

3.4 BIOLOGICAL RESOURCES

3.4.1 SETTING

The Monterey Bay region is rich in plant and animal life, and contains some of California's most valued natural habitats within its coastal, mountain, riparian and other areas. The region is dominated by coastal mountain ranges, including the Santa Cruz range north of the Bay, the Santa Lucia range to the south, the Gabilan range east of the Salinas Valley, and the inland Diablo range, which forms the eastern edge of San Benito County. Within the coastal ranges north of Watsonville and south of Monterey, dense coniferous forests are prevalent, with many stands of redwood trees. Between these densely forested areas, along the eastern slopes of the Coast Ranges, and further eastward, the forests are thinner and trend toward chaparral habitats. Most of the central valleys and lowlands have been in agricultural use for over a hundred years. The region's indigenous animals include various types of raptors and other birds, mountain lions, bobcats, deer, foxes, squirrels, raccoons, and sea otters, sea lions. The extremely rare California condor, the largest bird in North America, is being reintroduced to the coastal ranges, and both humpback and gray whales can be seen periodically from the shoreline. Monarch butterflies migrate toward the coast in December, and congregate spectacularly at Natural Bridges State Beach near Santa Cruz and in Pacific Grove in Monterey County.

The region contains a number of federally-protected lands and waters, including Pinnacles National Monument, the California Sea Otter Game Refuge, and the Monterey Bay National Marine Sanctuary, which includes all of Monterey Bay. The Los Padres National Forest covers a vast area of the Santa Lucia mountain range, including the region's highest peak, Junipero Serra Peak west of Greenfield. Specially protected coastal habitat areas include Elkhorn Slough, and a marine laboratory owned and managed by the University of California at Santa Cruz.

There are numerous animal species identified as threatened and endangered within the region, including the California Brown Pelican, California Clapper Rail, Western Snowy Plover, Bank Swallow, Least Bells Vireo, Tidewater Goby, San Joaquin Kit Fox, Santa Cruz Long-Toed Salamander, Arroyo Southwestern Toad, California Red-Legged Frog, Vernal Pool Fairy Shrimp, and Smith Blue Butterfly. Threatened and endangered plants in the region include the Adobe Sanicle, Santa Cruz Tarplant, Beach Layia, Menzies' Wallflower, Yadon's Wallflower, Coastal Dunes Milk-Vetch, Tidestrom's Lupine, Pacific Grove Clover, Santa Lucia Mint, Monterey Spineflower, Robust Spineflower, Butterworth's Buckwheat, Sand Gilia, Hickman's Cinquefoil, Seaside Bird's Beach, Dudley's Lousewort, Mexican Flannelbush, and Little Sur Manzanita.

Habitat Conservation Plans (HCPs) are being developed and/or implemented in several areas within the region, and the general plans of each County include policies to preserve natural wildlife habitats, including environmentally significant areas, and to develop HCPs where necessary.

3.4.2 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Implementation of the three plans could have a significant environmental impact if it were to result in:

- A substantial adverse effect (either directly or through habitat modifications) on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- A substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- A substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Substantial interference with the movement of any native resident or migratory fish or wildlife species;
- Substantial interference with established native resident or migratory wildlife corridors;
- Substantial impediment to the use of native wildlife nursery sites;
- Any conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Any conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Although adoption of the three plans would not, in and of itself, have any effect on biological resources within the region, construction of several of the projects identified in the financially constrained Action Element might be expected to entail adverse effects.

Habitat

While some projects would not necessarily create significant impacts to biological resources, the introduction of more human activity into potentially sensitive areas would increase the potential for conflicts with sensitive plant and wildlife species. Several of the bikeway projects in the Santa Cruz harbor area could increase human activity in the vicinity of potentially sensitive riparian and coastal habitats. Generally, the widening of existing roadways would not be expected to have impacts on

habitat for candidate, sensitive, or special status species, due to the disturbed nature and low biological value of habitat immediately adjacent to roadways (although the construction of new roads and the widening of existing roadways could include the removal of various tree species and grasslands, and burrowing owls can frequently be found inhabiting burrows only a few feet from agricultural fields, sidewalks or roads). The construction of some projects identified in the three plans would involve the disturbance of agricultural/grazing lands, and lands with non-native grassland vegetation associations, which can provide habitat for special status species such as the San Joaquin kit fox, burrowing owl and California tiger salamander. Some projects with bridge components could impact swallows, roosting bats and special status aquatic species such as the California red-legged frog and western pond turtle. Nesting raptors in the vicinity of some projects may also be impacted by project-related construction activity. Transportation system improvement projects in coastal zones could result in impacts on natural and man-made habitats that support sensitive biological resources.

IMPACT 3.4.1: Modification of Habitat. Construction of some of the projects identified in the financially constrained Action Elements of the three plans could be expected to result in the modification of areas which currently provide habitat for candidate, sensitive, or special status species, and could interfere with the movement of resident or migratory fish or wildlife species. Examples of projects which might involve such impacts may include (but are not necessarily limited to) construction of the new roadways, bridge widenings, roadway widenings, rail improvements on rail lines not currently utilized by trains and the development of transportation-related facilities in coastal zones. This could represent a **potentially significant environmental impact** associated with these types of projects.

RECOMMENDED MITIGATION MEASURE

MITIGATION MEASURE 3.4.1: Avoidance and Design Modification

For each project identified in the financially constrained Action Elements of the three plans where habitat modification may be anticipated, the following measures may be used by the implementing agency to reduce modification of areas which currently provide habitat for candidate, sensitive, or special status species, and interference with the movement of resident or migratory fish or wildlife species::

A. Prior to the finalization of project design, the area in which the project is proposed should be thoroughly surveyed to determine the presence or absence of habitat for candidate, sensitive, or special status species, and to determine the extent to which project construction may interfere with the movement of any resident or migratory fish or wildlife species. If special status species are known to occur or have the potential to occur, appropriate resource agency contacts shall, where appropriate, be made and mitigation developed in consultation with a qualified biologist and the resource agencies.

B. If initial biological assessments for a proposed project identified in one of the three plans determine the presence or potential presence of a state or federally listed species on the site, the implementing agency shall, where appropriate, consult with the California Department of Fish and Game (CDFG) or the U.S. Fish and Wildlife Service (USFWS), respectively, for guidance on whether or not the project can avoid impacts to the species. The project shall, where appropriate, avoid impacts through re-design or realignment, wherever possible.

C. During site-specific environmental review, implementing agencies shall, where appropriate, evaluate the effects of project-related noise, light and activity on any environmentally sensitive habitat areas, both during and after construction, and shall, where appropriate, identify appropriate mitigation measures, where feasible.

D. In those instances where it is not possible to avoid sensitive habitat areas through design measures, the USFWS and the CDFG may need to be contacted in order to achieve compliance with the appropriate endangered species protection regulations through the implementation of site-specific mitigation measures prior to project approval.

RESULTING LEVEL OF SIGNIFICANCE

Avoiding completely those areas identified as habitat for candidate, sensitive, or special status species of plants and animals, or those areas which are important in providing free movement for resident or migratory fish or wildlife species, would reduce this potential impact to a level of less than significant for most projects. However, depending on the location, character and purpose of a proposed project, it may not be possible to design it in such a way so as to completely avoid these areas. In these instances, this potential impact would need to be mitigated to the satisfaction of the appropriate regulatory agencies prior to the issuance of the permits necessary to allow project construction to proceed, although impacts associated with a few projects could be expected to remain **significant and unavoidable**.

Wetlands

Several projects would involve construction, reconstruction or widening of bridges over rivers, creeks and sloughs, while other projects would involve the development of bicycle paths or recreational trails along riparian corridors. Construction of these facilities could have both direct impacts due to the disturbance of riparian flora and fauna, and indirect impacts due to increased erosion and sedimentation that could adversely affect downstream water quality.

A number of regulatory mechanisms are in place to address construction-related impacts to wetlands. Disturbance within any “waters of the United States” would require a Section 404 permit from the U.S. Army Corps of Engineers, which would place certain requirements for avoidance or replacement of lost wetland habitat. When a project would alter the natural flow or bed, channel or bank of any river, stream or lake, a Section 1601 Streambed Alteration Agreement would need to be formalized with the CDFG. Like the Section 404 permit, this agreement would be expected to

include measures that would reduce impacts to riparian habitats. Preparation and implementation of the Storm Water Pollution Prevention Plans (SWPPPs) required under Section 401 of the Clean Water Act would reduce potential indirect impacts related to increased erosion, sedimentation and runoff.

IMPACT 3.4.2: Modification of Riparian Areas/Wetlands. Construction of some projects identified in the financially constrained Action Elements of the three plans could be expected to result in the modification of riparian areas or wetlands. Examples of projects which might involve such impacts may include (but are not necessarily limited to) the construction of new bridges, the replacement of existing bridges, and projects that result in an increase in impermeable surface areas that may require additional infrastructure for stormwater runoff collection and treatment. This could represent a **potentially significant environmental impact** associated with these types of projects.

RECOMMENDED MITIGATION MEASURE

MITIGATION MEASURE 3.4.2: Avoidance/Permitting/Precautions During Construction

The following measures may be used by the implementing agencies to reduce modification of riparian areas or wetlands:

- A. The proposed projects should be designed to avoid construction in riparian areas or wetlands to the extent practicable.
- B. In those instances where it is not possible to avoid riparian areas or wetlands through design measures, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service and the California Department of Fish and Game shall, where appropriate, be contacted in order to achieve compliance with the appropriate regulations and to obtain all required permits prior to project approval. The granting of the required permits may be conditional on the implementation of site-specific measures designed to mitigate any modification of riparian areas or wetlands which may result from construction of the projects.
- C. Implementing agencies shall, where appropriate, ensure that all removed and excess material is disposed of off-site and away from the flood plain, outside areas subject to U.S. Army Corps of Engineers jurisdiction.
- D. Implementing agencies shall, where appropriate, ensure that construction activities in drainages occur during the dry season when channels are at low flow.
- E. Implementing agencies shall, where appropriate, ensure that no fueling or maintenance of equipment takes place in any channel. Mechanical equipment shall, where appropriate, be serviced in designated staging areas located outside of any creek bed and associated wetland habitat. Water from equipment washing or concrete wash down shall, where appropriate, be prevented from entering any channel.

F. Implementing agencies shall, where appropriate, ensure that any equipment adjacent to any channel is checked and maintained daily, to prevent leaks of materials that if (eventually) introduced to water could be deleterious to aquatic life. Petroleum products and other substances that could be hazardous to aquatic life shall be prevented from contaminating the soil and/or entering the adjacent waters. CDFG shall, where appropriate, be notified immediately of any spills, and shall, where appropriate, be consulted regarding clean-up procedures.

G. Implementing agencies shall, where appropriate, ensure that construction activities minimize increases in turbidity to the maximum extent possible.

H. Implementing agencies shall, where appropriate, ensure that following construction, disturbed banks are re-vegetated using locally-occurring, drought-resistant native species and erosion control grass seed, in consultation with a qualified biologist.

RESULTING LEVEL OF SIGNIFICANCE

Avoiding completely riparian areas or wetlands through design measures would reduce this potential impact to a level of less than significant for most projects. However, depending on the character and purpose of a proposed project, it may not be possible to design it in such a way as to completely avoid these areas. In these instances, this potential impact would need to be mitigated to the satisfaction of the appropriate regulatory agencies prior to the issuance of the permits necessary to allow project construction to proceed, although impacts associated with a few projects could be expected to remain **significant and unavoidable**.

Wildlife Movement

IMPACT 3.4.3: Interference with Wildlife Movement. Development of projects identified in the three plans involving roadways located in previously undeveloped areas, such as new road construction and roadway extensions, has the potential to substantially interfere with wildlife movement if established wildlife movement corridors are located within or in the vicinity of the proposed roadway improvements. This could represent a **potentially significant environmental impact**.

RECOMMENDED MITIGATION MEASURE

MITIGATION MEASURE 3.4.3: Avoidance and Design Modification

During site-specific environmental review for projects located in wildlife movement corridors, implementing agencies shall, where appropriate, conduct biological field investigations to document existing conditions and assess site-specific impacts upon wildlife that may be affected by the project. Implementing agencies shall, where appropriate, develop new roadway alignments and extensions to avoid or minimize disturbance of wildlife movement corridors to the maximum extent feasible. If

impacts cannot be avoided, project-specific mitigation measures shall, where appropriate, be developed in consultation with responsible agencies (USFWS and/or CDFG, as appropriate).

RESULTING LEVEL OF SIGNIFICANCE

Avoiding completely wildlife movement corridors through design measures would reduce this potential impact to a level of less than significant for most projects. However, depending on the character and purpose of a proposed project, it may not be possible to design it in such a way as to completely avoid these areas. In these instances, this potential impact would need to be mitigated to the satisfaction of the appropriate regulatory agencies prior to the issuance of the permits necessary to allow project construction to proceed, although impacts associated with a few projects could be expected to remain **significant and unavoidable**.

Wildlife Nurseries

None of the projects identified in the financially constrained Action Elements of the three plans would be expected to have adverse effects on sites which have been formally identified as native wildlife nurseries.

Ordinances and Policies to Protect Biological Resources

Construction activities in some areas would have the potential to adversely affect individual trees or other biological resources which have been afforded protection by local jurisdictions. Such trees may include large oaks, riparian species, or even special status trees such as the Monterey cypress and Monterey pine. Impacts to such trees may occur as a result of direct removal for transportation system improvement project construction or roadway widening projects, or from construction near or within the root zone of individual specimens located nearby.

IMPACT 3.4.4: Conflicts with Protective Ordinances and Policies. Depending on the specific features of local ordinances and policies which are designed to protect biological resources within each jurisdiction, it is possible that implementation of some projects identified in the financially constrained Action Elements of the three plans could conflict with such ordinances and policies. Examples of projects which might involve such impacts may include (but are not necessarily limited to) construction of new roadways and rail improvements on rail lines that are not currently used by trains. This could represent a **potentially significant environmental impact** associated with these types of projects.

RECOMMENDED MITIGATION MEASURE

MITIGATION MEASURE 3.4.4: Modify Design to Achieve Compliance/Tree Replacement/Tree Protection Plans

A. Where it is clear that the implementation of a specific project would result in a conflict with local ordinances or policies intended to protect biological resources, the appropriate agency responsible for the actual implementation of the proposed project should modify the design of the project to achieve compliance with the applicable ordinances or policies, where feasible.

B. Implementing agencies shall, where appropriate, ensure that trees that are removed for construction of specific projects are replaced with native tree species at a minimum 2:1 ratio, under the direction of a certified arborist. Special status trees or trees located in sensitive habitats may require higher replacement ratios to mitigate the specific function and value impacted. Tree replacement ratios shall, where appropriate, be consistent with the local jurisdictions in which impacts occur. As part of the overall revegetation and monitoring plan, these replacement tree plantings shall, where appropriate, be monitored over time based on the recommendations of a qualified revegetation specialist.

C. Implementing agencies shall, where appropriate, ensure that a tree protection plan is required for construction around trees. The plan may include (but need not be limited to) setbacks for trees, use of protective fencing, restrictions regarding grading and paving near trees, directions regarding pruning and restrictions regarding digging/trenching within root zones of trees.

RESULTING LEVEL OF SIGNIFICANCE

Depending on the character and purpose of a proposed project, it may not be possible to modify it in such a way as to completely avoid disturbing protected trees or other biological resources that may be protected within a specific local jurisdiction. In these instances, this potential impact would need to be mitigated to the satisfaction of the appropriate local jurisdiction prior to the issuance of the permits necessary to allow project construction to proceed, although impacts associated with a few projects could be expected to remain **significant and unavoidable**.

Habitat Conservation Plans

Several projects could involve construction of transportation infrastructure that could potentially affect the species and habitat that is (or may be) protected under existing Habitat Conservation Plans (HCPs) in the Seascap Uplands area and the Quail Hollow Quarry area or HCPs currently in development (in San Benito County, the Pajaro River/Salispuedes Creek area and at the former Fort Ord, which already has an approved installation-wide, multi-species Habitat Management Plan). Depending on the timing of the proposed projects and final design, these improvements could be subject to the requirements of HCPs.

IMPACT 3.4.5: Conflicts with Habitat Conservation Plans. It is possible that implementation of some of the projects identified in the financially constrained Action Elements of the three plans could conflict with the provisions of approved local, regional, or state habitat conservation plans. Examples of projects which might involve such impacts may include (but are not necessarily limited to) the construction of new roadways or bike paths. This could represent a **potentially significant environmental impact** associated with these types of projects.

RECOMMENDED MITIGATION MEASURE

MITIGATION MEASURE 3.4.5: Modify Design to Achieve Compliance

For projects located within the boundaries of an HCP, the appropriate jurisdiction shall, where appropriate, ensure that the project is reviewed for consistency with the HCP, and that specific mitigation measures and/or alternative alignments are identified to avoid conflicts with the HCP and its protected species and habitats.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of this mitigation measure could reduce the impact to a level of less than significant.