

APPENDIX D

ESTUARINE AND BEACH ECOSYSTEM CONSERVATION PLAN

During 1994 Camp Pendleton entered into formal consultation under Section 7 of the ESA for ongoing and planned training activities, infrastructure maintenance activities, several construction projects and a Riparian and Estuarine Ecosystem Conservation Plan. On October 30, 1995 the USFWS issued a Biological Opinion covering those actions. This appendix contains the Estuarine and Beach Ecosystem Conservation Plan portion of those actions. Terms and conditions of the Biological Opinion covering this plan and the Riparian Ecosystem Plan are contained in Appendix S.

The primary purpose of the Estuarine and Beach Ecosystem Conservation Plan is to manage fish and wildlife resources in the estuarine and beach areas of Camp Pendleton. This plan is "programmatic" in the sense that it addresses long term requirements of the riparian resources in a comprehensive, "programmatic" fashion. This conservation plan is programmatic in its strategy: habitat management actions will be planned and evaluated in the context of achieving and maintaining a "healthy ecosystem" for sensitive species. It is the intention to apply this programmatic approach to all ongoing and future actions at Camp Pendleton, as they potentially affect the integrity of riparian ecosystems.

The mission of Marine Corps Base, Camp Pendleton is to operate an amphibious training base, while protecting the environment and providing facilities, services, and support to prepare Marines and Sailors for combat. Camp Pendleton's 125,000 acres (approximately 200 square miles) of ocean front beach, coastal plains and terraces, hills, mountains and stream valleys, with the Base's associated restricted airspace, offer a unique combination of natural resources that assure well-prepared national security forces.

Camp Pendleton's military mission is combat training and support of Marine Corps units and other Department of Defense (DoD) forces. Training activities include, but are not limited to: amphibious landings, fixed and rotary-winged aircraft flights and landings, tracked/wheeled vehicle and personnel maneuvers, artillery and small arms firing, aerial weapons delivery, engineer unit operations, organization of supply, field combat service support, employment of communications, airlifting of troops and weapons, equipment maintenance, and field medical treatment.

Camp Pendleton's training and combat service support functions share the use of Base lands with several non-military functions. Such uses include: a Department of Justice border patrol check point, a California State Parks and Recreation campground and beach, the San Onofre Nuclear Generating Station, agriculture and grazing outleases, and public schools. These functions are important uses of Camp Pendleton's land, and they require additional land management attention to assure the Base meets its primary commitments to the military mission and conservation.

The Base manages access to sensitive wildlife habitat and acknowledges the importance of this practice as a necessary precaution to preserve wildlife corridors and vital habitat for listed

species and to enable the Base's mission to co-exist with sensitive wildlife communities.

D.1 ECOSYSTEM CONSERVATION MANAGEMENT

D.1.1 Overview

The Department of Defense has embraced "ecosystem management" as its tool for conserving natural resources. In a memorandum of August 8, 1994, concerning implementation of ecosystem management in the Department of Defense, the Deputy Under Secretary of Defense (Environmental Security) promulgated the following policy statements:

Ecosystem Management is the basis for future management of DoD lands and waters. It will blend multiple-use needs and provide a consistent framework for managing DoD installations, ensuring the integrity of ecosystems.

Ecosystem management is a goal-driven approach to environmental management at a scale compatible with natural processes, recognizes social and economic viability within functioning ecosystems, and is realized through effective partnerships among private and government agencies.

Ecosystem management is a process that considers the environment as a complex system functioning as a whole, not as a collection of parts, and recognizes that people and their social and economic needs are an integral part of the whole.

In applying the principles and guidelines for DoD ecosystem management, military installations will:

- Develop a vision of ecosystem health. Existing natural resource, social, and economic conditions should be factored into the vision;
- Develop coordinated approaches to work toward ecosystem health. Since ecosystems rarely coincide with ownership and political boundaries, cooperation across ownerships is an important component of ecosystem-based management;
- Maintain and improve the sustainability and native biological diversity of ecosystems;
- Support sustainable human activities. People and their social, economic, and security needs are an integral part of ecological systems, and management of ecosystems depends upon sensitivity to these issues;
- Use benchmarks to monitor and evaluate outcomes and establish milestones to ensure accountability.

The Camp Pendleton's conservation program starts with recognition of its military mission. In fact, the Riparian Ecosystem Conservation Plan assumes that only through continuance of that mission will the objectives of the plans be accomplished.

The conservation program also proceeds with recognition of the following biological principles: (1) ecosystems are dynamic by nature; (2) the functioning of ecosystem components operate at different rates; (3) all components are interrelated; (4) the ecosystem is a complex, dynamic system functioning as a whole, not as a collection of parts; and (5) ecosystem integrity may be disrupted by excessive "interference" of any single component.

The Base uses these guidelines in establishing programmatic instructions for military training, facility and range maintenance, recreation, and new project planning. This approach is used to develop prudent and reasonable alternatives, which seek to avoid and minimize impacts to species and their habitats and maintain ecosystem integrity.

The Base Estuarine and Beach Ecosystem Conservation Plan was developed to maintain and improve the sustainability and native biological diversity of the estuarine and beach ecosystems, while supporting Camp Pendleton's mission of training Marines. Camp Pendleton intends that this program provide a comprehensive framework for assuring the consistent management of the Camp Pendleton estuarine and beach ecosystems.

The thrust of the Estuarine and Beach Ecosystem Conservation Plan is to manage habitat on an ecosystem basis. Benchmarks have been established to monitor and evaluate the integrity and functioning of the ecosystems aboard Camp Pendleton. Specific habitat and species goals were established in consultation with the USFWS and aim at contributing to threatened and endangered species recovery. Based on periodic assessments, the program calls for management objectives and strategies to be modified to meet changing circumstances and requirements.

The program depends on the development of formal and informal partnerships among private and government agencies to achieve its goals. It is based on the assumption that without such partnering the integrity of the ecosystems cannot be maintained. The plan further assumes that successful partnering will not happen without each party respecting the legitimate needs of the other.

D.1.2 Integration With Regional Conservation Planning

The Camp Pendleton conservation program depends on its integration with regional conservation planning efforts. The Base acknowledges the USFWS's broader role in the regional planning process and expects the USFWS to be its advocate in this arena. Camp Pendleton assumes that the USFWS will view the Base's ecosystems in an ecoregion context, setting appropriate goals for the subareas thereof. This means that the responsibility for conservation of wildlife in the southern California coastal ecoregion does not fall solely on Camp Pendleton. Camp Pendleton expects that the USFWS, in its oversight and wildlife advocacy role in the region conservation planning process, will promote the distribution of information and consistent application of Section 7 and Section 10 procedures to foster species recovery throughout the ecoregion.

D.1.3 Management Activity Funding

The Estuarine and Beach Ecosystem Conservation Plan is premised on the understanding that funding and achievement of the plan's goals are interrelated with assuring and enhancing the ongoing maintenance and flexibility of the Base's military mission. Funding for management activities aimed at the conservation of the Base's ecosystems derive from 1) agricultural leases and resource utilization programs and 2) new projects. In the past, policy has resulted in single project related, on-site, in-kind mitigation measures. This focus did not promote an ecosystem approach to resource management. This plan promotes a policy that will tailor individual project mitigation to the needs of the ecosystem. In addition, this plan recognizes the USFWS's proposal to assume (see conservation recommendations in the Biological Opinion) some of the costs associated with the conservation program by in-kind resources. This is intended to increase the flexibility of Camp Pendleton to devote more effort towards the ecosystems goals previously established, and in turn enhance its operational flexibility. However, this approach is tempered in light of the current legislative proscription, under the Anti-Deficiency Act, from obligation of funds prior to Congressional authorization. Should this proscription be changed or legislation enacted that addresses the challenge of long-term funding for recurring ecosystem maintenance and enhancement requirements, Camp Pendleton and the USFWS will reexamine the current funding and management strategies aimed at achieving the program goals.

D.1.4 Ecosystem Boundaries

Camp Pendleton recognizes that the ecosystem habitats observe no specific delineation, tending to merge together in a very fluid and continuous manner, and that whatever ecosystem boundaries it designates are artificial. However, to facilitate the consistent mapping, monitoring, assessment and other management activities for each ecosystem, the following artificial boundaries were established in consultation with the USFWS. The **riparian ecosystem** aboard Camp Pendleton is comprised of those lands lying within the 100-year flood plain of the drainages flowing through the Base to the estuary and beach systems at the stream/river mouths junction with the Pacific Ocean. The **estuary and beach ecosystem** consists of those coastal areas and associated salt/fresh water marshes between the head of tidal action and the low tide line at the beach, which support unique estuarine species. The beaches included in this ecosystem are the coastal beaches with associated dune systems that border estuary and riparian regions of the Base and along the coast. The **uplands ecosystem** consists of the remaining undeveloped areas of Camp Pendleton.

D.1.5 Programmatic Instructions

The Base has incorporated into this plan a system of "programmatic instructions" that will be used to avoid and minimize adverse impacts to the ecosystem. If adverse impacts cannot be avoided, appropriate compensation procedures will be implemented, per section 2.4.3. Activities will be scheduled during the non-breeding season where possible. Military training units will

follow guidance given in the Programmatic Instructions to avoid incidental take and adverse impacts. Construction sites will be selected to impact the least amount of riparian and estuarine/beach habitat possible.

D.1.6 General Goals

Camp Pendleton, in consultation with the USFWS has developed habitat acreage goals and species population numbers. Additionally, Camp Pendleton established enhancement actions specified within the Estuarine and Beach Ecosystem Conservation Plan.

D.2 ESTUARINE/BEACH ECOSYSTEM CONSERVATION PLAN

D.2.1 Background

This estuarine/beach conservation program is designed sustain and enhance Camp Pendleton's natural resources along its coastline emphasizing coastal lagoons and the Santa Margarita River Estuary. This includes conservation of listed species and their associated habitat, maintaining and enhancing the functionality and biodiversity of the Santa Margarita River Estuary, and the coastal lagoons located at Cockleburr, French, Aliso, Las Flores, San Onofre, and San Mateo Creeks. This will be done through continuation of the active management programs conducted by Camp Pendleton and through application of the Programmatic Instructions contained herein, for the 319 acres of habitat associated with this ecosystem. Further, acreage assigned to estuary and beach areas will be managed to avoid future, permanent project impacts (other than transient training traffic or exercises) from construction. Permanent impacts to this habitat will be consulted on separately with the USFWS.

Entirely compatible with this objective is the support of Camp Pendleton's foremost mission--the training of Marines to defend the sovereignty of the United States. The philosophic approach behind this Conservation Program is to sustain and enhance estuarine and beach ecosystem dynamics, such that estuarine and beach communities on Camp Pendleton are sufficiently resilient to withstand a continued array of disturbances and incursions occasioned by military training activities.

The dynamics of the estuarine and beach conservation plan are outlined in the context of the ecosystem goals, terms and conditions and conservation recommendations below. Within the land areas designated as management zones, programmatic instructions and minimization measures will be enforced to protect these areas from permanent intrusion or effects which will disrupt the balance which has been achieved between Marines pursuing training activities and threatened and endangered species residing in these areas. Protective fencing; warning signs; predator management; exotic vegetation management; monitoring of estuary salinity and tidal conditions are central tenets of the conservation program. Funding for future enhancement activities listed under the conservation recommendations, terms and conditions and reasonable and prudent measures will be actively pursued to promote recovery of the appropriate species. These activities have fostered a growth in the California least tern population over the years and

with further study should promote the same in the western snowy plover population.

D.2.2 Goals

The overall objective of the estuarine/beach ecosystem conservation plan is to manage and protect the natural resources along the Base's coastline emphasizing coastal lagoons and the Santa Margarita River Estuary. This includes protection of listed species and their essential habitat, maintaining the functionality and biodiversity of the following focused management areas to be designated as: the Santa Margarita River Estuary, and the coastal lagoons located at Cocklebur Creek, French Creek, Aliso Creek, Las Flores Creek, San Onofre Creek, and San Mateo Creek.

The primary goals of the estuarine/beach ecosystem conservation plan are to:

D.2.2.1 WITH REGARDS TO BASE MANAGEMENT

- 1) Facilitate greater latitude in conduct of training activities;
- 2) Provide a framework for consistency in mitigation related to current and future estuarine/beach impacts resulting from Base activities;
- 3) Preclude the need for the designation of critical habitat for the western snowy plover and other listed species;
- 4) Promote partnership with the USFWS for estuarine/beach ecosystem conservation in the region.

D.2.2.2 WITH REGARDS TO ECOSYSTEM MANAGEMENT

Implementation of the following conservation strategies should maintain and improve the integrity of estuarine/beach ecosystems and support viable, expanding populations of sensitive species. This plan proposes to implement specific management practices for listed species, including the western snowy plover, in lieu of Federal designation of critical habitat.

- 1) Provide a framework for managing estuarine/beach habitats from an ecosystem perspective;
- 2) Maintain connectivity with riparian and upland ecosystems;
- 3) Promote natural hydrological processes to maintain estuarine water quality and quantity in conformance with approved basin plans.
- 4) Minimize reduction or loss of upland buffers surrounding coastal wetlands;

- 5) Restore the dune system in the vicinity of the Santa Margarita Estuary following the guidance developed by The Nature Conservancy, as funds become available.

D.2.2.3 WITH REGARDS TO HABITAT MANAGEMENT

It is Camp Pendleton's intent to manage estuarine/beach habitat to preclude long-term damage and degradation. Habitat management will continue toward meeting the following goals:

- 1) Maintain natural processes and areal extent of estuarine/lagoon and beach/dune areas by avoiding and minimizing the permanent loss of the habitat value of these areas
- 2) Maintain integrity of listed species' habitat.
- 3) Eliminate/control exotic plants whenever practical.
- 4) Maintain suitable tidewater goby habitat in the complex of lagoons associated with the creeks listed above

D.2.2.4 WITH REGARDS TO SPECIES MANAGEMENT

- 1) Promote the growth of current tern populations over the entire SMR estuary (not only the North Beach colony) and at both Aliso Creek and French Creek Lagoons.
- 2) Maintain the integrity of the least tern nesting colonies.
- 3) Promote growth of current population of snowy plovers in the vicinity of the tern nesting colony sites.
- 4) Maximize the probability of a metapopulation persistence within the lagoon complex for tidewater gobies. The dynamic fluctuations in numbers of individuals associated with habitat types prone to episodic catastrophic events, such as drought and flooding, prevent the specification of precise population objectives.

D.2.3 Estuarine Ecosystem Baseline

This plan intends to conduct enhancement activities and studies that benefit regional habitat conservation, as funds and personnel permit. Appropriate compensation credit will be afforded to Camp Pendleton for such actions.

D.2.4 Plan Implementation

Existing management efforts for listed species conservation will be continued at the following Management Zones:

- 1) **SMR Management Zone:** The beach area extending from southern edge White Beach (MG 594795) to the southern end of the SMR Estuary delineated by the dirt access running seaward at the southern edge of the Estuary (MG 621758). This Management Zone shall encompass Cocklebur Canyon outlet and the Santa Margarita River Estuary extending east to Stuart Mesa Bridge. Habitats within this zone include least tern foraging areas; inter-tidal beaches (between mean low water and mean high tide) for snowy plover foraging; all nesting locations for the western snowy plover, California least tern, and light-footed clapper rail; salt pan; dune systems in nesting areas; salt marsh; mud flats; and all wetlands.
- 2) **Other Management Zones:** Habitats for listed species within the coastal lagoon systems of French, Aliso, Las Flores, San Onofre, and San Mateo watersheds.

D.2.4.1 AVOIDANCE AND MINIMIZATION

Programmatic Instructions are provided below which outline activities that are authorized in the Management Zones.

- 1) In the event nesting by California least tern or western snowy plovers should occur outside the traditionally fenced nesting areas within the management zones, individual nests and any young produced shall be afforded protection by posting and fencing around the immediate vicinity of the nest(s).
- 2) Prior to each nesting season an evaluation of vegetative cover shall be made at all nesting sites and any necessary vegetation control may be implemented utilizing herbicides or mechanical techniques prior to the breeding season. Enhancement of nesting areas decreases the likelihood of birds nesting outside the management zones.
- 3) In addition to signs posted at wetlands and nesting sites, the Management Zone will be posted in strategic locations including the Del Mar recreation area, atop the bluffs at Cocklebur Beach, beach access from the agriculture field just north of the North Beach least tern colony, the dirt road running along the southern and eastern portions of the Santa Margarita River Estuary, and on the beach ½ mile south of the LCAC ramp.
- 4) Camp Pendleton has adopted and implemented the Programmatic Instructions described below, to regulate the operational, maintenance, and recreational programs in and adjacent to estuarine and beach habitats to help ensure that the impact of incidental take is avoided and minimized to the maximum extent practicable. Any activity not specifically addressed in these Programmatic Instructions or otherwise covered herein under the class system for future consultations, requires concurrence from the USFWS

to determine if impacts are offset by the ecosystem conservation plans described in this Plan and its Biological Opinion. If the proposed project is compatible with the objectives established in this ecosystem conservation plan, the USFWS shall approve the proposed action. Indirect effects for noise and dust are considered mitigated by this conservation plan.

- 5) Weather permitting, construction of fencing at California least tern nesting colonies shall be completed by 15 March. This conservation plan will be updated as recovery plans for listed species are published so that conservation efforts contribute to regional recovery goals.
- 6) All terms and conditions identified in the Biological Opinion 1-6-92-F49 will be implemented.
- 7) Tidewater goby populations on Camp Pendleton will be monitored to determine if there are any impacts to gobies from relocation of effluent infiltration ponds. Populations shall be surveyed to determine their status at least once every three years or as funding permits.
- 8) Conservation measures currently in place as a result of the LCAC FEIS will continue until completed, including the restricted status of the Santa Margarita River Estuary (with the exception of small boat raid operations up the river) and management of the designated Cocklebur Sensitive Area.
- 9) Protection measures.
 - Signs will be posted at entrances (along access roads or beaches) to all wetlands, nesting sites, and the management zones, to deter unauthorized entry.
 - In addition to the permanent fence at the White Beach tern colony, a buffer shall be demarcated along the northern border of the colony during the breeding season with an additional barrier i.e., communication wire. This is especially necessary on the northern end of the colony where vehicular and troop movements occur.
 - A seasonal fence extension from the White Beach tern colony extending to the French Creek Lagoon shall be constructed.

The chick fencing which is employed at the North Beach colony to protect least terns from vehicular traffic shall be breached in several locations on the eastern boundary. This will allow movement of flightless snowy plover chicks that have hatched inside the least tern fencing to escape in order to reach foraging areas. Openings shall be placed according to nest distribution of snowy plovers within the fenced areas. Breaches shall be closed during monitoring or other activities in the colony that could potentially scatter least tern chicks resulting in the separation of siblings on both sides of the fence. Monitoring will be scheduled to avoid, as much as possible, periods of activity on the beaches adjacent to the colonies in order to minimize risk of tern

siblings becoming separated by the fence. Chick barriers at White Beach shall be maintained open ended at French Creek Lagoon.

- 9) Non-native animal predators/competitor species that threaten listed species will be controlled.
- 10) All lighting in estuaries will be fully minimized year round. Indirect illumination from pyrotechnics may be used during the non-breeding season in accordance with the Fire Danger Rating System (FDRS).
- 11) Information will be published by Base notices to Base personnel regarding sensitive species and habitat areas along the coastal areas.
- 12) The breeding/nesting season for the western snowy plover and California least tern shall be designated as 15 March - 31 August. The non-breeding season shall be designated as 1 September - 14 March for all activities authorized to occur outside of the breeding season.
- 13) Introduction of exotic vegetation into estuarine and beach habitats shall be controlled to the extent possible, and existing infestations will be targeted for suppression, with an ultimate goal of eradication. Priority will be placed on the control of *Arundo*, *Tamarix*, and iceplant. Primary emphasis will be on preventive measures for existing California least tern and western snowy plover nesting sites. Prevention of exotic plant invasion will be done by removing sprouting giant reed stalks which are deposited on the beach during winter storms whenever possible.
- 14) The dune restoration plan developed for Camp Pendleton by The Nature Conservancy will be implemented as funds become available.

D.2.4.2 MAINTENANCE AND ENHANCEMENT OF ESTUARINE/BEACH ECOSYSTEM

These are management actions that should be implemented to maintain the ecosystem's ability to support listed species and may be implemented to enhance the estuaries and beaches of Camp Pendleton.

- 1) Manage estuarine zones to maintain wetland values of coastal lagoons.
- 2) Fence nesting areas.
- 3) Control predators.
- 4) Restore dunes within nesting areas.
- 5) Explore habitat enhancement techniques including: (a) deepening smaller estuarine lagoons, and (b) controlling and removing exotic plants and fish.

- 6) Continue annual fencing of least tern nesting colonies; construct of seasonal fencing; post warning signs at colonies; publish Base notices; monitor breeding activities (ICW LCAC FEIS funded monitors); study long term population trends; and manage nest predators at colonies.
- 7) Complete multi-year (3-5 year) study of breeding biology and affect of tern management on western snowy plovers with banding.
- 8) Monitor snowy plover breeding activity.
- 9) Protect last known nesting location of light-footed clapper rails (SMR).
- 10) Additional conservation activities included in the mitigation measures set forth in the LCAC FEIS, which are currently in progress and will continue until completed, include:
 - Maintain restricted status to the Santa Margarita Estuary;
 - Protection and management of Cockleburr Sensitive Area.
 - Assure no loss of Belding's savannah sparrow habitat.
 - Monitoring the breeding status of the least tern to determine effects of LCAC operation and facility construction.
- 11) Vehicle access to estuary is authorized for the following activities during the non-breeding season:
 - Removal of exotic plant species from the large sand deposition which occurred along the south bank of the river at eastern end of salt flats, to promote establishment of a nesting area for snowy plovers.
 - Transporting and distributing sand on the Salt Flats Island to enhance this nesting site, should funding become available.
- 12) Maintain occupied tidewater goby habitat as well as maintaining historic habitat locations for recolonization.
- 13) Natural regeneration of native vegetation shall be emphasized.
- 14) Use best management practices based on current site conditions to implement adaptive management.
- 15) Sites will be selected based on the following criteria:

- Previously disturbed areas;
 - Beach areas outside Santa Margarita River Estuary and plover management zone;
 - Beach areas within plover management zone;
 - Santa Margarita River Estuary.
- 17) Specific instructions for enhancement techniques are contained in Enclosure 4 to the BO and Appendix J of the BA.

D.2.4.3 MITIGATION

Activities that cause permanent destruction of wetlands and sensitive dune areas will require replacement in kind by enhancement of degraded components of the ecosystem in consultation with the USFWS.

D.2.4.4 COMPENSATION

Programmatic Instructions will be used to avoid and minimize adverse impacts to the appropriate species and its associated habitat. When these instructions are inadequate, the Table D-1 compensation procedures will be implemented to mitigate for habitat losses and other indirect adverse affects to the species. These compensation procedures will apply to new projects or changes to current activities that affect estuarine or beach habitats. Although there are no foreseen losses of estuarine or beach habitat on the Base, these compensation procedures are applicable as long as the estuarine conservation goals (habitat and species) for the sensitive species affected are being met.

Compensation for the appropriate habitat will be calculated by means of Equation 1:

Equation 1: Compensation Required (Acres) =

$$\begin{aligned} & 3 \times (\text{Nesting Habitat}\{\text{Acres}\}) + \\ & 1.5 \times (\text{Foraging habitat}\{\text{Acres}\}) + \\ & 3 \times (\text{Dune Habitat}\{\text{Acres}\}) + \\ & 2 \times (\text{Indirect Effect}\{\text{Acres}\}) \end{aligned}$$

Compensation enhancement activities that may be applied, both on and off Camp Pendleton, subject to the USFWS's recommendation as the ecoregion manager, will be prioritized in descending order to be credited on the basis of \$25,000 per acre of compensation required in accordance with Table D-1.

Table D-1. Compensation for Estuary/Beach Impacts.

Bird Habitat	Tidewater Goby Habitat
Creation of nesting islands/new breeding colonies	Dredging of lagoons/new channels
Exotic Plant Control	Exotic fish control
Dune Restoration	Sedimentation traps
Predator control	Water quality monitoring
Warning signs/fencing	Warning signs/marker buoys
Studies	Studies

D.2.4.5 MONITORING

- 1) Water quality within the Santa Margarita River Estuary will continue to be monitored until estuary enhancement actions under the LCAC EIS are completed.
- 2) Oversee the Navy responsibilities in monitoring, minimizing, and determining impacts of the Landing Craft Air Cushion (LCAC) Facility at Camp Pendleton as identified in the Final EIS are carried out:
 - Watersheds need to remain healthy;
 - Natural hydrological regime of lagoons needs to be maintained or improved;
 - Marsh habitat adjacent to lagoons needs to be improved;
 - Maintain/enhance buffers surrounding wetlands;
 - Water quality in lagoons should be maintained or if necessary improved.
- 3) Least terns and snowy plovers shall be monitored at least biennially to determine number of pairs, hatching success, and reproductive success in order to assess the effectiveness of the conservation plan.
- 4) Survey tidewater goby populations and monitor their status every 3 years, or as funding is available.
- 5) Continue to permit access for clapper rail surveys by statewide survey efforts.
- 6) Conservation plan shall be updated as recovery plans are published so conservation efforts are consistent with recovery goals. The Base should participate in review of recovery plans to ensure compatibility with the Base's mission requirements.

D.2.5 Programmatic Instructions

This plan proposes instructions which activities are required to comply with to avoid and minimize impacts to estuarine/beach ecosystems and listed species.

D.2.5.1 GENERAL

- 1) All actions which develop/remove or degrade estuarine/beach habitat shall be compensated for pursuant to the program activity classifications identified in Section 3.
- 2) Avoid and minimize impacts as much as possible.
- 3) All activities shall comply with NEPA. Alternatives shall be fully considered.
- 4) Conduct enhancement activities and studies that will benefit regional habitat conservation. Appropriate compensation credit will be given to the Base for these studies.

D.2.5.2 INSTRUCTIONS FOR MILITARY TRAINING ACTIVITIES

Troops

- 1) All training units using estuarine and beach areas shall be familiar with and follow the Fire Danger Rating System (FDRS).
- 2) Military activities shall be kept to a minimum within the Santa Margarita Management Zone during the breeding season. During the breeding season, all activities involving smoke, pyrotechnics, loud noises, blowing sand, and large groupings of personnel (14 or more) must be kept at least 1000 feet (300 meters) away from fenced or posted nesting areas. All other activities must be kept at least 15 feet (5 meters) from these areas.
- 3) No vegetation shall be cut for military training purposes, except exotic plant species when approved by AC/S, ES.
- 4) All training foot traffic within the management zones shall be prohibited within 15 ft. (5 meters) of posted nesting areas during the breeding season with the exception of Environmental Security, animal damage control, law enforcement, research, and life guard personnel.
- 5) Estuary wetlands and salt flats shall not be entered unless specifically authorized in another section of these programmatic instructions.

- 6) Military activities will be kept to a minimum within the Management Zone during the non-breeding season (September 1-March 14) in order to minimize disturbance to wintering snowy plovers.
- 7) Foot traffic in coastal lagoons and the Santa Margarita River Estuary shall be minimized.
- 8) Boat traffic is not authorized in the Santa Margarita River and White Beach estuary/lagoon at any time during the breeding season (15 March-31 August). Boat traffic in other lagoons will avoid foraging birds, and transit as far away as possible from nesting sites.

Vehicles

- 1) Motorized vehicles shall remain at least 15 feet from nesting areas during the breeding season, with the exception of amphibious tracked vehicles, vehicles using the White Beach access road, vehicles required for animal damage control, law enforcement, Environmental Security staff, and lifeguards. Vehicle traffic within the management zones during the breeding season shall be kept to a minimum. Vehicles will remain on hard packed sand unless parked, outside posted (signed) areas during the breeding season and as much as possible at other times, and will avoid the dune system at the base of the bluffs, as well as coastal wetlands. Travel speeds are not to exceed 25 mph.
- 2) Vehicles shall be excluded from the edges of bluffs between the White Beach/French Creek nesting areas during the breeding season.
- 3) Amphibious tracked vehicles shall traverse the management zones while maintaining both tracks in water at all times. Upon entering the beach from Camp Del Mar vehicles shall transit in a direct line along a marked corridor bordering the southern edge of the Santa Margarita Management Zone before heading up-coast. During returns, vehicles shall proceed along the same marked corridor. During the breeding season, amphibious tracked vehicles shall not traverse the Santa Margarita Management Zone (see Paragraph 12.4) in excess of a monthly, average of 20 traverses per day (one traverse equals one round trip to and from Camp Del Mar).
- 4) The Landing Craft Air Cushion (LCAC) shall not traverse the beach/estuary areas of the management zones (see Paragraph 2.4) during the breeding season.
- 5) Vehicles and troops accessing the beach at White Beach during the breeding season shall follow a route along the base of the northerly bluff to maintain the maximum distance from the tern colony.

Aircraft

- 1) During the breeding season, aircraft shall not land within 300 meters of fenced nesting areas on Blue Beach or White Beach as identified on the CP Special Training Map.
- 2) Aircraft shall maintain an altitude of 300 feet AGL or more above nesting areas.
- 3) Helicopter landing in the Santa Margarita estuary, wetlands, and salt flats shall not be authorized, except on an in-flight emergency basis and at LZ21 (Camp Del Mar).
- 4) Aircraft landing is authorized in established Landing Zones (LZ), CAL Sites, and VSTOL pads.

Engineering

- 1) No digging of fighting positions or bivouacking shall be authorized in the vicinity of nesting areas within the management zones during the breeding season.
- 2) Engineering training operations outside of NEPA approved landing operation support shall be prohibited within the management zones. At beaches, earth moving activity is authorized only for areas of unvegetated sand as least 300 meters from posted nesting areas unless specifically approved or requested by AC/S, ES.

D.2.5.3 Facilities Maintenance Activities

- 1) No tree or brush trimming shall occur within management zones during the breeding season.
- 2) Tree trimming shall avoid entire trees except exotics.
- 3) Exotic plant species shall not be used to landscape areas adjacent to estuary and coastal wetlands.
- 4) Tree trimming equipment shall operate from roads as much as possible.
- 5) With the exception of the access road immediately west of I-5, no vehicles shall enter estuarine areas without prior approval from the AC/S, Environmental Security.
- 6) Trimming of landscape trees may occur all year in compliance with the Migratory Bird Treaty Act.
- 7) Trimming of vegetation shall not exceed 10 feet from communication or power lines.
- 8) Trimming for improved road safety shall be no more than 10 feet from the road shoulder.

- 9) No road/culvert repairs shall be conducted during breeding season except under emergency conditions.
- 10) Exotics shall be thoroughly dried and properly disposed.
- 11) Proper erosion control on slopes shall be implemented as funding becomes available.
- 12) Sediment runoff shall be contained on construction sites.

D.2.5.4 RECREATION ACTIVITIES

- 1) Recreational activities shall be kept to a minimum within the Santa Margarita Management Zone during the breeding season.
- 2) All foot traffic within the management zone shall be prohibited within 150 ft. (50 meters) of posted nesting areas during the breeding season.
- 3) Surf fisherman shall stay at least 300 ft. from posted nesting areas during the breeding season. No live bait fish or amphibians will be allowed for use in fishing.
- 4) Fishing shall be prohibited within coastal lagoons except the Santa Margarita Estuary, from under the Interstate 5 freeway bridge access point to the Santa Margarita River mouth.
- 5) Watercraft shall not be permitted within coastal wetlands (except up to four non-motorized boats may be allowed in the Santa Margarita Estuary three days per week during the waterfowl hunting season).
- 6) Illumination from the Del Mar ball field will be shielded (when replaced) to deflect lighting away from the Santa Margarita River Estuary. Lights shall be extinguished when field is not in use.
- 7) Beach raking will be limited to the Del Mar and San Onofre Recreational Beaches.
- 8) Recreational use of all terrain vehicles, motorcycles, and off-road vehicles is prohibited within the management zones.
- 9) Cutting of vegetation is prohibited, except along recreational beach at San Onofre and Del Mar.
- 10) Beach fires are prohibited within the management zones.
- 11) Dogs on the beach must be on a leash when within 1000 feet of nesting areas during the breeding season.

- 12) Camping at Cockleburrr Canyon beach access will be limited to the non-breeding season (September 1 -14 March).

D.3 ACTIVITY CLASSIFICATION SYSTEM FOR FUTURE CONSULTATION

The Estuarine and Beach Ecosystem Conservation Plan established a system to manage the conduct of future consultations between the USFWS and Camp Pendleton. The purpose of this system is: (1) to reduce staffing requirements; (2) to provide a systematic approach to deal with future proposed projects, activities and operations; (3) to increase the Base's mission flexibility; (4) to satisfy section 7(e)20 of the Act requirements for future programmatic consultations; (5) to define activities which require formal consultation with the USFWS.

This "activity class" system is not intended to negate the requirement for consultation in the future. On the contrary, it is intended to define activities whose consultation requirements are programmatically covered by this Opinion or those for which no further consultation is required. This system establishes an annual reporting procedure for newly initiated Base activities, the effects of which are relatively minor and easily covered under the conservation plans. Further, the system defines types of activities for which an expedited consultation process can be implemented.

This plan establishes that Camp Pendleton activities be sorted into the following four categories: Class IV, III, II and I.

D.3.1 Class IV

D.3.1.1 DEFINITION

Class IV activities are defined as any activity that does not have the potential to affect listed or proposed species. No section 7 consultation is required for such activities.

D.3.1.2 EXAMPLES

- 1) Foot traffic on existing roads during all seasons.
- 2) Light foot traffic (movement by individuals) off of existing roads during the non-breeding season outside of posted nesting areas.
- 3) Vehicle operations on existing paved and dirt roads, including established creek crossings, during all seasons.
- 4) Vehicle operations off of existing roads in habitat outside the Tern/Plover Management Zone in the estuarine/beach ecosystem during the non-breeding season.

- 5) Live firing on established ranges.
- 6) New construction within cantonment areas that do not result in additional habitat degradation.
- 7) Vegetation management during the non-breeding season:
 - Limb Trimming of all vegetation within 10 feet of roads or above ground transmission cables.
 - Exotic Plant Control in all areas.
- 8) Maintenance activities during the breeding season:
 - Use of existing facilities and ranges, that do not result in take of occupied habitat.
 - Culvert clearing of all vegetation within 15 feet of culvert entry and exit points.
 - Road Maintenance of existing roads.
 - Night-time Lighting including lighting from existing facilities and indirect illumination from pyrotechnics to the extent the Fire Danger Rating System allows.
 - Exotic Plant Control in areas greater than 100 feet from occupied habitat during the breeding season.
 - Recreational Access pursuant to Marine Corps Order P5090, Base Order P5000 and programmatic instructions.
 - Vehicle traffic on existing roads.
 - Foot traffic during state authorized hunting seasons.
 - Maintenance activities that do not remove native vegetation within 100 feet of occupied habitat.
 - Hunting of game during authorized seasons, except posted or fenced areas.
 - Hiking, running, and bird watching along established trails.
 - Fishing within waterways, along designated beaches and within lakes or ponds.

D.3.2 Class III

D.3.2.1 DEFINITION

Class III activities are those discrete projects that "may affect" listed or proposed species. Potential effects to the species and their habitat are limited and considered offset by the on-going implementation of the estuarine/beach conservation plan. An annual report of activities occurring under this class will be sent by Camp Pendleton to the USFWS at the end of each fiscal year.

Class III activities are those which may potentially result in adverse effects to species in the estuarine/beach ecosystem that:

- 1) Are temporary disturbances to Plover Management Zone that is eliminated when activity ends.
- 2) Are temporary degradation of nesting areas during non-breeding season that can be restored before nesting season begins.

D.3.2.2 EXAMPLES

- 1) Aircraft overflights below 300 feet AGL over occupied territories of listed species during the breeding season along established Terrain flight (TERF) routes.
- 2) Small boats in the Santa Margarita River during the non-breeding season (military training and hunting).
- 3) Off-road troop movement (large groups) during the non-breeding season.
- 4) Indirect lighting of habitat during breeding season.
- 5) Weed control activities:
 - That result in the use of power tools during the breeding season within 100 feet of occupied habitat.
 - That result in affecting native vegetation of occupied habitat.
 - That use Rodeo or equivalent cut-stump or aerial spraying in occupied habitat.
- 6) Controlled burns conducted for habitat enhancement and protection during the non-breeding season.
- 7) Temporary sustained noise levels above 80 dBA L_{eq} hourly as measured over a 7 day period during the breeding season.

- 8) Vehicle access for enhancement activities.

D.3.3 Class II

D.3.3.1 DEFINITION

Activities that may affect listed species and for which impacts may or may not be offset by the conservation plan with associated compensation measures and that require concurrence from the USFWS via a separate project concurrence letter. Concurrence letter will specify the project description for the proposed action; avoidance and minimization measures effected; programmatic instructions recommended for implementation; assessment of the impact to listed species and associated habitat for direct and indirect effects (with the exception of dust and noise); annual bank balance; compensation requirements; and mitigation compensation measures proposed.

- Permanent development of beach habitat in excess of 1 acre.
- Permanent development of more than 1 acre of pickleweed salt marsh or 2 acres of coastal dune habitat.

D.3.3.2 EXAMPLES

General

- 1) Aircraft overflights below 300 feet AGL over occupied territories of listed species during the breeding season.
- 2) Results in lighting of habitat during breeding season that directly affects listed species.
- 3) Weed control activities that occur during the peak of the breeding season (March through June).
- 4) Aerial spraying of pesticides between March through August.
- 5) Result in permanent sustained noise levels above 80 dBA L_{eq} hourly calculated over a 7 day period during the breeding season.
- 6) Aircraft overflights below 300 feet AGL over nesting sites of listed species during the breeding season.

Project Examples

- 1) New facilities, structures or habitat modification that affects significant quantities of

habitat.

- 2) Construction of new nesting island in Santa Margarita Estuary.

D.3.4 Class I

D.3.4.1 DEFINITION

Activities whose impacts are not offset by the Conservation Plan and/or additional mitigation not agreed upon through informal consultation. These activities will trigger the requirement to enter into formal consultation and require preparation of a separate biological assessment by the Base, and consequent issuance of a Biological Opinion by the USFWS. Reference may be made to measures within this Plan as guidelines for avoidance or minimization measures. However, credit for conservation plan activities conducted under this plan will not accrue to this “new consultation” and for which significant, separate compensation will be required.

- Activities that require construction or degradation of Santa Margarita Estuary, plover management zone, Cockleburr Canyon, and Red Beach Estuary.
- Activities whose indirect affect has potential to significantly degrade water quality and quantity of the Santa Margarita Estuary.