0.4 MITIGATION MONITORING AND REPORTING PROGRAM

0.4.1 INTRODUCTION AND SUMMARY

Pursuant to Section 21081.6 of the Public Resources Code and the *California Environmental Quality Act (CEQA) Guidelines* Section 15097, public agencies are required to adopt a monitoring or reporting program to assure that mitigation measures and revisions identified in Final Environmental Impact Report (FEIR) are implemented. As stated in Section 21081.6 of the Public Resources Code:

> *"... the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment."*

Pursuant to Section 21081(a) of the Public Resources Code, findings must be adopted by the decision makers coincidental to certification of the FEIR. The Mitigation Monitoring and Reporting Program (MMRP) must be adopted when making the findings (at the time of approval of the project).

As defined in the CEQA Guidelines, Section 15097, "reporting" is suited to projects that have readily measureable or quantitative measures or which already involve regular review. "Monitoring" is suited to projects with complex mitigation measures, such as wetland restoration or archaeological protection, which may exceed the expertise of the local agency to oversee, are expected to be implemented over a period of time, or require careful implementation to assure compliance. Both reporting and monitoring would be applicable to the proposed project.

0.4.2 MITIGATION MATRIX

To sufficiently track and document the status of mitigation measures, a mitigation matrix has been prepared and includes the following components:

- Impact
- Mitigation Measure
- Action
- Timing
- Responsibility

The mitigation matrix is included in Table 0.4-1. Additionally, the project will be required to adhere to the design features presented in Table 0.4-2.

Table 0.4-1. Mitigation Measures

Impact	Mitigation Measure	Action	Timing	Responsibility
AESTHETICS				
VIS-1 Depending on the final location, the construction of a groundwater storage tank may result in a significant visual impact.	**MM VIS-1** If a groundwater storage tank is installed, placement of the tank shall consider the existing visual setting to ensure the tank does not impede any scenic vistas or significantly modify the visual character of the project site. Screening strategies shall be used to minimize the appearance of the storage tank. Such strategies include, but are not limited to: placing the tank on lower lying land, landscaping, berms, and/or vegetation and painting the tank a neutral color to blend with the tank's surroundings. The plans for the storage tank shall be approved by the Planning Division Manager and City Engineer prior to issuance of a grading permit.	Incorporate strategies to minimize the appearance of the storage tank. Plans for the tank will be submitted for approval by the Planning Division Manager.	Prior to the issuance of a grading permit.	Applicant, Planning Division Manager, City Engineer
BIOLOGICAL RESOURCES				
BIO-1 The project has the potential to directly impact California gnatcatcher due to loss of 77.36 acres of CSS habitat.	**MM-BIO-1a** Prior to project grading, the project applicant shall conduct USFWS presence/absence protocol coastal California gnatcatcher surveys. The surveys shall be conducted within the 12-month period prior to project grading. Pursuant to the Biological Opinion issued by the USFWS, results of the surveys shall be submitted to USACE, the Wildlife Agencies and the City of San Marcos Planning Division Manager. If coastal California gnatcatchers are found to be nesting within the area to be disturbed mitigation measures MM-BIO-1b and MM-BIO-1c shall also be implemented.	Conduct USFWS survey for coastal California gnatcatcher. Submit results to USACE, Wildlife Agencies and City Planning Division Manager.	Within the 12-month period prior to project grading.	Applicant, Project Biologist, Planning Division Manager
	MM-BIO-1b If the preconstruction survey identified nesting gnatcatchers on the project site, clearing and grubbing activity would cease within 300 feet of the nest until such time as the nest is no longer active.	Cease clearing and grubbing activity within 300 feet of active nests.	During construction until the nest is no longer active.	Applicant, Project Biologist, Contractor
	MM-BIO-1c To reduce potential noise impacts to nesting gnatcatchers, a qualified acoustician would monitor the project site and vicinity for listed birds during initial grading, and on a monthly basis thereafter to determine if any nests are within a distance potentially affected by noise from grading, clearing, or construction activities. If nesting birds are located adjacent to the project site with the potential to be affected by construction activity noise above 60 dBA Leq,	Noise monitoring and implementation of noise mitigation via barriers if noise levels are excessive.	During initial grading and on a monthly basis thereafter during breeding season (February 15 through September 15).	Applicant, Project Biologist, Qualified Acoustician

Impact	Mitigation Measure	Action	Timing	Responsibility
	a noise barrier would be erected. This noise barrier would consist of a l0-foot-high continuous plywood fence supported by posts or an earthen berm located at the site boundary that abuts potential off-site habitat. If 60 dBA Leq is exceeded the acoustician would require the construction contractor to make operational and barrier changes to reduce noise levels to 60 dBA during the breeding season (February 15 through September 15). Noise monitoring would occur during operational changes and installation of barriers, as needed, to ensure their effectiveness.			
	MM-BIO-1d A Wildlife-Agency approved biological monitor shall be present during initial clearing, grading, and construction in sensitive habitat areas and/or in the vicinity of biological open space areas to ensure that conservation measures associated with resource agency permits and construction documents are performed. The biological monitor shall have the authority to halt construction to prevent or avoid take of any listed species and/or to ensure compliance with all avoidance, minimization, and mitigation measures. Any unauthorized impacts or actions in non-compliance with the permits and construction documents shall be immediately brought to the attention of the City, USACE, and the Wildlife Agencies.	A Wildlife-Agency approved biological monitor shall be present to ensure performance of biological mitigation measures.	During initial clearing, grading, and construction in sensitive habitat areas and/or in the vicinity of biological open space areas.	Applicant, Project Biologist
BIO-2 Potential to impact avian species protected under the Migratory Bird Treaty Act if tree removal, vegetation removal, or other construction activities occur during the nesting season.	**MM-BIO-2** If construction is proposed during the breeding season (February 15 through September 15), a pre-construction survey shall be performed by a qualified biologist to determine if any birds are nesting within or immediately adjacent to the impact area. The survey must be conducted no more than three days prior to commencing project activities. If surveys show that nesting birds are present, a no-work buffer would be placed around the nest. The buffer size would be determined by a qualified biologist and would vary based on site conditions and type of work to be conducted. The no-work buffer would be maintained until the end of the breeding season or until surveys by a qualified biologist confirm that fledglings are no longer dependent on nest. If no nesting birds are detected during pre-construction surveys, no restrictions would be necessary and construction may proceed as planned.	If construction is proposed during the breeding season, conduct a pre-construction survey. Install no-work buffer if nesting birds are present.	For construction activities proposed for the period of February 15 through September 15, conduct survey no more than three days prior to construction activities. No-work buffer to be maintained until the end of the breeding season.	Applicant, Project Biologist

Impact	Mitigation Measure	Action	Timing	Responsibility
BIO-3 Potential for indirect impacts to sensitive wildlife species during project construction.	**MM-BIO-3a** The applicant shall designate a USFWS-approved qualified biologist who would be responsible for overseeing compliance with protective measures (e.g., buffers, noise mitigation) for the listed species during construction, including site clearing and grubbing. The biologist would have the authority to halt all associated project activities, which may be in violation of the USFWS Biological Opinion issued for the project. In such an event, the biologist is required to contact the City of San Marcos, USACE and USFWS within 24 hours.	Monitoring of grading activities to ensure compliance with biological mitigation measures. If violations are identified, USACE and USFWS will be notified.	During project construction.	Applicant, Project Biologist
	MM-BIO-3b An employee education program for the construction crew shall be developed and implemented by a qualified biologist. Each employee (including temporary, contractors, and subcontractors) would receive a training/awareness program within two weeks of working on the proposed project. They would be advised of the potential impact to the listed species and the potential penalties for taking such species. At a minimum, the program shall include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area environs.	Implement education program for construction crews.	Within two weeks of employee starting on construction site.	Contractor
	MM-BIO-3c Construction work areas shall be delineated and marked clearly, by flagging or temporary orange construction fencing, in the field prior to habitat removal, and the marked boundaries maintained and clearly visible to personnel on foot and by heavy equipment operators. Fencing shall be placed on the impact side to reduce the potential for additional vegetation loss within open space. Fencing placement shall be done by a qualified biologist. All temporary fencing shall be removed only after the conclusion of all grading, clearing, and construction. Employees shall strictly limit their activities and vehicles to the proposed project areas, staging areas, and routes of travel. The project proponent and/or the biological monitor	Flagging of sensitive habitat areas.	Prior to project construction	Project Biologist, Contractor

Impact	Mitigation Measure	Action	Timing	Responsibility
	shall contact the City of San Marcos, USACE, and USFWS to verify that the limits of construction have been properly staked and are readily identifiable. Intrusion by unauthorized vehicles into the riverbed and outside of construction limits shall be prohibited, with control exercised by an on-site foreman. Access routes to the construction area outside of work hours shall be blocked with physical barriers, such as concrete blocks or large equipment.			
	MM-BIO-3d The work area shall be kept clean to avoid attracting predators. All food and trash shall be disposed of in closed containers and removed from the project site. No pets shall be allowed on the construction site.	Maintenance of construction work area.	During project construction.	Contractor
	MM-BIO-3e All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities shall occur in designated upland areas outside of the proposed preserve. The designated upland areas shall be located in such a manner as to prevent any runoff from entering waters of the United States, including wetlands.	Proper staging and construction fuel management.	During project construction	Contractor
BIO-4 Potential for indirect impacts to sensitive wildlife species during project operation.	**MM-BIO-4a** The applicant would require the Home Owner's Association to implement covenants, conditions, and restrictions (CC&Rs) to regulate property usage, including maintenance of on-site restored habitats, indoor cat policy, and protection of adjacent natural areas of the on-site preserve and the Creek. The applicant would incorporate landscape management practices into the CC&Rs that minimize the use of chemical fertilizers, pesticides, and herbicides. Maintenance of on-site restored habitats and protection of adjacent natural areas of the on-site preserve and the Creek shall be overseen by a conservancy or similar entity with approval by the permitting regulatory agencies. The CC&Rs shall be reviewed by the City Attorney prior to recordation.	Maintenance of habitat and enforcement of other protective measures through CC&Rs.	CC&Rs shall be established prior to project occupancy and reviewed by the City Attorney prior to recordation. Maintenance shall be ongoing.	Applicant, HOA, City Attorney
	MM-BIO-4b Potential impacts from human and pet intrusion into the on-site open space shall be minimized through a program of education (using that developed by the American Society for the Prevention of Cruelty to Animals), cat control, and habitat fencing as required by the approved Habitat Mitigation and Monitoring Plan (HMMP), with no	Construction of fencing and owner education. Enforcement shall be through CC&Rs.	CC&Rs shall be reviewed by City Attorney prior to recordation. Fencing to be implemented prior to project	Applicant, HOA, City Attorney

Impact	Mitigation Measure	Action	Timing	Responsibility
	gates between the development and the open space, along the backyards of residential lots adjacent to the planned open space. These requirements would be identified in the CC&Rs. The CC&Rs shall be reviewed by the City Attorney prior to recordation.		occupancy. Education will be ongoing.	
	MM-BIO-4c Use of invasive exotic plant species in landscaped areas adjacent to or near sensitive vegetation communities shall be restricted. The applicant shall encourage the use of native species in landscaping plans and would avoid the use of species listed in Lists A & B of the California Invasive Plant Council's list of Exotic Pest Plants of Greatest Ecological Concern in California. This condition shall be included in the CC&Rs for the project. The CC&Rs shall be reviewed by the City Attorney prior to recordation.	The planting palette shall avoid the use of species listed in Lists A & B of the California Invasive Plant Council's list of Exotic Pest Plants of Greatest Ecological Concern in California.	CC&Rs shall be reviewed by City Attorney prior to recordation. During initial project landscaping and project operation.	Applicant, HOA, City Attorney
	MM-BIO-4d All night lighting within the proposed development area, including streets and backyards, shall be directed away from the habitat areas, including Agua Hedionda Creek, the stepping stone linkage along the project's northern boundary, and the preserved open space east of the development. This condition shall be included in the CC&Rs for the project and the HOA shall regulate this condition and would not allow any future additional lighting to be installed by private homeowners. The CC&Rs shall be reviewed by the City Attorney prior to recordation.	Specification of lighting requirements on project plans.	CC&Rs shall be reviewed by City Attorney prior to recordation. Ongoing, starting with project occupancy.	Applicant, HOA, City Attorney
BIO-5 The project impacts 77.36 acres of CSS and 1.84 acres of baccharis dominated CSS.	**MM-BIO-5a** The direct impact to 77.36 acres of CSS and 1.84 acres of baccharis dominated CSS shall be mitigated at a 2:1 ratio for a total of 158.34 acres. This shall be accomplished through the preservation of CSS within a biological conservation easement on the project site.	Habitat preservation.	Prior to any impact to CSS and baccharis dominated CSS habitat.	Applicant
	MM-BIO-5b Graded slopes outside the fuel modification zone adjacent to natural open space areas shall be revegetated with CSS species (specifically, this includes the slope along the western side of the Las Posas Road extension adjacent to Agua Hedionda Creek). In addition, the off-site easement area would require removal of exotic species, seeding with native species, and/or spreading of CSS duff for preservation that would allow the project to maintain a minimum 500-foot wide habitat linkage along the	Habitat restoration.	Prior to any impact to CSS and baccharis dominated CSS habitat.	Applicant

Impact	Mitigation Measure	Action	Timing	Responsibility
	northern project boundary with the exception of a 500 linear foot portion which may have a minimum width of 400 feet.			
	MM-BIO-5c A monitoring/management plan(s) that is consistent with MHCP guidelines and that addresses both the habitat and the species shall be developed and implemented by the natural lands manager or biological consultant in coordination with the USACE, USFWS and CDFW. The plan shall include management objectives to determine the distribution and abundance of plants and animals found within the on-site and off-site acquisition parcels and build a baseline database from this information. Management will include monitoring specific taxonomic groups to determine whether the project site is functioning naturally or if the biological diversity of the project site is being degraded or diminished. All threats will be monitored and managed appropriately. This plan will be implemented prior to, or concurrent with, the initiation of construction.	Develop and implement monitoring/ management plan.	Prior to, or concurrent with, the initiation of construction.	Applicant, Project Biologist
	MM-BIO-5d A five-year restoration and monitoring plan for the upland restoration area shall be developed and submitted to the USACE, CDFW, and USFWS for approval prior to any ground disturbance in the CSS habitat. The plan would include salvaging on-site plant materials prior to initial clearing and the storage of those materials may be used in the revegetation effort. The restoration/monitoring plan shall include specific replacement planting techniques, timing, success criteria, and an As-Built report.	Develop restoration and monitoring plan for upland restoration area. Submit to USACE, CDFW and USFWS for approval.	Prior to any ground disturbance in the CSS habitat.	Applicant, Project Biologist
BIO-6 The project impacts 0.06 acres of herbaceous wetland due to implementation of the HMMP for the project.	**MM-BIO-6a** The direct impact to 0.06 acres of herbaceous wetland would occur during implementation of the HMMP. This direct impact shall be mitigated at a 3:1 ratio for a total of 0.18 acres. This shall be accomplished through restoration, enhancement and/or creation of wetland habitat and placement of wetland habitat in a biological conservation easement. The wetland mitigation shall be performed in accordance with the draft HMMP for the project, as refined by USACE, and the Wildlife Agencies through the permitting process. The HMMP also identifies the required management and success criteria for the proposed mitigation.	Habitat restoration, enhancement, and/or creation.	Prior to any impact to herbaceous wetland habitat.	Applicant

Impact	Mitigation Measure	Action	Timing	Responsibility
	MM-BIO-6b A five-year restoration and monitoring plan for the wetland restoration areas shall be developed and submitted to the USACE and USFWS for approval prior to any ground disturbance of wetland habitat. The plan would include salvaging on-site plant materials (if appropriate) prior to initial clearing and the storage of those materials may be used in the revegetation effort. The restoration/monitoring plan shall include specific replacement planting techniques, timing, success criteria, and an As-Built report.	Develop restoration and monitoring plan for wetland restoration area. Submit to USACE and USFWS for approval.	Prior to any ground disturbance of wetland habitat.	Applicant, Project Biologist
BIO-7 Potential for indirect impacts to sensitive habitats during project construction.	See MM-BIO-3a through MM-BIO-3e.	See MM-BIO-3a through MM-BIO-3e.	See MM-BIO-3a through MM-BIO-3e.	See MM-BIO-3a through MM-BIO-3e.
BIO-8 Potential for indirect impacts to sensitive habitats during project operation.	**MM-BIO-8a** Trails that pass through areas of sensitive habitat shall include City-approved habitat signage to inform users of the sensitive resources and remind the trail user to stay on the established trails. Signage shall be placed in accordance with the Final HMMP and approved by the Planning Division Manager. The Final HMMP shall include a provision to monitor and track usage.	Placement of informational signage.	Prior to project occupancy.	Applicant, Planning Division Manager
	MM-BIO-8b The western boundary of the riparian corridor shall be enhanced with plant material and fencing barriers to prohibit intrusion into the corridor from the roadway and walkways along Las Posas Road as allowed by the regulatory permits issued by the resource protection agencies and approve Fire Protection Plan.	Enhancement of western boundary of riparian corridor.	Prior to project occupancy.	Applicant
	MM-BIO-8c Use of invasive exotic plant species in landscaped areas adjacent to or near sensitive vegetation communities shall be restricted. The applicant shall encourage the use of native species in landscaping plans and would avoid the use of species listed in Lists A & B of the California Invasive Plant Council's list of Exotic Pest Plants of Greatest Ecological Concern in California. This condition shall be included in the CC&Rs for the project. The CC&Rs shall be reviewed by the City Attorney.	The planting palette shall avoid the use of species listed in Lists A & B of the California Invasive Plant Council's list of Exotic Pest Plants of Greatest Ecological Concern in California.	During initial project landscaping and project operation.	Applicant, HOA, City Attorney

Impact	Mitigation Measure	Action	Timing	Responsibility
BIO-9 The project impacts 0.06 acres of jurisdictional wetlands due to implementation of the HMMP.	See MM-BIO-6a and MM-BIO-6b.	See MM-BIO-6a and MM-BIO-6b.	See MM-BIO-6a and MM-BIO-6b.	See MM-BIO-6a and MM-BIO-6b.
BIO-10 Potential for indirect impacts to jurisdictional wetlands during project construction.	**MM-BIO-10a** The project applicant shall submit monthly construction monitoring reports during all grading activities for the project to the RWQCB. Construction monitoring reports shall include, but not be limited to, the following: • Name, qualification, and affiliations of the persons contributing to the report; • Summary of construction activities that includes general locations, project components, approximate acreages; • Quantification of impacts to waters of the US authorized under RWQCB Order No. R9-2005-0272; • Dates, times and names of qualified biologists onsite; • Diagram showing location and type of the most recent erosion and sediment control BMPs implemented onsite in accordance with the SWPPP; • Summary of any problems, resolutions, and notification that occurred during this monitoring period; and • Photo-documentation of construction activities.	Submit construction monitoring reports to RWQCB.	Monthly during project grading.	Applicant
	MM-BIO-10b Pursuant to the conditions identified in the 401 Water Quality Certification from the RWQCB (Order No. R9-2005-0272) the project applicant shall develop and implement a sedimentation/siltation monitoring plan to measure sediment loads above and below the project site during the construction phase. Sediment and siltation monitoring shall continue until such time that a Notice of Termination is processed. The construction phase sedimentation/siltation monitoring program shall be developed and submitted to the RWQCB for acceptance prior to initiation or project grading. Upon RWQCB acceptance of	Develop and implement sedimentation/ siltation monitoring plan. Submit to RWQCB.	Develop and submit to RWQCB plan prior to project grading. Implement plan during project construction.	Applicant

Impact	Mitigation Measure	Action	Timing	Responsibility
	the monitoring plan, the project applicant shall monitor sediment loading above and below the project as follows: • Samples taken upstream of the construction areas and immediately downstream of the last point of discharge from the project. • Samples shall be analyzed for settleable solids and total suspended solids. • Sediment/siltation monitoring to occur after significant rainfall where storm water runoff discharges from the project site into Agua Hedionda Creek. The project applicant does not need to perform upstream/downstream sample collection for more than three rain events per month.			
	MM-BIO-10c Pursuant to the conditions identified in the 401 Water Quality Certification from the RWQCB (Order No. R9-2005-0272), following each sample event, the applicant shall immediately assess each sample and if the results of the downstream site show an increase greater than 5 percent above background (upstream site) sediment levels, the applicant shall conduct an immediate assessment of erosion and sediment control BMPs being implemented. The project applicant shall also: • Identify the source of the silt and sediment; • Repair or replace BMPs that failed; • Maintain any BMP that is not functioning properly due to lack of maintenance; • Evaluate whether additional or alternative BMPs should be implemented to prevent further exceedances of background sediment levels; and • Report to the RWQCB within five working days the actions taken to remedy the situation.	Perform water quality sampling. Conduct an assessment of erosion and sediment control BMPs and report to RWQCB, if needed.	Sample following each sample event and assess BMPs immediately upon seeing an increase greater than 5 percent above background sediment levels. Report to RWQCB within five working days.	Applicant
	MM-BIO-10d Pursuant to the conditions identified in the 401 Water Quality Certification from the RWQCB (Order No. R9-2005-0272) the project applicant shall include all quality assurance and quality control data from the sediment/siltation monitoring program in reports to be submitted monthly during the rainy season (October 1	Submit sediment/siltation monitoring program data to RWQCB.	Monthly during the rainy season (October 1 through April 30).	Applicant

Impact	Mitigation Measure	Action	Timing	Responsibility
	through April 30). In months receiving no precipitation resulting in discharge to receiving waters, no report will be required.			
	MM-BIO-10e All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities, would occur in designated upland areas outside of the proposed preserve. The designated upland areas would be located in such a manner as to prevent any runoff from entering waters of the United States, including wetlands.	Locate equipment maintenance, staging, and fuel dispensing in a designated upland area.	During project construction.	Applicant, Contractor
BIO-11 Edge effects including intrusion by domestic animals and unauthorized people and spill over lighting could indirectly impact habitat linkages and wildlife corridors.	See MM-BIO-4a through MM-BIO-4d and MM-BIO-8a through MM-BIO-8c.	See MM-BIO-4a through MM-BIO-4d and MM-BIO-8a through MM-BIO-8c.	See MM-BIO-4a through MM-BIO-4d and MM-BIO-8a through MM-BIO-8c.	See MM-BIO-4a through MM-BIO-4d and MM-BIO-8a through MM-BIO-8c.
BIO-12 The project would contribute to a significant cumulative impact related to habitat loss of CSS.	See MM-BIO-5a through MM-BIO-5d.	See MM-BIO-5a through MM-BIO-5d.	See MM-BIO-5a through MM-BIO-5d.	See MM-BIO-5a through MM-BIO-5d.
While no least Bell's vireos or southwestern willow flycatchers were identified on the project site, and there is a low potential for occurrence due to lack of suitable on-site habitat, the following measures are identified in the regulatory permits for the project and would be implemented by the project applicant.	**MM-BIO-13** Prior to project grading, the project applicant shall conduct USFWS protocol least Bell's vireo surveys. The surveys shall be conducted within the 12-month period prior to project grading. Results of the surveys shall be submitted to USACE, the Wildlife Agencies, and the City of San Marcos Planning Division Manager. If least Bell's vireo are found to be nesting within the area to be disturbed, clearing and grubbing activity would not be allowed within 500 feet of active territories until such time as the nest is no longer active. Alternatively, noise mitigation (e.g., berm, temporary barrier) may be implemented to achieve noise levels of 60 dBA or less at the nest.	Conduct protocol surveys and submit results to USACE, Wildlife Agencies, and City. No clearing and grubbing activity shall occur within 500 feet of active territories.	Within the 12-month period prior to project grading. If nesting birds are found, no disturbance shall occur until the nest is no longer active.	Applicant, Project Biologist, Contractor, Planning Division Manager
	MM-BIO-14 Prior to project grading, the project applicant shall conduct USFWS protocol southwestern willow flycatcher surveys. The surveys shall be conducted within the 12-month period prior to project grading. Results of the	Conduct protocol surveys and submit results to USACE, Wildlife Agencies	Within the 12-month period prior to project grading. If nesting birds are	Applicant, Project Biologist, Contractor

Impact	Mitigation Measure	Action	Timing	Responsibility
	surveys shall be submitted to USACE, the Wildlife Agencies, and the City of San Marcos Planning Division Manager. If southwestern willow flycatchers are found to be nesting within the area to be disturbed, clearing and grubbing activity would not be allowed within 500 feet of active territories until such time as the nest is no longer active. Alternatively, noise mitigation (e.g., berm, temporary barrier) may be implemented to achieve noise levels of 60 dBA or less at the nest.	and City. No clearing and grubbing activity shall occur within 500 feet of active territories.	found, no disturbance shall occur until the nest is no longer active.	
	MM-BIO-15 To ensure preservation and management of the proposed preserved areas in perpetuity consistent with MHCP guidelines, the following would occur prior to initial vegetation clearing: • Conservation easements shall be recorded over the 210.8 acres to be preserved, including the 4.7 acres off site adjacent to the northern property boundary following the purchase from the current owner. • Designation of an experienced natural lands manager by the project applicant approved by USACE, the USFWS, and the City of San Marcos Planning Division Manager. • Funding of a non-wasting endowment at an amount to be determined through the preparation of a Property Analysis Record (PAR), or similar analysis.	Recordation of conservation easement.	Prior to project construction.	Applicant
CULTURAL RESOURCES				
CR-1 Unknown sources of archaeological resources may occur on the project site, and the project has the potential to disturb unidentified archaeological resources during project grading.	**MM-CR-1a** An archeological monitor and a Luiseño Native American monitor shall be present during all earth moving and grading activities to assure that any potential cultural resources, including tribal, found during project grading are protected.	Monitoring of ground disturbing activities.	During all ground disturbing activity.	Archaeologist, Tribal Monitor
	MM-CR-1b Prior to beginning project construction, the Project Applicant shall retain a San Diego County qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. Any newly discovered cultural resource deposits shall be subject to cultural resources evaluation, which shall include archaeological documentation, analysis and report	Monitoring of ground disturbing activities.	During all ground disturbing activity.	Archaeologist

Impact	Mitigation Measure	Action	Timing	Responsibility
	generation and take into account tribal customs and traditions.			
	MM-CR-1c At least 30 days prior to beginning project construction, the Project Applicant/ Landowner shall enter into a Cultural Resource Treatment and Monitoring Agreement (also known as a pre-excavation agreement) with a Luiseño Tribe. A Luiseño Tribe shall provide input into the scope and content of the Agreement. At minimum, the Agreement shall address the treatment of known cultural resources, the designation, responsibilities, and participation of professional Native American Tribal monitors during grading, excavation and ground disturbing activities; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains discovered on site.	Enter into Cultural Resource Treatment and Monitoring Agreement.	At least 30 days before project construction.	Applicant, Luiseño Tribe
	MM-CR-1d Prior to beginning project construction, the Project Archaeologist shall file a pre-grading report with the City to document the proposed methodology for grading activity observation, which would be determined in consultation with the contracted Luiseño Tribe referenced in MM-CR-1c. Said methodology shall include the requirement for a qualified archaeological monitor to be present and to have the authority to stop and redirect grading activities. In accordance with the agreement required in MM-CR-1c, the archaeological monitor's authority to stop and redirect grading would be exercised in consultation the Luiseño Native American monitor in order to evaluate the significance of any archaeological resources discovered on the property. Tribal and archaeological monitors shall be allowed to monitor all grading, excavation, and groundbreaking activities, and shall also have the authority to stop and redirect grading activities. The Luiseño Native American monitor shall be present at any pre-construction meeting that addresses earth and/or ground disturbing activities.	File a pre-grading report with City.	Before project construction.	Archaeologist, Luiseño representative

Impact	Mitigation Measure	Action	Timing	Responsibility
	MM-CR-1e The landowner shall relinquish ownership of all cultural resources collected during the grading monitoring program and, if appropriate, from any previous archaeological studies or excavations on the project site to the appropriate Tribe for proper treatment and disposition per the Cultural Resources Treatment and Monitoring Agreement referenced in MM-CR-1c. Such treatment may include, but does not require, curation at a facility that meets the criteria contained in 36 C.F.R. Part 79, or if requested by the appropriate Tribe, re-burial on-site, i.e., a non-curation alternative. All cultural materials that are deemed by the Tribe to be associated with burial and/or funerary goods would be repatriated to the Most Likely Descendant as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98.	Relinquish all cultural resources.	Before, during, and after project construction.	Applicant
	MM-CR-1f All sacred sites, should they be encountered within the project area, shall be avoided and preserved as the preferred mitigation, if feasible.	Avoidance of sacred sites.	Before, during, and after project construction.	Applicant, Contractor
	MM-CR-1g If inadvertent discoveries of subsurface archaeological/cultural resources, not including human remains or associated burial goods which are addressed in MM-CR-4, are discovered during grading, the Developer, the project archaeologist, and the Luiseño Tribe under agreement with the landowner described in CR-3 shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. Pursuant to California Public Resources Code Section 21083.2(b) avoidance is the preferred method of preservation for archaeological resources. If the Developer, the project archaeologist and the Tribe cannot agree on the significance of mitigation for such resources, these issues would be presented to the Planning Division Manager for decision. The Planning Division Manager shall make a determination based upon the provisions of the California Environmental Quality Act with respect to archaeological resources and shall take into account the religious beliefs, customs, and practices of the Tribe. Notwithstanding any other rights available under law, the decision of the Planning	Evaluation of cultural resources if they are identified during project construction.	During project grading.	Applicant, Archaeologist, Tribal Monitor

Impact	Mitigation Measure	Action	Timing	Responsibility
	Division Manager shall be appealable to the Planning Commission and/or City Council. If tribal cultural resources are inadvertently discovered during the project's earth and/or ground disturbing activities, a controlled grade may be required. A controlled grade procedure would require that earth and/or ground disturbing equipment operate at a deliberate pace, in a specialized manner and work in controlled increments as determined by the Native American monitor and Project Archaeologist. Equipment would need to meet specific requirements regarding weight, attachments and type of wheels.			
	MM-CR-1h Fill material brought onto the project site shall be clean of cultural resource material. The fill material shall be analyzed and confirmed by an archaeologist and/or Luiseño Native American monitor.	Ensure fill material is clean of cultural resource material.	During project construction.	Archaeologist, Tribal Monitor
CR-2 The project has the potential to disturb unidentified historical resources during project grading.	**MM-CR-2** An archaeological cultural resources monitor shall be present during all initial earth moving and grading activities or otherwise disturbance of existing condition to monitor for historical resources, including the previously identified well and wall features. If historical resources are encountered, work shall cease in the vicinity of the discovery until the archaeologist has had an opportunity to document and evaluate the discovery. If it is determined to be a significant cultural resource, data recovery or other mitigation measures may be required. The archaeologist shall prepare an Archaeological Data Recovery Program (ADRP) for review and approval by the City Planning Division Manager. Impacts to significant resources must be mitigated before ground-disturbing activities in the area of discovery shall be allowed to resume. If the resource is determined not to be significant, work may resume in the area of the discovery.	Monitoring of initial ground disturbing activities.	During all ground disturbing activity.	Cultural Resources Monitor
CR-3 The project has the potential to disturb unidentified paleontological resources during project grading.	**MM-CR-3** A qualified paleontologist shall be retained by the applicant to implement an appropriate paleontological mitigation program which includes the following measures: • The paleontologist shall monitor construction excavations which impact previously undisturbed	Monitoring of construction activities and filing of mitigation report.	During and after all ground disturbing activity.	Paleontologist

Impact	Mitigation Measure	Action	Timing	Responsibility
	sediments of the Santiago Peak Volcanics, as well as deposits of colluviums and alluvium. The paleontologist would initially monitor the excavation on a part time basis, which may be reduced depending on the sediments excavation and if any fossils are being encountered. If the paleontologist encounters any significant fossils, they would be salvaged. • The paleontologist would be allowed to divert or direct grading activity in the area of an exposed fossil to prevent the fossil from being destroyed. • Because of the small nature of some fossils present in these rock units, it may be necessary for matrix samples to be collected for processing through fine mesh screens. • If found, fossils shall be prepared to the point of identification, stabilized, mapped on a USGS topographic map, and cataloged before they are donated to their final repository. • All significant fossils collected would be donated to a public, non-profit institution with a research interest in the materials, such as the San Diego Natural History Museum. The institution selected must be capable of curating specimens, field notes, geologic maps, and stratigraphic sections, as well as allows for retrieval of specific specimens by researchers in the future. On the completion of all laboratory and field work, a final paleontological mitigation report shall be prepared and filed with the client, the fossil repository and the lead agency.			
CR-4 There is a potential for project construction activities to disturb previously unidentified human remains on the project site.	**MM-CR-4** If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. Suspected Native American	Do not disturb human remains.	During project construction.	Applicant, Archaeologist,

Impact	Mitigation Measure	Action	Timing	Responsibility
	remains shall be examined in the field and the location of the find shall be kept secure. If the San Diego County Coroner determines the remains to be Native American, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. The NAHC must then immediately notify the "most likely descendant(s)" of the discovery. The most likely descendants(s) shall then make recommendations within 48 hours, and engage in consultation concerning treatment of remains as provided in Public Resources Code 5097.98.			
GEOLOGY/SOILS				
GEO-1 Compressible soils unsuitable for supporting fill and/or development underlie the project site.	**MM GEO-1** For the portions of the project site that are underlain by potentially compressible soils, the soil shall be removed and replaced with properly compacted fill during the construction process as defined by the UBC/California Building Code (CBC). Consistent with the Recommended Grading Specifications presented in Appendix D of the Update Geotechnical Investigation, the fill material brought to the project site shall be compacted to at least 90 percent of laboratory maximum dry density as determined by the current version of ASTM Test Procedure D 1557 at or slightly above optimum moisture content.	Remove and replace compressible soils per regulations.	During project construction.	Applicant, Geotechnical Engineer
HAZARDS/HAZARDOUS MATERIALS				
HAZ-1 The project site is located within a Very High fire hazard severity zone.	**MM HAZ-1** The project shall use fire-restrictive building materials as outlined in Chapter 7A, Section 704A, Ignition-Resistant Construction, of the CBC for the future residences. This requirement shall be noted on the building plans and would be subject to review and approval by the City.	Use of fire-restrictive building materials.	This requirement shall be noted on building plans and implemented during construction.	Applicant, Contractor
HAZ-2 Fire modeling identified flame lengths raging from 34 to 79.5 feet, depending on the modeled scenario.	**MM HAZ-2a** A comprehensive approach to fire fuel management shall be required and shall be consistent with the recommendations in the Fire Protection Plan prepared for the project. Fuel management shall take place in three zones. Figure 2-14a depicts these fuel management areas and Figure 2-14b depicts the fuel treatment located within the proposed riparian restoration/corridor area adjacent to Las Posas Road. • Zone 1 comprises the first 50 feet around a structure. This zone is irrigated and shall be planted	Develop fire fuel management plan.	During project construction.	Applicant

Impact	Mitigation Measure	Action	Timing	Responsibility
	with vegetation that meets the County of San Diego's Acceptable Plants for Defensible Space in Fire Prone Areas. Zone 1 criteria would also be applied to the manufactured slopes and shall be re-vegetated with well-spaced and maintained fire resistant plants and trees. • Zone 2 is a non-irrigated zone and generally covers 50 to 100 feet beyond Zone 1. Within Zone 2, permanent vegetation is removed and cleared areas are hydroseeded with a mix of native annual and perennial grasses. Zone 2 is subject to select thinning and pruning to maintain the zone requirements. • Zone 3 is located in open space lots M and N and addresses the riparian corridor. The significance of this zone is the proposed restoration of the riparian habitat environment. The restoration would remove existing non-native vegetation and the planting of local native riparian wetland species. The removal of the most flammable non-native and invasive species would reduce the fire behavior parameters, particularly flame length. A 150-foot fuel management zone from the edge of structures to the edge of a native fuel buffer adjacent to the riparian habitat zone would be maintained except for where narrower zones are permitted per the FPP. Additionally, non-combustible signage would be posted every 200 feet for fuel modification/fire clearing limits both horizontal and vertical. • For newly constructed roads, the vegetation shall be modified/reduced by 50 percent for 20 feet on either side of the road.			
	MM HAZ-2b All homes shall have a minimum 150-foot fuel modification zone with the exception of Lots 8 through 17 on the western portion of the project and lots 187 and 188 on the eastern side where a pinch points occurs to keep fuel modification within the boundaries approved under the regulatory permits. Fuel modification for these lots shall range from approximately 136 feet to 149 feet. Given that	Incorporation of fuel modification zones.	During project construction.	Applicant

Impact	Mitigation Measure	Action	Timing	Responsibility
	flame lengths are expected to be less than 50 feet with fuel modification, the reduced fuel modification zones for these ten lots would be adequate.			
	MM HAZ-2c Homeowners shall be responsible for all required fuel treatment measures on their lot. Fuel treatment zones adjacent to individual lots would be recorded as permanent easements and the Home Owner's Association (HOA) would be responsible for enforcement of all required fuel modification treatments on these permanent easements. The HOA is responsible to ensure completion of all required fuel modification treatment prior to the annual fire season.	Maintenance of fuel management zones.	Prior to annual fire season.	Homeowners, HOA
HYDROLOGY/WATER QUALITY				
HYWQ-1 If a future well is placed closer than 550 feet from adjacent groundwater-using properties, a potentially significant impact would occur.	**MM HYWQ-1** If a well is developed on the project site for irrigation purposes, the well shall be placed no closer than 550 feet to any existing wells.	Placement of well at least 550 feet from existing wells.	During project construction.	Applicant
NOISE				
N-1 If two rock crushers are to operate simultaneously, crusher noise may impact nearby residential uses.	**MM-N-1** If two rock crushers are to operate simultaneously, noise measurements of the rock crushing facilities shall be conducted within the first week of operations to ensure compliance with the City's thresholds. If noise levels are found to be above the established thresholds of 60 dBA at any existing single-family residential use, then mitigation would be required to reduce the sound level of 60 dBA at the residential uses. Mitigation could include berms or temporary walls, modified crusher orientation, or relocation of the rock crushers.	Take noise measurements if two crushers will be operated simultaneously. If noise levels exceed thresholds, implement noise reduction measures to meet noise standards.	During rock crushing phase.	Applicant
N-2 Noise levels at six receptors are modeled to exceed the City's General Plan Noise Element 60 dBA exterior threshold.	**MM-N-2** To minimize on-site exterior noise levels, 7-foot barriers shall be constructed along the lots adjacent to Las Posas Road. A 4-foot barrier shall be constructed at the lot in the southeast corner of the project site. The barriers may be constructed of a combination of landscape berms and sound walls. The locations of barriers are presented in	Construction of noise attenuation barriers.	Prior to occupancy of homes along the west side of Las Posas Road within the project area.	Applicant

Impact	Mitigation Measure	Action	Timing	Responsibility
	Figure 3.10-4. The design of the barrier, including materials and color for any sound walls shall be subject to review and approval by the Planning Division Manager.			
N-3 Since noise levels at six receptors are modeled to exceed the City's General Plan Noise Element 60 dBA exterior threshold, an interior noise assessment is required to ensure the interior noise threshold of 45 dBA CNEL is met.	**MM-N-3** To ensure compliance with the interior noise threshold of 45 dBA CNEL, a final noise assessment shall be performed prior to the issuance of the first building permit for all second floor areas of the lots located adjacent to Las Posas Road. This final report shall identify the interior noise requirements based on architectural and building plans to meet the City's established interior noise limit. The identified interior noise requirements shall also be in place prior to occupancy of the residences adjacent to Las Posas Road.	Conduct final noise assessment and mitigate noise conditions to acceptable levels if an exceedance is identified.	Prior to issuance of first building permit for all second floor areas.	Applicant
PUBLIC SERVICES				
PS-1 The project would contribute to an increase in emergency and non-emergency demands on the San Marcos Fire Department that require additional resources.	**MM PS-1** The proposed project is contained within a preexisting San Marcos Fire Protection District Community Facilities District No. 2001-01 (CFD 2001-01)[1]. The project shall contribute toward the future resources needed by the Fire Department through participation in CFD 2001-01 and payment of mitigation fees. Such payments would go towards providing the additional staff and equipment that would be needed by the Fire Department in the future to provide fire protection services to the project. Specifically this CFD 2001-01 covers authorized facilities including: fire stations, fire training facilities, fire dispatch center, fire community system and fire equipment. It also covers the following authorized services: fire protection, ambulance and paramedic services.	Payment of mitigation fees to the fire protection CFD.	Prior to project occupancy.	Applicant
PS-2 The project would contribute to an increase in demand on police protection services.	**MM PS-2** The project shall contribute toward the future police protection resources through the payment of fees to Community Facilities District 98-01 (CFD 98-01)[2]. These fees would provide for additional staff and equipment to assist in the provision of law enforcement services. As it relates to police protection, CFD 98-01 covers police communication systems and police equipment and police services.	Payment of mitigation fees to the law enforcement CFD.	Prior to project occupancy.	Applicant

[1] http://www.ci.san-marcos.ca.us/Modules/ShowDocument.aspx?documentid=2554
[2] http://www.ci.san-marcos.ca.us/Modules/ShowDocument.aspx?documentid=2560

Impact	Mitigation Measure	Action	Timing	Responsibility
PS-3 Students generated by the project would contribute to a district-wide shortage in capacity in the SMUSD.	**MM PS-3** To offset the additional facilities and resources that would be needed to meet the demand of students generated by the residential units of the proposed project under either the one- or two-district scenario, the project applicant would be required to pay school mitigation fees pursuant to California Education Code Section 17620 et seq. and Government Code Sections 65995(h) and 65996(b). These fees would assist in funding implementation of SMUSD's and VUSD's long-range plans. The current school fees for residential are $3.88/s.f. for SMUSD and $3.20/s.f. for VUSD. Fees do change over time. The developer would be responsible for paying the fees that are in effect at the time of building permit issuance, and, consistent with General Plan Policy LU-11.2, shall provide a letter from the school district(s) to the City prior to the issuance of building permits confirming these fees have been paid.	Payment of school fees to the school district(s) serving the project.	Prior to project occupancy.	Applicant
RECREATION				
REC-1 The project does not provide sufficient park acreage to accommodate new residents.	**MM-REC-1** The project applicant shall pay the City's Public Facility Fee (PFF), a portion of which is designated for parks. The PFF money would go towards the acquisition and development of local and community park facilities throughout the City. Payment of the PFF shall be made prior to project occupancy.	Payment of PFF.	Prior to project occupancy.	Applicant
TRANSPORTATION/TRAFFIC				
TR-1 Project-related traffic results in a significant increase in delay at the intersection of Las Posas Road/Camino Del Sol in the Existing Plus Project condition.	**MM-TR-1a** Prior to project occupancy, the project applicant shall install a fiber optic interconnect for signal timing between the intersections of Las Posas Road / Borden Road and Las Posas Road / Avenida Azul. The project applicant shall also be responsible for developing the signal coordination timing plans for the two intersections. The project applicant shall pay for all existing signal retiming along Las Posas Road from Borden Road to Avenida Azul. .	Installation of signal interconnect and development of signal coordination timing plans.	Prior to project occupancy.	Applicant
	MM-TR-1b Contribute a fair share toward the cost of installing a traffic signal at the intersection of Las Posas Road / Camino Del Sol.	Payment of a fair share contribution for future improvements at this intersection.	Prior to issuance of building permits.	Applicant

Impact	Mitigation Measure	Action	Timing	Responsibility
TR-2 The addition of project traffic results in a significant increase in delay at the intersection of Las Posas Road/Camino Del Sol in the PM peak hour in the Existing Plus Cumulative condition.	See MM-TR-1a and MM-TR-1b.			
TR-3 The addition of project traffic results in a significant increase in delay at the intersection of Las Posas Road/SR-78 Westbound Ramps in the PM peak hour in the Existing Plus Cumulative condition.	**MM TR-2** Contribute a fair share toward construction of a dedicated right-turn lane at the westbound (off-ramp) approach of the intersection.	Payment of a fair share contribution for future improvements at this intersection.	Prior to issuance of building permits.	Applicant
TR-4 The addition of project traffic results in a significant increase in delay at the intersection of Grand Avenue/SR-78 Eastbound Ramps – Via Vera Cruz in the AM and PM peak hours in the Existing Plus Cumulative condition.	**MM-TR-3** Contribute a fair share toward the construction of a dedicated right-turn lane at the southbound (off-ramp) approach of the intersection. Convert existing shared through/right-turn lane to a shared left-turn/through lane. Modify signal to provide a right-turn overlap phase at the southbound approach of the intersection.	Payment of a fair share contribution for future improvements at this intersection.	Prior to issuance of building permits.	Applicant
	MM-TR-4 The project applicant shall pay the City's Public Facility Fee (PFF), a portion of which is designated for circulation street and SR-78 interchange improvements. Payment of the PFF shall be made prior to project occupancy.	Payment of the City's PFF.	Prior to project occupancy.	Applicant
TR-5 The addition of project traffic results in a significant increase in delay at the intersection of Las Posas Road/Camino Del Sol in the AM and PM peak hours in the Horizon Year 2035 condition.	See MM-TR-1a and MM-TR-1b.	See MM-TR-1a and MM-TR-1b.	See MM-TR-1a and MM-TR-1b.	See MM-TR-1a and MM-TR-1b.

Impact	Mitigation Measure	Action	Timing	Responsibility
TR-6 The addition of project traffic results in a significant increase in delay at the intersection of Las Posas Road/SR-78 Westbound Ramps in the AM and PM peak hours in the Horizon Year 2035 condition.	See MM-TR-2.	See MM-TR-2.	See MM-TR-2.	See MM-TR-2.
TR-7 The addition of project traffic results in a significant increase in delay at the intersection of Grand Avenue/SR-78 Eastbound Ramps – Via Vera Cruz in the AM and PM peak hours in the Horizon Year 2035 condition.	See MM-TR-3 and MM-TR-4.	See MM-TR-3 and MM-TR-4.	See MM-TR-3 and MM-TR-4.	See MM-TR-3 and MM-TR-4.
UTILITIES AND SERVICE SYSTEMS				
UTIL-1 Total water storage requirements for the proposed project were not considered in the VWD 2008 Master Plan. The project increases the water storage demand by 347,540 gallons under the One Water District Scenario and 11,005 gallons for the Two Water Districts Scenario.	**MM-UTIL-1** Prior to project occupancy, the project applicant shall pay Water Capital Facility Fees per VWD Ordinance 175. These fees would go towards water infrastructure improvements identified in VWD's 2008 CIP Proof of fee payment shall be provided to the City of San Marcos Planning Division.	Payment of Water Capital Facility Fees.	Prior to project occupancy.	Applicant
UTIL-2 Total parallel land outfall conveyance needs for the proposed project were not considered in the VWD 2008 Master Plan. The	**MM-UTIL-2** Prior to project occupancy, the project applicant shall pay Wastewater Capital Facility Fees per Vallecitos Water District Ordinance 176. The purpose of the fee is to provide adequate wastewater conveyance and treatment to serve new development within VWD's service area and to provide adequate funding for future financing	Payment of Wastewater Capital Facility Fees.	Prior to project occupancy.	Applicant

Impact	Mitigation Measure	Action	Timing	Responsibility
proposed project will increase wastewater flows by 39,281 gpd over what was anticipated in the 2008 Master Plan.	and construction of facilities described in VWD's 2008 CIP. Proof of fee payment shall be provided to the City of San Marcos Planning Division.			
UTIL-3 The proposed project contributes to a cumulative impact to water storage within the VWD water service area through an increase in storage demand of 347,540 gallons under the One Water District Scenario and 11,005 gallons for the Two Water Districts Scenario.	See MM-UTIL-1.	See MM-UTIL-1.	See MM-UTIL-1.	See MM-UTIL-1.
UTIL-4 The proposed project contributes to a cumulative impact to wastewater conveyance at the land outfall.	See MM-UTIL-2.	See MM-UTIL-2.	See MM-UTIL-2.	See MM-UTIL-2.
UTIL-5 The project contributes to a cumulative impact to wastewater solids treatment through an increase in treatment demand of 39,281 gpd.	See MM-UTIL-2.	See MM-UTIL-2.	See MM-UTIL-2.	See MM-UTIL-2.
UTIL-6 The project contributes to a cumulative impact to wastewater liquids treatment through an increase in treatment demand of 39,281 gpd.	See MM-UTIL-2.	See MM-UTIL-2.	See MM-UTIL-2.	See MM-UTIL-2.

Impact	Mitigation Measure	Action	Timing	Responsibility
UTIL-7 The project contributes to a cumulative impact to ocean outfall capacity through an increase in treatment demand of 39,281 gpd.	See MM-UTIL-2.	See MM-UTIL-2.	See MM-UTIL-2.	See MM-UTIL-2.

Table 0.4-2. Design Considerations for the Project

Aesthetics/Visual Quality

- Project is a clustered design which minimizes the project footprint and preserves large blocks of habitat.
- Implementation of the Landscape Master Plan
- Annex into Community Facilities District No. 98-02, Lighting, Landscaping, Open Space and Preserve Maintenance (CFD No. 98-02)[3]. Additionally a special Improvement area shall be formed with respect to CFD 98-02 for the ongoing maintenance services provided by the City for improvements being installed above and beyond the City standards, as proposed by the developer for additional visual and aesthetic enhancement. These items include improved pedestrian/equestrian trail, the graded/landscaped slopes fronting Las Posas Road, parkway/median landscape within Las Posas Road right-of-way, and stormwater BMPs for hydromodification within Las Posas Road, and Park "C".

The following grading, design and landscaping techniques should be incorporated for all manufactured slopes:

- Artificial appearing slopes shall be avoided. Reduced front yard setbacks would allow for reduced pad grading for selected locations.
- All manufactured slope banks In excess of ten feet in height shall be constructed at a gradient of 2 to 1 or less except that cut slopes up to 1.5 to 1 may be allowed upon certification as to soil stability by a soils engineer and certification from a Landscape Architect that the resultant slope can be adequately landscaped. Approval by the City Engineer shall also be required.
- All manufactured slopes shall be planted in compliance with an approved slopes planting plan approved by the Planning Division Manager with plant materials that stabilize the slopes and minimize erosion.
- Temporary erosion-control devices shall be installed in conjunction with grading activities. Such devices shall conform to related City of San Marcos and State of California standards.
- Issuance of a grading permit shall provide assurance to the City Engineer that manufactured slope banks would be properly landscaped and that the landscape would be maintained by either the developer, Home Owner's Association (HOA), or by an improvement district, and/or by home owners for minor interior slopes between the lots.
- Phasing and grading within each planning area shall provide for the safety and maintenance of other planning areas already developed or under construction.
- Landscape screening shall be used to minimize visual impact of graded slopes from view of any public and private roads and offsite public viewsheds by utilizing plant material of varying form, height and densities to soften and vary graded slope planes.
- Slope drainage structures shall be obscured by creating a variety of plant masses to soften the man-made appearance.
- All manufactured slopes shall be rounded at top and toe to conform to the existing topography.
- Development architecture shall be sensitive to the natural terrain. Reduced front yard setbacks would allow for reduced pad grading for selected locations.
- The architectural design of rear elevations shall be carefully detailed to have varied wall and roof planes and enhanced building materials to soften their appearance.
- The developer shall ensure stability and growth on all manufactured slopes for a minimum of two years and until maintenance is assumed by a special Community Facilities District (CFD) improvement zone.

[3] http://www.ci.san-marcos.ca.us/Modules/ShowDocument.aspx?documentid=2556

- Grading shall be minimized and buildings and roadways shall conform to blend with landforms to the extent possible.
- Jute-type matting or other fibrous covers shall be placed on graded cut slopes, where needed, to help allow for the establishment of plant cover.
- The developer shall provide temporary construction fencing between development areas, natural open space areas, and sensitive plant areas prior to the grading and construction phases of the project to delineate the limits of construction onsite and protect sensitive open space.
- Enhanced landscaping shall be incorporated along lots adjacent to Las Posas Road.
- Variation and undulation of slopes to create natural character shall predominate.
- Final Grading Plan shall be peer reviewed by a City's consultant at the cost of the developer. If peer review requires changes, the revised design shall incorporate these changes.

Air Quality

- The project shall implement dust control measures. These measures include watering of active grading sites and unpaved roads a minimum of twice daily, replacement of ground cover as quickly as possible, reducing speeds on unpaved roads/surfaces to 15 miles per hour or less, and reducing dust during unloading and loading operations.
- Low-VOC coatings shall be used for all buildings, as required under SDAPCD Rule 67.0.
- All construction equipment shall be maintained in proper tune to ensure equipment efficiency.
- All diesel-fueled construction vehicles shall be required to meet the latest emissions standards.

Biological Resources

All backyards shall be fenced and back yards that are adjacent to the habitat linkage shall be constructed with habitat fencing as required by the approved HMMP.

The project applicant shall be required to comply with all conditions identified in the regulatory permits issued for the project:

- United States Army Corps of Engineers Department of the Army Permit. SPL-2001-00479
- California Regional Water Quality Control Board. Tentative Clean Water Section 401 Water Quality Certification and Waiver of Waste Discharge Requirements for Discharged or Dredged and/or Fill Materials (File no. 02C-144)
- California Department of Fish and Wildlife Streambed Alteration Agreement #1600-2015-0122-R5.

The project applicant shall be required to comply with all conditions identified in the Biological Opinion (April 8, 2005) and amendment to the Biological Opinion (December 7, 2005) issued for the project (FWS Log No. 1-6-05-1668-R1).

The project applicant shall implement the Habitat Mitigation and Monitoring Plan prepared for the project. The Final HMMP would be reviewed and approved by USFWS, CDFW and USACE.

Geology and Soils

- The project would implement all recommendations from the Update Geotechnical Investigation (GEOCON 2013). These recommendations include general provisions related to the site as well as specific recommendations related to soil and excavation, grading, subdrains, slopes, terrace drains, seismic design criteria, foundation and concrete slab-on-grade, retaining walls, lateral loads, slope maintenance, bioretention and bio-swales, and site drainage and moisture protection. The complete report is included as Appendix G of this document.
- Future development on the project site would be subject to the requirements of the Uniform Building Code (UBC) for Zone 4 for resistance to seismic shaking. The proposed project would

be constructed in accordance with other UBC criteria, current seismic design specifications of the Structural Engineers Association of California, other applicable regulations, and all applicable requirements of the State of California Occupational Safety and Health Administration (Cal/OSHA). • All manufactured slopes shall be planted in compliance with a slopes planting plan approved by the Director of Planning with plant materials that stabilize the slopes and minimize erosion. • Installation of temporary erosion-control devices in conjunction with grading activities. Such devices shall conform to related San Marcos standards. • The developer shall ensure stability and growth on all manufactured slopes for a period of two years and until maintenance is assumed by the City via Community Facilities District No. 98-02 (Lighting, Landscape, Open Space and Preserve Maintenance). HOA slopes shall be maintained by the HOA in perpetuity.
Greenhouse Gases • The project will provide solar panels on the rooftops of homes to reduce electricity energy demand for the project by 88 percent. As a condition of project approval, a minimum of 167 homes will be required to incorporate photovoltaic solar panels.
Hazards and Hazardous Materials • Due to its location within Review Area 2, the project will record overflight notification documents as outlined in the McClellan-Palomar Airport Land Use Compatibility Plan and Chapter 20.265 of the City's Municipal Code, notifying residents of potential annoyances commonly associated with proximity to airports, such as noise, vibration, and overflights. • The project will be required to prepare and provide a Construction Staging/Site Phasing Plan for approval by the San Marcos Fire Department prior to permit issuance. • A lighted directory sign and map meeting requirements of the San Marcos Fire Department and as specified in the FPP shall be installed at each of the three entry points to private roads off of Las Posas Road. • To comply with NFPA 24 standards, all fire hydrants shall be painted yellow and the top cap of each fire hydrant shall be painted green. New fire hydrants that are private shall have a red band painted around the base of the hydrant as per San Marcos Fire Department requirements and VID/VWD. • The project shall adhere to all requirements related to construction activities and fire safety as provided in Chapter 33 of the 2013 California Fire Code (California Code of Regulations, Title 24, Part 9) and Section 3318.1 of the 2014 County of San Diego Consolidated Fire Code (San Diego County Code, Title 9, Division 6, Chapter 1).
Hydrology/Water Quality • Implementation of the Water Quality Improvement Plans prepared for the project. • Implementation of construction BMPs in compliance with the General Construction Permit. These BMPs include, but are not limited to: good site management/housekeeping, non-stormwater management, erosion control, sediment control, run-on and run-off control, inspection/maintenance/ repair, rain event action plan, and monitoring/reporting requirements. • Implementation of source control BMPs including, but not limited to: marking all inlets with the words "no dumping", minimizing the use of irrigation and pesticides, and regular sweeping of sidewalks, parking lots and roads.

Noise and Vibration

- All construction equipment shall be properly fitted with mufflers.
- All staging and maintenance shall be conducted as far away from the existing residences as possible.
- Grading, extraction, and construction activities shall be limited to between the hours of 7:00 AM and 4:30 PM, Monday through Friday. No grading, extraction, or construction is allowed on the weekends or holidays. Rock crusher activity shall be limited to between the hours of 9:00 AM and 4:00 PM.
- The project shall comply with blasting provisions identified in the City's Municipal Code Section 17.60.060, including:
    - The general contractor or property owner/developer shall give reasonable notice in writing at the time of issuance of a building permit, grading permit or encroachment license to all residences or businesses within 600 feet of any potential blast location. The notice shall be in a form approved by the Building Director. Any resident or business receiving such notice may request of the Building Director that a notice of impending blasting be given by the blaster at the time of the 12 hour advance notice given to the Building Director. The general contractor or property owner/developer shall make all reasonable efforts to contact any and all parties requesting the second notice.
    - The blaster shall file a written certification with the Building Director certifying that the general notice required by Section 17.60.060(b) has been given. The certificate shall include addresses and date(s) of notification. A copy shall be retained on file at the Building Division.
    - Inspections of all structures within 300 feet of the blast site shall be made before blasting operations. The persons inspecting shall obtain the permission of the building owner to conduct an inspection. The inspections shall be done by a registered structural engineer employed by the blaster or project contractor. The inspection shall be only for the purpose of determining the existence of any visible or reasonably recognizable pre-existing defects or damages in any structure. Inspection refusal shall be at the discretion of the property owner.
    - Blasting shall only be permitted between the hours of 9:00 AM and 4:00 PM during any weekday, Monday through Friday, exclusive of City recognized holidays unless special circumstances warrant another time or day and special approval is granted by the Building Director and Fire Chief.
- As the project area is located within the McClellan-Palomar Airport Overflight Notification Area, all new residents at the project site would be notified that their property may be subject to aircraft overflight noise.

Utilities and Services Systems

- The project applicant shall pay the Vista Irrigation District Capacity Fee.
- The project applicant shall pay the San Diego County Water Authority Capacity Charge.
- The project shall annex into Vallecitos Water District for the Water and Sewer Service in accordance with Ordinance No. 153 and comply with any and all terms and condition that may be required when considered by the District Board of Directors prior to service being provided.
- The project applicant shall pay Water Capital Facility Fees per Vallecitos Water District Ordinance No. 175.
- The project applicant shall pay Wastewater Capital Facility Fees per Vallecitos Water District Ordinance No. 176.
- The project shall construct and accept all on-site water and sewer facilities identified in VWD's San Marcos Highlands Water and Sewer Study (April, 2015) prior to service being provided in accordance with all rules and regulations in affect at the time service is provided.

- The project shall construct wastewater collection facilities shown in Figure 5 of the VWD Water Sewer Study (EIR Appendix P1) required to provide service to the proposed project.
- Construction of the water distribution facilities shown in Figure 3 of the VWD Water Sewer Study (EIR Appendix P1) to provides service to the project, including a 12-inch looped water system with connections at Las Posas Road and Ardilla Way, or as approved by the water district.
- Provide an inter-agency water connection on Las Posas Road between the Vallecitos Water District and the Vista Irrigation District system.

State Clearinghouse No. 1999071007

Final Environmental Impact Report

VOLUME II

San Marcos Highlands Specific Plan

P13-0009
(EIR-15-001, SP 13-001, TSM 13-001, CUP 13-010, ROZ 14-001, PZ 14-001, GPA 15-002)

City of San Marcos
Development Services Department
1 Civic Center Drive
San Marcos, CA 92069

Contact: Norman Pedersen
(760) 744-1050
PlanningDivision@san-marcos.net

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Abbreviations/Acronyms

AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing materials
ADT	average daily trip
AFY	Acre feet per year
AHWMP	Agua Hedionda Watershed Management Plan
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AMSL	Above mean sea level
APCD	Air Pollution Control District
APN	Assessor's Parcel Number
AQIA	Air Quality Impact Assessment
BMP	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal/OSHA	State of California Occupational Safety and Health Administration
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CC&R	covenants, conditions, and restrictions
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CH_4	methane
CHRIS	California Historical Resources Information System
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2e	CO_2 equivalent
COPPS	Community Oriented Police and Problem Solving
CRHR	California Register of Historic Resources
CSC	California Species of Concern
CSS	coastal sage scrub
CSUSM	California State University San Marcos
CUP	Conditional Use Permit
CUWCC	California Urban Water Conservation Council
CWA	Clean Water Act

CWPP	Community Wildfire Protection Plan
cy	cubic yards
dB	decibel
dBA	A-weighted decibel
DEIR	Draft Environmental Impact Report
DTSC	Department of Toxic Substances Control
du	dwelling unit
dus/acre	dwelling units/acres
EDCO	EDCO Waste and Recycling
EDR	Environmental Data Resources, Inc.
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Endangered Species Act
EWPCF	Encina Water Pollution Control Facilities
FDPO	Flood Damage Prevention Overlay
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPAs	Focused Planning Areas
FPP	Fire Protection Plan
FTA	Federal Transit Administration
GHG	Greenhouse gas
gpd	gallons per day
gpm	gallons per minute
HAPs	hazardous air pollutants
HFC	hydrofluorocarbons
HIST UST	Historical Underground Storage Tank Registered Database
HMMP	Habitat Mitigation and Monitoring Plan
HOA	Home Owner's Association
HOV	high-occupancy vehicle
HRA	Hazard Risk Assessment
ISO	Insurance Service Office
in/sec	inch per second
ITS	Institute of Transportation Studies
LAFCO	Local Agency Formation Commission
LBP	lead-based paint
Leq	equivalent sound level
LID	low impact development
LOS	Level of service
MBTA	Migratory Bird Treaty Act
MG	million gallon
mg/m^3	milligrams per cubic meter
MGD	million gallons per day
MHCP	Multiple Habitat Conservation Plan
MMT	million metric tons

$MMTCO_2e$	million metric tons of CO_2 equivalent
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
MSCP	Multiple Species Conservation Program
MS4s	separate storm sewer systems
MWD	Metropolitan Water District
N_2	nitrogen
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Planning
NCMSCP	North County Multiple Species Conservation Program
NEPA	National Environmental Policy Act
NEVs	neighborhood electric vehicles
NHPA	National Historic Preservation Act
NO	nitric oxide
NO_x	nitrogen oxides
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OPR	Office of Planning and Research
PAMA	Pre-Approved Mitigation Area
Pb	lead
PFCs	perfluorocarbons
$PM_{2.5}$	fine particulate matter
PM_{10}	respirable particulate matter
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
RAQS	Regional Air Quality Strategies
RECs	recognized environmental conditions
ROW	right-of-way
ROZ	Ridgeline Overlay Zone
RTP	Regional Transportation Plan
RUWMP	Regional Urban Water Management Plan
RWQCB	Regional Water Quality Control Board
s.f.	square feet
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCIC	South Coastal Information Center
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDCGHGI	San Diego County Greenhouse Gas Inventory

SDCWA	San Diego County Water Authority
SEIR	Supplemental EIR
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Office
SIP	State Implementation Plans
SLF	Sacred Lands File
SMFD	San Marcos Fire Department
SMFPD	San Marcos Fire Protection District
SMUSD	San Marcos Unified School District
SO_2	sulfur dioxide
SOV	single-occupancy vehicle
SP	Specific Plan
SPA	Specific Plan Area
SR-78	State Route 78
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
TACs	toxic air contaminants
TC	time of concentration
TM	Tentative Map
TMDL	total maximum daily load
TSM	Tentative Subdivision Map
UBC	Uniform Building Code
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USTs	underground storage tanks
UWMP	Urban Water Management Plan
v/c	volume-to-capacity
VdB	Vibration Velocity
VFPD	Vista Fire Protection District
VID	Vista Irrigation District
VOCs	volatile organic compounds
VUSD	Vista Unified School District
VWD	Vallecitos Water District
WQIP	Water Quality Improvement Plan
WUI	Wildland urban interface
µg/m3	micrograms per cubic meter

1.0 SUMMARY

1.1 PROJECT SYNOPSIS

The San Marcos Highlands project (proposed project) is a single-family residential development located at the northern terminus of Las Posas Road in the City of San Marcos in north-central San Diego County. The project site is bounded by the existing Santa Fe Hills neighborhood to the south, rural residential in the County of San Diego to the north and west, and undeveloped hillsides to the east.

The project boundary is 293.3 acres. This includes ~~262.14~~ 265.8 acres within the Specific Plan, plus an additional ~~26.47~~22.8 acres outside of the Specific Plan that would serve as a mitigation area for habitat impacts. Also included in the overall project boundary is a 4.7-acre area dedicated as an off-site habitat linkage easement.

The project site is currently within the City of San Marcos (141.14 acres) and the unincorporated County of San Diego (152.16 acres). Approximately ~~121~~ 124.69 acres are within the City's Sphere of Influence. A reorganization to annex these 124.69 acres into the City from the unincorporated County is proposed as part of the project. ~~The additional 3.69 acres would be subject to a boundary adjustment to correct a previous mapping error and to align the City's adopted Sphere of Influence with the proposed annexation area.~~

The proposed project consists of 189 clustered single-family residential lots with a minimum lot size of 5,000 feet within a development area of 50.04 acres (including roads). Planning Area One represents all the development area west of Las Posas Road and would have 109 residential lots on ~~25.63~~ 20.27 acres. Planning Area Two covers the area east of Las Posas Road and would provide 80 residential lots on 24.41 acres. ~~Additionally the project includes two open space lots.~~ A total of 210.8 acres of the project would be placed in a biological conservation easement. When the acreage of fuel modification areas, park, manufactured exterior slopes and water quality lots are added to the biological conservation easement areas, the project provides a total of 243.23 acres of open space.

The project consists of a General Plan Amendment (GPA 15-002), Specific Plan Amendment (SP 13-001), Tentative Subdivision Map (TSM 13-001), Conditional Use Permit (CUP 13-010), and a Ridgeline Development Permit (ROZ 14-001). A pre-zone from County Zoning (A-70) to Specific Plan Area (SPA) would be required for a 9.7-acre portion of the project site currently in the County of San Diego (PZ 14-001).

Approval from the County of San Diego would be required for a boundary adjustment. Local Agency Formation Commission (LAFCO) approval would be required for reorganization to annex a portion of the project site into the City of San Marcos from the unincorporated County. Reorganization of water district boundaries would also be required and require approval by the Vallecitos Water District, Vista Irrigation District and LAFCO. A sewer service boundary adjustment is also proposed for VWD. Additionally, school boundary adjustments may be required by the San Marcos Unified School District and the Vista Unified School District. Graphics are presented in Chapter 2, which details the proposed reorganizations and discretionary actions.

1.2 SUMMARY OF SIGNIFICANT EFFECTS AND MITIGATION MEASURES THAT REDUCE OR AVOID THE SIGNIFICANT EFFECT

Table 1-1, Summary of Significant Effects, located at the end of this chapter, provides a summary of significant environmental impacts resulting from the project and mitigation measures that are required to reduce and/or avoid the environmental effects. Conclusions are provided stating whether or not the impact would be mitigated to below a level of significance. All project impacts are either not significant or are mitigated to below a level of significance. Detailed analyses of significant environmental effects and mitigation are provided in Chapter 3.0 of this EIR.

In addition to mitigation measures, regulatory standards for grading, construction, and environmental protection have been incorporated into the project design to reduce adverse environmental effects. These include, but are not limited to, grading design and landscaping techniques, erosion controls, dust and noise management during grading and the control of runoff, implementation of a fire protection plan for future residences, and all conditions identified during the biological regulatory permitting process. Mitigation measures and design considerations are included in Table 2-2 at the end of the Chapter 2. These mitigation measures will reduce impacts related to aesthetics, biological resources, cultural resources, geology/soils, hazards/hazardous materials, hydrology/water quality, noise, public services, transportation/traffic and utilities to below a level of significance.

1.3 AREAS OF CONTROVERSY

A Notice of Preparation (NOP) was distributed on August 15, 20142015 for a 30-day public review and comment period. Additionally, a public information meeting was held on August 28, 20142015.

Public comments were received on the NOP for this EIR and reflect concern or controversy over a number of environmental issues (refer to Appendix B.1 for the NOP and Appendix B.2 for the NOP comment letters). A total of 15 letters were received, as listed below:

- United States Fish and Wildlife Service
- California Department of Fish and Wildlife
- Native American Heritage Commission
- County of San Diego
- Pechanga Cultural Resources
- San Luis Rey Band
- San Diego County Local Agency Formation Commission (LAFCO)
- Vallecitos Water District
- San Diego Archaeological Society
- Mary H. Clarke
- B. Cohen
- Carlos Covarrubias
- Sandra Farrell
- S. Lorenz
- Kevin Mecum

Issues and concerns raised in the NOP comment letters include the following:

- Overall project design
- Community character
- Project consistency with Ridgeline Protection and Management Overlay Zone
- Dust and noise associated with proposed rock crusher(s)
- Construction-related odors
- Need for updated biology surveys
- Habitat and species impacts
- Project consistency with draft North County Multiple Species Conservation Program and Multiple Habitat Conservation Program
- Habitat linkage width and size of proposed culverts
- Archaeological monitoring and treatment of any remains if found onsite
- Expansive soils
- Greenhouse gas emissions
- Conversion of pond
- Hydrology, drainage and site runoff
- Consistency with City and County General Plans
- Noise from construction, crushing and blasting
- School capacity
- Increased demand on park and recreation facilities
- Traffic increases (project and cumulative)
- Timing of traffic counts
- Pedestrian safety
- Emergency access, ingress and egress
- Wildfire risk and responsibility for fuel management buffer maintenance
- Maintenance of existing Vallecitos Water District easement
- Wastewater outfall capacity
- Water supply and drought
- Increased radiation if wireless or cell phone antennas are proposed
- Range of alternatives
- Cumulative projects

Relevant environmental issues raised within the letters are evaluated in Section 3.0 of this EIR.

1.4 ISSUES TO BE RESOLVED BY THE DECISION MAKING BODY

An EIR is an informational document intended to inform the public agency decision makers and the public of the significant effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

The lead agency must respond to each significant effect identified in the EIR by making "Findings" for each significant effect. The issues to be resolved for the project include whether or how to mitigate the associated significant effects, including whether to implement a project alternative, the determination of which is to be made by the decision makers.

Issues to be resolved that are directly related to the proposed project include the choice among the alternatives and whether or how to mitigate the significant effects. In particular, the decision makers must decide if the significant impact associated with aesthetics, biological resources, cultural resources, geology/soils, hazards/hazardous materials, hydrology/water quality, noise, public services, recreation, transportation/traffic, and utilities/service systems have been mitigated to less than significant. In addition, the decision makers must determine whether any of the project alternatives would substantially reduce significant effects while still meeting key objectives of the project.

1.5 PROJECT ALTERNATIVES

Four alternatives are proposed to provide an understanding of how environmental effects could be reduced by varying the design and scope of the project. Table 1-2 provides a comparison of project alternative impacts to significant proposed project impacts.

1.5.1 No Project/No Development Alternative

The No Project/No Development Alternative is addressed in Section 4.3.3. Under the No Project/No Development Alternative, the San Marcos Highlands Specific Plan would not be implemented and the project site would remain undeveloped. The project site is currently vacant and supports upland habitat types including Diegan coastal sage scrub. There is also limited riparian habitat associated with the headwaters of Agua Hedionda Creek. Informal private trails are located on the site. On the western portion of the site is an easement for the San Diego Aqueduct. The topography of the project site can be characterized by hilly terrain traversed by a northeast-southwest trending drainage corridor. Elevations range from approximately 600 to 1,300 feet above mean sea level. Under this alternative, the full extension of Las Posas Road to Buena Creek could still occur, consistent with the Mobility Elements of the City of San Marcos and County of San Diego General Plans.

Since the No Project/No Development Alternative would not develop any homes on the project site, impacts would be less than with the proposed project or completely eliminated. There are some benefits of the project that would not be realized under the No Project/No Development Alternative, including the implementation of a Fire Protection Plan to reduce and/or manage fire fuel loads, the construction of an alternative emergency exit for residents to the north, restoration and enhancement of 7.0 acres of wetlands, and the long-term preservation of 210.80 acres of habitat in perpetuity in a biological conservation easement.

1.5.2 No Project/Existing Specific Plan Alternative

The No Project/Existing Specific Plan Alternative is addressed in Section 4.3.4. Under the No Project/Existing Specific Plan Alternative, the project site would be developed per the currently adopted Specific Plan which allows for a 202.9-acre project with 138 acres of preserved open space and 230 residential units. This is an approximately 22 percent increase in the number of units compared to what is proposed by the project. This alternative would generate 2,408 trips per day compared to 1,998 trips per day identified for the project.

The currently adopted Specific Plan estimated approximately 800,000 cubic yards of earthwork would be required and that grading would occur on approximately 60 acres of the project site. The proposed project would handle approximately 655,000 cubic yards of earthwork and grading is proposed on approximately 55 acres of the site. Grading under the No Project/Existing Specific Plan Alternative represents a 22 percent increase in the amount of grading quantities and an 8 percent larger grading footprint as compared to the proposed project. Under this alternative, the full extension of Las Posas Road to Buena Creek could still occur, consistent with the Mobility Elements of the City of San Marcos and County of San Diego General Plans.

Compared to the proposed project, the No Project/Existing Specific Plan Alternative would result in greater impacts related to operational emissions, including traffic generation, noise, air and GHG emissions. This alternative would also result in an increase in demand for public services and utilities. This is due to the development of 230 homes and the associated impacts that would go with an increased development intensity. Compared to the proposed project, this alternative would afford the long-term protection of sensitive habitats through a conservation easement over less acreage (138 acres vs. 210.8 acres), and would result in a greater level of impact to biological resources overall.

1.5.3 County Zoning Alternative

The County Zoning Alternative is addressed in Section 4.3.5. The County Zoning Alternative was identified as a way to reduce development intensity in the portion of the project site that is in the unincorporated County. This alternative would split the development intensity on the project site. For the area of the project located in San Diego County, development would be consistent with the current Semi-Rural 10 (SR-10) General Plan designation and A70 zoning, which is one home per 10 acres. There are nine legal lots on the project site that fall within the unincorporated County. Due to the parcel configuration for some of the County parcels (e.g., long and narrow) it may be difficult to find a home site location. For the portion within the City, there is an adopted Specific Plan allowing for development of 230 homes on 202.9 acres (average density of one home per 0.88 acre). Applying the same density to the 141.14 acres in the City jurisdiction, up to 124 homes could be developed in the City. The actual yield could be less once required preserve areas and constraints associated with the City's ROZ ~~topographical constraints~~ are considered. For this analysis it is assumed that all 124 units would be developed in the City. When added to the maximum of nine units in the County, this represents 133 units, a reduction of approximately 29 percent compared to the project. This alternative would generate 1,438 daily trips per day compared to the 1,998 trips anticipated for the project (29 percent reduction).

Under the County Zoning Alternative it is assumed that the project applicant would reapply for new permits from the regulatory agencies and develop a new Habitat Mitigation and Monitoring Plan (HMMP) that reflects proposed impacts under this alternative. Mitigation ratios consistent with the Multiple Habitat Conservation Program (e.g., 2:1 for impacts to coastal sage scrub and 3:1 for wetlands/riparian impacts) would be applicable to this alternative. Under this alternative, the full extension of Las Posas Road to Buena Creek could still occur, consistent with the Mobility Elements of the City of San Marcos and County of San Diego General Plans.

The County Zoning Alternative would decrease the number of residential lots from 189 to 133, a 29 percent reduction. This results in a corresponding decrease in operational-related impacts, including trip generation, vehicular emissions and noise, and the need for public services and utilities. This alternative could be more impactive from an aesthetics and biological resources perspective due to the allowance of patchwork and/or fragmented habitat clearing that would be

allowed on the lots in the unincorporated County. Additionally, this alternative would mitigate coastal sage scrub impacts at a 2:1 ratio compared to the 2.4:1 ratio that will be used by the project. This alternative ~~and~~ would not implement the HMMP that is proposed for the project~~.~~, thus the 7.0 acres of riparian habitat creation and restoration along Agua Hedionda Creek would not be realized. This results in less restoration and preservation compared to the proposed project.

1.5.4 Reduced Project Alternative

The Reduced Project Alternative is addressed in Section 4.3.6. The Reduced Project Alternative was identified as a way to reduce the overall development footprint of the project and to reduce the number of proposed residential units. Under the Reduced Project Alternative, proposed ~~development~~ density on the knoll on the eastern portion of the project site would be reduced. Approximately 26 lots would be removed under this alternative, including all the lots on the Street "F" cul-de-sac as well as some lots along Street "A". Under this alternative, Street "A" would terminate in a cul-de-sac. This alternative would allow for the development of 163 lots, a 13 percent reduction compared to the proposed project. This alternative would generate 1,738 daily trips compared to the 1,998 daily trips anticipated for the project (13 percent reduction).

Under this alternative it is assumed that the project applicant would reapply for new permits from the regulatory agencies and develop a new HMMP that reflects proposed impacts under this alternative. Mitigation ratios consistent with the MHCP (e.g., 2:1 for impacts to coastal sage scrub and 3:1 for wetlands/riparian impacts) would be applicable to this alternative. Under this alternative, the full extension of Las Posas Road to Buena Creek could still occur, consistent with the Mobility Elements of the City of San Marcos and County of San Diego General Plans.

This alternative would decrease the number of residential lots from 189 to 163, a 13 percent reduction. This results in a corresponding decrease in operational-related impacts, including trip generation, vehicular emissions and noise, and the need for public services and utilities. This alternative would require more grading than the project and would result in a higher cut slope, which could result in more aesthetic impacts and construction-related noise, air quality and greenhouse gas impacts. Additionally, this alternative would mitigate coastal sage scrub impacts at a 2:1 ratio compared to the 2.4:1 ratio that will be used by the project. This alternative would not implement the HMMP that is proposed for the project thus the 7.0 acres of riparian habitat creation and restoration along Agua Hedionda Creek would not be realized. This results in less restoration and preservation compared to the proposed project.

1.5.5 Increased Habitat Linkage Alternative

The Increased Habitat Linkage Alternative is addressed in Section 4.3.7. Under the Increased Habitat Linkage Alternative, the last row of lots along the northern portion of the project would be removed to allow for a wider habitat linkage along the northern project boundary. Under this alternative, the northern habitat linkage on the project site would increase to a minimum of 500 feet. Specifically, this alternative would remove lots 22-30 along Street "A, lots 92-109 along Street "D", and Park "A". A total of 162 residences would be constructed under this alternative. This represents a 14 percent reduction compared to the proposed project. This alternative would generate 1,728 daily trips compared to the 1,998 daily trips anticipated for the project (14 percent reduction).

Under this alternative, it is assumed that the project applicant would reapply for new permits from the regulatory agencies and develop a new HMMP that reflects proposed impacts under this alternative. Mitigation ratios consistent with the MHCP (e.g., 2:1 for impacts to coastal sage scrub

and 3:1 for wetlands/riparian impacts) would be applicable to this alternative. Under this alternative, the full extension of Las Posas Road to Buena Creek could still occur, consistent with the City of San Marcos and County of San Diego General Plans, Mobility Elements.

This alternative would decrease the number of residential lots from 189 to 162, a 14 percent reduction. This results in a corresponding decrease in operational-related impacts, including trip generation, vehicular emissions and noise, and the need for public services and utilities. This results in a corresponding decrease in construction related emissions and noise. Similar earthwork quantities as those identified for the proposed project are also expected for this alternative, however the grading would not balance onsite and export of approximately 64,000 cubic yards of materials would be required. Construction related air emissions, GHG emissions and noise generation would be greater under this alternative. This alternative would increase the width of the habitat linkage along the northern project boundary to provide more area for wildlife to move between the project site and offsite habitat areas. The biological resources analysis for the proposed project noted that the project site is highly fragmented as is the surrounding habitat and that there are limited opportunities for dispersal of large mammals. However, this alternative would not implement the HMMP identified for the project and would mitigate impacts to biological resources at a 2:1 ratio for uplands and a 3:1 ratio of wetlands. This alternative would also eliminate Park "A". Compared to the project, this alternative decreases impacts in some environmental areas and increases impacts in others.

1.5.6 Environmentally Superior Alternative

Table 1-2 provides a qualitative comparison of the impacts for each alternative compared to the proposed project. As shown, the No Project/No Development Alternative would eliminate all of the significant impacts identified for the project; however, the No Project/No Development Alternative would not meet any of the project objectives. CEQA Guidelines Section 15126.6(e)(2) states that if the No Project Alternative is identified as the environmentally superior alternative, then an environmentally superior alternative should be identified among the other alternatives.

Among the other alternatives, not including the proposed project, the Reduced Project Alternative is the environmentally superior alternative because it would incrementally lessen some of the project's ~~significant~~ impacts, including impacts related to construction and operational air and greenhouse gas emissions, construction and operational noise, traffic, and demands for public services and utilities. This alternative would also reduce the direct impacts to coastal sage scrub. Additionally, this alternative would mitigate coastal sage scrub impacts at a 2:1 ratio but not implement the HMMP that is proposed for the project. This results in less restoration and preservation compared to the proposed project. However, this alternative would result in a more visually-impactive project, since it would create an approximate 85-foot cut slope.

Table 1-1. Summary of Project Impacts and Mitigation Measures

Impact	Mitigation Measure	Conclusions
Aesthetics		
VIS-1 Depending on the final location, the construction of a groundwater storage tank may result in a significant visual impact.	**MM-VIS-1** If a groundwater storage tank is installed, placement of the tank shall consider the existing visual setting to ensure the tank does not impede any scenic vistas or significantly modify the visual character of the project site. Screening strategies shall be used to minimize the appearance of the storage tank. Such strategies include, but are not limited to: placing the tank on lower lying land, landscaping, berms, and/or vegetation and painting the tank a neutral color to blend with the tank's surroundings. The plans for the storage tank shall be approved by the Planning Division Manager and City Engineer ~~Director~~ prior to issuance of a grading permit.	MM VIS-1 requires appropriate siting and screening measures to ensure the tank does not impede views of any scenic resources on or surrounding the project site. The storage tanks plans would also be subject to review and approval by the Planning Division Manager and City Engineer. ~~Director.~~ Potential visual impacts due to installation of a groundwater storage tank would be mitigated through implementation of MM-VIS-1.
Biological Resources		
BIO-1 The project has the potential to directly impact California gnatcatcher due to loss of 77.36 acres of coastal sage scrub habitat.	**MM-BIO-1a** Prior to project grading, the project applicant shall conduct USFWS presence/absence protocol coastal California gnatcatcher surveys. The surveys shall be conducted within the 12-month period prior to project grading. Pursuant to the Biological Opinion issued by the USFWS, results of the surveys shall be submitted to the USACE, Wildlife Agencies and the City of San Marcos Planning Division Manager.~~Director~~. If coastal California gnatcatchers are found to be nesting within the area to be disturbed mitigation measures MM-BIO-1b and MM-BIO-1c shall also be implemented. **MM-BIO-1b** If the preconstruction survey identified nesting gnatcatchers on the project site, clearing and grubbing activity would cease within 300 feet of the nest until such time as the nest is no longer active. **MM-BIO-1c** To reduce potential noise impacts to nesting gnatcatchers, a qualified acoustician would monitor the project site and vicinity for listed birds during initial grading, and on a monthly basis thereafter to determine if any nests are within a distance potentially affected by noise from grading, clearing, or construction activities. If nesting birds are located adjacent to the project site with the potential to be affected by construction activity noise above	Mitigation measures BIO-MM-1a through MM-BIO-1c require protocol preconstruction surveys prior to project grading. Should nesting gnatcatchers be found during these surveys, buffering and avoidance measures would be implemented to avoid impacts to the gnatcatchers. Implementation of MM-BIO-1a through MM-BIO-1c would reduce this impact to below a level of significance.

Impact	Mitigation Measure	Conclusions
	60 dBA Leq, a noise barrier would be erected. This noise barrier would consist of a l0-foot-high continuous plywood fence supported by posts or an earthen berm located at the site boundary that abuts potential off-site habitat. If 60 dBA Leq is exceeded the acoustician would require the construction contractor to make operational and barrier changes to reduce noise levels to 60 dBA during the breeding season (~~January 15~~February 15 through September 15). Noise monitoring would occur during operational changes and installation of barriers, as needed, to ensure their effectiveness. **MM-BIO-1d** A Wildlife-Agency approved biological monitor shall be present during initial clearing, grading, and construction in sensitive habitat areas and/or in the vicinity of biological open space areas to ensure that conservation measures associated with resource agency permits and construction documents are performed. The biological monitor shall have the authority to halt construction to prevent or avoid take of any listed species and/or to ensure compliance with all avoidance, minimization, and mitigation measures. Any unauthorized impacts or actions in non-compliance with the permits and construction documents shall be immediately brought to the attention of the City, USACE, and the Wildlife Agencies.	
BIO-2 Potential to impact avian species protected under the Migratory Bird Treaty Act if tree removal, vegetation removal, or other construction activities occur during the nesting season.	**MM-BIO-2** If construction is proposed during the breeding season (~~January 15~~February 15 through September 15), a pre-construction survey shall be performed by a qualified biologist to determine if any birds are nesting within or immediately adjacent to the impact area. The survey must be conducted no more than three days prior to commencing project activities. If surveys show that nesting birds are present, a no-work buffer would be placed around the nest. The buffer size would be determined by a qualified biologist and would vary based on site conditions and type of work to be conducted. The no-work buffer would be maintained until the end of the breeding season or until surveys by a qualified biologist confirm that fledglings are no longer dependent on nest. If no nesting birds are detected during pre-construction surveys, no restrictions would be necessary and construction may proceed as planned.	Mitigation measure MM-BIO-2 requires a preconstruction survey if construction is proposed during the nesting season. If nesting birds are found, avoidance measures would be implemented to minimize impacts. Implementation of mitigation measure MM-BIO-2 would reduce this impact to below a level of significance.

Impact	Mitigation Measure	Conclusions
BIO-3 Potential for indirect impacts to sensitive wildlife species during project construction.	**MM-BIO-3a** The applicant shall designate a USFWS-approved qualified biologist who would be responsible for overseeing compliance with protective measures (e.g., buffers, noise mitigation) for the listed species during construction, including site clearing and grubbing. The biologist would have the authority to halt all associated project activities, which may be in violation of the USFWS Biological Opinion issued for the project. In such an event, the biologist is required to contact the City of San Marcos, USACE and USFWS within 24 hours. **MM-BIO-3b** An employee education program for the construction crew shall be developed and implemented by a qualified biologist. Each employee (including temporary, contractors, and subcontractors) would receive a training/awareness program within two weeks of working on the proposed project. They would be advised of the potential impact to the listed species and the potential penalties for taking such species. At a minimum, the program shall include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area environs. **MM-BIO-3c** Construction work areas shall be delineated and marked clearly, by flagging or temporary orange construction fencing, in the field prior to habitat removal, and the marked boundaries maintained and clearly visible to personnel on foot and by heavy equipment operators. Fencing shall be placed on the impact side to reduce the potential for additional vegetation loss within open space. Fencing placement shall be done by a qualified biologist. All temporary fencing shall be removed only after the conclusion of all grading, clearing, and construction. Employees shall strictly limit their activities and vehicles to the proposed project areas, staging areas, and routes of travel. The project proponent and/or the biological monitor shall contact the City of San Marcos, USACE and USFWS to verify that the limits of construction have been properly staked and are readily identifiable. Intrusion by unauthorized	Mitigation measures MM-BIO-3a through MM-BIO-3e require education and training for construction workers as well as the requirement for good housekeeping on the construction site, with specific requirement related to the construction equipment staging and fueling. Implementation of mitigation measures MM-BIO-3a through MM-BIO-3e would reduce these impacts to below a level of significance.

Impact	Mitigation Measure	Conclusions
	vehicles into the riverbed and outside of construction limits shall be prohibited, with control exercised by an on-site foreman. Access routes to the construction area outside of work hours shall be blocked with physical barriers, such as concrete blocks or large equipment. **MM-BIO-3d** The work area shall be kept clean to avoid attracting predators. All food and trash shall be disposed of in closed containers and removed from the project site. No pets shall be allowed on the construction site. **MM-BIO-3e** All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities shall occur in designated upland areas outside of the proposed preserve. The designated upland areas shall be located in such a manner as to prevent any runoff from entering waters of the United States, including wetlands.	
BIO-4 Potential for indirect impacts to sensitive wildlife species during project operation.	**MM-BIO-4a** The applicant would require the Home Owner's Association to implement covenants, conditions, and restrictions (CC&Rs) to regulate property usage, including maintenance of on-site restored habitats, indoor cat policy, and protection of adjacent natural areas of the on-site preserve and the Creek. The applicant would incorporate landscape management practices into the CC&Rs that minimize the use of chemical fertilizers, pesticides, and herbicides. Maintenance of on-site restored habitats and protection of adjacent natural areas of the on-site preserve and the Creek shall be overseen by a conservancy or similar entity with approval by the permitting regulatory agencies. The CC&Rs shall be reviewed by the City Attorney prior to recordation. **MM-BIO-4b** Potential impacts from human and pet intrusion into the on-site open space shall be minimized through a program of education (using that developed by the American Society for the Prevention of Cruelty to Animals), cat control, and habitat fencing as required by the approved HMMP, ~~the inclusion of permanent cat-proof fences,~~ with no gates between the development and the open space, along the backyards of residential lots adjacent to the planned open space. These requirements would be identified in the CC&Rs. The CC&Rs shall be reviewed by the City Attorney prior to recordation.	Mitigation measures MM-BIO-4a through MM-BIO-4d identify an indoor cat policy, landscape management requirements, limits on the type of landscaping to be permitted on the project site, and the requirement of lighting to be directed away from habitat areas. These requirements would be enforced by the HOA via the CC&Rs for the project. Implementation of mitigation measures MM-BIO-4a through MM-BIO-4d would reduce this impact to below a level of significance.

Impact	Mitigation Measure	Conclusions
	MM-BIO-4c Use of invasive exotic plant species in landscaped areas adjacent to or near sensitive vegetation communities shall be restricted. The applicant shall encourage the use of native species in landscaping plans and would avoid the use of species listed in Lists A & B of the California Invasive Plant Council's list of Exotic Pest Plants of Greatest Ecological Concern in California. This condition shall be included in the CC&Rs for the project. The CC&Rs shall be reviewed by the City Attorney prior to recordation. **MM-BIO-4d** All night lighting within the proposed development area, including streets and backyards, shall be directed away from the habitat areas, including Agua Hedionda Creek, the stepping stone linkage along the project's northern boundary, and the preserved open space east of the development. This condition shall be included in the CC&Rs for the project and the HOA shall regulate this condition and would not allow any future additional lighting to be installed by private homeowners. The CC&Rs shall be reviewed by the City Attorney prior to recordation.	
BIO-5 The project impacts 77.36 acres of Diegan coastal sage scrub and 1.84 acres of baccharis dominated coastal sage scrub.	**MM-BIO-5a** The direct impact to 77.36 acres of CSS and 1.84 acres of baccharis dominated CSS shall be mitigated at a 2:1 ratio for a total of 158.34 acres. This shall be accomplished through the preservation of CSS within a biological conservation easement on the project site. **MM-BIO-5b** Graded slopes outside the fuel modification zone adjacent to natural open space areas shall be revegetated with CSS species (specifically, this includes the slope along the western side of the Las Posas Road extension adjacent to Agua Hedionda Creek). In addition, the off-site easement area would require removal of exotic species, seeding with native species, and/or spreading of CSS duff for preservation that would allow the project to maintain a minimum 500-foot wide habitat linkage along the northern project boundary with the exception of a 500 linear foot portion which may have a minimum width of 400 feet. **MM-BIO-5c** A ~~conceptual~~ monitoring/management plan(s) that is consistent with MHCP guidelines and that addresses both the habitat and the species shall be developed and implemented by the natural lands manager or biological consultant in coordination with the USACE, USFWS, and CDFW. The plan shall include management	Although the project is only required to mitigate for 158.34 acres for impacts to CSS and baccharis dominated coastal sage scrub, the project would preserve 185.83 acres of Diegan coastal sage scrub on the project site within a biological conservation easement. This represents a 2.4:1 mitigation ratio and exceeds the 2:1 mitigation ratio for CSS impacts as identified in the MHCP. The long-term preservation and management of this habitat would also provide protected habitat for the coastal California gnatcatcher. Implementation of mitigation measures MM-BIO-5a through MM-BIO-5d would reduce this impact to below a level of significance.

Impact	Mitigation Measure	Conclusions
	objectives to determine the distribution and abundance of plants and animals found within the on-site and off-site acquisition parcels and build a baseline database from this information. Management will include monitoring specific taxonomic groups to determine whether the project site is functioning naturally or if the biological diversity of the project site is being degraded or diminished. All threats will be monitored and managed appropriately. This plan will be implemented prior to, or concurrent with, the initiation of construction. **MM-BIO-5d** A five-year restoration and monitoring plan for the upland restoration area shall be developed and submitted to the USACE, CDFW, and USFWS for approval prior to any ground disturbance in the CSS habitat. The plan would include salvaging on-site plant materials prior to initial clearing and the storage of those materials may be used in the revegetation effort. The restoration/monitoring plan shall include specific replacement planting techniques, timing, success criteria, and an As-Built report.	
BIO-6 The project impacts 0.06 acres of herbaceous wetland due to implementation of the Habitat Mitigation and Monitoring Plan for the project.	See **MM-BIO-3a through MM-BIO-3e.** **MM-BIO-6a** The direct impact to 0.06 acres of herbaceous wetland would occur during implementation of the HMMP. This direct impact shall be mitigated at a 3:1 ratio for a total of 0.18 acres. This shall be accomplished through restoration, enhancement and/or creation of wetland habitat and placement of wetland habitat in a biological conservation easement. The wetland mitigation shall be performed in accordance with the draft HMMP for the project, as refined by USACE and the Wildlife Agencies through the permitting process. The HMMP also identifies the required management and success criteria for the proposed mitigation. **MM-BIO-6b** A five-year restoration and monitoring plan for the wetland restoration areas shall be developed and submitted to the USACE and USFWS for approval prior to any ground disturbance of wetland ~~in the CSS~~ habitat. The plan would include salvaging on-site plant materials (if appropriate) prior to initial clearing and the storage of those materials may be used in the revegetation effort. The restoration/monitoring plan shall include specific replacement planting techniques, timing, success criteria, and an As-Built report.	Implementation of mitigation measures MM-BIO-3a through MM-BIO-3e, described above, along with MM-BIO-6a and MM-BIO-6b require restoration, enhancement, and/or wetland creation and placement into a biological conservation easement to reduce impacts to wetland resources. This shall be accomplished through restoration, enhancement and/or creation of 7.0 acres of wetland habitat and placement of ~~4.2~~4.7 acres of the wetland habitat in a biological conservation easement even though MM-BIO-6a only requires mitigation of 0.18 acres. The five-year restoration and monitoring plan described in MM-BIO-6b will require approval by USACE and USFWS. Implementation of erosion control measures and best management practices compliant with conditions included in the 401 Water Quality Certification requirements of the RWQCB permit for the project are required per MM-BIO-10a through MM-BIO-10d. MM-BIO-3e and MM-BIO-10e, which ensure equipment

Impact	Mitigation Measure	Conclusions
		maintenance, staging, and fueling would be undertaken in designated areas, are also applicable to this impact. Implementation of these measures would reduce this impact to below a level of significance.
BIO-7 Potential for indirect impacts to sensitive habitats during project construction.	See **MM-BIO-3a through MM-BIO-3e**.	MM-BIO-3a through MM-BIO-3e require mitigation oversight by a qualified biologist, worker education, clear delineation of construction areas, keeping the project site clean, and ensuring equipment maintenance, staging, and fueling are undertaken in designated areas. Implementation of these measures would reduce this impact to below a level of significance.
BIO-8 Potential for indirect impacts to sensitive habitats during project operation.	**MM-BIO-8a** Trails that pass through areas of sensitive habitat shall include City-approved habitat signage to inform users of the sensitive resources and remind the trail user to stay on the established trails. Signage shall be placed in accordance with the Final HMMP and approved by the Planning Division Manager. The Final HMMP shall include a provision to monitor and track trail usage. ~~every 300 feet.~~ **MM-BIO-8b** The western boundary of the riparian corridor shall be enhanced with plant material and fencing barriers to prohibit intrusion into the corridor from the roadway and walkways along Las Posas Road as allowed by the regulatory permits issued by the resource protection agencies and the approved Fire Protection Plan. **MM-BIO-8c** Use of invasive exotic plant species in landscaped areas adjacent to or near sensitive vegetation communities shall be restricted. The applicant shall encourage the use of native species in landscaping plans and would avoid the use of species listed in Lists A & B of the California Invasive Plant Council's list of Exotic Pest Plants of Greatest Ecological Concern in California. This condition shall be included in the CC&Rs for the project. The CC&Rs shall be reviewed by the City Attorney.	Mitigation measures MM-BIO-8a through MM-BIO-8c require the placement of signage to identify sensitive resources, enhancement of the boundary along the riparian area with increased vegetation to prevent intrusion, and restricting the use of invasive exotic plant species. Implementation of these measures would reduce this impact to below a level of significance.

Impact	Mitigation Measure	Conclusions
BIO-9 The project impacts 0.06 acres of jurisdictional wetlands due to implementation of the Habitat Mitigation and Management Plan.	See **MM-BIO-6a and MM-BIO-6b**.	Implementation of mitigation measures MM-BIO-6a and MM-BIO-6b require restoration, enhancement, and/or wetland creation and placement into a biological conservation easement to reduce impacts to wetland resources. This shall be accomplished through restoration, enhancement and/or creation of 7.0 acres of wetland habitat, of which 4.7 acres will be placed in a biological conservation easement. ~~and placement of 4.2 acres of th wetland habitat in a biological conservation easement even though~~ MM-BIO-6a only requires mitigation of 0.18 acres, thus the project provides wetland mitigation at a 78:1 ratio. The five-year restoration and monitoring plan described in MM-BIO-6b will require approval by USACE and USFWS. Implementation of these measures would reduce this impact to below a level of significance.
BIO-10 Potential for indirect impacts to jurisdictional wetlands during project construction.	**MM-BIO-10a** The project applicant shall submit monthly construction monitoring reports during all grading activities for the project to the RWQCB. Construction monitoring reports shall include, but not be limited to, the following: • Name, qualification, and affiliations of the persons contributing to the report; • Summary of construction activities that includes general locations, project components, approximate acreages; • Quantification of impacts to waters of the US authorized under RWQCB Order No. R9-2005-0272; • Dates, times and names of qualified biologists onsite; • Diagram showing location and type of the most recent erosion and sediment control BMPs implemented onsite in accordance with the SWPPP; • Summary of any problems, resolutions, and notification that occurred during this monitoring period; and • Photo documentation of construction activities.	Implementation of erosion control measures and best management practices compliant with conditions included in the 401 Water Quality Certification requirements of the RWQCB permit for the project are required per MM-BIO-10a through MM-BIO-10d. MM-BIO-10e ensures equipment maintenance, staging, and fueling would be undertaken in designated areas. Implementation of these measures would reduce this impact to below a level of significance.

Impact	Mitigation Measure	Conclusions
	MM-BIO-10b Pursuant to the conditions identified in the 401 Water Quality Certification from the RWQCB (Order No. R9-2005-0272) the project applicant shall develop and implement a sedimentation/siltation monitoring plan to measure sediment loads above and below the project site during the construction phase. Sediment and siltation monitoring shall continue until such time that a Notice of Termination is processed. The construction phase sedimentation/siltation monitoring program shall be developed and submitted to the RWQCB for acceptance prior to initiation or project grading. Upon RWQCB acceptance of the monitoring plan, the project applicant shall monitor sediment loading above and below the project as follows: • Samples taken upstream of the construction areas and immediately downstream of the last point of discharge from the project. • Samples shall be analyzed for settleable solids and total suspended solids. • Sediment/siltation monitoring to occur after significant rainfall where storm water runoff discharges from the project site into Agua Hedionda Creek. The project applicant does not need to perform upstream/downstream sample collection for more than three rain events per month. **MM-BIO-10c** Pursuant to the conditions identified in the 401 Water Quality Certification from the RWQCB (Order No. R9-2005-0272), following each sample event, the applicant shall immediately assess each sample and if the results of the downstream site show an increase greater than 5 percent above background (upstream site) sediment levels, the applicant shall conduct an immediate assessment of erosion and sediment control BMPs being implemented. The project applicant shall also: • Identify the source of the silt and sediment; • Repair or replace BMPs that failed; • Maintain any BMP that is not functioning properly due to lack of maintenance;	

Impact	Mitigation Measure	Conclusions
	• Evaluate whether additional or alternative BMPs should be implemented to prevent further exceedences of background sediment levels; and • Report to the RWQCB within five working days the actions taken to remedy the situation. **MM-BIO-10d** Pursuant to the conditions identified in the 401 Water Quality Certification from the RWQCB (Order No. R9-2005-0272) the project applicant shall include all quality assurance and quality control data from the sediment/siltation monitoring program in reports to be submitted monthly during the rainy season (October 1 through April 30). In months receiving no precipitation resulting in discharge to receiving waters, no report will be required. **MM-BIO-10e** All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities, would occur in designated upland areas outside of the proposed preserve. The designated upland areas would be located in such a manner as to prevent any runoff from entering waters of the United States, including wetlands.	
BIO-11 Indirect impact to habitat linkages and wildlife corridors could occur from edge effects, including intrusion by domestic animals and unauthorized people and spill over lighting.	Implementation of mitigation measures **MM-BIO-4a through MM-BIO-4d** and **MM-BIO-8a through MM-BIO-8c** are also applicable for this impact.	Mitigation measures MM-BIO-4a through MM-BIO-4d identify an indoor cat policy, landscape management requirements, limits on the type of landscaping to be permitted on the project site, and the requirement of lighting to be directed away from habitat areas. These requirements would be enforced by the HOA via the CC&Rs for the project. Mitigation measures MM-BIO-8a through MM-BIO-8c require the placement of signage to identify sensitive resources, enhancement of the boundary along the riparian area with increased vegetation to prevent intrusion, and restricting the use of invasive exotic plant species. Implementation of these measures would minimize the potential for edge effects to impact habitat linkages and wildlife corridors. Impacts would be reduced to below a level of significance.

Impact	Mitigation Measure	Conclusions
BIO-12 Cumulative Loss of Diegan Coastal Sage Scrub	Implementation of mitigation measures **MM-BIO-5a through MM-BIO-5d** would reduce the project's contribution towards a cumulative impact to below a level of significance.	The project would preserve 185.83 acres of CSS on the project site within a biological conservation easement. This represents a 2.4:1 mitigation ratio and exceeds the 2:1 mitigation ratio for CSS impacts as identified in the MHCP. The long-term preservation and management of this habitat would also provide protected habitat for the gnatcatcher. Implementation of mitigation measures MM-BIO-5a through MM-BIO-5d would reduce this impact to below a level of significance.
While no least Bell's vireos or southwester willow flycatchers were identified on the project site, and there is a low potential for occurrence due to lack of suitable on-site habitat, the following additional mitigation measures are identified in the regulatory permits for the project.	**MM-BIO-13** Prior to project grading, the project applicant shall conduct USFWS protocol least Bell's vireo surveys. The surveys shall be conducted within the 12-month period prior to project grading. Results of the surveys shall be submitted to USACE, the Wildlife Agencies, and the City of San Marcos Planning Division Manager. ~~Director.~~ If least Bell's vireo are found to be nesting within the area to be disturbed, clearing and grubbing activity would not be allowed within 500 feet of active territories until such time as the nest is no longer active. Alternatively, noise mitigation (e.g., berm, temporary barrier) may be implemented to achieve noise levels of 60 dBA or less at the nest. **MM-BIO-14** Prior to project grading, the project applicant shall conduct USFWS protocol southwestern willow flycatcher surveys. The surveys shall be conducted within the 12-month period prior to project grading. Results of the surveys shall be submitted to USACE, the Wildlife Agencies, and the City of San Marcos Planning Division Manager.~~Director~~. If southwestern willow flycatchers are found to be nesting within the area to be disturbed, clearing and grubbing activity would not be allowed within 500 feet of active territories until such time as the nest is no longer active. Alternatively, noise mitigation (e.g., berm, temporary barrier) may be implemented to achieve noise levels of 60 dBA or less at the nest. **MM-BIO-15** To ensure preservation and management of the proposed preserved areas in perpetuity consistent with MHCP guidelines, the following would occur prior to initial vegetation clearing:	Mitigation measures MM-BIO-13 and MM-BIO-14 require the completion of protocol surveys for least Bell's vireo and southwestern willow flycatcher to ensure no impacts would occur within 500 feet of active nests and that noise levels at active nests would remain at or below 60 dBA. MM-BIO-15 requires a biological conservation easement to be in place prior to initial vegetation clearing, along with designating a natural lands manager for the area and creation and funding of an endowment to ensure funding for required monitoring.

Impact	Mitigation Measure	Conclusions
	• Conservation easements shall be recorded over the 210.8 acres to be preserved, including the 4.7 acres off site adjacent to the northern property boundary following the purchase from the current owner. • Designation of an experienced natural lands manager by the project applicant approved by USACE, the USFWS, and the City of San Marcos Planning Division Manager. ~~Director.~~ • Funding of a non-wasting endowment at an amount to be determined through the preparation of a Property Analysis Record (PAR), or similar analysis.	
Cultural Resources		
CR-1 Unknown sources of archaeological resources may occur on the project site, and the project has the potential to disturb unidentified archaeological resources during project grading.	**MM-CR-1a** An archeological monitor and a Luiseño Native American monitor shall be present during all earth moving and grading activities to assure that any potential cultural resources, including tribal, found during project grading are protected. **MM-CR-1b** Prior to beginning project construction, the Project Applicant shall retain a San Diego County qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. Any newly discovered cultural resource deposits shall be subject to cultural resources evaluation, which shall include archaeological documentation, analysis and report generation and take into account tribal customs and traditions. **MM-CR-1c** At least 30 days prior to beginning project construction, the Project Applicant/ Landowner shall enter into a Cultural Resource Treatment and Monitoring Agreement (also known as a pre-excavation agreement) with a Luiseño Tribe. The Agreement shall address the treatment of known cultural resources, the designation, responsibilities, and participation of professional Native American Tribal monitors during grading, excavation and ground disturbing activities; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains discovered on site.	Mitigation measures MM-CR-1a and MM-CR-1b provide for the presence of archaeological and Native American monitors that would be able to identify any previously unidentified archaeological resources, to prevent inadvertent disturbance of any cultural deposits that may be present. Should any resources be identified, implementation of these measures would ensure proper handling and treatment of such resources by providing for a proper evaluation to determine whether additional archaeological work is necessary. To further ensure impacts to Native American archaeological resources are protected, implementation of MM-CR-1c through MM-CR-1g provides additional protections for significant resources, and describes the process for proper treatment and handling to ensure impacts are minimized. Therefore, with incorporation of these measures, potential impacts to archaeological resources would be reduced to below a level of significance.

Impact	Mitigation Measure	Conclusions
	MM-CR-1d Prior to beginning project construction, the Project Archaeologist shall file a pre-grading report with the City to document the proposed methodology for grading activity observation, which would be determined in consultation with the contracted Luiseño Tribe referenced in MM-CR-1c. Said methodology shall include the requirement for a qualified archaeological monitor to be present and to have the authority to stop and redirect grading activities. In accordance with the agreement required in MM-CR-1c, the archaeological monitor's authority to stop and redirect grading would be exercised in consultation the Luiseño Native American monitor in order to evaluate the significance of any archaeological resources discovered on the property. Tribal and archaeological monitors shall be allowed to monitor all grading, excavation, and groundbreaking activities, and shall also have the authority to stop and redirect grading activities. A Luiseño Native American monitor shall be present at any pre-construction meeting that addresses earth and/or ground disturbing activities. ~~The Luiseño Native American monitor shall be a participant in any pre-construction meetings that address archaeological issues.~~ **MM-CR-1e** The landowner shall relinquish ownership of all cultural resources collected during the grading monitoring program and, if appropriate, from any previous archaeological studies or excavations on the project site to the appropriate Tribe for proper treatment and disposition per the Cultural Resources Treatment and Monitoring Agreement referenced in MM-CR-1c. Such treatment may include, but does not require, curation at a facility that meets the criteria contained in 36 C.F.R. Part 79, , or if requested by the appropriate Tribe, re-burial on-site, i.e., a non-curation alternative. ~~including those facilities operated and maintained by a Luiseño Tribe, or if requested by the appropriate Tribe, reburial on site.~~ All cultural materials that are deemed by the Tribe to be associated with burial and/or funerary goods would be repatriated to the Most Likely Descendant as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98. **MM-CR-1f** All sacred sites, should they be encountered within the project area, shall be avoided and preserved as the preferred mitigation, if feasible.	

Impact	Mitigation Measure	Conclusions
	MM-CR-1g If inadvertent discoveries of subsurface archaeological/cultural resources, not including human remains or associated burial goods which are addressed in MM-CR-4, are discovered during grading, the Developer, the project archaeologist, and the Luiseño Tribe under agreement with the landowner described in CR-3 shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. Pursuant to California Public Resources Code Section 21083.2(b) avoidance is the preferred method of preservation for archaeological resources. If the Developer, the project archaeologist and the Tribe cannot agree on the significance of mitigation for such resources, these issues would be presented to the Planning Division Manager ~~Director~~ for decision. The Planning Division Manager ~~Director~~ shall make a determination based upon the provisions of the California Environmental Quality Act with respect to archaeological resources and shall take into account the religious beliefs, customs, and practices of the Tribe. Notwithstanding any other rights available under law, the decision of the Planning Division Manager ~~Director~~ shall be appealable to the Planning Commission and/or City Council. If tribal cultural resources are inadvertently discovered during the project's earth and/or ground disturbing activities, a controlled grade may be required. A controlled grade procedure would require that earth and/or ground disturbing equipment operate at a deliberate pace, in a specialized manner and work in controlled increments as determined by the Native American monitor and Project Archaeologist. Equipment would need to meet specific requirements regarding weight, attachments and type of wheels. **MM-CR-1h** Fill material brought onto the project site shall be clean of cultural resource material. The fill material shall be analyzed and confirmed by an archaeologist and/or Luiseño Native American monitor.	
CR-2 The project has the potential to disturb unidentified historical resources during project grading.	**MM-CR-2** An archaeological cultural resources monitor shall be present during all initial earth moving and grading activities or otherwise disturbance of existing conditions to monitor for historical resources, including the previously identified well and wall features. If historical resources are encountered, work shall cease in the	Mitigation measure MM-CR-2 provides for the presence of an archaeological cultural resources monitor that would be able to identify any previously unidentified historical resources, to prevent inadvertent disturbance of any intact

Impact	Mitigation Measure	Conclusions
	vicinity of the discovery until the archaeologist has had an opportunity to document and evaluate the discovery. If it is determined to be a significant cultural resource, data recovery or other mitigation measures may be required. The archaeologist shall prepare an Archaeological Data Recovery Program (ADRP) for review and approval by the City Planning ~~Director~~Division Manager. Impacts to significant resources must be mitigated before ground-disturbing activities in the area of discovery shall be allowed to resume. If the resource is determined not to be significant, work may resume in the area of the discovery.	historical features that may be present. Should any resources be identified, implementation of this measure would ensure appropriate data recovery or other measures to ensure impacts to these resources are minimized. Therefore, with incorporation of this measure, potential impacts to historical resources would be reduced to below a level of significance.
CR-3 The project has the potential to disturb unidentified paleontological resources during project grading.	**MM-CR-3** A qualified paleontologist shall be retained by the applicant to implement an appropriate paleontological mitigation program which includes the following measures: • The paleontologist shall monitor construction excavations which impact previously undisturbed sediments of the Santiago Peak Volcanics, as well as deposits of colluviums and alluvium. The paleontologist would initially monitor the excavation on a part time basis, which may be reduced depending on the sediments excavation and if any fossils are being encountered. If the paleontologist encounters any significant fossils, they would be salvaged. • The paleontologist would be allowed to divert or direct grading activity in the area of an exposed fossil to prevent the fossil from being destroyed. • Because of the small nature of some fossils present in these rock units, it may be necessary for matrix samples to be collected for processing through fine mesh screens. • If found, fossils shall be prepared to the point of identification, stabilized, mapped on a USGS topographic map, and cataloged before they are donated to their final repository. • All significant fossils collected would be donated to a public, non-profit institution with a research interest in the materials, such as the San Diego Natural History Museum. The institution selected must be capable of curating specimens, field notes, geologic maps, and stratigraphic	MM-CR-3 requires retention of a qualified paleontologist that would implement an appropriate paleontological mitigation program. With incorporation of this measure, potential impacts to paleontological resources would be reduced to below a level of significance

Impact	Mitigation Measure	Conclusions
	sections, as well as allows for retrieval of specific specimens by researchers in the future. On the completion of all laboratory and field work, a final paleontological mitigation report shall be prepared and filed with the client, the fossil repository and the lead agency.	
CR-4 There is a potential for project construction activities to disturb previously unidentified human remains on the project site.	**MM-CR-4** If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. Suspected Native American remains shall be examined in the field and the location of the find shall be kept secure. If the San Diego County Coroner determines the remains to be Native American, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. The NAHC must then immediately notify the "most likely descendant(s)" of the discovery. The most likely descendants(s) shall then make recommendations within 48 hours, and engage in consultation concerning treatment of remains as provided in Public Resources Code 5097.98.	Potential impacts to human remains would be mitigated through MM-CR-4, which specifies that remains should not be further disturbed until the San Diego County Coroner has determined origins of the remains and final treatment has been agreed to with input of Native American tribes as necessary. Adherence to California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98 would ensure potential impacts to human remains are less than significant.
Geology/Soils		
GEO-1 Compressible soils unsuitable for supporting fill and/or development underlie the project site.	**MM-GEO-1** For the portions of the project site that are underlain by potentially compressible soils, the soil shall be removed and replaced with properly compacted fill during the construction process as defined by the UBC/California Building Code (CBC). Consistent with the Recommended Grading Specifications presented in Appendix D of the Update Geotechnical Investigation, the fill material brought to the project site shall be compacted to at least 90 percent of laboratory maximum dry density as determined by the current version of ASTM Test Procedure D 1557 at or slightly above optimum moisture content.	The project site is underlain by compressible soils. Mitigation measure MM-GEO-1 requires removal and replacement with properly compacted fill during the construction process as defined by the UBC/CBC. This would reduce the impact to below a level of significance.
Hazards/Hazardous Materials		
~~**HAZ-1**~~ ~~Unauthorized materials could be encountered during construction that could present~~	~~**MM-HAZ-1** Prior to project grading, the project applicant shall prepare Phase 1 ESA to verify that no on-site conditions present any hazards. The Phase 1 shall be prepared in accordance with the current American Society for Testing and Materials Standard Practice~~	~~Conditions on the project site may have changed since preparation of the Phase 1 ESA. Accordingly, completion of an updated Phase 1 report, as required by MM-HAZ-1, and any remedial actions~~

Impact	Mitigation Measure	Conclusions
~~a hazard for people residing or working in the area.~~	~~for Environmental Site Assessments, Designation E1527-00. The Phase 1 shall be submitted to the City Planning Director for review and approval. If any areas of concern are identified in the Phase 1, additional environmental analysis would be required and any areas of concern would be cleaned up per State and Federal standards and recommendations in the Phase 1.~~	~~required within the Phase 1 would ensure impacts would be less than significant.~~
HAZ-1~~2~~ In the FPP, the project site is located within a Very High fire hazard severity zone. The project site's location in a community hazard area represents a potentially significant impact.	**MM- HAZ-1~~2~~** The project shall use fire-restrictive building materials as outlined in Chapter 7A, Section 704A, Ignition-Resistant Construction, of the CBC for the future residences. This requirement shall be noted on the building plans and would be subject to review and approval by the City.	Due to the project's location and the results of the fire modeling, MM-HAZ-1~~2~~ calls for the use of fire-restrictive building materials and installation of sprinkler for the future residences. Potential wildland fire hazards would be reduced through implementation of mitigation measure MM-HAZ-1~~2~~.
HAZ-2~~3~~ Depending on the fire scenario, flame lengths could range from 34 to 44.7 feet prior to fuel treatment. Within the riparian zone wetland habitat area, modeled flame lengths for conditions prior to fuel modification range from 50.1 to 79.5 feet. This represents a significant impact.	**MM-HAZ-2a~~3a~~** A comprehensive approach to fire fuel management shall be required and shall be consistent with the recommendations in the Fire Protection Plan prepared for the project. Fuel management shall take place in three zones. Figure 2-14a depicts these fuel management areas and Figure 2-14b depicts the fuel treatment located within the proposed riparian restoration/corridor area adjacent to Las Posas Road. • Zone 1 comprises the first 50 feet around a structure. This zone is irrigated and shall be planted with vegetation that meets the County of San Diego's Acceptable Plants for Defensible Space in Fire Prone Areas. Zone 1 criteria would also be applied to the manufactured slopes and shall be re-vegetated with well-spaced and maintained fire resistant plants and trees. • Zone 2 is a non-irrigated zone and generally covers 50 to 100 feet beyond Zone 1. Within Zone 2, permanent vegetation is removed and cleared areas are hydroseeded with a mix of native annual and perennial grasses. Zone 2 is subject to select thinning and pruning to maintain the zone requirements. • Zone 3 is located in open space lots M and N and addresses the riparian corridor. The significance of this zone is the proposed restoration of the riparian habitat environment. The restoration would remove existing non-native vegetation	MM-HAZ-2a~~3a~~ through MM-HAZ-2c~~3c~~ identify specific fuel modification and maintenance requirements. According to the fire modeling in the FPP, flame lengths are reduced to 6.8 feet and 11.7 feet with treatment as proposed in MM-HAZ-2a~~3a~~ through MM-HAZ-2c~~3c~~. Within the riparian zone wetland habitat area, modeled flame lengths would be 45.4 feet after treatment. Implementation of mitigation measures MM-HAZ-2a~~3a~~ through MM-HAZ-2c~~3c~~ would reduce wildland fire hazards by creating adequate low fuel buffers between structures and natural open space areas. Implementation of these measures would ensure potential impacts resulting from wildland fires would be less than significant.

Impact	Mitigation Measure	Conclusions
	and the planting of local native riparian wetland species. The removal of the most flammable non-native and invasive species would reduce the fire behavior parameters, particularly flame length. A 150-foot fuel management zone from the edge of structures to the edge of a native fuel buffer adjacent to the riparian habitat zone would be maintained except for where narrower zones are permitted per the FPP. Additionally, non-combustible signage would be posted every 200 feet for fuel modification/fire clearing limits both horizontal and vertical. • For newly constructed roads, the vegetation shall be modified/reduced by 50 percent for 20 feet on either side of the road. **MM-HAZ-~~2~~2b~~3~~3b** All homes shall have a minimum 150-foot fuel modification zone with the exception of Lots 8 through 17 on the western portion of the project and lots 187 and 188 on the eastern side where a pinch points occurs to keep fuel modification within the boundaries approved under the regulatory permits. Fuel modification for these lots shall range from approximately 136 feet to 149 feet. Given that flame lengths are expected to be less than 50 feet with fuel modification, the reduced fuel modification zones for these ten lots would be adequate. **MM-HAZ-~~2~~2c~~3~~3c** Homeowners shall be responsible for all required fuel treatment measures on their lot. Fuel treatment zones adjacent to individual lots would be recorded as permanent easements and the ~~San Marcos Highlands~~ Home Owner's Association (HOA) would be responsible for enforcement of all required fuel modification treatments on these permanent easements. The HOA is responsible to ensure completion of all required fuel modification treatment prior to the annual fire season.	
Hydrology/Water Quality		
HYWQ-1 If a future well is placed closer than 550 feet from adjacent groundwater-using properties, a potentially significant impact would occur.	**MM-HYWQ-1** If a well is developed on the project site for irrigation purposes, the well shall be placed no closer than 550 feet to any existing wells.	Mitigation measure MM-HYWQ-1 requires a minimum 550-foot buffer between a future well on the project site any offsite wells. Implementation of this mitigation measure would reduce impacts to below a level of significance.

Impact	Mitigation Measure	Conclusions
Noise		
N-1 If two rock crushers are to operate simultaneously, noise may impact nearby residential uses.	**MM-N-1** If two rock crushers are to operate simultaneously, noise measurements of the rock crushing facilities shall be conducted within the first week of operations to ensure compliance with the City's thresholds. If noise levels are found to be above the established thresholds of 60 dBA at any existing single-family residential use, then mitigation would be required to reduce the sound level of 60 dBA at the residential uses. Mitigation could include berms or temporary walls, modified crusher orientation, or relocation of the rock crushers.	Implementation of mitigation measure MM-N-1 would reduce noise levels to below a level of significance by ensuring rock crushing operations comply with City standards to reduce noise levels to 75 dBA.
N-2 Noise levels at six receptors are modeled to exceed the City's General Plan Noise Element 60 dBA exterior threshold.	**MM-N-2** To minimize on-site exterior noise levels, 7-foot barriers shall be constructed along the lots adjacent to Las Posas Road. A 4-foot barrier shall be constructed at the lot in the southeast corner of the project site. The barriers may be constructed of a combination of landscape berms and sound walls. The locations of barriers are presented in Figure 3.10-4. The design of the barrier, including materials and color for any sound walls shall be subject to review and approval by the Planning ~~Director~~Division Manager.	Incorporation of mitigation measure MM-N-2 would ensure exterior noise levels at the project site are compliant with the City's thresholds by constructing noise barriers to reduce on-site noise and ensure impacts are mitigated to below a level of significance.
N-3 Since noise levels at six receptors are modeled to exceed the City's General Plan Noise Element 60 dBA exterior threshold, an interior noise assessment is required to ensure the interior noise threshold of 45 dBA CNEL is met.	**MM-N-3** To ensure compliance with the interior noise threshold of 45 dBA CNEL, a final noise assessment shall be performed prior to the issuance of the first building permit for all second floor areas of the lots located adjacent to Las Posas Road. This final report shall identify the interior noise requirements based on architectural and building plans to meet the City's established interior noise limit. The identified interior noise requirements shall also be in place prior to occupancy of the residences adjacent to Las Posas Road.	As required in mitigation measure MM-N-3, a final noise study is required to ensure interior noise levels would meet the City's threshold and ensure impacts are mitigated to below a level of significance.
Public Services		
PS-1 The project would contribute to an increase in emergency and non-emergency demands on the San Marcos Fire Department that require additional resources.	**MM-PS-1** The proposed project is contained within the preexisting San Marcos Fire Protection District Community Facilities District (CFD 2001-01). The project shall contribute toward the future resources needed by the Fire Department through participation in the CFD and payment of mitigation fees. Such payments would go towards providing the additional staff and equipment that would be needed by the Fire Department in the future to provide fire protection services to the project. Specifically, this CFD 2001-01 covers authorized facilities including: fire stations, fire training	The project's incremental effects on fire protection services would be offset by the City requirement for payment of fees to the preexisting CFD as required by mitigation measure MM-PS-1. Therefore, impacts related to fire protection services would be mitigated to below a level of significance.

Impact	Mitigation Measure	Conclusions
	facilities, fire dispatch center, fire community system and fire equipment. It also covers the following authorized services: fire protection, ambulance and paramedic services.	
PS-2 The project would contribute to an increase in demand on police protection services.	**MM-PS-2** The project shall contribute toward the future police protection resources through the payment of fees to Community Facilities District 98-01 (CFD 98-01). These fees would provide for additional staff and equipment to assist in the provision of law enforcement services. As it relates to police protection, CFD 98-01 covers police communication systems, police equipment and police services.	The project's incremental effects on police protection services would be offset by the City requirement for the payment of fees to CFD 98-01 as required by mitigation measure MM-PS-2. Therefore, with implementation of this mitigation measure, impacts to police protection services would be mitigated to below a level of significance.
PS-3 Under the Two-District Scenario, ~~while~~ the local SMUSD schools (Paloma Elementary, San Marcos Middle, and Mission Hills High) ~~may~~ have interim capacity to house project-generated students; however, there is insufficient capacity within the District as a whole. The District has a capacity shortage of 3,096 students. Therefore, the project contributes to a district-wide shortage of seats.	**MM-PS-3** To offset the additional facilities and resources that would be needed to meet the demand of students generated by the residential units of the proposed project under either the one- or two-district scenario, the project applicant would be required to pay school mitigation fees pursuant to California Education Code Section 17620 et seq. and Government Code Sections 65995(h) and 65996(b). These fees would assist in funding implementation of SMUSD's and VUSD's long-range plans. The current school fees for residential are $3.88/s.f. ~~3.79/s.f~~ for SMUSD and $3.20/s.f. for VUSD. Fees do change over time. The developer would be responsible for paying the fees that are in effect at the time of building permit issuance, and, consistent with General Plan Policy LU-11.2, shall provide a letter from the school district(s) to the City prior to the issuance of building permits confirming these fees have been paid.	To mitigate the project-level impacts related to schools as well as the project's contribution towards a cumulative impact to SMUSD schools, the project applicant would pay Level 2 school fees (currently $3.20 per s.f. for single-family residential within VUSD and $3.79 per s.f. for single-family residential within SMUSD) at the time the building permit is obtained, as identified in mitigation measure MM-PS-3. SB 50 states that the fees imposed by school districts shall constitute the exclusive method of considering and mitigating impacts on school facilities caused by a development project. Such payment shall provide "full and complete mitigation of the impacts of any legislative or adjudicative act…on the provision of adequate school facilities" (Government Code Section 65995(h)).
Recreation		
REC-1 The project does not provide sufficient park acreage to accommodate new residents.	**MM-REC-1** The project applicant shall pay the City's Public Facility Fee (PFF), a portion of which is designated for parks. The PFF money would go towards the acquisition and development of local and community park facilities throughout the City. Payment of the PFF shall be made prior to project occupancy.	To make up for the deficiency in public park space, the project would pay the City's PFF, as required by MM-REC-1 and City Ordinance 88-799 (Chapter 20.12, Growth Management, of the San Marcos Municipal Code). A portion of this fee is designated for parks. The PFF money would go towards the acquisition and development of local and community park facilities throughout the City in addition to what is provided on-site. Implementation of this measure would reduce impacts to below a level of significance.

Impact	Mitigation Measure	Conclusions
Transportation/Traffic		
TR-1 Project-related traffic results in a significant increase in delay at the intersection of Las Posas Road/Camino Del Sol in the Existing Plus Project condition.	**MM-TR-1a** Prior to project occupancy, the project applicant shall install a fiber optic interconnect for signal timing between the intersections of Las Posas Road / Borden Road and Las Posas Road / Avenida Azul. The project applicant shall also be responsible for developing the signal coordination timing plans for the two intersections. The project applicant shall pay for all existing signal retiming along Las Posas Road from Borden Road to ~~Grand Avenue~~Avenida Azul. **MM-TR-1b** Contribute a fair share toward the cost of installing a traffic signal at the intersection of Las Posas Road / Camino Del Sol.	Installation of a signal at the intersection of Las Posas Road/Camino Del Sol would mitigate impacts to this intersection to acceptable LOS D or better, as shown in Table 3.14-21, and reduce impacts to transportation and traffic to below a level of significance under the Existing Plus Project condition.
TR-2 The addition of project traffic results in a significant increase in delay at the intersection of Las Posas Road/Camino Del Sol in the PM peak hour in the Existing Plus Cumulative condition.	See **MM-TR-1a and MM-TR-1b.**	Installation of a signal at the intersection of Las Posas Road/Camino Del Sol would mitigate impacts to this intersection to acceptable LOS D or better, as shown in Table 3.14-21, and reduce impacts to transportation and traffic to below a level of significance under the Existing Plus Cumulative condition.
TR-3 The addition of project traffic results in a significant increase in delay at the intersection of Las Posas Road/SR-78 Westbound Ramps in the PM peak hour in the Existing Plus Cumulative condition.	**MM-TR-2** Contribute a fair share toward construction of a dedicated right-turn lane at the westbound (off-ramp) approach of the intersection.	Impacts to this intersection would be mitigated through contribution of fair share payment towards construction of a dedicated right-turn lane at the westbound (off-ramp) approach of the intersection. This improvement would improve conditions at this intersection to acceptable LOS D or better, as shown in Table 3.14-21, and reduce impacts to transportation and traffic to below a level of significance under the Existing Plus Cumulative condition.
TR-4 The addition of project traffic results in a significant increase in delay at the intersection of Grand Avenue/SR-78 Eastbound Ramps – Via Vera Cruz in the AM and PM peak hours in the Existing Plus Cumulative condition.	**MM-TR-3** Contribute a fair share toward the construction of a dedicated right-turn lane at the southbound (off-ramp) approach of the intersection. Convert existing shared through/right-turn lane to a shared left-turn/through lane. Modify signal to provide a right-turn overlap phase at the southbound approach of the intersection. **MM-TR-4** The project applicant shall pay the City's Public Facility Fee (PFF), a portion of which is designated for the circulation street and SR-78 interchange improvements. Payment of the PFF shall be made prior to project occupancy.	Impacts to this intersection would be mitigated by through fair share payment towards roadway improvements, including provision of additional lanes and modified signal phasing. These improvements would improve conditions at this intersection to acceptable LOS D or better, as shown in Table 3.14-21, and reduce impacts to transportation and traffic to below a level of significance under the Existing Plus Cumulative condition.

Impact	Mitigation Measure	Conclusions
TR-5 The addition of project traffic results in a significant increase in delay at the intersection of Las Posas Road/Camino Del Sol in the AM and PM peak hours in the Horizon Year 2035 condition.	See MM-TR-1a and MM-TR-1b.	Installation of a signal at the intersection of Las Posas Road/Camino Del Sol would mitigate impacts to this intersection to acceptable LOS D or better, as shown in Table 3.14-21, and reduce impacts to transportation and traffic to below a level of significance under the Horizon Year 2035 condition.
TR-6 The addition of project traffic results in a significant increase in delay at the intersection of Las Posas Road/SR-78 Westbound Ramps in the AM and PM peak hours in the Horizon Year 2035 condition.	See **MM-TR-2.**	Impacts to this intersection would be mitigated through contribution of fair share payment towards construction of a dedicated right-turn lane at the westbound (off-ramp) approach of the intersection. This improvement would improve conditions at this intersection to acceptable LOS D or better, as shown in Table 3.14-21, and reduce impacts to transportation and traffic to below a level of significance under the Horizon Year 2035 condition.
TR-7 The addition of project traffic results in a significant increase in delay at the intersection of Grand Avenue/SR-78 Eastbound Ramps – Via Vera Cruz in the AM and PM peak hours in the Horizon Year 2035 condition.	See **MM-TR-3** and MM-TR-4.	Impacts to this intersection would be mitigated by through fair share payment towards roadway improvements, including provision of additional lanes and modified signal phasing. These improvements would improve conditions at this intersection to acceptable LOS D or better, as shown in Table 3.14-21, and reduce impacts to transportation and traffic to below a level of significance under the Horizon Year 2035 condition.
Utilities/Service Systems		
UTIL-1 Total water storage requirements for the proposed project were not considered in the VWD 2008 Master Plan. The project increases the water storage demand by 347,540 gallons under the One Water District Scenario and	**MM-UTIL-1** Prior to ~~the issuance of building permits~~building occupancy, the project applicant shall pay Water Capital Facility Fees per VWD Ordinance 175. These fees would go towards water infrastructure improvements identified in VWD's 2008 CIP. Proof of fee payment shall be provided to the City of San Marcos Planning Division.	MM-UTIL-1 requires the payment Water Capital Facility Fees per VWD Ordinance 175 prior to the issuance of building permits. These fees would go towards water infrastructure improvements identified in VWD's 2008 CIP including project R-10, which is located in one of the two pressure zones providing water storage for the proposed project. Further, VWD indicated in their Water and Sewer Study (~~2015~~2016) that payment of Water

Impact	Mitigation Measure	Conclusions
~~5,445~~11,005 gallons for the Two Water Districts Scenario.		Capital Facility Fees satisfies the project's increase in capacity to water storage. Implementation of mitigation measure MM-UTIL-1 would reduce project-level impacts related to water storage to below a level of significance.
UTIL-2 Total parallel land outfall conveyance needs for the proposed project were not considered in the VWD 2008 Master Plan. The proposed project will increase wastewater flows by ~~35,277~~39,281 gpd over what was anticipated in the 2008 Master Plan.	**MM-UTIL-2** Prior to ~~the issuance of building permits~~building occupancy, the project applicant shall pay Wastewater Capital Facility Fees per Vallecitos Water District Ordinance 176. The purpose of the fee is to provide adequate wastewater conveyance and treatment to serve new development within VWD's service area and to provide adequate funding for future financing and construction of facilities described in VWD's 2008 CIP. Proof of fee payment shall be provided to the City of San Marcos Planning Division.	MM-UTIL-2 requires the payment of Wastewater Capital Facility Fees per Vallecitos Water District Ordinance 176. The purpose of the fee is to provide adequate wastewater conveyance and treatment to serve new development within VWD's service area and to provide adequate funding for future financing and construction of facilities described in VWD's 2008 CIP. Projects LOA-1 through LOA-6 in the CIP are specific to the parallel land outfall. Further, VWD indicated in their Water and Sewer Study (~~2015~~2016) that payment of Wastewater Capital Facility Fees satisfies the project's increase in capacity at the land outfall. Implementation of mitigation measure MM-UTIL-2 would reduce project-level impacts to below a level of significance.
UTIL-3 The proposed project contributes to a cumulative impact to water storage within the VWD water service area through an increase in storage demand of 347,540 gallons under the One Water District Scenario and 11,005 gallons for the Two Water Districts Scenario. ~~5,445 gallons.~~	See **MM-UTIL-1**.	MM-UTIL-1 requires the payment Water Capital Facility Fees per VWD Ordinance 175 prior to the issuance of building permits. These fees would go towards water infrastructure improvements identified in VWD's 2008 CIP including project R-10, which is located in one of the two pressure zones providing water storage for the proposed project. Further, VWD indicated in their Water and Sewer Study (~~2015~~2016) that payment of Water Capital Facility Fees satisfies the project's increase in capacity to water storage. Implementation of mitigation measure MM-UTIL-1 would reduce cumulative-level impacts related to water storage to below a level of significance.

Impact	Mitigation Measure	Conclusions
UTIL-4 The proposed project contributes to a cumulative impact to wastewater conveyance at the land outfall.	See **MM-UTIL-2**.	MM-UTIL-2 requires the payment of Wastewater Capital Facility Fees per Vallecitos Water District Ordinance 176. The purpose of the fee is to provide adequate wastewater conveyance and treatment to serve new development within VWD's service area and to provide adequate funding for future financing and construction of facilities described in VWD's 2008 CIP. Projects LOA-1 through LOA-6 in the CIP are specific to the parallel land outfall. VWD indicated in their Water and Sewer Study (~~2015~~2016) that payment of Wastewater Capital Facility Fees satisfies the project's increase in capacity related to wastewater treatment and disposal. Therefore, MM-UTIL-2 would reduce cumulative-level impacts identified related to wastewater treatment (solids and liquids) and ocean outfall capacity to below a level of significance.
UTIL-5 The project contributes to a cumulative impact to wastewater solids treatment through an increase in treatment demand of ~~35,277~~39,281 gpd.	See **MM-UTIL-2.**	MM-UTIL-2 requires the payment of Wastewater Capital Facility Fees per Vallecitos Water District Ordinance 176. The purpose of the fee is to provide adequate wastewater conveyance and treatment to serve new development within VWD's service area and to provide adequate funding for future financing and construction of facilities described in VWD's 2008 CIP. Projects LOA-1 through LOA-6 in the CIP are specific to the parallel land outfall. VWD indicated in their Water and Sewer Study (~~2015~~2016) that payment of Wastewater Capital Facility Fees satisfies the project's increase in capacity related to wastewater treatment and disposal. Therefore, MM-UTIL-2 would reduce cumulative-level impacts identified related to wastewater treatment (solids and liquids) and ocean outfall capacity to below a level of significance.

Impact	Mitigation Measure	Conclusions
UTIL-6 The project contributes to a cumulative impact to wastewater liquids treatment through an increase in treatment demand of ~~35,277~~39,281 gpd.	See **MM-UTIL-2**.	MM-UTIL-2 requires the payment of Wastewater Capital Facility Fees per Vallecitos Water District Ordinance 176. The purpose of the fee is to provide adequate wastewater conveyance and treatment to serve new development within VWD's service area and to provide adequate funding for future financing and construction of facilities described in VWD's 2008 CIP. Projects LOA-1 through LOA-6 in the CIP are specific to the parallel land outfall. VWD indicated in their Water and Sewer Study (~~2015~~2016) that payment of Wastewater Capital Facility Fees satisfies the project's increase in capacity related to wastewater treatment and disposal. Therefore, MM-UTIL-2 would reduce cumulative-level impacts identified related to wastewater treatment (solids and liquids) and ocean outfall capacity to below a level of significance.
UTIL-7 The project contributes to a cumulative impact to ocean outfall capacity through an increase in treatment demand of ~~35,277~~39,281 gpd.	See **MM-UTIL-2.**	MM-UTIL-2 requires the payment of Wastewater Capital Facility Fees per Vallecitos Water District Ordinance 176. The purpose of the fee is to provide adequate wastewater conveyance and treatment to serve new development within VWD's service area and to provide adequate funding for future financing and construction of facilities described in VWD's 2008 CIP. Projects LOA-1 through LOA-6 in the CIP are specific to the parallel land outfall. VWD indicated in their Water and Sewer Study (~~2015~~2016) that payment of Wastewater Capital Facility Fees satisfies the project's increase in capacity related to wastewater treatment and disposal. Therefore, MM-UTIL-2 would reduce cumulative-level impacts identified related to wastewater treatment (solids and liquids) and ocean outfall capacity to below a level of significance.

Table 1-2. Comparison of Project Alternatives

Environmental Topic	Proposed Project	No Project/ No Development Alternative	No Project/ Existing Specific Plan Alternative	County Zoning Alternative	Reduced Project Alternative	Increased Habitat Linkage Alternative
Number of Residential Units Proposed	189 units	0	230 units	133 units	163 units	162 units
Aesthetics/Viewsheds	LTS	LTS (Less)	Greater impact	Greater impact	Greater impact	LTS (Similar)
Air Quality	LTS	LTS (Less)	LTS (Greater)	LTS ~~(Similar)~~ (More for construction) (Less for operation)	LTS ~~(Similar)~~ (More for construction) (Less for operation)	LTS (More for construction) (Less for operation)
Biological Resources	LTSM	LTS (Less)	LTSM (Greater)	LTSM (Greater)	LTSM (Less)	LTSM (Less)
Cultural Resources	LTSM	LTS (Less)	LTSM (Similar)	LTSM (Similar)	LTSM (Similar)	LTSM (Similar)
Geology/Soils	LTSM	LTS (Less)	LTSM (Similar)	LTSM (Similar)	LTSM (Similar)	LTSM (Similar)
Greenhouse Gas Emissions	LTS	LTS (Less)	LTS (Greater)	LTS (Similar) (More for construction) (Less for operation)	LTS (Similar) (More for construction) (Less for operation)	LTS (More for construction) (Less for operation)
Hazards/Hazardous Materials	LTSM	LTS (Less)	LTSM (Similar)	LTSM (Similar)	LTSM (Similar)	LTSM (Similar)
Hydrology/Water Quality	LTSM	LTS (Less)	LTS (Similar)	LTS (Similar)	LTS (Similar)	LTS (Similar)
Land Use	LTS	LTS (Less)	LTS (Similar)	LTS (Less)	LTS (Similar)	LTS (Similar)
Noise	LTSM	LTS (Less)	LTSM (Similar)	LTSM ~~(Similar)~~ (More for construction) (Less for operation)	LTSM ~~(Similar)~~ (More for construction) (Less for operation)	LTSM (More for construction) (Less for operation)
Population/Housing	LTS	LTS (Less)	LTSM (Similar)	LTS (Less)~~(Similar~~)	LTS (Less)	LTS (Less)
Public Services	LTSM	LTS (Less)	LTSM (Greater)	LTSM (Less)	LTSM (Less)	LTSM (Less)
Recreation	LTSM	LTS (Less)	LTSM (Greater)	LTSM (Less) ~~(Similar)~~	LTSM (Less)	LTSM (Less)

Environmental Topic	Proposed Project	No Project/ No Development Alternative	No Project/ Existing Specific Plan Alternative	County Zoning Alternative	Reduced Project Alternative	Increased Habitat Linkage Alternative
Transportation/Traffic	LTSM	LTS (Less)	LTSM (Greater)	LTSM ~~(Similar)~~ (More for construction) (Less for operation)	LTSM ~~(Similar)~~ (More for construction) (Less for operation)	LTSM (More for construction) (Less for operation)
Utilities, Service Systems and Energy	LTSM	LTS (Less)	LTSM (Greater)	LTSM (Less)	LTSM (Less)	LTSM (Less)

Impact Status: LTS = Less Than Significant Impact; LTSM = Less Than Significant with Mitigation