

## 4.0 MITIGATION MONITORING AND REPORTING PROGRAM

The Mitigation Monitoring and Reporting Program (MMRP) is a CEQA-required component of the Environmental Impact Report (EIR) process for the project. The results of the environmental analyses, including proposed mitigation measures, are documented in the draft EIR.

CEQA requires that agencies adopting EIRs take affirmative steps to determine that approved mitigation measures are implemented subsequent to project approval.

As part of the CEQA environmental review procedures, Section 21081.6 requires a public agency to adopt a monitoring and reporting program to ensure efficacy and enforceability of any mitigation measures applied to the proposed project. The lead agency must adopt an MMRP for mitigation measures incorporated into the project or proposed as conditions of approval. The MMRP must be designed to ensure compliance during project implementation. As stated in Section 21081.6 (a) (1):

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. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required to be incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead agency or a responsible agency, prepare and submit a proposed reporting or monitoring program.

**Table 4-1** below is the MMRP. The table lists each of the mitigation measures proposed from the draft EIR and specifies the agency responsible for implementation of the mitigation measure and the time period for the mitigation measure.

Table 4-1 Mitigation Monitoring and Reporting Program

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<b>Air Quality</b>			
<p><b>Impact AQ-1:</b> Project development that includes wood burning stoves would result in a net increase of Reactive Organic Gases (ROG), a criteria pollutant for which the project region is non-attainment in an applicable federal or state ambient air quality standard.</p>	<p><b>Mitigation Measure AQ-1:</b> Wood burning fireplaces or stoves shall not be permitted. Only natural gas fireplaces or stoves shall be permitted. Project plans shall not include wood burning fireplaces or stoves and shall clearly indicate the prohibition against such use.</p>	Project Applicant	During project design
<p><b>Impact AQ-2:</b> The project would not expose sensitive receptors to criteria air pollutants during project construction but could expose sensitive receptors to toxic air contaminants.</p>	<p><b>Mitigation Measure AQ-2a:</b> To reduce the air quality impacts of PM associated with grading and new construction, the project applicant shall incorporate the following mitigation measures for all phases of construction:</p> <ul style="list-style-type: none"> <li>■ All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.</li> <li>■ All haul trucks transporting soil, sand, or other loose material off-site shall be covered.</li> <li>■ All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.</li> </ul>	Project Applicant	All phases of construction

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact AQ-2 Continued</i></p>	<ul style="list-style-type: none"> <li>▪ All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).</li> <li>▪ All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.</li> <li>▪ Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.</li> <li>▪ All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.</li> <li>▪ Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD’s phone number shall also be visible to ensure compliance with applicable regulations.</li> </ul>		
	<p><b>Mitigation Measure AQ-2b:</b> To reduce health risks from TACs during project construction, the project applicant shall incorporate the following mitigation measures into the project:</p> <ul style="list-style-type: none"> <li>▪ Minimize the idling time of diesel powered construction equipment to two minutes;</li> <li>▪ Develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction of the project</li> </ul>	<p>Project Applicant</p>	<p>During Construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact AQ-2 Continued</i></p>	<p>(i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent PM reduction compacted to the most recent ARB fleet average. Acceptable option for reducing emissions include the use of late model engines, low-emission diesel projects, alternative fuels, engine retrofit technology, after-treatment projects, add-on devices such as particulate filters, and /or other options as such become available;</p> <ul style="list-style-type: none"> <li>■ Require that all construction equipment, diesel trucks, and generators be equipped with best available technology for emission reductions of NOx and PM; and</li> <li>■ Require all contractors use equipment that meets CARB’s more recent certification standard for off-road heavy duty diesel engines</li> </ul>		
<p><b>Impact CUM AQ-1:</b> Development of the project in conjunction with other development in the region would result in a net increase of reactive organic gases (ROG).</p>	<p><b><i>See Mitigation Measure AQ-1</i></b></p>	<p>Project Applicant</p>	<p>During project design</p>

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<b>Biological Resources</b>			
<p><b>Impact BIO-A:</b> Although multiple surveys confirmed the non-presence of special-status species on the site, due to the presence of suitable habitat, development of the project could have significant impacts on the Delta button celery, a state listed species, and/or other special-status plants if they were to re-establish themselves between the last survey periods and the time of site development.</p>	<p><b>Mitigation Measure BIO-A:</b> Special-Status Plants</p> <ol style="list-style-type: none"> <li>a. A pre-construction survey for the Delta button celery (<i>Eryngium racemosum</i>) shall be conducted by a qualified biologist during the plant's blooming period (June to October), prior to site development. The survey shall be conducted in the area of the project site south of Point of Timber Road. If Delta button celery is not found, no further mitigation is needed. If Delta button celery is found, a qualified biologist shall implement feasible alternative measures such as plant relocation, seed collection, propagation or other suitable measures, including monitoring and reporting, that would reasonably reduce the potential impacts on Delta button celery. The qualified biologist shall coordinate implementation of these measures with the California Department of Fish and Game and efforts shall be consistent with related protocols.</li> <li>b. Pre-construction special-status plant surveys shall be conducted by a qualified biologist prior to site development. Pre-construction surveys shall occur during the season that provides an adequate opportunity to identify occurrences of any special-status plants. If no special-status plants are found, no further mitigation is needed. If a special-status plant or plants are found, a qualified biologist shall implement feasible alternative measures such as plant relocation, seed collection, propagation or other suitable measures, including monitoring and reporting, that would reasonably reduce the potential impacts to the identified special-status plant. The qualified biologist shall coordinate implementation of these measures with the California Department of Fish and Game and efforts shall be consistent with related protocols.</li> </ol>		

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<p><b>Impact BIO-1:</b> Development of the project would have a significant impact on trees.</p>	<p><b>Mitigation Measure BIO-1:</b> Landscape Trees.</p> <p>To offset impacts resulting from the removal of <del>80</del> 23 trees on the project site, the project includes landscaping with approximately 770 trees that would be planted along the project roadways and at the project site entry as part of the proposed landscaping. This is an approximately 9.5:1 mitigation ratio following mitigation ratios shall be implemented subject to the approval or modification of the Department of Conservation and Development: a 3:1 in kind replacement or replacement by native trees for non-native trees removed, or 6:1 for other native tree species that are planted to replace the two walnut trees. Comply with the following landscape/irrigation improvement and initial protection requirements subject to the review and approval of the Department of Conservation and Development, Community Development Division (CDD):</p> <ol style="list-style-type: none"> <li>a. Final Landscape Plan: At least 30 days prior to the issuance of a grading permit a final landscape/irrigation plan, prepared by a licensed landscape architect shall be submitted for review and approval by CDD. The Final Plan shall be designed in general accord with the preliminary landscape plan, Sheet 10 of 10 of the Project Plans dated October 2009.</li> <li>b. Minimum Size Plants: All proposed trees shall be a minimum of 15-gallon size; all shrubs shall be a minimum 5-gallon size.</li> <li>c. Maintenance Cost: Landscaping shall generally be designed to minimize landscape maintenance cost.</li> </ol>	<p>Department of Conservation and Development</p>	<p>During project design and prior to issuance of grading permits</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-1 Continued</i></p>	<p>d. Compliance with Water Conservation and Sight Obstruction Ordinance Requirements: The landscape plan shall contain sufficient information to demonstrate compliance with the reporting requirements and standards of the Water Conservation Landscaping in New Developments ordinance (Chapter 82-26) as amended, and the Sight Obstruction at Intersections ordinance (Chapter 82-18). The latter ordinance applies to intersections with public roads. The landscape architect shall certify that the plan complies with the ordinance improvement standards and reporting requirements.</p> <p>e. To assure the long term viability of this landscaping the applicant shall post a bond for the value of the landscaping, installation plus 20%. The term of the bond shall extend 24 months beyond the installation of landscaping. Prior to the acceptance of the bond by the County a qualified landscape designer shall assess the value of the landscape and provide a copy of that assessment to the CDD. Prior to the release of the bond a landscape designer shall submit a letter to the CDD that the landscaping is in good health.</p>		
<p><b>Impact BIO-2:</b> Development of the project would have a significant impact on bank habitat.</p>	<p><b>Mitigation Measure BIO-2:</b> Creek Bank Habitat</p> <p>a. <del>Prior to removal or reconstruction of bank habitat along Kellogg Creek or disturbing any creek/channel banks within the project site and at Pantages Island, the applicant shall contact the CDFG, the Corps, the RWQCB, and the Reclamation Board and determine if permits are warranted for the activities pursuant to the regulations that are in effect. Proof of permits (for example, a Section 404 permit, Section 401 permit, Section 1602 permit) or an absence of requirements for such permits from these resource agencies shall be provided to CDD.</del></p>	<p>Department of Conservation and Development</p>	<p>Prior to, during, and post construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-2-Continued</i></p>	<p>b.— Mitigation for loss of bank habitat shall be completed as prescribed by the CDFG, Corps, RWQCB, and Reclamation Board. The applicant has provided a report to Contra Costa County describing how the applicant will mitigate impacts to bank habitats, and these stated mitigations, described below, shall become a condition of project approval.</p> <p>c.— Specifically, the applicant proposes to mitigate for the loss of 9,720 lineal feet of excavated low and moderate quality bank habitat by: (1) enhancement of 9,157 lineal feet of existing low and moderate low quality bank habitat, both on site and off site, to high quality bank habitat (shaded riverine aquatic habitat and shallow water habitat) on Pantages Island, ECCID Property on the south side of the ECCID Dredge Cut/Channel, Old Kellogg Creek, and Kellogg Creek between Newport Drive and State Route 4; and (2) creation of 1,903 lineal feet of moderate quality bank habitat (shallow sloping or level bench to MHW with riparian trees and grasses, rip rap with willows between MHW and MLW) on the excavated portion of Pantages Island and the North Cove to near the end of Kellogg Creek. Bank habitat mitigation totals approximately 11,060 lineal feet which exceeds removal of lineal footage by 1,340 lineal feet.</p> <p>d.— Enhance existing bank habitat or create new bank habitat on-site and off-site, approximately 11,060 linear feet in total, including (1) shaded riverine aquatic habitat and shallow water habitat (high quality bank habitat) on the westerly, northerly, and southerly sides of Pantages Island the ECCID portion of the project site; and the creek bank ECCID easement area west of the project site from the Pantages property line to the bridge, and Kellogg Creek between Newport Drive and State Route 4; and (2) moderate quality bank habitat along Kellogg Creek on the easterly side of Pantages Island and the northerly side of the north cove to the northeasterly end of the project site.;</p>		



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<p><i>Impact BIO-2-Continued</i></p>	<ul style="list-style-type: none"> <li>e. The creek bank and revegetation design that creates moderate quality habitat following excavation will include the following:               <ul style="list-style-type: none"> <li>i. Riprap with willow plantings shall be established between mean low water (MLW) and mean high water (MHW) to provide additional stabilization and some shaded riverine aquatic habitat.</li> <li>ii. A shallow sloping or level bench shall be established at approximately MHW to support larger riparian trees such as Fremont cottonwood.</li> <li>iii. The upper bank shall be sloped at 5:1 and also planted with riparian trees and grasses.</li> <li>iv. Riparian trees planted along the shallow sloping or level bench shall be planted on 15-foot centers to ensure adequate bank coverage.</li> <li>v. Native riparian trees such as valley oaks, California buckeyes, and Fremont cottonwoods and native grasses can be used for revegetation.</li> <li>vi. The planted riparian trees shall be monitored by a biologist or arborist annually for a period of 5 years to ensure that mortality does not exceed 20 percent after 5 years. If there is greater than 20 percent mortality of planted trees after 5 years, the project proponent shall be responsible for replanting and monitoring the trees for an additional 3-year period.</li> <li>vii. During the 5-year monitoring period invasive weed monitoring shall also be conducted. In the event that an increase in the distribution or density of invasive plants is documented (for example, water hyacinth or Brazilian waterweed), an invasive weed management and eradication program shall be developed and implemented.</li> </ul> </li> </ul>		

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<p><i>Impact BIO-2-Continued</i></p>	<ul style="list-style-type: none"> <li>viii. <del>A performance bond, letter of credit, or other financial instrument shall be established to pay for any remedial work that might need to occur.</del></li> <li>ix. <del>Once vegetation has become established, the upper bank should provide overhanging vegetation cover for fish during most tidal elevations. However, the placement of riprap without natural habitat features (e.g., large woody debris) along most of the lower bank would create minimal in water habitat for fish. Given incorporation of both high quality and low quality habitat features, this design is characterized as being overall of moderate value. To improve the overall habitat value of the bank, installation of tree species along the lower bank may be possible by installing Sonatubes in the riprap and planting the trees within these tubes. The Sonatubes allow trees to grow along rip rap banks without harming the integrity of the bank. An alternative bank stabilization method other than rip rap, which provides the same or better overall quality of the habitat and provides sufficient protection against wave action, may also be considered.</del></li> <li>f. <del>Low and moderate quality habitat along the south side of the ECCID Dredge Cut/Intake Channel, to the Lakeshore/Lake bridge, along the westerly, northerly, and southerly sides of Pantages Island, in the section of Old Kellogg Creek at the southwestern end of the project site and along the east and west sides of Kellogg Creek between Newport Drive and State Route 4, shall be restored to high quality habitat by creating a slope setback.</del></li> <li>g. <del>The setback shall be created by excavating existing bank material from approximately MLW to the top of the bank.</del></li> </ul>		

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<p><i>Impact BIO-2-Continued</i></p>	<ul style="list-style-type: none"> <li>i. An intertidal berm with a 10:1 or 20:1 slope shall be established to create shallow water habitat and stabilize the bank.</li> <li>ii. The berm shall be planted with tules to provide in water resting and hiding places for fish.</li> <li>iii. The upper bank shall be sloped at 3:1 or 5:1 and planted with native riparian trees and shrubs to create shaded riverine aquatic habitat.</li> <li>iv. Trees and shrubs planted along upper bank shall be monitored by a qualified biologist or arborist for a minimum 5 year period. If there is greater than 20 percent mortality of planted trees and shrubs after 5 years, the applicant shall be responsible for replanting and monitoring the trees for an additional 3 year period.</li> <li>v. During the 5 year monitoring period invasive weed monitoring shall also be conducted. In the event that an increase in the distribution or density of invasive plants is documented (for example, water hyacinth or Brazilian waterweed), an invasive weed management and eradication program shall be developed and implemented.</li> <li>vi. A performance bond, letter of credit, or other financial instrument shall be established to pay for any remedial work that might need to occur.</li> <li>h. Existing low and moderate quality bank habitat around the westerly, northerly, and southerly perimeter of Pantages Island shall be restored to high quality habitat by implementing the setback design as described for the ECCID Dredge Cut/Intake Channel. This design shall be established around most of the island, except for bank habitat adjacent to Kellogg Creek. Bank habitat along Kellogg Creek shall be stabilized with riprap to prevent</li> </ul>		

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<i>Impact BIO-2-Continued</i>	erosion due to wave action from existing and future boater activity. Therefore, this area of Pantages Island will be designed to provide moderate quality bank habitat as prescribed above. Also to address wave action, moderate quality habitat shall be created along the northerly side of the North Cove.		
<p><b>Impact BIO-3:</b> Development of the project would have a significant impact on vernal pool fairy shrimp. (Significant)</p>	<p><b>Mitigation Measure BIO-3:</b> Vernal pool fairy shrimp:</p> <ul style="list-style-type: none"> <li>a. In order to offset the project's impact on vernal pool fairy shrimp the applicant shall implement one of the following measures:                             <ul style="list-style-type: none"> <li>i. Purchase credits in an existing fairy shrimp mitigation bank at a ratio determined during negotiations with USFWS during Section 7 Consultation between the Corps and the USFWS;</li> <li>ii. Acquire suitable mitigation property via fee title at a ratio determined during negotiations with USFWS during Section 7 Consultation between the Corps and the USFWS; or</li> <li>iii. With permission from state and federal regulatory agencies and in agreement with the Conservancy, the project proponent shall make a financial contribution to the Conservancy, to offset the project's impact to the vernal pool fairy shrimp. The financial contribution to the Conservancy or the amount of mitigation land that shall be purchased via fee title shall be determined during negotiations with USFWS during Section 7 consultation between the Corps and the USFWS.</li> </ul> </li> <li>b. Prior to impacting the seasonal wetland where the vernal pool fairy shrimp were found, documentation of the mitigation transaction (e.g., financial contribution to the Conservancy), and/or a copy of the Biological Opinion outlining the mitigation requirements and incidental take statement from USFWS, shall be provided to CDD</li> </ul>	Department of Conservation and Development	Prior to issuance of construction

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<i>Impact BIO-3 Continued</i>	<p>e. Prior to grading onsite, and as prescribed in a Biological Opinion issued for the project, topsoils from the wetland containing the fairy shrimp egg bank shall be scalped by a qualified federal 10(a)(1)(A) permitted biologist and redeposited in appropriate seasonal mitigation wetlands that shall be created within the wetland mitigation preserve onsite.</p>		
<p><b>Impact BIO-4:</b> Development of the project would have a potentially significant impact on the California red-legged frog. (Significant)</p>	<p><b>Mitigation Measure BIO-4:</b> California red-legged frog.</p> <p>a. Mitigation shall be 1:1 for impacts to aquatic and upland buffer habitat, that is, for each 1 acre of aquatic or upland buffer habitat impacted, 1 acre of compensatory habitat shall be preserved onsite or acquired offsite in a suitable location) or mitigation may be as required by the USFWS during consultation initiated by the Corps with USFWS pursuant to Section 7 of FESA.</p> <p>b. Replacement habitat can be acquired via fee title acquisition of land, contribution into an existing mitigation bank, or, with permission from state and federal regulatory agencies and in agreement with the Conservancy, the applicant may make a financial contribution to the Conservancy.</p> <p>c. Any mitigation and subsequent monitoring requirement stipulated in permits/ authorizations issued by the USFWS and the Corps for this project shall be completed as stated in the permits/authorizations. Copies of all survey reports and monitoring reports required by USFWS in the conditions of the Biological Opinion shall be submitted to CDD.</p> <p>d. CCD shall receive copies of all agency agreements/ authorizations related to this species, and shall not issue a grading or building permit until all agency agreements/ permits relating to the California red-legged frog have been obtained for this project and mitigation has been implemented.</p>	<p>Department of Conservation and Development</p>	<p>Prior to, during, and post construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><b>Impact BIO-5:</b> Development of the project would have a potentially significant impact on the giant garter snake. (Significant)</p>	<p><b>Mitigation Measure BIO-5:</b> Giant garter snake.</p> <p>a.— Mitigation shall be 1:1 for impacts to suitable aquatic and upland habitat (that is, for each 1 acre of suitable aquatic and upland habitat impacted, 1 acre of compensatory habitat shall be preserved onsite or acquired offsite in a suitable location) or mitigation may be as required by the USFWS during consultation initiated by the Corps with USFWS pursuant to Section 7 of FESA.</p> <p>b.— Replacement habitat can be acquired via fee title acquisition of land, contribution into an existing mitigation bank, or, with permission from state and federal regulatory agencies and in agreement with the Conservancy, the project proponent may make a financial contribution to the Conservancy. Any mitigation and subsequent monitoring requirement stipulated in permits/authorizations issued by the USFWS and the Corps for this project shall be completed as stated in the permits/authorizations.</p> <p>c.— CDD shall receive copies of all agency agreements/authorizations related to this species, and shall not issue a grading permit or building permit until all agency agreements/permits relating to the giant garter snake have been obtained and mitigation for this species has been implemented.</p>	<p>Department of Conservation and Development</p>	<p>Prior to, during, and post construction</p>
<p><b>Impact BIO-6:</b> Development of the project would have a potentially significant impact on the western pond turtle.</p>	<p><b>Mitigation Measure BIO-6:</b> Western pond turtle.</p> <p>The applicant shall install turbidity barriers around construction areas in Kellogg Creek and the buffers protecting the preserved emergent marsh to ensure that western pond turtles do not enter the project construction areas.</p> <p>a.— The western pond turtle is not a state listed species; therefore, it is not protected pursuant to the California Endangered Species Act. Thus, the resource agencies (CDFG and USFWS) do not have specific mitigation guidelines that must be followed to offset a project's impact to the western pond turtle. Mitigation for this special status</p>	<p>Department of Conservation and Development</p>	<p>Prior to issuance of building or grading permit</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-6 Continued</i></p>	<p>species is determined on a project by project basis. It is likely that any mitigation implemented for the California red-legged frog and the giant garter snake would also mitigate the proposed project's impact on the western pond turtle. The mitigation measure for impacts to these two listed species would be a 1:1 mitigation ratio (that is, for each 1 acre of impact, 1 acre of mitigation land would be acquired offsite or preserved onsite) for impacts to aquatic habitat and a surrounding upland buffer area, or mitigation would be as worked out by the applicant, the USFWS, and the Corps at the time applications for permits/authorizations from these two agencies are submitted. Replacement habitat can be acquired via fee title acquisition of land, contribution into an existing mitigation bank, or, with permission from state and federal regulatory agencies and in agreement with the Conservancy, the applicant may make a financial contribution to the Conservancy.</p> <p><u>Within 5 days of initiating construction activities, a qualified biologist (knowledgeable and experienced in western pond turtle identification) shall conduct preconstruction surveys of all areas in these locations that will or could be impacted by construction activities. Any western pond turtles or eggs observed within the construction zone shall be allowed to leave the area on their own accord or they shall be relocated by the qualified biologist to a suitable area outside of the construction zone. A survey report detailing the survey results shall be prepared and submitted to the biological permitting agencies prior to the start of construction.</u></p> <p><u>After the preconstruction survey and prior to construction activities, an exclusion fence shall be placed between the development and the bank habitat and the emergent marsh habitat such that a western pond turtle could not move from these habitats into the development area. A qualified biologist shall be present during trenching activities associated with the exclusion fence installation.</u></p>		

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	<p><u>The exclusion fencing will be standard silt fencing, approximately 42 inches in height that will be trenched 6 inches into the soil. The soil will then be compacted against both sides of the fence to prevent wildlife from gaining access underneath. The stakes will be placed on the inside of the fence facing the development. No gaps or holes are permitted in the fencing system, except for pedestrian and vehicle entry points.</u></p> <p><u>The entry/exit points may be constructed in the fencing system for equipment and personnel, but the qualified biologist must ensure no wildlife is capable of entering the fenced off site via the gate. The gate structure must be flush to the ground with no holes or gaps (i.e., plywood gates with silt fencing flaps).</u></p> <p><u>The fence will be inspected occasionally by a qualified biologist for holes, gaps, or access points, which shall be repaired upon discovery. The area inside the fence will also be inspected for trapped wildlife prior to the initiation of construction each day. If wildlife is discovered, the fence shall be opened and monitored until the wildlife has left the fenced area on its own accord and no work shall occur during this period. If the wildlife does not leave on its own accord, CDFW will be contacted before work may continue.</u></p>		
<p><b>Impact BIO-7:</b> Development of the project would have potentially significant impact on federal and/or state listed fish species and fish species designated by the State of California as Species of Special Concern.</p>	<p><b>Mitigation Measure BIO-7:</b> Federal and/or State listed fish species and California species of special concern fish.</p> <p>a.— To minimize potential impacts to federal and/or state listed fish and California “species of special concern” during construction and dredging of the two interior bays, a levee shall be maintained between the area to be excavated and the Kellogg Creek channel.</p> <p>b.— A qualified fisheries biologist shall be onsite during all pumping and siphoning activity to ensure that these activities do not result in take of federal and/or state listed fish and California “species of special concern.”</p>	<p>Department of Conservation and Development</p>	<p>Prior to issuance of permits and throughout pre-construction and construction</p>



Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-7 Continued</i></p>	<p><del>c. Silt curtains or suction dredges shall be used when conducting work in the ECCID Dredge Cut/Intake Channel and Kellogg Creek. Use of this equipment will localize sediment movement and protect fish from entrainment and the effects of increased turbidity.</del></p> <p>d. All in-water work shall be conducted between August 1 and November 30 to minimize the potential for take of threatened and endangered fish species. By conducting work within this time period, the project will avoid most critical spawning, migratory, and dispersal periods for listed fish species.</p> <p>e. Long term impacts to fish are not expected provided the proposed bank habitat mitigation to re-create and replace impacted bank habitat is implemented by the applicant.</p>		
<p><b>Impact BIO-8:</b> Development of the project would have a potentially significant impact on tree nesting raptors.</p>	<p><b>Mitigation Measure BIO-8:</b> Tree nesting raptors.</p> <p>a. <del>If possible, tree removal shall be completed outside the nesting season (that is, between September 2 and February 28). In an abundance of caution, a preconstruction nesting survey of the tree to be removed shall be conducted within 30 days of the scheduled removal to ensure no birds are nesting.</del></p> <p>b. <del>If construction or tree removal would commence between March 1 and September 1 during the nesting season, nesting surveys shall be conducted 30 days prior to grading/construction of the project or any proposed tree removal work. The raptor nesting surveys shall include examination of all trees and shrubs within sphere of influence of the proposed project, and not just of those trees slated for removal.</del></p> <p>c. <del>If nesting raptors are identified during the surveys, the dripline of the nest tree shall be fenced with orange construction fencing (provided the tree is on the project site), and a 300-foot radius around the nest tree shall be staked with bright orange lath or other suitable staking.</del></p>	<p>Department of Conservation and Development</p>	<p>Prior to issuance of demolition permits and through pre-construction and construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-8 Continued</i></p>	<p><del>d. If the tree is adjacent to the project site then the buffer shall be demarcated per above where the buffer occurs on the project site. The size of the buffer may be altered if a qualified raptor biologist conducts behavioral observations and determines the nesting raptors are well acclimated to disturbance. If this occurs, the raptor biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/ harassment to the nesting raptors. This buffer may be reduced no smaller than 100 feet from the nest tree.</del></p> <p>e. No construction or earth moving activity shall occur within the established buffer until it is determined by a qualified raptor biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by August 1. This date may be earlier than August 1 or later, and would have to be determined by a qualified raptor biologist.</p> <p><u>If construction related work would commence anytime during the nesting/breeding season for raptors or other bird species listed in the Migratory Bird Treaty Act (typically February 1 through September 15), a pre-construction survey of the project vicinity for nesting birds shall be conducted. This survey shall be conducted by a qualified biologist (experienced with the nesting behavior of bird species of the region) within 7 days prior to the commencement of construction activities that would occur during the nesting/breeding season. The intent of the survey shall be to determine if active nests are present within or adjacent to the construction zone within approximately 250 feet. The surveys shall be timed such that the last survey is concluded no more than one week prior to initiation of construction. If ground disturbance activities are delayed following a survey, then an additional pre-</u></p>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
	<p><u>construction survey shall be conducted such that no more than one week will have elapsed between the last survey and the commencement of ground disturbance activities.</u></p> <p><u>If active nests are found in areas that could be directly or indirectly affected by the project, 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 (generally 250 for raptors and 50 for passerines) and types of construction activities restricted within them should be determined through consultation with the CDFW depending on the species, taking into account factors such as the following:</u></p> <ul style="list-style-type: none"> <li>• <u>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;</u></li> <li>• <u>Distance and amount of vegetation or other screening between the construction site and the nest; and</u></li> <li>• <u>Sensitivity of individual nesting species and behaviors of the nesting birds.</u></li> </ul> <p><u>The buffer zone around an active nest shall be established in the field with orange construction fencing or another appropriate barrier and construction personnel shall be instructed on the sensitivity of nest areas. The qualified biologist shall serve as a construction monitor during those periods when construction activities would occur near active nest areas of special-status bird species to ensure that no impacts on these nests occur.</u></p>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><b>Impact BIO-9:</b> Development of the project would have a potentially significant impact on the Swainson's hawk.</p>	<p><b>Mitigation Measure BIO-9: Swainson's hawk.</b></p> <p><del>a. To meet the CDFG's mitigation requirements for impacts to Swainson's hawk foraging habitat the applicant shall implement one of the following scenarios:</del></p> <p><del>i. Dedicate and preserve 135 acres of habitat (this is a 1:1 impact to mitigation ratio), as approved by CDFG, to a conservation organization. An operating endowment shall be provided to the conservation organization to manage any preserved lands in perpetuity.</del></p> <p><del>ii. With permission from state and federal regulatory agencies and in agreement with the Conservancy, the applicant may make a financial contribution to the Conservancy, commensurate with approximately 135 acres of impacts to Swainson's hawk foraging habitat.</del></p> <p><u>The loss of potential foraging hawk habitat shall be mitigated in consultation with the CDFW following the recommendations provided below. The CDFW Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California (CDFG 1994) recommends that projects within 1 mile of an active nest provide:</u></p> <ul style="list-style-type: none"> <li><u>One acre of Habitat Management (HM) land (at least 10 percent of the HM land requirements shall be met by fee title acquisition or a conservation easement allowing for the active management of the habitat, with the remaining 90 percent of the HM lands protected by a conservation easement [acceptable to the Department] on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk) for each acre of development authorized (1:1 ratio); or</u></li> </ul>	<p>Department of Conservation and Development</p>	<p>Prior to issuance of permits and throughout pre-construction and construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
	<ul style="list-style-type: none"> <li>• <u>One-half acre of HM land (all of the HM land requirements shall be met by fee title acquisition or a conservation easement [acceptable to the Department] which allows for the active management of the habitat for prey production on-the HM lands) for each acre of development authorized (0.5:1 ratio).</u></li> <li>b. <u>Prior to site disturbance t</u>To ensure that no impacts occur to any nesting Swainson’s hawk, preconstruction nesting surveys shall be conducted <del>no more than one month prior to construction to establish whether Swainson’s hawk nests within 1,000 feet of the project site are occupied</del> <u>in conformance with the Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley (Swainson’s Hawk Technical Advisory Committee, 2000).</u></li> </ul>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-9 Continued</i></p>	<ul style="list-style-type: none"> <li>c. <del>If an active nest is found on or adjacent to within 0.25 miles of the project site “to avoid potential violation of Fish and Game Code 2080 (i.e., killing of listed species), project-related disturbance at active Swainson’s hawk nesting sites should be reduced or eliminated during critical phases of the nesting cycle (March 1-September 15 annually)” (CDFG 1994) and/or in consultation with the CDFW.</del></li> <li>d. <del>If Swainson’s hawk are found nesting on the project site, a qualified raptor biologist shall establish a non-disturbance boundary around the nesting site. The size of this nondisturbance boundary shall be determined by the qualified raptor biologist in the field and in consultation with the CDFW. The buffer shall be based upon the location of the nesting tree, the bird’s tolerance of noise, and the type of other disturbance (e.g., ground vibrations). Once the young have fledged from the nest, the buffer can be removed, and all project activities can commence.</del></li> <li>e. <del>Upon completion of nesting cycle, as determined by a qualified raptor biologist, and in coordination with CDFG, any non-disturbance boundary/nest buffer could be vacated.</del></li> <li>f. <del>If the nest tree must be removed as part of the project, removal of this tree shall be mitigated in accordance with the mitigation measure prescribed for tree removal impacts in Mitigation Measure BIO 1. Tree planting is proposed as mitigation at a 9.5:1 ratio (that is, planting: removal). Replacement nest trees shall be native species (such as oaks or cottonwoods).</del></li> </ul>		
<p><b>Impact BIO-10:</b> Development of the project would have a potentially significant adverse effect on the western burrowing owl.</p>	<p><b>Mitigation Measure BIO-10: Western burrowing owl.</b></p> <p>Western burrowing owl surveys conducted according to the methodologies prescribed by CDFG in their <i>Staff Report on Burrowing Owl Mitigation</i>, dated March 7, 2012. Below we provide a summary of the survey methodologies contained in the <i>Staff Report on Burrowing Owl Mitigation</i> that would be applicable to the project site. These</p>	<p>Department of Conservation and Development</p>	<p>Prior to issuance of permits and throughout pre-construction, during and post-construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
	surveys would meet the standards of care required by CEQA for conducting surveys.		
<i>Impact BIO-10 Continued</i>	<ul style="list-style-type: none"> <li>a. Initiating Survey. An initial take avoidance survey shall be conducted no less than 14 days prior to initiating ground disturbance activities. Burrowing owls may re-colonize a site after only a few days. Time lapses between project activities will trigger subsequent take avoidance surveys including but not limited to a final survey conducted within 24 hours prior to ground disturbance.</li> <li>b. Number of visits and timing. Conduct four survey visits: 1) at least one site visit between February 15 and April 15, and 2) a minimum of three survey visits, at least three weeks apart, between April 15 and July 15, with at least one visit after June 15.</li> <li>c. Survey method. Conduct surveys by walking straight-line transects spaced 7 meters (m) to 20 m apart, adjusting for vegetation height and density. At the start of each transect and, at least, every 100 m, scan the entire visible project area for burrowing owls using binoculars. During walking surveys, record all potential burrows used by burrowing owls as determined by the presence of one or more burrowing owls, pellets, prey remains, whitewash, or decoration. Some burrowing owls may be detected by their calls, so observers should also listen for burrowing owls while conducting the survey.</li> </ul>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
	<ul style="list-style-type: none"> <li>d. Weather conditions. Poor weather may affect the surveyor’s ability to detect burrowing owls, therefore, avoid conducting surveys when wind speed is &gt;20 km/hr, and there is precipitation or dense fog. Surveys have greater detection probability if conducted when ambient temperatures are &gt;20° C, &lt;12 km/hr winds, and cloud cover is &lt;75%.</li> <li>e. Time of day. Daily timing of surveys varies according to the literature, latitude, and survey method. However, surveys between morning civil twilight and 10:00 AM and two hours before sunset until evening civil twilight provide the highest detection probabilities.</li> </ul>		



Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-10 Continued</i></p>	<p>f. Avoiding burrowing owls. A primary goal is to design and implement projects to seasonally and spatially avoid negative impacts and disturbances that could result in take of burrowing owls, nests, or eggs. Avoidance measures may include but not be limited to:</p> <ul style="list-style-type: none"> <li>▪ Avoid disturbing occupied burrows during the nesting period, from February 1 through August 31.</li> <li>▪ Avoid impacting burrows occupied during the non-breeding season by migratory or non-migratory resident burrowing owls.</li> <li>▪ Avoid direct destruction of burrows through chaining (dragging a heavy chain over an area to remove shrubs), disking, cultivation, and urban, industrial, or agricultural development.</li> <li>▪ Develop and implement a worker awareness program to increase the on-site worker's recognition of and commitment to burrowing owl protection.</li> <li>▪ Place visible markers near burrows to ensure that equipment and other machinery does not collapse burrows.</li> <li>▪ Do not fumigate, use treated bait or other means of poisoning nuisance animals in areas where burrowing owls are known or suspected to occur (e.g., sites observed with nesting owls, designated use areas).</li> <li>▪ Restrict the use of treated grain to poison mammals to the months of January and February.</li> </ul>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-10 Continued</i></p>	<ul style="list-style-type: none"> <li>g. Minimizing Impacts. If burrowing owls and their habitat can be protected in place on or adjacent to the project site, the use of buffer zones, visual screens or other measures while project activities are occurring can minimize disturbance impacts. A qualified biologist shall conduct site-specific monitoring to inform the project proponent of buffer requirements. See Staff Report on Burrowing Owl Mitigation (2012) for additional guidance.</li> <li>h. Permanent Impacts. Refer to Staff Report on Burrowing Owl Mitigation (2012) for additional guidance regarding mitigation of permanent impacts to burrowing owl habitat loss.</li> </ul>		
<p><b>Impact BIO-11:</b> Development of the project would have a potentially significant impact on other protected nesting birds.</p>	<p><b>Mitigation BIO-11:</b> Impacts to other nesting birds.</p> <ul style="list-style-type: none"> <li><del>a. A nesting survey shall be conducted no more than 14 days prior to tree removal and/or breaking ground (surveys should be conducted a minimum of 3 separate days during the 14 days prior to disturbance) prior to commencing with construction work if this work would commence between February 1 and September 1. If a lapse in project related work of 15 days or longer occurs, another focused survey consistent with related protocols and if required, consultation with CDFG shall occur before project work can be reinitiated.</del></li> <li><del>b. If special-status birds, such as loggerhead shrike, tri-colored blackbird, and/or California black rail, are identified nesting within the area of affect, the project sponsor shall contact CDFG regarding appropriate buffer sizes and shall fence off a non-disturbance radius around the nest according to this measure.</del></li> </ul> <p style="text-align: center;"><b>(See BIO-8)</b></p>	<p>Department of Conservation and Development</p>	<p>Prior to issuance of permits and throughout pre-construction and during construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><del>Impact BIO 12:</del> Impacts to Waters of the United States and/or State:</p>	<p><del>Mitigation Measure BIO 12:</del> Impacts to waters of the United States and/or State</p> <p>Authorization from the Army Corps of Engineers (Corps) and the Central Valley Regional Water Quality Control Board (CVRWQCB) (for example, an Individual Permit and a Certification of Water Quality) shall be obtained prior to filling any waters of the U.S./State on the project site.</p> <p>A Conceptual Wetland and Emergent Marsh Preservation and Mitigation Plan for Pantages Bays was prepared by Gibson &amp; Skordal, LLC (dated November 15, 2006). According to this mitigation plan, minimization of indirect impacts would be accomplished by grading home pads to drain toward streets and away from open space areas, landscaping with native plants, construction on bioswales, maintaining natural buffers between the development and the preserved marsh habitat within the open space areas, and using native plantings as landscaping buffers between development and open space preserve areas. An exception is at the Emergency Vehicle Access (EVA) crossing of the marsh where there is no buffer. The location of the EVA was chosen so that the road crossed the marsh at its narrowest point. In most other cases, there is a minimum of 50 feet between the edge of the residential development and the preserved marsh. At some locations, grading would encroach into the 50 foot width; however, the graded area would be planted with native vegetation and maintained naturally (no irrigation) such that it functions as a buffer. The open space preserve area shall be separated from</p>	<p>Project Applicant</p>	<p>Prior to construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-12 Continued</i></p>	<p>adjacent development or recreational areas with permanent fencing that protects the open space preserve from unauthorized use while providing a visual connection to the open space. Residential fences would be tubular steel or some other form of permanent, visually open, fencing where houses back up to the open space preserve. Past mitigation efforts from other development projects have shown that with open fencing, protected areas are kept free from dumping of trash by homeowners as the community has more connection and feels more stewardship of the open space. In addition, along the EVA/trail, kiosks with educational signage will be developed to reduce human-induced impacts.</p> <p>Impacts to waters of the United States/State will also be minimized by implementing the following measures:</p> <ul style="list-style-type: none"> <li>a.— The project proponent shall implement best management practices consistent with the Storm Water Pollution Prevention Plan (SWPPP) prepared for the project to protect the emergent marsh and wetland mitigation area, including installing orange construction fencing, hay or gravel waddles, and other protective measures.</li> <li>b.— During project construction, a biological monitor shall be onsite to monitor the integrity of preserved wetlands and other waters.</li> <li>c.— For those wetland areas that cannot be avoided, compensation wetlands shall be enhanced/created to replace those wetlands permanently affected by project activities. If possible, wetlands shall be created on-site and shall resemble those wetlands affected by the project (known as in-kind replacement).</li> <li>d.— All impacted wetlands shall be replaced at a minimum 1:1 ratio (for each square foot of impact, one square foot of wetland would be enhanced/created) or as otherwise specified in permitting conditions imposed by the Corps and RWQCB.</li> </ul>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-12 Continued</i></p>	<p>e. The specific mitigation for the project consists of the components listed here:</p> <ul style="list-style-type: none"> <li>■ Creation of approximately 5.29 acres of seasonal wetland on-site;</li> <li>■ Creation of approximately 0.30 acre of marsh habitat on-site;</li> <li>■ Creation and enhancement of approximately 11,060 linear feet of bank habitat on-site and off-site, including Shaded Riverine Aquatic habitat and shallow water habitat. The off-site mitigation includes the ECCID Dredge Cut from the Pantages property line to the bridge, linking Lakeshore/Lakes neighborhoods and the RD-800 Kellogg Creek Banks from Newport Drive to State Route 4;</li> <li>■ Creation of approximately 46 acres of open water habitat on-site;</li> <li>■ Preservation of all avoided and created aquatic areas; and</li> <li>■ Implementation of a comprehensive long-term storm-water management plan designed to protect water quality.</li> </ul> <p>The compensatory mitigation envisioned for the project will consist of two major efforts. First will be the creation of seasonal wetland habitat in the uplands adjacent to the preserved marsh, and second will be the creation and enhancement of bank habitat within the project area.</p> <p><i>Creation (Compensatory Mitigation)</i></p> <p><i>Seasonal Wetland/Emergent Marsh/Open Water Habitat</i></p> <p>a. A minimum of approximately 5.29 acres of seasonal wetland and 0.30 acre of marsh shall be created within the 44-acre preserve area. Specifically, the creation of the seasonal wetland will occur in the 12.58-acre upland area in the northwest corner of the site. The</p>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-12 Continued</i></p>	<p>expansion of the marsh shall be accomplished either on the eastern side of the existing marsh on the new peninsula created by the opening of the northern bay or along the western side of the existing marsh. This represents a 1:1 mitigation ratio (created wetlands to impacted wetlands).</p> <p>b. Soil borings shall be taken prior to the construction of the seasonal wetlands within the open space preserve to verify the suitability of the proposed wetland soils (e.g. cobbly soils or old alluvium would not be suitable soils).</p> <p>c. Ground water depths shall also be identified within the open space preserve.</p> <p>d. The locations of the created wetlands shall be selected based on the existing topography within the uplands, soil composition, and ground water depths, and the created seasonal wetlands shall be excavated to a depth necessary to accumulate seasonal (winter) groundwater and/or to any clay layer that will perch rainfall.</p> <p>e. The upper 6 inches of top soil shall be scalped from the seasonal wetlands to be impacted and will be placed in the created wetlands for seed source. These topsoils would contain a seed bank of the impacted pool plant species which would germinate with fall/winter hydration of the re-created pools.</p> <p>f. The created wetlands shall be very slightly over excavated to accommodate the addition of topsoil.</p> <p>g. This mitigation measure may be substituted by implementing another wetland compensation plan that is approved for the project by both the Corps and the RWQCB.</p> <p><i>Creek Bank Habitat</i></p> <p>Overall, the project will result in the loss of approximately 9,720 linear feet of the 10,120 linear feet of existing habitat along the project site. The applicant proposes to mitigate for the loss of excavated low and moderate quality bank habitat by: (1) enhancement of 9,157 lineal feet</p>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-12 Continued</i></p>	<p>of the existing low and moderate low quality bank habitat, both onsite and offsite, to high quality bank habitat (shaded riverine aquatic habitat and shallow water habitat) on Pantages Island;</p> <p>East Contra Costa Irrigation District (ECCID) Property on the south side of the ECCID Dredge Cut/Channel, Old Kellogg Creek, and Kellogg Creek between Newport Drive and State Route 4; and (2) creation of 1,903 lineal feet of moderate quality bank habitat (shallow sloping or level bench to MHW with riparian trees and grasses, rip-rap with willows between MHW and MLW) on the excavated portion of Pantages Island, and the northerly side of the North Cove to the end of Kellogg Creek. Bank habitat mitigation totals approximately 11,060 lineal feet.</p> <p><i>Open Space Preservation</i></p> <p>The preserved and created seasonal wetlands and marsh habitat would be located within a 44-acre permanently preserved area. Open Space Parcel "C" and the marsh habitat on Pantages Island (Open Space Parcel "D") would also be permanently preserved through conservation easements or covenants. It is envisioned that ownership of the open space preserve areas will be transferred to the Town of Discovery Bay Community Services District (TDBCSD) for preservation in perpetuity, or some other public agency deemed approved by CDD. The TDBCSD would also function as the Preserve Manager and conduct the long-term monitoring and maintenance of the preserve areas in perpetuity. On the adjoining Ravenswood project, ownership of an open space parcel with seasonal wetlands controlled by a conservation easement has been conveyed to the TDBCSD for the same purpose pursuant to Corps Permit No. 199400928. TDBCSD will therefore be able to ensure consistent and coordinated management of the two conservation areas.</p> <p>In addition, the approximately 11,060 linear feet of enhanced and created bank habitat would be preserved in perpetuity. The lineal footage within the project site will be included as part of Water Parcel "F", as modified to include that creek bank and shoring walls. It is</p>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact BIO-12 Continued</i></p>	<p>envisioned that Parcel “F” as modified and the enhanced bank habitat on ECCID property and Pantages Island will be transferred to Reclamation District 800 (RD800). RD 800 already owns the mitigation Kellogg Creek banks from Newport Drive to State Route 4. RD 800 will own and be responsible by conservation covenants to monitor and maintain these bank habitats in perpetuity. Funding for maintenance of the permanently preserved open space conservation area will be provided through annual assessments of home owners in Pantages Bays that are secured through a TDBCSD landscape and lighting district or a binding, permanent agreement completed prior to filing the Final Map. With respect to the creek bank conservation areas owned by RD 800, the assessment will be created by a Proposition 218 vote undertaken prior to the filing of the Final Map.</p> <p>This funding and monitoring is separate from the compensatory mitigation monitoring for the created wetlands is outlined in the Conceptual Wetland and Emergent Marsh Preservation and Mitigation Plan for Pantages Bays was prepared by Gibson &amp; Skordal, LLC (dated November 15, 2006). Alternative long term mitigation monitoring acceptable to permitting agencies may also be considered.</p> <p>A 5 year monitoring program will be established to monitor the progress of the wetland mitigation toward an established goal. At the end of each monitoring year, an annual report will be submitted to the Corps, RWQCB and Contra Costa County. This report will document the hydrological and vegetative condition of the mitigation wetlands, and will recommend remedial measures as necessary to correct deficiencies.</p> <p>Aside from the minimum replacement ratio and in perpetuity protection, various regulatory agencies may provide additional conditions and stipulations for permits. Permits for impacts to waters of the U.S. will be required by the Corps. Similarly, permits for impacts to waters of the state will be required by both the RWQCB and CDFG prior to the impacts occurring. These agencies will likely impose their own</p>		



Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<i>Impact BIO-12 Continued</i>	<del>mitigation requirements. Any other conditions that are stipulated for impacts to waters of the U.S. or state by the Corps, RWQCB, and/or CDFG shall also become conditions of project approval.</del>		
<b>Impact CUM BIO-1:</b> Cumulative Impacts to Vegetation and Wildlife Resources	The mitigation measures prescribed above would offset cumulative impacts to special-status species, wetlands, trees, and plant communities/wildlife habitats to levels regarded as less than significant. Mitigation that includes creation and enhancement of impacted “waters of the U.S.,” stream channels, and bank habitat would offset this cumulative impact to levels regarded as less than significant.	Department of Conservation and Development and Project Applicant	Prior to issuance of building permits, prior to construction, during, and post-construction
<b>Cultural Resources</b>			
<b>Impact CUL-1:</b> Construction of the project could potentially cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	<p><b>Mitigation Measure CUL-1:</b> Pursuant to CEQA Guidelines Section 15064.5, in the event that any prehistoric, historic, archaeological or paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the resources shall be halted and the applicant shall consult with the County and a qualified professional (historian, archaeologist and/or paleontologist as determined appropriate and approved by the County) to assess the significance of the find.</p> <p>If any find is determined to be significant, representatives of the County and the consulting professional shall determine the appropriate avoidance measures or other appropriate mitigation.</p> <p>In considering any suggested mitigation proposed by the consulting professional to mitigate impacts to cultural resources, the County shall determine whether avoidance is feasible in light of factors such as the nature of the find, project design, costs, and other considerations.</p> <p>If avoidance is infeasible, other appropriate measures, such as data recovery, shall be instituted. Work may proceed on other parts of the project site while mitigation for cultural resources is carried out. All significant cultural materials recovered shall, at the discretion of the</p>	Department of Conservation and Development	When demolition and site clearing activities are complete, and during grading

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<i>Impact CUL-1 Continued</i>	consulting professional, be subject to scientific analysis, professional museum curation, and documentation according to current professional standards. At the County’s discretion, all work performed by the consulting professional shall be paid for by the applicant and at the County’s discretion, the professional may work under contract with the County.		
<b>Impact CUL-2:</b> Construction of the project could potentially cause a substantial adverse change in the significance of an unknown archaeological resource pursuant to Section 15064.5.	<b>Mitigation Measure CUL-2:</b> Implementation of Mitigation Measure CUL-1 would reduce impacts from changes in the significance of an archaeological resource to a less-than-significant level.	Department of Conservation and Development	When demolition and site clearing activities are complete, and during grading
<b>Impact CUL-3:</b> Construction of the project potentially could directly or indirectly destroy a unique paleontological resource on site or unique geologic feature.	<b>Mitigation Measure CUL-3:</b> Implementation of Mitigation Measure CUL-1 would reduce impacts to paleontological resources or a unique geologic feature to a less-than-significant level.	Department of Conservation and Development	When demolition and site clearing activities are complete, and during grading

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><b>Impact CUL-4:</b> Construction of the project could potentially disturb human remains, including those interred outside of formal cemeteries.</p>	<p><b>Mitigation Measure CUL-4:</b> In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken:</p> <ol style="list-style-type: none"> <li>1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:               <ul style="list-style-type: none"> <li>■ The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and</li> <li>■ If the coroner determines the remains to be Native American:                   <ul style="list-style-type: none"> <li>• The coroner shall contact the Native American Heritage Commission within 24 hours;</li> <li>• The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American;</li> <li>• The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98; or</li> </ul> </li> </ul> </li> </ol>	<p>Department of Conservation and Development</p>	<p>During site clearing, grading, or construction activities; if necessary</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact CUL-4 Continued</i></p>	<p>2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance:</p> <ul style="list-style-type: none"> <li>■ The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the Commission;</li> <li>■ The identified descendant fails to make a recommendation; or</li> <li>■ The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.</li> </ul>		

**Energy**

*There are no significant impacts to energy*

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<b><i>Geology and Soils</i></b>			
<p><b>Impact GEO-1:</b> Implementation of the project could expose people and developments to adverse effects from strong seismic ground shaking and seismic related ground failure including liquefaction and lateral spreading.</p>	<p><b>Mitigation Measure GEO-1a:</b> The project applicant shall design structures and foundations to withstand expected seismic sources in accordance with the current version of the California Building Code, as adopted by the County.</p>	County Building Official	Prior to issuance of a building permit and during construction
	<p><b>Mitigation Measure GEO-1b:</b> At least 60 days prior to recording the Final Map the applicant shall submit updated improvement plans for the project for review by the County’s Peer Review Geologist and review and approval by the Zoning Administrator. For the purposes of geologic review, the plans shall provide detailed information on the bank stabilization wall system being proposed along the waterfront residential lots.</p>	Project Applicant	60 days prior to recording the Final Map
	<p><b>Mitigation Measure GEO-1c:</b> Prior to the issuance of building permits, the applicant shall submit an updated geology, soils and foundation report meeting the requirements of the Subdivision Ordinance, Section 944.420 for review by the Peer Review Geologist and review and approval of the Zoning Administrator. The report shall address the specific approach to grading and development indicated by the Final Subdivision Map and Improvement Plans, and shall provide technical data and engineering analysis that addresses the stability of the residential lots.</p> <ul style="list-style-type: none"> <li>■ The project geotechnical engineer shall use the following performance criteria:</li> <li>■ Factor of Safety of a minimum of 1.5 for static conditions,</li> <li>■ Factor of Safety of 1.25 for pseudo-static conditions, and which takes into account the potential for a seismic source in the site vicinity (Great Valley seismic zone) and</li> <li>■ Factor of Safety of 1.3 for rapid draw down.</li> </ul>	Project Applicant	Prior to issuance of building permits

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact GEO-1 Continued</i></p>	<p><b>Mitigation Measure GEO-1d:</b> During the construction of subdivision improvements, the project geotechnical engineer shall provide observation and testing services and issue a grading/shoring wall completion report. The report shall provide documentation on the bank stabilization wall depths and appropriate testing of fill compaction to determine the effectiveness of the bank stabilization measures in preventing lateral spreading failures toward the Kellogg Creek channel.</p>	<p>Project Geotechnical Engineer</p>	<p>During the construction of subdivision improvements</p>
<p><b>Impact GEO-2:</b> Development of the project site could result in substantial soil erosion or the loss of topsoil.</p>	<p><b>Mitigation Measure GEO-2:</b> The applicant shall submit a Storm Water Pollution Prevention Plan (SWPPP) for review and approval by the Building Inspection Division of the Department of Conservation and Development. The SWPPP shall be consistent with the terms of the State Construction Storm Water General Permit, the manual of Standards for Erosion and Sedimentation Control Measures by the Association of Bay Area Governments, policies and recommendations of the County and the RWQCB. The County has SWPPP resources available on its website: <a href="http://www.co.contra-costa.ca.us/depart/pw/design/swppp/">http://www.co.contra-costa.ca.us/depart/pw/design/swppp/</a>.</p> <p>With regard to long-term control of sedimentation and protection of water quality, a Storm Water Control Plan (SWCP) C.3 Report (dk Consulting 2006) was prepared for the project and submitted to the County’s Public Works Department in order to comply with County water quality requirements. Engineered linear bioretention facilities (dry swales) are the selected stormwater runoff treatment for this project, which are area based storm water treatment facilities.</p>	<p>Project Applicant</p>	<p>Prior to construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><b>Impact GEO-3:</b> The project could expose structures to substantial adverse effects related to expansive and corrosive soils on the project site.</p>	<p><b>Mitigation Measure GEO-3:</b> At least 30 days prior to recordation of the final map, the project applicant shall submit a plan for monitoring corrosivity of pads and road beds. The plan shall demonstrate how the results of the study will guide design of concrete and ferrous materials that are in contact with the ground.</p>	<p>Project Applicant</p>	<p>30 days prior to recordation of the final map</p>
<p><b>Global Climate Change</b></p>			
<p><b>Impact CUM GCC-1:</b> The project would generate GHG emissions in excess of the BAAQMD threshold of 4.6 metric tons of CO<sub>2</sub>e per service population per year and would have a considerable contribution on global climate change.</p>	<p><b>Mitigation Measure CUM GCC-1a:</b> The County shall ensure that the project applicant(s) employs green building techniques in the design of proposed structures within the Pantages Bays project. Specifically, structures shall conform at a minimum to the California Green Building Code or equivalent green building standards.</p> <p><b>Mitigation Measure CUM-GCC-1b:</b> The applicant has agreed to incorporate the following measures within the proposed project:</p> <ul style="list-style-type: none"> <li>■ Project landscaping shall include water-efficient native and adaptive plants in combination with high-efficiency irrigation equipment;</li> <li>■ Recycled content shall be included in project building materials, including the use of pre-consumer fly-ash in the concrete for project walkways, driveways, roadways, and non-plant landscape elements;</li> <li>■ To protect regional and indoor air quality, interior paints, carpets, adhesives, sealants, and coatings selected for the project shall have a low concentration of volatile organic chemicals (VOCs);</li> </ul>	<p>Contra Costa County</p>	<p>Prior to construction and during project design</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact CUM GCC-1 Continued</i></p>	<ul style="list-style-type: none"> <li>■ The heating, ventilation, and air conditions (HVAC) systems within each single family home shall use environmentally responsible refrigerants (i.e. non CFC-based refrigerants);</li> <li>■ Indoor ventilation systems in each home shall include high-efficiency systems to provide enhanced indoor air quality as potential pollutants would be ventilated through the building at a faster rate;</li> <li>■ The project shall install high efficiency restroom fixtures including low-flow or dual flush toilets to reduce potable water use;</li> <li>■ Wood from sustainably harvested forests (as certified by the Forest Stewardship Council) shall be used in wood materials for the single family homes, including flooring, cabinets, trim, shelving, doors, and countertops; and</li> <li>■ The project shall install water and energy efficient appliances and lighting fixtures, including EnergyStar dishwashing and refrigeration equipment.</li> </ul>		



Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<b><i>Hazards and Hazardous Materials</i></b>			
<p><b>Impact HAZ-1:</b> The project could potentially cause the release of hazardous materials into the environment during demolition, grading, and construction activities.</p>	<p><b>Mitigation Measure HAZ-1a:</b> Prior to issuance of grading permits, soil samples shall be collected from the paint disposal area, by a qualified professional, and analyzed for metals, petroleum hydrocarbons, and volatile organic compounds. Soil samples shall be compared to the Environmental Screening Levels (ESLs) as determined by the California Regional Water Quality Control Board San Francisco Bay Region. If soil samples exceed ESLs, the soil shall be investigated and remediated under the oversight of the Contra Costa Environmental Health Division (CCEHD).</p> <p><b>Mitigation Measure HAZ1b:</b> The project site shall be inspected by an environmental professional who specializes in hazardous materials and contamination, appointed by CDD, and paid for by the applicant, during demolition and preliminary grading activities. In the event that previously unidentified contaminants are discovered, the contamination shall be reported to CCEHD and investigated and remediated under the oversight of CCEHD in accordance with existing regulatory programs.</p>	Project Applicant	Prior to issuance of grading permits, during demolition, and preliminary grading activities
<p><b>Impact HAZ-2</b> The project could potentially release hazardous materials during demolition of the existing residence.</p>	<p><b>Mitigation Measure HAZ-2a:</b> Prior to the issuance of a demolition permit, the applicant shall submit proof to the County that all asbestos-containing materials have been removed at the existing residence located to the south of Point of Timber Road, in compliance with state regulations.</p> <p><b>Mitigation Measure HAZ-2b:</b> Prior to the issuance of a demolition permit, the applicant shall submit proof to the County that all lead-based paint (LBP) has been removed at each of the existing former residences on the project site, in compliance with state regulations.</p>	Project Applicant	<p>Prior to issuance of a demolition permit</p> <p>Prior to issuance of a demolition permit</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><b>Impact HAZ-3</b> Project demolition and construction activities could expose individuals at the Timber Point Elementary School to hazardous emissions or materials.</p>	<p><i>See Mitigation Measures HAZ-1, HAZ-2a, and HAZ-2b</i></p>	<p>Project Applicant</p>	<p>Prior to issuance of grading permits, during demolition, and preliminary grading activities</p>
<p><b>Hydrology and Water Quality</b></p>			
<p><b>Impact HYD-1:</b> Construction activities would alter the existing drainage patterns resulting in erosion, sedimentation, and contamination of storm water runoff which could degrade water quality in adjacent water bodies.</p>	<p><b>Mitigation Measure HYD-1a:</b> A qualified hydrologist on the project team shall perform, at minimum, weekly monitoring of the water quality in Kellogg Creek adjacent to the turbidity barriers to determine whether adjustments to their position or depth are required. Monitoring shall be more frequent, as needed, to accurately assess water quality degradation.</p>	<p>Qualified Hydrologist</p>	<p>Weekly monitoring</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact HYD-1 Continued</i></p>	<p><b>Mitigation Measure HYD-1b:</b> The applicant shall submit a Storm Water Pollution Prevention Plan (SWPPP) for review and approval by the Building Inspection Division of the Department of Conservation and Development. The SWPPP shall be consistent with the terms of the State Construction Storm Water General Permit, the manual of Standards for Erosion and Sedimentation Control Measures by the Association of Bay Area Governments, policies and recommendations of the County and the RWQCB. The County has SWPPP resources available on its website: <a href="http://www.co.contra-costa.ca.us/depart/pw/design/swppp/">http://www.co.contra-costa.ca.us/depart/pw/design/swppp/</a>. Additionally, the Title 10 Ordinance (1010) of the Contra Costa County Code of Ordinances requires the project sponsor to obtain a permit for drainage activities for creek improvements to Kellogg Creek and Old Kellogg Creek.</p>	<p>Project Applicant and Department of Conservation and Development</p>	<p>Prior to the issuance of a grading permit</p>
	<p><b>Mitigation Measure HYD -1c:</b> To prevent pollution of receiving waters due to equipment fueling, storage, and maintenance, the contractor shall develop a detailed set of guidelines to follow. Final plan notes, and contractor bid documents shall include the following specifications:</p> <ol style="list-style-type: none"> <li>1. Space in the staging area shall be reserved for storage of maintenance materials, and refueling purposes.</li> <li>2. The staging area shall be graded to prevent any runoff so that any contaminants such as spilled fuel, oil, or grease will not reach the receiving waters.</li> </ol> <p>If heavy-duty construction machinery is left overnight in an area that is not protected from direct runoff to receiving waters, drip pans shall be placed beneath the engine block and hydraulic systems.</p>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><b>Impact HYD-2:</b> Abandoned groundwater wells on the project site could act as direct conduits to groundwater for hazardous waste.</p>	<p><b>Mitigation Measure HYD-2:</b> Prior to the issuance of grading permits, the project applicant shall coordinate with Contra Costa Environmental Health Division (CCEHD) to identify and survey the existing and abandoned groundwater wells on the project site.</p> <p>The identified groundwater wells shall be properly decommissioned under permit from CCEHD. CCEHD shall inspect the decommissioned wells for approval.</p>	<p>Project Applicant</p>	<p>Prior to issuance of grading permits</p>
<p><b>Impact HYD-3:</b> The project site is located within areas of projected tidal inundation due to sea level rise, which would place people and structures within a flood hazard associated with long-term sea level rise.</p>	<p><b>Mitigation Measure HYD-3a:</b> The final map and improvement plans, including grading plans shall include, at minimum, a finished floor elevation of residential units at 14.1 feet.</p>	<p>Project Applicant</p>	<p>During project design</p>
	<p><b>Mitigation Measure HYD-3b:</b> The final map and improvement plans, including grading plans shall include, at minimum, a finished street level elevation of 12.1 feet.</p>	<p>Project Applicant</p>	<p>During project design</p>
<p><b>Land Use and Planning</b></p>			
<p><i>There are no significant impacts to land use planning</i></p>			
<p><b>Mineral Resources</b></p>			
<p><i>There are no significant impacts to mineral resources</i></p>			

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<b>Noise</b>			
<p><b>Impact NOI-1:</b> Project construction would cause a substantial temporary increase in ambient noise levels.</p>	<p><b>Mitigation Measure NOI-1a:</b> All noise generating construction activities shall be limited to the hours of 7:30 AM to 5:30 PM, Monday through Friday, and shall be prohibited on state and federal holidays on the calendar dates that these holidays are observed by the state or federal government as listed below:</p> <ul style="list-style-type: none"> <li>▪ New Year’s Day (State and Federal)</li> <li>▪ Birthday of Martin Luther King, Jr. (State and Federal)</li> <li>▪ Washington’s Birthday/Presidents’ Day (State and Federal)</li> <li>▪ Lincoln’s Birthday (State)</li> <li>▪ Cesar Chavez Day (State)</li> <li>▪ Memorial Day (State and Federal)</li> <li>▪ Independence Day (State and Federal)</li> <li>▪ Labor Day (State and Federal)</li> <li>▪ Columbus Day (State and Federal)</li> <li>▪ Veterans Day (State and Federal)</li> <li>▪ Thanksgiving Day (State and Federal)</li> <li>▪ Day after Thanksgiving (State)</li> <li>▪ Christmas Day (State and Federal)</li> </ul> <p>For specific details on the actual day the state and federal holidays occur, please visit the following websites:</p> <ul style="list-style-type: none"> <li>▪ Federal Holidays: <a href="http://www.opm.gov/fedhol/2006.asp">http://www.opm.gov/fedhol/2006.asp</a></li> <li>▪ California Holidays: <a href="http://www.edd.ca.gov/eddsthoh.htm">http://www.edd.ca.gov/eddsthoh.htm</a></li> </ul>	<p>Project Applicant</p>	<p>During construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact NOI-1 Continued</i></p>	<p>An on-site complaint and enforcement manager shall be available to respond to and track complaints. The manager will be responsible for responding to any complaints regarding construction noise and for coordinating with the adjacent land uses. The manager will determine the cause of any complaints and coordinate with the construction team to implement effective measures (considered technically and economically feasible) warranted to correct the problem. The telephone number of the coordinator shall be posted at the construction site and provided to neighbors in a notification letter. The manager will be trained to use a sound level meter and should be available during all construction hours to respond to complaints.</p> <p>At least one week prior to commencement of grading or construction activities for each major phase of construction the applicant shall prepare a notice that grading or construction work will commence. The notice shall be posted at the site and mailed to all the owners and occupants of property within 300 feet of the exterior boundary of the project site as shown on the latest equalized assessment roll. The notice shall include a list of contact persons with name, title, phone number and area of responsibility. The person responsible for maintaining the list shall be included. The list shall be kept current at all times and shall consist of persons with authority to indicate and implement corrective action in their area of responsibility. The names of individuals responsible for noise and litter control, tree protection, construction traffic and vehicles, erosion control, and the 24-hour emergency number, shall be expressly identified in the notice. The notice shall be re-issued with each phase of the project and a copy shall be mailed to the Contra Costa County Department of Conservation and Development.</p>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact NOI-1 Continued</i></p>	<p><b>Mitigation Measure NOI-1b:</b> The project applicant shall prepare a detailed construction noise mitigation plan for review and approval by the County. The goal of the plan is to provide a framework for notifying neighbors of the extent of the noise that can be expected during particular phases of the project grading, what mitigation will be applied, and who to call if there are noise-related complaints. Submission of this construction noise mitigation plan shall be required as part the building permit application.</p> <p>The construction noise mitigation plan shall use the California Model Community Noise Ordinance limits of 75 dBA for mobile equipment and 60 dBA for stationary equipment as the primary noise mitigation goals.</p> <p>Information in the plan shall include but not be limited to the following:</p> <ul style="list-style-type: none"> <li>▪ Construction schedule showing dates and location of activities.</li> <li>▪ List of equipment to be used during each major construction phase and sound level estimates for each phase.</li> <li>▪ Height, length, and location of any recommended noise barriers. The barriers can be constructed out of wood or other materials as long as they have a minimum surface weight of approximately 2.5 pounds per square foot. Possible materials include 1-1/8-inch-thick plywood or fully overlapping 1x redwood boards (1-1/2-inch-thick total). The barriers would likely be 6 to 8 feet tall but this would be refined as part of the construction noise control plan. Issues to consider when determining the ultimate height, length, and location of the barriers are the actual construction practices, including equipment to be used and the location and duration of noisier activities. The topography will also need to be considered in the final determination of barrier heights and effectiveness.</li> </ul>	<p>Project Applicant</p>	<p>Prior to construction and during construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact NOI-1 Continued</i></p>	<ul style="list-style-type: none"> <li>■ Truck routing to minimize noise at existing noise sensitive locations. The project applicant shall limit trucks to routes, hours, and days of the week set by Contra Costa County.</li> <li>■ Location of stationary equipment as far from residents as is practicable and/or enclose noise sources.</li> <li>■ The project applicant shall require the contractor to use electric or hydraulically powered rather than diesel or pneumatically powered equipment and construction tools as feasible.</li> <li>■ Provide intake silencers and "resident-type" exhaust mufflers on vehicles and equipment and/or acoustically shroud or shield impact tools as feasible.</li> <li>■ <del>The method for construction of the shoring walls will be sheet pile shoring wall that for installation will use a variable moment driver/hammer, or similar vibratory method approved by CDD.</del></li> </ul> <hr/> <p><b>Mitigation Measure NOI-1c:</b> The project applicant shall construct temporary noise barriers along the western property line neighboring the existing residences at the Ravenswood and Discovery Bay West subdivisions. Noise barriers shall provide noise reductions in the range of 5 to 10 dBA.</p>		
<p><b>Population and Housing</b></p>			
<p><i>There are no significant impacts to population and housing</i></p>			
<p><b>Public Services and Recreation</b></p>			
<p><b>Impact PS 1:</b> The project would be required to provide 2.6 acres of parkland to meet the</p>	<p><del><b>Mitigation Measure PS 1:</b> The project applicant shall, on the face of the Final Map (and/or other recorded instrument approved by CDD), dedicate approximately 2.6 acres of public trails to the public (a 20-foot emergency vehicle access (EVA) with at least eight feet paved in the</del></p>	<p>Project Applicant</p>	<p>Concurrent with the recording of the map</p>



Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p>County's parkland dedication requirement.</p>	<p>middle, an eight foot sidewalk leading from Point of Timer Road to the public trails through the preserved open space, and a passive recreation location at the end of the trail (beyond the marine patrol substation) for ingress, egress, and use by pedestrians and bicyclists. The right of public access shall confirm that dogs are not permitted on the EVA/trails due to proximity to creek banks, emergent marsh and seasonal wetlands (this provision includes members of the public with dogs and Pantages Bays homeowners). It shall confirm that access is limited from dawn to dusk. The applicant shall provide a water fountain at the end of the trail, beyond the marine patrol substation, for public use with tables and seating next to the open water. At the end of the trail, historical kiosks and signage (related to this part of the Delta and Point of Timber) and educational (related to the environment and its protection; notice the dogs not permitted), and benches along the trails, all in a number, design and content subject to the review and approval of CDD. The public trails through the open space area also serve as an EVA and must comply with Fire Department standards. In combination with the dedication of the public trail the project shall pay a park dedication fee of \$1351 per dwelling unit upon issuance of building permits.</p> <p>Signage shall be provided at the two project entries for public pedestrians and bicyclists (Point of Timber and Wilde Drive) and the trail heads at the end of "A" street and "B" street. The signs confirm public access to the EVA/trails and the sidewalks and roads within Pantages Bays. The signage shall also specify the limitations on such use (e.g. no dogs on EVA/public trails; dogs must be on leash on roads and sidewalks; public pedestrian and bicyclist access permitted only from dawn to dusk). The signs and their content are subject to the review and approval of CDD.</p>		
<p><i>Impact PS 1 Continued</i></p>	<p>As provided in Condition of Approval number 69, it is anticipated the TDBCSD will own and maintain Open Space Parcel "C" which includes the EVA/trails and seating at the end of the trail. Through landscaping and lighting district assessment (or other binding, permanent agreement</p>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><del>approved by CDD) the future Pantages Bays residents shall pay for the maintenance of the EVA/trail and seating end point for their use and that of the public. The right of public access to roads and sidewalks shall confirm that it does not include public vehicular use (unless by invited guest), and that dogs are permitted with the public and residents of Pantages only if on leash. Access to the EVA/trails, roadways and waterways within Pantages Bays is also granted to public agencies such as TDBCSD, RD 800, Fire District, Sheriff's Office.</del></p> <p><del>It is anticipated that these offers of dedication of public access for pedestrian and bicyclists will be accepted on behalf of the public by the County (and/or by another public agency approved by CDD). These rights of public access and the right of enforcement by members of the public and the County (or by another public agency) shall be confirmed in the CC&amp;R's. ( Mitigation Measure PS-1)</del></p>			
<p><b>Public Utilities</b></p>			
<p><b>Impact UTIL-1:</b> Per the requirements of Title 22 of the California Waterworks Standards, the Town of Discovery Bay Community Services District does not currently have sufficient legal water supply capacity to serve the project.</p>	<p><b>Mitigation Measure UTIL-1:</b> Prior to final map recordation, the applicant shall provide documentation to CDD (i.e., Can &amp; Will Serve letter and verification from other governmental authorities, such as the California Department of Public Health), demonstrating to the satisfaction of CDD that the TDBCSD has identified and secured sufficient financing for the construction of any required improvements outlined in the Water MP to ensure sufficient capacity exists to serve the project.</p> <p>Prior to the issuance of the first occupancy permit, the Applicant shall provide documentation to CDD that said improvements needed to serve the project are constructed and operational. This shall be a deed disclosure on each deed.</p>	<p>Project Applicant</p>	<p>Prior to filing of an application</p>
<p><b>Impact UTIL-2:</b> Town of Discovery Bay Community Services District does not currently have sufficient</p>	<p><b>Mitigation Measure UTIL-2:</b> Prior to final map recordation, the applicant shall provide documentation to CDD (i.e., Can &amp; Will Serve letter), demonstrating to the satisfaction of the CDD that the TDBCSD has identified and secured sufficient funding for the construction of any</p>	<p>Project Applicant</p>	<p>Prior to filing of an application</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p>wastewater treatment capacity to serve the project.</p>	<p>capacity or treatment improvements outlined in the Wastewater MP and necessary so that serving the project does not exceed the requirements of the RWQCB.</p> <p>Prior to the issuance of the first occupancy permit, the Applicant shall provide documentation to the CDD that said improvements needed to serve the project are constructed and operational, and that any source control measures are being implemented consistent with the requirements of the RWQCB.</p>		
<p><b>Impact CUM UTIL-1:</b> The project, in combination with other reasonably foreseeable projects, would have a considerable contribution to long-term water supplies within the project area.</p>	<p><b>Mitigation Measure CUM UTIL-1:</b> The project applicant shall implement Mitigation Measure UTIL-1.</p>	<p>Project Applicant</p>	<p>Prior to final map recordation</p>
<p><b>Impact CUM UTIL-2:</b> The project, in combination with other reasonably foreseeable projects, would have a considerable contribution to long-term wastewater treatment within the project area.</p>	<p><b>Mitigation Measure CUM UTIL-2:</b> The project applicant shall implement Mitigation Measure UTIL-2.</p>	<p>Project Applicant</p>	<p>Prior to final map recordation</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<b>Transportation and Circulation</b>			
<p><b>Impact TRA-1:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions at the SR4/Byron Highway (south intersection) signalized intersection.</p>	<p><b>Mitigation Measure TRA-1:</b> Mitigation of the unacceptable traffic conditions at the SR4/Byron Highway (south) can be achieved by adding a second northbound to westbound left-turn lane from Byron Highway onto SR4 and its associated receiving lane. This improvement is <u>included in the 2018 East County Regional Area of Benefit (ECRAOB) Transportation Mitigation Fee Update project list, currently identified in the 2007 Contra Costa County Capital Road Improvement &amp; Preservation Program, although funding has not been identified. If this improvement is not included in a County fee program or other funding program at the time of project approvals, the project applicant shall be responsible for their fair share of the improvement. The project applicant shall pay the required fee</u> prior to the issuance of building permits.</p>	<p>Project Applicant</p>	<p>Prior to the issuance of building permits</p>
<p><b>Impact TRA-2:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions on Vasco Road.</p>	<p><b>Mitigation Measure TRA -2:</b> The project applicant shall pay regional roadway fees to the East Contra Costa Regional Fee and Financing Authority (ECCRFFA) fee program to upgrade existing roadways. Implementation of Mitigation Measure TRA -2 would require the project applicant to pay regional roadway fees to upgrade existing roadways and/or construct new facilities in the project area upon issuance of building permits.</p>	<p>Project Applicant</p>	<p>Prior to construction</p>
<p><b>Impact TRA-3:</b> Implementation of the project would increase traffic volumes on nearby rural roads, and create conflicts with the farm equipment that share these roads during the peak summer months.</p>	<p>Implementation of <b>Mitigation Measure TRA -2</b> would require the project applicant to pay regional roadway fees to upgrade existing roadways and/or construct new facilities in the project area.</p>	<p>Project Applicant</p>	<p>Prior to construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><b>Impact CUM TRA-1:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions at the unsignalized intersection of Byer Road/Byron Highway (No. 6).</p>	<p><b>Mitigation Measure CUM TRA-1:</b> Mitigation of the unacceptable traffic conditions at the Byer Road/Byron Highway intersection can be achieved by installing a traffic signal and a southbound left turn lane. This improvement is not identified in any funding program.</p> <p>As indicated in Table 4.16-15 of the EIR, the project applicant would be required to contribute 12 percent of the total costs to the County’s Road Trust account (Fund #8192) for this improvement upon issuance of building permits. This trust fund shall fund improvements to intersections identified as operating unacceptably under cumulative conditions and not identified in an AOB fee program.</p> <p>In lieu of the nominal cash contribution towards this future improvement, the County finds it preferable to require the applicant to fully fund and install the signal and intersection improvements at Point of Timber/Bixler Road as described in <b>Mitigation Measure CUM TRA-5</b>. This alternative construction project would be of greater overall benefit due to its closer proximity to the subdivision and its greater impact thereon.</p> <p><del>If this improvement is not included in a County fee program at the time of project approvals, the project applicant shall pay its fair share towards the cost of this improvement to the County’s Road Trust account (Fund #8192) prior to the issuance of building permits. This trust fund shall fund improvements to intersections identified as operating unacceptably under cumulative conditions and not identified in a fee program. As indicated in Table 4.16-15, the project applicant would be required to contribute 12 percent of the total costs for this improvement.</del></p>	<p>Project Applicant</p>	
<p><b>Impact CUM TRA-2:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions at</p>	<p><b>Mitigation Measure CUM TRA-2 (Option 1):</b> Mitigation of the unacceptable traffic conditions at the Holway Drive/Byron Highway and Camino Diablo Road/Byron Highway intersections can be achieved by installing a traffic signal at the Camino Diablo Road/Byron Highway and providing left-turn pockets on all approaches. Traffic turning left from</p>	<p>Project Applicant</p>	<p>During project design and prior to issuance of building permits</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p>the unsignalized intersections of Holway Drive/Byron Highway (No. 7) and Camino Diablo Road/Byron Highway (No. 23).</p>	<p>eastbound Camino Diablo Road to northbound Holway Drive and left again from Holway Drive to Byron Highway would instead turn left at the signalized Camino Diablo Road/Byron Highway intersection. This mitigation would require modifications to the adjacent railroad crossing west of the intersection to provide the required left turn pocket on the eastbound approach.</p> <p>This improvement is included in the <u>2018 ECRAOB Draft East County Regional AOB</u> Transportation Mitigation Fee Update project list. The project applicant shall pay the required <del>AOB</del> fee.</p>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><i>Impact CUM TRA-2 Continued</i></p>	<p><b>Mitigation Measure CUM TRA-2 (Option 2):</b> As an alternative to Mitigation Measure CUM TRA-2 (Option 1), mitigation of the unacceptable traffic conditions at the Holway Drive/Byron Highway and Camino Diablo Road/Byron Highway intersections can be achieved by installing traffic signals at both intersections, in addition to adding a northbound left turn lane pocket at the Holway Drive/Byron Highway intersection. Traffic would not be shifted under this mitigation, and a left turn pocket across the railroad crossing at the Camino Diablo Road/Byron Highway intersection would not be needed.</p> <p>A signal at the Holway Drive/Byron Highway intersection is not identified in any funding program. Similarly, the installation of a signal at Camino Diablo Road/Byron Highway is not identified in any funding program.</p> <p>If these improvements are not included in a County fee program at the time of project approvals, the project applicant shall pay its fair share towards the cost of these improvements to the County's Road Trust account (Fund #8192) prior to the issuance of building permits. This trust fund shall fund improvements to intersections identified as operating unacceptably under cumulative conditions and not identified in a fee program. As indicated in Table 4.16-15, the project applicant would be required to contribute between 2 percent and 14 percent of the total costs for this improvement.</p>	<p>Project Applicant</p>	<p>During project design and prior to issuance of building permits</p>
<p><b>Impact CUM TRA-3:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions at the unsignalized intersection of Sellers Avenue/Balfour Road (No. 9).</p>	<p><b>Mitigation Measure CUM TRA-3:</b> Mitigation of the unacceptable traffic conditions at the Sellers Avenue/Balfour Road intersection can be achieved by installing a traffic signal and providing left turn lanes at all four intersection approaches.</p> <p>This improvement is included in the <u>2018 ECRAOB Draft East County AOB-Transportation Mitigation Fee Update</u> project list. The project applicant shall pay the required 2018 <u>ECRAOBAOB</u> fee. Implementation of this mitigation measure would reduce this impact to less-than-significant.</p>	<p>Project Applicant</p>	<p>During project design and prior to issuance of building permits</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<p><b>Impact CUM TRA-4:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions at the unsignalized intersection of Point of Timber Road/Byron Highway (No. 12).</p>	<p><b>Mitigation Measure CUM TRA-4:</b> Mitigation of the unacceptable traffic conditions at the Point of Timber Road/Byron Highway intersection can be achieved by installing a traffic signal.</p> <p>This improvement is included in the <u>2018 ECRAOB Draft East County AOB</u> Transportation Mitigation Fee Update project list. The project applicant shall pay the required <u>AOB</u> fee.</p>	<p>Project Applicant</p>	<p>During project design and prior to issuance of building permits</p>
<p><b>Impact CUM TRA-5:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions at the unsignalized intersection of Point of Timber Road/Bixler Road (No. 13).</p>	<p><b>Mitigation Measure CUM TRA-5:</b> Mitigation of the unacceptable traffic conditions at the Point of Timber Road/Bixler Road intersection can be achieved by installing a traffic signal and adding left turn lanes at all four intersection approaches. This improvement is not identified in any funding program.</p> <p>As indicated in Table 4.16-15 of the EIR, the project applicant would be required to contribute between 30 and 39 percent of the total costs to the County’s Road Trust account (Fund #8192) for this improvement upon issuance of building permits. This trust fund shall fund improvements to intersections identified as operating unacceptably under cumulative conditions and not identified in a fee program.</p> <p>In lieu of the cash contribution towards this future improvement, the County finds that the best option is to require the applicant to fully fund and install the signal and intersection improvements at Point of Timber/Bixler Road as described:</p> <p>The Applicant shall install a traffic signal and add left-turn lanes at all four intersection approaches for mitigation of the unacceptable traffic conditions at the Point of Timber Road/Bixler Road for CUM TRA-5 per Condition of Approval # 101.</p> <p>If this improvement is not included in a County fee program at the time of project approvals, the project applicant shall pay its fair share towards</p>	<p>Project Applicant</p>	<p>During project design and prior to issuance of building permits</p>



Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
	<p><del>the cost of this improvement to the County's Road Trust account (Fund #8192) prior to the issuance of building permits. This trust fund shall fund improvements to intersections identified as operating unacceptably under cumulative conditions and not identified in a fee program. As indicated in Table 4.16-15, the project applicant would be required to contribute between 30 and 39 percent of the total costs for this improvement.</del></p>		
<p><b>Impact CUM TRA-6:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions at the unsignalized intersection of Point of Marsh Creek Road/Sellers Avenue (No. 16).</p>	<p><b>Mitigation Measure CUM TRA-6:</b> Mitigation of the unacceptable traffic conditions at the Marsh Creek Road/Sellers Avenue intersection can be achieved by installing a traffic signal.</p> <p>This improvement is included in the <u>2018 ECRAOB Draft East County AOB</u> Transportation Mitigation Fee Update project list. The project applicant shall pay the required <u>2018 ECRAOB AOB</u>-fee.</p>	<p>Project Applicant</p>	<p>During project design and prior to issuance of building permits</p>
<p><b>Impact CUM TRA-7:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions at the unsignalized intersection of Point of Marsh Creek Road/Bixler Road (No. 18).</p>	<p><b>Mitigation Measure CUM TRA-7:</b> Mitigation of the unacceptable traffic conditions at the Marsh Creek Road/Bixler Road intersection can be achieved by installing a traffic signal. This improvement is not identified in any funding program.</p> <p>As indicated in Table 4.16-15 of the EIR, the project applicant would be required to contribute between 10 percent and 11 percent of the total costs to the County's Road Trust account (Fund #8192) for this improvement upon issuance of building permits. This trust fund shall fund improvements to intersections identified as operating unacceptably under cumulative conditions and not identified in an AOB fee program.</p> <p>In lieu of the nominal cash contribution towards this future improvement, the County finds it preferable to require the applicant to fully fund and install the signal and intersection improvements at Point of Timber/Bixler Road as described in <b>Mitigation Measure CUM TRA-5.</b></p>	<p>Project Applicant</p>	<p>During project design and prior to issuance of building permits</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
	<p>This alternative construction project would be of greater overall benefit due to its closer proximity to the subdivision and its greater impact thereon.</p> <p>If this improvement is not included in a County fee program at the time of project approvals, the project applicant shall pay its fair share towards the cost of this improvement to the County's Road Trust account (Fund #8192) prior to the issuance of building permits. This trust fund shall fund improvements to intersections identified as operating unacceptably under cumulative conditions and not identified in a fee program. As indicated in Table 4.16-15, the project applicant would be required to contribute between 10 and 11 percent of the total costs for this improvement.</p>		
<p><b>Impact CUM TRA-8</b> Implementation of the project would increase traffic volumes and worsen LOS conditions at the signalized intersection of SR4/Byron Highway (south) (No. 19).</p>	<p><b>Mitigation Measure CUM TRA-8:</b> Mitigation of the unacceptable traffic conditions at the SR4/Byron Highway (south) intersection can be achieved by adding a second left-turn lane on the Byron Highway approach and a second through lane on the southeast-bound SR4 approach.</p>	<p>Project Applicant</p>	<p>During project design and prior to issuance of building permits</p>
<p><i>Impact CUM TRA-8 Continued</i></p>	<p>The second left-turn lane on the Byron Highway approach improvement is included in the <u>2018 ECRAOB Transportation Mitigation Fee Update project list</u>, currently identified in the <u>2007 Contra Costa County Capital Road Improvement &amp; Preservation Program</u>, although funding has not been identified. The second through lane on the southeast-bound SR4 approach is not identified in any funding program.</p> <p>If this improvement is not included in a County fee program at the time of project approvals, the project applicant shall pay its fair share towards the cost of this improvement to the County's Road Trust account (Fund #8192). The project applicant shall pay the required fee</p>		

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
	<p>prior to the issuance of building permits. <del>This trust fund shall fund improvements to intersections identified as operating unacceptably under cumulative conditions and not identified in a fee program. As indicated in Table 4.16-17, the project applicant would be required to contribute between 9 and 11 percent of the total costs for this improvement.</del></p>		
<p><b>Impact CUM TRA-9:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions at the unsignalized intersection of SR4/Newport Drive (No. 21).</p>	<p><b>Mitigation Measure CUM TRA-9:</b> Mitigation of the unacceptable traffic conditions at the SR4/Newport Drive intersection can be achieved by installing a traffic signal. This improvement is not identified in any funding program.</p> <p>As indicated in Table 4.16-15 of the EIR, the project applicant would be required to contribute between 4 percent and 6 percent of the total costs to the County’s Road Trust account (Fund #8192) for this improvement upon issuance of building permits. This trust fund shall fund improvements to intersections identified as operating unacceptably under cumulative conditions and not identified in an AOB fee program.</p> <p>In lieu of the nominal cash contribution towards this future improvement, the County finds it preferable to require the applicant to fully fund and install the signal and intersection improvements at Point of Timber/Bixler Road as described in <b>Mitigation Measure CUM TRA-5</b>. This alternative construction project would be of greater overall benefit due to its closer proximity to the subdivision and its greater impact thereon.</p> <p><del>If this improvement is not included in a County fee program at the time of project approvals, the project applicant shall pay its fair share towards the cost of this improvement to the County’s Road Trust account (Fund #8192) prior to the issuance of building permits. This trust fund shall fund improvements to intersections identified as operating unacceptably under cumulative conditions and not identified in a fee</del></p>	<p>Project Applicant</p>	<p>During project design and prior to issuance of building permits</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
	<p><del>program. As indicated in Table 4.16-15, the project applicant would be required to contribute between 4 and 6 percent of the total costs for this improvement.</del></p>		
<p><b>Impact CUM TRA-10:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions at the signalized intersection of Camino Diablo Road/Vasco Road (No. 22).</p>	<p><b>Mitigation Measure CUM TRA-10:</b> Mitigation of the unacceptable traffic conditions at the Camino Diablo Road/Vasco Road intersection can be achieved by adding a northbound right turn lane. This improvement is included as one of several improvements at this intersection in the 2013 ECRAOB <del>Draft East County AOB</del> Transportation Mitigation Fee Update project list. The project applicant shall pay the required <u>2018 ECRAOB AOB</u> fee.</p>	<p>Project Applicant</p>	<p>During project design and prior to issuance of building permits</p>
<p><b>Impact CUM TRA-11:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions along Vasco Road.</p>	<p><b>Mitigation Measure CUM TRA-11:</b> The project applicant shall pay regional roadway fees to the East Contra Costa Regional Fee and Financing Authority (ECCRFFA) fee program to upgrade existing roadways.</p>	<p>Project Applicant</p>	<p>During project design and prior to issuance of building permits</p>
<p><b>Impact CUM TRA-12:</b> Implementation of the project would increase traffic volumes and worsen LOS conditions along Marsh Creek Road.</p>	<p>Implementation of Mitigation Measure TRA -2 would require the project applicant to pay regional roadway fees to upgrade existing roadways and/or construct new facilities in the project area. However, as there are no specific plans to provide additional capacity on this segment of Marsh Creek Road, the impact would remain significant and unavoidable.</p>	<p>Project Applicant</p>	<p>Prior to construction</p>

Environmental Impacts	Mitigation Measures	Responsible Agency	Timing
<b>Visual Resources and Aesthetics</b>			
<p><b>Impact VIS-1:</b> The project would create new sources of light and glare which could adversely affect day or nighttime views in the area.</p>	<p><b>Mitigation Measure VIS-1:</b> The project applicant shall prepare a lighting plan for the review and approval by the Zoning Administrator. Exterior lighting shall be low mounted, downward casting, shielded, and shall utilize motion detection systems where applicable. In general, the light footprint of individual units shall not extend beyond the periphery of each property. Implementation of exterior lighting fixtures on all buildings shall also comply with the standard California Building Code (Title 24, Building Energy Efficiency Standards) to reduce the lateral spreading of light to surrounding uses.</p>	<p>Project Applicant and Department of Conservation and Development</p>	<p>Prior to issuance of grading or building permits</p>

Source: Circlepoint, 2013.