

Highlands Estates Subdivision Project
Mitigation Monitoring and Reporting Program Environmental Compliance Matrix
Report Period: June 1, 2021 to June 30, 2021
Reporter Name: Kristen Outten, SWCA Environmental Consultants

Acronyms
 C - Complete
 NC - Not Complete
 O - Ongoing
 A - Acceptable
 GA - Generally Acceptable (Entered if the activities were generally acceptable for the reporting period with the exception of Non-Compliance Notices as noted in the Non-Compliance Notice column(s))
 U - Unacceptable (Entered if all the activities related to this mitigation activity were unacceptable for the reporting period (e.g., Non-Compliance Notices only or Plan not finalized as required by mitigation measure).
 WMR - Weekly Monitoring Report

Impact	Mitigation Measure	Monitoring and Reporting Action(s) Requirements	Mitigation Timing	Monitoring Schedule	Phase I					Phase II		Completion Status		Completion Status June, 2021
					Lot 9	Lot 10	Lot 11	Lot 5	Lot 6	Lot 7	Lot 8	Completion Status (C/NC/O) (if complete, enter date & color block)	Completion Level (NC, A, GA, U)/Supporting Document (WMR) or Notes	
Aesthetics	<p>Improvement Measure AES-1a: The Project Applicant shall provide "finished floor verification" to certify that the structures are actually constructed at the height shown on the approved plans. The Project Applicant shall have a licensed land surveyor or engineer establish a baseline elevation datum point in the vicinity of the construction site. Prior to the below floor framing inspection or the pouring of concrete slab for the lowest floors, the land surveyor shall certify that the lowest floor height as constructed is equal to the elevation of that floor specified by the approved plans. Similarly, certifications of the garage slab and the topmost elevation of the roof are required. The application shall provide the certification letter from the licensed land surveyor to the Building Inspection Section.</p> <p>Improvement Measure AES-1b: The Project Applicant shall plant a total of four (4) trees (minimum 24-gallon each), one directly in front of each home on lots 5 through 8 to soften and screen views of the new homes from off-site locations. These trees will be in addition to the seven (7) 15-gallon replacement trees included in the proposed project.</p> <p>Improvement Measure AES-2: Construction contractors shall minimize the use of on-site storage and when necessary store building materials and equipment away from public view and shall keep activity within the project site and construction equipment laydown areas.</p>	<p>County of San Mateo Planning and Building Department Shall oversee compliance with approved height of construction</p> <p>County of San Mateo Planning and Building Department Shall oversee tree placement</p> <p>County of San Mateo Planning and Building Department Shall oversee monitoring of construction activities</p>	<p>Project design and review process</p> <p>Project design and review process and during construction</p> <p>During construction</p>	<p>Confirm and document during building permit review and project construction</p> <p>Confirm and document prior to completion of construction</p> <p>Confirm and document during construction</p>	X	X	X	X	X	X	X	NC	NC	
AES-1														
AES-2														
Biological Resources	<p>Mitigation Measure BIO-2a: No earlier than 30 days prior to the commencement of construction activities, a survey shall be conducted to determine if active woodrat nests (stickhouses) with young are present within the disturbance zone or within 100 feet of the disturbance zone. If active woodrat nests (stickhouses) with young are identified, a fence shall be erected around the nest site adequate to provide the woodrat sufficient foraging habitat at the discretion of a qualified biologist and based on consultation with the CDHG. At the discretion of the monitoring biologist, clearing and construction within the fenced area would be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur.</p> <p>If woodrats are observed within the disturbance footprint outside of the breeding period, individuals shall be relocated to a suitable location within the open space by a qualified biologist in possession of a scientific collecting permit. This will be accomplished by dismantling woodrat nests (outside of the breeding period), to allow individuals to relocate to suitable habitat within the adjacent open space.</p>	<p>County of San Mateo Planning and Building Department Shall oversee implementation of pre-construction survey recommendations</p>	<p>No earlier than 30 days prior to commencement of construction activities</p>	<p>Confirm completion of survey prior to grading and construction and monitor for compliance with construction limits during construction</p>	X	X	X	X	X	X	O for Lots 9, 10, 11 NC for Lots 5, 6, 7, 8	A	No biologist was present onsite to monitor work on lot 9 near woodrat nests on 3/9/20, work was halted until a biologist was onsite.	

<p>BIO-2</p> <p>Mitigation Measure BIO-2b: No earlier than two weeks prior to commencement of construction activities that would occur during the nesting/breeding season of native bird species potentially nesting/roosting on the site (typically February through August in the project region), a survey for nesting birds shall be conducted by a qualified biologist experienced with the nesting behavior of bird species of the region. The intent of the survey would be to determine if active nests of special-status bird species or other species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the construction zone or within 500 feet of the construction zone. The surveys shall be timed such that the last survey is concluded no more than two weeks prior to initiation of construction or tree removal work. If ground disturbance activities are delayed, then an additional pre-construction survey shall be conducted such that no more than two weeks have elapsed between the last survey and the commencement of ground disturbance activities.</p> <p>If active nests are found in areas that could be directly affected or subject to prolonged construction-related noise, a no-disturbance buffer zone shall be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zones and types of construction activities restricted within them will be determined through consultation with the CDFG, taking into account factors such as the following:</p> <ul style="list-style-type: none"> Noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity; Distance and amount of vegetation or other screening between the construction site and the nest; and Sensitivity of individual nesting species and behaviors of the nesting birds. <p>Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers and construction personnel shall be instructed on the sensitivity of nest areas. A qualified biologist shall serve as a construction monitor during these periods when construction activities would occur near active nest areas of special-status bird species and all birds covered by the Migratory Bird Act to ensure that no impacts on these nests occur.</p>	<p>County of San Mateo Planning and Building Department Shall oversee implementation of pre-construction survey recommendations</p>	<p>No earlier than two weeks prior to commencement of grading</p>	<p>Confirm and document prior to grading</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>O for Lots 9, 10, 11 NC for Lots 5, 6, 7, 9</p>	<p>A</p>	
	<p>Mitigation Measure BIO-2c: Prior to the commencement of construction activities during the breeding season of native bat species in California (generally from April 1 through August 31), a focused survey shall be conducted by a qualified biologist to determine if active maternity roosts of special-status bats are present within any of the trees proposed for removal. Should an active maternity roost of a special-status bat species be identified, the roost shall not be disturbed until the roost is vacated and juveniles have fledged, as determined by the biologist. Once all young have fledged, then the tree may be removed. Species-appropriate replacement roosting habitat (e.g., bat boxes) shall be provided should the project require the removal of a tree actively used as a maternity roost. The replacement roosting habitat shall be subject to the approval of the CDFG.</p> <p>Mitigation Measure BIO-2d: Immediately preceding initial ground disturbance activities on lot 11, a pre-construction clearance survey shall be conducted by a qualified biologist for California red-legged frogs. The survey shall be conducted to determine whether individual California red-legged frogs are present within the disturbance boundary. Should a California red-legged frog be observed during the clearance survey, all construction activities on lot 11 shall be immediately halted and the USFWS shall be immediately contacted. Under no circumstances shall a California red-legged frog be collected or relocated, unless USFWS personnel or their agents implement the measure. Construction-related activities may resume once the frog has naturally left the lot or has been relocated by a permitted biologist (authorized by the USFWS).</p> <p>Mitigation Measure BIO-3: As required by the County for the removal of trees within the RM District, tree replacement shall occur at a minimum 1:1 ratio for all protected trees removed with a circumference of or exceeding 55 inches (17.5 inches diameter at breast height). The replacement of indigenous trees shall be in kind (i.e., live oaks removed shall be replaced by live oaks) and exotic trees to be removed shall be replaced with an appropriate species on the tree list maintained by the County of San Mateo Planning Department. Replacement trees shall also be maintained for a minimum of 2 years, but up to 5 years, (as determined by the County of San Mateo Planning Department).</p> <p>To facilitate the successful replacement of trees, a tree replacement plan shall be prepared and shall meet the following standards:</p> <ul style="list-style-type: none"> Where possible, the plan shall identify suitable areas for tree replacement to occur such that the existing native woodlands in the open space are enhanced and/or expanded. The plan shall specify, at a minimum, the following: <ul style="list-style-type: none"> -The location of planting sites; -Site preparation and planting procedures; -A schedule and action plan to maintain and monitor the tree replacement sites; -A list of criteria and performance standards by which to measure success of the tree replacement; -Contingency measures in the event that tree replacement efforts are not successful. 	<p>County of San Mateo Planning and Building Department Shall oversee implementation of pre-grading survey recommendations</p>	<p>Prior to commencement of construction activities during the breeding season (April 1 through August 31)</p>	<p>Confirm and document prior to grading and construction</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>O for Lots 9, 10, 11 NC for Lots 5, 6, 7, 10</p>	<p>A</p>	
<p>BIO-3</p> <p>Mitigation Measure BIO-5a: Prior to the commencement of construction activities on lot 11, the outer edge of the willow scrub habitat (facing lot 11) shall be delineated by a qualified biologist. Temporary fencing shall be installed that clearly identifies the outer edge of the willow habitat and that identifies the willow scrub as an "Environmentally Sensitive Area." Signs shall be installed indicating that the fenced area is "restricted" and that all construction activities, personnel, and operational disturbances are prohibited.</p>	<p>County of San Mateo Planning and Building Department Shall oversee installation of temporary fencing</p>	<p>Prior to commencement of grading on lot 11</p>	<p>Confirm and document prior to grading</p>	<p>X</p>							<p>O</p>	<p>A</p>	
													<p>August 2020 - Temporary fencing required repair as it was falling over. Fence was repaired prior to the next monthly inspection in September 2020.</p>

BIO-5	Mitigation Measure BIO-5b: Prior to the issuance of a grading permit, the Project Applicant shall develop an erosion control plan. The plan shall include measures such as silt fencing to prevent project-related erosion and sedimentation from adversely affecting the creek, zone and other habitats on and near lots 1-11. The erosion control plan shall be subject to approval by the County of San Mateo Planning Department.	County of San Mateo Planning and Building Department Shall review erosion control plan	Prior to issuance of grading permit	Document during grading and construction	X	X	X	X	X	X	C	A
BIO-6	<p>Mitigation Measure BIO-5c: Prior to the issuance of a grading permit, the Project Applicant shall develop a lighting plan. The lighting plan shall require that all lighting be directed and shielded as to minimize light spillage into nearby willow scrub habitat, as well as adjacent oak woodland habitats. The lighting plan shall be subject to approval by the County of San Mateo Planning Department.</p> <p>Mitigation Measure BIO-6: Prior to the commencement of construction on lot 8, the occurrence of purple needlegrass shall be mapped, including all stands on the lot with 20 percent or greater cover of native grasses and having a diameter greater than 10 feet. The area of purple needlegrass to be lost due to development of the lot shall then be calculated.</p> <p>As part of the proposed project, approximately 92 acres of open space would be maintained as open space under a conservation easement. This open space contains a serpentine grassland (on the slope west of the water tanks) that is dominated by native grasses (including purple needlegrass) and other native plant species. These native grasses, including purple needlegrass, would be permanently protected by the conservation easement. In addition, non-native plant areas adjacent to the serpentine grassland shall be restored to support native grasses over an area twice the acreage (2:1) of the stands of purple needlegrass to be lost on lot 8.</p>	<p>County of San Mateo Planning and Building Department Shall oversee mapping of purple needlegrass and dedication of open space</p> <p>County of San Mateo Planning and Building Department Shall oversee implementation of design-level geotechnical investigation recommendations</p>	<p>Prior to issuance of grading permit</p> <p>Mapping: Prior to commencement of grading on lot 8; Granting of conservation easement: Prior to recordation of final subdivision map; Native grass planting: Prior to completion of construction</p>	<p>Mapping: Prior to commencement of grading on lot 8; Granting of conservation easement: Prior to recordation of final subdivision map; Native grass planting: Prior to completion of construction</p>	X	X	X	X	X	X	NC	NC
BIO-6	<p>Mitigation Measure GEO-1: A design-level geotechnical investigation of the site shall be performed prior to any project grading including static and seismic slope stability analysis of the areas of the project site to be graded and developed. The specific mitigation measures to be utilized in order to stabilize existing landslides and areas of potential seismically induced landslides shall be presented in the report. The specific mitigation measures shall include some of the following measures or measures comparable to these:</p> <ul style="list-style-type: none"> • Landslide debris on lots 7 and 8 shall be excavated and replaced with a fully drained conventional buttress fill that is founded in the underlying Franciscan mélange, as recommended by the project geotechnical engineer. (Lots 7-8) • Retaining walls shall be designed to withstand high lateral earth pressure from adjoining natural materials and/or backfill shall be installed at the rear of lots 5 through 8. In addition, retaining walls shall be built in the front of lots 5 and 6 to aid in maintaining the slopes behind the lots and the more extensive cut required for lots 5 and 6. (Lots 5-8) • A surface drainage system shall be installed for each lot to mitigate new landslides developing within the thin veneer of soil mantling the bedrock on the slope below lots 1 through 4. (Lots 1-4) • Subsurface drainage galleries may be installed to control the flow of groundwater and reduce the potential for slope instabilities from occurring in the future. (All lots) • Over-steepening of slopes shall be avoided. Horizontal benches shall be constructed on all reconstructed slopes at an interval of 25 to 30 feet. New fill shall be compacted to at least 90 percent relative compaction (as determined by ASTM test method D1557). (All lots) • Drilled pier and grade-beam foundations shall be used to support foundations in accordance with recommendations of the project geotechnical engineer. (All lots) 	<p>County of San Mateo Planning and Building Department Shall oversee implementation of design-level geotechnical investigation recommendations</p>	<p>Prior to issuance of grading permit</p>	<p>Confirm and document during grading and building permit review</p>	X	X	X	X	X	C for Lot 9 and 10 per Planning review on 11/12/20. C for lot 11 NC for lots 5, 6, 7, 8	A	
BIO-6	<p>Mitigation Measure GEO-2a: Materials used to construct the buttress fill should have effective strength parameters equal to or better than the parameters used in the Treadwell & Rollo 2009 study. (Lots 7 and 8)</p>	<p>County of San Mateo Planning and Building Department Shall oversee implementation of design-level geotechnical investigation recommendations</p>	<p>Prior to issuance of grading permit</p>	<p>Confirm and document during building permit review</p>					X		NC	NC
BIO-6	<p>Mitigation Measure GEO-2b: The following mitigation measures shall be implemented to ensure the stability of proposed structures that are located on deep fill soils:</p> <ul style="list-style-type: none"> • A site-specific, design-level geotechnical investigation shall be completed during the design phase of the proposed project, and prior to approval of new building construction within the site for specific foundation design, slope configuration, and drainage design. (All lots) • The geotechnical investigation shall provide recommendations to prevent water from ponding in pavement areas and adjacent to the foundation of the proposed residences, and to prevent collected water from being discharged freely onto the ground surface adjacent to the residences, site retaining walls, or artificial slopes. The project geotechnical engineer shall identify on site areas downslope of the homes where the collected water may be discharged utilizing properly designed energy dissipaters. (All lots) • Fills used at the project site shall be properly placed with keyways and subsurface drainage, and adequately compacted following the recommendations of the final geotechnical report and Geotechnical Engineer, in order to significantly reduce fill settlement. (All lots) • Underground utilities shall be designed and constructed using flexible connection points to allow for differential settlement. (All lots) • Foundation plans shall be submitted to the County for review prior to issuance of a building permit. All foundation excavations shall be observed during construction by the project Geotechnical Engineer to insure that subsurface conditions encountered are as anticipated. As-built documentation shall be submitted to the County. (All lots) • Drilled pier and grade-beam foundations or other appropriate foundations per the recommendations of the design-level geotechnical investigation shall be developed for lots that are determined to likely experience soil creep. (All lots) • All work shall be completed in accordance with requirements of the 2007 California Building Code and the San Mateo County Building Code. (All lots) 	<p>County of San Mateo Planning and Building Department Shall oversee implementation of design-level geotechnical investigation recommendations</p>	<p>Prior to issuance of grading permit</p>	<p>Confirm and document during grading and building permit review</p>	X	X	X	X	X	C for Lot 9 and 10 per Planning review on 11/12/20. C for lot 11 NC for lots 11, 5, 6, 7, 8	A	

Geology and Soils

GEO-3	<p>Improvement Measure GEO-3: In compliance with the NPDES regulations, the Project Applicant shall file a Notice of Intent with the State Water Resources Control Board (SWRCB) prior to the start of grading and prepare a SWPPP.</p> <p>The SWPPP shall include specific best management practices to reduce soil erosion. The SWPPP shall include locations and specifications of recommended soil stabilization techniques, such as placement of straw wattles, silt fence, berms, and storm drain inlet protection. The SWPPP shall also depict staging and mobilization areas with access routes to and from the site for heavy equipment. The SWPPP shall include temporary measures to reduce erosion to be implemented during construction, as well as permanent measures.</p> <p>County staff and/or representatives shall review the SWPPP to ensure adequate compliance with State and County standards.</p> <p>County staff and/or representatives shall visit the site during grading and construction to ensure compliance with the SWPPP, as well as note any violations, which shall be corrected immediately. A final inspection shall be completed prior to occupancy.</p>	County of San Mateo Planning and Building Department Shall review and oversee compliance with the SWPPP	Prior to issuance of grading permit: During construction	Confirm and document during grading, building permit review, construction, and prior to project occupancy	X	X	X	X	X	X	X	X	X	X	C	A - NOI submitted on 5/02/2017; COI submitted on 10/30/2019
GEO-4	<p>Mitigation Measure GEO-4: The Project Applicant shall be required to use the seismic design criteria listed below to design structures and foundations to withstand expected seismic sources in accordance with the California Building Code (2007) as adopted by the County of San Mateo.</p> <p>Site Class: C</p> <p>Soil Profile Name: Very Dense Soil and Soft Rock, Occupancy Category: II</p> <p>Seismic Design Category: E</p> <p>Mapped Spectral Response for Short Periods- 0.2 Sec (S_{0.2}): 2.226 g Mapped Spectral Response for Long Periods- 1.5 Sec (S_{1.5}): 1.273 g</p> <p>Site Coefficient: F_a, based on the mapped spectral response for short periods: 1.0</p> <p>Adjusted Maximum Considered EQ Spectral Response for Short Periods (SM_S): 2.226</p> <p>Adjusted Maximum Considered EQ Spectral Response for Long Periods (SM_L): 1.655</p> <p>Design (5-percent damped) Spectral Response Acceleration Parameters at short periods (SDS): 1.484</p> <p>Design (5-percent damped) Spectral Response Acceleration Parameters at long periods (SDL): 1.103</p>	County of San Mateo Planning and Building Department Shall oversee compliance with California Building Code	Project design and review process	Confirm and document during building permit review	X	X	X	X	X	X	X	X	X	X	C	A-Lot 9 and 10 per Planning review on 11/12/20
GEO-5	<p>Mitigation Measure GEO-5: During site grading, soils in each lot shall be observed and tested by the project Geotechnical Engineer to determine if expansive soils are exposed. Should expansive soils be encountered in planned building or pavement locations, the following measures shall be implemented under the direction of the Geotechnical Engineer in order to mitigate the impact of expansive soils:</p> <ul style="list-style-type: none"> • Expansive soils in foundation areas shall be excavated and replaced with non-expansive fill to the specifications of the geotechnical engineer. • A layer of non-expansive fill soils 12 to 24 inches in thickness shall be placed over the expansive materials and prior to the placement of pavements or foundations. • Moisture conditioning of expansive soil shall be applied to a degree that is several percent above the optimum moisture content or lime treating of the expansive soil. • Foundations shall be constructed to be below the zone of seasonal moisture fluctuation or to be capable of withstanding the effects of seasonal moisture fluctuations. • Specific control of surface drainage and subsurface drainage measures shall be provided. • Low water demand landscaping shall be used. 	County of San Mateo Planning and Building Department Shall oversee implementation of geotechnical investigation recommendations	During grading activities	Confirm and document prior to issuance of building permit	X	X	X	X	X	X	X	X	X	X	C (Confirm date with C. Leung)	A - (Confirm date with C. Leung)
Air Quality	<p>Mitigation Measure AQ-1: The Project Applicant shall require that the following BAAQMD recommended and additional PM10 reduction practices be implemented by including them in the contractor construction documents:</p> <ul style="list-style-type: none"> • The first phase of construction shall require 30 percent of construction equipment to meet Tier 1 EPA certification standards for clean technology. The remainder of construction equipment (70 percent), which would consist of older technologies, shall be required to use emulsified fuels. • The second phase of construction shall require 30 percent of construction equipment to meet Tier 2 EPA certification standards for clean technology and 50 percent to meet Tier 1 EPA certification standards. The remaining 20 percent of construction equipment, which would consist of older technologies, shall use emulsified fuels. • For all larger vehicles, including cement mixers or other devices that must be delivered by large trucks, vehicles shall be equipped with CARB level three verified control devices. • Water all active construction areas at least twice daily. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. • Pave, apply water three times daily, or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at the construction sites. • Sweep daily (with water sweepers) all paved access roads, parking eas, and staging areas at the construction sites. • Sweep public streets adjacent to construction sites daily (with water sweepers) if visible soil material is carried onto the streets. • Hydrosed or apply non-toxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more). • Enclose, cover, water, twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.). Limit traffic speeds on unpaved roads to 15 miles per hour. • Limit traffic speeds on unpaved roads to 15 miles per hour. • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as soon as possible. • Install wheel washers for all exiting trucks or wash off the tires or tracks of all trucks and equipment leaving the construction site. • Install wind breaks at the windward sides of the construction areas 	County of San Mateo Planning and Building Department Shall oversee implementation of recommendations	During grading and construction	Confirm and document during grading and building permit review	X	X	X	X	X	X	X	X	X	X	O	A
AQ-1	<p>A water log is kept onsite to ensure that 2x daily watering is being conducted.</p>															

UTIL-1	<p>Mitigation Measure UTIL-1: The Project Applicant shall mitigate the project-generated increase in sewer flow such that there is a "zero net increase" in flow during wet weather events, by reducing the amount of existing inflow and infiltration (I/I) into the Crystal Springs County Sanitation District (District) sewer system. This shall be achieved through the construction of improvements to impacted areas of the sewer system, with construction plans subject to District approval. Construction of improvements, as approved by the District, shall be completed prior to the start of the construction of the residences. In addition, as project sewage will be treated by the City of San Mateo's Wastewater Treatment Plant, the Project Applicant shall submit payment of the City of San Mateo Wastewater Treatment Plant Expansion development impact fee to the City of San Mateo. This fee is based on the number of bedrooms in each residential unit and is calculated at the time of the final plans, using the City's fee schedule in effect at the time of the building permit application.</p>	Crystal Springs County Sanitation District Shall review sewer system improvement plans	Project design and review process	Complete upon construction of sewer system improvements and payment of development impact fee (prior to construction of residences)	X	X	X	X	X	X	X	X	C	A - Sewer Review complete 7/17/19	
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