites. Preserved and protected cultural resources that provide the community with significant cultural, scientific, or educational value.

- **Policy 12.1:** Disturbance of human remains. In areas where there is a high chance that human remains may be present (areas along the Whitewater Rivers/CVSC, on Tribal lands, on areas with previously undisturbed soil, in the washes and canyons found in the eastern areas of the Master Planning Area, and areas of historic settlement), require proposed projects to conduct survey to establish occurrence of human remains, if any. If human remains are discovered on proposed project sites, the project must implement mitigation measures to prevent impacts to human remains in order to receive permit approval.

- **Policy 12.2:** Tribal coordination. Require notification of California Native American tribes and organizations of proposed projects that have the potential to adversely impact cultural resources.

- **Policy 12.3:** Protected sites. Require sites with significant cultural resources to be protected.

- **Policy 12.4:** Preservation of historic resources. Where practical, encourage the preservation of historic resources.

- **Policy 12.5:** Document historic resources. When it is not practical to preserve a historic resource, require the architectural details and design elements of historic structures to be preserved during renovations and remodels.

- **Policy 12.6:** Discovery of human remains. Require that any human remains discovered during implementation of public and private projects within the City be treated with respect and dignity and fully comply with the California Native American Graves Protection and Repatriation Act and other appropriate laws.

- **Policy 12.7:** Paleontological resources. Require any paleontological artifacts found within the City or Sphere of Influence be reported to the City and temporarily loaned to local museums like the Western Science Center for Archaeology and Paleontology, in Hemet, CA

- **Policy 12.8:** Disturbance of human remains. In areas where there is a high chance that human remains may be present (areas along the Whitewater Rivers/CVSC, on Tribal lands, on areas with previously undisturbed soil, in the washes and canyons found in the eastern areas of the Master Planning Area, and areas of historic settlement), require proposed projects to conduct survey to establish occurrence of human remains, if any. If human remains are discovered on proposed project sites, the project must implement mitigation measures to prevent impacts to human remains in order to receive permit approval.

Impacts of the Facilities to cultural resources are analyzed in this section of the Recirculated Draft PEIR at the programmatic level, and would be further analyzed as part of the subsequent analysis during the final design of a Facility(ies) prior to construction in order to identify any specific potentially significant impacts based on the final design and location of the Facility(ies), and to implement associated mitigation measure(s), as appropriate, for the affected resource(s). In this sense, the Master Plan would be consistent with the above-listed city of Coachella General Plan policies.

5.4.5 Environmental Impacts

To provide a more concise analysis, Thresholds A and B have been combined in this Recirculated Draft PEIR and are analyzed simultaneously.

Threshold A: *Create a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.*

Threshold B: *Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5*.

The Project has the potential to impact cultural resources, including potential and confirmed historical resources and historic properties. Direct effects from the Project could result from the following: vegetation clearing; grading of access roads; grading of debris basins; trenching for channels and pipelines; and any other earth-moving activity that disturbs previously undisturbed or unevaluated cultural resources such as prehistoric objects or sites, making those objects and their cultural resources unavailable for future scientific investigation.

The Master Plan Area has been only partially surveyed (29 percent in total) and some of these surveys are of an unacceptable age, requiring updating. (California State Historic Preservation Officer suggests re-survey of project areas when the most recent survey is older than 10 years.) Just 2.77 percent of the CVSC has been previously surveyed, while 43.49 percent of the Mecca/North Shore Area Region and 15.82 percent of the Oasis/Valley Floor Area of the Project have been previously surveyed, as shown in **Table 5.4-E – Summary of EIC Cultural Resources Records Search Results**.

Table 5.4-E – Summary of EIC Cultural Resources Records Search Results

Project Component	Number of Previous Surveys	Date Range of Previous Surveys	Portion of Components Surveyed	Number of Previously Recorded Sites	Number of NRHP-Listed or -Eligible Sites[a]	Number of NRHP-Ineligible Sites[a]	Number of Unevaluated Sites
CVSC	9	1974-2011	2.77%	1	N/A	1	N/A
Open Channels in Mecca/North Shore Area	35	1974-2011	39.50%	7	1	1	5
Underground Pipelines in Mecca/North Shore Area	7	1984-2008	47.47%	0	N/A	N/A	N/A

Project Component	Number of Previous Surveys	Date Range of Previous Surveys	Portion of Components Surveyed	Number of Previously Recorded Sites	Number of NRHP-Listed or -Eligible Sites[a]	Number of NRHP-Ineligible Sites[a]	Number of Unevaluated Sites
Open Channels in Oasis/Valley Floor Area	58	1977-2012	35.69%	30	4	6[b]	20
Underground Pipelines in Oasis/Valley Floor Area	2	1978-1993	4.13%	0	N/A	N/A	N/A
Debris Basins	2	1996-2006	7.70%	0	N/A	N/A	N/A
Training Levees	9	1977-2006	27.52%	1	N/A	N/A	1

Notes:
NRHP: National Register of Historic Places; N/A: Not Applicable
[a] Either by recommendation or determination.
[b] One site NRHP-ineligible, but unevaluated for California Register of Historical Resources.
Source: TetraTech, 2014.

The Project crosses 36 previously recorded resources. One of these is a NRHP-listed historic district, 25 are unevaluated for CRHR or NRHP eligibility, 2 have been recommended as NRHP or CRHR eligibility, 2 are considered eligible for listing on a local historic register (Riverside County), and 6 have been recommended or determined not eligible for listing in the NRHP, but do not appear to have been evaluated for CRHR eligibility. There are no previously recorded resources within Mecca ADP Pipe, Oasis Debris Basin, or Oasis Pipe portions of the Project.

Construction of the Facilities may result in significant impacts on cultural resources, particularly those that have been determined or recommended eligible for listing in the NRHP, CRHR, or local registers as well as those that are unevaluated. Effects of the Project on resources that have been determined ineligible listing on registers would not be considered significant.

The impacts of widening open channels, construction of underground storm drains and debris basins, as well as CVSC improvements would be similar. Any excavation required for these activities adjacent to or through a cultural resource may result in physical destruction or disturbance of the resource. If excavation encroaches upon adjacent building or structure footprints, impacts on built resources may also occur as a result of vibrations caused by heavy equipment or if the excavation requires demolition of the resource. All channels cross previously recorded resources, while the two proposed pipelines and debris basin do not cross previously recorded resources; as such, there is potential for cultural resources to exist within these Project areas.

In the case of the proposed open channels, if any are lined with concrete, the lining would prevent further erosion of any archaeological sites the channel passes through. This would result in protecting and preserving the resource. This benefit would not occur along any channels that have an earthen bottom.

Construction of training levees is less likely to impact cultural resources. Placement of material atop archaeological resources is typically considered to protect resources from further

disturbance. However, heavy equipment used to place the levee materials may disturb the upper levels of a resource. Further, if the source material for the levees is not from an established source that has been surveyed for cultural resources, excavation and placement of that material in the new levee may result in impacts on cultural resources at the source location.

In addition, the location of the proposed Facilities are conceptual at this time, and the final location and type of Facility may change as more detailed information becomes available during the final design process.

In order to avoid or minimize potential impacts to historical or archeological resources, future projects will be required to adhere to mitigation measures **MM CR 1, MM CR 2,** and **MM CR 3** by conducting a field survey, Native American consultation, worker education, and setting forth procedures for inadvertent finds during construction. Therefore, with adherence to these mitigation measures, Project impacts to historical and archaeological resources are considered to be **less than significant with mitigation incorporated**.

Threshold C: *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.*

Absent specific agency guidelines, most paleontologists in California adhere to guidelines set forth by in *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (Society of Vertebrate Paleontology [SVP] 2010). These guidelines establish detailed protocols for the assessment of the paleontological resource potential (i.e., "sensitivity") of a project area and outline measures to follow in order to mitigate adverse impacts to known or unknown fossil resources during project development. (AE, p. 6.)

Using baseline information gathered during the paleontological resource assessment, the paleontological resource potential of the geologic unit(s) (or members thereof) underlying the Master Plan Area can be assigned to one of four categories defined by SVP. These categories include no potential, low potential, undetermined potential, and high potential. (AE, p. 6.) The following lists the criteria and mitigation recommendations for each category. (AE, p. 7.)

- **No Potential:** Geologic units assigned to this category include rock units that are formed under or exposed to immense heat and pressure, such as high-grade metamorphic rocks and plutonic igneous rocks. Per the SVP, no mitigation is required for this category.
- **Low Potential:** Geologic units assigned to this category include rock units that have yielded few fossils in the past, based upon review of available literature and museum collections records. Geologic units of low potential also include those that yield fossils only on rare occasion and under unusual circumstances. Per the SVP, mitigation is not typically required for this category.
- **Undetermined Potential:** In some cases, available literature on a particular geologic unit would be scarce and a determination of whether or not it is fossiliferous or

potentially fossiliferous would be difficult to make. Under these circumstances, per the SVP, further study is needed to determine the unit's paleontological resource potential (i.e., field survey).

- **High Potential:** Geologic units with high potential for paleontological resources are those that have proven to yield vertebrate or significant invertebrate, plant or trace fossils in the past or are likely to contain new vertebrate materials, traces, or trackways. Rock units with high potential also may include those that contain datable organic remains older than late Holocene (e.g., animal nests or middens). Per the SVP, typically a field survey as well as on-site construction monitoring is required; any significant specimens discovered are to be prepared, identified, and curated into a museum, and a final report documenting the significance of the finds is required.

If a project area is determined to have high or undetermined potential for paleontological resources following the initial assessment, then SVP recommends that a Paleontological Resources Mitigation Plan (PRMP) be developed and implemented during the construction phase of a project. The mitigation plan describes, in detail, when and where paleontological monitoring would take place and establishes communication protocols to be followed in the event that an unanticipated fossil discovery is made during project development. Further, the PRMP should be prepared by a qualified professional paleontologist and developed using the results of the initial paleontological assessment and survey. Elements of the PRMP can be adjusted throughout the course of a project as new information is gathered and conditions change, so long as the lead agency is consulted and all parties are in agreement. (AE, pp. 6-7.)

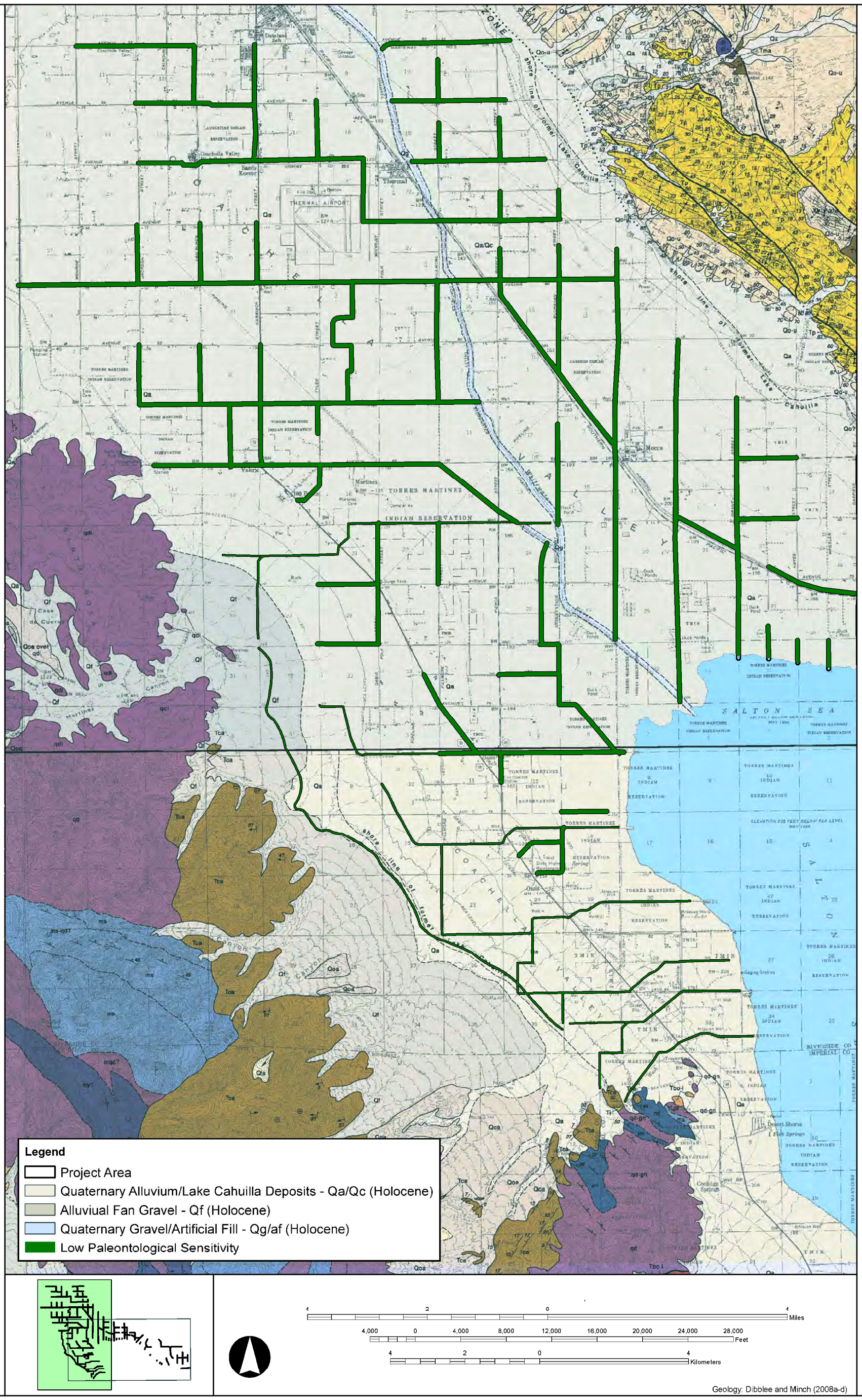
Based on the literature review and museum records search results, the geologic units underlying the Master Plan Area have a paleontological resource potential ranging from low to high in accordance with criteria set forth by the SVP. The Palm Spring Formation and Borrego Formation mapped within the Master Plan Area have a high paleontological resource potential because they have proven to yield an abundant and diverse vertebrate fauna from exposures within southeastern California. The Quaternary alluvium and lacustrine deposits mapped within the Master Plan Area have a low potential to contain intact paleontological resources because they are typically too young to contain fossilized remains; however, these sediments may be underlain at a moderate depth by the Pleistocene-age ancient Lake Cahuilla deposits. (AE, p. 15.)

The geologic units underlying the Master Plan Area and their determined sensitivity ratings are depicted on **Figure 5.4-2 – Paleontological Sensitivity in the Master ~~Plan~~ Area** shown on the page following Table 5.4-F) and listed in **Table 5.4-F – Geologic Units in the Master Plan Area and Their Recommended Paleontological Sensitivity.**

Table 5.4-F – Geologic Units in the Master Plan Area and Their Recommended Paleontological Sensitivity

Geologic Unit	Map Abbreviation	Age	Typical Fossils	Paleontological Resource Potential
Palm Spring Formation	Tp	Pliocene- Pleistocene	Terrestrial mammals, rodent, birds, reptiles, and amphibians	High
Borrego Formation	Tbo	Pliocene- Pleistocene	Terrestrial mammals	High
Quaternary surficial sediments	Qa, Qc, Qcb, Qf	Holocene	None	Low to High, dependent on depth

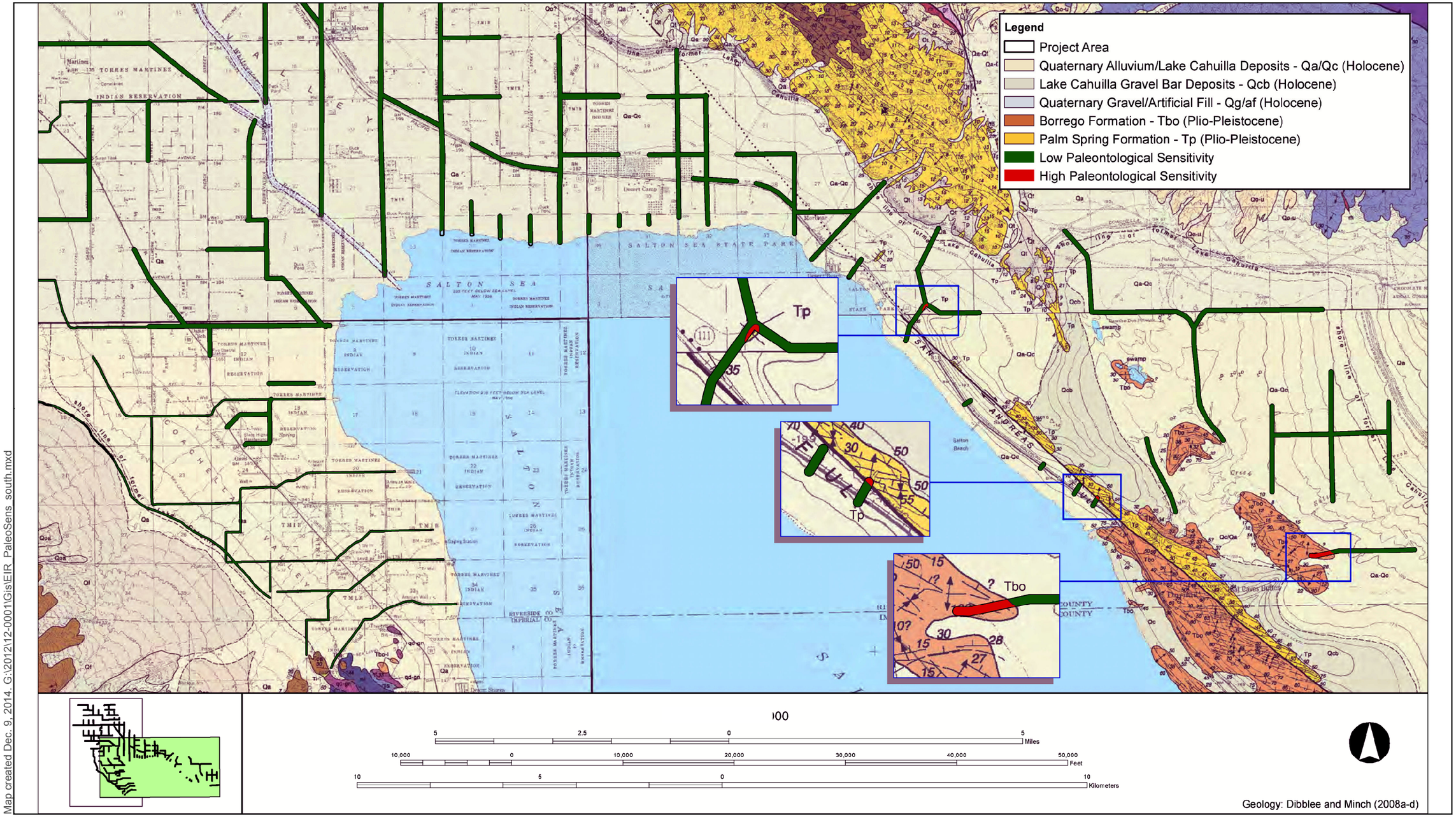
Source: Applied Earthworks, *Paleontological Resource Assessment for the Master Drainage Plan and Programmatic Environmental Impact Report for the Coachella Valley Water District for the Region I-Oasis Area and Region II-Mecca/North Shore, Riverside and Imperial Counties, California*, November 2014, Table 6-2, p. 16.



Source: Applied Earthworks 2014

Figure 5.4-2a – Paleontological Sensitivity in the Plan Area

Eastern Coachella Valley Stormwater Master Plan



Map created Dec. 9, 2014. G:\2012\12-0001\Gis\EIR_PaleoSens_south.mxd

Source: Applied Earthworks 2014

Figure 5.4-2b – Paleontological Senstivity in the Plan Area

Eastern Coachella Valley Stormwater Master Plan

Therefore, because there is a high paleontological resource potential associated with the Palm Spring Formation and Borrego Formation and a low to high potential associated with the Quaternary surficial sediments, potential impacts to paleontological resources from implementing the Project are significant without mitigation. However, it should be noted that the location of the proposed Facilities are conceptual at this time, and the final location and type of Facility may change as more detailed information becomes available during the final design process. For example, the locations of underground utilities, new development patterns, right-of-way availability, or the results of subsequent focused biological surveys or cultural resource surveys may necessitate a shift in alignment or change in the location and type of Facility identified in the SMP. Mitigation measures **MM CR 4**~~,~~ and **MM CR 5**~~, and MM CR 6~~ are required to reduce potential impacts to paleontological resources by requiring a field reconnaissance survey, worker education, and a PRMP. The PRMP would include adequate protocol for monitoring and for resource discovery. Moreover, Holocene-age Lake Cahuilla deposits have a potential to yield paleontological resources, but as the UCMP database does not contain such deposit records, there is uncertainty if such deposits would or have yielded resources in the Project Area; therefore, with implementation of the PRMP such potential impacts would be reduced to less than significant. Therefore, with adherence to these measures, Project impacts to paleontological resources are anticipated to be **less than significant with mitigation incorporated**.

Threshold D: *Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074.*

CVWD initiated formal AB 52 consultation in January 2016 with written correspondence to the following list of local Native American tribes having previously requested to be consulted on CVWD projects (CVWD AB 52 letter dated January 4, 2016):

- *Agua Caliente Band of Cahuilla Indians*
- *Augustine Band of Cahuilla Indians*
- *Morongo Band of Mission Indians*
- *Soboba Band of Luiseño Indians*
- *Torres Martinez Desert Cahuilla Indians*
- *Twenty-Nine Palms Band of Mission Indians*

AB 52 provides guidance for consultation timelines and states that a response must be made within 30-days. A response should indicate to the lead agency a request to consult, and then the lead agency has 30-days to begin consultation with a tribe. To date, one (1) letter was received. The Soboba Band of Luiseño Indians stated in their letter that the tribe does not have specific concerns regarding known cultural resources in the specified areas that the project encompasses, but does request that the appropriate consultation continue to take place between concerned tribes, project proponents, and local agencies. Further, Soboba requested deferring to the Torres Martinez Desert Cahuilla Indians based on their closer proximity to the

project (Soboba Band of Luiseño Indians letter dated February 1, 2016 is provided in Appendix C.3 Cultural Resources).

Therefore, as future stormwater projects are initiated in the Master Plan area, CVWD would continue tribal outreach, such as consultation, cultural report preparation and field survey, including tribal monitoring as requested or determined appropriate in project-specific environmental review. For these reasons, and with adherence to mitigation measures **MM CR 1, MM CR2,** and **MM CR 3**, the implementation of the Master Plan is **less than significant with mitigation incorporated** and would not result in an adverse change to tribal resources.

5.4.6 Mitigation Measures

An EIR is required to describe feasible mitigation measures that could minimize significant adverse impacts (State *CEQA Guidelines* Section 15126.4).

MM CR 1 Cultural Resources Survey: Prior to final design approval for a Facility(ies), the Facility(ies) area shall be surveyed for historical and archaeological resources and properly assess unevaluated resources to determine if they are NRHP or CRHR-eligible or ineligible. The final design shall avoid historical and archaeological resources that are recommended eligible for the NRHP, CRHR, or local designation, as is reasonably feasible. As part of this survey, the agency or developer implementing the Facility(ies) shall consult with the Native American Heritage Commission (NAHC) and Native American tribal representatives identified by NAHC in order to identify potentially sacred sites and/or resources that may be impacted by the Facility(ies).

MM CR 2 Cultural Resources Awareness Training: Prior to any ground-disturbing activities within areas identified by the surveys completed in mitigation measure **MM CR 1** as having a potential to impact historical or archaeological resource(s), all non-archaeological construction personnel shall be briefed by a trained archaeologist on the importance of, and the legal basis for, the protection of significant archaeological resources. Personnel shall be given a training brochure regarding identification of historical and archaeological resources and reporting finds. The training may be conducted concurrent with other environmental training (e.g., paleontological resources awareness training required by mitigation measure **MM CR 5**, safety training, etc.). Construction personnel will receive the training, even if not present at the start of construction. The Cultural Resources Awareness Training program may involve a brief oral presentation, video recording, and/or brochure/handout.

MM CR 3 Discovery of Cultural Resource: Should any cultural and/or archaeological resources be discovered during construction of a proposed Facility, construction activities in the vicinity of the discovery shall immediately halt and construction shall be moved to other parts of the subject Facility footprint or alignment. A qualified archaeologist shall be retained by the proponent (or designee) of such Facility to determine the significance of the resource(s). If the find is determined to be a historical or unique archaeological resource, as defined in Section 15064.5 of the California Code of Regulations (State *CEQA Guidelines*), avoidance or

other appropriate measures as recommended by the archaeologist shall be implemented. Site records or site record updates (as appropriate) shall be prepared and submitted to the Eastern Information Center as a permanent record of the discovery.

MM CR 4 Paleontological Resource Survey: Prior to any ground-disturbing activities, a qualified paleontologist ("Project Paleontologist") shall be retained to conduct a field reconnaissance survey of the Facility(ies) being implemented. The purpose of the field survey shall be to visually inspect the ground surface for exposed fossils or traces thereof and to evaluate geologic exposures for their potential to contain preserved fossil material at the subsurface. All geologic units within the Master Plan Area shall be subject to a pedestrian walkover, excluding those that have been visibly disturbed or are obscured by developments (e.g., existing roadway, canal, building, heavy vegetation, etc.). Particular attention shall be paid to rock outcrops, both within and in the vicinity of the Facility(ies) being implemented, and any areas where geologic sediments are well exposed. This survey may be conducted concurrently with mitigation measure **MM CR 1**.

All fossil occurrences observed during the course of fieldwork, significant or not, shall be adequately documented and recorded at the time of discovery. The data collected for each fossil occurrence shall include, at minimum, the following information: Universal Transverse Mercator (UTM) coordinates, approximate elevation, description of taxa, lithologic description, and stratigraphic context (if known). In addition, each locality shall be photographically documented with a digital camera. If feasible, all significant or potentially significant fossils shall be collected at the time they are observed in the field with prior consent of the landowner(s). If the fossil discovery is too large to collect during the survey (e.g., a whale skeleton or bone bed) and requires a large-scale salvage effort, then it shall be documented and a mitigation strategy shall be devised pursuant to guidelines set forth in *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (2010) by the Society of Vertebrate Paleontology.

MM CR 5 Paleontological Resources Awareness Training: Prior to any ground-disturbing activities within areas identified by the surveys completed in mitigation measure **MM CR 4** as having a potential to impact paleontological resource(s), all field personnel shall receive a worker's environmental awareness training module on paleontological resources. The training shall provide a description of the fossil resources that may be encountered in the area of the Facility(ies) being implemented, outline steps to follow in the event that a fossil discovery is made, and provide contact information for the Project Paleontologist and on-site monitor(s). The training shall be developed by the Project Paleontologist and may be conducted concurrent with other environmental training (e.g., historical and archaeological resources awareness training required by mitigation measure **MM CR 2**, safety training, etc.).

5.4.7 Project-Specific Environmental Effects after Mitigation Measures are Implemented

Impacts related to cultural resources may be potentially significant within or adjacent to proposed Facilities. However, the Master Plan is intended to be used as a planning guide for the conceptual location and sizing of regional drainage facilities (Facilities) that would be constructed by CVWD, City of Coachella, and/or developers over time as development takes place within the area, the final location and sizing of the Facility(ies) would be determined at a later time and subject to further Facility-specific review. With these mitigation measures in place, potential impacts to historic and/or archaeological resources would be addressed and any resource-specific mitigation would be implemented as is required herein, and as a result, potential impacts from the implementation of the Master Plan would be less than significant.

5.4.8 Cumulative Environmental Effects after Mitigation Measures are Implemented

A cumulatively considerable impact would occur if the Project, in conjunction with other future projects, results in a significant impact to cultural resources. Cultural resource impacts are site-specific with respect to any given resource. Impacts that may be considered cumulative simply relate to the loss of cultural resources, in general, over time throughout the region. The geographic scope for cumulative impacts to cultural resources is the Master Plan Area, which includes portions of unincorporated Riverside and Imperial counties ~~and~~ portions of the city ~~Cities~~ of Coachella ~~and La Quinta~~.

Because the Master Plan does not propose any changes in land uses within the Plan Area, this Recirculated Draft PEIR utilizes the "summary of projections" approach in the cumulative analysis. State *CEQA Guidelines* Section 15130(d) states that:

> Previously approved land use documents such as general plans, specific plans, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impact analysis is required when a project is consistent with a general, specific, master, or comparable programmatic plan where the lead agency determines that the regional or area-wide cumulative impacts of the proposed project have been adequately addressed, as defined in Section 15152(f), in a certified EIR for that plan.

Additionally, if a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact. (State *CEQA Guidelines* Section 15130(e).)

Riverside County

Future development within the unincorporated area of Riverside County consistent with the 2015 Riverside County General Plan build-out within the Master Plan area would contribute to a variety of incremental impacts related to cultural resources. The regulatory and mitigation measures presented in EIR No. 521 were deemed sufficient to ensure that a project's individual cultural impacts can be avoided, reduced or minimized to less than significant levels. Cumulatively considerable impacts would occur as Riverside County grows pursuant to the General Plan. The removal or destruction of cultural resources and the cumulative effect of their disturbance cannot be guaranteed to be reduced to less than significant levels even with mitigation. This determination is due to the unknown nature of the extent, location and cultural significance of such resources. For these reasons, build-out of the General Plan would contribute substantially to significant cumulative impacts to previously unknown historical, archeological, cultural and paleontological resources, and impacts therefore, would be significant and unavoidable. (2015 RCGP EIR 521, p. 5-107.) However, because the proposed Project would respond to future development and not be a driver of future development, the Project's contribution of cumulative impacts to cultural resources in Riverside County is not considered cumulative considerable.

Imperial County

Significant impacts to prehistoric cultural resources may result if development occurs on existing undeveloped land in Imperial County, particularly in areas that have been identified as very sensitive, moderately sensitive, or lightly sensitive. These areas especially include New and Alamo rivers, areas around the ancient Lake Cahuilla shoreline, the southwestern-most portion of Imperial County around Ocotillo, and the eastern-most portion of Imperial County. The General Plan EIR requires that development in areas identified with either a very, moderately, or lightly sensitive rating are required to conduct a cultural resource study. Significant impacts to historic cultural resources could occur in both previously developed and undeveloped areas, although few historic resources are known to exist in intensively farmed areas. Per the General Plan EIR, project applicants should seek to identify any potentially significant historical resources that may exist in undeveloped areas proposed for development through consultation with Imperial County Historical Society and the Southeast Information Center at Imperial Valley College Museum. A qualified archaeologist shall be consulted to evaluate the resource(s), if applicable. Therefore, the Imperial County General Plan EIR determined impacts to cultural resources would be less than significant with mitigation. (ICGP EIR, pp. III-152 – III-153.)

City of Coachella

There are a number of sensitive areas and potential impacts under the development per the Coachella General Plan. Combined impacts on historical, paleontological, archaeological and human remains could result in a negative impact on the combined cultural resources within the City of Coachella and its Sphere of Influence. Although there are potential cumulative impacts under the Coachella General Plan, there are equally as many regulatory strategies to preserve

the finite cultural resources within the City of Coachella and its Sphere of Influence. Thus, following the development strategies and implementing the policies of the Coachella General Plan would reduce cumulative impacts. Potential cumulative impacts are mitigated by federal, state, regional, and local actions, regulations, and policies. Based on the impact analysis and regulatory framework, cumulative impacts to historic, archaeological, and paleontological resources from General Plan build-out would be less than significant, and impacts to disturbing human remains would be less than significant with mitigation. (CGP EIR, p. 4.4-23.)

~~City of La Quinta~~

~~The City of La Quinta and its Sphere of Influence contains culturally sensitive areas. Based on past cultural surveys, a number of historic and archaeological sites associated with the Native Americans have been identified within City limits and to a lesser extent in the Sphere of Influence. The region is known to contain sensitive paleontological resources, including fossil deposits near the ancient Lake Cahuilla. The potential exists for discovering additional culturally important sites in the future. New development proposed by the LA Quinta General Plan would potentially result in the disturbance or destruction of cultural resources due to grading, site excavation, construction, and urbanization. (LQGP EIR, p. VIII-6.)~~

~~Policies and programs within the La Quinta General Plan are intended to protect and preserve cultural resources within the City and its Sphere of Influence. Cultural resource surveys would be required for proposed projects that have the potential to disturb or destroy sensitive resources. Mitigation measures proposed in the La Quinta General Plan EIR would also assure protection of cultural resources. As such, no significant cumulative impacts to cultural resources are expected to result from implementation of the General Plan. Therefore, impacts would be less than significant with mitigation. (LQGP EIR, p. VIII-6.)~~

As noted above, development per the respective jurisdictions' general plans within the Master Plan Area would result in less than significant cumulative impacts in Imperial County and the city of ~~cities of~~ Coachella ~~and La Quinta~~ with adherence to the mitigation measures contained within the applicable general plans' EIR. Further, while build-out of the Riverside County General Plan was determined to result in a cumulatively significant and unavoidable impact, the General Plan EIR also recognizes that adherence to regulatory requirements and the EIR's mitigation measures are sufficient to ensure a project's individual cultural impacts can be avoided, reduced, or minimized to less than significant levels.

Mitigation would occur at the Facility-level, by implementing the cultural resource protection policies of the applicable General Plans, and through implementation of Facility-specific mitigation measures. The mitigation measures for cultural resources were determined to reduce potential impacts to a less than significant level. Therefore, with implementation of mitigation measures **MM CR 1** through **MM CR 5**, the Project's contribution to potential cumulative impacts to cultural resources would be **less than significant with mitigation incorporated**.

5.4.9 References

The following references were used in the preparation of this section of the Recirculated Draft PEIR:

2015 RCGP — Riverside County, *General Plan, Multipurpose Open Space Element*, December 8, 2015. (Available at http://planning.rctlma.org/Portals/0/genplan/general_plan_2016/elements/Ch05_MOSE_120815.pdf?ver=2016-04-01-100801-367, accessed December 31, 2015.)

2015 RCGP EIR 521 — Riverside County, *General Plan Environmental Impact Report No. 521*, Recirculated Public Review Draft, February 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan/GeneralPlanAmendmentNo960EIRNo521CAPFebruary2015/DraftEnvironmentalImpactReportNo521.aspx, accessed December 31, 2015.)

AE — Applied Earthworks, Inc., *Paleontological Resource Assessment for the Master Drainage Plan and Programmatic Environmental Impact Report for the Coachella Valley Water District for the Region I-Oasis Area and Region II-Mecca/North Shore, Riverside and Imperial Counties, California*, November 2014. (Appendix C.2)

CGP — City of Coachella, *General Plan Update 2035*, Adopted April 22, 2015. (Available at http://www.coachella.org/Home/ShowDocument?id=3221, accessed September 11, 2015.)

CGP EIR — City of Coachella, *General Plan Update Final EIR*, certified April 22, 2015. (Available at http://cityofcoachellageneralplanupdate.weebly.com/final-eir.html, accessed September 11, 2015.)

ICGP Open Space Element — Imperial County, *General Plan Conservation and Open Space Element*, 1993. (Available at http://www.icpds.com/CMS/Media/Conservation-and-Open-Space-Element.pdf, accessed December 12, 2014.)

~~LQGP EIR~~ — ~~City of La Quinta, *Environmental Impact Report for the City of La Quinta General Plan*, February 19, 2013. (Available at City of La Quinta Community Development Department.)~~

NPS — National Park Service, *National Register Bulletin, How to Apply the National Register Criteria for Evaluation.* (Available at http://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_2.htm, accessed February 11, 2015.)

TT — Tetra Tech, Inc., *Class I Cultural Resources Inventory of the Salton Sea Region*, August 2002. (Appendix C.1)

5.5 Hydrology and Water Quality

Note to reader: Text added to this Recirculated Draft PEIR is shown in double underline (example text) and deleted text is shown in strikethrough (~~example text~~.)

The focus of this section is to address, at a program level, potential impacts related to hydrology and water quality from construction and operation of the Facilities identified in the Master Plan.

As discussed below and in the Initial Study prepared for the Project (Appendix A), the Project's potential to result in a substantial adverse effect, either directly or indirectly to hydrology and water quality would be less than significant with mitigation incorporated.

5.5.1 Setting

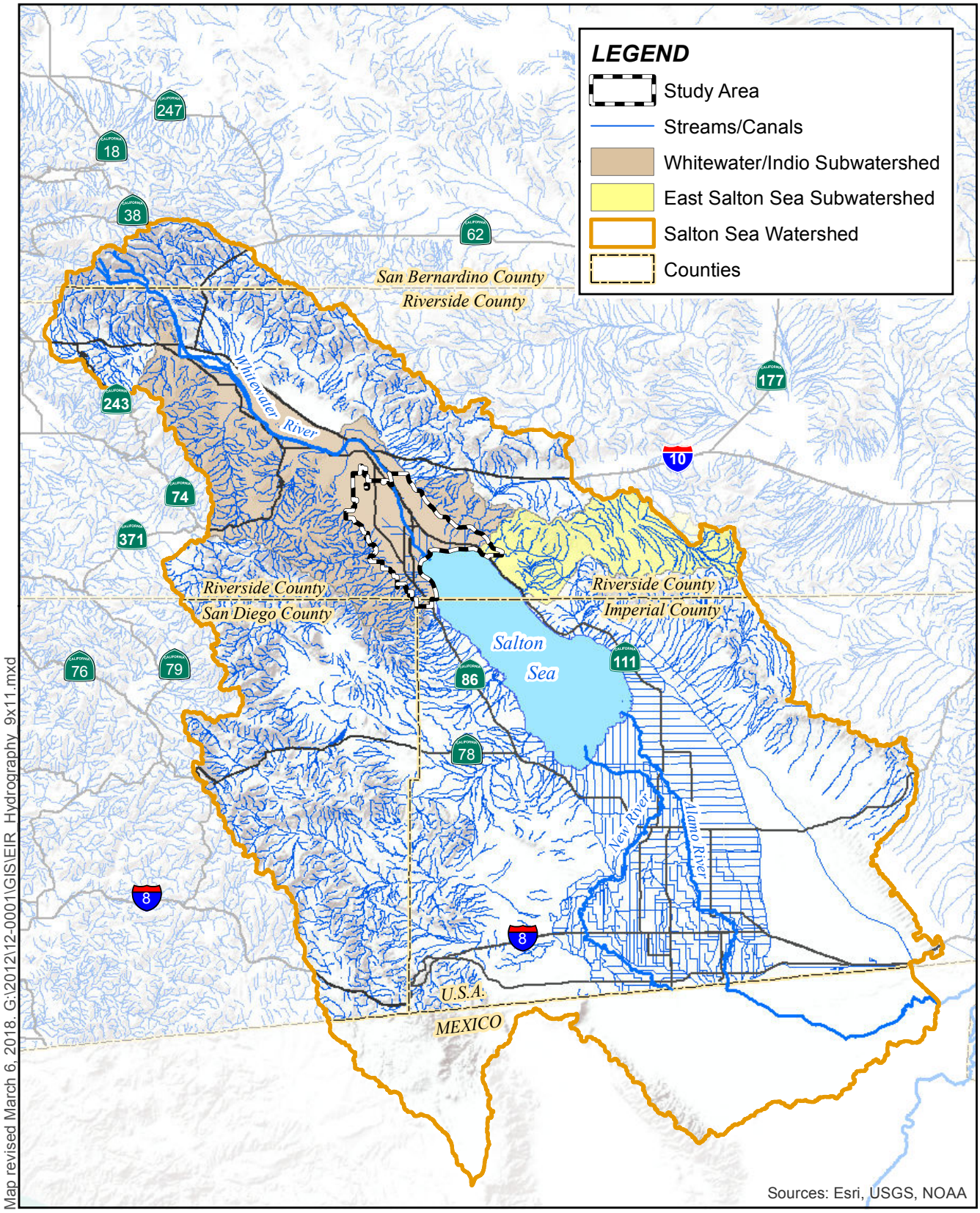
The Master Plan Area is located entirely within the Salton Sea Watershed. This watershed encompasses approximately 8,000 square miles from San Bernardino County in the north to the Mexicali Valley in the Republic of Mexico to the south, and primarily consists of a generally flat valley floor. The Salton Sea lies at the lowest point in the watershed and collects runoff and agricultural drainage from most of Imperial County, much of Riverside County, small portions of San Bernardino and San Diego counties, as well as the northern portion of the Mexicali Valley. The principal sources of inflow to the Salton Sea include the Alamo River, New River, Coachella Valley Stormwater Channel (CVSC)/Whitewater River, direct surface sheet-flow drainage from Imperial and Coachella valleys, subsurface inflow from groundwater, San Felipe Creek, Salt Creek, other small local drainages, and direct precipitation on the Salton Sea.[1] The historical total inflow (average over 1950-2002) to the Salton Sea is estimated to be approximately 1.3 million acre-feet per year. Imperial Valley accounts for over 75 percent of the historical inflow to the Salton Sea, the Mexicali and Coachella valleys each contribute nearly 10 percent, and the local watershed and direct precipitation contribute approximately 5 percent. (DWR, p. 1)

The majority of the Master Plan Area is located within the Whitewater River Subwatershed of the Salton Sea Watershed.[2] A small portion of the Master Plan Facilities in the Mecca/North Shore Area is within the East Salton Sea Subwatershed of the Salton Sea Watershed. The proposed Facilities Line K01 and K01-01 are within the East Salton Sea Subwatershed while the remainder of the Facilities and Plan Area are located in the Lower Whitewater River Subwatershed. **Figure 5.5-1 – Hydrology within the ~~Master~~ Plan Area** shows the boundaries of the Master Plan Area and the greater Salton Sea Watershed, the Whitewater River

[1] CVSC is an unlined, engineered extension of Whitewater River, which serves agricultural irrigation return water and conveys treated wastewater, urban runoff, and stormwater runoff to the Salton Sea.

[2] Also referred to as the Whitewater River (Indio) Subbasin (east portion).

Subwatershed, and the East Salton Sea Subwatershed, as well as streams and canals in the region.



Map revised March 6, 2018. G:\2012\12-0001\GIS\EIR_Hydrography_9x11.mxd

Sources: Salton Sea Authority, 2009; USGS/NHD, 2015; ESRI.

Figure 5.5-1 - Hydrology within the Plan Area

Eastern Coachella Valley Stormwater Master Plan

0 10 20 30 Miles

The Whitewater River and East Salton Sea subwatersheds are generally situated in Riverside County within the Coachella Valley Planning Area of the Colorado River Basin Regional Water Quality Control Board (RWQCB). The subwatersheds are generally defined by the boundaries of the Whitewater Hydrologic Unit and the East Salton Sea Hydrologic Unit, and cover approximately 1,920 square miles. The San Bernardino Mountains and the Little San Bernardino Mountains form the northern and eastern boundaries; the San Jacinto and Santa Rosa Mountains and the Salton Sea shoreline form the western and southern boundaries (Colorado River Basin Plan, p. 1-11). The subwatersheds consist of sparsely populated mountains, desert [open space], agricultural lands, and urbanized areas principally located on the valley floor between the cities of Banning and Indio along Interstate 10, and from the City of Palm Springs to the City of Coachella along State Route 111. (CDM, p. ES-1.)

In relation to groundwater basins, the Master Plan overlies two subareas of the Whitewater River (or Indio) Subbasin (Basin No. 7-21.01): Thermal and Oasis. The Thermal Subarea makes up much of the valley floor north of the Salton Sea, bounded to the east by the Little San Bernardino Mountains and by the Oasis Subarea to the west. The Thermal Subarea is not considered conducive to infiltration due to the subsurface soil conditions of thick silt and clay layers that tend to restrict groundwater recharge. The Oasis Subarea is located along the eastern toe of the Santa Rosa Mountains and does not exhibit such limitations and may allow for effective stormwater recharge (CVWD 2015 UWMP, p. 6-5).

Within the Coachella Valley area, average annual precipitation ranges from less than 3 inches in the valley to 40 inches in the San Bernardino Mountains. Seasonal snows fall on the higher elevations in the San Bernardino and San Jacinto mountains. In the valley, precipitation from summer thunderstorms often exceeds that of winter. Runoff resulting from rains and snowmelt at the higher elevations is a source of groundwater replenishment. Perennial streams include the upper reaches of the San Gorgonio and Whitewater rivers, and Palm Canyon Creek, Tahquitz Creek, Snow Creek, Deep Canyon Creek, Chino Creek, and Andreas Creek. (Colorado River Basin Plan, p. 1-11.)

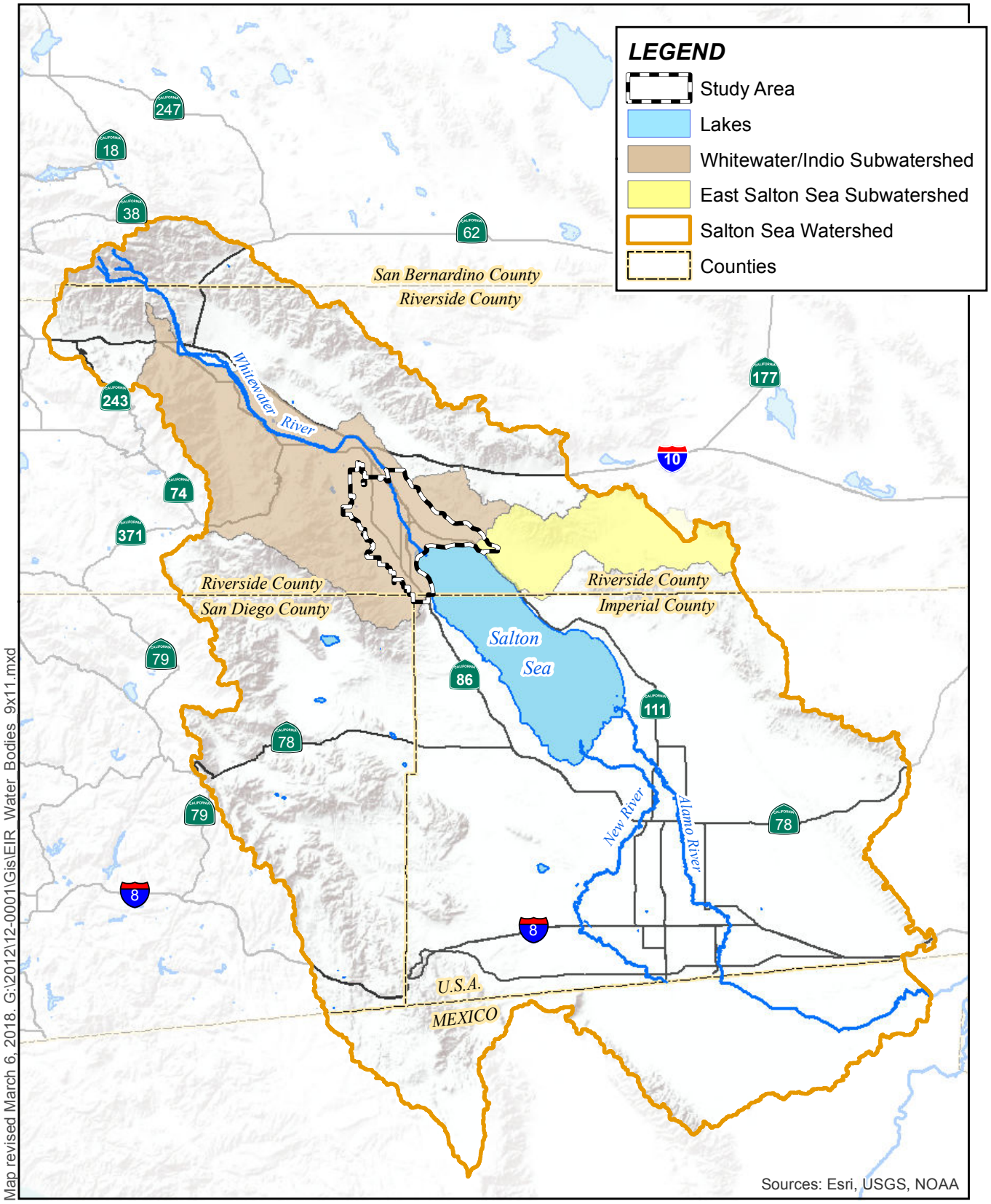
5.5.1.1 Surface Waters

The 50-mile long Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel is the largest surface water feature within the Master Plan area. The Whitewater River is a natural water course that originates from the southerly and easterly slopes of the San Bernardino Mountains, at the western portion of the Coachella Valley. Several of its tributaries originate from the easterly slopes of the San Jacinto and Santa Rosa Mountains. The Whitewater River eventually discharges to the Salton Sea through the man-made extension of the Whitewater River stormwater channel system known as the Coachella Valley Stormwater Channel (CVSC). The CVSC is the main drainage channel for the East Valley. It is a largely unlined earthen channel that extends 17 miles southeast from the City of La Quinta, through the cities of Indio and Coachella, and the agricultural communities of Thermal and Mecca down to the north end of the Salton Sea. The drainage area of the Whitewater River Stormwater

Channel/Coachella Valley Stormwater Channel is approximately 1,500 square miles at the Salton Sea. See **Figure 5.5-2 – Regional Surface Water Bodies.**

~~Just north of the Master Plan area, the Coachella Canal splits into two segments; the Coachella Canal and Levee on the west side of the valley, and the Coachella Canal and East Dike on the east side of the valley. The Canal and Levee on the west side terminate at Lake Cahuilla, which provides regulatory storage of irrigation water and impounds storm waters from the mountains to the west. It also serves as a temporary reservoir for La Quinta area floodwaters. Lake Cahuilla is outside of, and immediately adjacent to the Master Plan Area boundary in the City of La Quinta.~~

Remainder of page intentionally blank.



Map revised March 6, 2018. G:\2012\12-0001\Gis\EIR_Water_Bodies_9x11.mxd

Sources: Salton Sea Authority, 2009; USGS/NHD, 2018; ESRI.

Figure 5.5-2 - Regional Surface Water Bodies

Eastern Coachella Valley Stormwater Master Plan

0 10 20 30 Miles

Existing drainage facilities in the Master Plan Area are currently limited and consist primarily of roadside ditches and agricultural drains generally flowing to the CVSC and Salton Sea, which are inadequate to handle runoff generated in the area. With the exception of the CVSC; USBR Dike Nos. 2 and 4, which run along the northwestern boundary of the Master Plan Area generally from Avenue 58 south to Avenue 65 near the City of La Quinta; the Avenue 64 Evacuation Channel; and the East Side Dike System, which are designed to protect the Coachella Canal along the eastern boundary of the Master Plan Area, there are no existing major drainage facilities in the Master Plan Area. During periods of runoff, the floodwaters, silt and other debris impact a wide area of agricultural land and developed communities, which results in property damage and flooded roadways. These existing drainage features generally convey the flow of runoff to CVSC and eventually to the Salton Sea.

5.5.1.2 Water Quality

Water quality in this region is regulated by the State Water Resources Control Board (SWRCB); under the jurisdiction of the Colorado River Regional Water Quality Control Board (CRWQCB) (Region 7). The Colorado River *Water Quality Control Plan* (aka "Basin Plan") establishes water quality standards for all the ground and surface waters of the region. The Colorado River Region encompasses approximately 20,000 square miles and includes all of Imperial County and portions of San Bernardino, Riverside, and San Diego Counties. The Colorado River Region (the Region) includes the Salton Trough, which contains the Salton Sea and the Coachella and Imperial Valleys. The major hydrologic feature in the Region is the Colorado River. For planning purposes the Region has been divided into seven major planning areas: Lucerne Valley, Hayfield, Coachella Valley, Anza-Borrego, Imperial Valley, Salton Sea, and East Colorado River Basin. The Project site is located within the Coachella Valley Planning Area, with the majority of the Master Plan Area within the Whitewater Subwatershed (see **Figures 5.5-1 and 5.5-2**). (Colorado River Basin Plan, pp. 1-8–1-9, 1-11, 1-13–1-15.)

The CVSC, Alamo River, New River, and Salton Sea have been identified by the SWRCB pursuant to Section 303(d) of the Clean Water Act (CWA) as having water quality impairments. The 303(d) List includes potential sources of the pollutants and target date for completion of the Total Maximum Daily Load (TMDL) by the Colorado RWQCB. A TMDL to address the impairment is required for each pollutant on the 303(d) List, as a means to attain and maintain water quality standards.

According to the current (2012) Section 303(d) List (approved by EPA in 2015), the CVSC is impaired due to:

- Pesticides (dichlorodiphenyltrichloroethane (DDT), dieldrin, and toxaphene - sources unknown)[3],

[3] The listings for DDT, dieldrin, and toxaphene only apply to a 2 mile area of the CVSC from Lincoln Street to the Salton Sea.

- Pathogens (source unknown),[4] and
- Polychlorinated biphenyls (PCBs – source unknown).[5]

The Salton Sea is listed as impaired due to:

- Arsenic (source unknown),
- Salinity (sources include agricultural return flows, out-of-state source, and point source),[6]
- Pesticides (chlorpyrifos and DDT – sources unknown),
- Enterococcus (source unknown),
- Nutrients (sources from agricultural return flows, major industrial point source, and out-of-state source), and
- Selenium (source unknown).

Surface water quality may be impacted by both point source and non-point source discharges of pollutants. Common examples of point source discharges include wastewater treatment plants and factories, which are regulated through National Pollutant Discharge Elimination System (NPDES) permits. Non-point source pollution, on the other hand, is derived from many diffuse sources like stormwater, snowmelt, or irrigation water. Urban areas and agriculture are both considered to substantially contribute to non-point source pollution in surface waters. Pollutants commonly associated with agricultural areas include fertilizers, pesticides, fecal coliform, salts, and sediments. Pollutants commonly associated with urban areas include pathogens, organic compounds, sediment, oil and grease, metals, trash and debris, and nutrients.

5.5.1.3 Status of Surrounding Water Bodies

The CRWQCB sets water quality standards for all ground and surface waters within the Colorado River Region in the Basin Plan. Water quality standards, as defined in the CWA, consists of the combination of two components: the beneficial uses of specific water bodies, and the levels (either numeric or narrative) of water quality that must be met and maintained to protect those uses (i.e., water quality objectives). Beneficial uses and water quality objectives must also comply with the state's anti-degradation policy (State Board Resolution No. 68-16).

Beneficial uses consist of all the various ways that water can be used for the benefit of people and/or wildlife. Thirteen beneficial uses are recognized within the Region. Eleven beneficial uses have been designated for surface water bodies in the vicinity of the Master Plan Area as

[4] This listing for pathogens only applies to a 17 mile area of the CVSC from Dillon Road to the Salton Sea.

[5] This listing for PCBs only applies to a 2 mile area of the CVSC from Lincoln Street to the Salton Sea.

[6] According to the 303(d) list, "TMDL development will not be effective in addressing this problem [salinity], which will require an engineering solution with federal, local, and state cooperation." (p. 6).

summarized in **Table 5.5-A – Beneficial Uses of Surface Waters in Proximity to the Master Plan Area**.

Table 5.5-A – Beneficial Uses of Surface Waters in Proximity to the Master Plan Area

Receiving Waters	303(d) List Impairments	Designated Beneficial Uses
Coachella Canal	None	MUN[P], AGR, GWR, REC1[1], REC2[1], WARM, WILD, RARE[2]
Coachella Valley Drains	None	FRSH, REC1[1], REC2[1], WARM, WILD, RARE[2]
Coachella Valley Stormwater Channel (CVSC)	DDT, dieldrin, toxaphene, pathogens, PCB.	FRSH, REC1[1], REC2[1], WARM, WILD, RARE[2]
Salton Sea	Arsenic, salinity, chlorpyrifos, DDT, enterococcus, nutrients, selenium.	AQUA, IND[P] REC1, REC2, WARM, WILD, RARE

Definitions of Beneficial Uses	
AGR	Agricultural supply waters are used for farming, horticulture. Uses include, but are not limited to, irrigation, stock watering, or support of vegetation for range grazing.
AQUA	Aquaculture waters are used for aquaculture or mariculture operations, Uses include, but are not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.
FRSH	Freshwater replenishment waters are used for natural or artificial maintenance of surface water quantity or quality.
GWR	Ground Water Recharge waters are used for natural or artificial recharge of groundwater for purposes of future extraction, maintenance of water quality, or halting salt water intrusion in fresh water aquifers.
IND	Industrial service supply waters are used for industrial activities that do not depend primarily on water quality. Uses include, but are not limited to, mining, cooling, water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.
MUN	Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
RARE	Rare, threatened, or endangered species waters support the habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.
REC1	Water contact recreation waters are used for recreational activities involving body contact with water where ingestion of water is reasonably possible. Uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, and use of natural hot springs.
REC2	Non-contact water recreation waters are used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, and camping, boating, sightseeing, or aesthetic enjoyment in conjunction of the above activities.

Definitions of Beneficial Uses	
WARM	Warm freshwater habitat waters support warm water ecosystems that include, but are not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
WILD	Wildlife habitat waters support terrestrial ecosystems that include, but are not limited to, the preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g. mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

Notes:

[P] Potential use. Determined on a case-by-case basis as necessary in accordance with the "Sources of Drinking Water Policy" (Basin Plan, p. 2-12).

[1] Unauthorized Use.

[2] Rare, endangered, or threatened wildlife exists in or utilizes some of these waterway(s). If the RARE beneficial use may be affected by a water quality control decision, responsibility for substantiation of the existence of rare, endangered, or threatened species on a case-by-case basis is upon the California Department of Fish and Game on its own initiative and/or at the request of the Regional Board; and such substantiation must be provided within a reasonable time frame as approved by the Regional Board (Basin Plan, p. 2-12).

Sources: Colorado River Basin Plan Chapter 2 – Beneficial Uses, (Available at http://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/docs/bp032014/bp_chapter2.pdf").

303(d) List, (Available at : http://waterboards.ca.gov/coloradoriver/water_issues/programs/tmdl/docs/2012_303dlist/attch_1.pdf)

All listed water quality objectives governing water quality in inland surface waters are discussed in the Colorado River Basin Plan; however, only water quality objectives that are most likely to be relevant to the proposed Master Plan are listed in **Table 5.5-B – Applicable Water Quality Objectives**. Water quality standards are attained when designated beneficial uses are achieved and water quality objectives are being met. The regulatory program of the CRWQCB is designed to minimize and control pollutant discharges to surface waters within the Region, largely through permitting, such that water quality standards are effectively attained.

Table 5.5-B – Applicable General Surface Water Objectives

Aesthetic Qualities
All waters shall be free from substances attributable to wastewater of domestic or industrial origin or other discharges which adversely affect beneficial uses not limited to: settling to form objectionable deposits; floating as debris, scum, grease, oil, wax, or other matter that may cause nuisances; and producing objectionable color, odor, taste, or turbidity.
Tainting Substances
Water shall be free of unnatural materials which individually or in combination produce undesirable flavors in the edible portions of aquatic organisms.
Toxicity
All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or indigenous aquatic life.

Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, 96-hour bioassay or bioassays of appropriate duration or other appropriate methods as specified by the Regional Board. Effluent limits based upon bioassays of effluent will be prescribed where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.

Temperature

The natural receiving water temperature of surface waters shall not be altered by discharges of wastewater unless it can be demonstrated to the satisfaction of the Colorado River Regional Board that such alteration in temperature does not adversely affect beneficial uses.

pH

pH shall range from 6.0-9.0. Discharges shall not cause any changes in pH detrimental to beneficial water uses.

Dissolved Oxygen

The dissolved oxygen concentration shall not be reduced below 5.0 mg/L for waters designated WARM.

Suspended Solids and Settleable Solids

Discharges of wastes or wastewater shall not contain suspended or settleable solids in concentrations which increase the turbidity of receiving waters, unless it can be demonstrated to the satisfaction of the Colorado River Regional Board that such alteration in turbidity does not adversely affect beneficial uses.

Total Dissolved Solids

Discharges of wastes or wastewater shall not increase the total dissolved solids content of receiving waters, unless it can be demonstrated to the satisfaction of the Colorado River Regional Board that such an increase in total dissolved solids does not adversely affect beneficial uses of receiving waters.

Additionally, any discharge, excepting discharges from agricultural sources, shall not cause concentration of total dissolved solids (TDS) in the Coachella Valley Drains to exceed an annual average of 2,000 mg/L and a maximum of 2,500 mg/L.

Bacteria

In waters designated for water contact recreation (REC I) or noncontact water recreation (REC II), the following bacterial objectives apply. Although the objectives are expressed as fecal coliforms, E. coli, and enterococci bacteria, they address pathogenic microorganisms in general (e.g., bacteria, viruses, and fungi).

Based on a statistically sufficient number of samples (generally not less than five samples equally spaced over a 30-day period), the geometric mean of the indicated bacterial densities should not exceed one or the other of the following:

	REC I	REC II
E. coli	126 per 100 ML	630 per 100 ML
enterococci	33 per 100 ML	165 per 100 ML

nor shall any sample exceed the following maximum:

	REC I	REC II
E. coli	400 per 100 ML	2,000 per 100 ML
enterococci	100 per 100 ML	500 per 100 ML

In addition to the objectives above, in waters designated for water contact recreation (REC I), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 MPN per 100 ML, nor shall more than ten percent of total samples during any 30-day period exceed 400 MPN per 100 ML.

Biostimulatory Substances

Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

Sediment

The suspended sediment load and suspended sediment discharge rate to surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

Turbidity

Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

Radioactivity

Radionuclides shall not be present in waters in concentrations which are deleterious to human, plant, animal or aquatic life or that result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal or aquatic life. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the limits specified in Tables 64442 and 64443 of Sections 64442 and 64443, respectively, of Title 22 of the California Code of Regulations, which are incorporated by reference into the Colorado River Basin Plan. This incorporation by reference is prospective, including future revisions to the incorporated provisions as the revisions take effect.

Chemical Constituents

No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in hazardous chemical concentrations found in bottom sediments or aquatic life. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) based upon drinking water standards specified in the following provisions of Title 22 of the California Code of Regulations, which are incorporated by reference into the Colorado River Basin Plan: Table 64431-A of Section 64431 (Inorganic Chemicals), Table 64444-A of Section 64444 (Organic Chemicals), and Table 64678-A of Section 64678 (Determination of Exceedances of Lead and Copper Action Levels). This incorporation is prospective, including future revisions to the incorporated provisions as the revisions take effect. The Colorado River Regional Board acknowledges that specific treatment requirements are imposed by state and federal drinking water regulations on the consumption of surface waters under specific circumstances. To protect all beneficial uses, the Regional Board may apply limits more stringent than MCLs.

Maximum Contaminant Levels (MCLs) for Organic and Inorganic Chemicals

Inorganic Chemical Constituents	MCL in mg/L
Arsenic	0.01
Barium	1.0
Cadmium	0.005
Chromium	0.05
Fluoride	2.0
Lead	0.015*
Mercury	0.002
Nitrate (as NO_3)	45.0
Nitrate + Nitrite (sum of nitrogen)	10.0

Selenium	0.05
Silver	0.10
Organic Chemical Constituents	MCL in mg/L
(a) Chlorinated Hydrocarbons	
Endrin	0.002
Lindane	0.0002
Methoxychlor	0.03
Toxaphene	0.003
(b) Chlorinated Hydrocarbons	
2,4-D	0.07
2,4,5-TP Silvex	0.05

*Limit given is "Action Level." USEPA's Lead and Copper Rule requires drinking water systems to monitor for lead from customer taps. If ten percent of the homes tested have lead levels greater than the action level of 15 ppb, the system must increase monitoring, undertake additional efforts to control corrosion, and inform the public. For each monitoring period, a system (or the state) must calculate the lead level at the 90th percentile of homes monitored.

Pesticide Wastes
The discharge of pesticidal wastes from pesticide manufacturing processing or cleaning operations to any surface water is prohibited.

Source: California Regional Water Quality Control Board, Colorado River Basin – Region 7, *Water Quality Control Plan Colorado River Basin*, June 2006 update. Chapter 3 – Water Quality Objectives (Available at http://waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/docs/bp032014/bp_chapter3.pdf)

In addition to the above "general" surface water quality objectives, the Colorado River Basin Plan sets forth "specific" surface water objectives for the total dissolved solids (salinity) and selenium for the Salton Sea. With regard to salinity, the water quality objective for the Salton Sea is to reduce the present level of salinity and stabilize it at 35,000 mg/L, unless it can be demonstrated that a different level of salinity is optimal for the sustenance of its wild and aquatic life and achievement of this objective does not adversely affect the primary purpose of the Salton Sea, which is to receive and store agricultural drainage, seepage, and stormwaters.

The Colorado River Basin Plan notes that because of economic considerations 35,000 mg/L may not be realistically achievable, in which case any reduction in salinity that allows for survival of the Salton Sea's aquatic life shall be deemed an acceptable alternative or interim objective. The Colorado River Basin Plan further notes that because of the difficulty and predicted costliness of achieving salinity stabilization it is unreasonable for the CRWQCB to assume responsibility for implementation of this objective; thus, responsibility must be jointly shared by the all of the agencies with direct influence on the fate of the Salton Sea and there must be considerable public support in order to achieve this objective in order to obtain the necessary funding for salinity control. With regard to selenium, the Colorado River Basin Plan has established the following objectives for all surface waters that are tributary to the Salton Sea: a four-day average value that shall not exceed 0.005 mg/L and a one-hour average value that shall not exceed 0.02 mg/L. (Colorado River Basin Plan, pp. 3-83-9.)

The Colorado River Basin Plan also sets forth "specific" bacterial objectives to that portion of the CVSC that begins at the Valley Sanitary District Waste Water Treatment Plant in Coachella extending south for approximately 17 miles where it discharges into the Salton Sea at the northern shore. Based on a minimum of five samples equally spaced over a 30-day period the geometric mean of E. coli must not exceed 126 MPN per 100 ML for REC I waters and 630 MPN per 100 ML for REC II waters and no single sample shall exceed 400 Most Probable Number[7] (MPN) per 100 ML for REC I waters and 2,000 MPN per 100 ML for REC II waters. (Colorado River Basin Plan, p. 3-9.)

5.5.1.4 Stormwater Drainage

The 2015 population within CVWD's service area for urban water services is estimated at 216,900 persons. If development occurs consistent with the SCAG growth forecasts, then the urban water service population is projected to increase to 527,100 people by 2040. (CVWD 2015 UWMP, p. ES-2). Existing drainage facilities are limited in the Master Plan Area and consist primarily of agricultural drains and roadside ditches, which are inadequate to control the runoff generated in the area. Continued urbanization and development in the Master Plan Area would compound the drainage problems that are currently experienced due to the increase in runoff created by urbanization and the need for greater degree of flood protection. For stormwater drainage, the Master Plan proposes open channels, underground storm drains, debris basins, training levees, and improvements to the CVSC.

The general drainage pattern of the watershed for stormwater discharge in the Master Plan Area begins within the Santa Rosa, San Bernardino, and Little San Bernardino mountains that drain into the valley floor from Whitewater River and canyon mouths. Where drainage enters the Master Plan Area from canyon mouths, it generally sheet flows overland uncontrolled across natural and urban landscapes to the Whitewater River/CVSC, which flows to the Salton Sea, or to the Salton Sea directly due to the lack of existing drainage facilities with adequate flow capacities.

Several groundwater recharge facilities operate within CVWD that infiltrate stormwater runoff, imported water, or a combination of both.[8] Research suggests that stormwater infiltration may be feasible along the eastern toe of the Santa Rosa Mountains, specifically in the Oasis Subarea of the Whitewater River Subbasin (see CVWD 2015 UWMP, p. 6-15, and *Engineer's Report on Water Supply and Replenishment Assessment-Lower Whitewater River Subbasin Area of Benefit-2010-2011*, prepared by CVWD, 2010).

[7] The Most Probable Number (MPN) is defined as an index of the number of bacteria that, more probably than any other number, will give the results shown by the laboratory examination. (Basin Plan, p. 3-9)

[8] Whitewater River Spreading Area, Thomas E. Levy Groundwater Replenishment Facility, Mission Creek Recharge Facilities (with Desert Water Agency), and Martinez Canyon Pilot Recharge Facility. CVWD is near completion of the 1,000 Palms Flood Control Project that will also capture stormwater runoff.

In the Mecca/North Shore area, the majority of stormwater drainage from the nearby mountains is conveyed to the East Side Dike System which then conveys flow to the CVSC from its three detention channels. In the Mecca/North Shore area, there are several siphon under crossings where flood flows are able to cross underneath the Coachella Canal and East Side Dike System un-attenuated directly into the Mecca/North Shore area.

The major flood risk to the Oasis/Valley Floor area is alluvial fan flooding from nine canyon mouths from the Santa Rosa Mountains between Avenue 62 and the Riverside County and Imperial County line.

In addition, approximately 17 miles of the CVSC from Avenue 52 to the Salton Sea exists as an unlined earthen channel. Because of the limited channel capacity of the CVSC and the unstable/unlined channel banks, the CVSC poses a riverine flooding hazard. Major breakout of the CVSC can be expected during the 100-year and greater storms, creating up to a 2-mile wide floodplain through the Oasis/Valley Floor and Mecca/North Shore areas. Further, due to the undersized culverts crossing the Union Pacific Railroad (UPRR) and State Route 111, flows backup and can inundate the southwest portions of the Mecca/North Shore area near Lincoln Street/Hammond Road and 4th Street.

Existing and planned land uses within Plan Area include various densities of residential uses from very low to very high; commercial uses including general, office, tourist, and retail; light and heavy industrial uses; rural, open space, and conservation uses; and Indian lands (see **Figure 3-5 – General Plan Land Use Map**). The pollutants typically associated with different land uses are shown in **Table 5.5-C – Potential Pollutants Generated by Land Use Type**.

Table 5.5-C – Potential Pollutants Generated by Land Use Type

Type of Development (Land Use)	General Pollutant Categories						
	Sediment/Turbidity	Nutrients	Toxic Organic Compounds	Trash and Debris	Bacteria and Viruses (also pathogens)	Oil and Grease	Metals
Detached Residential Development	P	P	N	P	P	P	N
Attached Residential Development	P	P	N	P	P	P(2)	N
Commercial/Industrial Development	P	P(1)	P(5)	P	P(3)	P	P(6)
Automotive Repair Shops	N	N	P(4,5)	P	N	P	P
Restaurants	N	N	N	P	P	P	N
Hillside Development	P	P	N	P	P	P	N

Type of Development (Land Use)	General Pollutant Categories						
	Sediment/Turbidity	Nutrients	Toxic Organic Compounds	Trash and Debris	Bacteria and Viruses (also pathogens)	Oil and Grease	Metals
Parking Lots	P	P(1)	P(4)	P	P	P	P
Retail Gasoline Outlets	N	N	P(4)	P	N	P	P

Abbreviations: P = Potential N = Not potential

Notes:

(1) A potential pollutant if non-native landscaping exists or is proposed onsite; otherwise not expected.
(2) A potential pollutant if a project includes uncovered parking areas; otherwise not expected.
(3) A potential pollutant if a land use involves food or animal waste products.
(4) Specifically petroleum hydrocarbons.
(5) Specifically solvents; however, this pollutant is not expected at commercial office or commercial retail sites, unless said retail is vehicle related.
(6) A potential pollutant if the project includes outdoor storage or metal roofs; otherwise not expected.

Source: Riverside County Flood Control and Water Conservation District, *Riverside County Whitewater River Region Stormwater Quality Best Management Practice Design Handbook for Low Impact Development*, June 2014. Table 1. (Available at: http://rcflood.org/downloads/NPDES/Documents/WW_SWMP_WQMP/WWR_BMP_Design_Handbook_Jan2015.pdf

The pollutants listed in **Table 5.5-C** would be considered pollutants of concern for the proposed Project, and for which selection of stormwater BMPs would be based using the guidance material developed by the Riverside County Flood Control and Water Conservation District specifically for the Whitewater River Region. Treatment Control BMPs, as well as Site Design and Source Control BMPs, would be considered to reduce the pollutant load into receiving water bodies. A BMP selection matrix based on effectiveness of pollutant removal is provided in **Table 5.5-D**.

Remainder of page intentionally blank

Table 5.5-D – BMP Selection Matrix
Based Upon Pollutant of Concern Removal Efficiency

Pollutant of Concern	Landscape Swale[1]	Landscape Strip[1]	Biofiltration (with Underdrain)[1, 2]	Extended Detention Basin[1]	Sand Filter Basin[1]	Infiltration Basin[1]	Infiltration Trench[1]	Permeable Pavement[1]	Biofiltration (without Underdrain)[1,2]	Other BMPs Including Proprietary BMPs[3, 5]
Sediment/Turbidity	M	M	H	M	H	H	H	H	H	Varies by Product[4]
Nutrients	L/M	L/M	M	L/M	L/M	H	H	H	H	
Toxic Organic Compounds	M/H	M/H	M/H	L	L/M	H	H	H	H	
Trash and Debris	L	L	H	L/M	H	H	H	L	H	
Bacteria & Viruses (also pathogens)	L	M	H	L	M	H	H	H	H	
Oils and Grease	M	M	H	M	H	H	H	H	H	
Metals	M	M/H	M/H	L/M	M	H	H	H	H	

Abbreviations: L: Low removal efficiency M: Medium removal efficiency H: High removal efficiency

Notes:
(1) Expected performance when designed in accordance with the most current edition of the document *Riverside County, Whitewater River Region Stormwater Quality Best Management Practice Design Handbook for Low Impact Development.*
(2) Performance dependent upon design which includes implementation of thick vegetative cover. Local water conservation and/or landscaping requirements should be considered; approval is based on the discretion of the local land use authority.
(3) Includes proprietary storm water treatment devices as listed in the CASQA Stormwater Best Management Practices Handbooks, other storm water treatment BMPs not specifically listed (including proprietary filters, hydrodynamic separators, inserts, etc.), or newly developed/emerging storm water treatment technologies
(4) Expected performance should be based on evaluation of the unit processes used by the BMP and available BMP testing data. Approval is based on the discretion of the local land use authority.
(5) When used for primary treatment as opposed to pre-treatment, requires site-specific approval by the local land use authority.

Source: Riverside County Flood Control and Water Conservation District, *Riverside County Whitewater River Region Stormwater Quality Best Management Practice Design Handbook for Low Impact Development*, June 2014. Table 1. (Available at: http://rcflood.org/downloads/NPDES/Documents/WW_SWMP_WQMP/WWR_BMP_Design_Handbook_Jan2015.pdf

5.5.2 Comments Received in Response to the Notice of Preparation

No comments were received in response to the Notice of Preparation regarding hydrology and water quality.

5.5.3 Thresholds of Significance

The significance of potential impacts to hydrology and water quality were evaluated based on the State *CEQA Guidelines,* Appendix G criteria. Using these thresholds, the Project would be considered to have a significant impact if it were to affect the following thresholds: :

- (Threshold A) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; and/or

- (Threshold B) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

5.5.4 Related Regulations

5.5.4.1 Federal Regulations

Federal Emergency Management Agency

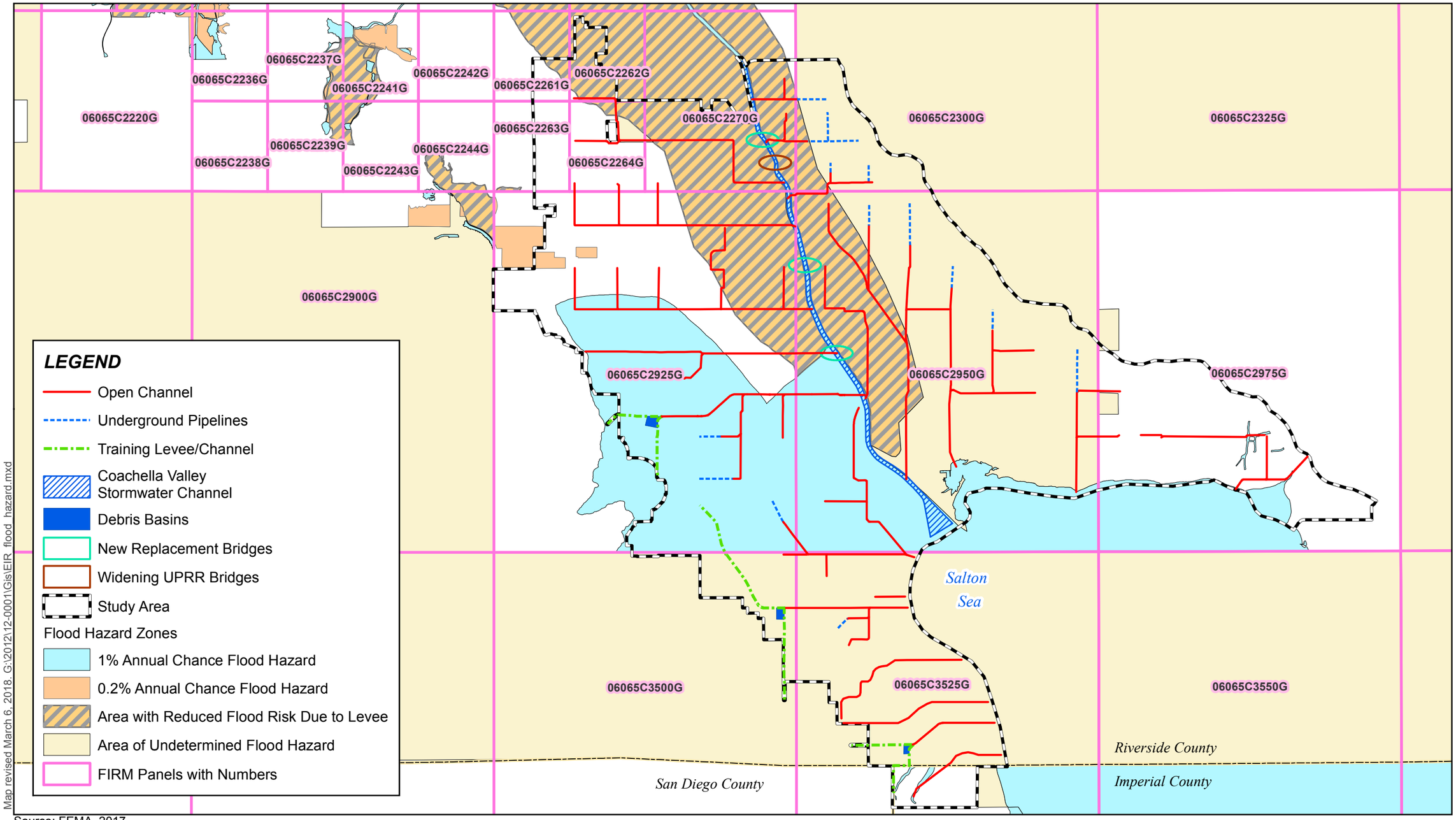
Riverside County, Imperial County, City of Coachella,[9] ~~City of La Quinta,~~ and City of Indio are all participants in the National Flood Insurance Program (NFIP), which is administered through the Federal Emergency Management Agency (FEMA). As a participant in the program, residents within these jurisdictions are eligible to purchase flood insurance. FEMA then requires each participating jurisdiction to adopt a floodplain management ordinance, which has the intent to: (i) ensure that any new construction and/or substantial improvement within a mapped floodplain are done in a manner that reduces damage to the public and property, and (ii) discourage any new development within floodways.

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 mandate FEMA to evaluate flood hazards. FEMA provides Flood Insurance Rate Maps (FIRMs) for local and regional planners to promote sound land use and floodplain development, identifying potential flood areas based on the current conditions. To delineate a FIRM, FEMA conducts engineering studies referred to as Flood Insurance Studies (FISs). The most recent FIS and FIRM were completed and published for the County of Riverside on August18, 2014. Using information gathered in these studies, FEMA engineers and cartographers delineate Special Flood Hazard Areas (SFHAs) on FIRMs.

Riverside County Ordinance No. 458 (discussed below under Local Regulations) sets forth the process by which Riverside County implements the NFIP.

According to FEMA, portions of the Master Plan Area fall within the 100-Year Floodplain (**Figure 5.5-3 – FEMA Flood Hazard Map)**, which is an area of land subject to potential inundation by a storm that has a one percent probability of occurring in any given year. Other areas of the fall within the 500-Year Floodplain (aka, 0.2% Annual Chance Flood Hazard), areas of “undetermined flood hazard” and areas with “reduced flood risk due to levee.”

[9] City of Coachella is all designated as Zone C – or No Special Flood Hazard Area.



Map revised March 6, 2018. G:\2012\12-0001\Gis\EIR_flood_hazard.mxd

Source: FEMA, 2017.

Figure 5.5-3 - FEMA Flood Hazard Map
Eastern Coachella Valley Stormwater Master Plan

Clean Water Act

The Federal Water Pollution Control Act, more commonly known as the Clean Water Act (CWA) was designed to restore and maintain the chemical, physical, and biological integrity of the waters in the United States. The CWA also directs states to establish water quality standards for all waters of the United States and to review and update such standards on a triennial basis. Other provisions of the CWA related to basin planning include Section 208, which authorizes the preparation of waste treatment management plans, and Section 319, which mandates specific actions for the control of pollution from nonpoint sources. The United States Environmental Protection Agency (EPA) has delegated responsibility for implementation of portions of the CWA in California to the SWRCB and the nine RWQCBs, including water quality control planning and control programs, such as the NPDES program. The NPDES program is a set of permits designed to implement the CWA that apply to various activities that generate pollutants with potential to impact water quality.

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. Section 304(a) requires the EPA to publish water quality criteria that accurately reflect the later scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based upon bio-monitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards. Section 303(c)(2)(b) of the CWA requires states to adopt numerical water quality standards for toxic pollutants for which the EPA has published water quality criteria and which reasonably could be expected to interfere with designated uses of a water body.

Construction of the Facilities would comply with the provisions of the CWA through the implementation of best management practices (BMPs) to reduce erosion and runoff from the construction sites.

5.5.4.2 State Regulations

Porter-Cologne Water Quality Control Act and the Colorado River Basin Plan

The Porter-Cologne Water Quality Control Act, Division 7 of the California Code, authorizes the SWRCB to adopt, review, and revise policies for all waters of the state (including both surface and groundwater), and directs the RWQCB to develop regional basin plans. Section 13170 of the California Water Code also authorizes the SWRCB to adopt water quality control plans on its own initiative. The Water Quality Control Plan for the Colorado River Basin (Region 7) is designed to preserve and enhance the quality of water resources in the Colorado River Basin Region for the benefit of present and future generations. The purpose of the Water Quality Control Plan is to designate beneficial uses of the region's surface and groundwaters, designate water quality objectives for the reasonable protection of those uses, and establish an implementation plan to achieve the objectives.

The Colorado River Basin Plan sets forth water quality objectives for constituents that could potentially cause an adverse effect or impact on the beneficial uses of water. Specifically, the Colorado River Basin Plan is designed to accomplish the following:

- Designate beneficial uses for surface and groundwaters;
- Set the narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy;
- Describe implementation programs to protect the beneficial uses of all waters within the region; and
- Describe surveillance and monitoring activities to evaluate the effectiveness of the Colorado River Basin Plan.

The Colorado River Basin Plan incorporates by reference all applicable SWRCB and RWQCB plans and policies.

All projects resulting in discharges, whether to land or water, are subject to Section 13263 of the California Water Code and are required to obtain approval of Waste Discharge Requirements (WDRs) from the RWQCB. Land and groundwater related WDRs (i.e., non-NPDES WDRs) regulate discharges of process and wash-down wastewater and privately or publicly treated domestic wastewater. WDRs for discharges to surface waters also serve as NPDES permits.

The SWRCB administers the NPDES permit program regulating stormwater from construction activities for projects greater than one acre in size. In order to obtain coverage under the General Construction Permit (Order No. 2009-0009-DWQ), a Waste Discharge Identification Number (WDID) must be obtained, and an effective site-specific Storm Water Pollution Prevention Plan (SWPPP) developed. The SWPPP must identify potential on-site pollutants, and identify and implement an effective combination of erosion control and sediment control measures to reduce or eliminate discharge of pollutants to surface water from stormwater and non-stormwater discharges. As applicable, and prior to the construction of stormwater projects, the Contractor is responsible to prepare an approved SWPPP detailing best management practices for implementation at a specific project site.

Clean Water Act Section 401

Section 401 of the CWA requires that any person applying for a federal permit or license which may result in a discharge of pollutants into waters of the United States must obtain a state water quality certification that activity complies with all applicable water quality standards, limitations, and restrictions. No license or permit may be issued by a federal agency until certification required by Section 401 has been granted. Further, no license or permit may be issued if certification has been denied. CWA Section 404 permits and authorizations are subject to Section 401 certification by the RWQCB.

California Drainage Law

California drainage law is essentially case law. As such, it is complex, but the courts have established the following general principles, which apply in general to development projects:

- The downstream property owner is obligated to accept and make provision for those waters that are the natural flow from the land above.
- The upstream property owner shall not concentrate water where it was not concentrated before without making proper provision for its disposal without damage to the downstream property owner.
- The upstream property owner may reasonably increase drainage runoff by paving or construction of other impervious surfaces, including buildings without liability. The upstream property owner may not further increase drainage runoff by diversion of water that previously drained to another area. Reasonableness is often based on prevailing standards of practice in the community or region.
- No property owner shall block, or permit to be blocked, any drainage channel, ditch, or pipe.
- No property owner shall divert drainage water without properly providing for its disposal.

NPDES Permit Program

In California, the SWRCB and its nine RWQCBs administer the NPDES permit program. The NPDES permits cover all construction (including linear projects) and subsequent drainage improvements that disturb one acre or more, as well as industrial activities, and MS4s. Construction and industrial activities are typically regulated under statewide general permits that are issued by the SWRCB. The SWRCB also issues statewide general MS4 stormwater NPDES permits for public agencies that fall under the Phase II NPDES regulations.

The NPDES MS4 permit applicable within the Master Plan Area is Order No. R7-2013-0011 (NPDES No. CAS617002), adopted by the Colorado River Basin RWQCB on June 20, 2013, for the Colorado River Basin Region. Riverside County and Riverside County Flood Control & Water Conservation District are designated Principal Permittees; CVWD and each of the incorporated cities within the Whitewater River subwatershed are designated Co-Permittees. This MS4 Permit sets forth the waste discharge requirement for discharges from the MS4 facilities within the Whitewater River subwatershed. For purposes of implementing the MS4 permit, any future project that is considered new development and redevelopment is required to comply with the provisions of the MS4 Permit. (2013 CRB MS4.)

Water Quality Management Plans (WQMPs) are required to address the quality of stormwater or urban runoff that flows from a developed site after construction is completed and the facilities or structures are occupied and/or operational. A site-specific WQMP is prepared for Priority Projects (as defined in Order No. R7-2013-0011), which may include Master Plan

facilities. The WQMP describes the BMPs that would be implemented and maintained throughout the life of a project and is used by property owners, facility operators, tenants, facility employees, maintenance contractors, etc., to prevent and minimize water pollution that can be caused by stormwater or urban runoff. A site-specific WQMP would be required as part of future facility-specific applications for discretionary approval. Final site-specific WQMPs must be approved prior to issuance of building and grading permits for future development.

Stormwater from the Master Plan Area ultimately discharges into the Coachella Valley Stormwater Channel and Salton Sea, which have water quality standards and are both listed on the 3030(d) list of impaired waterbodies for various pollutants. Therefore, future construction projects within the Master Plan Area would be required to comply with pertinent regulations for managing construction-phase and operation-phase stormwater runoff (such as SWPPPs and WQMPs, for example).

Construction Stormwater Permits

The SWRCB administers the NPDES permit program regulating stormwater from construction activities for projects greater than one acre in size (including linear projects). The main compliance requirement of the NPDES permits is the development and implementation of a SWPPP. The purpose of a SWPPP is to identify potential on-site pollutants and identify and implement appropriate stormwater pollution prevention measures to reduce or eliminate discharge of pollutants to surface water from stormwater and non-stormwater discharges. The SWPPP must be prepared by a Qualified SWPPP Developer and managed onsite by a Qualified SWPPP Practitioner.

Stormwater BMPs to be implemented during construction and grading would be outlined in the SWPPP prepared for each Facility as well as future development or infrastructure projects approved within the Master Plan Area. Additionally, all future development and infrastructure projects in the Master Plan Area would be required to obtain a construction NPDES permit prior to site disturbance.

The permit requires that projects implement a SWPPP that contains specific BMPs and establishes numeric effluent limitations to meet water quality and technology-based standards. It also provides greater clarity so that the public can determine whether permittees are in compliance. (2009 SWRCB Permit)

5.5.4.3 Local Regulations

2015 Riverside County General Plan

The 2015 Riverside County General Plan Multipurpose Open Space Element and Safety Element include the following policies that identify hydrology and water quality objectives for the unincorporated Riverside County lands within the Master Plan Area.

Multipurpose Open Space Element:

- **Policy OS 3.3**: Minimize pollutant discharge into storm drainage systems, natural drainages, and aquifers.

- **Policy OS 5.1:** Substantially alter floodways or implement other channelization only as a "last resort," and limit the alteration to: a) that necessary for the protection of public health and safety only after all other options are exhausted; b) essential public service projects where no other feasible construction method or alternative project location exists; or c) projects where the primary function is improvement of fish and wildlife habitat.

Safety Element:

- **Policy S 4.4**: Prohibit alteration of floodways and channelization unless alternative methods of flood control are not technically feasible or unless alternative methods are utilized to the maximum extent practicable. The intent is to balance the need for protection with prudent land use solutions, recreation needs, and habitat requirements, and as applicable to provide incentives for natural watercourse preservation, including density transfer programs as may be adopted.

- **Policy S 4.5:** Prohibit substantial modification to water courses, unless modification does not increase erosion or adjacent sedimentation, or increase water velocities, so as to be detrimental to adjacent property, nor adversely affect adjacent wetlands or riparian habitat.

- **Policy S 4.6:** Direct flood control improvement measures toward the protection of existing and planned development.

- **Policy S 4.10:** Require all proposed projects anywhere in the County to address and mitigate any adverse impacts that it may have on the carrying capacity of local and regional storm drain systems.

- **Policy S 4.18:** Require that the design and upgrade of street storm drains be based on the depth of inundation, relative risk to public health and safety, the potential for hindrance of emergency access and regress from excessive flood depth, and the threat of contamination of the storm drain system with sewage effluent. In general, the 10-year flood flows shall be contained within the top of curbs and the 100-year flood flows within the street right-of-way.

Although implementation of the Master Plan would alter present land use in a comparatively limited way as necessary for the infrastructure to adequately capture and convey stormwater and provide flood control protection in the Master Plan Area, the Master Plan would be

consistent with the Riverside County General Plan. Construction, operation, and maintenance of the Facilities would not conflict with the above-listed policies.

Riverside County Ordinances

Riverside County Ordinance No. 458 was adopted in 1979 to protect the public health, safety and welfare and minimize public and private costs caused by flooding in the unincorporated areas as a requirement of its participation in the NFIP of FEMA. Ordinance No. 458 specifically regulates development in Special Flood Hazard Areas identified on maps prepared by FEMA, the State of California or Riverside County that are based on the 1 percent chance flood, also referred to as the "100-year flood."

Riverside County Ordinance No. 754 establishes stormwater/urban runoff management and discharge controls. The ordinance is intended to protect and enhance the water quality of Riverside County water courses, water bodies, groundwater and wetlands in a manner pursuant to and consistent with applicable requirements contained in the CWA, California Porter-Cologne Act, and any associated state or federal regulations, administrative orders or permits. This compliance is accomplished by implementation of BMPs to reduce pollutants in stormwater to the maximum extent practicable, regulating illicit connections and discharges to the storm drain system, and the prohibition of non-stormwater discharges to the storm drain system with specified exceptions.

CVWD Ordinance

CVWD is the designated flood control agency within its service area. CVWD Ordinance No. 1234 provides conditions of approval for development in flood hazard areas within the CVWD Stormwater Service Area. In order to minimize flood damage and to provide a greater level of protection, the standard project storm (SPS) and standard project flood (SPF) rather than the 100-year storm and 100-year flood should be used for the design of flood control facilities. Ordinance No. 1234 then indicates that any flood protection facilities not designed and constructed for the SPS and SPF would not normally be owned, operated, or maintained by CVWD and it also identifies several other requirements for developer who construct such flood protection facilities, related to notification, transfer of ownership and indemnification.

Imperial County General Plan

The Imperial County General Plan contains objectives in its Conservation and Open Space Element that identify hydrology and water quality objectives for the unincorporated Imperial County lands within the Master Plan Area.

Conservation and Open Space Element:

- **Objective 8.1**: Protect all bodies of water, e.g., Salton Sea, and water courses for their continued use and development.

- **Objective 8.2:** Maintain the salinity of the Salton Sea at 40,000 parts per million salinity and encourage the advantageous usage of the Salton Sea for agricultural and natural drainage, recreation, and development.

- **Objective 8.5:** Protect and improve water quality and quantity for all water bodies in Imperial County.

Although implementation of the Master Plan would alter present land use in a comparatively limited way as necessary for the infrastructure to adequately capture and convey stormwater and provide flood control protection in the Master Plan Area, the Master Plan would be consistent with the Imperial County General Plan. Construction, operation, and maintenance of the Facilities is would not conflict with the above-listed objectives.

City of Coachella General Plan

The City of Coachella General Plan Update 2035 contains policies in its Sustainability & Natural Environment Element, Safety Element, and Infrastructure & Public Services Element that identify hydrology and water quality policies for the Master Plan Area land within the City of Coachella.

Sustainability & Natural Environment Element:

- **Goal 7:** Waterways. Waterways and desert washes that serve a natural, environmental function and provide aesthetically pleasing open space for the community.

- **Policy 7.1:** Pollution prevention. Limit the amount and concentration of pollutants released into the City's waterways.

- **Policy 7.2:** Development impacts. When considering development applications, require consideration of onsite detainment of stormwater runoff and require the incorporation of appropriate stormwater treatment and control measures, in accordance with the most recent NPDES permit requirements.

- **Policy 7.4:** Water quality. Ensure water quality in the City's waterways meets applicable state and federal standards.

Safety Element:

- **Policy 2.9:** Groundwater resources protection. Develop partnerships with the Coachella Valley Water District and adjacent communities to manage the groundwater resources of the region, prevent over-drafting of the aquifers and prevent regional subsidence due to excessive water extraction.

- **Goal 3:** Flood hazards. A community that is minimally disrupted by flooding and inundation hazards.

- **Policy 3.1:** Hydrological studies. Require new development proposals to include as a condition of approval, hydrological studies prepared by a state-certified engineer with expertise in these kinds of studies, that assess the impact the new development would have on the flooding potential of existing development down-gradient. The studies shall provide mitigation measures to reduce this impact to an acceptable level.

- **Policy 3.3:** Flood mitigation for both existing and new construction. Require all new developments and redevelopments in areas susceptible to flooding (such as the 100-year floodplain and areas known to flood during intense or prolonged rainfall events) to incorporate mitigation measures designed to minimize or eliminate flood hazards.

- **Policy 3.4:** Flood hazard enforcement. Continue to enforce City ordinances for flood hazard reduction, tract drainage and stormwater management for all new developments and existing projects undergoing substantial improvements within the FEMA-designated Special Flood Hazard Areas, other areas identified by the state as susceptible to flooding, hillside areas, and other areas known to flood. Mitigation measures may include (but are not limited to) the design of onsite drainage systems connected to the Coachella Valley Stormwater Channel, keeping surface waters within the project area, grading of the sites so that runoff does not affect adjacent properties, and building structures so they are elevated above the anticipated flood levels.

- **Policy 3.5:** Storm drainage facilities. Maintain, develop and improve where needed, the storm drain facilities (including bridges and other stormwater channel crossings) with an emphasis on those areas in the City that flood repeatedly.

Infrastructure & Public Services Element:

- **Goal 2:** Water Supply Facilities. Water supply facilities that meet future growth within the city and assure a high-quality and reliable supply of water to current and future residents.

- **Policy 2.9:** Water supply source protection. Protect local groundwater resources from localized and regional contamination sources such as septic tanks, underground storage tanks, industrial businesses and urban runoff.

- **Policy 2.18:** Groundwater replenishment. Cooperate with CVWD and other agencies to develop groundwater replenishment programs to ensure viability of the groundwater aquifer in the east Whitewater basin.

- **Goal 4:** Stormwater Capacity. Sufficient stormwater drainage facilities and services that are environmentally sensitive, accommodate growth, and protect residents and property.

- **Policy 4.2:** New stormwater facilities. Ensure all new drainage facilities are adequately sized and constructed to accommodate stormwater runoff in urbanized areas.

- **Policy 4.3:** Regional stormwater facilities. Coordinate efforts with Riverside County and other agencies in the development of regional stormwater facilities.

- **Policy 4.4:** Fair-share costs. Require new development fund fair-share costs associated with the provision of stormwater drainage to ensure all development has adequate stormwater drainage protection.

- **Policy 4.5:** New development. Require the preparation of drainage studies that evaluate adherence to City stormwater design requirements and incorporate measures to prevent on- or off-site flooding with all new development applications.

- **Policy 4.6:** Stormwater Pollution Prevention. Cooperate in regional programs to implement the National Pollutant Discharge Elimination System program.

- **Policy 4.9:** Property dedication. Require the dedication of real property and improvements of that property when new stormwater drainage facilities are required to serve a development.

Although implementation of the Master Plan would alter present land use in a comparatively limited way as necessary for the infrastructure to adequately capture and convey stormwater and provide flood control protection in the Master Plan Area, the Master Plan would be consistent with the City of Coachella General Plan. Construction, operation, and maintenance of the Facilities would not conflict with the above-listed objectives.

City of Coachella Municipal Code

The City of Coachella Municipal Code contains several provisions regulating the discharge of stormwater and changes in hydrology. For example, Chapter 13.16 regulates water quality control in the city. Sections under this chapter set forth regulations on protecting the stormwater drainage system, prohibited discharges, and compliance with appropriate and applicable BMPs among other issues. Specifically, Section 13.16.341 (General permit for stormwater dischargers from construction activity) requires any developer or owner engaging in construction activities which disturb one acre or more of land to apply for coverage under the general permit for stormwater discharges from construction activity with the state board, and prior to obtaining any city-issued grading or construction permits, the developer or owner must provide evidence of compliance with the general permit for stormwater discharges to the City's Public Works Department.

Tribal Lands Permits

There are several federally-recognized Coachella Valley tribes. The NPDES stormwater program applies to tribal lands within the state. EPA is the stormwater permitting authority for

Indian country in California under Construction General Permit No. CAR10000I and Multi-Sector General Permit No. CAR05000I.

5.5.5 Environmental Impacts

Threshold A: *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.*

A significant impact may occur if substantial changes made in existing drainage patterns, streams or rivers were to create new waterways not able to properly drain water flow patterns that occur within the Master Plan Area and result in flooding. Flooding can cause temporary or permanent damage to property, natural environments (habitats), and other water bodies.

The Facilities have been conceptually sized and sited to generally capture and convey stormwater drainage along historic and natural flow patterns. Once constructed the Facilities would alter the existing drainage pattern by constructing a drainage system intended to divert, redirect, and concentrate storm flows and runoff into facilities with capacity to safely accommodate such flows, including stormwater peak discharges from 100-year storm events. These storm flows would ultimately be conveyed to CVSC, which is a principal source of inflow for the Salton Sea, and to the Salton Sea directly. By conveying stormwater runoff through the Master Plan Area toward the CVSC and Salton Sea, the Facilities would eliminate the primary sources of flooding currently experienced during significant storm events, particularly in the Whitewater River Subwatershed and East Salton Sea Subwatershed within the Salton Sea Watershed.

The Master Plan includes several debris basins that have the potential to provide added benefits of stormwater infiltration, particularly during small storm events. Basins designed with infiltration capabilities would provide added settling time and pollutant removal mechanisms. Dual-purpose flood control basins that also provide infiltration have been successfully demonstrated in the CVWD Service Area, as well as neighboring communities where groundwater recharge is a priority. Currently, the proposed debris basins are located in the Oasis/Valley Floor Area of the Master Plan (see Figure 3-3), which is an area anticipated to have amenable subsurface soil conditions for infiltration.

The total volume of stormwater runoff may fluctuate as a result of urban development in the Master Plan Area. The Facilities would not increase the amount of stormwater flow into the CVSC and Salton Sea, nor adversely impact the existing floodplain because the proposed Facilities are designed to convey the stormwater along historic and natural patterns toward this same waterway and sea, and reduce the amount of the debris and sediment that could be conveyed downstream. Therefore, impacts related to altering the existing drainage pattern of the site or increasing the rate or amount of surface runoff to result in flooding would be less than significant.

While the Facilities would essentially function as flooding mitigation within the Master Plan Area, the individual Facilities would be constructed by either a public agency or private developer over time as development within the Master Plan Area occurs. In addition, due to the conceptual and long-term nature of the Master Plan, some of the Facilities may never be constructed. Thus, there exists the possibility that the cohesion of the Facilities' design may be fractured, and a Facility would not operate as intended due to the lack of a connection with an adequate outlet, which may result in unforeseen flooding. For this reason, to ensure potential impacts remain less than significant, mitigation would be incorporated. Mitigation measure **MM HYD 1** would require foresight in the development of the each Facility to ensure storm flows from that Facility would be conveyed to an adequate outlet, or interim facility such that potential impacts of flooding are avoided. Therefore, impacts would be **less than significant with mitigation**.

Threshold B*: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.*

As discussed above under Threshold A, the Master Plan, when implemented, would provide adequate flood protection to the Master Plan Area through the construction of open channels, underground storm drain pipelines, debris basins, training levees, and improvements to the CVSC. The stormwater runoff would be conveyed by the Facilities generally along historic and natural flow patterns in the Master Plan Area to the Whitewater River/CVSC and to the Salton Sea, which lies at the lowest point in the Salton Sea Watershed and collects runoff and agricultural drainage within the watershed.

Implementation of the Master Plan would prevent the overflow of existing and proposed Facilities through the design and construction of new and revised, adequately-designed facilities that would capture and convey stormwater runoff, especially from 100-year frequency storm events, in the Master Plan Area to the improved CVSC waterway and to the Salton Sea. Once constructed, the Facilities would substantially eliminate the primary sources of flooding currently experienced in the Master Plan Area. Because the Facilities would convey stormwater in a better, more controlled fashion, along historic and natural patterns as well as reduce the amount of the debris and sediment that could be conveyed downstream, implementation of the Master Plan would not provide substantial additional sources of polluted runoff. Further, as the Facilities would be constructed as development occurs in the Master Plan Area, these future development projects would be subject to the applicable Water Quality Management Plan and BMPs that would ensure substantial polluted runoff is not generated by the future development which could otherwise impact the Facilities. In addition, with increasing regulatory pressure to incorporate groundwater recharge wherever feasible, Master Plan Facilities like debris basins may have the added benefits of stormwater retention, settling, and infiltration. This would decrease not only the volume released from the debris basins, but also pollutant concentrations. Therefore, impacts related to exceeding the capacity of existing or planned

stormwater drainage systems or provide substantial additional sources of polluted runoff would be less than significant.

Because the Facilities are designed to provide adequate capacity for the Master Plan Area's anticipated stormwater, once constructed the Facilities essentially function as mitigation measures for flooding within the Master Plan Area, Because, the individual Facilities would be constructed by either a public agency or private developer over time as development within the Master Plan Area occurs and due to the conceptual and long-term nature of the Master Plan, some of the Facilities may never be realized. Thus, there exists the possibility the cohesion of the Facilities' design may be fractured, and a Facility would not operate as intended. However, with implementation of mitigation measure **MM HYD 1**, which requires that design of each Facility would ensure storm flows from that Facility be conveyed to an adequate outlet to negate flooding, even in an interim condition until such time that the ultimate conveyance is built, potential impacts to an existing stormwater drainage system would be reduced to less than significant. Therefore, impacts would be **less than significant with mitigation**.

5.5.6 Mitigation Measures

An EIR is required to describe feasible mitigation measures which could minimize significant adverse impacts. (*CEQA Guidelines*, Section 15126.4.)

MM HYD 1: Prior to approval of any Facility, or portion thereof, the design and plans shall demonstrate storm flows and runoff from that portion of the being implemented would be conveyed to an adequate outlet system or suitable interim condition that does not induce flooding, to the satisfaction of the Coachella Valley Water District.

5.5.7 Project-Specific Environmental Effects after Mitigation Measures are Implemented

While it was determined that impacts from the implementation of the Project would be less than significant because implementation of the Master Plan would: (i) not result in on- or off-site flooding; (ii) eliminate the primary source of flooding currently experienced in the Master Plan Area; (iii) ultimately result in the construction of Facilities that would provide adequate capacity as part of the area's stormwater drainage system; and (iv) not result in additional polluted runoff; there still exists the potential that Facilities may not operate as intended during the long-term build-out of the Master Plan as development occurs, which may result in a temporary and fractured cohesion of Facilities. However, to ensure that each specific Facility discharges into an adequate outlet system, mitigation measure **MM HYD 1** would be implemented, which requires demonstration to the satisfaction of CVWD that the Facility(ies) being constructed and operated would discharge to an adequate outlet system. Therefore, potentially significant impacts to hydrology and water quality would be **less than significant with mitigation**.

5.5.8 Cumulative Environmental Effects after Mitigation Measures are Implemented

A cumulatively considerable impact would occur if construction, operation, and maintenance of the Facilities identified in the Master Plan, in conjunction with other future projects, results in a significant impact to hydrology and water quality. The Master Plan conceptually identifies the locations and sizing of regional drainage facilities (Facilities) so as to provide adequate stormwater conveyance, flood protection and opportunities for stormwater capture within the Master Plan Area. Thus, the Master Plan Area and the city of La Quinta comprises ~~is~~ the geographic scope for cumulative impacts to hydrology and water quality. The Master Plan Area includes portions of unincorporated Riverside and Imperial counties ~~and portions~~ of the ~~cities of~~ city of Coachella ~~and La Quinta~~.

The Master Plan Area is anticipated to experience continued growth and urbanization as part of the build-out of general plans within the Plan Area, consistent with regional growth projections, which estimate a 250 percent increase in population in the Plan Area by 2040. Because specific Facilities would be constructed when future development is constructed; the Facilities in and of themselves would not significantly adversely impact hydrology and water quality in the Master Plan Area in a cumulatively considerable sense because the Master Plan is a proactive approach to addressing this development. Further, implementation of mitigation measure **MM HYD 1** requires that each Facility being implemented to demonstrate that stormwater flows from the Facility would be conveyed to an adequate outlet system to the satisfaction of CVWD. Thus, as the Master Plan is realized over the span of many years, Facilities, as they are constructed, would not result in on- or off-site flooding or exceed stormwater drainage system capacity.

While future development in the Plan Area would increase the potential to significantly impact hydrology and water quality due to the increased development and runoff, these impacts would be analyzed and mitigated on a project-by-project basis since future development is subject to CEQA review and consistency with regulatory requirements (including Water Quality Management Plans and BMPs), the applicable jurisdictions' General Plan policies, and applicable mitigation measures.

Because the implementation of the Master Plan would result in limited land use changes necessary for the infrastructure needed to adequately capture and convey stormwater and provide flood control protection in the Master Plan, this Recirculated Draft PEIR utilizes the "summary of projections" approach in the cumulative analysis. State *CEQA Guidelines* Section 15130(d) states:

> Previously approved land use documents such as general plans, specific plans, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and

> program EIRs. No further cumulative impact analysis is required when a project is consistent with a general, specific, master, or comparable programmatic plan where the lead agency determines that the regional or area-wide cumulative impacts of the proposed project have been adequately addressed, as defined in Section 15152(f), in a certified EIR for that plan.

Additionally, if a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact. (State *CEQA Guidelines* Section 15130(e).)

Riverside County

The 2015 Riverside County General Plan EIR No. 521 divides the thresholds associated with hydrology and water quality into two topics: flood and dam inundation hazards, and water resources. Thresholds associated with flood and inundation hazards include the following: result in housing within flood hazard areas; cause impediment of flows; expose people or structures to flooding hazards, including flooding due to dam or levee failure; cause the adverse alteration of drainage patterns or substantially increase surface runoff; and cause inundation risks due to seiche, tsunami, or mudflow.

Regarding the cumulative effects from General Plan build-out to these flood and dam inundation hazard thresholds, implementation of regulatory requirements, General Plan policies, and mitigation measures would be sufficient to ensure that incremental cumulative impacts would be less than significant. As such, the General Plan build-out's incremental increase in exposure to flooding hazards would not be cumulatively considerable. In total, build out of the General Plan would not result in cumulatively considerable impacts due to flooding hazards, including dam inundation, seiche and mudflow. (GPA No. 960 EIR 521, p. 5-118.) Therefore, with mitigation cumulative impacts from flood and dam inundation hazards were determined to be less than significant at buildout of the 2015 Riverside County General Plan.

Thresholds associated with water resources include the following: result in insufficient water supply; substantially deplete groundwater supplies or substantially interfere with groundwater recharge; substantially degrade water quality; violate water quality standards or waste discharge requirements; exceed wastewater treatment requirements; exceed wastewater treatment capacity; result in significant adverse effects due to the construction of new or expanded water or wastewater facilities; substantially alter existing drainage patterns resulting in substantial erosion or siltation; cause runoff exceeding stormwater drainage system capacities or cause substantial water pollution; and cause significant adverse effects due to the need for new or expanded stormwater drainage facilities.

Regarding the cumulative effects from 2015 Riverside County General Plan build-out to these water resources thresholds, implementation of regulatory requirements, General Plan policies and mitigation measures, would help reduce, avoid or minimize various cumulative impacts to

water resources, including supplies, infrastructure, water quality, hydrology and storm drainage. However, while many of these impacts would be *individually* less than significant, for some water impacts, the incremental impact would be *cumulatively* substantial, even with the implementation of all feasible mitigation. Specifically, impacts that would be cumulatively significant under build-out per the 2015 Riverside County include: incremental increases in the demand for water supply; incremental increases in groundwater usage and its recharge; incremental changes to existing drainage patterns, erosion, sedimentation and siltation; and, incremental increases in runoff due to development of additional impervious surfaces. For these issue areas, cumulative impacts from build-out of the 2015 Riverside County General Plan would be significant and unavoidable. (GPA No. 960 EIR 521, pp. 5-198 – 5-199.) Implementation of the Master Plan however, would result in the construction of Facilities for stormwater conveyance and flood protection that provide opportunities for stormwater capture within the Master Plan Area. Therefore, implementation of the Master Plan **would not contribute to cumulative impacts** with regard to hydrology and water quality resulting from build-out of the 2015 Riverside County General Plan.

Imperial County

Imperial County's General Plan EIR divides the thresholds associated with hydrology and water quality into two topics: water quality, and flood control/hydrology. Regarding the cumulative effects from General Plan build-out to water quality, future urban development within Imperial County and its Sphere of Influence is expected to discharge less fertilizer or pesticide residues, and result in lower salt concentrations in existing drainage systems than it currently the case due to agricultural runoff. Urban runoff, particularly from industrial uses, contributes significantly to water quality degradation in the region. Oil and grease residuals and heavy metals are examples of pollutants found in urban runoff which can lead to potentially significant cumulative impacts with respect to surface and groundwater quality. The potential also exists for contamination of surface and groundwater in the vicinity of geothermal power plants. Policies designed to mitigate these potential cumulative water quality impacts to below a level of significance are contained in the Imperial County General Plan. (ICGP EIR, p. V-11.) Therefore, cumulative impacts to water quality were determined to be less than significant with mitigation.

Regarding the cumulative effects from build-out of the Imperial County General Plan to water quality and hydrology, as future development proceeds within the region, the incremental increase in impervious surfaces is expected to result in potentially significant cumulative impacts with respect to the alteration of surface drainage patterns; increased burden on existing drainage capacities; increase in urban runoff volumes and flows, leading to downstream flooding potential; degradation of surface and groundwater quantity and quality; and increase in erosion, sedimentation, and siltation. However, implementation of the mitigation measures provided in the Imperial County General Plan EIR for development projects within Imperial County would mitigate this potential cumulative impact to below a level of significance. (ICGP EIR, p. V-12.) Therefore, implementation of the Master Plan **would not**

contribute to cumulative impacts with regard to hydrology and water quality resulting from build-out of the Imperial County General Plan.

City of Coachella

Considering that water is interconnected in the Coachella Valley, changes made in the City of Coachella and its Sphere of Influence can have an effect on waterways, water quality, and hydrology in areas outside of the Genera Plan's planning boundaries. Cumulative impacts of these changes could come in many ways including: poor water quality for those downstream of waterways within the City of Coachella and its Sphere of Influence, erosion sending sediment downstream, indirect flooding from redirection of flood flow and failure to build levees to protect populations from flood flows creating irreversible environmental impacts. (CGP EIR, p. 4.7-36.)

Though there is potential for impacts from hydrology and water quality, the current regulatory framework guides development to reduce potential environmental impacts. From NPDES to the Clean Water Act, multiple agencies and regulations are in place to ensure development would have minimal environmental impacts. In addition to the regulatory framework, the General Plan policies also add a second level of standards to reduce impacts on, and from, hydrology and water quality in the City of Coachella and its Sphere of Influence. Thus, cumulative impacts to hydrology and water quality related to build-out of the Coachella General Plan are considered **less than significant**. (CGP EIR, p. 4.7-36.) Implementation of the Master Plan Facilities within the General Plan area would be subject to the applicable levels of review and approvals mentioned previously. Therefore, implementation of the Master Plan **would not contribute to cumulative impacts** with regard to hydrology and water quality resulting from build-out of the City of Coachella General Plan.

City of La Quinta

The City of La Quinta's General Plan EIR divides the thresholds associated with hydrology and water quality into two topics: hydrology, and water resources and quality. The former topic covers the thresholds related to hydrology, and the latter topic covers the thresholds related to water quality standards, waste discharge, and groundwater supplies. Regarding the cumulative effects from General Plan build-out to hydrology, implementation of the General Plan, as well as build-out of surrounding jurisdictions, would facilitate urban development and increase impervious surfaces throughout the region. As a result, stormwater runoff would increase. The La Quinta General Plan includes goals, policies, and programs to ensure that forthcoming development recognizes and plans for flood hazards, and includes stormwater management facilities, such as on-site stormwater retention basins. Future development within surrounding jurisdictions would also be required to address the potential risk of flood hazards and require on-site stormwater retention. The City of La Quinta and surrounding jurisdictions currently participate in the NPDES program, which mandates the adoption of stormwater management plans and programs to reduce runoff of pollutants into "waters of the United States." As a result, build-out of the General Plan in conjunction with growth and development of surrounding jurisdictions would not result in cumulatively considerable impacts to hydrology.

(LQGP EIR, p. VIII-7.) Therefore, cumulative impacts to hydrology resulting from build-out of the La Quinta General Plan were determined to be **less than significant.**

Build-out per the La Quinta General Plan is not expected to impact water quality. However, to further limit potential impacts to water resources and reduce impacts to less than significant levels, mitigation measures contained in the La Quinta General Plan EIR will be implemented by development projects in La Quinta. Further, implementation of the La Quinta General Plan would ensure the continued implementation of federal, state, local, and all other applicable water pollution control standards. (LQGP EIR, p. III-256.) Additionally, although water demands are expected to be met at build-out and beyond, the General Plan would contribute to a reduction in groundwater in the basin, and as such, implementation of the General Plan in conjunction with development within surrounding jurisdictions would result in a cumulatively considerable impact to water resources. (LQGP EIR, p. VIII-10.) Because the Master Plan does not include any facilities within La Quinta, implementation of the proposed Project **would not contribute to cumulative impacts** with regard to water resources.

Summary

Project-specific impacts to hydrology and water quality resulting from the Master Plan Facilities would be less than significant with incorporation of the applicable mitigation measures and/or regulatory compliance that are required for the Project from each jurisdiction in which the Master Plan Facility is constructed. Further, since other future development projects would be subject to project-specific review and analysis so as to individually limit and minimize its potential impacts, **cumulatively considerable impacts from the implementation of the Master Plan would be less than significant**.

5.5.9 References

The following references were used in the preparation of this section of the Recirculated Draft PEIR:

2009 SWRCB Permit — State Water Resources Control Board, Division of Water Quality, *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities*, Order No. 2009-0009-DWQ, NPDES No. CAS000002, adopted September 2, 2009. (Available at http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2009/wqo/wqo2009_0009_dwq.pdf, accessed December 30, 2014.)

2013 CRB MS4 California Regional Water Quality Control Board, Colorado River Basin – Region 7, *Order No. R7-2013-0011, NPDES No. CAS617002, Waste Discharge Requirement for Discharges from the Municipal Separate Storm Sewer System (MS4) within the Whitewater River Watershed*, adopted June 20, 2013. (Available at http://www.waterboards.ca.gov/rwqcb7/board_decisions/adopted_orders/orders/2013/0011cv_ms4.pdf, accessed December 30, 2014.)

2015 RCGP Riverside County, *General Plan*, Land Use Element and Multipurpose Open Space Element, December 8, 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx accessed December 31, 2015.)

2015 RCGP EIR 521 Riverside County, *General Plan Environmental Impact Report No. 521*, Recirculated Public Review Draft, February 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan/GeneralPlanAmendmentNo960EIRNo521CAPFebruary2015/DraftEnvironmentalImpactReportNo521.aspx, accessed April 16, 2015.)

303(d) List California State Water Resources Control Board, *California 2012 (303(3) Combined List Table.* (Available at http://gispublic.waterboards.ca.gov/webmap/303d_2012/files/2012USEPA_approv_303d_List_Final_20150807wsrcs.xls, accessed December 28, 2015.)

BMP Design Handbook Riverside County Flood Control and Water Conservation District, *Stormwater Quality Best Management Practice design Handbook for Low Impact Development*, June 2014. (Available at http://rcflood.org/downloads/NPDES/Documents/WW_SWMP_WQMP/WWR_BMP_Design_Handbook_Jan2015.pdf, accessed December 24, 2015.)

CDM CDM, *Whitewater River Watershed Municipal Stormwater Program, Stormwater Management Plan 2001-2006*. (Available at http://rcflood.org/downloads/npdes/Draft_010709_SMP.pdf, accessed December 23, 2014.)

CGPU EIR City of Coachella, *General Plan Update 2035*, Adopted April 22, 2015. (Available at http://www.coachella.org/Home/ShowDocument?id=3221, accessed September 11, 2015.)

CMC City of Coachella, *Coachella Municipal Code*, codified through June 25, 2014. (Available at https://www.municode.com/library/ca/coachella/codes/code_of_ordinances, accessed December 30, 2014.)

Colorado River Basin Plan	California Regional Water Quality Control Board, Colorado River Basin – Region 7, *Water Quality Control Plan Colorado River Basin*, includes amendments adopted by the Regional Board through March 2014. (Available at http://waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/ , accessed December 28, 2015.)
DWR	California Department of Water Resources, *Summary of Salton Sea Hydrology and Future Scenarios*, March 2006. (Available at http://www.water.ca.gov/saltonsea/historicalcalendar/ac/03.16.2006/Hydrology_Inflows.pdf, accessed December 19, 2014.)
ICGP OS	Imperial County, *General Plan Conservation and Open Space Element*, 1993. (Available at http://www.icpds.com/CMS/Media/Conservation-and-Open-Space-Element.pdf, accessed December 30, 2014.)
Ord. 1234	Coachella Valley Water District, *Ordinance No. 1234 (as amended through 1234.1), Establishing Regional Stormwater Facility Design Standards and Development Requirements*. (Available at http://www.cvwd.org/business/ddm/Appendix_K/K-7.pdf, accessed December 30, 2014.)
Ord. No 754	Riverside County, *Ordinance No. 754 (as amended through 754.2), Establishing Stormwater/Urban Runoff Management and Discharge Controls*. (Available at http://www.rivcocob.org/ords/700/754.2.pdf, accessed December 30, 2014.)
CVWD 2015 UWMP	Coachella Valley Water District, prepared by MWH. *2015 Urban Water Management Plan Final Report*. July 1, 2016. (Available at http://www.cvwd.org/).

5.6 Noise

Note to reader: Text added to this Recirculated Draft PEIR is shown in double underline (example text) and deleted text is shown in strikethrough (~~example text~~.)

The focus of this section is to address, at a program level, potential noise impacts resulting from construction and operation of the Facilities identified in the Master Plan.

As discussed below and in the Initial Study prepared for the Project (Appendix A), the Project's potential to result in a substantial adverse effect from noise is considered to be less than significant with mitigation incorporated.

5.6.1 Setting

This section presents a discussion of noise fundamentals applicable to the Project, together with an assessment of existing ambient noise levels and noise sources in the Project vicinity.

5.6.1.1 Characteristics of Sound

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perceptibility is subjective and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound in subjective terms such as "noisy" or "loud." To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect our ability to hear. The analysis of a project's noise impact defines the noise environment of that project area in terms of sound intensity and its effect on adjacent land uses and receptors.

5.6.1.2 Quantification of Sound

Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which defines the level of sound in decibels (dB). Because human hearing is not equally sensitive to sound at all frequencies, the A-weighting system is used to adjust quantified or measured sound levels to approximate this frequency-dependent response; A-weighted sound is expressed as dBA. As a source of reference, common indoor and outdoor noise sources, presented in terms of dBA, are shown in relation to the approximate corresponding noise level in **Table 5.6-A – Representative Environmental Noise Levels**.

Table 5.6-A – Representative Environmental Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	rock band
jet fly-over at 1,000 feet	105	
	100	
gas lawnmower at 3 feet	95	
	90	

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
diesel truck, 50 mph at 50 feet	85	food blender at 3 feet
	80	garbage disposal at 3 feet
noisy urban area during daytime	75	
gas lawnmower at 100 feet	70	vacuum cleaner at 10 feet
commercial area	65	normal speech at 3 feet
heavy traffic at 300 feet	60	
	55	large business office
quiet urban area during daytime	50	dishwasher in next room
	45	
quiet urban area during nighttime	40	theater, large conference room (background)
quiet suburban area during nighttime	35	
	30	library
quiet rural area during nighttime	25	bedroom at night, concert hall (background)
	20	
	15	broadcast/recording studio
	10	
	5	
lowest threshold of human hearing	0	lowest threshold of human hearing

Source: California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013, Table 2-5, p. 2-20.

Noise consists of pitch, loudness, and duration; therefore, it is difficult to describe noise with a single unit of measure. Federal and state agencies have established noise and land use compatibility guidelines that use averaging methods to noise measurement. Two measurement scales commonly used in California are the Community Noise Equivalent Level (CNEL) and the day-night level (DNL or L_{dn}). To account for increased human sensitivity at night, CNEL adds a 5 dB weighting to the L_{dn} for noise that occurs between 7:00 p.m. and to 10:00 p.m., and a 10 dB weighting to the L_{dn} for noise that occurs between 10:00 p.m. and 7:00 a.m. (2015 RCGP EIR 521, Section 14.5). For a given 24-hour period, CNEL is typically 0.5 dBA higher than L_{dn}, thus, as this is an imperceptible difference, both are normally interchangeable (TNS, p. 2-53).

Other noise rating scales of importance when assessing the annoyance factor include the peak or maximum noise level (L_{max}) and the equivalent noise level (L_{eq}). L_{max} is the highest exponential, time-averaged sound level that occurs during a stated period and reflects acoustical peaks and the annoying aspects of intermittent noise. L_{eq} is a measurement of the sound energy level averaged over a specified time period (usually one hour) and represents the average amount variable sound energy received by a receiver over a time interval in a single numerical value. Short-term noise impacts in this Recirculated Draft PEIR are specified in terms of both L_{max} and L_{eq}.

Noise can be particularly problematic when noise-sensitive land uses are affected. Noise-sensitive land uses are defined as uses where one would typically find activities that are

interrupted by noise, such as residential uses, schools, hospitals, churches, performing arts facilities, and hotels and motels.

5.6.1.3 Groundborne Vibration

Groundborne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving, and operating heavy earth-moving equipment.

Vibration is an oscillatory motion which can be described in terms of the displacement, velocity, or acceleration. Displacement is the easiest descriptor to understand. For a vibrating floor, the displacement is simply the distance that a point on the floor moves away from its static position. The velocity represents the instantaneous speed of the floor movement, and acceleration is the rate of change of the speed.

Although displacement is easier to understand than velocity or acceleration, it is rarely used for describing groundborne vibration (VG, p. 6). Most transducers used for measuring groundborne vibration use either velocity or acceleration. Further, the response of humans, buildings, and equipment to vibration is more accurately described using velocity or acceleration. The effects of groundborne vibration include “feelable” movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. The rumble is the noise radiated from the motion of the room surfaces. In essence, the room surfaces act like a giant loudspeaker causing what is called groundborne noise. In extreme cases, the vibration can cause damage to buildings.

There are several different methods used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings and is typically measured in inches per second (VG, p. 6). The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body (VG, p. 6). The RMS amplitude is defined as the squared amplitude of the signal. The PPV and RMS velocity are normally described in inches per second in the United States and meters per second in the rest of the world. Although it is not universally accepted, decibel notation VdB is in common use for vibration.

Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of vibration (VG, p. 13). Man-made vibration issues are, therefore, usually confined to short distances (i.e., 500 feet or less) from the source. Sensitive receptors for vibration include structures (especially older masonry structures); people (especially residents, the elderly, and the sick) and vibration sensitive equipment.

5.6.1.4 Existing Site and Surrounding Conditions

The Master Plan encompasses a total of 207 square miles and is divided into 2 areas by the Coachella Valley Stormwater Channel (CVSC). The Oasis/Valley Floor area encompasses 104 square miles and is generally bounded by Avenue 52 to the north, Madison Street and the Santa Rosa Mountains to the west, CVSC and the Salton Sea to the east, and the Riverside County line to the south (**Figure 3-3 – Oasis/Valley Floor Area**). The Mecca/North Shore area encompasses 103 square miles and is generally bounded by Avenue 52 to the north, CVSC to the west, the Coachella Canal to the east, and the northern area of the Salton Sea to the south (**Figure 3-4 – Mecca North Shore Area**). Collectively, these two areas are referred to as the Master Plan Area (see **Figure 3-2 – Eastern Coachella Valley Stormwater Master Plan Area**).

The construction of Facilities would affect properties in portions of unincorporated Riverside and Imperial counties and in the City of Coachella. ~~It should be noted that while no Facilities are proposed to be located in the City of La Quinta, a portion of the Master Plan Area is within that city.~~

Unincorporated Riverside County

The Facilities proposed within unincorporated Riverside County are within the General Plan's Eastern Coachella Valley Area Plan. The main land use designation within the Oasis/Valley Floor area is agriculture (see **Figure 3-5 – General Plan Land Use**). Other notable land use designations in the northern portion of the Oasis/Valley Floor area include: commercial retail, light industrial, heavy industrial, public facilities, and low- and medium-density residential. In the middle portion of the area, other notable land use designations, besides agriculture, include: Indian lands, low- medium- and high-density residential, commercial retail, light industrial, and commercial tourist. In the southern portion of the area, other notable land use designations, besides agriculture include, Indian lands, commercial retail, medium- and medium-high-density residential, conservation habitat, public facilities, open space recreation, mixed-use policy area, and water.

The primary land use designation within the Mecca/North Shore area is agriculture (see **Figure 3-5**). Other notable land use designations in this area include: light industrial, commercial, retail, Indian Land, medium- and medium-high and very high-density residential, community center, open space recreation. Land use designations near the southeastern portion of the area include: rural desert, medium-density residential, medium-high density residential, high-density residential, and commercial tourist.

City of Coachella

The Facilities proposed within the City of Coachella are located in an area designated by that city's General Plan for low-density residential with an agriculture to urban transition overlay, medium-density residential, light industrial, and general commercial (see **Figure 3-5**). The CVSC traverses the City of Coachella in areas designated for open space and light industrial.

Imperial County

The Facilities proposed within Imperial County are located in an area designated by that county's General Plan for recreation/open space (see **Figure 3-5**).

5.6.1.5 Existing Noise Levels

Noise levels are generally low in agricultural and rural areas; higher in more urbanized areas. Noise in eastern Coachella Valley is generally related to linear sources, or "noise corridors," such as roadways and railroads, or to aircraft. Within the Master Plan Area, principal noise corridors are major roadways such as Highway 111 and Highway 86/86s; Southern Pacific Railroad; Harrison Street and Polk Street to the west and east, respectively, about one mile west of the CVSC; and the Jacqueline Cochran Regional Airport. Other sources of vehicular noise include the local streets in the Master Plan Area. Transportation noise is concentrated along these roadways and can vary with the volume of traffic, the vehicular speed, the vehicular mix and the roadway cross-section.

5.6.2 Comments Received in Response to the Notice of Preparation

No comments were received regarding noise.

5.6.3 Thresholds of Significance

The significance of potential noise impacts were evaluated based on the State CEQA Guidelines, Appendix G criteria. Using these thresholds, the Project would be considered to have a significant impact if it were to affect the following thresholds:

- (Threshold A) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- (Threshold B) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels; and/or
- (Threshold C) Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

5.6.4 Related Regulations

5.6.4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce;
- Assisting State and local abatement efforts; and
- Promoting noise education and research.

The federal Office of Noise Abatement and Control was initially tasked with implementing the Noise Control Act. However, the Office of Noise Abatement and Control has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The United States Department of Transportation assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration and Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that "noise sensitive" uses are either prohibited from being sited adjacent to a highway or, alternately, that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by transportation sources, the local agencies, in this instance Riverside and Imperial counties and the city ~~cities~~ of Coachella ~~and La Quinta~~, are restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

The proposed Project is conditioned to comply with the appropriate OSHA regulations relative to worker exposure to noise during Facility(ies) construction and operation.

5.6.4.2 State Regulations

California Government Code

California Government Code Section 65302 mandates the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the California Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable. The general plans for each affected respective jurisdiction contains noise-related goals and policies within its respective Noise/Safety Element that ranks land use compatibility as required by the California Government Code. These elements are discussed below.

Vibration Standards

The *Transportation and Construction Vibration Guidance Manual* prepared for California Department of Transportation provides methods with which to estimate construction-induced groundborne vibration, and establish potential criteria for acceptable levels of groundborne vibration for human perception and damage to buildings. This information is summarized in

Table 5.6-B – Potential Vibration Damage Threshold Criteria for Human Response and **Table 5.6-C – Potential Vibration Damage Threshold Criteria for Structures**.

Table 5.6-B – Potential Vibration Damage Threshold Criteria for Human Response

Human Response	Maximum PPV[a] (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely Perceptible/Threshold of Perception	0.035	0.006-0.19
Distinctly Perceptible/ Readily Perceptible	0.24	0.08
Strongly Perceptible/Begins to Annoy	0.90	0.10
Severe/Unpleasant	2.00	0.4-0.6

Notes:
[a] Peak Particle Velocity
Source: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, September 2013, adapted from Tables 5 and 6, p. 22.

Table 5.6-C – Potential Vibration Damage Threshold Criteria for Structures

Structure and Condition	Maximum PPV[a] (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Notes:
[a] Peak Particle Velocity
Transient sources create a single isolated vibration event, such as blasting or drop balls.
Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
Source: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, September 2013, adapted from Table 19, p. 38.

5.6.4.3 Local Regulations

2015 Riverside County General Plan

The 2015 Riverside County General Plan Noise Element includes policies that identify noise objectives for the unincorporated Riverside County land within the Master Plan Area. The following policies are applicable to the proposed Master Plan.

Noise Element:

- **Policy N 1.3:** Consider the following uses noise-sensitive and discourage these uses in areas in excess of 65 CNEL: schools, hospitals, rest homes, long-term care facilities, mental care facilities, residential uses, libraries, passive recreation uses, and places of worship. According to the State of California Office of Planning and Research General Plan Guidelines, an acoustical study may be required in cases where these noise-sensitive land uses are located in an area of 60 CNEL or greater. Any land use that is exposed to levels higher than 65 CNEL would require noise attenuation measures. Areas around airports may have different noise standards than those cited above. Each Area Plan affected by a public-use airport includes one or more Airport Influence Areas, one for each airport. The applicable noise compatibility criteria are fully set forth in Appendix L-1 and summarized in the Policy Area section of the affected Area Plan.
- **Policy N 1.5:** Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise sensitive uses of Riverside County.
- **Policy N 13.1:** Minimize the impacts of construction noise on adjacent uses within acceptable practices.
- **Policy N 13.2:** Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse noise impacts on surrounding areas.
- **Policy N 13.4:** Require that all construction equipment utilize noise reduction features (e.g. mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
- **Policy N 16.2:** Consider the following land uses sensitive to vibration: hospitals, residential areas, concert halls, libraries, sensitive research operations; schools; and offices.

Regarding vibration, the 2015 Riverside County General Plan Noise Element states that some of the most common sources of vibration come from trains and/or transit vehicles, construction equipment, airplanes, and large vehicles (2015 RCGP Noise Element, p. N-19). **Table 5.6-D** lists typical human reactions to various levels of PPV. It should be noted that these thresholds are consistent with those enumerated in the California Department of Transportation's *Transportation and Construction Vibration Guidance Manual* (2013), which are shown above.

Table 5.6-D – 2015 Riverside County General Plan Noise Element on Human Reaction to Typical Vibration Levels

Vibration Level PPV (inches/second)	Human Reaction
0.0059-0.0188	Threshold of perception, possibility of intrusion
0.0787	Vibrations readily perceptible
0.0984	Continuous vibration begins to annoy people
0.1968	Vibrations annoying to people in buildings
0.3937-0.5905	Vibrations considered unpleasant when continuously subjected and unacceptable by some walking on bridges.

Source: 2015 *Riverside County General Plan Noise Element*, Table N-3, p. N-19.

Construction of Facilities would be consistent with these above-listed policies. Long-term operation and maintenance of the Facilities are not anticipated to be noise generators.

Riverside County Noise Ordinance

Riverside County Ordinance No. 847 establishes countywide standards regulating noise. Ordinance No. 847 establishes general sound level standards according to type of land use (General Plan land use designation and density). Additional standards are established for special sound sources including motor vehicles, audio equipment, and sound-amplifying equipment and live music. (Ordinance No. 847, Section 6).

Section 4 of Ordinance No. 847 provides the general sound level standards for Riverside County. The following **Table 5.6-E** includes an adaption of Table 1 in Ordinance No. 847, which contains Riverside County's noise standards.

Table 5.6-E – Riverside County Noise Level Standards

General Plan Land Use Designation Category	Maximum Decibel Level (dB L_{max})	
	7:00 a.m. – 10:00 p.m.	10:00 p.m. – 7:00 a.m.
Non-Rural Residential[a]	55	45
Rural Residential[b]	45	45
Commercial[c]	65	55
Light Industrial	75	55
Heavy Industrial	75	75

General Plan Land Use Designation Category	Maximum Decibel Level (dB L_{max})	
	7:00 a.m. – 10:00 p.m.	10:00 p.m. – 7:00 a.m.
Business Park and Public Facilities	65	45
Rural, Agriculture, and Open Space[d]	45	45

[a] Applicable to all non-rural residential 2015 Riverside County land use designations in the Master Plan Area.
[b] Applicable to the Rural Residential (RR) land use designation in the Master Plan Area.
[c] Applicable to all 2015 Riverside County General Plan commercial land use designations in the Master Plan Area.
[d] Applicable to the 2015 Riverside County General Plan Rural Desert (RD), Agriculture (AG), Conservation (C), Conservation Habitat (CH), Open Space Recreation (REC), Open Space Rural (RUR), and Watershed (W) land use designations in the Master Plan Area.
Source: Riverside County Ordinance No. 847, adapted from Table 1, p. 4.

Sounds emanating from the following sources are exempt from County Ordinance No. 847 as set forth in Section 2 of that Ordinance, which has been abbreviated to those relevant to the Project:

a. Facilities owned or operated by or for a governmental agency.

b. Capital improvement projects of a governmental agency.

c. The maintenance or repair of public properties.

h. Private construction project located one-quarter of a mile or more from an inhabited dwelling

i. Private construction projects located within one-quarter of a mile from an inhabited dwelling provided that:

1. Construction does not occur between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September; and

2. Construction does not occur between the hours of 6:00 p.m. and 7:00 a.m. during the months of October through May.

County Ordinance No. 847 defines a governmental agency as the United States, the State of California, Riverside County, any city within Riverside County, and special districts within Riverside County, or any combination of these agencies. The Project constitutes such activity. However, as the Facilities are expected to be constructed along with anticipated development in the eastern Coachella Valley region, some of the Facilities may be constructed by non-agency developers, and as such, the exemptions related to private construction are included herein.

Imperial County General (ICGP)

The ICGP Noise Element includes the following policies that identify noise objectives for the unincorporated Imperial County land within the Master Plan Area, which includes two Facilities:

the training levee and channel associated with 84th Avenue Channel and Travertine Point Channel No. 1.

Noise Element:

- **Objective 1.2**: Control noise levels at the source where feasible.

The ICGP Noise Element identifies Noise Impact Zones. A Noise Impact Zone is defined as an area which may be exposed to noise greater than 60 dB CNEL or 75 dB L_{eq} (ICGP Noise Element, p. 19). The purpose of the Noise Impact Zone is to define areas and properties where an acoustical analysis of a proposed project is required to demonstrate project compliance with land use compatibility requirements and other applicable environmental noise standards. Any property meeting one of the following criteria is defined as being within a Noise Impact Zone (ICGP Noise Element, pp. 19-20):

- Within 1,500 feet from the centerline of an interstate;
- Within 1,100 feet from the centerline of a state highway or prime arterial;
- Within 750 feet from the centerline of a major arterial;
- Within 450 feet from the centerline of a secondary arterial;
- Within 150 feet from the centerline of a collector street;
- Within 750 feet of the centerline of any railroad;
- Within 1,000 feet of the boundary of any railroad switching yard;
- Within an existing or projected 60 dB CNEL of any airport; and/or
- Within ¼ mile of existing farmland which is in an agricultural zone.

A segment of a proposed Facility (Travertine Point Channel No. 1) within Imperial County is within 1,100 feet of Highway 86, and thus, within a Noise Impact Zone. It should be noted that while there are existing agricultural operations in this same area, it is not within an agricultural zone. However, an acoustical analysis is unnecessary due to the characteristics of the proposed Facility, which is an open channel. That is, Project-related noise would only be generated during construction, which is temporary, and existing noise conditions would be restored upon completion.

The ICGP Noise Element also contains construction noise standards. As set forth in the Noise Element, construction noise, from a single piece of equipment or a combination of equipment, shall not exceed 75 dB L_{eq}, when averaged over an 8-hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual sensitive receptor of days or weeks. In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB L_{eq} when averaged over a 1-hour period. Construction equipment operation shall be limited to the hours between 7 a.m. and 7 p.m., Monday through Friday, and between 9 a.m. and 5 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays. In cases of a person constructing or modifying

a residence for himself/herself, and if the work is not being performed as a business, construction equipment operations may be performed on Sundays and holidays between the hours of 9 a.m. and 5 p.m. Such non-commercial construction activities may be further restricted where disturbing, excessive, or offensive noise causes discomfort or annoyance to reasonable persons of normal sensitivity residing in an area. (ICGP Noise Element, p. 24)

Construction of Facilities would be consistent with these above-listed policies. Long-term operation and maintenance of the Facilities are not anticipated to be noise generators.

Imperial County Noise Ordinance

Noise within Imperial County is regulated by Title 9, Land Use Ordinance; Division 7, Noise Abatement and Control. Sound level limits are provided in Section 90702.00, which states that it shall be unlawful for any person to cause noise by any means to the extent that the applicable one-hour average sound level set out in the Land Use Ordinance is exceeded, at any location in Imperial County on or beyond the boundaries of the property of which the noise is produced. Noise level standards are based on the zoning of the area, and include the following land use zones: residential, commercial, manufacturing, industrial (including agricultural and extraction). As shown on **Figure 3-6**, the areas where the Facilities are located within Imperial County, none of these zoning types exist. The two Facilities in Imperial County are primarily sited in an area zoned as Native American and a small portion of Travertine Point Channel No. 1 is zoned Private. Thus, there are no applicable noise standards for the areas where the Facilities are proposed in Imperial County as they are outside of a land use zone that Imperial County has identified with a sound level limit.

Additionally, as set forth in Section 90702.00(G), "This section shall not apply to any activity performed by a City or the County in the discharge of a governmental function or responsibility provided that such City or the County has applied reasonable noise mitigation." Therefore, as the construction of Facilities is a government activity and as there are no established noise standards for the area around the proposed Facilities in Imperial County, the noise ordinance does not apply to the Project.

City of Coachella General Plan (CGP)

The CGP Noise Element includes the following policies that identify noise objectives for Facilities (A01, A01-01, B01, B01-01, B01-02, L01, and L01-01) within that city.

CGP Noise Element:

- **Policy 1.1:** Noise Compatibility. Use the City's Land Use/Noise Compatibility Matrix shown in Figure 10-1 as a guide for planning and development decisions.
- **Policy 1.2:** Noise Analysis and Mitigation. Require projects involving new development or modifications to existing development to implement mitigation measures, where necessary, to reduce noise levels to at least the normally compatible range shown in the City's Land Use/Noise Compatibility Matrix in Figure 10-1. Mitigation measures

should focus on architectural features, building design and construction, rather than site design features such as excessive setbacks, berms and sound walls, to maintain compatibility with adjacent and surrounding uses.

- **Policy 2.1:** Noise Ordinance. Minimize noise conflicts between neighboring properties through enforcement of applicable regulations such as the City's noise ordinance.

Construction of Facilities is reasonably anticipated to be consistent with the above-listed policy; and may include Facility-specific noise evaluation. Long-term operation and maintenance of the Facilities are not anticipated to be noise generators.

City of Coachella Noise Ordinance

Noise within the City of Coachella is regulated by Chapter 7.04, Noise Control, of the Coachella Municipal Code. Sound level limits are provided in Section 7.04.030, which states that regardless of whether an objective measurement by sound level meter is involved, it shall be unlawful for any person to make, continue, or cause to be made or continued, within the city limits any disturbing excessive or offensive noise or vibration which causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the area or that is plainly audible at a distance greater than 50 feet from the source point for any purpose. **Table 5.6-F** lists the city's noise level standards. It should be noted that unlike Riverside and Imperial counties, which utilize 7:00 a.m. to 10:00 p.m. timeframes, the City of Coachella utilizes a 6:00 a.m. to 10:00 p.m. timeframe.

Table 5.6-F – City of Coachella Noise Level Standards

Zone	Applicable 10-Minute Average Limit (dBA)	
	6:00 a.m. – 10:00 p.m.	10:00 p.m. – 6:00 a.m.
Residential – All zones	55	45
Commercial – All zones	65	55

Source: City of Coachella Municipal Code, adapted from Section 7.04.030(A).

The Coachella Municipal Code also sets forth the following construction hour limitations in Section 7.04.070:

- October 1 – April 30
  - Monday through Friday: 6:00 a.m. – 5:30 p.m.
  - Saturday: 8:00 a.m. to 5:00 p.m.
  - Sunday: 8:00 a.m. to 5:00 p.m.
  - Holidays: 8:00 a.m. to 5:00 p.m.
- May 1 – September 30

- Monday through Friday: 5:00 a.m. – 7:00 p.m.
- Saturday: 8:00 a.m. to 5:00 p.m.
- Sunday: 8:00 a.m. to 5:00 p.m.
- Holidays: 8:00 a.m. to 5:00 p.m.

As set forth in Section 7.04.060(K), "The provisions of this regulation shall not preclude the construction, operation, maintenance and repairs of equipment, apparatus or facilities of park and recreation departments, public work projects or essential public services and facilities, including those of public utilities subject to the regulatory jurisdiction of the California Public Utilities Commission." The Master Plan constitutes such an activity if constructed by a public agency; however, as the Facilities are expected to be constructed along with anticipated development in the eastern Coachella Valley region, some of the Facilities may be constructed by non-agency developers, and as such, the standards and limitations related to private construction are included herein and would be applicable if constructed by a private developer.

5.6.5 Environmental Impacts

To provide a more concise analysis, Thresholds A and C have been combined in this Recirculated Draft PEIR and are analyzed simultaneously.

Threshold A: *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.*

Threshold C: *Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.*

There are two types of noise impacts associated with implementation of the Master Plan, noise resulting from construction of the Facilities and noise resulting from the operation and maintenance of the Facilities.

Impacts Resulting from Construction of Facilities

Construction noise levels vary according to the type(s) of equipment utilized and size of the active construction zone. Construction of Facilities may entail the use of heavy equipment such as backhoes, excavators, tractor, dozers, scrapers, pavers, water trucks, wheeled loaders, and dump trucks; at various times throughout a future construction project.

As shown in **Table 5.6-G – Typical Construction Equipment Noise Levels**, at 50 feet the maximum noise levels for this type of equipment ranges from approximately 77 dBA to 85 dBA L_{max} and the equivalent continuous noise level ranges from approximately 73 dBA to 81 dBA L_{eq}. At a distance of ~~50 feet or~~ a quarter-mile (1,320 feet) away from the construction area, maximum noise level ranges from approximately 48 dBA to 57 dBA L_{max} and the equivalent continuous noise level ranging from approximately 44 dBA to 53 dBA $L_{eq.}$ These noise levels assume no shielding or noise attenuation between the source of the noise to the receptor at 50

feet and a quarter-mile respectively. Noise shielding is anything that breaks or partially breaks the line of sight between the receiver and the noise source, such as a building, fence, or wall.

Table 5.6-G – Typical Construction Equipment Noise Levels[a]

Construction Equipment	Impact Device[1]?	50 Feet from Source		¼ Mile from Source	
		L_{max} (dBA)	L_{eq} (dBA)	L_{max} (dBA)	L_{eq} (dBA)
Backhoe	No	77.6	73.6	49.1	45.1
Dozer	No	81.7	77.7	53.2	49.3
Dump Trucks	No	76.5	72.5	48.0	44.0
Excavator	No	80.7	76.7	52.3	48.3
Front End Loader	No	79.1	75.1	50.7	46.7
Grader	No	85.0	81.0	56.6	52.6
Scraper	No	83.6	79.6	55.1	51.2
Tractor	No	84.0	80.0	55.6	51.6
Paver	No	77.2	74.2	48.8	45.8

Notes:
[a] Calculated using the Federal Highway Administration Construction Noise Model (FHWA-HEP-05-054) also known as the Roadway Construction Noise Model (RCNM)
Source: U.S. Department of Transportation, Federal Highway Administration, *FHWA Roadway Construction Noise Model Users Guide*, January 2006. (Available at https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf, accessed December 10, 2014.)

At a distance of 50 feet from the noise source, the total maximum unshielded maximum noise level (85 dBA L_{max}) associated with the equipment anticipated to be used to construct the proposed Facilities would exceed the daytime sound level limits set forth in the Riverside County Noise Ordinance (see **Table 5.6-E**) and the City of Coachella Noise Ordinance (see **Table 5.6-F)**. At a quarter-mile, the total unshielded maximum noise level (57 dBA L_{max}) would exceed the daytime noise standards for residential uses in unincorporated Riverside County and the City of Coachella.

It should be noted that impacts from impulsive noise are not anticipated as use of impact devices is not anticipated for construction of the Facilities. Impulsive noise is produced by the impact of a mass on a surface, which is typically repeated over time, such as, a jack hammer.

The projected noise levels in **Table 5.6-G**, assumes no shielding or noise attenuation. Common building construction methods for residential and commercial structures provide attenuation of

[1] An impact device is equipment that generates impulsive noise. Impulsive noise is defined as noise of short duration (generally less than one second), high intensity, abrupt onset, rapid decay and often rapidly changing spectral composition. The noise is produced by the impact of a mass on a surface, which is typically repeated over time, such as, a jack hammer.

exterior noise sources at varying levels ranging from a 15 dBA reduction to a 40 dBA reduction depending on the building materials used and whether windows are closed (ICGP Noise Element, p. 27). While persons within a residential or commercial structure would not be exposed to the total noise levels shown in **Table 5.6-G**, Riverside County and the City of Coachella's noise standards are applicable to exterior noise levels. Accordingly, no attenuation factors such as those from a structure's building materials have been applied in calculating the construction noise outputs for the Project. It should also be noted that, unlike the three proposed debris basins, the proposed open channels, underground storm drains, and training levees are linear facilities, that is, the construction noise source would move along the alignment as construction of these Facilities occurs.

Under existing conditions, there are noise-sensitive receptors located in proximity to numerous Facilities. Moreover, as the Master Plan identifies conceptual locations and sizing of regional drainage facilities to be developed over a span of many years as anticipated development occurs in the Master Plan Area, additional noise-sensitive receptors may be present at the time Facility(ies) are constructed. Nonetheless, while construction noise associated with a government agency project is exempt from the noise standards in each of the affected jurisdictions and private construction is exempt if confined to that affected jurisdiction's construction hour limitations, the Project's construction noise levels may potentially cause a substantial temporary or periodic increase in ambient noise levels in the vicinity of the Facility(ies) above levels existing without the Project.

As the final location and design of facilities may change, and the area conditions in regards to noise-sensitive receptors may be different at the time of construction from present, as such, construction of future Facilities may require additional noise evaluation.

Limiting construction-related noise exposure to sensitive receptors would also be achieved by restricting such activity to the daytime hours when noise sensitivity is lower and the ambient noise levels are higher, and which is required by specific limitations per agency jurisdiction and affected Facilities as summarized in **Table 5.6-H**.

Table 5.6-H – Required Construction Hour Limitations by Jurisdiction and Affected Facilities

	Riverside County[a]	Imperial County	City of Coachella[b]
Construction Timeframes	*Oct. 1 – May 31* 7:00 a.m. – 6:00 p.m. *June 1 – Sept. 30* *7:00 a.m. – 6:00 p.m.*	*Monday through Friday* 7:00 a.m. – 7:00 p.m. *Saturday* *9:00 a.m. – 5:00 p.m.* *No construction activity permitted on Sundays or*	*Oct. 1 – April 30, Monday – Friday* 6:00 a.m. – 5:30 p.m. *May 1 – Sept. 30, Monday – Friday* *6:00 a.m. – 7:00 p.m.* *Any Saturday, Sunday,*

	Riverside County[a]	Imperial County	City of Coachella[b]
		holidays	*Holiday* *8:00 a.m. – 5:00 p.m.*
Affected Facilities	*All facilities not located within Imperial County and the City of Coachella*	Travertine Point Channel No. 1 and Training Levee and Channel associated with 84th Avenue Channel	A01, A01-01, B01, B01-01, B01-02, L01, and L01-01

[a] The allowed start time for construction activity from June 1 through September 30 is 6:00 a.m. per Ordinance No. 847 Section 2. However, so as to keep construction activity from impacting Riverside County's evening noise standards (10:00 p.m. – 7:00 a.m.) an allowed start time of 7:00 a.m. is reflected instead.

[b] The allowed start time for construction activity from May 1 through September 30 is 5:00 a.m. per Coachella Municipal Code Section 7.04.070. However, so as to keep construction activity from impacting the City of Coachella's evening noise standards (10:00 p.m. – 6:00 a.m.) an allowed start time of 6:00 a.m. is reflected instead.

Potential noise effects would be mitigated by implementing mitigation measure **MM NOI 1** and MM NOI 2. Mitigation measure **MM NOI 1** requires the use of temporary noise barriers that achieve a Sound Transmission Class rating of 32 during construction of any segment of a Facility within a quarter-mile of an existing noise-sensitive receptor, including an inhabited residential dwellings, hospitals, and schools. Such a noise barrier would attenuate the maximum noise level and equivalent continuous noise level from construction equipment to at or below 55 dBA at the receptor. It should be noted that no residential or commercial structures are in the vicinity of the SMP Facilities proposed to be located in Imperial County. Mitigation measure **MM NOI 2** requires construction equipment be maintained in good working condition; this measure serves to ensure that the projected noise levels, based on manufacturer specifications and monitored levels of properly operating equipment, would not be exceeded.

Moreover, it should be also noted that idling of construction equipment not in use for longer than five minutes is prohibited by California Air Resources Board's (CARB) Regulation for In-Use Off-Road Diesel-Fueled Fleets.[2] While this regulation is intended to reduce emission of criteria air pollutants, compliance with this regulation would also reduce construction noise by restricting engine idling.

Therefore, exposure of persons to or generation of noise levels in excess of established standards would be **less than significant with mitigation** as construction noise activity for a government agency project or for private construction that occurs within the affected jurisdictions' established timeframe, which is required of the Project, and which is exempt from such standards.

Impacts Resulting from Operation of Facilities

[2] Source: http://www.arb.ca.gov/regact/2010/offroadlsi10/finaloffroadreg.pdf, accessed February 10, 2015.

Once a Facility is constructed, it may require maintenance in order to retain function and flood control capacity. It is expected that CVWD would operate and maintain the Facilities. Operation and maintenance of the Facilities may generate noise, but at a much smaller scale than construction. Maintenance of storm drains and concrete channels typically consists of keeping these facilities and their side drains clear of debris and sediment, as well as repairs to access roads and fences, and removing graffiti; and major repairs may be required following damaging storm events. To maintain the constructed Facilities, CVWD would occasionally use equipment similar to the types used to construct the proposed Facilities.

The routine maintenance of earthen channels and basins typically require the following activities: the removal of deposition, repair of eroded slopes, and reduction of fire hazards by annually mowing, and application of herbicides as well as the maintenance activities described in the previous paragraph. Vegetation must be removed or mowed, as necessary, to provide the designed hydraulic capacity. Any vegetation that may pose a fire hazard to adjacent structures must also be maintained. The design capacity of the facility and the frequency, duration, and velocity of runoff usually dictate the frequency of vegetation maintenance. Most Facilities would require some annual vegetation control.

These above-described maintenance activities are generally short in duration, require less equipment than Facility construction, and would also take place during daytime hours, unless in the rare event immediate emergency maintenance or repair was necessary. For these reasons, operation of the Facilities would not constitute a substantial temporary increase in ambient noise levels. Moreover, such activity by CVWD to maintain the Facilities is also exempt from noise standard regulations in Riverside and Imperial counties and in the City of Coachella. Therefore, impacts in that regard would be **less than significant**.

Threshold B: *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels*

Ground vibration can be annoying to people and the degree to which a person is annoyed depends on the activity in which they are participating at the time of the disturbance. For example, someone sleeping or reading would be more sensitive than someone who is running on a treadmill. Reoccurring primary and secondary vibration effects often lead people to believe that the vibration is damaging their home, although vibration levels may well be below minimum thresholds for damage potential. (VG, p. 13)

Vibration generated by construction activity also has the potential to damage structures. This damage could be structural damage, such as cracking of floor slabs, foundations, columns, beams, or wells, or cosmetic architectural damage, such as cracked plaster, stucco, or tile. (VG, p. 13)

Although construction of the proposed Facilities is not anticipated to require the use of impact devices (**Table 5.6-G**), excavators and scrapers may be used during consruction. The effects of these types of equipment are anticipated to be similar to those of a large bulldozer. **Table**

5.6-I – Potential Construction-Induced Vibration presents the Peak Particle Velocity (PPV), i.e., the amount of vibration, associated with the types of construction equipment anticipated to be used to construct the Facilities.

Table 5.6-I – Potential Construction Induced Vibration[a]

Construction Equipment	PPV[b] at 25 ft. (in/sec)	PPV at 50 ft. (in/sec)[c]
Large Bulldozer	0.089	0.042
Loaded Trucks	0.076	0.035
Small Bulldozer	0.003	0.001

Notes:
[a] Source: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, September 2013, adapted from Table 18, p. 37.
[b] Peak Particle Velocity
[c] Where $PPV_{Equipment} = PPV_{Ref}(25/D)^n$ (in/sec) and PPV_{Ref} = reference PPV at 25 ft, "D" = distance from equipment to the receiver in ft. and "n" = 1.1 (the value related to the attenuation rate through the ground).

In comparing the estimated vibration shown in **Table 5.6-I** with the threshold criteria presented in **Table 5.6-B** and **Table 5.6-C**, above, at a distance of 50 feet estimated vibration is expected to be "Barely Perceptible" to humans and significantly below the vibration damage threshold for older residential structures. At a distance of 25 feet, the estimated vibration is expected to be "Distinctly Perceptible" to humans; however, it is still below the vibration damage threshold for older residential structures.

Since the estimated vibration is expected to be within levels perceived as barely perceptible at 50 feet, potential impacts regarding vibration are less than significant at that distance and mitigation regarding construction-related vibration impacts is not required. However, at distances of less than 50 feet, vibration from construction equipment is above the threshold of perception and has the potential to be "Distinctly Perceptible" to humans although it is not anticipated to achieve the level of "Strongly Perceptible/Begins to Annoy." As such, MM NOI 1 is required to reduce potential noise effects to sensitive receptors.

The Project would comply with limitations on construction hours set forth in **Table 5.6-H – Required Construction Hour Limitations by Jurisdiction and Affected Facilities**, which would then limit sensitive receptor's exposure to construction-related vibration to daytime hours when sensitivity is lower. Therefore, impacts associated with groundborne vibration resulting from the construction of proposed Facilities would be **less than significant with mitigation**.

5.6.6 Mitigation Measures

An EIR is required to describe feasible mitigation measures that could minimize significant adverse impacts (State *CEQA Guidelines* Section 15126.4).

MM NOI 1 Temporary Noise Barrier:
Facilities constructed within a quarter-mile of a noise-sensitive receptor, including an existing inhabited residential dwelling, hospital, or school, shall install temporary noise barriers by the constructing entity with a Sound Transmission Class rating of no less than 32 unless a subsequent noise analysis demonstrates construction noise will not result in a substantial temporary or periodic increase in ambient noise levels in the vicinity of such Facility or Facilities above existing levels.

MM NOI 2 Construction Equipment:

1. The Contractor shall be required to provide and maintain construction equipment in good condition and in proper tune per manufacturer's specifications, and to the satisfaction of the Coachella Valley Water District, Riverside County, Imperial County, and/or City of Coachella, as appropriate based on the location of the Facility(ies) being implemented. Equipment maintenance records and equipment design specification data sheets shall be available to CVWD for review upon request.
2. The contractor shall require all construction equipment, fixed or mobile, be equipped with properly operating and maintained mufflers, consistent with manufacturers' standards.
3. The construction supervisor shall place all stationary construction equipment so that emitted noise is directed away from the noise-sensitive receptors nearest the project site.
4. The construction supervisor shall locate equipment staging in areas that would create the greatest distance between construction-related noise sources and noise-sensitive receptors(i.e., on the access roads or at the center of each facility).
5. The construction supervisor shall limit haul truck deliveries to the same hours specified for construction equipment.
6. The construction supervisor shall require truck trips be limited to the hours of construction activity.
7. The construction supervisor shall maintain quality pavement conditions on the property that are free of vertical deflection (i.e. speed bumps) to minimize truck noise.
8. The construction supervisor shall require the truck access gates and loading areas be posted with signs which state:
9. Truck drivers shall turn off engines when not in use;
10. No music or electronically reinforced speech from workers shall be audible at noise sensitive properties.

5.6.7 Project-Specific Environmental Effects after Mitigation Measures are Implemented

The Master Plan is intended to be used as a planning guide for the conceptual location and sizing of regional drainage facilities (Facilities) that would be constructed by CVWD, City of Coachella, and/or developers over time as development takes place within the area, as such, the final location and sizing of the Facility(ies) would be determined at a later time and subject to further Facility-specific review.

Construction of Facilities may produce construction-related temporary noise perceptible by noise-sensitive receptors. The temporary nature of this impact in conjunction with mitigation measures requiring temporary barriers, maintaining construction equipment in proper tune, as well as the construction equipment engine noise reduction through compliance with CARB regulation would reduce potential noise impacts to **less than significant**.

Mitigation measure **MM NOI 1** requires a quantifiable reduction to reduce noise levels at noise-sensitive receptors at or below 55 dBA. Mitigation measure **MM NOI 2** is a qualitative measure in that there are no quantifiable reductions associated with it. Mitigation measure **MM NOI 2** requires that all utilized construction equipment is properly working and tuned to manufacturer's specifications in addition to setting forth a number of other measures that would reduce construction-related noise exposure to sensitive receptors. This measure would serve to ensure that the projected noise levels, based on manufacturer specifications and monitored levels of properly operating equipment, would not be exceeded. Required compliance with CARB's Regulation for In-Use Off-Road Diesel-Fueled Fleets prohibits idling of vehicles and construction equipment in excess of five minutes, which would reduce the amount of noise generated by vehicles and equipment when not in use.

Implementation of mitigation measures **MM NOI 1 and MM NOI 2** are designed to reduce potential construction noise to a less than significant level, and no residual impacts would occur.

5.6.8 Cumulative Noise Effects after Mitigation Measures are Implemented

A cumulatively considerable impact would occur if construction of the Facilities in conjunction with the operation and construction of other future projects would result in the generation of excessive noise or groundborne vibration. The geographic scope for cumulative noise impacts is the Master Plan Area, which includes portions of unincorporated Riverside and Imperial counties and portions of the city ~~Cities~~ of Coachella ~~and La Quinta~~.

Because the Master Plan does not propose any changes in land uses within the Master Plan Area, this Recirculated Draft PEIR utilizes the "summary of projections" approach in the cumulative analysis. State *CEQA Guidelines* Section 15130(d) states that:

> Previously approved land use documents such as general plans, specific plans, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impact analysis is required when a project is consistent with a general, specific, master, or comparable programmatic plan where the lead agency determines that the regional or area-wide cumulative impacts of the proposed project have been adequately addressed, as defined in Section 15152(f), in a certified EIR for that plan.

Additionally, if a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact. (State *CEQA Guidelines* Section 15130(e).) Thus, cumulative environmental effects per each of these respective jurisdictions' general plans are discussed below.

Riverside County

Future development accommodated by build-out of the 2015 Riverside County General Plan would result in cumulatively considerable increases in ambient noise levels and in the number of people and noise-sensitive land uses exposed to substantial noise levels. It would also incrementally increase ambient noise levels throughout Riverside County to cumulatively considerable levels in some places (where regulatory and mitigation measures are insufficient to reduce noise impacts). Thus, build-out of the 2015 General Plan would result in incremental generation or cumulative exposure of existing uses to excessive noise in some areas, and would result in a cumulatively substantial permanent or temporary increase in ambient noise levels in other areas of the County. Regarding impacts from groundborne vibration and excessive airport-related noise levels, implementation of the regulatory programs and mitigation measures in EIR No. 521 would be sufficient to ensure that impacts are not cumulatively significant. (2015 RCGP EIR 521, p. 5-148.) Therefore, cumulative noise impacts to noise exposure in excess of established noise standards, substantial permanent increase in ambient noise levels, and substantial temporary or periodic increase in ambient noise levels were determined to be significant and unavoidable; and cumulative noise impacts to groundborne vibration and excessive airport-related noise were determined to be less than significant with mitigation.

Imperial County

The General Plan sets forth noise standards for Imperial County, and contains provisions to analyze potential noise impacts, determine whether noise impacts are significant, and determine if mitigation of potential noise impacts is feasible and adequate. The standards include noise/land use compatibility guidelines, interior noise standards, property line noise standards, construction noise standards, and guidelines for the determination of significant noise level increase. The Imperial County General Plan EIR contains mitigation measures for

noise from aircraft, railroads, roadways, industrial uses, agricultural uses, and construction. Specific Plans are also required to include an acoustical analysis. The General Plan describes project design strategies to reduce adverse noise impacts, and include reductions at the source, along the noise path, and at the receptor. (ICGP EIR, pp. III-80 – III-82.) Therefore, the Imperial County General Plan EIR determined noise impacts from build-out would be less than significant with mitigation.

City of Coachella

Cumulative development in the City of Coachella would add population, business, and traffic to the community. This cumulative development would also increase noise levels in the community, especially in the vicinity of its busiest roadways. However, this impact was determined to be less than significant as the General Plan's potential to result in a substantial permanent increase in ambient noise levels in the project vicinity is less than significant with implementation of General Plan policies and enforcement of the City of Coachella's Noise Ordinance. (CGP EIR, p. 4.10-25.) Moreover, the City of Coachella General Plan EIR determined that General Plan build-out would have a less than significant noise impact to exceeding noise standards, groundborne vibrations, substantial temporary or periodic increase in ambient noise levels, and airport- and airstrip-related noise (CGP EIR, pp. 4.10-16 – 4.10-25). Therefore, cumulative noise impacts from build-out of the General Plan were determined to be less than significant.

~~City of La Quinta~~

~~The primary source of noise throughout the City of La Quinta and its Sphere of Influence is the operation of motor vehicles on streets. Land uses adjacent to major arterials therefore experience higher noise levels. Throughout the Sphere of Influence, noise levels are generally lower due to the rural environment. Implementation of the General Plan would facilitate new growth and development in the Sphere of Influence and result in the intensification of land use development within the City of La Quinta's limits, thereby leading to increased traffic volumes and associated higher noise levels. In addition, construction equipment noise, and the noise generated by mechanical equipment would increase as new development and infill development occurs. The ambient noise level would rise as the General Plan is implemented. (LQGP EIR, p. VIII-8)~~

~~The General Plan includes a wide range of policies and programs that would reduce potential noise impacts to less than significant levels. Such policies include adherence to community noise standards, compliance monitoring, land use compatibility planning, and other noise reducing strategies. Mitigation measures provided in the General Plan EIR would also help reduce impacts from increased noise levels. Acoustical analyses may be required to properly identify, mitigate and reduce project-related noise impacts to acceptable levels. (LQGP EIR, p. VIII-8).~~

~~Although cumulative noise levels are expected to rise due to regional growth and development, implementation of goals, policies and programs set forth in the General Plan, and mitigation measures provided in the General Plan EIR would sufficiently protect sensitive receptors from noise impacts. As a result, the General Plan is not expected to generate cumulatively considerable noise impacts. (LQGP EIR, p. VIII-8.) Therefore, cumulative noise impacts were determined to be less than significant with mitigation.~~

As discussed in the preceding paragraphs, development within the Master Plan Area per the respective jurisdictions' general plans would result in less than significant cumulative impacts through regulatory requirements, applicable General Plan policies, and applicable mitigation measures enumerated in the respective General Plan EIRs related to noise. However, Riverside County's EIR No. 521 determined a significant and unavoidable cumulative impact would result from exceeding noise standards and from the substantial permanent and temporary/periodic increase in ambient noise levels.

The Project would not contribute cumulatively to significant sources of noise within the Master Plan Area or in the vicinity of Facilities. The operational or long-term noise associated with the Facilities is nominal, and Facility-specific construction noise would be temporary and would cease once construction is completed. Further, the Facilities would be constructed intermittently over a span of many years as development occurs in the area necessitating such stormwater conveyance and flood control protection infrastructure, and each Facility would mitigate noise impacts as required by the above-listed mitigation measures. Therefore, the Project's contribution to cumulative noise impacts would be **less than significant**.

5.6.9 References

The following references were used in the preparation of this section of the Recirculated Draft PEIR:

2015 RCGP — Riverside County, *General Plan,* Noise Element, December 8, 2015. (Available at http://planning.rctlma.org/Portals/0/genplan/general_plan_2016/elements/Ch07_Noise_120815.pdf?ver=2016-04-01-100805-193, accessed December 30, 2015.)

2015 RCGP EIR 521 — Riverside County, *General Plan Environmental Impact Report No. 521, Recirculated Public Review Draft*, February 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan/GeneralPlanAmendmentNo960EIRNo521CAPFebruary2015/DraftEnvironmentalImpactReportNo521.aspx, accessed December 30, 2015.)

CGP Safety Element — City of Coachella, *General Plan Update 2035*, Adopted April 22, 2015. (Available at http://www.coachella.org/Home/ShowDocument?id=3221, accessed September 11, 2015.)

CMC — City of Coachella, *Coachella Municipal Code*, codified through June 25, 2014. (Available at https://www.municode.com/library/ca/coachella/codes/code_of_ordinances, accessed December 10, 2014.)

ICGP Noise Element — Imperial County, *General Plan Noise Element*, 1993. (Available at http://www.icpds.com/CMS/Media/Noise-Element.pdf, accessed December 10, 2014.)

LU Ord — Imperial County, *Title 9: Land Use Ordinance, Division 7: Noise Abatement and Control*, adopted November 24, 1998. (Available at http://www.icpds.com/CMS/Media/TITLE9Div7_2008.pdf, accessed December 10, 2014.)

Ord. 847 — Riverside County, *Ordinance No. 847 (as amended through 847.1), Regulating Noise*, effective July 19, 2007. (Available at http://www.rivcocob.org/ords/800/847.pdf, accessed December 10, 2014.)

TNS — California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol,* September 2013. (Available at http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf, accessed December 9, 2014)

VG — California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, September 2013. (Available at http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf, accessed December 9, 2014.)

Section 6 – Other CEQA Topics

Note to reader: Text added to this Recirculated Draft PEIR is shown in double underline (example text) and deleted text is shown in strikethrough (~~example text~~.)

The State *CEQA Guidelines* set forth several general content requirements for an EIR, including certain potential impacts which must be addressed. Those impact areas applicable to this Master Plan include the potential for the Master Plan to result in significant and unavoidable adverse impacts (Section 15126(b)); growth-inducing impacts (Section 15126(d)); and significant irreversible changes (Section 15126.2(c)). Section 15125(d) of the State *CEQA Guidelines* also requires an EIR to discuss any inconsistencies between a proposed project and applicable general and regional plans. In addition, State *CEQA Guidelines*, Appendix F requires an EIR discuss project-related energy consumption and conservation. This section of the EIR addresses each of these general requirements.

6.1 Significant and Unavoidable Adverse Impacts

This topic is intended to address any significant impacts that cannot be mitigated to below a level of significance (State *CEQA Guidelines*, Section 15126.2). As discussed in detail throughout Section 5 of this Recirculated Draft PEIR, implementation of the Master Plan would not result in any Project-specific or cumulatively significant unavoidable adverse impacts related to greenhouse gas emissions, biological resources, cultural resources, hydrology and water quality, and noise. Additionally, the Project's Initial Study (included as Appendix A) determined that no significant impacts would occur to the following issue areas: aesthetics, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, population and housing, public services, recreation, transportation and traffic, and utilities and service systems.[1]

The Project's impacts to agricultural resources were determined to be **significant and unavoidable** due to the conversion of state-designated Farmland (Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) to non-agricultural uses. The Project would implement mitigation measure **MM AG 1** for those facilities constructed and or/funded by CVWD. However, because CVWD would not be constructing or funding all of the Master Plan Facilities and does not have the necessary land use authority to impose CEQA mitigation measures upon Master Plan Facilities constructed as part of private development projects, there are no feasible mitigation measure to reduce or eliminate the impact to state-designated Farmland. Additionally, the Project would significantly contribute to a cumulatively considerable loss of state-designated Farmland in the Master Plan Area.

[1] While the Initial Study identified the threshold regarding if the Project would conflict with any applicable habitat conservation plan or natural community conservation plan as a potentially significant impact, this issue is analyzed in Section 5.3, Biological Resources, of the Draft PEIR.

The Project's impacts to air quality were determined to be **significant and unavoidable** as the [short-term] construction emissions would exceed daily regional thresholds set by SCAQMD for NO_X, even after implementation of mitigation measure **MM AQ 1** and **MM AQ-2**. Additionally, the exposure of sensitive receptors to substantial pollution concentrations from the short-term emissions of NO_X is also significant and unavoidable, and this short-term emission would also result in impacts to ozone precursors, and as such, the incremental contribution is cumulatively considerable. Although these are direct, short-term impacts that would cease once construction is complete, they remain significant and unavoidable due to NO_X emissions.

6.2 Growth Inducing Impacts

According to State *CEQA Guidelines* Section 15126.2(d), a project may foster economic or population growth, or additional housing, either indirectly or directly, in a geographical area if it meets any one of the following criteria:

- a project would remove obstacles to population growth;
- increases in the population may tax existing community service facilities, causing significant environmental effects; or
- a project would encourage and facilitate other activities that could significantly affect the environment.

As discussed in Section 3, Project Description, of this Recirculated Draft PEIR, the Project provides a single comprehensive stormwater master plan that contains a drainage plan for the Oasis/Valley Floor and Mecca/North Shore areas that supports the existing and proposed land uses in the Master Plan Area as set forth in the general plans of the jurisdictions within the Master Plan Area (i.e., Riverside and Imperial counties and ~~cities~~ the city of Coachella ~~and La Quinta~~). The Project, when fully realized, would contain the 100-year frequency flood flows and alleviate the primary sources of flooding within the Plan Area, and thereby result in the elimination of FEMA-designated Special Flood Hazard Areas within the Plan Area boundaries. Toward this end, the Project proposes a system of open channels, underground storm drains, debris basins, training levees, and improvements to the existing Whitewater River/Coachella Valley Stormwater Channel (CVSC). Full implementation of the Master Plan would occur over time as development occurs in the Plan Area, and given the long-term, programmatic level of the Master Plan, locations of the Facilities are conceptual and some of the Facilities may not be realized.

The Master Plan Area is generally located in an area that is urbanizing, and CVWD projects a 250 percent increase in population within the Master Plan Area by 2040. This anticipated development would introduce more residential, commercial, and industrial uses as per the applicable general plans' land use designations. The Project in and of itself, would not generate an increased demand on infrastructure or utilities, but instead, is intended to be used as a planning guide for locating and sizing regional drainage facilities (Facilities) that would provide

adequate stormwater conveyance and flood control protection for existing and future development from flood hazards that currently exist in the area. The Facilities would be integrated with future development and build-out of the applicable general plans within the Plan Area. For this reason, implementation of the Master Plan would not directly or indirectly induce population growth or remove obstacles to population growth; it is in response to existing and projected population growth.

Operation of the Facilitates would not generate new employment opportunities as it is expected existing CVWD personnel would address maintenance issues as they arise over the lifespan of the Facilities. At most, construction of each Facility may result in temporary construction employment opportunities. However, given the nature of the work and the availability of labor in both the Coachella Valley and the inland Southern California region as a whole, it is reasonable to assume that the construction of a new Facility would be completed by companies already in business and doing business in the area and would not result in an indirect population growth. Thus, implementation of the Master Plan would not result in any significant growth inducing impacts.

6.3 Significant Irreversible Environmental Changes from the Project

The intent of this section of the Recirculated Draft PEIR is to discuss primary and secondary impacts of the Project that result in significant irreversible changes to the environment. State *CEQA Guidelines* Section 15126.2(c) identifies examples such as use of nonrenewable natural resources, irreversible changes in land use, and irreversible damage to the environment resulting from environmental accidents associated with a project.

Nonrenewable resources, such as fossil fuels, would be consumed during construction of the proposed Facilities. These resources are used for vehicles traveling to and from the Facility site and used to construct each Facility. However, once in operation, these nonrenewable resources would no longer be consumed except by vehicles addressing maintenance issues as they may arise. As such, the operation of the Master Plan is not considered a long-term obligation or investment of fossil fuels due to the infrequency of the visits and continually improving fuel technology, which is anticipated to significantly lessen consumption of fossil fuels in the future, especially in vehicles. Therefore, as the long-term effect of implementation of the Master Plan would not change the development intensity within the Plan Area, but instead follow with it, and the Master Plan does not involve a significant long-term investment of nonrenewable resources, the construction, operation, and maintenance of Facilities would not result in significant irreversible environmental changes.

6.4 Energy Conservation

Appendix F of the State CEQA Guidelines requires an EIR to include a discussion of the potential energy impacts of projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

6.4.1 Energy Requirements

Facilities Construction

This discussion utilizes the assumptions from the *Air Quality/Greenhouse Gas Analysis for the Eastern Coachella Valley Stormwater Master Plan* (the AQ Tech Memo). Because the California Emissions Estimator Model (CalEEMod) program used to evaluate air quality/greenhouse gas emissions does not display the amount and fuel type for construction-related sources, additional calculations were conducted and are summarized below. These calculations are contained in Appendix E of this Recirculated Draft PEIR. Construction of the Master Plan Facilities would require the use of construction equipment for excavating, grading, paving, and hauling activities, as well as construction workers and vendors traveling to and from the site of the Facilities being constructed. Construction equipment requires diesel as the fuel source.

Fuel consumption from heavy-duty construction equipment was calculated based on the equipment mix and usage factors provided in the CalEEMod construction output files as part of the AT Tech Memo included in Appendix B of this Recirculated Draft PEIR. The total horsepower was then multiplied by fuel usage estimates per horsepower-hour included in Table A9-3-E of the SCAQMD's CEQA Air Quality Handbook. Fuel consumption from construction worker and vendor/delivery trucks was calculated using the trip rates and distances provided in the CalEEMod construction output files. Total vehicle miles traveled (VMT) was then calculated for each type of construction-related trip and divided by the corresponding county-specific miles per gallon factor using California Air Resources Board's (CARB's) EMFAC 2014 model. EMFAC provides the total annual VMT and fuel consumed for each vehicle type. Consistent with CalEEMod, construction worker trips were assumed to include 50 percent light duty gasoline auto and 50 percent light duty gasoline trucks. Construction vendor trucks were assumed to be 50 percent medium-duty and 50 percent heavy-duty diesel trucks. Construction hauling trips were assumed to be 100 percent heavy-duty diesel trucks. Please refer to Appendix E of the Recirculated Draft PEIR for detailed calculations.

As shown below in **Table 6-A - Construction Energy Use**, a total of 152,181 gallons of diesel fuel and 4,631 gallons of gasoline are estimated to be consumed during Project construction.

Table 6-A – Construction Energy Use[a]

Fuel	Fuel Consumption
Diesel	
On-Road Construction Trips[b]	45,660 Gallons
Off-Road Construction Equipment[c]	106,521 Gallons
Diesel Total	**152,181 Gallons**
Gasoline	
On-Road Construction Trips[b]	4,631 Gallons

Fuel	Fuel Consumption
Off-Road Construction Equipment[d]	-- Gallons
Gasoline Total	**4,631 Gallons**

Notes:
[a] Source: Table 1 – Total Construction-Related Fuel Consumption, Appendix E of Draft PEIR.
[b] On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod for all years of construction and fleet average fuel consumption in gallons per mile from EMFAC2014 for each of the construction years in the SCAQMD. See Table 2 – On Road Construction Trip Estimates, Appendix L of DEIR for calculation details.
[c] Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (HP)-hour, based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.
[d] All emissions from off-road construction equipment were assumed to be diesel.

Fuel energy consumed during construction would be temporary in nature and would not represent a significant demand on energy resources. Construction of the Master Plan Facilities would utilize cleaner, more efficient off-road equipment because mitigation measure **MM AQ 1** (see Recirculated Draft PEIR Section 5.2.8) requires construction equipment to meet or exceed CARB/US EPA standards. Construction equipment is also required to comply with regulations limiting idling to five minutes or less (CCR Title 13 §2449(d)(3)). Furthermore, there are no unusual characteristics of the Master Plan Facilities that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the State. For comparison, the State of California consumed 15.39 billion gallons of gasoline and 2.90 billion gallons of diesel fuel in fiscal year 2015-2016.[2] The fuel usage during Project construction would account for approximately 0.00003 percent of the existing gasoline related energy consumption and 0.005 percent of the existing diesel fuel related energy consumption in the State of California.

As shown in **Table 6-A**, a total of 152,181 gallons of diesel fuel and 4,631 gallons of gasoline are estimated to be consumed during construction of the Facilities. Fuel energy consumed during construction would be temporary in nature and would not represent a significant demand on energy resources. There are no unusual characteristics of the Master Plan Facilities that would necessitate the use of construction equipment that would be less energy-efficient than for comparable storm drain facilities in other parts of the State. Further, construction would be required to comply with all applicable local, state, and federal fuel efficiency standards.

Construction and operation of the Master Plan Facilities is not anticipated to consume energy other than diesel and gasoline.

[2] *California Board of Equalization, Net Taxable Gasoline Gallons 10 Year* Report (available at https://www.boe.ca.gov/sptaxprog/reports/mvf_10_year_report.pdf) and *Taxable Diesel Gallons of Diesel 10 Year Report* (available at http://www.boe.ca.gov/sptaxprog/reports/Diesel_10_Year_Report.pdf)

Therefore, it is expected that construction-related fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Facilities Operation and Maintenance
The majority of operational energy consumed during maintenance of the Master Plan facilities would be from the infrequent visits by vehicles driven by maintenance personnel and is considered negligible.

6.4.2 Energy Standards

Construction and operation of the Master Plan would not contribute significantly to peak demands for electricity or other forms of energy because the Facilities do not use electricity.

Implementation of Master Plan would comply with applicable City, state, and federal energy conservation measures. There are no unusual characteristics of the Master Plan Facilities that would necessitate the use of equipment during construction or maintenance that would be less energy-efficient than at comparable storm drain facilities in other parts of the State.

Implementation of the Master Plan would not use large amounts of energy in a manner that is wasteful. The majority of operational energy consumed during maintenance of the Facilities would be from the infrequent visits by vehicles driven by maintenance personnel; however, there are no unusual characteristics of the Facilities which would necessitate use of equipment that would be less energy-efficient than at comparable storm drain facilities in other parts of the State.

6.5 Consistency with Regional Plans

Section 15125(d) of the State *CEQA Guidelines* also requires an EIR to "discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans." The regional plans applicable to the proposed Project that are discussed in the environmental impact analysis are the Riverside County, Imperial County, and City of Coachella general plans, the CVMSHCP, and the AQMP.[3] The following table identifies the location in which each of these plans is discussed in the Recirculated Draft PEIR.

Table 6-B – Location of Where Consistency with Regional Plans is Discussed

Plan	Location of Discussion
Riverside County General Plan	Environmental impact analysis section for each environmental issue under the heading "Related Regulations"
Imperial County General Plan	Environmental impact analysis section for each environmental issue under the heading "Related Regulations"

[3] ~~The city of La Quinta General Plan is not discussed in the environmental impact analysis in Section 5 of this Draft PEIR as no Facilities are proposed to be located within that city.~~

Plan	Location of Discussion
City of Coachella General Plan	Environmental impact analysis section for each environmental issue under the heading "Related Regulations"
Coachella Valley Multiple Species Habitat Conservation Plan	Section 5.3.4.3 Biological Resources, Related Regulations, Regional Regulations, Coachella Valley Multiple Species Habitat Conservation Plan
Air Quality Management Plan	Section 5.2.6.1 Air Quality, Related Regulations, Criteria Air Pollutants
Southern California Association of Governments, Regional Transportation Plan/Sustainable Communities Strategy	Section 6.5.1 Other CEQA Topics, Consistency with Regional Plans, Southern California Association of Governments' Regional Transportation Plan
Coachella Valley Association of Governments, Regional Transportation Plan	Section 6.5.2 Other CEQA Topics, Consistency with Regional Plans, Coachella Valley Association of Governments' Regional Transportation Plan

Implementation of the Master Plan would not generate traffic; thus, no discussion of the Riverside County Congestion Management Plan or Coachella Valley Association of Governments' Transportation Uniform Mitigation Fee is required. Additionally, because implementation of the Master Plan does not entail the construction of new housing or the need for replacement housing, no discussion of any housing plan is required.

6.5.1 Southern California Association of Governments Regional Transportation Plan

SCAG is the metropolitan planning organization for Ventura, Los Angeles, Orange, Riverside, San Bernardino, and Imperial counties and is charged by the federal government to research and prepare plans for transportation, growth management, hazardous waste management, and air quality. The following table discusses the proposed Project's consistency with goals and principles of SCAG's 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The Project would be consistent with the goals and principles of the current SCAG plan, as shown in the table below.

Table 6-C –Consistency with RTP/SCS Goals [a]

Goal Number	Goal Text	Statement of Consistency, Non-Consistency, or Not Applicable
1	Align the plan investments and policies with improving regional economic development and competitiveness.	***Not Applicable:*** This goal is specific to SCAG for its RTP/SCS; however, continued development and urbanization in the Plan Area is anticipated, which would include economic development and thus increased

Goal Number	Goal Text	Statement of Consistency, Non-Consistency, or Not Applicable
		competitiveness. The Project would provide stormwater conveyance and flood control protection to existing and future development so as to eliminate flood hazards to life and property in the Plan Area, thereby protecting commerce in the Plan Area.
2	Maximize mobility and accessibility for all people and goods in the region.	***Not Applicable:*** The Project constitutes a stormwater master plan intended to provide for the drainage needs of existing and anticipated future development in the Plan Area through the construction of a system of open channels, underground storm drains, training levees, debris basins, and improvements to the CVSC. This Project does not involve people or goods mobility, or vehicular or active transportation.
3	Ensure travel safety and reliability for all people and goods in the region.	
4	Preserve and ensure a sustainable regional transportation system.	
5	Maximize the productivity of our transportation system.	
6	Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).	
7	Actively encourage and create incentives for energy efficiency, where possible.	***Consistent:*** The Project has been designed to minimize major diversions and perpetuate the natural drainage patterns within the Plan Area to the maximum extent practicable. Thus, utilizing gravity to move flows to the greatest extent possible, thereby resulting in a more efficient use of energy. The Project does not require a long-term commitment of resources, and the energy required for construction is not anticipated to be substantial.
8	Encourage land use and growth patterns that facilitate transit and active transportation.	***Not Applicable:*** The Project constitutes a stormwater master plan intended to provide for the drainage needs of existing and anticipated future development in the Plan Area through the construction of a system of open channels, underground storm drains, training levees, debris basins, and improvements to the CVSC. This Project does not involve people or goods mobility, or transportation, nor does the Project
9	Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with	

Goal Number	Goal Text	Statement of Consistency, Non-Consistency, or Not Applicable
	other security agencies.	encourage land use and growth patterns in and of itself.

[a] Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*, adopted April 2016, p. 64.

6.5.2 Coachella Valley Association of Governments Regional Transportation Plan

Coachella Valley Association of Governments (CVAG) is the local planning agency that coordinates government services in the Coachella Valley. CVAG has recently prepared several studies including the Transportation Project Prioritization Study (2016), Regional Arterial Cost Estimation (2016), and Active Transportation Plan (2016), which in combination establish the key components of Coachella Valley's Regional Transportation Plan. As described previously, SCAG recently released its 2016 RTP, which includes the majority of projects seen within the Transportation Project Prioritization Study prepared by CVAG. Together, these studies define a complete regional transportation system planned for implementation. The goals of the Active Transportation Plan (previously, the Non-Motorized Transportation Plan, 2010) are provided below in **Table 6-D – Consistency with Active Transportation Plan Objectives**, followed with statements of Project applicability to the goals.

Table 6-D – Consistency with Active Transportation Plan Objectives [a]

Goal	Policy Text	Statement of Consistency, Non-Consistency, or Not Applicable
Goal 1: Bicycle Transportation		
A	Implement the Bicycle Transportation Plan, which identifies existing and future needs and provides specific recommendations for facilities and programs over the next 20 years.	***Not Applicable:*** The Project would address drainage issues for current and anticipated future development in the Plan Area through the construction of open channels, underground storm drains, training levees, debris basins, and improvements to the CVSC to address flooding problems within the Plan Area. This Project does not involve people or goods mobility or transportation. Further, the Project is not intended to encourage land use and growth patterns in and of itself, which includes housing. The Project would correspond with future development as
B	Complete a network of bikeways that is feasible, fundable, and serves bicyclists' needs, especially for travel to employment centers, schools, commercial districts, transit stations, and recreational destinations.	
C	Maintain and improve the quality, operation, and integrity of the bikeway network and facilities.	
D	Provide short- and long-term bicycle parking in employment and commercial areas, in multifamily housing, at schools, and at recreation and transit	

Goal	Policy Text	Statement of Consistency, Non-Consistency, or Not Applicable
	facilities.	needed. For this reason, implementation of the Master Plan would neither directly nor indirectly induce population growth, nor remove obstacles to population growth. It would facilitate flood control needs for the growth occurring from other future projects that have been already assessed for environmental impacts and approved.
E	Increase the number of bicycle-transit trips.	
F	Develop and implement education and encouragement plans aimed at youth, adult cyclists, pedestrians, and motorists. Increase public awareness of the benefits of bicycling and of available resources and facilities.	
G	Develop and implement a safety program with the development of shared-use paths.	

Goal	Policy Text	Statement of Consistency, Non-Consistency, or Not Applicable
Goal 2: The Pedestrian Realm		
A	Implement Chapter 6 of the ATP that recommends pedestrian facilities near five major transit hubs.	***Not Applicable:*** The Project would address drainage issues for current and anticipated future development in the Plan Area through the construction of open channels, underground storm drains, training levees, debris basins, and improvements to the CVSC to address flooding problems within the Plan Area. This Project does not involve people or goods mobility or transportation. Further, the Project is not intended to encourage land use and growth patterns in and of itself, which includes housing. The Project would correspond with future development as needed. For this reason, implementation of the Master Plan would neither directly nor indirectly induce population growth, nor remove obstacles to population growth. It would facilitate flood control needs for the growth occurring from other future projects that have been already assessed for environmental impacts and approved.
B	Plan improvements so that people can walk throughout the Coachella and Palo Verde Valleys.	
C	Implement pedestrian designs that encourage walking and contribute to a positive walking environment for all people.	
D	Ensure and enhance the safety of pedestrians at intersections and other specific locations.	

[a] Coachella Valley Association of Governments, *Active Transportation Plan*, 2016, pp. 3-2 to 3-6.

6.6 References

The following references were used in the preparation of this section of the Recirculated Draft PEIR:

ATP Michael Baker International. *Active Transportation Plan* prepared for Coachella Valley Association of Governments. 2016. (Available at http://www.cvag.org/library/pdf_files/trans/Transportation_Documents/CVAG%20ATP%202016-05-25.pdf, accessed September 15, 2016).

RACE Michael Baker International. *Regional Arterial Cost Estimate* prepared for Coachella Valley Association of Governments. 2016. (Available at https://www.cvag.org/library/pdf_files/trans/Transportation_Documents/CVAG%20RACE%202016-05-25.pdf, accessed September 15, 2016).

RTP/SCS Southern California Association of Governments. *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*. Adopted April 7, 2016. (Available at http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf" http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf, accessed September 15, 2016).

TPPS Michael Baker International. *Transportation Project Prioritization Study* prepared for Coachella Valley Association of Governments. 2016. (Available at https://www.cvag.org/library/pdf_files/trans/Transportation_Documents/CVAG%20TPPS%202016-05-25.pdf, accessed September 15, 2016).

Section 7 – Alternatives to the Proposed Project

Note to reader: Text added to this Recirculated Draft PEIR is shown in double underline (example text) and deleted text is shown in strikethrough (~~example text~~.)

The following discussion considers alternatives to implementation of the Project. The discussion examines the potential environmental impacts resulting from each alternative. Through comparisons of these alternatives to the Project, the relative advantage(s) of each can be weighed and analyzed.

State *CEQA Guidelines* Section 15126.6 identifies the parameters within which consideration and discussion of alternatives to the proposed Project should occur. As stated in this section of the guidelines, alternatives must focus on those that are potentially feasible and which attain most of the basic objectives of the Project.

7.1 Project Objectives

As stated previously in Section 3.4 of the Recirculated Draft PEIR, the objectives of the proposed Master Plan are as follows:

1. Provide a single, comprehensive stormwater master plan that contains a drainage plan with the opportunity for stormwater capture for the Oasis/Valley Floor and Mecca/North Shore areas and supports the existing and proposed land uses in the Master Plan Area.
2. In conjunction with ultimate street improvements within the Master Plan Area, contain the 100-year return period flood flows and alleviate the primary sources of flooding within the Master Plan Area.
3. Identify preferred facility alignments, sizing, and right-of-way required for the future construction of Master Plan Facilities to protect existing and future development.
4. Identify the most economical combination of facilities considering environmental constraints, right-of-way acquisition, construction, and maintenance costs.
5. Develop a plan which, when implemented, would result in the elimination of FEMA designated Special Flood Hazard Areas within the boundaries of the Master Plan Area.
6. Minimize major diversions, provide stormwater capture opportunities and perpetuate the natural drainage pattern of the area to the maximum extent practicable.

7.2 Significant Unavoidable Impacts

As determined in *Section 5.1, Agriculture and Forestry Resources*, the Project's impacts to agricultural resources after mitigation would be significant and unavoidable due to the conversion of state-designated Farmland (Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) to non-agricultural uses. Additionally, the Project would significantly contribute to a cumulatively considerable loss of state-designated Farmland in the Plan Area.

As determined in *Section 5.2, Air Quality and Greenhouse Gas Emissions*, the Project's impacts to air quality after mitigation would be significant and unavoidable as the short-term construction emissions, would exceed daily regional thresholds set by the South Coast Air Quality Management District (SCAQMD) for oxides of nitrogen (NO_X). The exposure of sensitive receptors to substantial pollution concentrations from the short-term emissions of NO_X is also significant and unavoidable, and this short-term emission would also result in impacts to ozone precursors, and as such, the incremental contribution is cumulatively considerable. Although these are direct, short-term impacts that would cease once construction is complete, they remain significant and unavoidable due to NO_X emissions. It should be noted that the referenced Section 5.2 analyzes impacts to both air quality and greenhouse gas (GHG) emissions, and only impacts to air quality were determined to be significant and unavoidable. Impacts with regard to GHG emissions would be less than significant.

As the Project would result in significant and unavoidable impacts, a *Statement of Overriding Considerations* would be required. CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project (State CEQA Guidelines Section 15093).

7.3 Less Than Significant Impacts

The Project's potential impacts to the following environmental topics considered in the Recirculated Draft PEIR would be less than significant with mitigation incorporated: biological resources, cultural resources, hydrology and water quality, and noise. It should also be noted that impacts related specifically to GHG emissions were determined to be less than significant without mitigation. The Project's Initial Study (included as Appendix A) determined impacts with regard to: aesthetics, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, population and housing, public services, recreation, transportation and traffic, and utilities and service systems would be less than significant and therefore no mitigation is required for these issue areas.[1]

7.4 Rationale for Alternative Selection

State *CEQA Guidelines* Section 15126.6(a) requires that an EIR "…describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." According to this section of the State *CEQA Guidelines*, "…an EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that would foster informed decision-making and public participation." An

[1] While the Initial Study identified the Land Use and Planning threshold regarding if the Project would conflict with any applicable habitat conservation plan or natural community conservation plan as a potentially significant impact, this issue is analyzed in Section 5.3 – Biological Resources, of the Draft PEIR.

EIR is not required to consider alternatives which are infeasible. CVWD, as Lead Agency, is responsible for selecting a range of project alternatives for examination, and there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the "rule of reason" (State *CEQA Guidelines,* Section 15126.6(a)). Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to an alternative site. (State *CEQA Guidelines,* Section 15126.6(f)(1).)

With respect to the selection of alternatives to be considered in an EIR, State *CEQA Guidelines* Section 15126.6(b) states "…the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." That is, each alternative must be capable of avoiding or substantially lessening any significant effects of the proposed Project. As mentioned, the resulting permanent conversion of state-designated Farmland and the construction-related air quality impacts from NO_X emissions would be significant and unavoidable. As such, a Statement of Overriding Considerations would be required prior to Project approval.

The rationale for selecting the alternatives to be evaluated, and a discussion of the "no project" alternative are also required (State *CEQA Guidelines,* Section 15126.6(e)). In addition to the "no project," this Draft PEIR (or in this instance the Recirculated PEIR) evaluates four other alternatives. Two alternatives for the Oasis/Valley Floor Region, which make up Alternative 1 and Alternative 2, and two alternatives for the Mecca/North Shore Region, which make up Alternative 3 and Alternative 4.

7.5 Alternatives Rejected from Consideration

State *CEQA Guidelines* Section 15126.6(c) specifies that an EIR should identify alternatives that were considered by the lead agency, but were rejected during the scoping process and identify the reasons for eliminating the alternatives from further consideration. Section 15126.6(c) further indicates that a lead agency may eliminate an alternative from detailed consideration in an EIR if it fails to meet the basic project objectives, is infeasible, or does not avoid significant environmental impacts.

An alternative that would entail all underground storm drains and no new open channels or training levees was rejected as being too costly and not providing adequate protection.

7.6 Description and Evaluation of Alternatives

This section of the Recirculated Draft PEIR presents the analysis of five alternatives in comparison to the potential environmental effects associated with the proposed Project. In accordance with State *CEQA Guidelines,* Section 15126.6(d), the discussion of the

environmental effects of the alternatives may be less detailed than the discussion of the impacts of the proposed Project.

In preparing the proposed Master Plan, a number of alternatives were developed and studied for their hydraulic and economic feasibility. However, due to the topography and existing characteristics of the Master Plan Area, coupled by the need for a pragmatic facility network design that would convey flows to the Salton Sea utilizing historic and natural drainage patterns, it is reasonable that the range of alternatives considered are relatively narrow in differences.

A preliminary, "high-level" hydrology analysis was prepared for the study alternatives to determine hydraulic sizing for each alternative. Moreover, a preliminary capital cost analysis and a 40-year operational and maintenance cost analysis was prepared for each alternative, which contributed in part to the rejection of the earthen-lined open channels from further consideration, as mentioned above.

The Project proposes facilities based on historic and natural drainage patterns, rainfall data, existing and planned land uses and growth projections, and expected debris flow from the higher elevations of the mountains and hills flanking the Master Plan Area. The Project also focused on minimizing right-of-way acquisition by proposing the majority of the facilities within or immediately adjacent to existing and future street rights-of-way, as feasible. The alternatives are described in the following paragraphs and a matrix consisting of an alternatives comparison analysis is presented in Section 7.7.

7.6.1 No Project Alternative

Pursuant to State *CEQA Guidelines,* Section 15126.6(e)(3)(C), the impacts of the No Project Alternative should be evaluated by projecting what would reasonably be expected to occur in the foreseeable future if the proposed Project were not approved based on current plans. Accordingly, the No Project Alternative is analyzed herein as the continued use of existing drainage facilities within the Master Plan Area. There are no new Master Plan Facilities under this alternative. For this alternative, flood protection is only provided by the existing CVWD and non-CVWD maintained drainage facilities within the Oasis/Valley Floor and Mecca/North Shore Regions.

Under this alternative, the benefits and objectives of the Master Plan would not be realized. The existing flood risks to life and property would remain in the Master Plan Area because no new facilities would be constructed. In the Oasis/Valley Floor Region, the major flood risk is alluvial fan flooding from the Santa Rosa Mountains via nine canyons which convey flash flood waters from the higher elevations to the valley floor. Local drainage area flooding is a concern in both the Oasis/Valley Floor and Mecca/North Shore Regions. Numerous unimproved open channels exist in the area, with limited flow capacities, and undersized culverts currently are unable to provide 100-year flood protection from the local drainage areas. Moreover, the unchannelized 17 miles of the Coachella Valley Stormwater Channel (CVSC) from Avenue 52 to

the Salton Sea poses a riverine flooding hazard without improvements such as those proposed by the Project.

7.6.2 Alternative 1 (Oasis/Valley Floor Region)

Alternative 1 is an alternate alignment in the Oasis/Valley Floor Region of the Master Plan Area. This alternative consists of concrete-lined open channels with 1.5:1 side slopes and minimum bottom width of 6 feet. Underground storm drains are provided for those tributary areas larger than one square mile. (OVFA, p. 3-1) The goal of the Alternative 1 alignment is to minimize the number of mainline channels and outfalls to CVSC. As a result, Alternative 1 may result in some overly large channels, which may not be feasible due to physical constraints of existing rights-of-way and limited bridge heights (OVFA, p. 3-1). Nonetheless, the Alternative 1 facilities have been sized to convey the 100-year flood discharge. Generally, all underground storm drains proposed in Alternative 1 are sized based on normal depth capacity and a maximum diameter of 96 inches. Open channels are proposed when the capacity of the 96-inch diameter storm drains are exceeded. Grade controls/invert stabilizers are proposed where the open channel velocities would exceed six feet per second due to topography. (OVFA, p. 3-1)

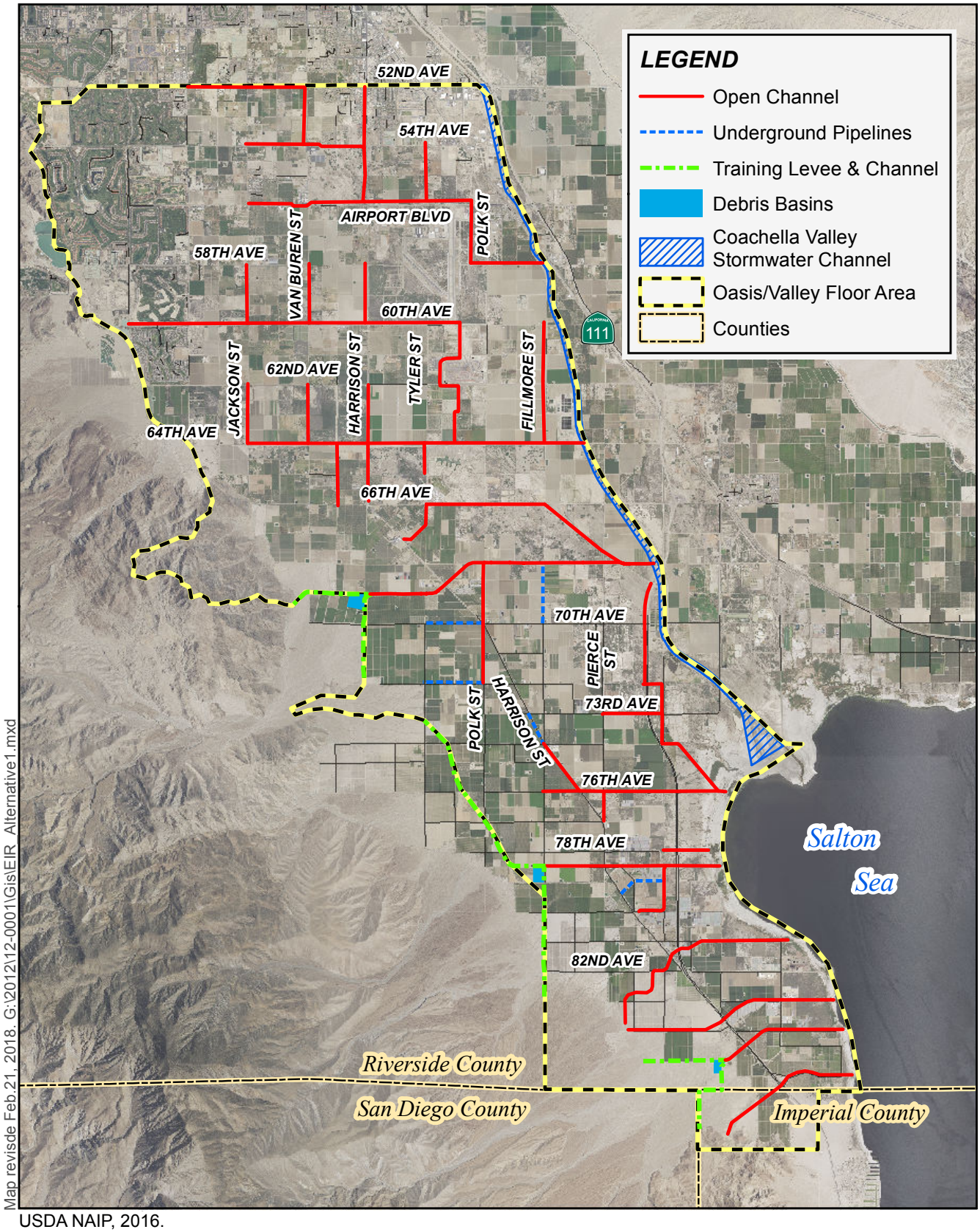
Due to the need to address alluvial fan flooding from the Santa Rosa Mountains, the same debris basins, training levees, and channels identified for the Project as 68th Avenue Channel, Kings Road Channel, and 84th Avenue Channel are included in Alternative 1. Further, the same channelization improvements to the CVSC are also included under this alternative. **Figure 7-1 – Alternative 1** illustrates the Alternative 1 facilities in the Oasis/Valley Floor, and **Table 7-A – Alternative 1 Facilities Comparison** lists the aggregate quantity of facilities in Alternative 1 in comparison to the Project.

Table 7-A – Alternative 1 Facilities Comparison

Facility Type	Quantity Comparison	
	Proposed Project in Oasis/Valley Floor	Alternative 1
Open Channel	369,985 LF	403,855 LF
Underground Storm Drains	11,825 LF	23,339 LF
Training Levees	61,152 LF	61,152 LF
Debris Basins	99.18 AC	99.18 AC
Construction Footprint[a]	~~2,814~~ 2,959 AC	2,218 AC

LF = linear feet; AC = acres

[a] Construction footprint for open channels and training levees buffered 100 feet on either side from centerline and Coachella Valley Storm Drain buffered 30 feet on either side from centerline.



Map revisde Feb.21, 2018. G:\2012\12-0001\Gis\EIR_Alternative1.mxd

USDA NAIP, 2016.

Figure 7-1 - Alternative 1

Eastern Coachella Valley Stormwater Master Plan

0 1 2 3 4 Miles

As with the proposed Project, construction of Alternative 1 facilities would result in the conversion of designated Farmland as shown in **Figure 7-2 – Alternative 1 – Important Farmland**. (Figure is on page 7-9.) With regard to the conversion of designated Farmland, **Table 7-B – ~~2014~~ 2016 FMMP Acreage within the Oasis/Valley Floor Region**, compares the types and quantities of FMMP designated Farmland to be converted by the portion of the Facilities in the Oasis/Valley Floor Region with Alternative 1.

Table 7-B – Comparison of ~~2014~~ 2016 Farmland Mapping and Monitoring Program Acreage for Master Plan Facilities within the Oasis/Valley Floor Region with Alternative 1

FMMP Farmland Categories	Master Plan Facilities Construction Footprint in the Oasis/Valley Floor Region (acres)[a]	Alternative 1 Facilities Construction Footprint (acres)[a]	Difference (Alternative 1 minus Master Plan) (acres)
Prime Farmland	~~811~~ 830	~~809~~ 783	~~-2~~ -47
Farmland of Statewide Importance	~~43~~ 41	~~36~~ 34	-7
Unique Farmland	~~113~~ 185	180	~~67~~ -5
Farmland of Local Importance	~~679~~ 696	~~733~~ 744	~~54~~ 48
Sub-Total (Farmland)	**~~1,646~~ 1,752**	**~~1,758~~ 1,741**	**~~112~~ -11**
Urban and Built Up	~~113~~ 32	~~65~~ 85	~~-48~~ 53
Water	108	50	~~-58~~ -58
Other	~~944~~ 1,008	~~286~~ 283	~~-658~~ -725
Other (Imperial County)	~~3~~ 59	59	~~-56~~ 0
Sub-Total (Non-Farmland)	**~~1,168~~ 1,207**	**~~460~~ 477**	**~~-708~~ -730**
Total	**~~2,814~~ 2,959**	**2,218**	**~~-596~~ -741**

[a] Construction footprint for open channels and training levees buffered 100 feet on either side from centerline and Coachella Valley Storm Drain buffered 30 feet on either side from centerline.

As shown in **Table 7-B**, above, implementation of Alternative 1 would convert less Prime Farmland, ~~and~~ Farmland of Statewide Importance, and Unique Farmland (~~2~~ 47, ~~and~~ 7, and 5 acres less, respectively) in the Oasis/Valley Floor Region than the Master Plan. ~~However, Alternative 1 would convert 67 more acres of Unique Farmland than the Master Plan.~~ This results in Alternative 1 converting a total of ~~58~~ 59 ~~more~~ less acres of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland than the Master Plan in the Oasis/Valley Floor Region.[2]

[2] Acreage converted by Alternative 1 (~~809+36+180 = 1,025~~ 783+34+180=997) less Acreage converted by Master Plan Facilities (~~811+43+113 = 967~~ 830+41+185=1,056) equals ~~112~~ -59.

City of Coachella

City of La Quinta

Riverside County

Riverside County

Salton Sea

Riverside County

San Diego County

Imperial County

LEGEND

- Study Area
- Open Channel
- Underground Pipelines
- Training Levee & Channel
- Coachella Valley Stormwater Channel
- Debris Basins

Farmland Designations

- P - Prime Farmland
- S - Farmland of Statewide Importance
- L - Farmland of Local Importance
- U - Unique Farmland
- W - Water
- X - Other Land
- D - Urban and Built Up Land

Map revised Feb. 21, 2018. G:\2012\12-0001\GisEIR Alt1 Farmland.mxd

Source: CA Dept. of Conservation
FMMP, 2016.

0 2 4 6 Miles

Figure 7-2 - Alternative 1 - Important Farmland
Eastern Coachella Valley Stormwater Master Plan

7.6.3 Alternative 2 (Oasis/Valley Floor Region)

Alternative 2 is an alternate alignment in the Oasis/Valley Floor Region of the Master Plan Area. This alternative consists of concrete-lined open channels with 1.5:1 side slopes and minimum bottom width of 6 feet, and underground storm drains in those tributary areas larger than one square mile. The goal of the Alternative 2 alignment is to optimize the alignments of Alternative 1 by distributing the tributary areas more evenly and adding one more mainline storm drain (OVFA, p. 3-1). As a result, Alternative 2 would likely achieve a better balance of the tributary areas while minimizing the number of mainlines and outfalls to the CVSC (OVFA, p. 3-1). The Alternative 2 facilities are sized to convey the 100-year flood discharge. Similar to Alternative 1, underground storm drains proposed in this alternative are sized based on normal depth capacity and a maximum diameter of 96 inches. Open channels are proposed when the capacity of the 96-inch diameter storm drains were exceeded. Grade controls/invert stabilizers were proposed where the open channel velocities would exceed six feet per second due to topography. (OVFA, p. 3-1)

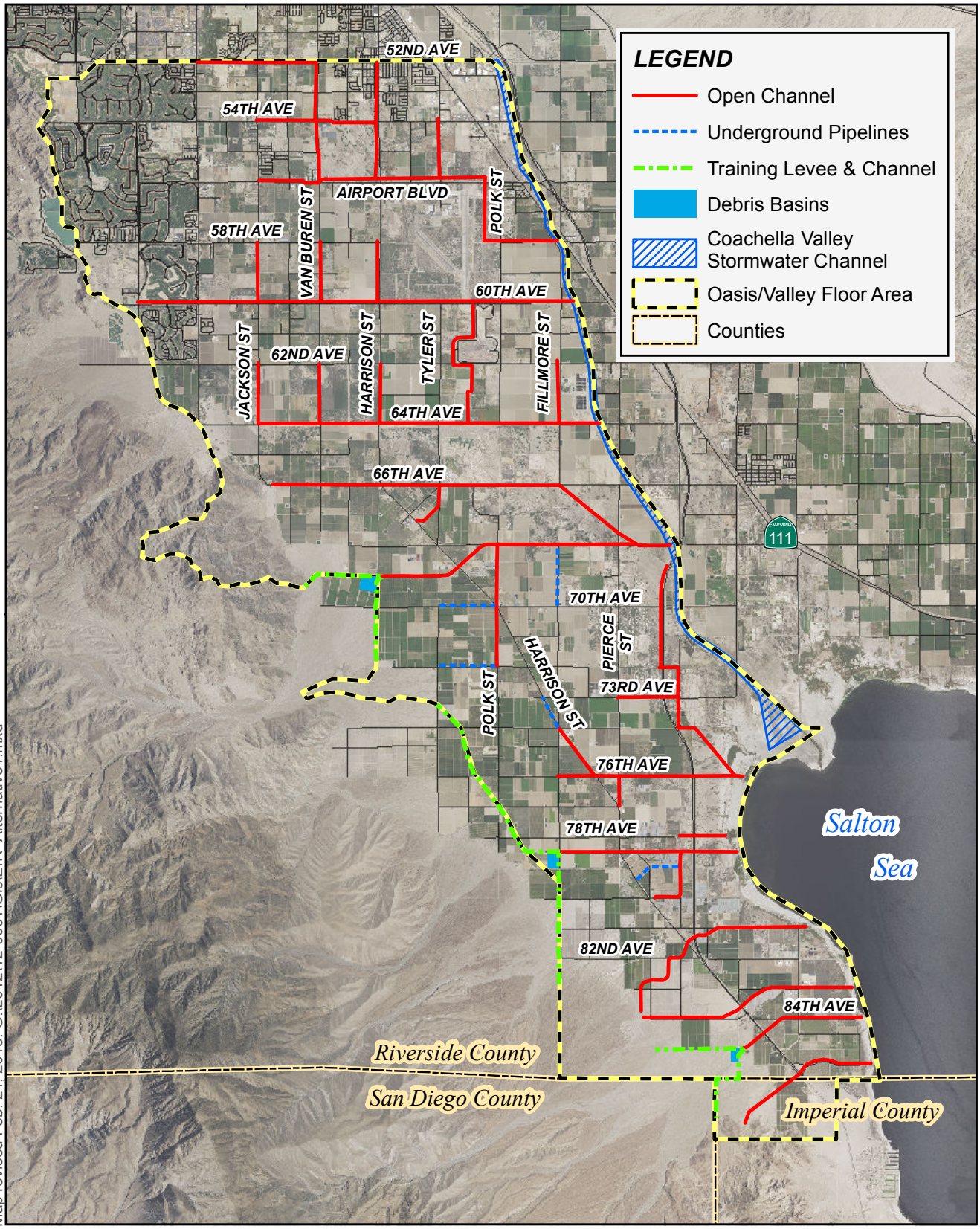
Due to the need to address alluvial fan flooding from the Santa Rosa Mountains, the same debris basins, training levees, and channels identified for the Project as 68th Avenue Channel, Kings Road Channel, and 84th Avenue Channel are included in Alternative 2. Further, the same channelization improvements to the CVSC are also included under this alternative. **Figure 7-3 – Alternative 2** illustrates this alternative's facilities in the Oasis/Valley Floor, and **Table 7-C – Alternative 2 Facilities Comparison** lists the aggregate quantity of facilities that would be part of this alternative in comparison to the Project.

Table 7-C – Alternative 2 Facilities Comparison

Facility Type	Quantity Comparison	
	Proposed Project in Oasis/Valley Floor	Alternative 2
Open Channel	369,985 LF	413,754 LF
Underground Storm Drains	11,825 LF	23,339 LF
Training Levees	61,152 LF	61,152 LF
Debris Basins	99.18 AC	99.18 AC
Construction Footprint[a]	~~2,814~~ 2,959 AC	~~2,218~~ 2,262 AC

LF = linear feet; AC = acres

[a] Construction footprint for open channels and training levees buffered 100 feet on either side from centerline and Coachella Valley Storm Drain buffered 30 feet on either side from centerline.



Map revised Feb. 21, 2018. G:\2012\12-0001\Gis\EIR_Alternative1.mxd

Source: County of Riverside GIS, 2018;
USDA NAIP, 2016

Figure 7-3 - Alternative 2
Eastern Coachella Valley Stormwater Master Plan

0 1 2 3 4 Miles

As with the proposed Project, construction of Alternative 2 facilities would result in the conversion of designated Farmland as shown in **Figure 7-4 – Alternative 2 – Important Farmland**. With regard to the conversion of designated Farmland, **Table 7-D – ~~2014~~ 2016 FMMP Acreage within the Oasis/Valley Floor Region**, compares the types and quantities of FMMP designated Farmland to be converted by the portion of the Facilities in the Oasis/Valley Floor Region with Alternative 2.

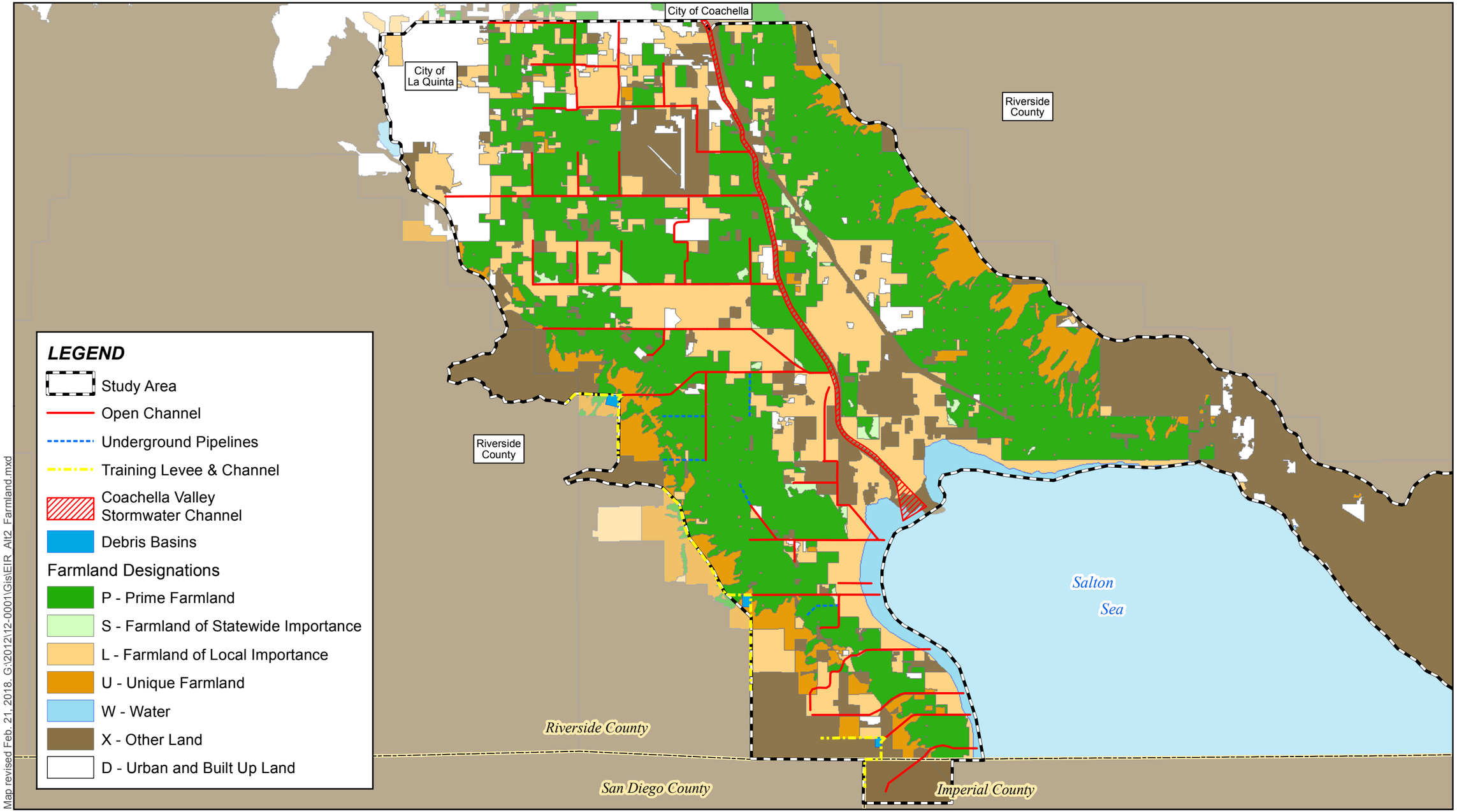
Table 7-D – Comparison of ~~2014~~ 2016 Farmland Mapping and Monitoring Program Acreage for Master Plan Facilities within the Oasis Valley Region with Alternative 2

FMMP Farmland Categories	Master Plan Facilities Construction Footprint in the Oasis/Valley Floor Region (acres)[a]	Alternative 2 Facilities Construction Footprint (acres)[a]	Difference (Alternative 2 minus Master Plan) (acres)
Prime Farmland	~~811~~ 830	~~823~~ 794	~~12~~ -36
Farmland of Statewide Importance	~~43~~ 41	~~36~~ 34	-7
Unique Farmland	~~113~~ 185	181	~~68~~ -4
Farmland of Local Importance	~~679~~ 696	~~739~~ 753	~~60~~ 57
Sub-Total (Farmland)	**~~1,646~~ 1,752**	**~~1,779~~ 1,762**	**~~133~~ 10**
Urban and Built Up	~~113~~ 32	~~69~~ 86	~~-44~~ 54
Water	108	50	~~-58~~ -58
Other	~~944~~ 1,008	~~306~~ 306	~~-638~~ -702
Other (Imperial County)	~~3~~ 59	59	~~55~~ 0
Sub-Total (Non-Farmland)	**~~1,168~~ 1,207**	**~~484~~ 501**	**~~-684~~ -706**
Total	**~~2,814~~ 2,959**	**2,263**	**~~-58~~ -696**

[a] Construction footprint for open channels and training levees buffered 100 feet on either side from centerline and Coachella Valley Storm Drain buffered 30 feet on either side from centerline.

As shown in **Table 7-D**, above, implementation of Alternative 2 would convert less Prime Farmland, Farmland of Statewide Importance and Unique Farmland (36, 7 and 4 less acres respectively) in the Oasis/Valley Floor Region than the Master Plan. ~~However, Alternative 2 would convert 12 more acres of Prime Farmland and 68 more acres of Unique Farmland than the Master Plan.~~ This results in Alternative 2 converting a total of ~~73~~ 47 less ~~more~~ acres of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland than the Master Plan in the Oasis/Valley Floor Region.[3]

[3] Acreage converted by Alternative 2 (~~823+36+181 = 1,040~~ 794+34+181=1,009) less Acreage converted by Master Plan Facilities (~~811+43+113 = 967~~ 830+41+185=1,056) equals -47 ~~73~~.



Source: CA Dept. of Conservation
FMMP, 2016.

Figure 7-4 - Alternative 2 - Important Farmland
Eastern Coachella Valley Stormwater Master Plan

7.6.4 Alternative 3 (Mecca/North Shore Region)

Alternative 3 is an alternate alignment in the Mecca/North Shore Region of the Master Plan Area. Open channels associated with this alternative consist of concrete-lined channels with a 1.5:1 side slope, minimum bottom width of 5 feet, a maximum hydraulic depth of 6 feet, and grade controls where the open channel velocities exceed 6 feet per second from topography (MNSA, p. 3-1). The facilities in Alternative 3 have been designed to convey the 100-year flood discharge. Underground storm drains are also proposed in this alternative and have been sized based on normal depth capacity and with a maximum diameter of 96 inches. Open channels are proposed where the capacity of the 96-inch diameter storm drain are (MNSA, p. 3-1).

Unlike the Project, the boundary for the Mecca/North Shore Region under Alternative 3 would extend past Parkside Drive and farther southeast into the North Shore Region to the Riverside County line, and additional open channel and underground storm drain facilities would be located in this expanded area. **Figure 7-5 – Alternative 3** illustrates this alternative's facilities in Mecca/North Shore. **Table 7-E – Alternative 3 Facilities Comparison** lists the aggregate quantity of facilities that would be part of this alternative in comparison to the Project.

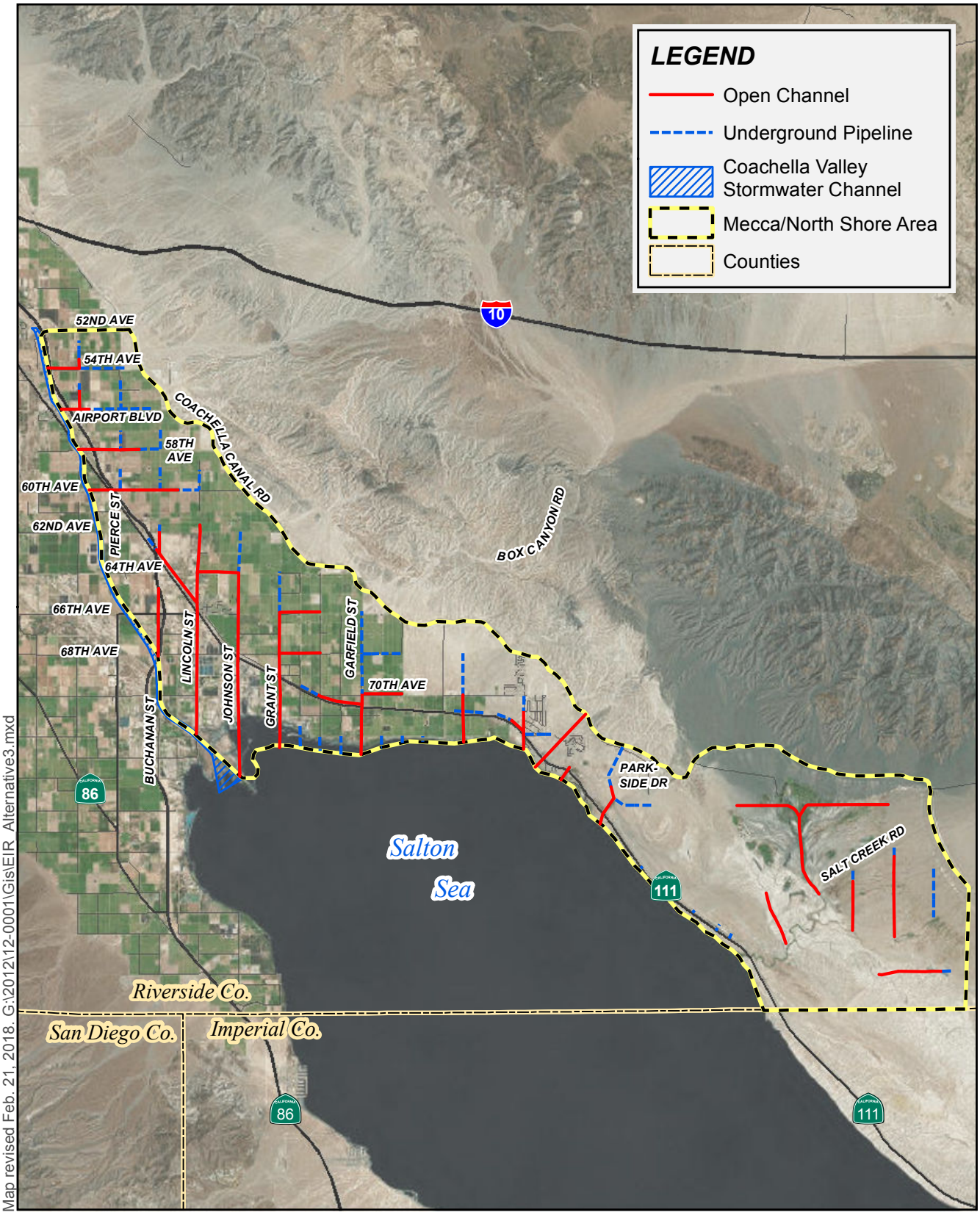
Table 7-E – Alternative 3 Facilities Comparison

Facility Type	Quantity Comparison	
	Proposed Project in Mecca/North Shore	Alternative 3
Open Channel	218,307 LF	251,635 LF
Underground Storm Drains	36,803 LF	122,935 LF
Construction Footprint[a]	1,103 AC	1,165 AC

LF = linear feet; AC = acres

[a] Construction footprint for open channels and training levees buffered 100 feet on either side from centerline and Coachella Valley Storm Drain buffered 30 feet on either side from centerline.

Remainder of page intentionally left blank.



Map revised Feb. 21, 2018. G:\2012\12-0001\Gis\EIR_Alternative3.mxd

Source: County of Riverside GIS, 2018; ESRI/Digital Globe, 2016.

Figure 7-5 - Alternative 3
Eastern Coachella Valley Stormwater Master Plan

0 1 2 3 4 Miles

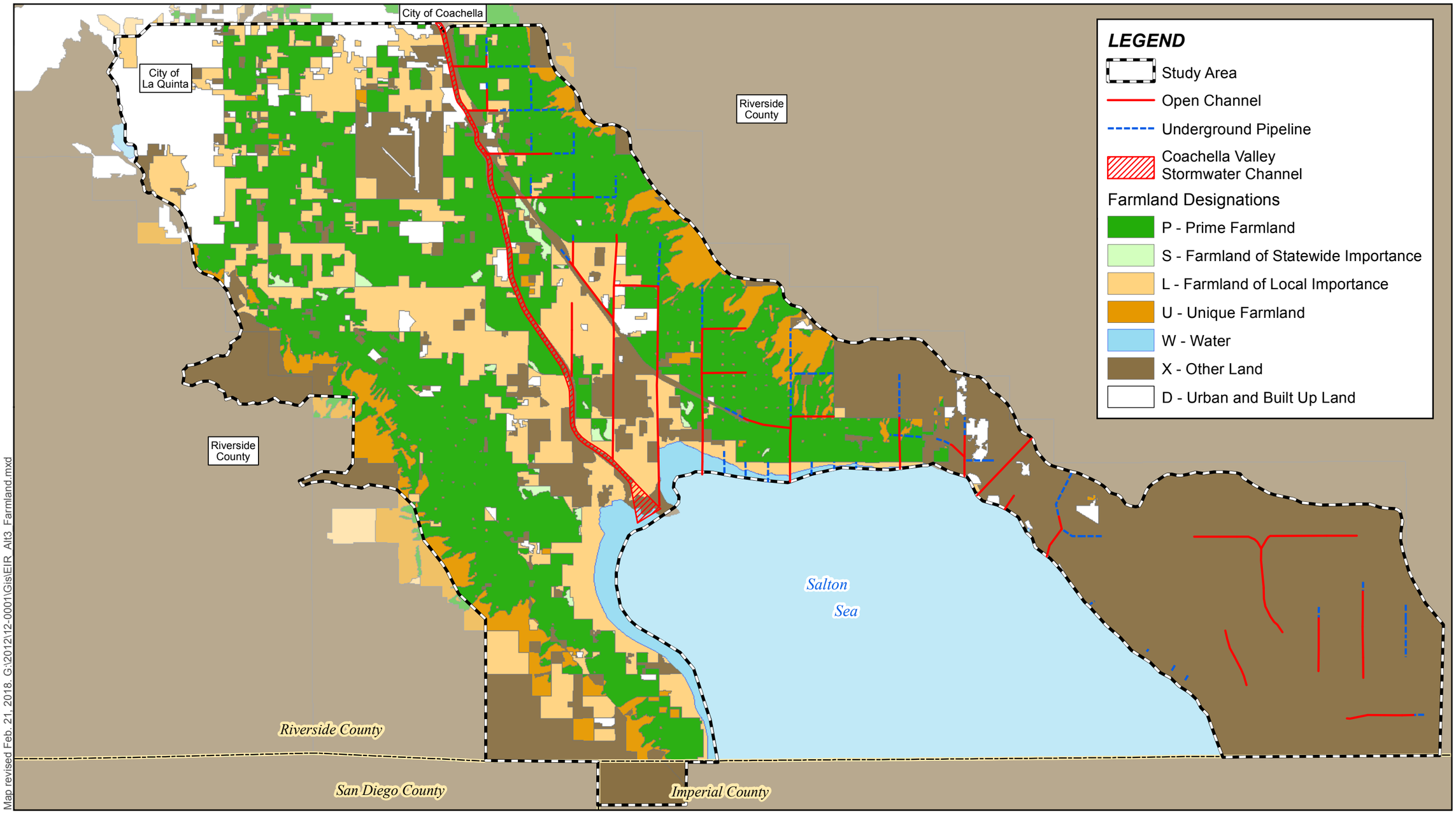
As with the proposed Project, construction of Alternative 3 facilities would result in the conversion of designated Farmland as shown in **Figure 7-6 – Alternative 3 – Important Farmland**. With regard to the conversion of designated Farmland, **Table 7-F – ~~2014~~ 2016 FMMP Acreage within the Mecca/North Shore Region**, compares the types and quantities of FMMP designated Farmland to be converted by the portion of the Facilities in the Mecca/North Shore Region with Alternative 3.

Table 7-F – Comparison of ~~2014~~ 2016 FMMP Acreage for Master Plan Facilities within the Mecca/North Shore Region with Alternative 3

FMMP Farmland Categories	Master Plan Facilities Construction Footprint in the Mecca/North Shore Region (acres)[a]	Alternative 3 Facilities Construction Footprint (acres)[a]	Difference (Alternative 3 minus Master Plan) (acres)
Prime Farmland	~~475~~ 467	~~344~~ 339	~~-131~~ -128
Farmland of Statewide Importance	14	~~9~~ 10	~~-5~~ -4
Unique Farmland	~~56~~ 69	21	~~-35~~ -48
Farmland of Local Importance	~~279~~ 272	~~224~~ 227	~~-55~~ -45
Sub-Total (Farmland)	**~~824~~ 822**	**~~598~~ 597**	**~~-226~~ -225**
Urban and Built Up	8	29	21
Water	3	36	33
Other	~~268~~ 270	503	~~235~~ 233
Other (Imperial County)	0	0	~~63~~ 0
Sub-Total (Non-Farmland)	**~~279~~ 281**	**568**	**~~289~~ 287**
Total	**1,103**	**~~1,166~~ 1,165**	~~63~~ 62

[a] Construction footprint for open channels and training levees buffered 100 feet on either side from centerline and Coachella Valley Storm Drain buffered 30 feet on either side from centerline.

As shown in **Table 7-F**, above, implementation of Alternative 3 would convert less Prime Farmland, Farmland of Statewide Importance, and Unique Farmland in the Mecca/North Shore Region than the Master Plan.



Source: CA Dept. of Conservation
FMMP, 2016.

0 2 4 6 Miles

Figure 7-6 - Alternative 3 - Important Farmland
Eastern Coachella Valley Stormwater Master Plan

7.6.5 Alternative 4 (Mecca/North Shore Region)

Alternative 4 is an alternate alignment in the Mecca/North Shore Region of the Master Plan Area. Open channels associated with this alternative consist of concrete-lined channels with a 1.5:1 side slope, minimum bottom width of 5 feet, a maximum hydraulic depth of 6 feet, and grade controls where the open channel velocities exceed 6 feet per second from topography (MNSA, p. 3-1). The Alternative 4 facilities are designed to convey the 100-year flood discharge. Underground storm drains are also proposed in this alternative and have been sized based on normal depth capacity and with a maximum diameter of 96 inches. Open channels are proposed where the capacity of the 96-inch diameter storm drain would be exceeded. (MNSA, p. 3-1)

Similar to Alternative 3, the boundary for the Mecca/North Shore Region under Alternative 4 would extend past Parkside Drive and farther southeast into the North Shore Region to the Riverside County line, and additional open channel and underground storm drain facilities would be located in this expanded area. However, Alternative 4 proposes a greater quantity of open channels as well as different facility alignments than Alternative 3. **Figure 7-7 – Alternative 4** illustrates this alternative's facilities in Mecca/North Shore. **Table 7-G – Alternative 4 Facilities Comparison** lists the aggregate quantity of facilities that would be part of this alternative in comparison to the Project.

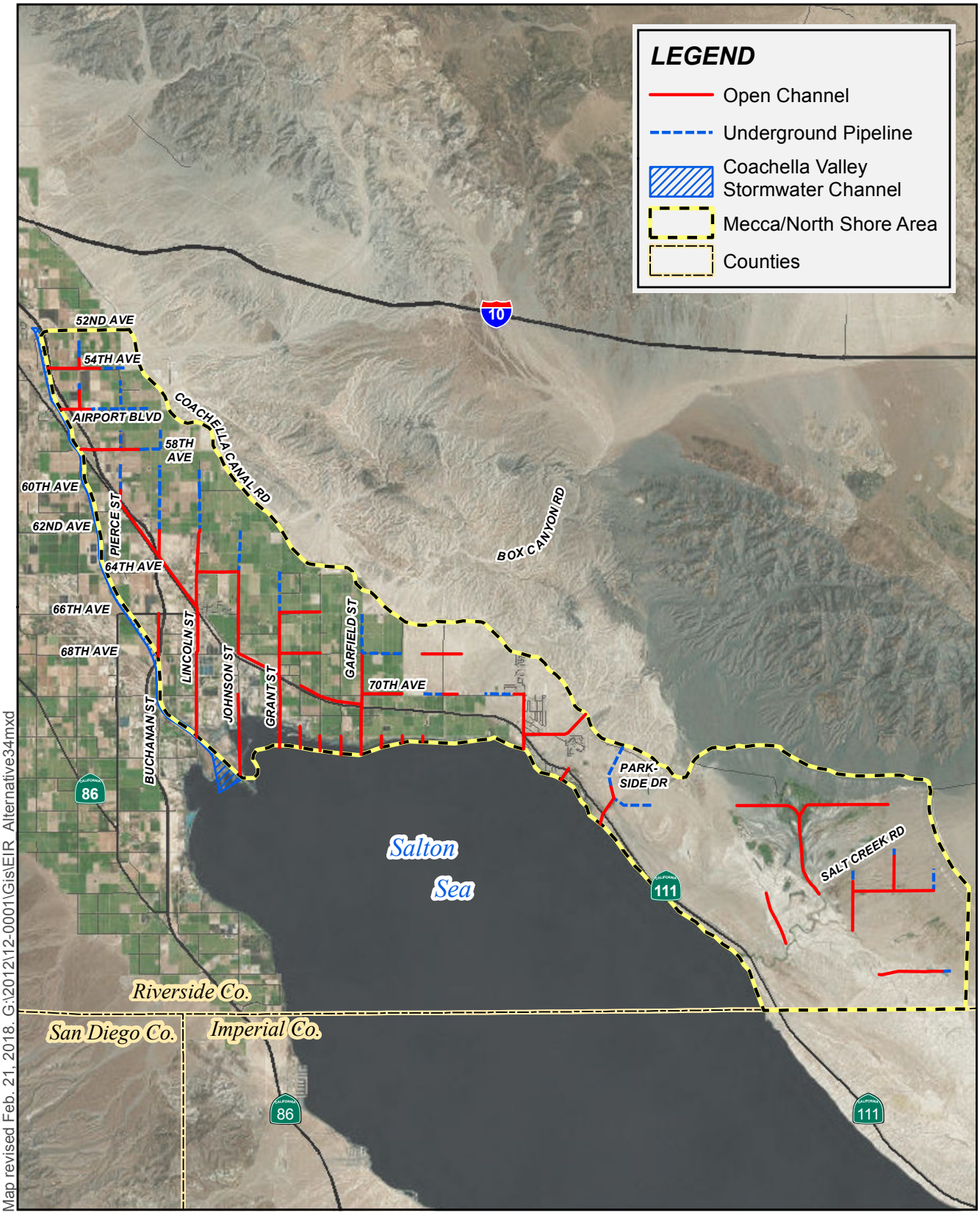
Table 7-G – Alternative 4 Facilities Comparison

Facility Type	Quantity Comparison	
	Proposed Project in Mecca/North Shore	Alternative 4
Open Channel	218,307 LF	278,530 LF
Underground Storm Drains	36,803 LF	90,839 LF
Construction Footprint	1,103 AC	1,273 AC

LF = linear feet; AC = acres

[a] Construction footprint for open channels and training levees buffered 100 feet on either side from centerline and Coachella Valley Storm Drain buffered 30 feet on either side from centerline.

Remainder of page intentionally left blank.



Source: County of Riverside GIS, 2018;
ESRI/Digital Globe, 2016.

Figure 7-7 - Alternative 4
Eastern Coachella Valley Stormwater Master Plan

0 1 2 3 4
Miles

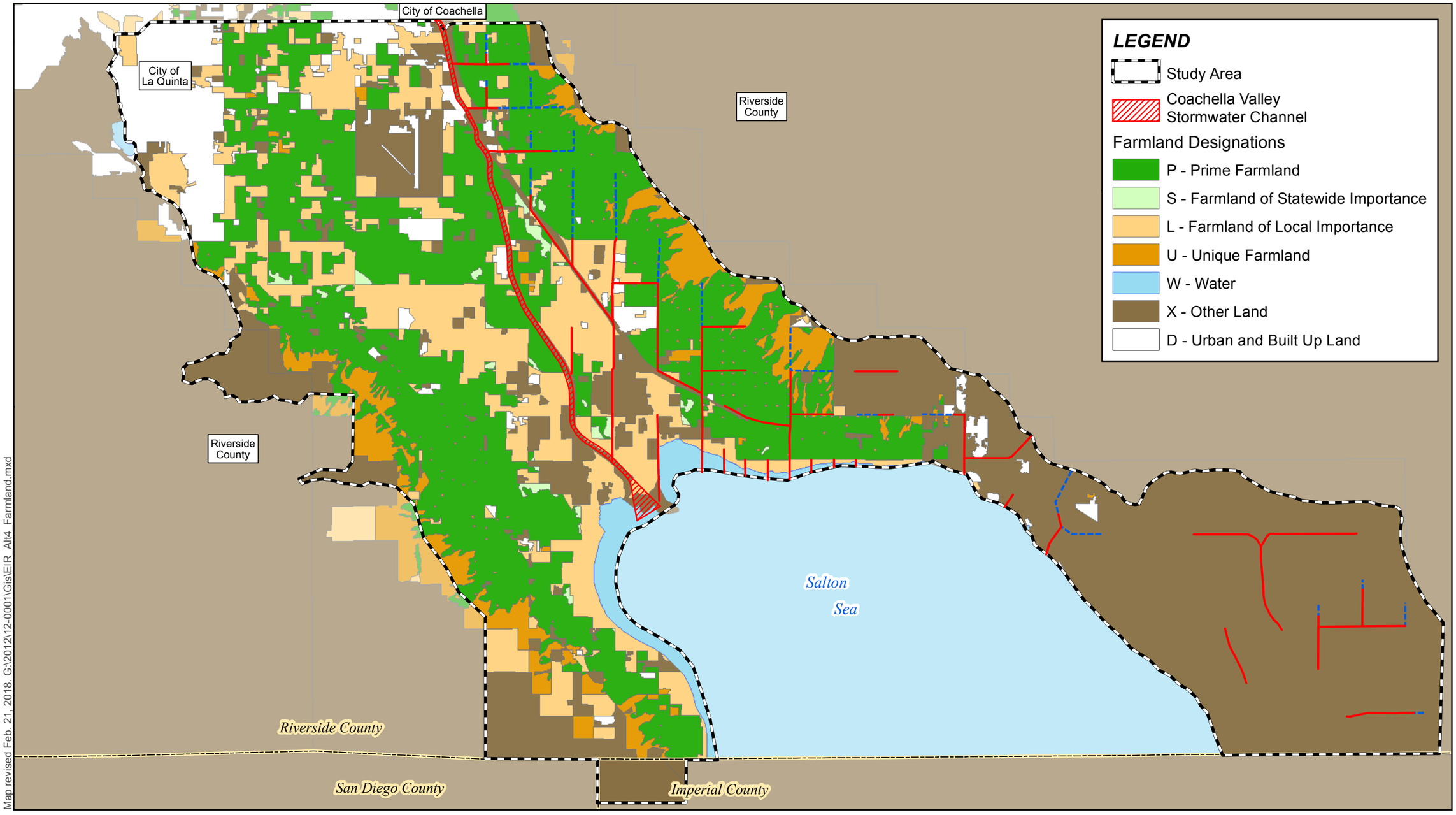
As with the proposed Project, construction of Alternative 4 facilities would result in the conversion of designated Farmland as shown in **Figure 7-8 – Alternative 4 – Important Farmland**. With regard to the conversion of designated Farmland, **Table 7-H – ~~2014~~ 2016 FMMP Acreage within the Mecca/North Shore Region**, compares the types and quantities of FMMP designated Farmland to be converted by the portion of the Facilities in the Mecca/North Shore Region with Alternative 3.

Table 7-H – Comparison of ~~2014~~ 2016 FMMP Acreage for Master Plan Facilities within the Mecca/North Shore Region with Alternative 4

FMMP Farmland Categories	Master Plan Facilities Construction Footprint in the Mecca/North Shore Region (acres)[a]	Alternative 4 Facilities Construction Footprint (acres)[a]	Difference
Prime Farmland	~~475~~ 467	~~334~~ 327	~~-141~~ -140
Farmland of Statewide Importance	14	9	-5
Unique Farmland	~~56~~ 69	25	~~-31~~ -44
Farmland of Local Importance	~~279~~ 272	~~184~~ 187	~~-95~~ -85
Sub-Total (Farmland)	**~~824~~ 822**	**~~552~~ 548**	**~~-272~~ -275**
Urban and Built Up	8	22	14
Water	3	63	60
Other	~~268~~ 270	~~636~~ 640	~~368~~ 370
Other (Imperial County)	0	0	0
Sub-Total (Non-Farmland)	**~~279~~ 281**	**~~721~~ 725**	**~~442~~ 444**
Total	**1,103**	**1,273**	**170**

[a] Construction footprint for open channels and training levees buffered 100 feet on either side from centerline and Coachella Valley Storm Drain buffered 30 feet on either side from centerline.

As shown in Table 7-H, above, implementation of Alternative 3 would convert less Prime Farmland, Farmland of Statewide Importance, and Unique Farmland in the Mecca/North Shore Region than the Master Plan.



Map revised Feb. 21, 2018. G:\2012\12-0001\Gis\EIR_Alt4_Farmland.mxd

Source: CA Dept. of Conservation
FMMP, 2016.

Figure 7-8 - Alternative 4 - Important Farmland
Eastern Coachella Valley Stormwater Master Plan

7.7 Evaluation of Alternatives

The Project's boundary for the Oasis/Valley Floor Region is coterminous with the boundaries associated with Alternatives 1 and 2 in the Oasis/Valley Floor Region. However, the boundaries for Alternatives 3 and 4 in the Mecca/North Shore Region are larger than what is proposed by the Project. Alternative 3 and 4 extend further southeast to the Riverside and Imperial County line. Even so, the primary objective to address existing flood hazards remains the same for these alternatives as for the Project.

Each alternative, except the No Project Alternative, identified facilities that would provide the same level of flood protection within the Master Plan Area, that is, adequately convey 100-year return period storm discharge. Alternatives 3 and 4 provide additional flood protection for the North Shore Region near the Salton Sea. All alternatives were developed to reduce flooding and allow the removal of FEMA-mapped Special Flood Hazard Areas within the Master Plan Area. The overall footprint of the proposed lateral facilities (channels and storm drains) is generally similar among all alternatives (except for the No Project Alternative) because the overall design approach is similar, i.e., to site facilities as much as possible within existing or future roadway rights-of-way so as to minimize right-of-way acquisition and to incorporate the historic and natural drainage patterns in the Plan Area.

All of the alternatives evaluated, except for the No Project Alternative, would generally be subject to the same mitigation measures as the proposed Project with the potential exception of Alternatives 3 and 4, which propose facilities within the Coachella Valley Multiple Species Habitat Conservation Plan's (CVMSHCP) Dos Palmas Conservation Area. Constructing Facilities within this Conservation Area would require additional mitigation measures applicable to this Conservation Area as outlined in the CVMSHCP.

None of the alternatives evaluated, except the No Project Alternative, would eliminate the significant conversion of FMMP-mapped Farmland or short-term air quality impacts from NO_X emissions that would occur during construction of the proposed Facilities. However, as discussed in Section 7.8, there is an alternative that reduces the amount of FMMP mapped Farmland.

The matrix approach to comparing the alternatives described in Section 7.6 is used for ease of directly comparing the potential significant adverse effects of the proposed Project with those of the alternatives, per State *CEQA Guidelines* Section 15126.6(d). **Table 7-I** compares the potential environmental impacts of each alternative and ranks the impacts of each alternative as "**Impacts Less Than the Project**," "**Impacts Same as the Project**," or "**Impacts Greater Than the Project**," in comparison to the significance determinations that the proposed Project would have with respect to each issue area. The detailed discussion regarding the Project's impacts for each of the environmental issues are included in the following sections of this Recirculated Draft PEIR: 5.1 Agricultural Resources; 5.2 Air Quality and Greenhouse Gas Emissions; 5.3 Biological Resources; 5.4 Cultural Resources; 5.5 Hydrology and Water Quality; and 5.6 Noise 5.6.

Table 7-I – Comparison of Alternatives Matrix

Environmental Issue	Proposed Project	No Project Alternative	Alternative 1 (Oasis/Valley Floor Region)	Alternative 2 (Oasis/Valley Floor Region)	Alternative 3 (Mecca/North Shore Region)	Alternative 4 (Mecca/North Shore Region)
Agriculture and Forestry Resources (Threshold A) Loss of Farmland	**Significant Unavoidable Impact:** Construction of the Facilities would result in the conversion of approximately ~~1,337~~ 1,297 acres of Prime Farmland, ~~57~~ 55 acres of Farmland of Statewide Importance, and ~~240~~ 254 acres pf Unique Farmland to a permanent, non-agricultural use. This quantity of Farmland converted is considered significant. The Project would implement mitigation measure **MM AG 1**; however, this MM is only applicable to CVWD funded or constructed Facilities. Because CVWD does not have the necessary land use authority to impose CEQA mitigation measures upon Facilities that may be constructed as part of a development project, impacts remain significant and unavoidable.	**Impacts Less Than the Project – No Impact:** No Farmland would be lost since there would be no new construction of Facilities.	**Impacts Less than the Project – Significant Unavoidable Impact:** Construction of the Alternative 1 Facilities would result in the conversion of approximately ~~809~~ 783 acres of Prime Farmland, ~~36~~ 34 acres of Farmland of Statewide Importance, and 180 acres pf Unique Farmland to a permanent, non-agricultural use. This quantity of Farmland converted is considered significant. Alternative 1 would be required to implement mitigation measure **MM AG 1**; however, this MM is only applicable to CVWD funded or constructed Facilities. Because CVWD does not have the necessary land use authority to impose CEQA mitigation measures upon the Alternative 1 Facilities that may be constructed as part of a development project, impacts remain significant and unavoidable.	**Impacts Less than the Project – Significant Unavoidable Impact:** Construction of the Alternative 2 Facilities would result in the conversion of approximately ~~823~~ 794 acres of Prime Farmland, ~~36~~ 34 acres of Farmland of Statewide Importance, and 181 acres pf Unique Farmland to a permanent, non-agricultural use. This quantity of Farmland converted is considered significant. Alternative 2 would be required to implement mitigation measure **MM AG 1**; however, this MM is only applicable to CVWD funded or constructed Facilities. Because CVWD does not have the necessary land use authority to impose CEQA mitigation measures upon the Alternative 2 Facilities that may be constructed as part of a development project, impacts remain significant and unavoidable.	**Impacts Less than the Project – Significant Unavoidable Impact:** Construction of the Alternative 3 Facilities would result in the conversion of approximately ~~344~~ 339 acres of Prime Farmland, ~~9~~ 10 acres of Farmland of Statewide Importance, and 21 acres pf Unique Farmland to a permanent, non-agricultural use. This quantity of Farmland converted is considered significant. Alternative 3 would be required to implement mitigation measure **MM AG 1;** however, this MM is only applicable to CVWD funded or constructed Facilities. Because CVWD does not have the necessary land use authority to impose CEQA mitigation measures upon the Alternative 3 Facilities that may be constructed as part of a development project, impacts remain significant and unavoidable.	**Impacts Less than the Project – Significant Unavoidable Impact:** Construction of the Alternative 4 Facilities would result in the conversion of approximately ~~334~~ 327 acres of Prime Farmland, 9 acres of Farmland of Statewide Importance, and 25 acres pf Unique Farmland to a permanent, non-agricultural use. This quantity of Farmland converted is considered significant. Alternative 4 would be required to implement mitigation measure **MM AG 1**; however, this MM is only applicable to CVWD funded or constructed Facilities. Because CVWD does not have the necessary land use authority to impose CEQA mitigation measures upon the Alternative 4 Facilities that may be constructed as part of a development project, impacts remain significant and unavoidable.
Agriculture and Forestry Resources (Threshold B) Agricultural Zoning or Williamson Act	**Less Than Significant Impact:** The Facilities are consistent with agricultural zoning, and as the proposed Facilities are for flood control, they are considered a compatible use with Williamson Act contract lands.	**Impacts Less Than the Project – No Impact:** No impacts to agricultural zoning or Williamson Act contracts would occur since there would be no new Facilities constructed.	**Impacts Same as the Project – Less Than Significant Impact:** This alternative would affect a greater quantity of land zoned for agricultural uses as well as land under a Williamson Act contract than the proposed Project. However, as with the proposed Project, these facilities would be considered consistent with zoning and compatible with Williamson Act lands. Thus, impacts would be similar to the Project, which were determined to be less than significant.	**Impacts Same as the Project – Less Than Significant Impact:** This alternative would affect a greater quantity of land zoned for agricultural uses as well as land under a Williamson Act than the proposed Project. However as with the proposed Project, these facilities would be considered consistent with zoning and compatible with Williamson Act lands. Thus, impacts would be similar to the Project, which were determined to be less than significant.	**Impacts Same as the Project – Less Than Significant Impact:** This alternative would affect a smaller quantity of land zoned for agricultural as well as land under a Williamson Act contract than the proposed Project. However as with the proposed Project, these facilities would be considered consistent with zoning and compatible with Williamson Act lands. Thus, impacts would be similar to the Project, which were determined to be less than significant.	**Impacts Same as the Project – Less Than Significant Impact:** This alternative would affect a smaller quantity of land zoned for agricultural as well as land under a Williamson Act contract than the proposed Project. However as with the proposed Project, these facilities would be considered consistent with zoning and compatible with Williamson Act lands. Thus, impacts would be similar to the Project, which were determined to be less than significant.

Environmental Issue	Proposed Project	No Project Alternative	Alternative 1 (Oasis/Valley Floor Region)	Alternative 2 (Oasis/Valley Floor Region)	Alternative 3 (Mecca/North Shore Region)	Alternative 4 (Mecca/North Shore Region)
Air Quality and Greenhouse Gas Emissions (Threshold A) Air Quality Standards	**Significant Unavoidable Impact:** Short-term construction emissions would exceed daily regional thresholds set by SCAQMD for NO_X during construction of the Facilities, and mitigation measures **MM AQ 1** and **MM AQ 2** would reduce short-term impacts but not to a level that is below the SCAQMD threshold. Therefore, impacts to air quality standards from construction are considered regionally significant. The Project would not result in significant operational impacts to regionalized air quality standards or significant construction and operational impacts to localized air quality standards. None the less, a Statement of Overriding Considerations would be required.	**Impacts Less than the Project – No Impact:** No construction emissions would occur under the No Project Alternative.	**Impacts Same as the Project – Significant Unavoidable Impacts:** Alternative 1 consists of an approximate ~~9~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of proposed Facilities for the Oasis/Valley Floor Region. Implementation of this alternative, which does not include facilities in the Mecca/North Shore Region, would not reduce construction-generated NO_X emissions to below the daily regional threshold set by SCAQMD. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable.	**Impacts Same as the Project – Significant Unavoidable Impacts**: Alternative 2 consists of an approximate ~~11~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of proposed Facilities for the Oasis/Valley Floor Region. Implementation of this alternative, which does not include facilities in the Mecca/North Shore Region, would not reduce construction-related NO_X emissions to below the daily regional threshold set by SCAQMD. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable.	**Impacts Same as the Project – Significant Unavoidable Impacts:** Alternative 3 consists of an approximate ~~47~~ 6 percent increase in the amount of land disturbance compared to the amount and size of proposed Facilities for the Mecca/North Shore Region. Implementation of this alternative, which does not include facilities in the Oasis/Valley Floor Region, would not reduce construction-related NO_X emissions to below the daily regional threshold set by SCAQMD. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable	**Impacts Same as the Project – Significant Unavoidable Impacts:** Alternative 4 consists of an approximate ~~45~~ 15 percent increase in the amount of land disturbance compared to the amount and size of proposed Facilities under the proposed Project for the Mecca/North Shore Region. Development of this alternative, which does not include facilities in the Oasis/Valley Floor Region, would not reduce construction-related NO_X emissions to below the daily regional threshold set by SCAQMD. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable
Air Quality and Greenhouse Gas Emissions (Threshold B) Cumulatively Considerable Contribution to a Criteria Pollutant	**Significant Unavoidable Impact:** The portion of the Basin within which the Project is located is designated as a non-attainment area for ozone and PM-10 under both federal and state standards. Because no new long-term uses are proposed, air quality impacts associated with operational air pollutant emissions would be less than significant. And while the proposed Project would be in conformance with the AQMP, because the Project's short-term emissions would result in impacts to ozone precursors after implementation of mitigation measures **MM AQ 1** and **MM AQ 2**, the incremental contribution is cumulatively considerable. Therefore, the impact is considered significant after mitigation, and a Statement of Overriding Considerations would be required.	**Impacts Less than the Project – No Impact:** No impacts to criteria pollutants would occur since there would be no new construction of Facilities.	**Impacts Same as the Project – Significant Unavoidable Impacts:** Although Alternative 1 would be in conformance with the AQMP, because short-term construction emissions would result in impacts to ozone precursors after implementation of mitigation measures **MM AQ 1** and **MM AQ 2**, the incremental contribution is cumulatively considerable. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable.	**Impacts Same as the Project – Significant Unavoidable Impacts**: Although Alternative 2 would be in conformance with the AQMP, because short-term construction emissions would result in impacts to ozone precursors after implementation of mitigation measures **MM AQ 1** and **MM AQ 2**, the incremental contribution is cumulatively considerable. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable.	**Impacts Same as the Project – Significant Unavoidable Impacts:** Although Alternative 3 would be in conformance with the AQMP, because short-term construction emissions would result in impacts to ozone precursors after implementation of mitigation measures **MM AQ 1** and **MM AQ 2**, the incremental contribution is cumulatively considerable. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable.	**Impacts Same as the Project – Significant Unavoidable Impacts:** Although Alternative 4 would be in conformance with the AQMP, because short-term construction emissions would result in impacts to ozone precursors after implementation of mitigation measures **MM AQ 1** and **MM AQ 2**, the incremental contribution is cumulatively considerable. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable.

Environmental Issue	Proposed Project	No Project Alternative	Alternative 1 (Oasis/Valley Floor Region)	Alternative 2 (Oasis/Valley Floor Region)	Alternative 3 (Mecca/North Shore Region)	Alternative 4 (Mecca/North Shore Region)
Air Quality and Greenhouse Gas Emissions (Threshold C) Sensitive Receptors	**Significant Unavoidable Impact:** The majority of sensitive receptors are primarily existing residences and schools in proximity to proposed Facilities, at varying distances. Emissions of NO_X during construction are above SCAQMD recommended daily regional thresholds after implementation of mitigation measures **MM AQ 1** and **MM AQ 2**, and therefore, exposure of sensitive receptors to substantial pollution concentrations from short-term construction emissions is considered potentially significant after mitigation. A Statement of Overriding Considerations would be required.	**Impacts Less than the Project – No Impact:** No impacts to sensitive receptors would because there would be no new construction of Facilities.	**Impacts Same as the Project – Significant Unavoidable Impact:** Alternative 1 would not reduce NO_X emissions to below the daily regional threshold set by SCAQMD after implementation of mitigation measures **MM AQ 1** and **MM AQ 2.** Therefore, exposure of sensitive receptors to substantial pollution concentrations from short-term construction emissions is considered potentially significant after mitigation. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable.	**Impacts Same as the Project – Significant Unavoidable Impact**: Alternative 2 would not reduce NO_X emissions to below the daily regional threshold set by SCAQMD, after implementation of mitigation measures **MM AQ 1** and **MM AQ 2.** Therefore, exposure of sensitive receptors to substantial pollution concentrations from short-term construction emissions is considered potentially significant after mitigation. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable.	**Impacts Same as the Project – Significant Unavoidable Impact:** Alternative 3 would not reduce NO_X emissions to below the daily regional threshold set by SCAQMD, after implementation of mitigation measures **MM AQ 1** and **MM AQ 2.** Therefore, exposure of sensitive receptors to substantial pollution concentrations from short-term construction emissions is considered potentially significant after mitigation. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable.	**Impacts Same as the Project – Significant Unavoidable Impact:** Alternative 4 would not reduce NO_X emissions to below the daily regional threshold set by SCAQMD, after implementation of mitigation measures **MM AQ 1** and **MM AQ 2.** Therefore, exposure of sensitive receptors to substantial pollution concentrations from short-term construction emissions is considered potentially significant after mitigation. Thus, impacts would be similar to the Project, which were determined to be significant and unavoidable.
Air Quality and Greenhouse Gas Emissions (Threshold D) Generate Significant Greenhouse Gas Emissions	**Less than Significant Impact:** Because GHG emissions are below CVWD's adopted emissions thresholds, the estimated amount of emissions from construction of the Facilities, and the negligible operational emissions from infrequent maintenance vehicles, the proposed Project would not generate a significant amount of GHG emissions, and the impact is considered to be less than significant without mitigation required.	**Impacts Less than the Project – No Impact:** No impacts greenhouse gas emissions would occur under the No Project Alternative.	**Impacts Same as the Project – Less than Significant Impact:** Alternative 1 consists of an approximate ~~9~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of proposed Facilities for the Oasis/Valley Floor Region. Implementation of this alternative does not include facilities in the Mecca/North Shore Region. Because construction of the Alternative 1 Facilities would use the same type and quantities of construction equipment as the Project, GHG emissions from construction-related activities would likely be the same under this alternative as the proposed Project.	**Impacts Same as the Project – Less than Significant Impact**: Although Alternative 2 consists of an approximate ~~11~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of proposed Facilities for the Oasis/Valley Floor Region, implementation of this alternative does not include facilities in the Mecca/North Shore Region. Because construction of the Alternative 2 Facilities would use the same type and quantities of construction equipment as the Project, GHG emissions from construction-related activities would likely be the same under this alternative as the proposed Project.	**Impacts Same as the Project – Less Than Significant Impacts:** Although Alternative 3 consists of an approximate ~~47~~ 6 percent increase in the amount of land disturbance compared to the amount and size of proposed Facilities for the Mecca/North Shore Region, implementation of this alternative does not include facilities in the Oasis/Valley Floor Region. Because construction of the Alternative 3 Facilities would use the same type and quantities of construction equipment as the Project, GHG emissions from construction-related activities would likely be the same under this alternative as the proposed Project.	**Impacts Same as the Project – Less Than Significant Impacts:** Although Alternative 4 consists of an approximate ~~45~~ 15 percent increase in the amount of land disturbance compared to the amount and size of proposed Facilities under the proposed Project for the Mecca/North Shore Region, implementation of this alternative does not include facilities in the Oasis/Valley Floor Region. Because construction of the Alternative 4 Facilities would use the same type and quantities of construction equipment as the Project, GHG emissions from construction-related activities would likely be the same under this alternative as the proposed Project.
Air Quality and Greenhouse Gas Emissions (Threshold E) Greenhouse Gas Plan, Policy,	**Less than Significant Impact:** There are no applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions (i.e., Climate Action Plan) for a linear stormwater	**Impacts Less than the Project – No Impact:** No impacts would occur since there would be no new construction of Facilities.	**Impacts Same as the Project – Less than Significant Impact:** There are no applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions (i.e., Climate Action	**Impacts Same as the Project – Less than Significant Impact:** There are no applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions (i.e., Climate Action	**Impacts Same as the Project – Less Than Significant Impact:** There are no applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions (i.e., Climate Action	**Impacts Same as the Project – Less Than Significant Impact:** There are no applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions (i.e., Climate Action

Environmental Issue	Proposed Project	No Project Alternative	Alternative 1 (Oasis/Valley Floor Region)	Alternative 2 (Oasis/Valley Floor Region)	Alternative 3 (Mecca/North Shore Region)	Alternative 4 (Mecca/North Shore Region)
Regulation	control project such as the proposed Project. Additionally, the Project would not generate GHG that would cause a significant impact on the environment. Impacts would be less than significant.		Plan) for a linear stormwater control facilities such as Alternative 1. Additionally, Alternative 1 would not generate GHG that would cause a significant impact on the environment. Impacts would be the same as the Project.	Plan) for a linear stormwater control facilities such as Alternative 2. Additionally, Alternative 2 would not generate GHG that would cause a significant impact on the environment. Impacts would be the same as the Project.	Plan) for a linear stormwater control facilities such as Alternative 3. Additionally, Alternative 3 would not generate GHG that would cause a significant impact on the environment. Impacts would be the same as the Project.	Plan) for a linear stormwater control facilities such as Alternative 4. Additionally, Alternative 4 would not generate GHG that would cause a significant impact on the environment. Impacts would be the same as the Project.
Biological Resources (Threshold A) Candidate, Sensitive, or Special-Status Plant Species	**Less than Significant Impacts with Mitigation:** Biological resources were evaluated at a programmatic level in the Recirculated Draft PEIR. Special status plant and animal species occur within the Master Plan Area; however, with CVMSHCP compliance as required by mitigation measures **MM BIO 1** through **MM BIO 3**, impacts to special status species in Riverside County would be less than significant as these mitigation measures require pre-construction surveys and payment of fees or conservation of existing land within a Conservation Area. In Imperial County, impacts from Facilities in that county were determined by the Travertine Point Specific Plan EIR to be less than significant with mitigation, and as such, additional mitigation measures required by this Recirculated Draft PEIR are unnecessary.	**Impacts Less than the Project – No Impact:** No impacts would occur since there would be no new construction of Facilities.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** Alternative 1 consists of an overall approximate ~~9~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Oasis/Valley Floor Region. Implementation of this alternative does not include facilities in the Mecca/North Shore Region. Construction of Alternative 1 Facilities would comply with biological resource protection regulations like the CVMSHCP in the Riverside County portion of the Master Plan Area through mitigation measures as appropriate, as the affected agencies are Permittees to the CVMSHCP. Moreover, the Alternative 1 Facilities are in the same general location as the proposed Facilities and do not otherwise impact biologically sensitive areas to a greater extent than the Project. Further, any Alternative 1 Facilities in Imperial County would be developed in accordance with the Travertine Pointe project and its Specific Plan and EIR analysis. Thus, impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** While Alternative 2 Alternative 2 consists of an overall approximately ~~11~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Oasis/Valley Floor Region. Implementation of this alternative does not include facilities in the Mecca/North Shore Region. Construction of Alternative 2 Facilities would comply with biological resource protection regulations like the CVMSHCP in the Riverside County portion of the Master Plan Area through mitigation measures as appropriate, as the affected agencies are Permittees to the CVMSHCP. Moreover, the Alternative 2 Facilities are in the same general location as the proposed Facilities and do not otherwise impact biologically sensitive areas to a greater extent than the Project. Further, Alternative 2 Facilities in Imperial County would be developed in accordance with the Travertine Pointe project and its Specific Plan and EIR analysis. Thus, impacts would be the same as the Project.	**Impacts Greater than the Project – Less than Significant Impacts with Mitigation:** Alternative 3's ~~47~~ 6 percent increase in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Mecca/North Shore Region is due to the proposed facilities extending past Parkside Drive and farther southeast into the North Shore area. This additional area contains a notably higher degree of biological sensitivity. A preliminary analysis of the biological constraints associated with this alternative determined that new mitigation measures would likely be necessary for encroaching into this sensitive area, and listed endangered species may also be affected more so under this alternative (MNSA, p. 6-1). Thus, although impacts would be greater than the proposed Project, they are expected to be less than significant with additional mitigation measures.	**Impacts Greater than the Project – Less than Significant Impacts with Mitigation**: Alternative 4's ~~45~~ 15 percent increase in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Mecca/North Shore Region is due to the proposed facilities extending past Parkside Drive and farther southeast into the North Shore area. This additional area contains a notably higher degree of biological sensitivity. A preliminary analysis of the biological constrains associated with this alternative determined that new mitigation measures would likely be necessary for encroaching into this sensitive area, and listed endangered species may also be affected more so under this alternative (MNSA, p. 6-1). Thus, although impacts would be greater than the proposed Project, they are expected to be less than significant with additional mitigation measures.

Environmental Issue	Proposed Project	No Project Alternative	Alternative 1 (Oasis/Valley Floor Region)	Alternative 2 (Oasis/Valley Floor Region)	Alternative 3 (Mecca/North Shore Region)	Alternative 4 (Mecca/North Shore Region)
Biological Resources (Threshold B) Riparian or Sensitive Habitat	**Less than Significant Impacts with Mitigation:** Riparian and sensitive community habitat is present within the Plan Area. Compliance with mitigation measures **MM BIO 1** through **MM BIO 3** as well as **MM BIO 4**, which requires compliance with the CVMSHCP land use adjacency guidelines within and adjacent to Conservations Areas, and **MM BIO 5**, which requires a jurisdictional delineation and adherence to applicable permit conditions and measures, would ensure impacts to riparian habitats in Riverside County would be less than significant. In Imperial County, impacts from Facilities in that county were determined by the Travertine Point Specific Plan EIR to be less than significant with mitigation, and as such, additional mitigation measures required by this Recirculated Draft PEIR are unnecessary.	**Impacts Less than the Project – No Impact:** It is not anticipated that riparian habitat would be impacted since maintenance activities would occur within previously disturbed areas where the existing drainage facilities are located.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** While Alternative 1 consists of an overall approximately ~~9~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Oasis/Valley Floor Region, the ~~increase~~ decrease would ~~be negligible~~ not significantly reduce impacts to biological resources as it is reasonably anticipated development under this alternative would comply with biological resource protection regulations like the CVMSHCP and permit conditions from affected resource agencies in the Riverside County portion of the Plan Area through mitigation measures as appropriate. Moreover, these Facilities are in the same general location as the proposed Project and do not otherwise impact other biologically sensitive areas than the Project. Further, facilities in Imperial County would be developed in accordance with the Travertine Pointe project and its Specific Plan and EIR analysis. Thus, impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** While Alternative 2 consists of an overall approximately ~~11~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Oasis/Valley Floor Region, the ~~increase~~ decrease would ~~be negligible~~ not significantly reduce impacts to biological resources as it is reasonably anticipated development under this alternative would comply with biological resource protection regulations like the CVMSHCP in Riverside County portion of the Plan Area through mitigation measures as appropriate, as the affected agencies are Permittees to the CVMSHCP. Moreover, these Facilities are in the same general location as the proposed Project and do not otherwise impact other biologically sensitive areas than the Project. Further, facilities in Imperial County would be developed in accordance with the Travertine Pointe project and its Specific Plan and EIR analysis. Thus, impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** Alternative 3's ~~47~~ 6 percent increase in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Mecca/North Shore Region is due to the proposed facilities extending past Parkside Drive and farther southeast into the North Shore area. This additional area contains a notably higher degree of biological sensitivity. A preliminary analysis of the biological constraints associated with this alternative determined that new mitigation measures would likely be necessary for encroaching into this sensitive area, including sensitive habitat (MNSA, p. 6-1). However, with implementation of new mitigation measures impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts**: Alternative 4's ~~45~~ 15 percent increase in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Mecca/North Shore Region is due to the proposed facilities extending past Parkside Drive and farther southeast into the North Shore area. This additional area contains a notably higher degree of biological sensitivity. A preliminary analysis of the biological constraints associated with this alternative determined that new mitigation measures would likely be necessary for encroaching into this sensitive area, including sensitive habitat (MNSA, p. 6-1). However, with implementation of new mitigation measures impacts would be the same as the Project.
Biological Resources (Threshold C) Federal Wetlands	**Less than Significant Impacts with Mitigation:** Potentially jurisdictional areas are present within the boundaries of the Plan Area, and may be significantly impacted by Facilities. However, any impacts would be mitigated with implementation of mitigation measure **MM BIO 5**, which requires a jurisdictional delineation and compliance with any related permits from the appropriate resource agency(ies). Therefore,	**Impacts Less than the Project – No Impact:** No jurisdictional delineations would be required since no improvements or new construction of Facilities would occur under the No Project Alternative.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** While Alternative 1 consists of an overall approximately ~~9~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Oasis/Valley Floor Region, the ~~increase~~ decrease would ~~be negligible~~ not significantly reduce impacts to biological resources as	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** While Alternative 2 consists of an overall approximately ~~11~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Oasis/Valley Floor Region, the ~~increase~~ decrease would ~~be negligible~~ not significantly reduce impacts to biological resources as	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** Alternative 3's ~~47~~ 6 percent increase in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Mecca/North Shore Region is due to the proposed facilities extending past Parkside Drive and farther southeast into the North Shore area. This additional area contains a notably	**Impacts Same as the Project – Less than Significant Impacts with Mitigation**: Alternative 4's ~~45~~ 15 percent increase in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Mecca/North Shore Region is due to the proposed facilities extending past Parkside Drive and farther southeast into the North Shore area. This additional area contains a notably

Environmental Issue	Proposed Project	No Project Alternative	Alternative 1 (Oasis/Valley Floor Region)	Alternative 2 (Oasis/Valley Floor Region)	Alternative 3 (Mecca/North Shore Region)	Alternative 4 (Mecca/North Shore Region)
	any potential impacts to federally protected wetlands in Riverside County would be mitigated to less than significant. In Imperial County, impacts from Facilities in that county were determined by the Travertine Point Specific Plan EIR to be less than significant with mitigation, and as such, additional mitigation measures required by this Recirculated Draft PEIR are unnecessary.		it is reasonably anticipated development under this alternative would comply with biological resource protection regulations like the CVMSHCP and permit conditions from the affected agency through similar mitigation measure as the Project's. Moreover, these Facilities are in the same general location as the proposed Project and do not otherwise impact other biologically sensitive areas than the Project. Further, facilities in Imperial County would be developed in accordance with the Travertine Pointe project and its Specific Plan and EIR analysis. Thus, impacts would be the same as the Project.	it is reasonably anticipated development under this alternative would comply with biological resource protection regulations like the CVMSHCP and permit conditions from the affected agency through similar mitigation measure as the Project's. Moreover, these Facilities are in the same general location as the proposed Project and do not otherwise impact other biologically sensitive areas than the Project. Further, facilities in Imperial County would be developed in accordance with the Travertine Pointe project and its Specific Plan and EIR analysis. Thus, impacts would be the same as the Project.	higher degree of biological sensitivity. A preliminary analysis of the biological constraints associated with this alternative determined that new mitigation measures would likely be necessary for encroaching into this sensitive area, which may include jurisdictional wetlands (MNSA, p. 6-1). However, with implementation of new mitigation measures and obtaining any necessary regulatory permits, impacts would be the same as the Project.	higher degree of biological sensitivity. A preliminary analysis of the biological constraints associated with this alternative determined that new mitigation measures would likely be necessary for encroaching into this sensitive area, which may include jurisdictional wetlands (MNSA, p. 6-1). Thus, impacts would be greater than the proposed Project and potentially significant and unavoidable. However, with implementation of new mitigation measures and obtaining any necessary regulatory permits, impacts would be the same as the Project.
Biological Resources (Threshold D) Native Resident or Migratory Fish or Wildlife Species	**Less than Significant Impacts with Mitigation:** There are no CVMSHCP-modeled biological corridors or linkages in the Plan Area; however, migratory species may still utilize vegetation within the Plan Area. Compliance to the CVMSHCP as required by mitigation measures **MM BIO 1** through **MM BIO 4**, and thus, impacts to migratory bird species covered by the CVMSHCP would be less than significant. For migratory birds that are listed by the Migratory Bird Treaty Act (MBTA), but not by the CVMSHCP, mitigation measure **MM BIO 6** requires pre-construction nesting surveys for such bird species if the construction activity requires vegetation removal and avoidance if such species are found to be present. Thus, related impacts in Riverside County would be less than significant with mitigation. In Imperial County, the availability of	**Impacts Less than the Project – No Impact:** No established migratory corridors or nursery sites would be affected by maintenance of existing drainage facilities. No new Facilities would be constructed by the No Project Alternative.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation: :** While Alternative 1 consists of an overall approximately ~~9~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Oasis/Valley Floor Region, the ~~increase~~ decrease would ~~be negligible~~ not significantly reduce impacts to biological resources as it is reasonably anticipated development under this alternative would comply with biological resource protection regulations like the CVMSHCP and MBTA through similar mitigation measure as the Project's. Moreover, these Facilities are in the same general location as the proposed Project and do not otherwise impact other biologically sensitive areas than the Project including corridors or linkages. Further, facilities in Imperial County would be	**Impacts Same as the Project – Less than Significant Impacts with Mitigation: :** While Alternative 2 consists of an overall approximately ~~11~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Oasis/Valley Floor Region, the ~~increase~~ decrease would ~~be negligible~~ not significantly reduce impacts to biological resources as it is reasonably anticipated development under this alternative would comply with biological resource protection regulations like the CVMSHCP and MBTA through similar mitigation measure as the Project's. Moreover, these Facilities are in the same general location as the proposed Project and do not otherwise impact other biologically sensitive areas than the Project including corridors or linkages. Further, facilities in Imperial County would be	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** While Alternative 3 consists of an overall approximately ~~47~~ 6 percent increase in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Mecca/North Shore Region, the increase would be negligible as it is reasonably anticipated development under this alternative would comply with biological resource protection regulations like the CVMSHCP and MBTA through similar mitigation measure as the Project's in regards to this threshold. Moreover, the additional facilities proposed farther southwest into the North Shore area are not within a CVMSHCP-modeled corridor or linkage. Thus, impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** While Alternative 4 consists of an overall approximately ~~45~~ 15 percent increase in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Mecca/North Shore Region, the increase would be negligible as it is reasonably anticipated development under this alternative would comply with biological resource protection regulations like the CVMSHCP and MBTA through similar mitigation measure as the Project's in regards to this threshold. Moreover, the additional facilities proposed farther southwest into the North Shore area are not within a CVMSHCP-modeled corridor or linkage. Thus, impacts would be the same as the Project.

Environmental Issue	Proposed Project	No Project Alternative	Alternative 1 (Oasis/Valley Floor Region)	Alternative 2 (Oasis/Valley Floor Region)	Alternative 3 (Mecca/North Shore Region)	Alternative 4 (Mecca/North Shore Region)
	open space was determined to be adequate so as to avoid significantly impacting migratory bird species. Therefore, related impacts in Imperial County would be less than significant.		developed in accordance with the Travertine Pointe project and its Specific Plan and EIR analysis. Thus, impacts would be the same as the Project.	developed in accordance with the Travertine Pointe project and its Specific Plan and EIR analysis. Thus, impacts would be the same as the Project.		
Biological Resources (Threshold E) Local Policies or Ordinances Protecting Biological Resources	**Less than Significant Impacts with Mitigation:** With the incorporation of mitigation measures **MM BIO 1** through **MM BIO 6**, the Project is consistent with applicable local policies protecting biological resources in Riverside County ~~and the city of Coachella~~. Moreover, the Project is consistent with applicable Imperial County policies without the need for mitigation measures.	**Impacts Less than the Project – No Impact:** Because there would be no construction of Facilities, there would be no impacts with regard to local policies or ordinances protecting biological resources.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** While Alternative 1 consists of an overall approximately ~~9~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Oasis/Valley Floor Region, given the nature of the stormwater infrastructure that would be developed under this alternative and that these facilities would be in the same general location as those proposed by the Project, Alternative 1 would not conflict with local policies or ordinances protecting biological resources within the affected jurisdictions through the anticipated requirement of similar mitigation measures as those required of the proposed Project. Therefore, impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** While Alternative 2 consists of an approximately ~~11~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Oasis/Valley Floor Region, given the nature of the stormwater infrastructure that would be developed under this alternative and that these facilities would be in the same general location as those proposed by the Project, Alternative 2 would not conflict with local policies or ordinances protecting biological resources within the affected jurisdictions through the anticipated requirement of similar mitigation measures as those required of the proposed Project. Therefore, impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** While Alternative 3 consists of an overall approximately ~~47~~ 6 percent increase in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Mecca/North Shore Region, given the nature of the stormwater infrastructure that would be developed under this alternative and that these facilities would be in the same general location as those proposed by the Project, Alternative 3 would not conflict with local policies or ordinances protecting biological resources within the affected jurisdictions through the anticipated requirement of similar mitigation measures as those required of the proposed Project. Therefore, impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** While Alternative 4 consists of an approximately ~~45~~ 15 percent increase in the amount of land disturbance compared to the amount and size of Facilities under the proposed Project for the Mecca/North Shore Region, given the nature of the stormwater infrastructure that would be developed under this alternative and that these facilities would be in the same general location as those proposed by the Project, Alternative 4 would not conflict with local policies or ordinances protecting biological resources within the affected jurisdictions through the anticipated requirement of similar mitigation measures as those required of the proposed Project. Therefore, impacts would be the same as the Project.
Biological Resources (Threshold F) Conflict with the Provisions of an adopted HCP.	**Less than Significant Impacts with Mitigation:** The Riverside County portion of the Plan Area is located within the boundaries of the CVMSHCP. The Project would be compliance with the CVMSHCP with incorporation of mitigation measures **MM BIO 1** through **MM BIO 6**. There are no other conservation plans in the area, which also includes the Imperial County portion of the Plan Area.	**Impacts Less than the Project – No Impact:** There would be no CVMSHCP requirements since no new construction is proposed under the No Project Alternative.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** For facilities within Riverside County, the affected jurisdictions are Permittees to the CVMSHCP, and therefore require compliance with the CVMSHCP, which would be achieved through the implementation of mitigation measures **MM BIO 1** through **MM BIO 6.** Therefore, impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** For facilities within Riverside County, the affected jurisdictions are Permittees to the CVMSHCP, and therefore require compliance with the CVMSHCP, which would be achieved through implementation of mitigation measures **MM BIO 1** through **MM BIO 6**. Therefore, impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** The affected jurisdictions are Permittees to the CVMSHCP, and therefore require compliance with the CVMSHCP, which would be achieved through implementation of mitigation measures **MM BIO 1** through **MM BIO 6**. Therefore, impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** The affected jurisdictions are Permittees to the CVMSHCP, and therefore require compliance with the CVMSHCP, which would be achieved through implementation of mitigation measures **MM BIO 1** through **MM BIO 6**. Therefore, impacts would be the same as the Project.

Environmental Issue	Proposed Project	No Project Alternative	Alternative 1 (Oasis/Valley Floor Region)	Alternative 2 (Oasis/Valley Floor Region)	Alternative 3 (Mecca/North Shore Region)	Alternative 4 (Mecca/North Shore Region)
Cultural Resources (Threshold A) Historic Resources (Threshold B) Archaeological Resources	**Less than Significant Impacts with Mitigation:** Potentially significant impacts may occur to known and potentially occurring historic and archaeological resources in the Plan Area, thus, mitigation measures **MM CR 1** through **MM CR 3** are required. These measures would minimize potential impacts to such resources by requiring a field survey, Native American consultation, worker education, and procedures for inadvertent finds during construction.	**Impacts Less than the Project – No Impact:** Because no new facilities would be constructed and no existing facilities expanded or altered, there would be no impacts to historic or archaeological resources.	**Impacts Same as or Greater than the Project – Less than Significant Impacts with Mitigation or Potentially Significant:** Alternative 1 consists of an overall approximately ~~9~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of SMP Facilities under the proposed Project for the Oasis/Valley Floor Region. Moreover, the facilities' alignments proposed under this alternative have not undertaken a records search, Native American outreach, and Sacred Lands File search specific to these alignments. As such, there exists the potential that implementation of this alternative may result in either the same level of impacts or greater impacts than the proposed Project to historic and/or archaeological resources in the area, which may be potentially significant whereas impacts would be reduced to less than significant levels with mitigation measures incorporated.	**Impacts Same as or Greater than the Project – Less than Significant Impacts with Mitigation or Potentially Significant:** Alternative 2 consists of an overall approximately ~~11~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of SMP Facilities under the proposed Project for the Oasis/Valley Floor Region. Moreover, the facilities' alignments proposed under this alternative have not undertaken a records search, Native American outreach, and Sacred Lands File search specific to these alignments. As such, there exists the potential that implementation of this alternative may result in either the same level of impacts or greater impacts than the proposed Project to historic and/or archaeological resources in the area, which may be potentially significant whereas impacts would be reduced to less than significant levels with mitigation measures incorporated.	**Impacts Same as or Greater than the Project – Less than Significant Impacts with Mitigation or Potentially Significant:** Alternative 3 consists of an overall approximately ~~47~~ 6 percent increase in the amount of land disturbance compared to the amount and size of SMP Facilities under the proposed Project for the Mecca/North Shore Region. Moreover, the facilities' alignments proposed under this alternative have not undertaken a records search, Native American outreach, and Sacred Lands File search specific to these alignments. As such, there exists the potential that implementation of this alternative may result in either the same level of impacts or greater impacts than the proposed Project to historic and/or archaeological resources in the area, which may be potentially significant whereas impacts would be reduced to less than significant levels with mitigation measures incorporated.	**Impacts Same as or Greater than the Project – Less than Significant Impacts with Mitigation or Potentially Significant:** Alternative 4 consists of an overall approximately ~~45~~ 15 percent increase in the amount of land disturbance compared to the amount and size of SMP Facilities under the proposed Project for the Mecca/North Shore Region. Moreover, the facilities' alignments proposed under this alternative have not undertaken a records search, Native American outreach, and Sacred Lands File search specific to these alignments. As such, there exists the potential that implementation of this alternative may result in either the same level of impacts or greater impacts than the proposed Project to historic and/or archaeological resources in the area, which may be potentially significant whereas impacts would be reduced to less than significant levels with mitigation measures incorporated.
Cultural Resources (Threshold C) Paleontological Resources	**Less than Significant Impacts with Mitigation:** There is a high paleontological resource potential in the Master Plan Area, and potentially significant paleontological resources may be impacted from the construction of Facilities. Thus, mitigation measures **MM CR 4** through **MM CR 6** are required to minimize potential impacts to paleontological resources by requiring a field reconnaissance survey, worker education, and a Paleontological Resources Mitigation Plan, where appropriate.	**Impacts Less than the Project – No Impact:** Because no new facilities would be constructed and no existing facilities expanded or altered, there would be no impacts to paleontological resources.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** There is a high paleontological resource potential in the Alternative 1 area. However, with implementation of mitigation measures **MM CR 4** through **MM CR 6** potential impacts would be reduced to less than significant levels. Therefore, impacts would be the same as the Project.	**Impacts Same as the Project – Less than Significant Impacts with Mitigation:** There is a high paleontological resource potential in the Alternative 2 area. However, with implementation of mitigation measures **MM CR 4** through **MM CR 6**, potential impacts would be reduced to less than significant levels Therefore, impacts would be the same as the Project.	**Impacts Same as or Greater than the Project – Less than Significant Impacts with Mitigation:** There is a high paleontological resource potential in the Alternative 3 area. However; with implementation of mitigation measures **MM CR 4** through **MM CR 6** potential impacts would be reduced to less than significant levels. Therefore, impacts would be the same as the Project.	**Impacts Same as or Greater than the Project – Less than Significant Impacts with Mitigation:** There is a high paleontological resource potential in the Alternative 4 area. However, with implementation of mitigation measures **MM CR 4** through **MM CR 6** potential impacts would be reduced to less than significant levels. Therefore, impacts would be the same as the Project.

Environmental Issue	Proposed Project	No Project Alternative	Alternative 1 (Oasis/Valley Floor Region)	Alternative 2 (Oasis/Valley Floor Region)	Alternative 3 (Mecca/North Shore Region)	Alternative 4 (Mecca/North Shore Region)
Cultural Resources (Threshold D) Tribal Cultural Resources	**Less Than Significant Impacts**: The Master Plan area is within the traditional use area of several Native American Tribes. Therefore, as future stormwater projects are initiated in the Master Plan area, CVWD would continue tribal outreach, such as consultation, cultural report preparation and field survey, including tribal monitoring as requested or determined appropriate in project-specific environmental review.	**Impacts Less than the Project – No Impact:** Because no new facilities would be constructed and no existing facilities expanded or altered, there would be no impacts to tribal cultural resources.	**Impacts Same as the Project – Less than Significant Impact:** The Alterative 1 area is within the traditional use area of several Native American Tribes. Therefore, as future stormwater projects are initiated in the Master Plan area, CVWD would continue tribal outreach, such as consultation, cultural report preparation and field survey, including tribal monitoring as requested or determined appropriate in project-specific environmental review. Impacts are the same as for the proposed Project.	**Impacts Same as the Project – Less than Significant Impact:** The Alterative 2 area is within the traditional use area of several Native American Tribes. Therefore, as future stormwater projects are initiated in the Master Plan area, CVWD would continue tribal outreach, such as consultation, cultural report preparation and field survey, including tribal monitoring as requested or determined appropriate in project-specific environmental review. Impacts are the same as for the proposed Project.	**Impacts Same as the Project – Less than Significant Impact:** The Alterative 3 area is within the traditional use area of several Native American Tribes. Therefore, as future stormwater projects are initiated in the Master Plan area, CVWD would continue tribal outreach, such as consultation, cultural report preparation and field survey, including tribal monitoring as requested or determined appropriate in project-specific environmental review. Impacts are the same as for the proposed Project.	**Impacts Same as the Project – Less than Significant Impact:** The Alterative 4 area is within the traditional use area of several Native American Tribes. Therefore, as future stormwater projects are initiated in the Master Plan area, CVWD would continue tribal outreach, such as consultation, cultural report preparation and field survey, including tribal monitoring as requested or determined appropriate in project-specific environmental review. Impacts are the same as for the proposed Project.
Hydrology and Water Quality (Threshold A) Substantially Alter Existing Drainage Patterns or Increase Surface Runoff that would Result in Flooding	**Less than Significant with Mitigation:** The Facilities were designed and sized to follow the historic and natural drainage conditions. Existing drainage patterns also includes alluvial fan sheet flow from the Santa Rosa Mountains via nine canyons, which would be conveyed to the stormwater conveyance infrastructure to protect property and human safety. When completed, the SMP Facilities would provide a comprehensive drainage system and protection from 100-year return period flow within the Plan Area and remove the Plan Area from FEMA's mapped Special Flood Hazards Area. However, as SMP Facilities would be constructed over a span of many years, implementation of mitigation measure **MM HYD 1** would ensure that individual SMP Facilities are completed so that storm flows from each Facility would be conveyed to an adequate outlet to avoid flooding.	**Impacts Less than the Project – No Impact:** Because no new facilities would be constructed and no existing facilities expanded or altered, there would be no alteration to existing drainage patterns or increase in surface runoff.	**Impacts Same as the Project – Less Than Significant Impacts with Mitigation:** As with the proposed Project, Alternative 1 would modify the existing drainage condition by collecting and conveying the current sheet flows, and the facilities have been designed to protect the Oasis/Valley Floor Region from the 100-year return period flow. Additionally, as with the proposed Project, Alternative 1 would implement the same mitigation measure to ensure that individual facilities are completed so that storm flows from each facility would be conveyed to an adequate outlet to avoid flooding. Therefore, the impacts would be similar to the proposed Project.	**Impacts Same as the Project – Less Than Significant Impacts with Mitigation:** As with the proposed Project, Alternative 2 would modify the existing drainage condition by collecting and conveying the current sheet flows, and the facilities have been designed to protect the Oasis/Valley Floor Region from the 100-year return period flow. Additionally, as with the proposed Project, Alternative 2 would implement the same mitigation measure to ensure that individual facilities are completed so that storm flows from each facility would be conveyed to an adequate outlet to avoid flooding. Therefore, the impacts would be similar to the proposed Project.	**Impacts Same as the Project – Less Than Significant Impacts with Mitigation:** As with the proposed Project, Alternative 3 would modify the existing drainage condition by collecting and conveying the current sheet flows, and the facilities have been designed to protect the Mecca/North Shore Region from 100-year return period flow. Additionally, as with the proposed Project, Alternative 3 would implement the same mitigation measure to ensure that individual facilities are completed so that storm flows from each facility would be conveyed to an adequate outlet to avoid flooding. Therefore, the impacts would be similar to the proposed Project.	**Impacts Same as the Project – Less Than Significant Impacts with Mitigation:** As with the proposed Project, Alternative 4 would modify the existing drainage condition by collecting and conveying the current sheet flows, and the facilities have been designed to protect the Mecca/North Shore Region from 100-year return period flow. Additionally, as with the proposed Project, Alternative 4 would implement the same mitigation measure to ensure that individual facilities are completed so that storm flows from each facility would be conveyed to an adequate outlet to avoid flooding. Therefore, the impacts would be similar to the proposed Project.

Environmental Issue	Proposed Project	No Project Alternative	Alternative 1 (Oasis/Valley Floor Region)	Alternative 2 (Oasis/Valley Floor Region)	Alternative 3 (Mecca/North Shore Region)	Alternative 4 (Mecca/North Shore Region)
Hydrology and Water Quality (Threshold B) Runoff Exceeding Capacity of Drainage System	**Less than Significant with Mitigation:** The Master Plan is designed to prevent overflow of existing and proposed SMP Facilities through the design and construction of new and revised, adequately-designed facilities that would convey stormwater, especially 100-year return period flow, in the Plan Area. However, as fragmentation of the network may occur as individual SMP Facility are constructed over the span of many years, mitigation measure **MM HYD 1** would require the development of the each SMP Facility to ensure storm flows from that Facility being implementing would be conveyed to an adequate outlet, and potential impacts to the stormwater drainage system existing at that time are avoided.	**Impacts Less than the Project – No Impact:** Because no new facilities would be constructed and no existing facilities expanded or altered, there would be no change in the amount of runoff in the Master Plan Area.	**Impacts Same as the Project – Less Than Significant Impacts with Mitigation:** As with the proposed Project, Alternative 1 would modify the existing drainage condition by collecting and conveying the current sheet flows, and the facilities have been designed to protect the Oasis/Valley Floor Region from the 100-year return period flow. Additionally, as with the proposed Project, Alternative 1 would implement the same mitigation measure to ensure that individual facilities are completed so that storm flows from each facility would be conveyed to an adequate outlet to avoid flooding and would not otherwise exceed drainage system capacity. Therefore, the impacts would be similar to the proposed Project.	**Impacts Same as the Project – Less Than Significant Impacts with Mitigation:** As with the proposed Project, Alternative 2 would modify the existing drainage condition by collecting and conveying the current sheet flows, and the facilities have been designed to protect the Oasis/Valley Floor Region from the 100-year return period flow. Additionally, as with the proposed Project, Alternative 2 would implement the same mitigation measure to ensure that individual facilities are completed so that storm flows from each facility would be conveyed to an adequate outlet to avoid flooding and would not otherwise exceed drainage system capacity. Therefore, the impacts would be similar to the proposed Project.	**Impacts Same as the Project – Less Than Significant Impacts with Mitigation:** As with the proposed Project, Alternative 3 would modify the existing drainage condition by collecting and conveying the current sheet flows, and the facilities have been designed to protect the Mecca/North Shore Region from 100-year return period flow. Additionally, as with the proposed Project, Alternative 3 would implement the same mitigation measure to ensure that individual facilities are completed so that storm flows from each facility would be conveyed to an adequate outlet to avoid flooding and would not otherwise exceed drainage system capacity. Therefore, the impacts would be similar to the proposed Project.	**Impacts Same as the Project – Less Than Significant Impacts with Mitigation:** As with the proposed Project, Alternative 4 would modify the existing drainage condition by collecting and conveying the current sheet flows, and the facilities have been designed to protect the Mecca/North Shore Region from 100-year return period flow. Additionally, as with the proposed Project, Alternative 4 would implement the same mitigation measure to ensure that individual facilities are completed so that storm flows from each facility would be conveyed to an adequate outlet to avoid flooding and would not otherwise exceed drainage system capacity. Therefore, the impacts would be similar to the proposed Project.
Noise (Threshold A) Exposure or Generation of Noise in Excess of Standards (Threshold C) Substantial Temporary or Periodic Noise Increase	**Less than Significant with Mitigation:** Long term noise vibration associated with the maintenance of the proposed Facilities would be negligible. Because construction of certain Facilities may take place within 50 feet of existing noise-sensitive receptors, mitigation measures **MM NOI 1** and **MM NOI 2** would reduce impacts to less than significant.	**Impacts Less than the Project – No Impact:** No construction noise would be generated under the No Project Alternative because no new facilities would be constructed. Therefore, noise levels would not exceed each jurisdiction's noise thresholds.	**Impacts Same than the Project – Less Than Significant Impacts with Mitigation:** Alternative 1 would result in the exposure of ~~more~~ fewer people to construction noise than the proposed Project as a result of the approximately ~~9~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of SMP Facilities under the proposed Project for the Oasis/Valley Floor Region. However, because Alternative 1 would implement mitigation measures **MM NOI 1** and **MM NOI 2** impacts would be similar to the proposed Project.	**Impacts Same than the Project – Less Than Significant Impacts with Mitigation:** Alternative 2 would result in the exposure of ~~more~~ fewer people to construction noise than the proposed Project as a result of the approximately ~~11~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of SMP Facilities under the proposed Project for the Oasis/Valley Floor Region. However, because Alternative 2 would implement mitigation measures **MM NOI 1** and **MM NOI 2** impacts would be similar to the proposed Project.	**Impacts Same than the Project – Less Than Significant Impacts with Mitigation:** Alternative 3 would result in the exposure of more people to construction noise than the proposed Project as a result of the approximately ~~47~~ 6 percent increase in the amount of land disturbance compared to the amount and size of SMP Facilities under the proposed Project for the Mecca/North Shore Region. However, because Alternative 3 would implement mitigation measures **MM NOI 1** and **MM NOI 2** impacts would be similar to the proposed Project.	**Impacts Same than the Project – Less Than Significant Impacts with Mitigation:** Alternative 4 would result in the exposure of more people to construction noise than the proposed Project as a result of the approximately ~~45~~ 15 percent increase in the amount of land disturbance compared to the amount and size of SMP Facilities under the proposed Project for the Mecca/North Shore Region. However, because Alternative 4 would implement mitigation measures **MM NOI 1** and **MM NOI 2** impacts would be similar to the proposed Project.

Environmental Issue	Proposed Project	No Project Alternative	Alternative 1 (Oasis/Valley Floor Region)	Alternative 2 (Oasis/Valley Floor Region)	Alternative 3 (Mecca/North Shore Region)	Alternative 4 (Mecca/North Shore Region)
Noise (Threshold B) Exposure or Generation of Excessive Groundborne Vibration or Noise	**Less than Significant:** Groundborne vibration may occur during construction of the Facilities. However, at a distance of 50 feet, vibration would be "Barely Perceptible" and at 25 feet vibration noise would be "Distinctly Perceptible." Construction-related vibration is significantly below the vibration damage threshold for any structure. For these reasons impacts would be less than significant.	**Impacts Less than the Project – No Impact:** No groundborne vibration or noise would be generated under the No Project Alternative because no new facilities would be constructed.	**Impacts Same as the Project – Less Than Significant Impact:** Alternative 1 would result in the exposure of ~~more~~ fewer people and structures to groundborne vibration than the proposed Project as a result of the approximately ~~9~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of the Facilities under the proposed Project for the Oasis/Valley Floor Region. ~~However~~ Nonetheless, because construction of the Alternative 1 Facilities would use the same type and quantities of construction equipment as the Project impacts would be similar to the proposed Project.	**Impacts Same as the Project – Less Than Significant Impact:** Alternative 2 would result in the exposure of ~~more~~ fewer people and property to groundborne vibration than the proposed Project as a result of the approximately ~~11~~ 25 percent ~~increase~~ decrease in the amount of land disturbance compared to the amount and size of the Facilities under the proposed Project for the Oasis/Valley Floor Region. ~~However~~ Nonetheless, because construction of the Alternative 2 Facilities would use the same type and quantities of construction equipment as the Project impacts would be similar to the proposed Project.	**Impacts Same as the Project – Less Than Significant Impact:** Alternative 3 would result in the exposure of more people and property to groundborne vibration impacts than the proposed Project as a result of the approximately ~~47~~ 6 percent increase in the amount of land disturbance compared to the amount and size of the Facilities under the proposed Project for the Mecca/North Shore Region. However, because construction of the Alternative 3 Facilities would use the same type and quantities of construction equipment as the Project impacts would be similar to the proposed Project.	**Impacts Greater than the Project – Less Than Significant Impact:** Alternative 4 would result in the exposure of more people and property to groundborne vibration impacts than the proposed Project as a result of the approximately ~~45~~ 15 percent increase in the amount of land disturbance compared to the amount and size of the Facilities under the proposed Project for the Mecca/North Shore Region. However, because construction of the Alternative 4 Facilities would use the same type and quantities of construction equipment as the Project impacts would be similar to the proposed Project.
Environmentally Superior to Proposed Project?	**Not applicable**	**Yes**	**Yes** Although substantially less Farmland would be permanently converted under Alternative 1, it is important to note that this alternative does not include any facilities in the Mecca/North Shore Region.	**Yes** Although substantially less Farmland would be permanently converted under Alternative 2, it is important to note that this alternative does not include any facilities in the Mecca/North Shore Region.	**Yes** Although substantially less Farmland would be permanently converted under Alternative 3, it is important to note that this alternative does not include any facilities in the Oasis/Valley Floor Region.	**Yes** Although substantially less Farmland would be permanently converted under Alternative 4, it is important to note that this alternative does not include any facilities in the Oasis/Valley Floor Region.

7.8 Environmentally Superior Alternative

State *CEQA Guidelines* Section 15126.6 requires the identification of the environmentally superior alternative be selected among the alternatives that were analyzed in the PEIR.

In order to achieve Project Objective 1 and provide a single master plan that contains a drainage plan for the Oasis/Valley Floor and Mecca/North Shore Regions, a combination of Alternatives 1 or 2 along with Alternatives 3 or 4[4] must be implemented. Because Alternatives 3 and 4 include a larger geographic area, any combination of alternatives would encompass a larger area than the proposed Project. Any combination of alternatives would provide the same level of flood protection as the proposed Project, that is, the facilities in Alternatives 1 through 4 have been designed to provide protection from the 100-year return period flow and implementation of any combination of alternatives would remove their respective areas from FEMA's mapped Special Flood Hazard Area.

Construction of Alternatives 1, 2, 3, or 4 individually or in combination is not likely to reduce the amount of NO_X generated during construction to below the SCAQMD daily threshold; thus the significant and unavoidable impact to criteria pollutants would not be eliminated.

With regard to the conversion of state-designated Farmland, **Table 7-J** compares the amount of Farmland converted by the proposed Project with the possible combinations of Alternatives.

Table 7-J – ~~2014~~ 2016 FMMP Mapped Farmland Converted by Project Alternatives

FMMP Farmland Categories	Master Plan (acres)	Alternatives 1 and 3 (acres)	Alternatives 1 and 4 (acres)	Alternatives 2 and 3 (acres)	Alternatives 2 and 4 (acres)
Prime Farmland	~~1,337~~ 1,297	~~1,153~~ 1,122	~~1,143~~ 1,110	~~1,167~~ 1,133	~~1,157~~ 1,121
Farmland of Statewide Importance	~~57~~ 55	~~45~~ 44	~~45~~ 43	~~45~~ 44	~~45~~ 43
Unique Farmland	~~240~~ 254	201	205	202	206
Farmland of Local Importance	~~958~~ 968	~~957~~ 971	~~917~~ 931	~~963~~ 980	~~923~~ 940
Sub-Total (Farmland)	**~~2,592~~ 2,574**	**~~2,356~~ 2,338**	**~~2,310~~ 2,289**	**~~2,377~~ 2,359**	**~~2,331~~ 2,310**
Urban and Built Up	~~23~~ 40	~~94~~ 114	~~87~~ 107	~~98~~ 115	~~91~~ 108
Water	111	86	113	86	113

[4] The possible combinations are Alternatives 1 and 3, Alternatives 1 and 4, Alternatives 2 and 3, or Alternatives 2 and 4.

FMMP Farmland Categories	Master Plan (acres)	Alternatives 1 and 3 (acres)	Alternatives 1 and 4 (acres)	Alternatives 2 and 3 (acres)	Alternatives 2 and 4 (acres)
Other	1,278	~~789~~ 786	~~922~~ 923	809	~~945~~ 946
Other (Imperial County)	59	59	59	59	59
Sub-Total (Non-Farmland)	**~~1,471~~ 1,488**	**~~1,028~~ 1,045**	**~~1,181~~ 1,202**	**~~1,052~~ 1,069**	**~~1,205~~ 1,226**
Total[a]	**~~4,063~~ 4,062**	**~~3,384~~ 3,383**	**3,491**	**~~3,429~~ 3,428**	**~~3,356~~ 3,536**

Note: [a] Changes in total acreage are the result of rounding or correction of typographical errors.

Construction of any combination of Alternatives would entail the conversion of state-designated Farmland to non-agricultural uses; thus, the significant and unavoidable impact to agricultural resources would not be eliminated. Only the No Project Alternative, which does not entail any new construction, would reduce impacts to air quality and agricultural resources to less than significant. Because the No Project Alternative would not result in the construction of new drainage facilities, impacts with regard to flooding and exceeding the capacity of storm drainage facilities would be greater than the proposed Project and could be considered significant. Nonetheless, because the No Project Alternative eliminates the significant impacts from air quality emissions during construction and the conversion of Farmland, it is considered the environmentally superior alternative.

When the No-Project Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives. (CEQA Guidelines Section 15126.6(e)(2).) In general, the environmentally superior alternative is defined as that alternative with the least adverse impacts to the Project area and its surrounding environment.

As previously discussed, because none of the alternatives include the facilities in both the Oasis/Valley Floor and Mecca/North Shore Regions, and thus, do not include the entirety of the Master Plan Area, none of these alternatives meet all of the Project objectives. Specifically, Alternatives 1 through 4 do not meet Project Objectives 1, 2, and 5 (see Section 7.1, above). Thus a combination of alternatives must be implemented to meet the Project Objectives. As shown in **Table 7-J**, because the combination of Alternatives 1 and 4 would result in the conversion of less Farmland than the proposed Project and all other combinations of alternatives, this combination of alternatives is considered the environmentally superior alternative.

CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives. Because none of the

alternatives evaluated effectively lessens or avoids significant short-term air quality impacts during construction or the conversion of Farmland and the proposed Project most fully meets the Project's objectives, CVWD may adopt the proposed Project with the mitigation measures identified in this PEIR as long as a Statement of Overriding Considerations is also adopted.

7.9 References

In addition to other documents, the following references were used in the preparation of this section of the Recirculated Draft PEIR:

MNSA Albert A. WEBB Associates, *Preliminary Alternative Development Study, Eastern Coachella Valley Stormwater Master Plan, Riverside County, California, For Mecca/North Shore Region*, March 2013. (Available at Coachella Valley Water District, 75-515 Hovley Lane East, Palm Desert, CA 92211.)

OVFA Albert A. WEBB Associates, *Preliminary Alternative Development Study, Eastern Coachella Valley Stormwater Master Plan, Riverside County, California, Oasis/Valley Flood Region*, March 2014. (Available at Coachella Valley Water District, 75-515 Hovley Lane East, Palm Desert, CA 92211.)

Section 8 – References and Persons Consulted

8.1 References

Note to reader: Text added to this Recirculated Draft PEIR is shown in double underline (example text) and deleted text is shown in strikethrough (~~example text~~.)

The following documents were referred to as general information sources during preparation of this Recirculated Draft PEIR. They are available for public review at the locations identified after each listing. They are referenced in the Recirculated Draft PEIR by the acronyms shown.

Section 2. Introduction

2003 RCGP	Riverside County, *General Plan*, adopted October 2003 and as amended through December 9, 2014. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx, accessed December 15, 2014.)
2003 RCGP EIR	Riverside County, *General Plan Final Program Environmental Impact Report, Volume 1*, certified October 2003. (Available at http://planning.rctlma.org/Portals/0/genplan/content/eir/volume1.html, accessed January 23, 2015.)
2015 ECVAP	Riverside County, *Eastern Coachella Valley Area Plan*, adopted December 8, 2015. (Available at http://planning.rctlma.org/Portals/0/genplan/general_plan_2016/area_plans/ECVAP_120815m.pdf?ver=2016-04-01-100905-193, accessed September 15, 2016.)
2015 RCGP	Riverside County, *Riverside County General Plan*, December 8, 2015. (Available at http://planning.rctlma.org/Portals/0/genplan/general_plan_2016/elements/Ch01_Intro_120815.pdf?ver=2016-04-01-100743-193, accessed September 15, 2016.)
~~2035 LQGP~~	~~City of La Quinta, *2035 La Quinta General Plan,* November 19, 2013. (Available at City of La Quinta Community Development Department Planning Division, 78-495 Calle Tampico, La Quinta, CA 92253.)~~
CGP	City of Coachella, *General Plan 2035,* adopted April 22, 2015. (Available at http://www.coachella.org/Home/ShowDocument?id=3221, accessed September 11, 2015.)

CGPU EIR City of Coachella, *General Plan Update Public Draft EIR*, July 2014. (Available at http://cityofcoachellageneralplanupdate.weebly.com/final-eir.html, accessed September 11, 2015.)

CVMSHCP Coachella Valley Association of Governments. *Final Recirculated Coachella Valley Multiple Species Habitat Conservation Plan.* September 2007. (Available at http://www.cvmshcp.org/).

CVMSHCP EIR/EIS Coachella Valley Association of Governments. *Final Recirculated Coachella Valley Multiple Species Habitat Conservation Plan Environmental Impact Report/Statement.* September 2007. (Available at http://www.cvmshcp.org/).

ICGP Imperial County Planning & Development Services, General Plan 1993 and as amended. (Available at: http://www.icpds.com/?pid=571, accessed September 15, 2016.)

~~LQMC~~ ~~City of La Quinta, La Quinta Municipal Code, current through June 2016. (Available at http://qcode.us/codes/laquinta/, accessed September 15, 2016.)~~

TPEIR Impact Sciences, Inc., *Travertine Point Revised Draft EIR.* May 2011. (Available at County of Imperial, Planning & Development Services, 801 Main St., El Centro, CA 92243.)

Section 5.1 Agriculture and Forestry Resources

~~2015 APR~~ ~~Riverside County Agricultural Commissioner's Office, *2015 Agricultural Production Report*. (Available at http://www.rivcoag.org/Portals/0/Publications/2015%20Reports/2015%20Riverside%20County%20Agricultural%20Production%20Report.pdf?ver=2016-09-01-062011-563, accessed October 2016.)~~

2016 APR Riverside County Agricultural Commissioner's Office, *2016 Agricultural Production Report.* (Available at http://www.rivcoawm.org/Portals/0/2016%20crop%20report.pdf?ver=2017-12-05-162552-850, accessed March 1, 2018)

~~2015 CVR~~ ~~Riverside County Agricultural Commissioner's Office, *Coachella Valley Acreage and Agricultural Crop Report 2013*. (Available at http://www.rivcoag.org/Portals/0/Publications/2015%20Reports/2015%20CV%20Dist%20Crop%20Report.pdf?ver=2016-09-01-062011-470, accessed October 28, 2016.)~~

2016 CVR Riverside County Agricultural Commissioner's Office, *Coachella Valley Acreage and Agricultural Crop Report 2016*. (Available at http://rivcoawm.org/Portals/0/2016%20CV%20Dist%20Crop%20Report.pdf?ver=2018-01-09-141254-700, accessed March 1, 2018.)

2016 PVR Riverside County Agricultural Commissioner's Office, *Palo Verde Valley Acreage and Agricultural Crop Report 2016*. (Available at http://rivcoawm.org/Portals/0/2016%20PV%20Dist%20Crop%20Report.pdf?ver=2018-01-09-141255-170, accessed March 1, 2018.)

2016 RCR Riverside County Agricultural Commissioner's Office, *Riverside/Corona District Acreage and Agricultural Crop Report 2016*. (Available at http://rivcoawm.org/Portals/0/2016%20RV%20Dist%20Crop%20Report.pdf?ver=2018-01-09-141255-403, accessed March 1, 2018.)

2016 STR Riverside County Agricultural Commissioner's Office, San Jacinto/Temecula Valley Acreage and Agricultural Crop Report 2016. (Available at http://rivcoawm.org/Portals/0/2016%20SJ%20Dist%20Crop%20Report.pdf?ver=2018-01-09-141546-857, accessed March 1, 2018.)

2015 RCGP Riverside County, *General Plan, Multipurpose Open Space Element*, December 8, 2015. (Available at http://planning.rctlma.org/Portals/0/genplan/general_plan_2016/elements/Ch05_MOSE_120815.pdf?ver=2016-04-01-100801-367, accessed December 31, 2015.)

2015 RCGP EIR 521 Riverside County, *General Plan Environmental Impact Report No. 521*, Recirculated Public Review Draft, February 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan/GeneralPlanAmendmentNo960EIRNo521CAPFebruary2015/DraftEnvironmentalImpactReportNo521.aspx, accessed September 2016.)

CGP City of Coachella, *General Plan 2035,* adopted April 22, 2015. (Available at http://www.coachella.org/Home/ShowDocument?id=3221, accessed September 11, 2015.

CGP EIR City of Coachella, *General Plan Update Final EIR*, certified April 22, 2015. (Available at http://cityofcoachellageneralplanupdate.weebly.com/final-eir.html, accessed September 2016.)

DOC California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program, Important Farmland Categories. (Available at http://www.conservation.ca.gov/dlrp/fmmp/mccu/Pages/map_categories.aspx, accessed December 15, 2014August 2016.)

ECVAP Riverside County, *Eastern Coachella Valley Area Plan Public Review Draft*, February 2015, adopted December 8, 2015. (Available at http://planning.rctlma.org/Portals/0/genplan/general_plan_2015/GPA%20960/Area%20Plans/ECVAP_6_2013%202014-01-20.pdf, accessed December 15, 2015.)

~~LQGP EIR~~ ~~City of La Quinta, *Environmental Impact Report for the City of La Quinta General Plan*, February 19, 2013. (Available at City of La Quinta Community Development Department.)~~

Ord 438 Riverside County, *Ordinance No. 348 (as amended through 348.4773), Land Use Planning and Zoning Regulations and Related Functions*. (Available at http://planning.rctlma.org/Portals/0/zoning/ordnance/Ord.%20348.4773_clean_version.pdf, accessed December 16, 2014.)

Ord 509 Riverside County, *Ordinance No. 509 (as amended through 509.2), Relating to Agricultural Preserves*. (Available at http://www.rivcocob.org/ords/500/509.2.pdf, accessed December 16, 2014.)

RCGP Riverside County, *General Plan Land Use Element* and *Multipurpose Open Space Element,* adopted December 15, 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx#top, accessed December 17, 2015.)

RCGP 2015 EIR 521 Riverside County, *General Plan Update Project, General Plan Amendment No. 960, Environmental Impact Report No. 521*, Recirculated Public Review Draft, February 2015, adopted December 10, 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan/GeneralPlanAmendmentNo960EIRNo521CAPFebruary2015/DraftEnvironmentalImpactReportNo521.aspx, accessed September 11, 2015 and December 17, 2015.)

SCS United States Soil Conservation Service (now Natural Resources Conservation Service), *Soil Survey of Riverside County, California, Coachella Valley Area*, 1980.

Section 5.2 Air Quality and Greenhouse Gas Emissions

AB 32 California Air Resources Board, Assembly Bill 32 Global Warming Solutions Act webpage. (Available at http://www.arb.ca.gov/cc/ab32/ab32.htm, accessed January 19, 2015.)

AB 32 Legislative Counsel of California, Bill Information: AB 32-California Global Warming Solutions Act of 2006, September 2006. (Available at http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf, accessed January 19, 2015.)

AQ/GHG Analysis Albert A. WEBB Associates, Air Quality/Greenhouse Gas Analysis for the Eastern Coachella Valley Stormwater Master Plan, January 16, 2015. (Appendix B)

CARB 2007 California Air Resources Board, Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emission Limit, November 16, 2007. (Available at http://www.arb.ca.gov/cc/ccei.htm, accessed January 19, 2015.)

CARB 2008a California Air Resources Board, Preliminary Draft Staff Proposal, Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act, October 24, 2008. (Available at http://www.arb.ca.gov/cc/localgov/ceqa/meetings/102708/prelimdraftproposal102408.pdf, accessed January 19, 2015.)

CARB 2008b California Air Resources Board, Climate Change Proposed Scoping Plan, October, 2008. (Available at http://www.arb.ca.gov/cc/scopingplan/document/psp.pdf, accessed January 19, 2015.)

CARB 2016a California Air Resources Board, 2016 Edition California GHG Emission Inventory, California Greenhouse Gas Emissions for 2000 to 2014 – Trends of Emissions and Other Indicators, June 17, 2016. (Available at https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_trends_00-14_20160617.pdf, accessed November 18, 2016.)

CARB 2016b California Air Resources Board, California Greenhouse Gas Inventory for 2000-2014 – by Category as Defined in the 2008 Scoping Plan, March 30, 2016. (Available at https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_2000-14.pdf, accessed November 18, 2016.)

CAPCOA 2008 California Air Pollution Control Officers Association, CEQA & Climate Change, January 2008. (Available at http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf, accessed June 27, 2016.)

CEC 2005 California Energy Commission, Scenarios of Climate Change in California: An Overview, Publication CEC-500-2005-186-SF, Published December 2005. (Available at http://www.energy.ca.gov/publications/displayOneReport.php?pubNum=CEC-500-2005-186-SF, accessed January 19, 2015.)

CEC 2006a California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004, Publication CEC-600-2006-013-SF, December 2006. (Available at http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF, accessed January 19, 2015.)

CEC 2006b California Energy Commission, Our Changing Climate, Publication CEC-500-2006-077, July 2006. (Available at http://www.energy.ca.gov/2006publications/CEC-500-2006-077/CEC-500-2006-077.PDF, accessed January 19, 2015.)

CEC 2006c California Energy Commission, Public Health Related Impacts of Climate Change in California, Publication CEC-500-2005-197-SF, March 2006. (Available at http://www.energy.ca.gov/2005publications/CEC-500-2005-197/CEC-500-2005-197-SF.PDF, accessed January 19, 2015.)

CPUC California Public Utilities Commission, News Release: PUC Sets GHG Emissions Performance Standard to Help Mitigate Climate Change, January 25, 2007. (Available at http://docs.cpuc.ca.gov/published/News_release/63997.htm, accessed January 19, 2015.)

CVIP 2003 South Coast Air Quality Management District, Final 2003 Coachella Valley PM10 State Implementation Plan, August 1, 2003. (Available at http://www.aqmd.gov/docs/default-source/clean-air-plans/pm10-plans/final-2003-coachella-valley-pm10-state-implementation-plan.pdf?sfvrsn=2, accessed January 7, 2015.)

CVWD 2016 Coachella Valley Water District, Draft Environmental Impact Report, Chormium-6 Water Treatment Facilities Project, State Clearinghouse No. 2015071022, April 2016. (Available at http://www.cvwd.org/DocumentCenter/Home/View/3004, accessed November 18, 2016.)

ECVAP Riverside County, Eastern Coachella Valley Area Plan Public Review Draft, February 2015, adopted December 8. (Available at http://planning.rctlma.org/Portals/0/genplan/general_plan_2015/GPA%20960/Area%20Plans/ECVAP_6_2013%202014-01-20.pdf, accessed December 15, 2015.)

EIA Energy Information Administration, Emissions of Greenhouse Gases in the United States 2006, U.S. Department of Energy, November 2007. (Available at http://www.eia.gov/oiaf/1605/archive/gg07rpt/pdf/0573(2006).pdf, accessed January 19, 2015.)

EO S-3-05 California Executive Department, Executive Order S-3-05 by the Governor of the State of California, June 2005. (Available at http://gov.ca.gov/news.php?id=1861, accessed January 19, 2015.)

IPCC 1995 Intergovernmental Panel on Climate Change, Second Assessment Report, Climate Change 1995 – The Science of Climate Change, 1996. (Available at http://www.ipcc.ch/ipccreports/sar/wg_I/ipcc_sar_wg_I_full_report.pdf, accessed January 19, 2015.)

IPCC 2007 Intergovernmental Panel on Climate Change, Fourth Assessment Report, Climate Change 2007 – The Physical Science Basis, 2007. (Available at http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html, accessed January 19, 2015.)

OPR 2008 State of California, Governor's Office of Planning and Research, Technical Advisory, CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review, June 19, 2008. (Available at http://www.opr.ca.gov/s_ceqaandclimatechange.php, accessed January 19, 2015.)

OPR 2009 State of California, Governor's Office of Planning and Research, CEQA Guideline Amendments, December 30, 2009. (Available at http://ceres.ca.gov/ceqa/guidelines/, accessed January 19, 2015.)

RCCAP County of Riverside, Climate Action Plan, December 2015, (Available at http://planning.rctlma.org/Portals/0/genplan/general_plan_2016/climate_action_plan/CAP_120815.pdf?ver=2016-04-01-101221-240, accessed February 2, 2017.)

SB 1368 California State Senate, Bill Information: SB 1368, September 29, 2006. (Available at http://www.leginfo.ca.gov/pub/05-06/bill/sen/sb_1351-1400/sb_1368_bill_20060929_chaptered.pdf, accessed January 19, 2015.)

SB 375 California State Senate, Senate Bill No. 375, Chapter 728, approved September 30, 2008. (Available at http://www.leginfo.ca.gov/pub/07-08/bill/sen/sb_0351-0400/sb_375_bill_20080930_chaptered.pdf, accessed January 19, 2015.)

SB 97 Legislative Counsel of California, Senate Bill No. 97, Chapter 185, CEQA, Greenhouse Gas Emissions, approved August 24, 2007. (Available at http://www.leginfo.ca.gov/pub/07-08/bill/sen/sb_0051-0100/sb_97_bill_20070824_chaptered.pdf, accessed January 19, 2015.)

SCAG 2012 Southern California Association of Governments, Draft Program Environmental Impact Report, 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy, April 4, 2012. (Available at http://rtpscs.scag.ca.gov/Documents/peir/2012/draft/2012dPEIR_3_2_AirQuality.pdf, accessed January 19, 2015.)

SCAQMD 1993 South Coast Air Quality Management District, CEQA Air Quality Handbook, November 1993. (Available at SCAQMD.)

SCAQMD 1996 South Coast Air Quality Management District, Coachella Valley PM-10 Attainment Redesignation Request and Maintenance Plan, September 9, 1996. (Available at http://www.aqmd.gov/home/library/clean-air-plans/coachella-valley-pm10-plan/cv-pm10-redesig-req, accessed January 7, 2015.)

SCAQMD 2005 South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 6, 2005. (Available at http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf?sfvrsn=4, accessed January 19, 2015.)

SCAQMD 2008a South Coast Air Quality Management District, Draft AQMD Staff CEQA Greenhouse Gas Significance Threshold, October 22, 2008. (Available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-staff-proposal.pdf?sfvrsn=2, accessed January 19, 2015.)

SCAQMD 2008b South Coast Air Quality Management District, Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008. (Available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2, accessed January 19, 2015.)

SCAQMD 2008c South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, Revised July 2008. (Available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2, accessed January 19, 2015.)

SCAQMD 2010 South Coast Air Quality Management District, Minutes for the CHC CEQA Significance threshold Stakeholder Working Group #15, September 28, 2010. (Available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf?sfvrsn=2, accessed November 18, 2016.)

SCAQMD 2012 South Coast Air Quality Management District, Final 2012 Air Quality Management Plan, February 2013. (Available at http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan, accessed January 19, 2015.)

USEPA 2016 U.S. Environmental Protection Agency, Criteria Air Pollutants. (Available at https://www.epa.gov/criteria-air-pollutants, accessed November 6, 2016.)

Section 5.3 Biological Resources

2015 RCGP Riverside County, *General Plan*, Land Use Element and Multipurpose Open Space Element, December 8, 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx accessed December 31, 2015.)

2015 RCGP EIR 521 Riverside County, *General Plan Environmental Impact Report No. 521*, Recirculated Public Review Draft, February 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan/GeneralPlanAmendmentNo960EIRNo521CAPFebruary2015/DraftEnvironmentalImpactReportNo521.aspx, accessed April 16, 2015.)

CGP- City of Coachella, *General Plan Update 2035*, adopted April 22, 2015. (Available at http://www.coachella.org/Home/ShowDocument?id=3221, accessed September 11, 2015.)

CVMSHCP Coachella Valley Association of Governments, Coachella Valley Multiple Species Habitat Conservation Plan, fully executed October 1, 2008. (Available at http://www.cvmshcp.org/Plan_Documents_old.htm, accessed April 16, 2014.)

CVMSHCP Coachella Valley Association of Governments, Final Recirculated Coachella

EIR Valley MSHCP Environmental Impact Report/Statement, September 2007. (Available at http://www.cvmshcp.org/Plan_Documents_old.htm, accessed April 16, 2014.)

ICGP EIR Imperial County, *Final Program EIR for the County of Imperial General Plan*, 1993. (Available at http://www.icpds.com/?pid=829, accessed October 3, 2016.)

Ord. 559 Riverside County, *Ordinance No. 559 (as amended through 559.7), Regulating the Removal of Trees*. (Available at http://www.rivcocob.org/ords/500/559.7.pdf, accessed December 31, 2014.)

OTMG Riverside County, *Oak Tree Management Guidelines*, approved March 2, 1993. (Available at http://planning.rctlma.org/DevelopmentProcess/DesignGuidelines/OakTreeManagementGuidelines.aspx, accessed December 31, 2014.)

TPEIR Travertine Point Revised Draft EIR (SCH #2007101145), May 2011. (Available at Riverside County Planning Department and Imperial County Planning & Development Services Department.)

Section 5.4 Cultural Resources

2015 RCGP Riverside County, *General Plan, Multipurpose Open Space Element*, December 8, 2015. (Available at http://planning.rctlma.org/Portals/0/genplan/general_plan_2016/elements/Ch05_MOSE_120815.pdf?ver=2016-04-01-100801-367, accessed December 31, 2015.)

2015 RCGP EIR 521 Riverside County, *General Plan Environmental Impact Report No. 521*, Recirculated Public Review Draft, February 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan/GeneralPlanAmendmentNo960EIRNo521CAPFebruary2015/DraftEnvironmentalImpactReportNo521.aspx, accessed December 31, 2015.)

AE Applied Earthworks, Inc., *Paleontological Resource Assessment for the Master Drainage Plan and Programmatic Environmental Impact Report for the Coachella Valley Water District for the Region I-Oasis Area and Region II-Mecca/North Shore, Riverside and Imperial Counties, California*, November 2014. (Appendix C.2)

CGP City of Coachella, *General Plan Update 2035*, Adopted April 22, 2015. (Available at http://www.coachella.org/Home/ShowDocument?id=3221, accessed September 11, 2015.)

CGP EIR — City of Coachella, *General Plan Update Final EIR*, certified April 22, 2015. (Available at http://cityofcoachellageneralplanupdate.weebly.com/final-eir.html, accessed September 11, 2015.)

ICGP Open Space Element — Imperial County, *General Plan Conservation and Open Space Element*, 1993. (Available at http://www.icpds.com/CMS/Media/Conservation-and-Open-Space-Element.pdf, accessed December 12, 2014.)

~~LQGP EIR~~ — ~~City of La Quinta, *Environmental Impact Report for the City of La Quinta General Plan*, February 19, 2013. (Available at City of La Quinta Community Development Department.)~~

NPS — National Park Service, *National Register Bulletin, How to Apply the National Register Criteria for Evaluation.* (Available at http://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_2.htm, accessed February 11, 2015.)

TT — Tetra Tech, Inc., *Class I Cultural Resources Inventory of the Salton Sea Region*, August 2002. (Appendix C.1)

Section 5.5 Hydrology and Water Quality

2009 SWRCB Permit — State Water Resources Control Board, Division of Water Quality, *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities*, Order No. 2009-0009-DWQ, NPDES No. CAS000002, adopted September 2, 2009. (Available at http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2009/wqo/wqo2009_0009_dwq.pdf, accessed December 30, 2014.)

2013 CRB MS4 — California Regional Water Quality Control Board, Colorado River Basin – Region 7, *Order No. R7-2013-0011, NPDES No. CAS617002, Waste Discharge Requirement for Discharges from the Municipal Separate Storm Sewer System (MS4) within the Whitewater River Watershed*, adopted June 20, 2013. (Available at http://www.waterboards.ca.gov/rwqcb7/board_decisions/adopted_orders/orders/2013/0011cv_ms4.pdf, accessed December 30, 2014.)

2015 RCGP — Riverside County, *General Plan*, Land Use Element and Multipurpose Open Space Element, December 8, 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx accessed December 31, 2015.)

2015 RCGP EIR 521 — Riverside County, *General Plan Environmental Impact Report No. 521*, Recirculated Public Review Draft, February 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan/GeneralPlanAmendmentNo960EIRNo521CAPFebruary2015/DraftEnvironmentalImpactReportNo521.aspx, accessed April 16, 2015.)

303(d) List — California State Water Resources Control Board, *California 2012 (303(3) Combined List Table.* (Available at http://gispublic.waterboards.ca.gov/webmap/303d_2012/files/2012USEPA_approv_303d_List_Final_20150807wsrcs.xls, accessed December 28, 2015.)

BMP Design Handbook — Riverside County Flood Control and Water Conservation District, *Stormwater Quality Best Management Practice design Handbook for Low Impact Development*, June 2014. (Available at http://rcflood.org/downloads/NPDES/Documents/WW_SWMP_WQMP/WWR_BMP_Design_Handbook_Jan2015.pdf, accessed December 24, 2015.)

CDM — CDM, *Whitewater River Watershed Municipal Stormwater Program, Stormwater Management Plan 2001-2006*. (Available at http://rcflood.org/downloads/npdes/Draft_010709_SMP.pdf, accessed December 23, 2014.)

CGPU EIR — City of Coachella, *General Plan Update 2035*, Adopted April 22, 2015. (Available at http://www.coachella.org/Home/ShowDocument?id=3221, accessed September 11, 2015.)

CMC — City of Coachella, *Coachella Municipal Code*, codified through June 25, 2014. (Available at https://www.municode.com/library/ca/coachella/codes/code_of_ordinances, accessed December 30, 2014.)

Colorado River Basin Plan — California Regional Water Quality Control Board, Colorado River Basin – Region 7, *Water Quality Control Plan Colorado River Basin*, includes amendments adopted by the Regional Board through March 2014. (Available at http://waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/, accessed December 28, 2015.)

DWR — California Department of Water Resources, *Summary of Salton Sea Hydrology and Future Scenarios*, March 2006. (Available at http://www.water.ca.gov/saltonsea/historicalcalendar/ac/03.16.2006/Hydrology_Inflows.pdf, accessed December 19, 2014.)

ICGP OS — Imperial County, *General Plan Conservation and Open Space Element*, 1993. (Available at http://www.icpds.com/CMS/Media/Conservation-and-Open-Space-Element.pdf, accessed December 30, 2014.)

Ord. 1234 — Coachella Valley Water District, *Ordinance No. 1234 (as amended through 1234.1), Establishing Regional Stormwater Facility Design Standards and Development Requirements*. (Available at http://www.cvwd.org/business/ddm/Appendix_K/K-7.pdf, accessed December 30, 2014.)

Ord. No 754 — Riverside County, *Ordinance No. 754 (as amended through 754.2), Establishing Stormwater/Urban Runoff Management and Discharge Controls*. (Available at http://www.rivcocob.org/ords/700/754.2.pdf, accessed December 30, 2014.)

Section 5.6 Noise

2015 RCGP — Riverside County, *General Plan,* Noise Element, December 8, 2015. (Available at http://planning.rctlma.org/Portals/0/genplan/general_plan_2016/elements/Ch07_Noise_120815.pdf?ver=2016-04-01-100805-193, accessed December 30, 2015.)

2015 RCGP EIR 521 — Riverside County, *General Plan Environmental Impact Report No. 521, Recirculated Public Review Draft*, February 2015. (Available at http://planning.rctlma.org/ZoningInformation/GeneralPlan/GeneralPlanAmendmentNo960EIRNo521CAPFebruary2015/DraftEnvironmentalImpactReportNo521.aspx, accessed December 30, 2015.)

CGP Safety Element — City of Coachella, *General Plan Update 2035*, Adopted April 22, 2015. (Available at http://www.coachella.org/Home/ShowDocument?id=3221, accessed September 11, 2015.)

CMC — City of Coachella, *Coachella Municipal Code*, codified through June 25, 2014. (Available at https://www.municode.com/library/ca/coachella/codes/code_of_ordinances, accessed December 10, 2014.)

ICGP Noise Element — Imperial County, *General Plan Noise Element*, 1993. (Available at http://www.icpds.com/CMS/Media/Noise-Element.pdf, accessed December 10, 2014.)

LU Ord — Imperial County, *Title 9: Land Use Ordinance, Division 7: Noise Abatement and Control*, adopted November 24, 1998. (Available at http://www.icpds.com/CMS/Media/TITLE9Div7_2008.pdf, accessed December 10, 2014.)

Ord. 847 — Riverside County, *Ordinance No. 847 (as amended through 847.1), Regulating Noise*, effective July 19, 2007. (Available at http://www.rivcocob.org/ords/800/847.pdf, accessed December 10, 2014.)

TNS — California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol,* September 2013. (Available at http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf, accessed December 9, 2014)

VG — California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, September 2013. (Available at http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf, accessed December 9, 2014.)

Section 6 Other CEQA Topics

ATP — Michael Baker International. *Active Transportation Plan* prepared for Coachella Valley Association of Governments. 2016. (Available at http://www.cvag.org/library/pdf_files/trans/Transportation_Documents/CVAG%20ATP%202016-05-25.pdf, accessed September 15, 2016).

RACE — Michael Baker International. *Regional Arterial Cost Estimate* prepared for Coachella Valley Association of Governments. 2016. (Available at https://www.cvag.org/library/pdf_files/trans/Transportation_Documents/CVAG%20RACE%202016-05-25.pdf, accessed September 15, 2016).

RTP/SCS — Southern California Association of Governments. *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*. Adopted April 7, 2016. (Available at http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf" http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf, accessed September 15, 2016).

TPPS Michael Baker International. *Transportation Project Prioritization Study* prepared for Coachella Valley Association of Governments. 2016. (Available at https://www.cvag.org/library/pdf_files/trans/Transportation_Documents/CVAG%20TPPS%202016-05-25.pdf, accessed September 15, 2016).

Section 7 Alternatives to the Proposed Project

MNSA Albert A. WEBB Associates, *Preliminary Alternative Development Study, Eastern Coachella Valley Stormwater Master Plan, Riverside County, California, For Mecca/North Shore Region*, March 2013. (Available at Coachella Valley Water District, 75-515 Hovley Lane East, Palm Desert, CA 92211.)

OVFA Albert A. WEBB Associates, *Preliminary Alternative Development Study, Eastern Coachella Valley Stormwater Master Plan, Riverside County, California, Oasis/Valley Flood Region*, March 2014. (Available at Coachella Valley Water District, 75-515 Hovley Lane East, Palm Desert, CA 92211.)

8.2 Locations Where References can be Found

Location	Address
~~City of La Quinta Community Development Department~~	~~78-495 Calle Tampico La Quinta, CA 92253~~
Coachella Valley Water District	75-515 Hovely Lane East Palm Desert, CA 92211
Imperial County Planning and Development Services Department	801 Main Street El Centro, CA 92243
Riverside County Planning Department	4080 Lemon Street, 12th Floor Riverside, CA 92501
South Coast Air Quality Management District	21865 Copley Drive Diamond Bar, CA 91765

8.3 Persons Consulted

Albert A. WEBB Associates – Stormwater Engineering Department
3788 McCray Street
Riverside, CA 92506
(951) 686-1070

Joseph Caldwell, PE, CPESC, CPSWQ, Director of Stormwater Engineering

8.4 List of Preparers

Coachella Valley Water District

75-515 Hovley Lane East Palm Desert, CA 92211
(760) 398-2651

Environmental Services Department
Steve Bigley, Director of Environmental Services
William Patterson ~~Luke Stowe~~, Environmental Supervisor
Elizabeth Meyerhoff, Environmental Specialist
Brett Daniels, Associate Biologist

Engineering Department
Craig Parker, PE, Director of Engineering
Mark Johnson, PE, Director of Engineering [retired]
Dan Charlton, PE, Director of Facilities and Maintenance
Tesfaye Demissie, PE, Senior Engineer

Albert A. WEBB Associates – Planning & Environmental Services Department

3788 McCray Street
Riverside, CA 92506
(951) 686-1070

Cheryl DeGano, Principal Environmental Analyst
Eliza Laws, Senior Environmental Analyst
Autumn DeWoody. Associate Analyst
Monica Tobias, Assistant Environmental Analyst
Nanette Pratini, GISP, GIS Specialist