4.12 ETHNOHISTORY AND NATIVE AMERICAN INTERESTS

"Ethnohistory" is the study of the historic activities of races or ethnic groups of people. This section summarizes a technical study entitled "Ethnohistory and Native American Consultation for the Proposed Gregory Canyon Landfill Project" prepared by Tierra Environmental Services (1998). This document is included in the Appendix O, and is on file with the County of San Diego Department of Environmental Health.

4.12.1 EXISTING SETTING

4.12.1.1 Luiseño Ethnography and Religion

The Shoshonean inhabitants of northern San Diego County were called Luiseños by Franciscan friars who named the San Luis Rey River and established the San Luis Rey Mission in the heart of Luiseño territory. Their territory encompassed an area from roughly Agua Hedionda on the coast, east to Lake Henshaw, north into Riverside County, and west through San Juan Capistrano to the coast (Bean and Shipek 1978). In northern San Diego County, the southern boundary of the Luiseño extended in a north-northeasterly direction from Agua Hedionda Lagoon to the southern slopes of the Palomar Mountains above San Jose Valley.

The Luiseño were divided into several autonomous lineages or kin groups. The lineage represented the basic political unit among most southern California Indians. According to Bean and Shipek (1978) each Luiseño lineage possessed a permanent base camp, or village, in the San Luis Rey Valley and another in the mountain region for the exploitation of acorns. Nearly all resources of the environment were exploited by the Luiseño in a highly developed seasonal mobility system. Each lineage had exclusive hunting and gathering rights in their procurement ranges and violation of trespass was seriously punished (Bean and Shipek 1978).

Acorns were the most important single food source used by the Luiseño. Their villages were usually located near water necessary for leaching acorn meal. Seeds from grasses, manzanita, sage, sunflowers, lemonade berry, chia and other plants were also used along with various wild greens and fruits. Deer, small game and birds were hunted and fish and marine foods were eaten. Houses were arranged in the village without apparent pattern. Other structures included sweathouses, ceremonial enclosures, ramadas and acorn granaries. Domestic implements included wooden utensils, baskets and ceramic cooking and storage vessels.

Hunting implements consisted of the bow and arrow, curved throwing sticks, nets and snares. Shell and bone hooks as well as nets were used for fishing. Lithic resources of quartz and metavolcanics, and some cherts were available locally in some areas. Exotic materials, such as obsidian and steatite, were acquired through trade. The traditional Luiseño religion is a complex and deeply philosophical belief system with powerful religious leaders, elaborate ceremonies, and a veil of secrecy (White 1963). Each ritual and ceremonial specialist maintained the knowledge of the full meaning of a ceremony in secrecy and passed on the knowledge to only one heir. The decimation of the population after European contact undoubtedly caused the loss of some religious specialists and brought about abbreviated versions of ceremonies (Winterrowd and Shipek 1986), many of which are still practiced today. Surviving ceremonies include initiation for cult candidates, installation of religious chiefs, funerals, and clothes burning (Bean and Shipek 1978).

Spanish explorers first encountered coastal Luiseño villages in 1769 with the establishment of Mission San Diego de Alcalá and, in 1798, the establishment of the Mission San Luis Rey de Francia (four miles inland). The missions "recruited" the Native Americans to use as laborers and convert them to Catholicism. The inland Luiseño groups were not heavily affected by Spanish influence until 1816, when an outpost of the mission was established 20 miles further inland, at Pala (Sparkman 1908).

At the time of contact, the Luiseño population ranged from 5,000 to as many as 10,000 individuals. Missionization, along with the introduction of European diseases, greatly reduced the Luiseño population. By the early 1820s California came under Mexico's rule, and in 1834 the missions were secularized resulting in political imbalance which caused Indian uprisings against the Mexican rancheros. Many of the Luiseños left the missions and ranchos and returned to their original village settlements (Cuero). Through this time, the Luiseños continued to maintain many of their aboriginal customs and simply adopted the agricultural and animal husbandry practices learned from Spaniards.

When California became a sovereign state in 1849, the Luiseño were recruited more heavily as laborers and experienced even harsher treatment. Conflicts between Indians and encroaching Anglos finally led to the establishment of reservations for some villages, such as Pala and Sycuan. Other Mission groups were displaced from their homes, moving to nearby towns or ranches. The reservation system interrupted the social organization and settlement patterns, yet many aspects of the original culture still persist today. Certain rituals and religious practices are maintained and traditional games, songs and dances continue as well as the use of foods such as acorns, yucca and wild game.

4.12.1.2 Ethnobotany

Plants common to the area include species mostly typical of the Coastal Sage Scrub (e.g., Artemisia, Salvia, *Eriogonum fasciculatum*), Chaparral (e.g., Heteromeles, Adenostoma, Arctostaphylos, shrubby Quercus, Ceanothus, Rhamnus), and Valley Grassland (e.g., Ranunculus, Delphinium, perennial bunch grasses and introduced grasses) communities (Munz 1974). Also represented within the proposed project area is a disturbed riparian woodland dominated by cottonwood (*Populus fremontii*) and willow (*Salix* spp.) trees in the San Luis Rey River drainage and the larger drainages contributing to the river. Vegetation within the more level areas of property has been severely disturbed in historic and recent years by ranching, mechanical brush control efforts, dairy farming, and other agricultural activities such that little of the original vegetation appears to remain. Developed areas include introduced exotics, coast live oak, and sycamore in a ruderal environment. These areas include developed and disturbed habitat that is now associated with the Verboom dairy and associated buildings. In spite of appearances, recent biological survey of the project area recorded almost 300 plant species, of which approximately 75 percent are native and the remaining 25 percent are introduced species. As many as 108 of these plants have recorded ethnohistoric uses, including 87 native species and 20 of the non-native species. These plants are discussed in detail in Appendix O of this Final EIR.

Interviews documented in Appendix O indicate that acorns and other plant foods and products are still gathered today around the base of Gregory Mountain. Olive and willow trees are harvested, and the area is still used for gathering mushrooms, tobacco tree leaves and soap root.

Ethnographic uses of plant species occurring on the project site are detailed in Table 1 of the ethnobotany study found in Appendix O. Plant foods common to the area ripen in spring, summer, and fall (see Oxendine 1983:Table 1), providing a relatively stable subsistence base for local villages. Natural and agricultural crop reliability (general availability and timing of maturation), always depending on rainfall and other factors, may have been widely variant from year to year and between coastal and inland "microclimates" (Shipek 1977:57-58).

Although data regarding aboriginal agricultural practices in southern California are largely conjectural, there is ample evidence that the pre-contact Luiseño planted desired foods near their homes, maintained primary collecting areas, and promoted the growth of seed grasses through burning. At least four types of plants found within the proposed Gregory Canyon Landfill Project area are mentioned specifically as having been deliberately planted and maintained, including oak trees, tuna cactus, grasses, and wild onions and other bulbs (Shipek 1977:121). In addition, Shipek (1977:122-123) cited extensive hybridization of southern California oak trees as potential evidence of human introduction of "new" species of oaks into the ecological niches of other oak trees.

Acorns were a staple of prehistoric and historic Native Americans in the region and the distribution of these trees was an important factor in determining the movement of these groups across the landscape. The present-day distribution of oak trees in the San Luis Rey River valley is not likely to be representative of their prehistoric distribution, as many trees were cut to clear land, to produce lumber, for hide tanning (Shipek 1977:57), and to provide firewood for Euro-American settlers to southern California. The floods of 1916 may have destroyed many more large trees remaining in the river valley.

Harvesting of an unknown but specific native grass was first described in the San Diego area by Fr. Palou in 1773. Harvesting by cutting would be necessary for grasses with non-shattering influorescences and maintenance of the grass would require seed broadcasting. Broadcasting would not be necessary for seeds that were harvested using seed beaters. Native grasses were at least as important as acorns for the original inhabitants of this area, although the numbers of utilized species and their range is not well known because introduced species quickly out-competed native species in Alta and Baja California. Early southern California settlers, from the Spanish missionaries to the settlers of the 1840s, described lush grasses in the valleys, on low hills, and mesas (Shipek 1977:127-128). Overgrazing by cattle and other domestic animals caused rapid replacement of native grasses by introduced species. Level areas within the proposed project area have been extensively used for agriculture and ranching during the past two centuries by the Spanish and later homesteaders, and native grasses are expected to be sparse or virtually non-existent in these areas.

Extensive changes in land use practices, subsistence methods, and Luiseño demographics in the area imply that both the resource base and ownership of particular plant resources or areas might also have changed drastically during that same period. Changes include replacement of native grasses by introduced species, decimation of oak groves, and a probable lack of maintenance of primary collecting areas. Consolidation of families in the area suggests that ownership of family-controlled and specialty gardens might have been transferred or even forgotten over the years. Change from gathering and hunting subsistence practices to agriculture and subsequently to a "modern" diet may have had the same effects on collectively owned areas that were used by the entire rancheriá in prehistoric times. Even with these changes, local Native Americans maintain an active interest in the ecology and setting of the area.

4.12.1.3 Current Native American Interests

While there are numerous important sites within traditional Luiseño territory, the research indicates two important traditional use cultural sites in or near the project area: Gregory Mountain and Medicine Rock (Tierra Environmental Services, 1998). Gregory Mountain, called "Chokla" by the Luiseño, is one of the most spiritually important places in the Luiseño world. It is believed to be one of the residing places of "Taakwic," a powerful and feared spirit, that is the guardian spirit of many Shoshonean shamans. The entire mountain, including the area within the proposed landfill boundary, is considered an important place for fasting, praying, and conducting ceremonies by the Luiseño.

The western portion of Gregory Mountain, including the peak, is located within the site boundary and is privately owned. The eastern portion of the mountain is on the Pala Indian Reservation. Because the peak and the western portion of Gregory Mountain is in private ownership, a major portion of the mountain, including the top, is not legally accessible to the Tribe today. In addition, in the absence of a maintained trail, heavy underbrush and topography limit access to the top of the mountain.

Medicine Rock (CA-SDI-313/4356), which is an historic resource as defined by the State CEQA Guidelines, is located north of the project site, between the site boundary and the H.G. Fenton Material sand and gravel operation. This resource, like a portion of Gregory Mountain, is on private property. The rock art at Medicine Rock is an important spiritual site to the Luiseño people. Based upon ethnographic testimony and ethnohistoric literature, some of the paintings at Medicine Rock may have been made in association with female puberty or *Wakenish* ceremonies held by the people of Pala.

The Gregory Canyon Landfill property is located within an "area of influence" of Gregory Mountain. Although much of the surrounding area is undeveloped or sparsely developed, a moderate degree of change has occurred in the recent past, including the introduction of agricultural uses, the Fenton Sand and Gravel operation, and the Calmat-Pala Aggregate Mining facility located on the Pala Reservation. The existing and proposed uses, some of which are on reservation property, contribute to the existing degradation of the cultural and ethnographic setting of the Gregory Mountain environs. As a result, Gregory Mountain, Medicine Rock, and the other cultural resources described in Section 4.11 are exposed to the effects of motor vehicle-related noise, dust, etc., from these existing uses.

Meetings were held in October 1999 and February 2000 with the Native American Environmental Protection Coalition. The meeting was attended by representatives of the Tribes and Tribal regulatory agencies as well as staff from County Department of Environmental Health, County Department of Planning and Land Use, the applicant, and EIR consultants. The purpose of the meetings was to discuss the project and potential impacts on the cultural resources.

4.12.2 IMPACT SIGNIFICANCE CRITERIA

In developing significance criteria for this section, it was recognized that impacts to Native American cultural resources have both an objective and subjective component. The objective component is the extent to which a Native American resource is impacted based upon objective data from air quality, noise, dust, traffic, and other objective studies. The subjective component reflects the judgment of the particular Native American Tribe on the impacts the project may

have upon their traditional use sites. Both criteria have been utilized in this section in evaluating project impacts to Native American interests.

The objective impact significance criteria is derived from the CEQA Guidelines governing impacts to historical resources. (Guidelines §15064.5). The Guidelines provide that a substantial adverse change in the significance of a historic resource "means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historic resource would be materially impaired" (Guidelines §15064.5(b)(1).) The Guidelines also state that a historic resource is "materially impaired" when a project demolishes or materially alters the physical characteristics of the historical resource. (Guidelines §15064.5(b)(2).) Objective testing of Native American resources potentially impacted by the project have been utilized in assessing the impacts upon Native American historic resources utilizing this Guideline.

This section also examines impacts of the project upon Native American cultural resources based upon the subjective judgment of the Native American tribe(s) whose resources may be impacted since there is a subjective experience of these cultural resources.

Because traditional use of ethnobotanical resources has been documented over a period of several centuries, they are considered potential historic resources under CEQA Section 15064.5. Therefore, as defined by these regulations, the project would result in a significant impact on ethnobotanical resources if the project would result in any physical demolition, destruction, relocation or alteration of the resource.

4.12.3 IMPACTS

4.12.3.1 Short-Term (Construction) Impacts

Construction activities would result in both short-term and long-term impacts at Gregory Mountain and potentially at Medicine Rock. The initial construction, which includes excavation operations and construction of the liner and other landfill systems, would increase noise and dust in the project area. These impacts are considered by members the Luiseño people to adversely affect the sanctity of Gregory Mountain and Medicine Rock.

Technical analyses have been done to assess the noise, air quality, and visual impacts to the cultural resources. These technical studies indicate that the project would not create significant air quality, dust or noise impacts to Gregory Mountain or Medicine Rock. These are discussed below.

4.12.3.2 Long-Term (Operational) Impacts

There would be long-term physical alterations to Gregory Canyon which is at the base of the sacred Gregory Mountain cultural resource. In addition, the ongoing landfill operations could permanently disrupt any ongoing traditional Native American activities associated with this important resource (e.g., conduct ceremonies, smoke tobacco, pray, etc.). According to members of the Luiseño Tribe interviewed, additional impacts would include increased noise and traffic problems; potential contamination of groundwater basins, wells, and the San Luis Rey River; and aesthetic impacts. With regard to water contamination, it was noted during interviews that the Luiseño believe in the "circle of life." This belief suggests that water contamination from the landfill would occur not only downstream from the project site but upstream as well. Because of the "circle of life," all contamination that leaks into the San Luis Rey River and reaches the

ocean would evaporate and then be deposited in the mountains with the rain. As a result, no impacts to Gregory Mountain are considered acceptable by the Luiseño tribe (Tierra Environmental Services, 1998).

The Luiseño people have indicated that the alteration of Gregory Canyon would contribute to the degradation of Medicine Rock and would have a significant adverse effect on this resource. At the present time the Luiseño are reluctant to discuss mitigation. Recommended mitigation measures have been identified by the consultant team and the applicant and are provided in Section 4.12.4.

Areas of concern raised by the Tribe, other than cultural resources, are traffic, water quality, noise, air quality, and aesthetics. Technical analyses for noise, air quality, and aesthetics, focusing specifically on Gregory Mountain and Medicine Rock, were prepared and are discussed below. Other impacts, such as water quality and traffic, are more general in nature and affect the area but not the specific cultural resources. With the implementation of proposed mitigation measures, the hydrology, surface hydrology, and traffic studies indicate that the project would not result in a significant impact on water resources and circulation. These areas are addressed in Sections 4.3, Hydrogeology; 4.4, Surface Hydrology; and 4.5, Traffic and Circulation, respectively.

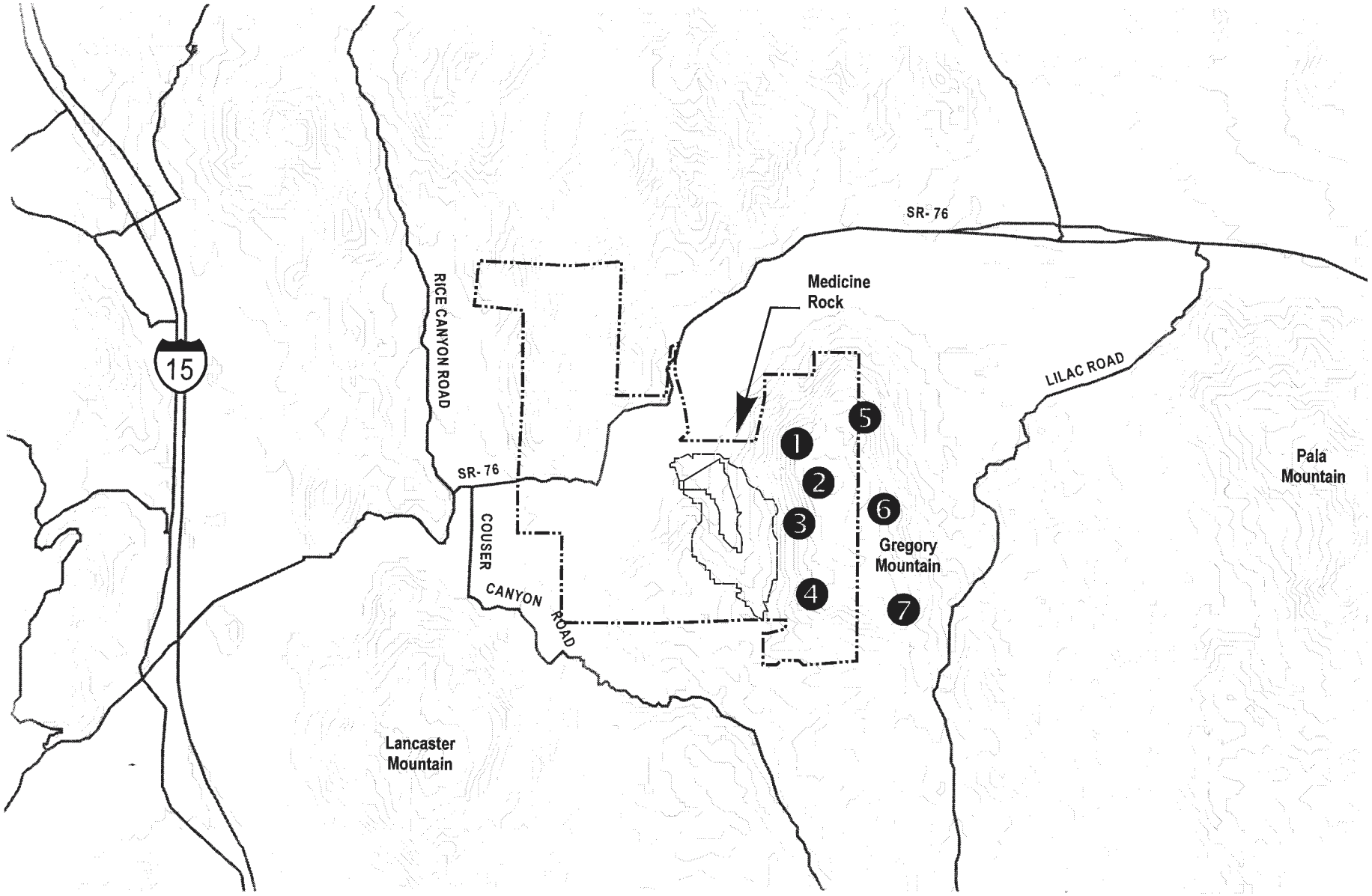
Technical Analyses

Technical analyses, including air quality, noise, and aesthetics, were extended to determine the potential impacts to Medicine Rock, located outside the project boundary, and Gregory Mountain, located partially on the property and partially east of the property on the Pala Reservation. Exhibit 4.12-1 indicates points identified for use in the analysis. The seven positions include the highest point along the mountain with six points around the highest point.

Air Quality

The air quality technical study prepared by PCR Services Corporation (January 2001) analyzed potential air quality impacts to Medicine Rock and Gregory Mountain. The technical study modeled impacts at receptor points around the property boundary and off-site up to five miles from the boundary. Both Medicine Rock and the top of Gregory Mountain are within the modeled receptor grid and are, therefore, included in the modeling. The analysis shows that both Medicine Rock and the top of Gregory Mountain would be below the impact criteria for criteria pollutants, except for PM_{10}. Project-related emissions of fugitive dust without mitigation have the potential to cause additional violations of the California Ambient Air Quality Standards for PM_{10}.

Heavy equipment operations and trucks would generate PM_{10} and dust emissions over a wide area of the site. Downwind dust concentrations depend on a wide array of variables that do not lend themselves to an accurate impact analysis. Under normal operating conditions, dust impacts would be confined mainly to within the landfill boundaries. However, during strong winds, areas cleared for cover removal, freshly placed cover and stockpiles, as well as active disturbance areas along dirt or gravel roadways may become dust sources. Wind patterns in the Gregory Canyon area do commonly blow in a direction that would transport dust from the landfill towards the Medicine Rock and Gregory Mountain area. Dust would be deposited in these culturally significant areas to some extent during high wind periods. These impacts can be mitigated to a level of insignificance by increasing the intervals of the application of water on access roads,



PCR

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NOT TO SCALE

Exhibit 4.12-1
Analysis Points for Cultural Resources

Sources: KTU&A, 1998; David Evans and Associates Inc., 1999

stockpiles, and cleared areas. In addition, landscaping can be installed between the landfill activity and Medicine Rock to serve as a dust screen. These mitigation measures reduce the impacts on Medicine Rock and Gregory Mountain created by fugitive dust to an insignificant level.

Noise

Exhibit 4.6-1 in Section 4.6, Noise and Vibration, indicates five locations where existing ambient noise levels were monitored. Location 4 is the southern edge of the Redi-Mix operational area, just north of the subject property. Table 4.6-2 indicates that the existing ambient noise level at Location 4 is 61.1 dBA L_{eq}.

There are no noise levels established for cultural resources. Medicine Rock is located on a property zoned S-82, which allows a noise level of 75 dBA. However, Proposition C establishes a 65 CNEL noise level at the boundary. The noise analysis uses the more stringent County standard of 62.5 dBA L_{eq}, which is the arithmetic mean of allowable standards between industrial and residential uses. Therefore, the 62.5 dBA L_{eq} is used to assess the potential noise impacts to Medicine Rock and Gregory Mountain.

Noise sources potentially impacting Medicine Rock and Gregory Mountain would be operations from the landfill facilities area and the working face and the relocation of the SDG&E transmission towers. Medicine Rock is approximately 800 to 1,400 feet from the facilities area and 800 feet from the nearest northeastern portion of the landfill footprint. Selected points on the top of Gregory Mountain (Exhibit 4.12-1) are estimated to be located from 3,000 to 7,200 feet from the facilities area and from 950 to 3,600 feet from the landfill.

The rock crusher and tire shredder are movable operations. For analysis purposes, the location of the rock crushing or tire shredder was based on minimizing impacts to the cultural resources. The rock crusher/tire shredder would be located a minimum of 2,500 feet from Medicine Rock and 1,500 from the analysis points identified on Gregory Mountain unless other forms of noise attenuation, such as berms or acoustical curtains, are used to reduce combined landfill noise levels to below 62.5 dBA L_{eq}. A mitigation measure is included in Section 4.6, Noise and Vibration, to limit the use of the machinery so that the rock crusher and tire shredder are not used simultaneously.

The analysis is a "worst case" since it assumes that all points have a direct line-of-sight with the landfill noise sources. The analysis also does not take into account that the landfill operations will move further south into the canyon as the northern portion is filled (see discussion of Landfill Sequencing in Section 3.6.2). The projected landfill noise levels at Medicine Rock and Gregory Mountain are shown in Table 4.12-1.

The total landfill noise level would be approximately 62.5 dBA at Medicine Rock (assuming rock crushing/tire shredding operations would be a minimum of 2,500 feet away), which is an increase of about 14.8 dBA above the ambient level. The northeastern most corner is used as the closest distance because of trucks traveling through the facilities area to the landfill operations. Combined noise levels would decrease as the landfill operations moves south into the canyon and further from Medicine Rock.

TABLE 4.12-1
POTENTIAL LANDFILL NOISE LEVELS AT MEDICINE ROCK AND GREGORY MOUNTAIN

OPERATION	DISTANCE (FEET)	POTENTIAL NOISE LEVELS L_{EQ} (dBA)
Medicine Rock (Ambient 47.7)		
Landfill Operations	800	62.0
Facilities Area	1,400	43.4 to 48.3
Rock Crushing/Tire Shredding	2,500	51.5
Total (with ambient)		62.4 to 62.5
Gregory Mountain [a] (Ambient 47.7)		
Landfill Operations	950 to 3,600	38.1 to 60.3
Facilities Area	3,000 to 7,200	21.2 to 36.8
Rock Crushing/Tire Shredding	1,500	55.9
Total (with ambient)		62.5

[a] A range is provided because different distances were used for analysis purposes based on the seven points identified (Exhibit 4.12-1)
Source: Mestre Greve, 1999 and PCR Services Corporation, 2000

The total landfill noise level would range from 48 to 62 dBA at Gregory Mountain. A range is provided for noise levels on the top of Gregory Mountain because of the different distances associated with the seven points identified for analysis purposes (Exhibit 4.12-1). The projected total combined landfill noise levels would be at or below the County noise standard of 62.5 dBA (L_{eq}) at Medicine Rock and at Gregory Mountain. The proposed project would not substantially change the user's experience in terms of noise at these cultural resources.

In addition, noise levels would not be continuous since the landfill would not operate 24 hours a day. Hours of operation established in Proposition C are between the hours of 7:00 A.M. and 6:00 P.M. Monday through Friday and 8:00 A.M. to 5:00 P.M. on Saturday unless different hours are established by the Local Enforcement Agency. In consultation with the Tribe, the applicant is willing to vary the days or hours of operation if there is a specific day reserved for Tribal ceremonies. As discussed in the Section 4.6, Noise and Vibration, the CNEL methodology established in Proposition C for project noise impacts is approximately 3.4 dBA less than the L_{eq} levels. Applying the CNEL scale to the potential L_{eq} noise levels in Table 4.12-1 would result in about a three decibel level reduction. In other words, maximum CNEL noise levels at Medicine Rock would be 59.5 dBA and maximum CNEL noise levels at Gregory Mountain would be 58.6 dBA.

A short-term increase in noise levels from grading activities could occur at Gregory Mountain when the SDG&E transmission towers are relocated. Relocation of the towers would not occur until the landfill operations were in that area of the footprint, approximately 10 years from opening. At 800 feet distance, the projected peak construction noise levels range between approximately 49 to 71 dBA, with an estimated average L_{eq} of approximately 64 to 66 dBA. The construction impacts can be mitigated to a level of less than significant by the use of temporary noise barriers between the construction equipment and the ridgeline.

Aesthetics

The visual analysis included an assessment of views from the points on Gregory Mountain (Exhibit 4.12-1). The powerlines and a high percentage of the landfill would not be visible due

primarily to the relative roundness of the top of Gregory Mountain and the low angle needed to see these elements. The landfill would not be visible from the points on the Pala Indian Reservation, but only from those points on the project site. Other areas are visible from the top of the Mountain as shown in Exhibit 4.12-1. For example, the site of the future gaming facility, because of its low elevation, would be visible from the top of Gregory Mountain. Visual impacts to Gregory Mountain therefore would be considered less than significant.

4.12.3.3 Ethnobotanical Impacts

Certain plants are important to the Native American community and the continuation of their traditional cultural practices. Development of the project site as a landfill would result in the loss of plant species that are important to local Native Americans due to their traditional ethnobotanical uses. As described earlier, these plant resources are found within coastal sage scrub, coast live oak woodland, cottonwood-willow riparian forest, native perennial grassland, southern willow scrub and mulefat scrub habitats. The loss of these habitats would also result in losses of ethnobotanical resources.

Because the property is outside the boundaries of the Pala Reservation and in private ownership, the plants are not legally accessible to the Tribe today. Nevertheless, the removal of plants that are important to local Native Americans for ethnobotanical uses is regarded as a significant impact. The 108 plants identified as having ethnobotanical uses would be preserved through the implementation of recommended mitigation measures (MM, 4.12-4).

4.12.3.4 Site Closure Impacts

Although it is anticipated that the landfill would operate for an approximately 30-year period, Proposition C has mandated that at least 1,313 acres of the site would remain as open space. Subsequent to the closure, landfilling operations would cease and the landfill would be revegetated. With the exception of the environmental control systems that would be maintained on-site, the area encompassing the revegetated landfill would contribute additional open space on the property. Therefore, whereas existing uses would continue to contribute to the degradation of the area, project-related impacts to Gregory Mountain, Medicine Rock and ethnobotanical resources would largely cease upon closure of the landfill.

4.12.3.5 First San Diego Aqueduct Relocation Option

The impacts to the ethnohistoric resources from the relocation of the First San Diego Aqueduct would be the same as with the project.

4.12.4 MITIGATION MEASURES

Proposition C

Proposition C contains requirements for project development as well as mitigation measures that could reduce potential impacts to the cultural resources. Section 5P of Proposition C contains the following general mitigation measure relative to potential cultural impacts. [1]

[1] Section 106 consultation under the NHPA, if and to the extent required, will occur in conjunction with issuance of a nationwide permit.

MM 4.12.C5P *Impacts to Native American resources impacted by the Project shall be mitigated through the development of a Memorandum of Agreement between the Applicant and the appropriate regulatory agencies in accordance with Section 106 of the National Historic Preservation Act. To mitigate archaeological impacts caused by the Project, the Applicant shall retain a qualified archaeologist to investigate and recommend appropriate mitigation measures. These mitigation measures shall be implemented by the Applicant.*

Section 5A and 5B address the days and hours of operation, respectively, and Section 5Q requires a Citizen Environmental Review Board. These mitigation measures are contained in Section 4.1, Land Use.

Impacts and Mitigation Measures

In addition to the measure contained in Proposition C, the following mitigation measures were developed by the EIR consultant team and applicant to reduce potential impacts identified in this section:

Impact 4.12-1: *The project would result in long-term physical alterations to Gregory Canyon which is at the base of the sacred Gregory Mountain cultural resource. In addition, the landfill operations could disrupt any ongoing traditional Native American activities associated with this resource.*

MM 4.12-1a: Prior to commencement of operation of the landfill and as partial fulfillment of MM 4.1-2, the applicant shall either dedicate the portion of the site east of the landfill footprint and relocated SDG&E easement including the western slopes and the top of Gregory Mountain, as permanent open space or execute and convey a permanent open space easement over this area.

MM 4.12-1b: Prior to commencement of operation of the landfill the applicant shall execute and record an access easement to the Pala Band of Mission Indians from the western boundary of the land owned by the Pala Band of Mission Indians to the summit of Gregory Mountain. The access easement shall grant the Pala Band of Mission Indians the right to walk or hike only within the access easement area.

MM 4.12-1c: Should the Pala Band agree, the applicant shall, upon commencement of operation of the landfill, pay to the Pala Band of Mission Indians a fixed dollar amount as determined below. Such amount shall be used by the Pala Band to implement measures to enhance and improve access to Gregory mountain from the Pala Reservation. Such measures may include, but are not limited to, a new footpath, clearing of an existing footpath, or the marking of new footpath trail as determined by Pala in its sole discretion. Such dollar amount shall be equal to the estimated cost of restoring the footpath that previously existed from the eastern base of Gregory Mountain to the top of the mountain. This estimate shall be obtained by the applicant from a company experienced in restoring footpaths.

MM 4.12-1d: In addition to the construction of the trail, should the Pala Band agree, the applicant shall provide funding as needed for the annual maintenance of the trail from the eastern base to the top of the mountain during the operational life of the landfill.

MM 4.12-1e: The applicant shall postpone landfilling activities on the western slope of Gregory Mountain above the existing San Diego Gas & Electric transmission line for as long as its practically possible.

Impact 4.12-2: *The project would create dust impacts to the areas of Medicine Rock and Gregory Mountain during high wind periods.*

MM4.12-2a: The applicant shall apply water on access roads, storage piles, and cleared areas in greater intervals, such as every three hours, during high wind periods to reduce the dust generated by vehicles.

MM4.12-2b: The applicant shall install landscaping between the landfill operations and Medicine Rock to create a dust screen. The landscape screen shall include shrubs and trees, such as manzanita and ceanothus.

Impact 4.12-3: *The project would create short-term construction noise impacts at the ridgeline of Gregory Mountain during the relocation of the SDG&E transmission towers.*

MM4.12-3: The applicant shall monitor noise levels at the ridgeline during the relocation of the SDG&E transmission towers. If noise levels exceed 62.5 dBA L_{eq} at the ridgeline, the applicant shall implement some or all of the following measures to reduce the noise levels to below 62.5 dBA L_{eq}:

- Build temporary noise barriers or berms between construction activities and the ridgeline. Design parameters (e.g., height, length, and location) for these temporary noise barriers or berms shall be determined by a qualified noise expert.
- Reduce the amount or size of construction equipment. For example, equipment with smaller engines could be used.

If the 62.5 dBA L_{eq} threshold is not exceeded, no action beyond monitoring shall be necessary.

Impact 4.12-4: *The project would result in the loss of ethnobotanical resources associated with the coastal sage scrub, coast live oak woodland, native perennial grassland, cottonwood-willow riparian forest, southern willow scrub and mulefat habitats.*

MM 4.12-4: The project shall mitigate for the loss of ethnobotanical plants in southern willow scrub, mulefat scrub, cotton-willow riparian forest, and native perennial grassland by the creation of in-kind habitats on the landfill site that include ethnobotanical species listed in Appendix O. This revegetated habitat shall be incorporated into the Habitat Enhancement Plan and/or the dedicated open space areas. Before the mitigation plans for these areas are finalized, the Tribe would have the opportunity to provide input concerning the selection of specific ethnobotanical resources. In addition, the Tribe shall be given the opportunity to provide

input regarding the location of the in-kind habitats to ensure that tribal members have adequate access to the areas.

4.12.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Mitigation measures are identified to minimize impacts to the cultural resources. The implementation of mitigation measures for dust and PM_{10} would reduce the impacts to cultural resources to a level of less than significant. Thus, all technical impacts including air quality, noise, and aesthetics would be at a level of less than significant.

A mitigation measure is provided to preserve the ethnobotanical resources within the mitigation areas created for the biological resources and the dedicated open space. This measure reduces impacts to ethnobotanical resources to a level of less than significant.

Mitigation measures presented to address the impact to Gregory Mountain would increase access to the mountain and preserve the upper slopes of the mountain in open space. However, based on input from Luiseño representatives during the EIR process, the Luiseño consider the impacts of the project to their traditional use sites to be significant and adverse. To date, the Luiseño have not discussed mitigation measures with the applicant. Therefore, the mitigation measures identified in Section 4.12.4 may not mitigate potential effects to a less than significant level.

In summary, based on traditional technical measures of air quality, noise and aesthetics the impacts after mitigation are less than significant. However, the Luiseño believe that impacts of the project on their traditional use sites (Gregory Mountain and Medicine Rock) are significant. Their belief of significant impact is based on their intangible use and relationship to Gregory Mountain and Medicine Rock, which makes the use of conventional measurable performance standards to define level of impact significance difficult if not impossible. Therefore, given the lack of objective standards to determine whether there would be significant effect on a culture's experience, this EIR concludes that there may be a significant impact to ethnohistorical resources (Gregory Mountain and Medicine Rock) remaining after mitigation.