5.5 Biological Resources

The following mitigation measures are recommended for Alternatives A, B, C, D, and E.

Upland Habitats:

Measure 5.5-1: The project applicant shall compensate for the loss of coast live oak woodland and north coast riparian scrub habitat at a ratio no less than 1:1. Compensation will include on-site creation, restoration, or enhancement along the southern portion of the project area north of and parallel with Coyote Creek (channel I-2). On-site creation/restoration plans must be prepared by a qualified biologist prior to construction and be implemented within one year following construction. On-site creation/restoration sites shall be monitored for at least five (5) years to ensure their success.

Wetlands and Other Waters of the U.S.:

Measure 5.5-2: The project applicant shall ensure that any loss of waters of the U.S. shall be compensated for by the preservation or creation of similar habitat at a ratio no less than 1:1, prior to construction. Permits secured for the project (Section 404/401) may require higher ratios. Compensation may include on-site creation, restoration, or enhancement, off-site creation, or payment into a Corps-approved mitigation bank for in-kind habitat credits. Mitigation bank credits must be obtained prior to construction. On-site or off-site creation/restoration plans must be prepared by a qualified biologist prior to construction and approved by the Corps. On- or off-site creation/restoration sites shall be monitored for at least five (5) years to ensure their success.

Federally Listed Species:

Measure 5.5-3: Impacts to aquatic habitat for federally listed salmonids during construction shall be minimized by implementing Best Management Practices (BMP) to protect water quality. This may include installing temporary siltation barriers (such as silt fencing), straw waddles, covering exposed soils, protecting inlet structures with sand bags, and reseeding exposed soils immediately following construction. These BMPs shall be fully described within the project's Storm Water Pollution Protection Plan (SWPPP), which shall be prepared prior to construction and implemented by the project applicant during construction. The project applicant shall also adhere to the measures provided under the EPA's NPDES General Construction Permit. Equipment and soil stock areas shall be placed at least 50 feet away from aquatic water sources.

Migratory Birds:

Measure 5.5-4: The applicant shall make every effort to conduct any tree and shrub removal activities that are required for project construction outside of the migratory bird and raptor breeding season (March 1 through August 31). For construction activities that will occur between March 1 and August 31 of any given year, the applicant shall conduct preconstruction surveys in suitable nesting habitat within 500 feet of the project site for nesting raptors. Surveys shall be conducted by a qualified biologist. If nesting raptors are detected, the applicant will consult with a qualified biologist to develop suitable measures to avoid impacting breeding effort. Measures may include, but are not limited to:

1. Maintaining a 500 foot buffer around each active raptor nest; no construction activities shall be permitted within this buffer except as described in Mitigation Measure 5.5-4II.
2. Depending on conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the breeding effort. In this case (to be determined on an individual basis), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the project would impact the nest, the biologist shall immediately inform the construction manager. The construction manager shall stop construction activities within the buffer until the nest is no longer active.

State and Local Special-Status Species:

Measure 5.5-5. The applicant shall conduct a survey for bat roosts within suitable habitat on the project site. The survey shall be conducted by a qualified biologist. This survey shall include, at a minimum, a visual inspection of potential bat roosting sites, and may include an evening or night survey to observe emergence and/or to detect presence using sonic detectors (to detect bat vocalizations). If occupied bat roosts are detected, the applicant shall consult with a qualified biologist to develop measures that avoid impacting roosts. Measures may include, but are not limited to:

1. Maintaining a 100-foot buffer around each roost; no construction activities shall be permitted within this buffer except as described in Mitigation Measure 5.5-5II.
2. Exclusion of bats from roosts (ensuring that no bats are trapped in the roost). For maternity roosts, this measure may only be implemented once young have been reared and are able to freely leave the roost (typically before March and after August).

5.6 Cultural and Paleontological Resources

The following mitigation measures are recommended for Alternatives A, B, C, D, and E.

Archaeological and Historical Resources:

Measure 5.6-1: Due to the sensitivity of the general vicinity, appropriate recommendations consist of monitoring by a qualified archaeologist and Native American representative during ground-disturbing activities that occur within 150 feet of perennial water courses including Porterfield Creek at the north and central portions of the project area and the unnamed creek at the south of the project area. An archaeological monitoring program should be established that includes consultation between the consulting archaeologist, lead agency, and the project proponent The program should clearly define the authority to temporarily halt/redirect construction should resources be encountered.

Measure 5.6-2: If previously unidentified cultural materials are unearthed during construction, work should be halted in that area until a qualified archaeologist can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-era materials might include stone, concrete,