
Biological Assessment

for the Complete or Partial Closure of

Defense Fuel Support Point, San Pedro, California



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**Prepared for:
Navy Region Southwest and the
Defense Logistics Agency**

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Acronyms

°C	degrees Celsius
°F	degrees Fahrenheit
AMSL	above mean sea level
AST	Aboveground storage tank
BA	Biological Assessment
BMP	Best Management Practice
BO	Biological Opinion
CAGN	Coastal California gnatcatcher
CALIPC	California Invasive Plant Council
CFR	Code of Federal Regulations
CLT	California Least Tern
CUPA	Certified Unified Program Agency
DLA	Defense Logistics Agency
DoD	Department of Defense
DoN	Department of the Navy
DFSP	Defense Fuel Support Point
EA	Environmental Assessment
ESA	Endangered Species Act
FR	Federal Register
GIS	Geographic Information System
INRMP	Integrated Natural Resources Management Plan
LAPD	Los Angeles Police Department
MBTA	Migratory Bird Treaty Act
NAVWPNSTA	Naval Weapons Station
Navy	U.S. Department of the Navy
NEPA	National Environmental Policy Act
PVB	Palos Verdes blue butterfly
PWS	Performance Work Statement
U.S.	United States
USFWS	United States Fish and Wildlife Service
USMC	United States Marine Corps
UST	underground storage tank

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Executive Summary

This Biological Assessment (BA) has been prepared by the United States Department of the Navy (Navy) to analyze the potential effects of the proposed complete or partial closure of Defense Fuel Support Point (DFSP) San Pedro, California on species listed under the Endangered Species Act (ESA). It provides the information necessary to initiate and support consultation between the Navy and the United States Fish and Wildlife Service (USFWS), as required by 50 Code of Federal Regulations (CFR) 402.14(c) and Section 7 of the ESA of 1973, as amended. The ESA requires federal agencies to ensure that their actions do not jeopardize the continued existence of an endangered or threatened species or its critical habitat. Analyses of potential effects were based on a review of the proposed action and the best available current and historical data.

The proposed action addressed in this BA is closure of Defense Fuel Support Point San Pedro, California (DFSP San Pedro) in accordance with applicable federal, state and local laws and regulations. This includes the Main Terminal, Marine Terminal, on-site and off-site pipelines, and associated infrastructure. The existing Defense Logistics Agency and Navy Host Tenant Real Estate Agreement would be terminated and the Navy would continue to own DFSP San Pedro. The fuel facility infrastructure, would be physically disconnected and closed in place, abandoned in place, dismantled, and/or demolished. The Main Terminal covers approximately 331 acres and is located at 3171 North Gaffey Street, San Pedro, California. The Marine Terminal (Pier 12) covers approximately 9 acres (including the Pier) and is located at 3500 Nimitz Road, Long Beach, California, within the Port of Long Beach. DFSP San Pedro is responsible for five pipelines in public rights-of-way totaling approximately 46.3 miles, all located within the County of Los Angeles. These include the Long Beach Pipelines, Norwalk pipeline, "R" pipeline, "G" pipeline, and the Surge pipeline.

The federally listed threatened or endangered species known to occur or that have the potential to occur within the Action Area or immediate vicinity include the coastal California gnatcatcher (*Poliophtila californica californica* [federally listed as threatened]), the Palos Verdes blue butterfly (*Glaucopsyche lydamus palosverdesensis* [federally listed as endangered]), and the California least tern (*Sternula antillarum brownii*) [federally listed as endangered]. Project-specific protocol surveys were completed for coastal California gnatcatcher in spring 2015. Palos Verdes blue butterfly long-term standardized transect surveys were completed for DFSP San Pedro in April 2014 and 2015. No adults were found in either year, but the species is likely to exist on site as dormant pupae (diapause). The proposed Action Area is not within critical habitat for these species. The Navy is proposing a set of impact avoidance, minimization, and conservation measures to be implemented in conjunction with the proposed action to avoid, minimize, and/or compensate for potential adverse effects on these listed species. These would include general measures (such as standard construction procedures required of construction contractors on DFSP San Pedro), revegetation, and erosion control measures. Additionally, species-specific measures, such as measures to protect nesting birds and continuation of a captive breeding program and monitoring to support Palos Verdes blue butterfly recovery, combined with best management practices and monitoring, would be implemented to minimize effects on the coastal California gnatcatcher and Palos Verdes blue butterfly.

Two riparian habitat dependent bird species, the southwestern willow flycatcher (*Empidonax traillii extimus*) and least Bell's vireo (*Vireo bellii pusillus*), were not carried forward for detailed analysis because of the unlikelihood of their occurrence on site (the flycatcher was observed on site during migration in 1997 and the vireo has never been documented from the site), their likely status as transients during migration if they were to be on site, and because riparian habitat on site would not be affected by the proposed action.

The primary causes of potential injury or mortality to coastal California gnatcatcher and Palos Verdes blue butterfly associated with the proposed action would be temporary and related to removal of habitat during demolition, including damage or destruction of host plants, collisions with vehicles, and habitat degradation. Approximately 0.45 acre of coastal California gnatcatcher habitat and 0.27 acre of Palos Verdes blue butterfly habitat would be temporarily removed by the action, representing 0.8% and 1.0% of the totals for each species, respectively, at the Main Terminal site. The proposed action could locally degrade coastal California gnatcatcher and Palos Verdes blue butterfly habitat at the Main Terminal and has the potential to introduce weeds as result of ground disturbance. The temporarily removed habitat would be unavailable until it has been restored following demolition activities. No designated habitat of either species would be permanently impacted. Following demolition activities, disturbed occupied habitat would be restored in place. Habitat for the coastal California gnatcatcher would take a minimum of several years to be restored after demolition. The key food plants for Palos Verdes blue butterfly can be reestablished within 3 years or less, depending on conditions. Implementation of impact avoidance and minimization measures listed in Table 2.1 of this biological assessment would enable avoidance or minimization of impacts to coastal California gnatcatcher and to Palos Verdes blue butterfly eggs, larvae, and adults within the potentially occupied habitat. Implementation of these measures, including clear definition of project boundaries on plans and in the field, having a project biologist on site when work is being done in and adjacent to identified habitat areas, minimizing construction activities within identified habitat areas, measures to protect nesting birds, habitat restoration, and continuing the captive breeding and monitoring program to support Palos Verdes blue butterfly recovery, would reduce the potential for and magnitude of adverse effect but not to a level where it would be so unlikely as to be discountable or below the scale at which take could occur. Therefore, the effects evaluation concludes that the proposed action ***May Affect and Is Likely to Adversely Affect*** the coastal California gnatcatcher and the action ***May Affect and Is Likely to Adversely Affect*** the Palos Verdes blue butterfly (Table ES-1). The project ***May Affect but Is Not Likely to Adversely Affect*** the California least tern, which may forage in waters near the Marine Terminal portion of the project area but would not be adversely affected by project activities.

Listed Species	Not Likely to Adversely Affect	Likely to Adversely Affect
Coastal California Gnatcatcher (CAGN)		X
Palos Verdes Blue Butterfly (PVB)		X
California Least Tern (CLT)	X	

1 Introduction

This Biological Assessment (BA) has been prepared by the United States Department of the Navy (Navy) and provides the information necessary to initiate and support consultation between the Navy and the United States Fish and Wildlife Service (USFWS) as required by Section 7 of the Endangered Species Act of 1973 (ESA), Public Law 93-205, 18 United States (U.S.) Code Section 1536, as amended, and Title 50, U.S. Code of Federal Regulations (CFR), Part 402. Section 7(a) of the ESA of 1973, as amended, requires federal agencies to consult with the USFWS to ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of designated critical habitat of such species. Section 7(c) of the ESA requires federal agencies to prepare a BA for the purpose of complying with Section 7(a) by identifying any threatened or endangered species, designated critical habitat, or species or habitat proposed as such, which are likely to be affected by the proposed action. Format and information provided in this BA follows the BA guidelines prepared by the USMC and Department of the Navy (DoN) in coordination with the USFWS (USMC and DoN 2000) and incorporates a review of the best available relevant scientific and biological information on the only ESA-listed species that may occur within the Action Area, the threatened coastal California gnatcatcher (CAGN; *Poliophtila californica californica*), the endangered Palos Verdes blue butterfly (PVB; *Glaucopsyche lygdamus palosverdesensis*), and the endangered California least tern (CLT; *Sternula antillarum browni*). The proposed action includes the implementation of the impact avoidance, minimization, and conservation measures described in detail in Section 2.3.

This BA incorporates information and programmatic guidance described in the Defense Fuel Support Point (DFSP) San Pedro *Integrated Natural Resource Management Plan* (INRMP) (NAVWPNSTA Seal Beach 2014), as well as avoidance, minimization, and compensation measures developed as part of the proposed action that would avoid or reduce potential effects to federally listed species.

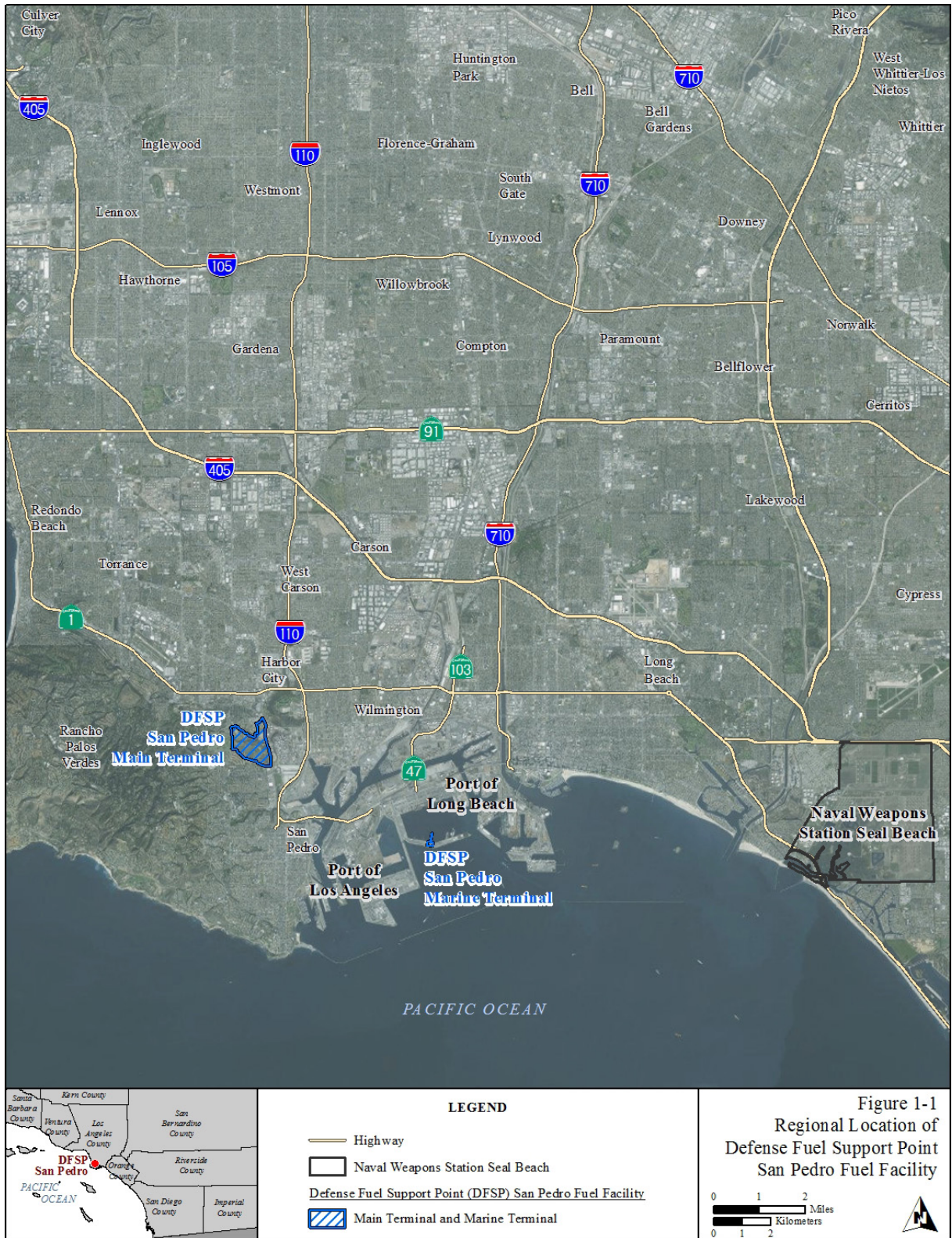
1.1 Project Location

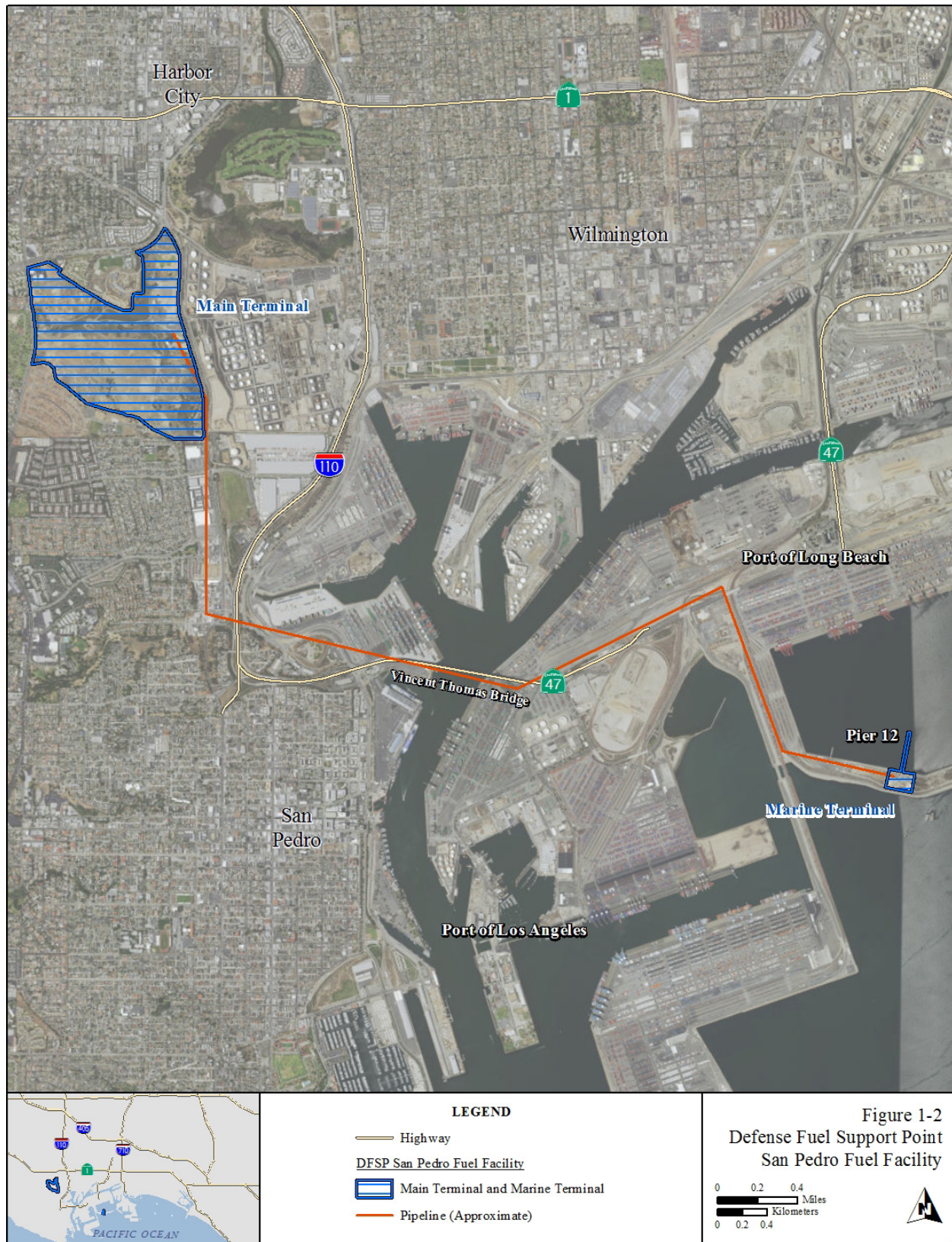
The proposed action would be implemented at the DFSP San Pedro, in Los Angeles County, California (Figure 1-1). DFSP San Pedro is located on the Palos Verdes Peninsula on the eastern slope of the Palos Verdes Hill in southern Los Angeles County, west of the City of Long Beach and south of Torrance, within the limits of San Pedro. The term “fuel facility” used in this BA refers to the three components of DFSP San Pedro:

1. the Main Terminal;
2. the Marine Terminal; and
3. off-site pipelines associated with DFSP San Pedro.

Pipelines connect the Main Terminal to the Marine Terminal (Figure 1-2). The Main Terminal covers approximately 331 acres and is located at 3171 North Gaffey Street, San Pedro, California (Figure 1-3). As indicated in Figure 1-3, the Main Terminal site is divided into Operations Areas and Listed Species Management Areas/Habitat Opportunity Areas, which are managed differently as described in Section 3.3 of this BA. The Marine Terminal of DFSP San Pedro includes Pier 12, which was formerly part of Naval Station Long Beach, and covers approximately 9 acres (including the Pier) that is located at 3500 Nimitz Road, Long Beach, California, within the Port of Long Beach (Figure 1-4).

The nine off-site pipelines associated with DFSP San Pedro and included as part of the project area extend for approximately 46 miles (74 kilometers) through public rights-of-way within Los Angeles County. These include the Long Beach Pipelines (three pipelines in total), the Norwalk pipeline, the R pipeline, the G pipeline, the surge pipeline, the 10-inch government pipeline, and the multi-product pipeline (Figure 1-5). Collectively, all of these pipelines run underground except for three short aboveground segments totaling approximately 690 feet (210 meters) (Table 1-1). As of May 2014, DFSP San Pedro is in a temporary closure status.









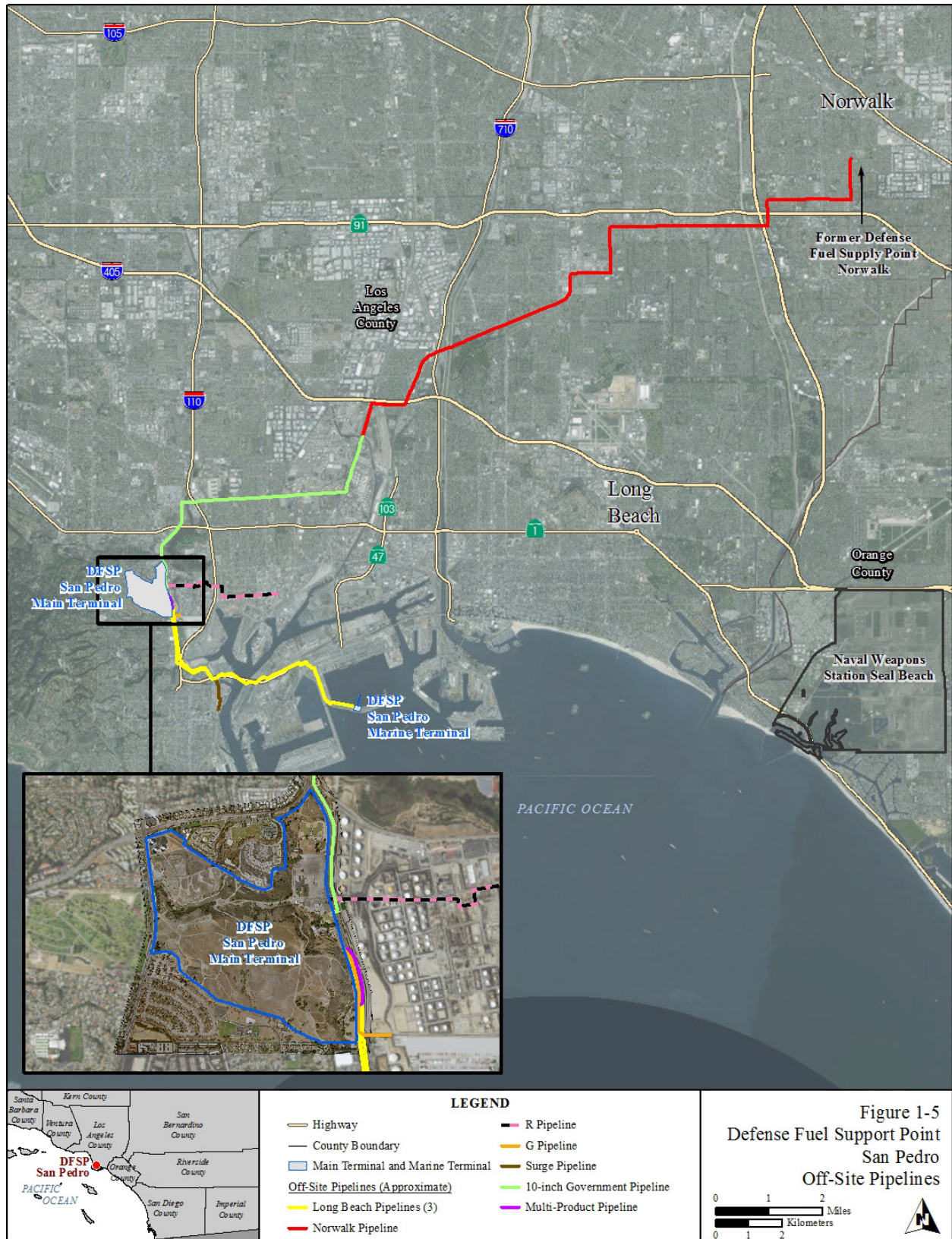


Table 1-1. DFSP San Pedro Off-Site Pipelines

Off-Site Pipeline Name ¹	Total Length	Portion Aboveground
Long Beach Pipeline (Main Terminal to Pier 12) – JP-5	27,456 feet (8,368 meters)	40 feet (12 meters)
Long Beach Pipeline (Main Terminal to Pier 12) – JP-8	27,456 feet (8,368 meters)	40 feet (12 meters)
Long Beach Pipeline (Main Terminal to Pier 12) – DFM	27,456 feet (8,368 meters)	40 feet (12 meters)
Norwalk Pipeline (Dominguez Channel to Norwalk)	84,321 feet (25,701 meters)	230 feet (70 meters)
R Pipeline	18,016 feet (5,491 meters)	20 feet (6 meters)
G Pipeline	5,280 feet (1,609 meters)	0
Surge Pipeline	3,700 feet (1,128 meters)	20 feet (6 meters)
10-inch Government Pipeline	47,430 feet (14,567 meters)	300 feet (91 meters)
Multi-Product Pipeline	3,600 feet (1,097 meters)	0
Totals	46.3 miles (74.5 kilometers)	690 feet (210 meters)

Note: ¹ Color of row corresponds to color of pipelines presented on Figure 1-5.
DFM = Diesel Fuel Marine; JP = Jet Propellant.

1.2 Purpose and Need for Proposed Action

The mission of DFSP San Pedro historically has been to receive, store, and distribute fuel to DoD facilities in support of Navy, Air Force, Army, Marine Corps, and Air National Guard missions. The fuel facility consists of storage tanks, pipelines, pump houses, loading racks and miscellaneous infrastructure. Prior to the temporary closure, fuel was received via pipelines and barges, and stored in underground and aboveground storage tanks. Fuel was then distributed by truck and pipeline to regional military facilities. DFSP San Pedro is entirely dedicated to fuel storage and delivery; no other military training or testing activities occur on-site (DLA 2008).

The purpose of the Proposed Action is to close the DFSP San Pedro fuel facility in order to achieve efficiencies in receiving, storing, and distributing fuel to DoD facilities. The DFSP San Pedro fuel facility includes the Main Terminal, the Marine Terminal, and off-site pipelines. The project is needed to address aging infrastructure and to limit environmental risk.

1.3 Action Area

The Action Area is defined as the area directly or indirectly affected by the proposed action. The Action Area includes the area that would be directly impacted by ground-disturbing and or demolition activities at the Main Terminal, Marine Terminal and on-site and off-site pipelines (i.e., the project “footprint”) as well as surrounding habitat areas that may be affected by noise, dust, and other project-related demolition activity.

1.4 Federally Listed and/or Proposed Species or Critical Habitat within the Action Area

Based on a review of the site conditions, existing records for the Action Area, and surveys conducted in spring 2015, three federally listed species are known or considered to have the potential to occur in the Action Area; these are the CAGN and PVB (refer to Section 4.1 for detailed information on these species), which occur at the Main Terminal Site, and the California least Tern (CLT), which could forage over water in the vicinity of the Marine Terminal Site. These species are the focus of this BA. There is no designated critical habitat for these species within the Action Area.

2 Proposed Action

2.1 Description of the Proposed Action

2.1.1 Project Components

The proposed action addressed in this BA is the complete closure of DFSP San Pedro with partial demolition, in compliance with applicable federal, state, and local laws and regulations. Subject to obtaining regulatory approval, the DFSP Main Terminal, Marine Terminal, and off-site pipelines would be closed in accordance with UFC 3-460-01.¹ The existing DLA and Navy Host Tenant Real Estate Agreement would be terminated. The Navy would continue to own DFSP San Pedro. No changes are proposed with respect to the ball fields or the Los Angeles Police Department (LAPD) shooting range; these areas would remain in their current condition and would continue to be available for public and LAPD use. The existing native plant nursery would continue to operate at the Main Terminal. As depicted in Figures 2-1 and 2-2, the following actions would occur:

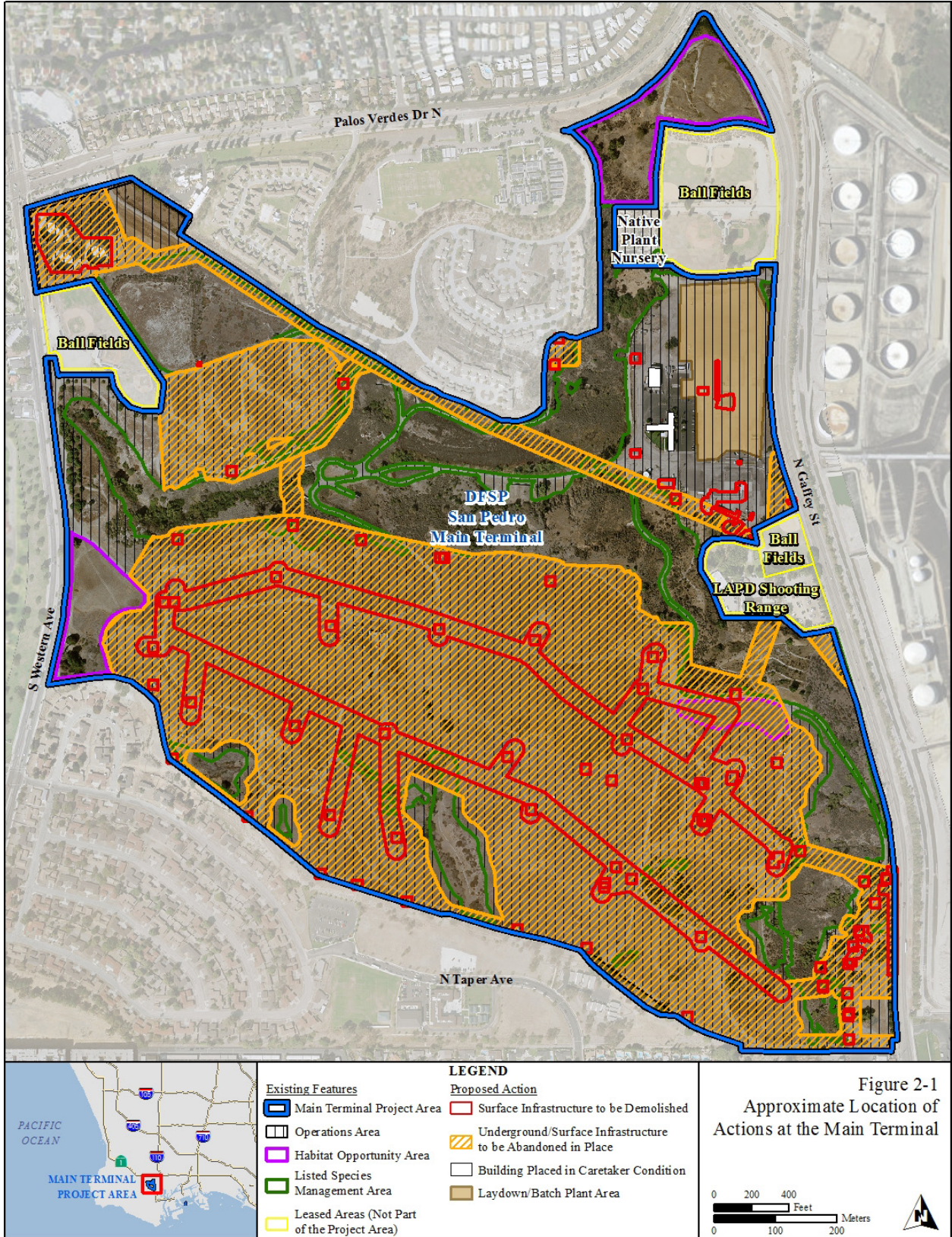
1. All buildings, equipment, and on-site pipelines at the Marine Terminal would be demolished; however, Pier 12 would not be demolished (Figure 2-2).
2. All ASTs would be demolished at both the Main and Marine Terminals. The ASTs would be recycled for scrap metal.
3. All USTs would be filled with an inert solid and abandoned in place.
4. On-site aboveground pipelines would be demolished.
5. On-site underground pipelines would be permanently disconnected and plugged and/or filled with an inert solid and abandoned in place²; however, approximately 9,600 linear feet of on-site underground pipeline within the Operations Area would be demolished (excavated and removed). After removal, the excavated area would be filled using on-site soils; no fill would be trucked in from off-site.³ The excavated area would then be compacted to engineering standards and graded to approximate existing slope contours.
6. All valve pits, pump stations/houses, and all warehouses would be demolished.
7. The underground segments of the off-site pipelines (refer to Figure 1-5) would be plugged and/or filled with an inert solid and abandoned in place. The aboveground segments of the off-site pipelines would be demolished (refer to Table 1-1).
8. All office and administrative buildings at the Main Terminal would be placed in long-term caretaker condition⁴.
9. Utilities at the Main Terminal would be shut-off and secured; utilities for non-project elements (e.g., ball fields) would not be affected.

¹ UFC 3-460-01, *Design: Petroleum Fuel Facilities*, provides guidance on the rehabilitation, deactivation, or closure of fueling facilities. Chapter 14 lists the closure requirements for closing a fueling facility (DoD 2013).

² An abandoned pipeline means a pipeline or pipeline segment which has been purged, sealed, and disconnected from an operating system but will not have basic federal maintenance and inspection activities performed.

³ The amount of on-site soil that would be used to fill the USTs under the soil fill option would be approximately 273,200 cubic yards. The fill soil would be obtained from within the Operations Area, avoiding Listed Species Management Areas, Habitat Opportunity Areas, IRP sites, and ephemeral drainages. The excavation of fill dirt would not affect PVB or CAGN habitats.

⁴ For this project, a caretaker condition implies maintaining the structure as needed so that it does not deteriorate on its own. Openings would be locked and secured and utilities would be turned off.





10. A Closure Plan⁵ would be prepared to describe the work that would be performed and environmental closure commitments. If soil or groundwater contamination is found during the closure process, a follow-on site investigation and restoration project would be initiated. Cleanup methods and standards would be negotiated with the CUPA, Regional Water Quality Control Board (RWQCB), and other regulatory agencies (e.g., the U.S. Fish and Wildlife Service [USFWS]), as applicable.

Soil, concrete, or foamcrete (i.e., a mixture of water, sand, cement, and air) would be used to fill the USTs. If filled with soil, the soil on top of the USTs would first be removed and stockpiled nearby, then the tops of the USTs would be removed, and the stockpiled soil and other soil in the immediate vicinity would then be pushed into the UST shells. The volume of fill dirt needed under the soil fill option would be approximately 273,200 cubic yards. Soil needed to fill the empty USTs would be obtained from within the Operations Area, avoiding Listed Species Management Areas, Habitat Opportunity Areas, IRP sites, and ephemeral drainages. The excavation of fill dirt would not affect PVB or CAGN habitats.

If it is determined that concrete or foamcrete would be used, concrete or foamcrete would be injected into the USTs and no excavation or removal of the top of the USTs would occur. A batch plant⁶ may be temporarily erected at the Main Terminal to mix the concrete or foamcrete.

Multiple injection points would be used from existing access points to fill the on- and off-site pipelines with inert material and/or plug the pipelines. As described in Section 1.2.3, the ASTs and USTs were cleaned and isolated/secured, and the pipelines, both on-site and off-site, were cleaned and isolated/secured as part of temporary closure. No additional cleaning would be needed.

Disturbed and excavated sites would be stabilized using best management practices (BMPs) for erosion and sediment control. The BMPs would be implemented in compliance with the anticipated Construction General Permit, to include complying with inspection and monitoring requirements. The sites would then be revegetated consistent with the DFSP Integrated Natural Resources Management Plan (INRMP) (NAVWPNSTA Seal Beach 2014). Plant materials would not include any invasive species listed by the California Invasive Plant Council (CalIPC).

Proposed closure and demolition activities would begin in calendar year 2016 and last approximately 4 years.

Assumptions Used in this Analysis

The following impact analysis reflects the actual location and extent of the infrastructure affected by this project; however, Figure 2-1 showing the layout of the proposed action presents general polygons of the infrastructure due to operational security concerns and, as such, does not show the specific locations of infrastructure. Specific locations and associated adjacent areas subject to temporary impacts have been used for the quantitative impact assessment in this document; thus, impacts when quantified, may be less than interpreted from the provided figure which depicts notional areas of impact.

⁵ A Closure Plan is a plan that describes procedures for terminating the storage of hazardous materials and/or hazardous wastes in a storage facility in a manner that: (1) Eliminates or minimizes the need for further maintenance; (2) Eliminates or minimizes any threat to public health, safety and the environment from residual hazardous materials or hazardous wastes in the facility; and (3) Demonstrates that the hazardous materials and/or hazardous wastes that were stored in the facility would be removed, disposed, neutralized, or reused in an appropriate manner (CUPA Chapter 8.20).

⁶ A batch plant is a machine that combines the materials used to create concrete or foamcrete.

The following assumptions were used in quantifying the estimated impacts to habitat types:

- The demolition and removal of ASTs and USTs assumed a 135-ft wide buffer area subject to temporary impacts.
- The demolition and removal of pipelines, valve boxes, and valve pits assumed a 25-ft wide buffer area subject to temporary impacts.
- The demolition and removal of pump stations/houses and buildings assumed no buffer area as these features are above-ground and located in developed areas; thus, no temporary impacts to habitat would occur.
- The excavation, demolition, and removal of surface or underground infrastructure (e.g., valve boxes, pipelines and USTs) would result in temporary impacts because the affected area would be replanted with a native species seed mix in the Operations Area and would be restored as habitat for PVB or CAGN in Listed Species Management Areas/Habitat Opportunity Areas.
- The in-place abandonment of infrastructure (e.g., pipelines and USTs) would be accomplished using existing portals; no temporary or permanent impacts to surface cover types would occur.

2.2 Alternatives Considered but not Selected

As part of the National Environmental Policy Act (NEPA) process, several alternatives are considered but not carried forward for analysis in the Environmental Assessment because they do not meet the purpose of and need for the NEPA proposed action. The Environmental Assessment carries forward four alternatives plus the No Action Alternative. The alternatives consist of:

- Alternative 1: Complete Closure with Partial Demolition
- Alternative 2: Complete Closure with Minimal Demolition
- Alternative 3: Complete Closure with Complete Demolition
- Alternative 4: Partial Closure with Minimal Demolition
- No Action Alternative: Reversal of Temporary Closure and Eventual Resumption of Operations

This BA assumes that the proposed action (Complete Closure with Partial Demolition) represents analysis of the worst case scenario to the species and the Navy may elect to select Alternatives 1, 2, or 4 without further consultation.

2.3 Measures Proposed to Avoid, Minimize, and Compensate for Effects to Listed (and/or Proposed) Species to be Incorporated into the Proposed Action

Impact avoidance and minimization measures associated with biological resources are listed in Table 2-1. These measures incorporate a number of species-specific measures to minimize the potential for take of PVB and CAGN, and to minimize or rectify project effects on their habitat. In drafting these measures, the Navy has drawn upon existing PVB and CAGN management-related measures set forth in the 2010 BO for DFSP San Pedro (FWS-LA-08B0606-08F0704; USFWS 2010a) which it believes would be appropriate to continue utilizing following the proposed closure of the facility. The measures identified in Appendix B may be revised as a result of consultation with the USFWS.

**Table 2-1
Proposed Impact Avoidance and Minimization Measures for the Proposed Action**

These draft impact avoidance and minimization measures presented are subject to revision pending the outcome of on-going regulatory coordination.

#	Action and Description
GENERAL	
<i>Short-Term (Demolition)</i>	
G-1	The contractor will be required to prepare an Environmental Protection Plan that will describe how the contractor will implement the mitigation, impact, avoidance and minimization measures presented in this table.
BIOLOGICAL RESOURCES	
<i>Short-Term (Demolition)</i>	
B-1	The project area will be accessed using existing roads. Parking, driving, lay-down, stockpiling, and vehicle and equipment storage will be limited to previously compacted and developed areas within the Operations Area. No off-road vehicle use will be permitted beyond the Operations Areas and designated access routes, except as addressed in #B-2.
B-2	To minimize impacts to biologically sensitive areas, construction access routes will be determined in coordination with NAVFACSW biologists during the design phase, and delineated in the construction plans. This access route will be clearly marked and will be considered part of the project activity zone. Biologically sensitive areas will be clearly marked on project activity plans, and avoided by personnel and equipment.
B-3	At least seven days before project initiation, the limits of the project boundary, including temporary features such as staging areas, will be clearly marked with flagging, fencing, or signposts. All project-related activities will occur within the project boundary. Limits of the project activity zone will be clearly marked on construction plans. No unauthorized personnel or equipment (including off-road vehicle access) will be allowed outside the project activity limits or designated access routes. DLA will include in closure PWS.
B-4	To ensure fire does not commence due to project activities, shields, protective mats, or other fire prevention equipment will be used during grinding and welding, and vehicles will not be driven and parked in areas where catalytic converters could ignite dry vegetation. No smoking or disposal of cigarette butts will take place within vegetated areas. As a precaution, project trucks will carry water and shovels or fire extinguishers, to ensure fire does not spread due to project activities.
B-5	Should night work be authorized, any night work will involve shielding all lighting away from sensitive areas.
B-6	A contractor education program will be conducted in accordance with the DLA Energy EMS. It will be conducted during all project phases and will cover the potential presence of listed species; the requirements and boundaries of the project; the importance of complying with avoidance, minimization, and compensation measures; and problem reporting and resolution methods.
B-7	All trash generated by demolition activities will be disposed of properly. All food-related trash will be placed in sealed bins or removed from the site regularly. Following initial project activities, all equipment, waste, and project debris will be removed from the site, and the soil will be re-contoured before habitat restoration. The project contract will require the project debris to be recycled and quantities turned into DLA. DLA will include these requirements in a Performance Work Statement (PWS) for Closure.
B-8	Staging areas, laydown areas, and/or other temporary project activity-related requirements will be located within the Operations Area, in already disturbed areas or non-sensitive habitat types. DLA will include these requirements in a PWS for Closure.
B-9	Use of shoring or other excavation stability measures to reduce areas of impact may be employed where practicable. DLA will include these requirements in a PWS for Closure.

#	Action and Description
B-10	A qualified Project Biologist will be on site when work is being done in and/or adjacent to identified habitat areas. These identified habitat areas with an appropriate buffer will be included on project maps and drawings. The Project Biologist will identify work areas, monitor work activity, provide “tailgate” sessions for the demolition contractor, and oversee and execute the impact avoidance and minimization measures pertaining to biological resources. The Project Biologist will have experience with listed and sensitive species that occur or have the potential to occur in the project area. Before demolition activities, a qualified biologist will conduct pre-project clearance surveys to ascertain the demolition area is not being used by sensitive native species, including owls, raptors, and bats.
B-11	<p>The following measures will be used to minimize and avoid impacts to CAGN:</p> <ol style="list-style-type: none"> a. The biologist will monitor demolition activities. The Project Biologist will conduct pre-activity surveys for CAGN s and their nests in and within a 100-foot wide buffer surrounding the impact area. These surveys will be conducted within the week before the initiation of brush clearing, grading, or other demolition activities. The Navy will coordinate with the USFWS to determine appropriate nest survey frequency. Areas that have been surveyed would be flagged, and any vegetation that is required to be removed for purposes of demolition would be removed outside the breeding season. b. Dust migration in or adjacent to Coastal Sage Scrub areas will be minimized by lightly spraying areas of exposed soil with water during excavation activities when weather conditions require the use of dust control measures. c. The following measures will be employed if active CAGN nest(s) are detected within the immediate area of project impacts or within the surrounding 100-foot wide buffer: <ol style="list-style-type: none"> i. If practical, demolition activities will be avoided within 100 feet of a nest until the nest fails or juveniles successfully fledge as determined by the Project Biologist. ii. If any active CAGN nest (nest containing eggs or an empty or partial nest with CAGNs actively exhibiting breeding behaviors) occurs within 100 feet of proposed demolition area, the Project Biologist will report the nest to the Navy. The Project Biologist will use the distance to the project limits and local topography to determine if demolition activities are likely to directly damage a nest or disturb nesting activities. Signage will be installed to deter people from entering any area within an active CAGN nest. iii. Where damage or disturbance of any CAGN nest(s) is likely, NAVWPNSTA Seal Beach will implement further measures to avoid the likelihood of nest destruction or disturbance, including temporarily halting clearing activities until the nest fails or until at least 10 days after young fledge from the nest. Demolition activities will be directed to other areas farther from the active nest(s) where the activities will not disturb the active nest(s). iv. The Project Biologist will monitor nest progress, demolition activity, and protective fencing to minimize potential demolition-related disturbance and submit a weekly nest status report to NAVWPNSTA Seal Beach. A post-demolition report will be submitted to the USFWS summarizing the weekly nest status report and outcomes within six months of project completion. d. DLA will include these requirements in a PWS for Closure.
B-12	Due to the presence of MBTA habitat within the project area, a qualified biologist will conduct pre-activity surveys for migratory birds and their nests within the project area and associated buffer area. The areas will be flagged; any vegetation needing to be removed for demolition will be removed prior to breeding season. DLA will include these requirements in a PWS for Closure.

2 Proposed Action

#	Action and Description
B-13	<p>The contractor performing the closure activities will be required to prepare a Revegetation Plan that is consistent with the DFSP INRMP. The Revegetation Plan will address all revegetation efforts associated with the project activities and include specific erosion control measures, irrigation requirements, species composition, seed mix origins and ratios for that particular habitat, weed control, water regimes, maintenance activities, success criteria, and monitoring requirements. The Revegetation Plan will apply to all soil disturbance and will include the following:</p> <ol style="list-style-type: none"> a. The Operations Area will be reseeded with native species. b. The Habitat Area (Listed Species Management and Habitat Opportunity Areas) will be restored with habitat plantings specific to the PVB and CAGN, as appropriate. c. To minimize and avoid impacts to CAGN following project completion, all suitable and/or occupied CAGN habitat that is temporarily impacted by project activities will undergo appropriate restoration activities (e.g., re-contouring, planting, and weeding). Restoration will be conducted consistent with the Restoration Plan. d. Revegetation methods for habitat areas will be consistent with the INRMP and include seeding and/or planting of container stock, salvaged plants, cuttings, or other propagules collected or propagated from a local native plant nursery or locally collected sources, including any sensitive plant species that will be impacted during soil disturbance or other project activities. Plants from local nurseries will use clean, weed-free soil. e. Reseeding/replanting that becomes necessary after the start of the rainy season will be done as soon as possible. f. DLA will include these requirements in a PWS for Closure.
Long-Term (Post-Closure)	
B-14	<p>Areas impacted by project activities will be inspected by the Navy within one year following the completion of project activities to determine whether any remedial measures, such as re-seeding/re-planting, weed control, watering, and/or erosion control, are required. Up to five years of post-restoration monitoring within disturbed habitat areas will occur. Invasive weed control (e.g., hand removal, mechanical, and herbicide control) will be implemented in areas reseeded/replanted until the native vegetation is established. This will be conducted as part of the established Habitat Management Program and incorporated into the Habitat Management Plan and INRMP.</p>
B-15	<p>The project will minimize the potential for invasive plant species (i.e., weeds) or soil pathogens to become established in disturbed areas and spread into Listed Species Management Areas as well as minimize the risk of habitat degradation from the invasion of nonnative vegetation into Listed Species Management Areas. Invasive plant species generally include those species listed by the CALIPC and any species that can invade natural or restoration areas and replace or preclude the establishment of native or other more desirable species. Invasive Species (as listed by the CALIPC “high” and “moderate” categories) will be prevented from establishing in temporarily disturbed areas by biological monitoring and removal if discovered. The following measures will be implemented:</p> <ol style="list-style-type: none"> a. Vegetation characteristics will be monitored annually within habitat areas using study areas defined in Longcore (2007). Monitoring will occur following the PVB flight season each year. The following characteristics will be estimated: <ol style="list-style-type: none"> i. Three permanent transects will be established in each survey area to estimate percent cover of native shrubs, native forbs, nonnative grasses, nonnative forbs, and bare ground. ii. For each study area, a qualified biologist will provide a narrative that describes which invasive species pose the most important threats to habitat. b. The following species will be eradicated from the Listed Species Management Areas, and any new invasion will be eliminated annually: giant reed (<i>Arundo donax</i>), Peruvian peppertree (<i>Schinus molle</i>), and iceplant (<i>Carpobrotus edulis</i>). Eradication techniques will avoid PVB hostplants with a buffer (2 foot) around hostplant canopies and follow guidelines described in CAGN minimization measures. c. A qualified biologist will maintain and continually update a list of nonnative plants that are known to quickly invade and degrade native habitat in the vicinity of DFSP San Pedro. If plant species with rapid colonization and invasion potential are observed within the Listed Species Management Areas, they will be the highest priority for annual weed management. This list will initially include: spurge (<i>Euphorbia terracina</i>), castor bean (<i>Ricinus communis</i>) and pampas grass (<i>Cortaderia selloana</i>);

#	Action and Description
	<ul style="list-style-type: none"> d. Other nonnative plants will be managed as part of habitat maintenance using the approaches as deemed appropriate by a biologist: <ul style="list-style-type: none"> i. Routine nonnative vegetation control will be implemented using hand tools, including hand-held power tools such as weed trimmers, without the use of chemicals. ii. To minimize impacts to PVB adults, use of powered weed trimmers or other potential disturbance-inducing methods will be avoided during the PVB flight season (February 15 to May 31) within areas determined to be occupied by monitoring and areas mapped as potentially occupied by PVB. iii. In problematic areas, herbicides will be applied by certified pesticide applicators as needed using the following guidelines provided in the 2010 BO (FWS-LA-08B0606-08F0704 Conservation Measure 6 [USFWS 2010a]). iv. No herbicide will be applied within 2 feet of any coast locoweed (<i>Astragalus trichopodus</i> var. <i>lonchus</i>) or deerweed canopy. e. Using data from vegetation sampling, each study area will be assessed to determine whether it meets the following criteria in regards to the severity of nonnative plant dominance. <ul style="list-style-type: none"> i. If the relative ratio of nonnative plant cover to native plant cover for any study area exceeds 1:1, the biologist will initiate vegetation management for that study area during the same calendar year. ii. If nonnative vegetation remains above this threshold two years later, the biologist will contact the USFWS and DFSP San Pedro to coordinate remedial actions, which may include supplemental seeding to enhance success.
B-16	<p>The following measures will be used to conserve PVB at the DFSP San Pedro:</p> <ul style="list-style-type: none"> a. DFSP San Pedro will maintain a captive breeding program to support PVB protection and recovery and continue monitoring following methods described in the 2010 BO (FWS-LA-08B0606-08F0704 Conservation Measure 1 [USFWS 2010a]). b. PVB populations will be monitored via annual PVB surveys along transects that have been sampled since 1999 and as described in 2010 BO (FWS-LA-08B0606-08F0704 Conservation Measure 2 [USFWS 2010a]). c. Restore suitable habitat to existing conditions following demolition according to the Revegetation Plan. Habitat areas will be restored with habitat plantings specific to the PVB and CAGN.
B-17	Continued operation of the onsite native plant nursery.

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3 Existing Conditions and Description of the Specific Area Affected by the Action

3.1 Data Sources

The following are the principal data sources consulted/developed to support the analysis presented in this chapter:

- DFSP San Pedro INRMP (Naval Weapons Station [NAVWPNSTA] Seal Beach 2014);
- DFSP San Pedro geographic information systems (GIS resource database) (Naval Weapons Station [NAVWPNSTA] Seal Beach 2015);
- Biological Opinion for routine Maintenance Operations, Defense Fuel Support Point, San Pedro, Los Angeles County, California (FWS-LA-08B0606-08F0704; USFWS 2010a) which provides general biological information and outlines measures to avoid take and minimize impacts on CAGN and PVB and associated habitats;
- Palos Verdes Blue Butterfly (*Glaucopsyche lygdamus palosverdesensis*), 5-year Review: Summary and Evaluation (USFWS 2014);
- Palos Verdes Blue Butterfly (*Glaucopsyche lygdamus palosverdesensis*) (PVB) survey data (Longcore and Osborne 2015; Longcore et al. 2014; Longcore et al. 2012; Johnson et al. 2012, 2008);
- Coastal California gnatcatcher (*Polioptila californica californica*) (CAGN) survey data (ICF International 2011; Cardno 2015); and
- Biological Assessment (revised Third Draft) for DFSP San Pedro Routine Operations and Maintenance Activities (NAVWPNSTA Seal Beach 2014).

3.2 Description of Existing Conditions

The project consists of a Main Terminal, located in San Pedro (Figure 1-3), a Marine Terminal (Figure 1-4), located in the West Basin, Pier T area of Long Beach Harbor, and off-site interconnecting pipelines (Figure 1-5).

3.3 Vegetation

Main Terminal. Vegetation community descriptions presented in the DFSP San Pedro INRMP (NAVWPNSTA Seal Beach 2014), which is based on vegetation mapping efforts conducted in 1996 and subsequent updates, were used to describe plant communities within the ROI. Scientific nomenclature for plants follows The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin et al. 2012). Below is a brief description of the plant communities within the project area.

The Main Terminal consists of Operations, Leased, Listed Species Management, and Habitat Opportunity Areas, which are managed differently (Figure 1-3). The Operations Area is the area where fuel facility operations previously took place. This area contains storage tanks, pipelines, valve pits and vaults, fire suppression systems, a truck loading rack, and operational/administration buildings.

The Leased Areas are managed by NAVWPNSTA Seal Beach. These areas include the shooting range leased to the LAPD and ball fields leased to community softball organizations. The Listed Species Management Areas provide natural resource benefits and are not subject to significant operations impacts on a regular basis. The Listed Species Management Area includes potentially occupied PVB, and CAGN habitat. The Habitat Opportunity Areas are areas of the facility not routinely accessed for operation support purposes.

Over 90 percent of the Operations Area, which covers 208 acres, consists of non-native grasslands and developed land types that have little resource value for non-grassland species because a large portion of the area is routinely mowed for fire abatement around active fuel tanks (DLA 2014). An additional 24 acres are leased as ball fields and a police shooting range. These acres also have little natural resource value and are outside of the project area. In addition, a native plant nursery owned by the government and operated under contract by the Palos Verdes Peninsula Land Conservancy, which grows locally sourced plant species, is located near the administration portion of the Main Terminal. It is also excluded from this assessment because its operation would not be affected.

The remaining approximately 101 acres provide natural resource benefits and are not subject to significant operations impacts on a regular basis (USFWS 2010a; DLA 2014). These are referred to as Listed Species Management Areas/Habitat Opportunity Areas and are the focus of most biological surveys and resource management activities at the Main Terminal site. Specifically, the 2014 BA (DLA 2014) identifies the Listed Species Management Areas as “areas that provide natural resource benefits and are not subject to significant operations impacts on a regular basis” and Habitat Opportunity Areas as “areas of the facility not routinely accessed for operation support purposes.” Hereafter in this assessment, the Listed Species Management Areas (84 acres) and Habitat Opportunity Areas (17 acres) will be collectively referenced as “Habitat Areas.”

Plant communities of DFSP San Pedro primarily consist of non-native grasslands (approximately 70 percent of the non-developed area) with patches of native coastal sage scrub, oak woodlands, and riparian corridors, as well as groves of eucalyptus and other non-native trees.

Table 3.1 and Figure 3.1 present the plant communities and other land cover types within DFSP San Pedro Main Terminal. The acreages and land use types used throughout the biological analysis are based on current (2015) GIS data provided by NAVWPNSTA Seal Beach.

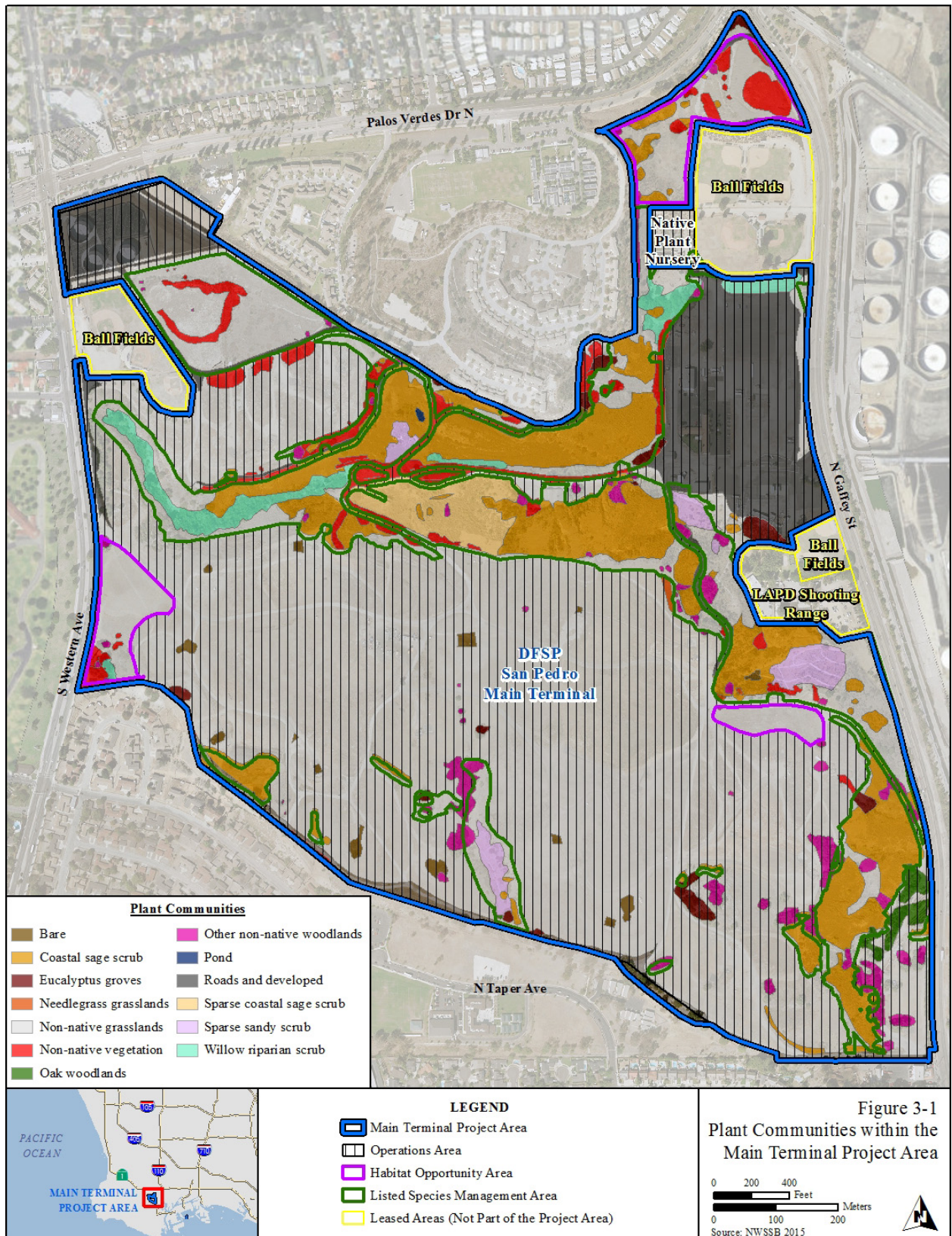
Table 3.1. Existing Plant Communities and Land Cover Types within the Main Terminal Project Area

Vegetation and Land Cover Types	Habitat Area		Operations Area		Site
	Acres	% of Total	Acres	% of Total	Total (acres)
Bare	0.20	12.9%	1.36	87.1%	1.56
Coastal sage scrub	34.39	92.9%	2.62	7.1%	37.01
Developed	1.34	4.9%	25.77	95.1%	27.11
Eucalyptus groves	0.74	30.4%	1.69	69.6%	2.42
Needlegrass grasslands	0.07	29.9%	0.15	70.1%	0.22
Non-native grasslands	38.86	19.5%	160.37	80.5%	199.23
Non-native vegetation	7.78	67.4%	3.76	32.6%	11.53
Oak woodlands	0.09	6.7%	1.26	93.3%	1.35
Other non-native woodlands	3.23	47.0%	3.63	53.0%	6.86
Pond	0.05	100.0%	0.00	0.0%	0.05
Roads and developed area	0.67	27.7%	1.76	72.3%	2.43
Sparse coastal sage scrub	4.71	91.6%	0.43	8.4%	5.14
Sparse sandy scrub	3.75	99.3%	0.02	0.7%	3.77
Undetermined plant community	0.40	8.5%	4.34	91.5%	4.75
Willow riparian scrub	4.54	85.4%	0.77	14.6%	5.31
Total²	100.82	32.6%	207.95	67.4%	308.76¹

Notes:

¹ Total acreage does not include approximately 24 acres of leased areas (ball fields and shooting range), which are not a part of this project.

² Column totals were computed on unrounded numbers and thus may differ slightly from the sum of the rounded numbers above them. The individual values in the columns were rounded to increase readability.



Non-Native Grasslands

Non-native grasslands are the dominant vegetation type on the Main Terminal. These grasslands contain primarily non-native annual grasses (e.g., bromes [*Bromus* spp.] and wild oats [*Avena* spp.]), although some native needlegrasses (*Stipa* spp.) are present (NAVWPNSTA Seal Beach 2014). Several non-native (often invasive) annual herbs are common, including: Italian thistle (*Carduus pycnocephalus*), tocalote (*Centaurea melitensis*), broadleaf and redstem filaree (*Erodium* spp.), hedychnis (*Hedypnois cretica*), summer mustard (*Hirschfeldia incana*), bur clover (*Medicago polymorpha*), sourclover (*Melilotus* spp.), wild radish (*Raphanus sativus*), and milk thistle (*Silybum marianum*) (NAVWPNSTA Seal Beach 2014). Native herb species occurring in this community include beach bur (*Ambrosia chamissonis*), annual bursage (*Ambrosia artemisiifolia*), western ragweed (*Ambrosia* spp.), narrowleaf milkweed (*Asclepias fascicularis*), horseweed (*Conyza canadensis*), fascicled tarplant (*Deinandra fasciculata*), dove weed (*Eremocarpus setigerus*), telegraph weed (*Heterotheca grandiflora*), and Spanish lotus (*Acmispon americanus* var. *americanus*).

Non-native grasslands may also support some coastal sage scrub species, and in some areas encompass small patches of true coastal sage scrub, which are important corridors for birds, butterflies, and wildlife, as well as native seed sources. PVB host plants deerweed (*Acmispon glaber*) and coast locoweed (*Astragalus trichopodus lonchus*) are scattered throughout the grasslands. The majority of grassland on the Main Terminal is mowed to provide for fire control and weed abatement.

Coastal Sage Scrub

The coastal sage scrub vegetation community is characterized by low-growing shrubs. California sagebrush (*Artemisia californica*) is dominant, and California bush sunflower (*Encelia californica*), coyote bush (*Baccharis pilularis*), California buckwheat (*Eriogonum fasciculatum*), brittlebush (*Encelia farinosa*), and black sage (*Salvia mellifera*) are co-dominant or subdominant in areas. Some portion of coastal sage scrub also supports coast prickly pear (*Opuntia littoralis*), purple sage (*Salvia leucophylla*), toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*), and sugar bush (*Rhus ovata*). Other species present include lemonade berry (*Rhus integrifolia*), thickbracted goldenbush (*Ericameria palmeri* var. *pachylepis*), Mexican elderberry (*Sambucus nigra*), bedstraw (*Galium angustifolium* ssp. *angustifolium*), sawtooth goldenbush (*Hazardia squarrosa*), giant wildrye (*Elymus condensatus*), sticky bush monkeyflower (*Mimulus* sp.), and coastal cholla (*Opuntia prolifera*). Native annual and perennial herb and grass species that are common in the understory are California croton (*Croton californicus* var. *californicus*), coyote melon (*Cucurbita foetidissima*), long-stemmed buckwheat (*Eriogonum elongatum*), green everlasting (*Pseudognaphalium californicum*), cudweed-aster (*Corethrogyne filaginifolia*), and foothill and purple needlegrass (*Stipa lepida* and *S. pulchra*, respectively).

PVB host plants deerweed and coast locoweed occur in this habitat type, but less frequently. Escaped ornamental species, such as sea fig and hottentot fig (*Carpobrotus* spp.), also occur as thick mats within the shrublands (NAVWPNSTA Seal Beach 2014).

Sparse Sandy Scrub

Sparse sandy scrub community contains seral or fringe coastal sage scrub components such as croton and deerweed. This community tends to be on sandy substrates and steep grassland slopes. Since no one species dominates these areas, they cannot be readily assigned to a more conventional vegetation community. They are identified as a separate mapping unit because they offer favorable habitat restoration sites for PVB.

Coast Live Oak Woodlands

Coast live oak woodlands covers are dominated by coast live oak (*Quercus agrifolia*), occasionally with other non-native tree species, such as pepper trees (*Schinus* spp.). Toyon, laurel sumac, and lemonade berry are occasional throughout the woodlands. Understory species are generally composed of non-native grasses and forbs, although some natives may also occur.

Willow Riparian Scrub

Riparian vegetation consists of an assemblage of willows (Goodding's black willow [*Salix gooddingii*], red willow [*S. laevigata*], and arroyo willow [*S. lasiolepis*]), coyote bush, and other species. Willow riparian scrub is associated with natural drainage features within the area.

Eucalyptus Woodland/Groves

The eucalyptus groves are dominated by gum trees (*Eucalyptus* spp.). The understory of these woodlands is generally sparse, composed of non-native grasses and forbs and some native shrubs.

Other Non-Native Woodlands

Non-native woodlands cover approximately 3.7 acres (1.5 hectares). These areas are dominated by non-native trees, such as Peruvian pepper tree (*Schinus molle*), Brazilian pepper tree (*S. terebenthifolia*), and acacias (*Acacia* spp.). The understory is generally sparse, composed of non-native grasses and forbs and some native shrubs.

Undetermined Plant Community

This category applies to a narrow strip along the western and southern boundaries of the site totaling 4.75 acres that was not included in the vegetation mapping.

Other Land Cover Types

Landscaping is considered an "other land cover types" and occurs in areas around the administrative buildings, ball fields, and the entry to the Main Terminal. The category includes native and non-native plant species. Landscaped areas of the Main Terminal constitute less than 0.1 acre (0.04 hectare) located around the administration building. Plants in landscaped areas include magnolia (*Magnolia* sp.), eucalyptus (*Eucalyptus* sp.), daylily (*Hemerocallis* sp.), Joshua tree (*Yucca brevifolia*), quince (*Chaenomeles* sp.), stone crop (*Sedum* sp.), oleander (*Nerium oleander*), loquat (*Eriobotrya japonica*), California fan palm (*Washingtonia filifera*), king palm (*Archontophoenix cunninghamiana*), juniper (*Juniperus* sp.), jade plant (*Crassula argentea*), orchid tree (*Bauhinia* sp.), and Brazilian pepper tree (NAVWPNSTA Seal Beach 2014).

Non-native invasive plant species include species listed by the 2006 CALIPC inventory, but they also include any species that can invade natural or restoration areas and replace or preclude the establishment of native or other more desirable species. Invasive, non-native plant species known to occur at the Main Terminal and/or which have the potential to occur on the off-site pipelines and the marine terminal include, but are not limited to, giant reed (*Arundo donax*), Peruvian pepper tree (*Schinus molle*), hottentot fig or iceplant (*Carpobrotus edulis*), castor bean (*Ricinus communis*), and pampas grass (*Cortaderia selloana*). Invasive species management by DLA/Navy includes maintenance of an updated list of species of concern, monitoring, and control by physical removal or cutting using hand tools, mowing, and treatment with herbicide (NAVWPNSTA Seal Beach 2014). The Main Terminal is vulnerable to non-

native species from seed sources located in nearby residential areas, as are portions of the off-site pipelines and Marine Terminal where soil is exposed.

Marine Terminal and Off-site Pipelines. The Marine Terminal in the Port of Long Beach consists of developed lands with buildings, paved roads, and container storage areas. Adjacent undeveloped lands are highly disturbed. No natural or sensitive plant communities are present at the Marine Terminal. Similarly, the off-site pipelines go through developed areas with little habitat value, typically along roads, and are almost entirely underground. The short segments of off-site pipeline that are aboveground consist of developed areas (pipe, steel, and concrete features); no plant communities occur.

3.3.1 Wildlife Associated with Mapped Vegetation Communities and Habitats

Main Terminal. DFSP San Pedro provides important habitat for a wide variety of wildlife species, including 62 species of birds, 10 mammals, 7 reptiles & amphibians, and 83 invertebrates (NAVWPNSTA Seal Beach 2014). A complete list of wildlife species documented on the Palos Verdes Peninsula is included in the INRMP. General wildlife are typical of urban interface non-native and native plant communities present on site, such as house finch (*Carpodacus mexicanus*), European starling (*Sturnus vulgaris*), mourning dove (*Zenaida macroura*), American kestrel (*Falco sparverius*), great horned owl (*Bubo virginianus*), and red-tailed hawk (*Buteo jamaicensis*). Nesting by neotropical migratory birds has not been well-documented. Mammals include opossum, desert cottontail (*Sylvilagus audubonii*), Botta's pocket gopher (*Thomomys bottae*), house mouse (*Mus musculus*), black rat (*Rattus rattus*), and striped skunk (*Mephitis mephitis*). Larger mammals such as raccoon (*Procyon lotor*), coyote (*Canis latrans*), feral dogs and cats are also present.

CAGN and PVB are the only federally-listed wildlife species known to occur within the Main Terminal project area, as discussed in Chapter 4. Both are documented from the Main Terminal.

Off-site Pipelines. Wildlife use of developed and undeveloped disturbed areas that are traversed by off-site pipelines within the Ports of Los Angeles and Long Beach is dominated by common species that are adapted to human-disturbed landscapes. These include various insects, native lizards, a variety of resident and migratory birds, and native and non-native small mammals. A number of terrestrial and marine-associated birds may occur on the piers, wharfs, structures, developed lands, and waters of the ports. The most commonly observed upland species within the West Basin area during the 2007-2008 harbor-wide surveys included the non-native, rock pigeon (*Columba livia*) and, to a lesser extent, American crow (*Corvus brachyrhynchos*), common raven (*C. corax*), European starling, and house finch. Upland species occur in low abundances in the survey area and are adapted to urban and disturbed habitats.

Marine Terminal. Marine-associated birds may occur on piers, wharfs, other structures, and waters within the Port complex. The most commonly observed species within the West Basin area are Brandt's cormorant (*Phalacrocorax penicillatus*), mew gull (*Larus canus*), western gull (*L. occidentalis*), surf scoter (*Melanitta perspicillata*), and western grebe (*Aechmophorus occidentalis*) (SAIC 2010). Upland species present at the Marine Terminal and adjacent disturbed areas are similar to those described above for off-site pipelines.

The endangered CLT could forage in waters near Pier 12, which is part of the Marine Terminal.

4 A Description of Any Listed (and/or Proposed) Species or Critical Habitat that may be Affected by the Proposed Action

This chapter describes the federally listed plant and wildlife species that are present or potentially present within the Action Area. Figure 4-1 shows the distribution of PVB and CAGN at the Main Terminal. No federally-listed plant species are known to occur within the project area, including the Main Terminal, off-site pipelines, or Marine Terminal. Federally-listed wildlife species that are known or have the potential to occur within the Action Area are listed in Table 4-1.

Table 4-1. Federally Listed Threatened and Endangered Species Known to Occur or Potentially Occurring at DFSP San Pedro

Species	Status	Habitat/ Occurrence in Project Area
Main Terminal Site		
CAGN <i>Polioptila californica californica</i>	FT/ CSC	CAGNs are present in coastal sage scrub on DFSP San Pedro Main Terminal. CAGNs have been observed in the project vicinity in 1993, 1994, 1995, 2011, and during recent surveys in 2015.
PVB <i>Glaucopsyche lygdamus palosverdesensis</i>	FE	This species is known to occur on DFSP San Pedro Main Terminal associated with its larval food plants, with estimates ranging from 35 – 214 individuals since the population’s discovery in 1994 through 2013 (Johnson et al. 2013; Longcore and Osborne 2015). No adult individuals were observed in 2014 or 2015 (Longcore and Osborne 2015; Longcore, pers. comm. 2015); however, the species may exist on the site as pupae in diapause. The Main Terminal supports the only remaining natural population of the species. The other extant populations have relied on introduction of captive bred individuals originating from DFSP San Pedro.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	FE/SE	This species nests in dense riparian vegetation associated with streams, rivers, lakes, springs, and other watercourses and wetlands. Willow flycatchers (<i>E. traillii</i>) were observed on DFSP San Pedro once in 1997 but these were thought to be non-breeding migratory transients belonging to the state-listed subspecies. Because of its small size and isolation, the riparian habitat at DFSP San Pedro Main Terminal is probably unsuitable for nesting by this species.
Least Bell’s vireo <i>Vireo bellii pusillus</i>	FE/SE	Least Bell’s vireo has not been observed on DFSP San Pedro. This bird occurs in riparian habitats, scrub, and thickets in coastal southern California. It typically breeds in willow riparian forest supporting a dense, shrubby understory of mulefat (<i>Baccharis salicifolius</i>) and other mesic species. Breeds 15 March – 31 August, prefers to nest in a dense shrub layer between 2 to 10 feet from the ground. Least Bell’s vireo has not been observed on DFSP San Pedro. Because of its small size and isolation, the riparian habitat at DFSP San Pedro is probably unsuitable for nesting by this species.
Marine Terminal Site		
California least tern <i>Sternula antillarum browni</i>	FE/SE/FP	This bird nests at Pier 400 in Los Angeles Harbor (approximately 2 miles from the Marine Terminal and Pier 12); it forages on fish in open waters; and is migratory and present April-August.

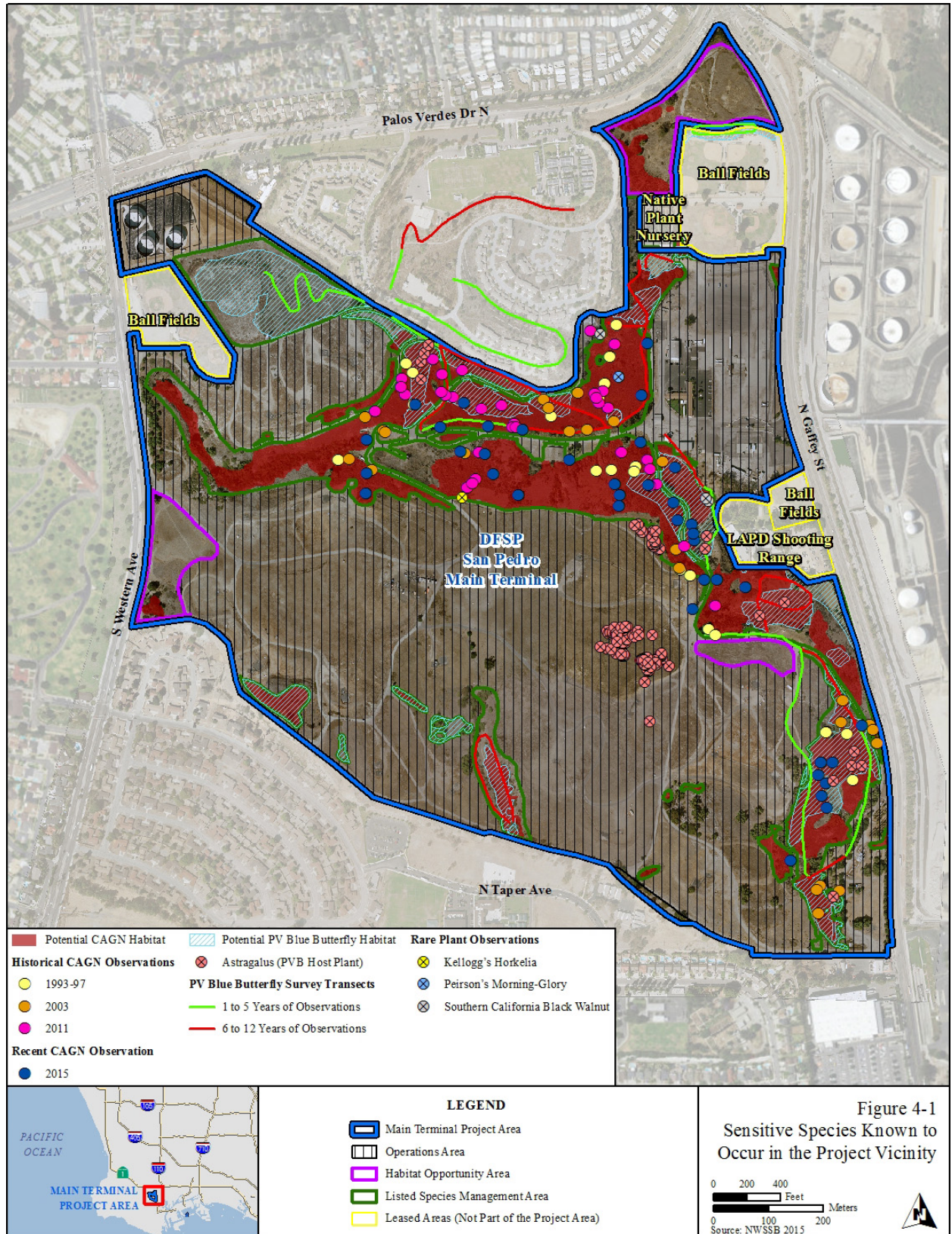
Status:

Federal Status (determined by USFWS):

- FE Federally Listed Endangered
- FT Federally Listed Threatened
- CH Critical Habitat

California State Status (determined by CDFW):

- SE California State-Listed Endangered
- CSSC California Species of Special Concern
- ST California State Listed Threatened
- FP California Fully Protected



Main Terminal. Two animal species federally listed under the ESA as endangered or threatened, respectively occur at the Main Terminal: the PVB (*Glaucopsyche lygdamus palosverdesensis*) and the CAGN (*Polioptila californica californica*). These species are discussed below. The southwestern willow flycatcher (*Empidonax traillii extimus*) and least Bell's vireo (*Vireo bellii pusillus*) have the potential to move through the Main Terminal as transients during migration. Both are associated with riparian habitats. Neither is expected to be more than a transient during migration. Least Bell's vireo has not been documented on the site. Willow flycatcher (unidentified subspecies) were observed on the site in 1997 as transients during migration but have not been subsequently observed there.

Off-site Pipelines. No listed plant or wildlife species are known or expected to occur along the off-site pipelines.

Marine Terminal. The endangered California least tern (CLT) could forage in waters near Pier 12, which is part of the Marine Terminal.

Critical habitat has not been designated on DFSP San Pedro. More detailed accounts for the species known or likely to occur in the project area, including PVB, CAGN, and CLT, are provided below.

4.1 Species Not Carried Forward for Detailed Analysis

Neither least Bell's vireo (*Vireo bellii pusillus*) or southwestern willow flycatcher (*Empidonax traillii extimus*) are likely to occur in the Action Area due to the very limited and isolated riparian habitat on the Main Terminal and lack of habitat near the other project components. No riparian habitat would be affected under the Proposed Action and these species are not carried forward in the analysis.

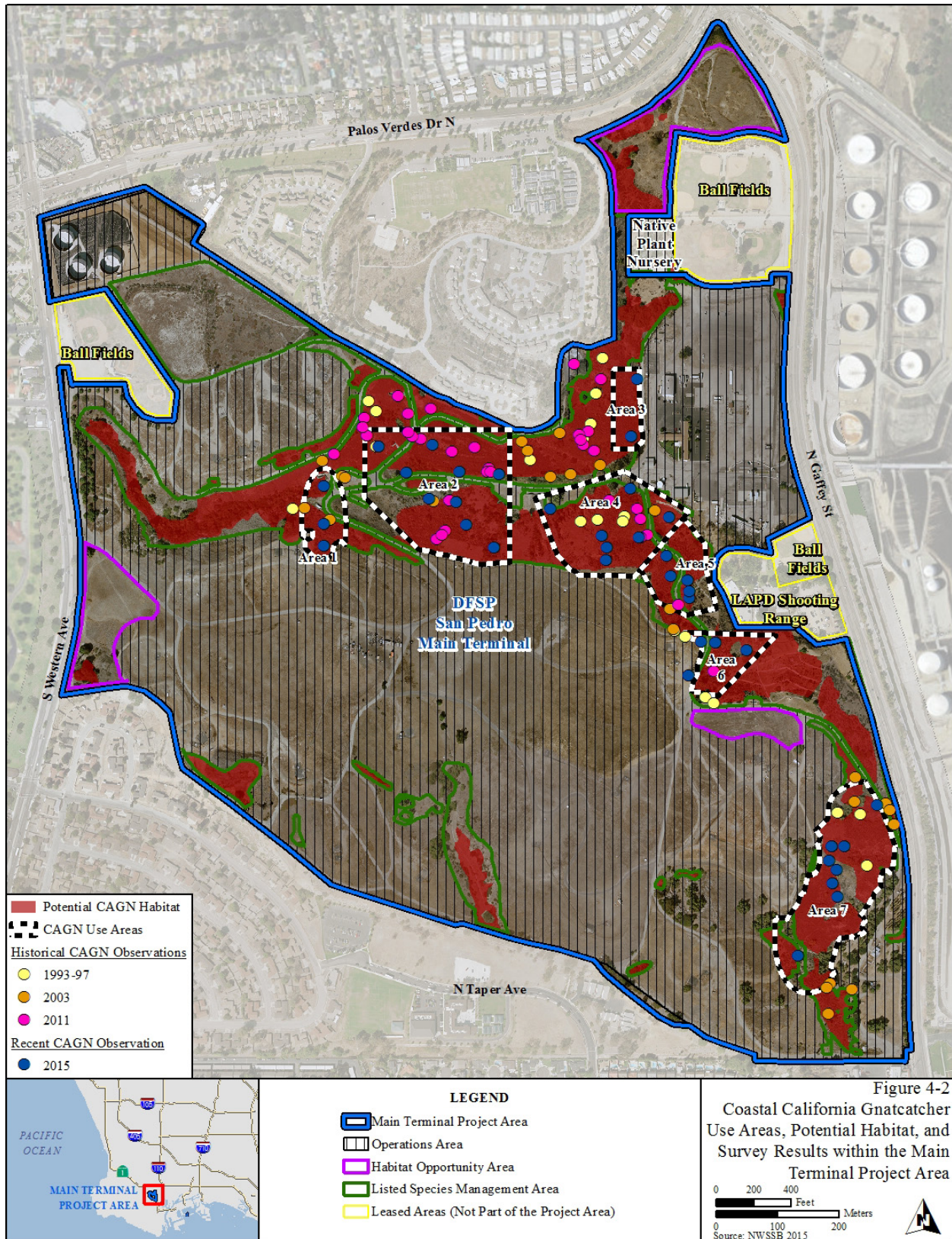
4.2 Species Carried Forward for Detailed Analysis

Detailed accounts for the species known or likely to occur in the Action Area, including PVB, CAGN, and CLT, are provided in this section.

4.2.1 Coastal California Gnatcatcher

The CAGN was federally listed as threatened on March 30, 1993 in response to habitat loss and degradation from development, fragmentation, invasive weed establishment, and brood parasitism⁷ by brown-headed cowbirds (*Molothrus ater*) (USFWS 1993; USFWS 2010a). The completed federal listing and detailed information on the CAGN regulatory history, range, life history, habitat, and abundance can be found in Federal Register 58(59):16742 and 65(206):63680-63743 (USFWS 1993, 2000). Occupied CAGN habitat occurs on DFSP San Pedro within Species Management/Habitat Opportunity Areas (Figure 4-2); however, CAGN habitat areas on DFSP San Pedro are not included in the critical habitat designation. The 2007 CAGN critical habitat designation excluded DFSP because "the habitat on and around DFSP does not currently have the spatial configuration and quantity of the PCEs [primary constituent elements] essential to the conservation of the species." (USFWS 2007; Federal Register 72:72010-72213).

⁷ The brown-headed cowbird is a brood parasite species that lays its eggs in the existing nests of other species, in this case the CAGN, thereby shifting the responsibility to raise the young to the host species. Brood parasitism can result in nest abandonment and other adverse responses.



CAGNs have been known to occupy DFSP San Pedro Main Terminal since surveys began in 1993. Subsequent basewide surveys were conducted in 1997, 2003, 2011, and 2015 (NAVWPNSTA Seal Beach 2014; Cardno 2015). Over the years, the number of breeding CAGN pairs observed on DFSP San Pedro has fluctuated. As many as five breeding pairs have been documented, but in some years, including 1997, there was no evidence of breeding (NAVWPNSTA Seal Beach 2014). Based on observations during the 2015 surveys, the DFSP San Pedro population appears to consist of “at least three pairs of nesting CAGNs”... “but likely four to seven pairs occur at the Main Terminal.” The higher estimate assumes that some adult females were not identified during surveys due to the often quiet and elusive behavior of CAGN females when they are nesting.

Based on 2015 GIS habitat data provided by NAVWPNSTA Seal Beach, potential CAGN habitat covers 56.85 acres. The 2010 BO (USFWS 2010a) specifies that disturbance of suitable CAGN habitat related to operations and maintenance activities at DFSP San Pedro shall not exceed 0.5 acre (0.2 hectare) in any 1-year period, and no more than 1 acre (0.4 hectare) will be impacted over any 3-year period.

4.2.2 Palos Verdes Blue Butterfly

The PVB was listed as endangered and critical habitat was designated on July 2, 1980 (USFWS 1980) because all known populations were small, limited in range, and threatened by urban development and/or weed control practices. A Recovery Plan was finalized in 1984 (USFWS 1984), and the most recent 5-year review was completed in 2014 (USFWS 2014). Critical habitat has been designated on the Palos Verdes Peninsula; however, critical habitat did not include DFSP San Pedro because the PVB population on DFSP San Pedro was not discovered until 1994, after critical habitat had been designated. The critical habitat for this species has not been revised since the original designation. A complete description of the regulatory and natural history for this species can be found in the *Federal Register* (45 Federal Register 129 44939; USFWS 1980) and www.ecos.fws.gov.

Figure 4-3 shows the location of potential PVB habitat within Habitat Areas at the Main Terminal and the locations of transects that have been repeatedly sampled over the years to monitor the population. The PVB was discovered on DFSP San Pedro in 1994, and it was the only known population in existence from 1994 - 1999. In 1994, a captive breeding program was established using the population on DFSP San Pedro as the genetic source, and the species has been repeatedly reintroduced to nearby historic locations as well as on DFSP San Pedro. Captive and wild butterfly populations are considered essential to the existence of this species. Surveys on DFSP San Pedro have been conducted annually since 1994. The population size has fluctuated dramatically from year to year (Table 4-2). In 1994, the population was estimated at 69; in 2003, the population was estimated at 30 adults; and in 2004, the number of individuals increased to 282 adults (NAVWPNSTA Seal Beach 2014). In 2012, the PVB population was estimated at 148 adults, and in 2013 numbers decreased to 35 individuals; the second lowest since monitoring started (Longcore and Osborne 2015). No adult PVB were detected during surveys in 2014 and 2015 and estimated adult populations were zero. The butterflies may survive on site because the mature larvae drop off the plants and burrow into the litter and become pupae, which are believed to be capable of multi-year diapause before emerging as adults (NAVWPNSTA Seal Beach 2014).

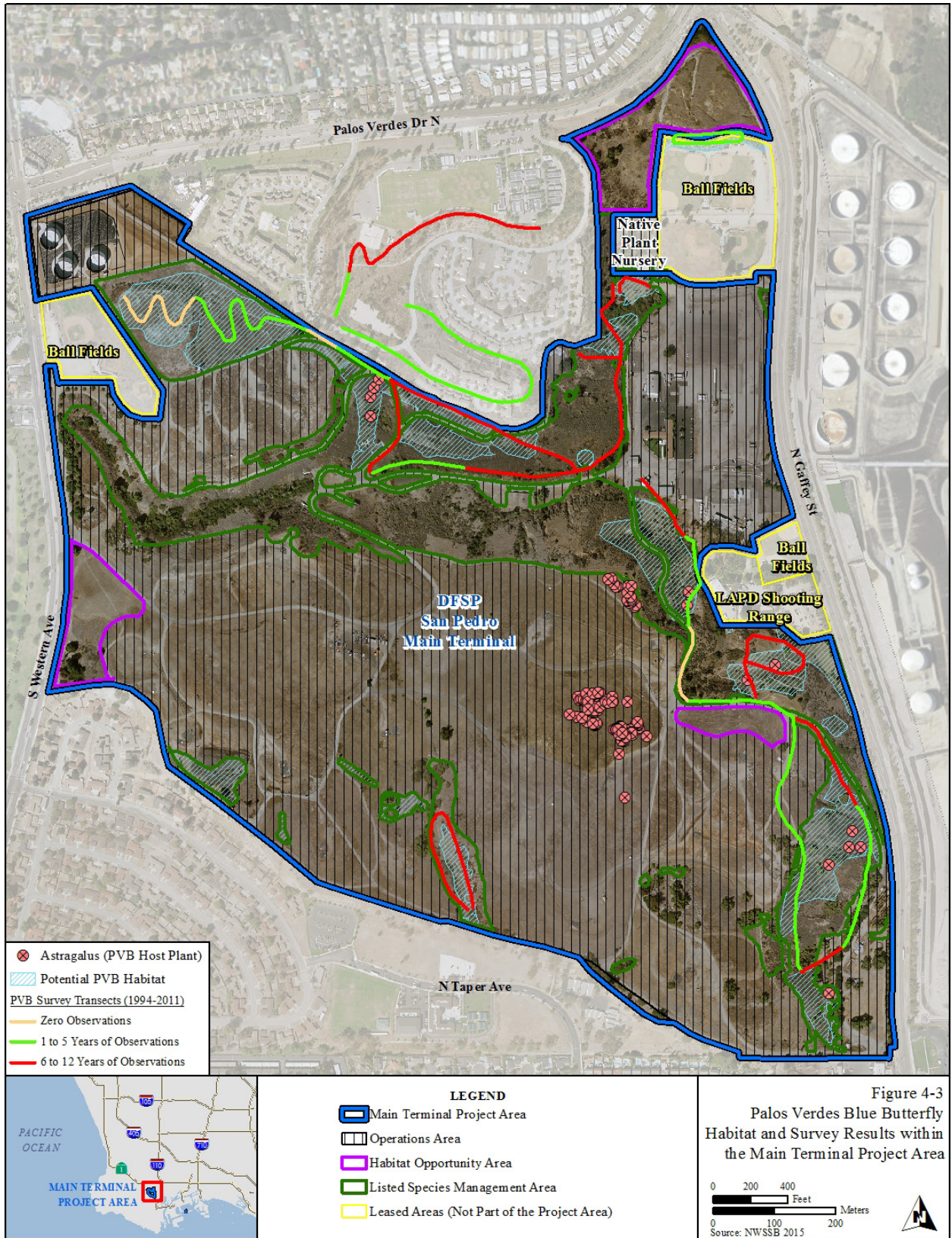


Table 4-2. Estimated PVB Population Size by Year at DFSP San Pedro Main Terminal (1994-2015)

Year	Estimated Population	Year	Estimated Population
1994	69	2005	204
1995	105	2006	219
1996	247	2007	211
1997	109	2008	45
1998	199	2009	214
1999	209	2010	47
2000	132	2011	53
2001	139	2012	148
2002	243	2013	35
2003	30	2014	0
2004	282	2015	0

Sources: Longcore and Osborne, 2015; Longcore pers. comm. 2015.

Overall, trends show that the populations fluctuate dramatically under natural conditions and the probability of extinction is calculated to occur within 4 years (Longcore and Osborne 2015). The DFSP San Pedro population is the only natural PVB population known to exist and has been the largest in recent years. Other existing populations have originated from reintroduction efforts using captive bred populations at DFSP San Pedro and Moorpark College (USFWS 2014; USFWS 2010a).

The recent decline in PVB numbers has been attributed to a number of factors, including the severe, nearly unprecedented drought over the past four years, as well as the gradual maturation of vegetation with associated declines of the two major food plants, which are relatively short-lived subshrubs that tend to proliferate after certain types of disturbance and gradually die out as the vegetation matures. Dramatic decreases in deerweed cover have been documented throughout most of the Main Terminal, including both designated Operations and Habitat Areas, over the periods 2006-2014 and 2012-2014. The total cover of deerweed in 2014 was approximately 14 percent of that present in 2006 (Osborne 2015).

Habitat for this species is related mainly to presence of food plants. At the Main Terminal, the PVB occurs primarily in open coastal sage scrub that includes coast locoweed and deerweed. Larvae feed primarily on deerweed and coast locoweed, which naturally occur on site and are also found in revegetated coastal sage scrub habitat (Johnson et al. 2013). The larvae feed through the spring and seem to prefer the micro-crevasses in the litter beneath its deerweed and locoweed food plants (NAVWPNSTA Seal Beach 2014). During the last two larval stages, the larvae appear to form an important association with native carpenter ants in the genus *Camponotus* and sometimes the exotic Argentine ant (*Linepithema humile*). At DFSP San Pedro, the PVB usually begins to emerge from its pupal case (i.e., eclosion) in late January through early March, depending upon weather conditions.

Based on 2015 GIS data provided by NAVWPNSTA Seal Beach, 28.32 acres of PVB habitat occurs at the Main Terminal. The majority of occupied PVB habitat at the Main Terminal is along the northern portion of the installation, although potential habitat and host plants occur throughout the installation. As shown in Figure 4-3, essentially all occupied PVB habitat is within designated Species Management/Habitat Opportunity Areas.

The 2010 BO (USFWS 2010a) specifies that disturbance of suitable PVB habitat related to operations and maintenance activities at DFSP San Pedro shall not exceed 0.5 acre (0.2 hectare) in any 1-year period, and

no more than 1 acre (0.4 hectare) will be impacted over any 3-year period. The 2010 BO was prepared to address operations and maintenance during the (at the time) full operational status of DFSP San Pedro.

4.2.3 California Least Tern

The CLT is the smallest of the North American terns and is found along the Pacific Coast of California, from San Francisco southward to Baja California. It has been federally listed as endangered since 1970. The following summary is drawn mostly from USFWS (2006; 1985). CLT nest in colonies on relatively open beaches kept free of vegetation by natural scouring from tidal action. The typical colony size is 25 pairs. Most CLT begin breeding in their third year. Their nest is a simple scrape in the sand or shell fragments. A typical clutch is 2 eggs and both adults incubate and care for the young. They can re-nest up to two times if eggs or chicks are lost early in the breeding season. They are very gregarious and forage, roost, nest and migrate in colonies. Fall migration commences the last week of July and first week of August. Several weeks before fall migration, adults and young wander along marine coastlines, congregating at prime fishing sites. The winter range of the species is not clearly known but may include sites in mainland Mexico, Central America and possibly southward.

CLT has nested for several years at Pier 400 in the Port of Los Angeles, located more than 2 miles from the Marine Terminal, which is located in West Basin of the Inner Long Beach Harbor. CLT forages in open waters within San Pedro Bay and the Ports of Los Angeles and Long Beach, primarily adjacent to the nest site and in shallow water habitats. CLTs were observed in low numbers foraging in the West Basin in 2008 (SAIC 2010). The Port of Los Angeles maintains, monitors, and protects 15 acres on Pier 400 for the nesting of CLT (POLA 2015). In 2013, the latest year for which data are available, the Port nest site supported 237 pairs and 254 nests (Frost, 2014).

5 Analysis of Effects and Description of the Manner in Which the Action May Affect Any Listed (and/or Proposed) Species

This section discusses the direct, indirect, temporary, and permanent effects of the proposed action on the listed species (CAGN, PVB, and CLT) known or expected to occur within the Action Area or immediate vicinity. “Direct Effects” are the direct or immediate effects of the proposed action on the species or its habitat. The area of potential direct effect of the proposed action includes the Action Area at the Main Terminal as shown on Figure 2-1. “Indirect effects” are those that are caused by the proposed action but occur later in time and are reasonably certain to occur. The following discussion considers the direct and indirect effects of the proposed action that incorporates the proposed impact avoidance, minimization, and species compensation measures listed in Section 2.3.

5.1 Vegetation and Habitat

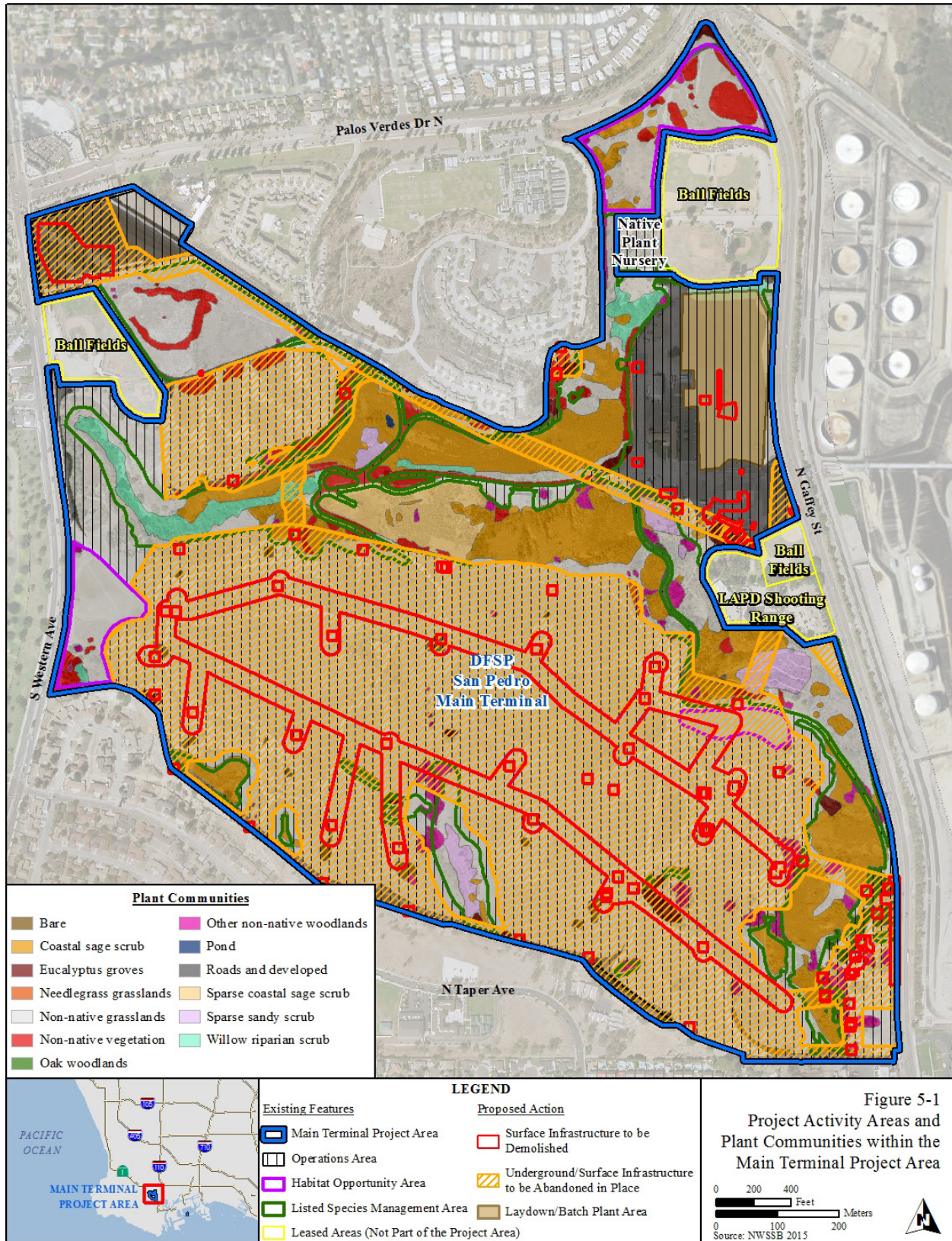
Table 5-1 and Figure 5-1 provide a summary of the vegetation directly affected by proposed project activities broken down by affected plant community/land cover type in both the Habitat Areas and Operations Area of the Main Terminal Site.

Table 5-1. Estimated Temporary Impacts to Vegetation and Land Cover Types at the Main Terminal Site

Vegetation and Land Cover Types	Habitat Area		Operations Area		Site Total (Acres)
	Acres	% of Total	Acres	% of Total	
Bare	0.00	0.0%	0.21	13.2%	1.56
Coastal sage scrub	0.16	0.4%	0.12	0.3%	37.01
Developed	0.11	0.4%	5.13	18.9%	27.11
Eucalyptus groves	0.02	0.7%	0.66	27.3%	2.42
Needlegrass grasslands	0.00	0.5%	0.00	1.1%	0.22
Non-native grasslands	0.70	0.4%	15.86	8.0%	199.23
Non-native vegetation	0.01	0.1%	0.15	1.3%	11.53
Oak woodlands	0.00	0.1%	0.25	18.4%	1.35
Other non-native woodlands	0.15	2.2%	0.35	5.1%	6.86
Pond	0.00	0.0%	0.00	0.0%	0.05
Roads	0.03	1.2%	0.21	8.5%	2.43
Sparse coastal sage scrub	0.00	0.0%	0.00	0.0%	5.14
Sparse sandy scrub	0.08	2.0%	0.00	0.0%	3.77
Undetermined plant community	0.00	0.0%	0.41	8.6%	4.75
Willow riparian scrub	0.00	0.0%	0.00	0.0%	5.31
Total	1.26	0.4%	23.33	7.6%	308.76

Notes: Column totals were computed on unrounded numbers and thus may differ slightly from the sum of the rounded numbers above them. The individual values in the columns were rounded to increase readability.

As shown in Table 5-1 temporary impacts to approximately 25 acres of vegetation and land cover types would occur. The majority of these impacts (23.3 acres) would be in the Operations Area, principally affecting non-native grasslands (15.9 acres), which are regularly mowed, and in developed areas, which lack habitat value. About 1.26 acres in Habitat Areas would be affected (Table 3.1-6). Permanent impacts on vegetation would be negligible. Following demolition, disturbed areas would be restored in accordance with a Revegetation Plan (see Section 2.3).



Indirect, long-term, adverse impacts to plant communities could occur as a result of the establishment of invasive plants. Invasive plants decrease the overall quality of habitat by out-competing native species, contributing to reduced diversity and structure, and reduced habitat functions and values. The potential for establishment of invasive plants would be minimized through implementation of impact avoidance and minimization measures (see Table 2.1), including invasive weed control (e.g., hand removal, mechanical, and herbicide control) in areas reseeded/replanted until the native vegetation is established.

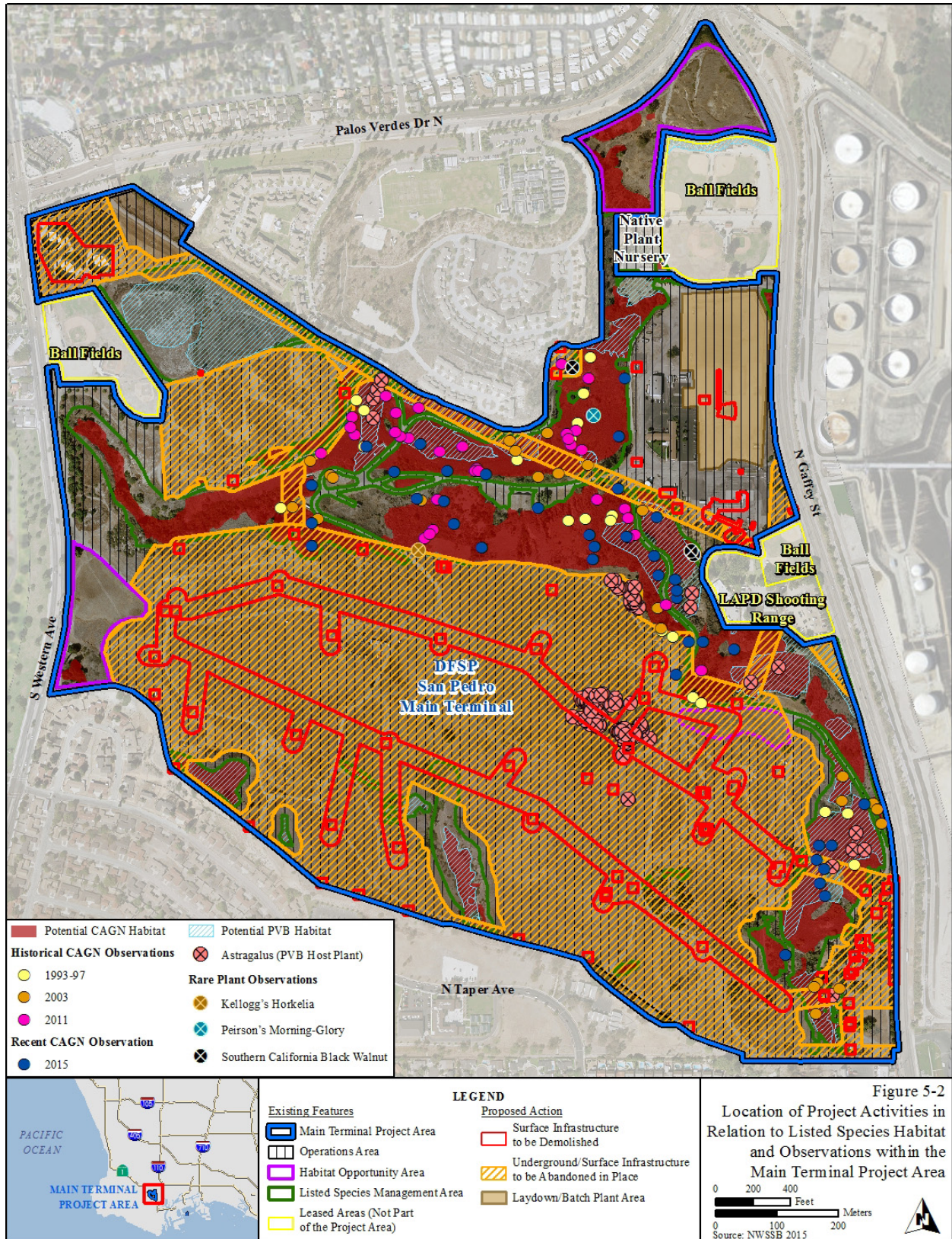
The presented impact assessment acreages assume that the USTs would be abandoned in place by filling them with an inert substance (foamcrete or concrete) that is introduced to the tanks through existing conduits so that there would be little or no surface disturbance associated with their abandonment. If the USTs were to be filled with soil, an option under consideration, however, there would be considerable surface disturbance. The soil overlying the USTs would need to be excavated and the tank tops removed. The excavated soil would be temporarily stockpiled adjacent to the hole for use as backfill. Soil needed to fill the empty USTs would be obtained from within the Operations Area, avoiding Listed Species Management Areas, Habitat Opportunity Areas, IRP sites, and ephemeral drainages. The excavation of fill dirt would not affect identified PVB or CAGN habitats. This option would result in extensive surface disturbance within the Operations Area. Reestablishment of vegetation would be more challenging on both the excavated areas (because of mixing of the soil profiles) as well as areas from which soil was obtained for backfill (because upper soil layers have been removed).

Figure 5-2 shows the locations of project activities in relation to listed species habitat and observations within the Main Terminal project area. Most project activities would be within the Operations Area and outside of designated habitat for CAGN and PVB.

5.2 Coastal California Gnatcatcher

CAGN are known to occur within the Action Area in or near coastal sage scrub habitat. Removal of coastal scrub habitat would result in loss of foraging and nesting sites and loss of dispersal areas. Additionally, there is a potential for increased predation levels associated with increased human activity and potential replacement of native vegetation by non-native plant species. Project implementation would result in direct temporary impacts to 0.45 acre of potentially occupied CAGN habitat, which is about 0.8 percent of the total CAGN habitat at the Main Terminal. For comparison, this acreage of CAGN habitat potentially disturbed by the project would be less than the annual threshold value for suitable CAGN habitat that could be disturbed by operations and maintenance activities at the Main Terminal, as specified in the 2010 BO. Given the small fraction of suitable habitat onsite that would be disturbed, pairs and individuals would be expected to utilize suitable habitat away from demolition sites during the demolition period and during restoration of disturbed areas. Any habitat that is cleared would be unavailable to CAGN for a minimum of several years, which would be the approximate time required to restore the habitat after clearing.

Demolition activities during breeding season for this species (February 15 to August 31) could result in reduced nesting success of the CAGN as a result of activities of humans and equipment, including increased noise, vibration, and dust from heavy equipment during project activities. However, implementation of impact avoidance and minimization measures into the project (Section 2.3), minimization of noise generating activities within 100 feet (30 m) of a nesting site, and periodic nest surveys during construction activities that occur within CAGN habitat during the nesting season, would minimize the potential for effects on CAGN. With implementation of these measures, the potential for take from demolition activities is reduced but not eliminated.



Post-closure operations would reflect the outcome of ESA consultation with USFWS to include monitoring of CAGN and revegetation activities as described in the impact avoidance and minimization measures (Table 2-1). Biological resources would continue to be managed in accordance with the INRMP.

Exposure of CAGN to noise and dust during construction would be limited and would not be anticipated to adversely affect the species. Because the Action Area is located within a highly developed region with existing commercial activities and street traffic, the temporary effect of additional noise associated with project activities would be less than it would otherwise be in a quiet environment. These factors make it less likely that construction activities would adversely affect behavior (e.g., by masking calls, causing stress, or disturbing food gathering or nesting activities) of CAGN located in the Action Area. Ongoing adherence to the impact avoidance and minimization measures in Section 2 would avoid or minimize the potential for impacts to this species.

Conclusion

Project-related demolition activities would result in a disturbance of 0.45 acre of potentially occupied CAGN habitat, which is about 0.8 percent of the total CAGN habitat at the Main Terminal. Direct and indirect impacts would include the potential to disturb individuals and cause reduced nesting success, an adverse effect, but are unlikely to cause injury or mortality to adults. Implementation of measures described in Table 2-1, including clear delimitation of construction limits on plans and in the field, having a qualified Project Biologist on site to oversee and execute impact avoidance and minimization measures pertaining to biological resources, measures to protect nesting birds, and measures to restore habitat and control invasive species, could reduce the potential for and magnitude of adverse effects but not to a level that would be so improbable as to be discountable or below the scale at which take could occur. Therefore, the proposed action *May Affect and is Likely to Adversely Affect* the CAGN.

5.3 Palos Verdes Blue Butterfly

PVB are known to occur within the Action Area in association with habitats that support food plants, primarily deerweed (*Acemison glaber*) and coast locoweed (*Astragalus trichopodus lonchus*), which generally occur in scrub or grassland habitat. Direct and indirect effects of removal of this habitat and the larval foodplants would result in loss of foraging and oviposition sites and loss of dispersal areas and larval host plants. Project activities would result in direct temporary impacts to 0.27 acre of potentially occupied PVB habitat, representing an estimated 1 percent of the total habitat at the Main Terminal. For comparison, this acreage of PVB habitat potentially disturbed by the project would be less than the annual threshold value for suitable PVB habitat that could be disturbed by operations and maintenance activities at the Main Terminal, as specified in the 2010 BO. This habitat would be unavailable until it has been restored following demolition activities. No PVB habitat would be permanently impacted. Following demolition activities, disturbed occupied habitat would be restored in place. The key food plants for PVB can be reestablished within 3 years or less, depending on conditions. Implementation of impact avoidance and minimization measures (Table 2-1) would minimize or avoid impacts to PVB eggs, larvae, and adults within the potentially occupied habitat. In addition, given the small amount of PVB habitat that would be disturbed, PVB individuals would be expected to utilize suitable habitat away from demolition sites during the demolition period and during restoration of disturbed areas.

The effect of impacting even a small amount of PVB habitat is important given the critical importance of the DFSP San Pedro population to the species (USFWS 2014), the very low currently observed population size – zero adults observed in 2014 and 2015 (Longcore and Osborne 2015), and the extreme vulnerability of this species to extinction (Longcore and Osborne 2015). Any habitat that is cleared would be unavailable to PVB for the period of time required to restore the habitat after clearing. Additionally, any clearing and grubbing or other physical disturbance to habitat, especially in the vicinity

of food plants, has the potential to cause take through mortality of PVB pupae in diapause, which are typically in the soil under or near food plants.

Following demolition activities, disturbed occupied habitat would be restored in place according to a Revegetation Plan. Because both larval food plants (*Acmispon* and *Astragalus*) are capable of rapid establishment and growth, it is possible that they could be restored within two growing seasons after impact. Implementation of protection measures would minimize or avoid impacts to eggs, larvae, and adults within potentially occupied habitat. In addition, given the small amount of area that would be disturbed (one percent of available PVB habitat), individuals may be able to utilize suitable habitat that is adjacent to demolition sites during the demolition and restoration of disturbed areas.

Removal of occupied habitat during flight season could result in reduced individual success and potential take of adults or larvae. Additionally, take of pupae in diapause would be possible at any time of year. Habitat impacted by demolition activities would be restored to existing conditions following demolition according to a Revegetation Plan.

Post-closure operations would reflect the outcome of ESA consultation with USFWS to include continuation of captive breeding and release of PVB, operation of the nursery, monitoring of PVB, and revegetation activities as described in the impact avoidance and minimization measures. In addition, biological resources would continue to be managed in accordance with the DFSP San Pedro INRMP (NAVWPNSTA Seal Beach 2014).

Undertaking a program of targeted disturbance to cut back or thin mature vegetation and allow development of early successional habitat, which favors growth of deerweed and coast locoweed, in currently unsuitable habitat near existing occupied PVB habitat, is a measure that could help reinvigorate the local PVB population, whose decline has been attributed partially to decline of larval host plants associated with the gradual maturation of habitat (Longcore and Osborne 2015).

Conclusion

The proposed action has the potential to adversely affect the PVB by reducing the populations of host plants that support this species, and by causing mortality or injury to larvae, pupae, or adult PVB. Implementation of measures described in Table 2-1, including clear definition of project boundaries on project plans and in the field, having a project biologist on site when work is being done in and adjacent to identified habitat areas, minimizing construction activities within identified habitat areas, implementing measures to restore habitat and to control invasive species, and continuing the captive breeding and monitoring program to support PVB recovery, would reduce the potential for and magnitude of adverse effect but not to a level where effects would be so unlikely as to be discountable or below the scale at which take could occur. Therefore, the proposed action *May Affect and is Likely to Adversely Affect* the PVB.

5.4 California Least Tern

Project activities at the Marine Terminal Site would involve noise and activities of humans and equipment and generation of dust on the landfill at the base of Pier T, which extends into the West Basin of Long Beach Harbor. There would be no in-water demolition activities and the pier itself would not be removed. The Marine Terminal Site is approximately 2 miles from the CLT nest site and from nearby waters most frequented by foraging CLT. Individual CLT that fly near the Marine Terminal site may avoid the activity there, which would be qualitatively similar in nature to other industrial activities in the Ports, including construction and cargo related activities.

Conclusion

Given that the Marine Terminal's West Basin location is spatially removed from major foraging areas for CLT, any behavioral avoidance of project activity would be an insignificant and unmeasurable effect not reaching the scale at which take would occur. Therefore, the project *May Affect, but Is Not Likely to Adversely Affect* the CLT.

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6 Cumulative Effects Analysis

Cumulative effects to be considered under the ESA are those effects of future non-federal (state, local agency, or private) activities on federally listed species that are reasonably certain to occur within the Action Area. There is only one cumulative project: the Ponte Vista housing development under construction adjacent to the Main Terminal. The approach to cumulative effects under the ESA differs from that under NEPA in that federal activities are excluded because they are individually subject to ESA Section 7 consultation requirements. Due to the project location on federal land owned by the Navy, all future federal actions that are reasonably certain to occur within the project vicinity and that would affect listed species would require separate environmental review and Section 7 consultations. They are therefore not subject to evaluation in this BA.

The Ponte Vista project, which borders the southern boundary of the Main Terminal site, is being built in an area previously developed as military housing. It would not cause removal of any PVB or CAGN habitat. However, given the proximity of two small areas of potential PVB and CAGN habitat on the southern end of the Main Terminal Site, there is the potential for temporary adverse cumulative effects from nearby noise and human activity on PVB and CAGN should those habitat areas be occupied during project implementation. These two potential habitat areas, which total 1.28 acres for PVB and 1.15 acres for CAGN, have not had documented sightings of either species and the implementation schedules are such that the activities requiring heavy equipment on the Ponte Vista site (demolition and grading) should be completed prior to the start of the DFSP demolition as described below, reducing the potential for cumulative effects from noise and human activity.

Demolition for the Ponte Vista project was completed in Spring, 2015, and grading and preparing the site for installation of new roads and other in-ground infrastructure is scheduled to occur before new homes are built in 2016-2017 (Ponte Vista 2015). For the proposed DFSP Closure Project, closure and demolition activities would begin in calendar year 2016 and would last approximately 4 years. Although there would be temporal overlap between the two projects, the earthmoving portions of the Ponte Vista project, which would cause the most disturbance, are expected to have been completed prior to the initiation of closure and demolition activities on the DFSP San Pedro site, reducing the noise and human activity at any one time. These staggered schedules, coupled with the small size of the nearby potential PVB/CAGN habitat, the isolation of this habitat from the majority of the habitat for these species on the Main Terminal site and lack of documented occurrences of either species in these habitat areas adjacent to the Ponte Vista project site minimizes the potential for cumulative impacts on PVB and CAGN. Implementation of Service approved avoidance, minimization and mitigation measures proposed in this BA would further minimize the potential for cumulative adverse effects.

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7 Conclusion

The proposed action has the potential to adversely affect CAGN by impacting its habitat and impairing behavioral patterns resulting in reduced breeding success and the PVB by reducing the populations of host plants that support this species, impacting its habitat, and by causing mortality or injury to eggs, larvae, pupae, or adult PVB. Implementation of measures described in Table 2-1, including clear definition of project boundaries on project plans and in the field, having a project biologist on site when work is being done in and adjacent to identified habitat areas, minimizing construction activities within identified habitat areas, implementing measures to protect nesting birds, restore habitat, and to control invasive species, and continuing the captive breeding and monitoring program to support PVB recovery, would reduce the potential for and magnitude of adverse effect but not to a level where effects would be so unlikely as to be discountable or below the scale at which take could occur. Based on the analysis of effects presented in Chapter 5, the Navy is of the opinion that the proposed action, with implementation of appropriate avoidance, minimization, and compensation measures presented in Section 2, *May Affect, and is Likely to Adversely Affect* the PVB and CAGN, but would not jeopardize their continued existence or recovery. Given that the Marine Terminal's West Basin location is spatially removed from major foraging areas for CLT, any behavioral avoidance of project activity would be an insignificant and unmeasurable effect not reaching the scale at which take would occur. Therefore, the project *May Affect, but Is Not Likely to Adversely Affect* the CLT.

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Appendix A

Focused Coastal California Gnatcatcher Surveys for Defense Fuel Support Point San Pedro

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Final
Coastal California
Gnatcatcher Report for
2015 Surveys Conducted in
Support of the Defense Fuel
Support Point San Pedro
Environmental Assessment
San Pedro, California

May 2015

Prepared for:
Naval Facilities Engineering
Command Southwest and the
Defense Logistics Agency



Acronyms and Abbreviations

CAGN	coastal California gnatcatcher
CDFW	California Department of Fish and Wildlife
DCSS	Diegan Coastal Sage Scrub
DFSP	Defense Fuel Support Point
USFWS	U.S. Fish and Wildlife Service

FINAL
COASTAL CALIFORNIA GNATCATCHER REPORT
FOR 2015 SURVEYS CONDUCTED IN SUPPORT OF THE
DEFENSE FUEL SUPPORT POINT SAN PEDRO
ENVIRONMENTAL ASSESSMENT
SAN PEDRO, CALIFORNIA

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1.0 INTRODUCTION

This *Coastal California Gnatcatcher Survey Report* details the results of protocol presence/absence surveys conducted in 2015 in support of an Environmental Assessment being prepared for the proposed complete or partial closure of the Defense Fuel Support Point (DFSP) San Pedro Fuel Facility. The survey area is located within the DFSP San Pedro Main Terminal, which is located northwest of the Port of Los Angeles and the Port of Long Beach in San Pedro in the City of Los Angeles, California (Figure 1).

Under the direction of Naval Facilities Engineering Command Southwest, Cardno surveyed for coastal California gnatcatcher (CAGN) (*Polioptila californica californica*) in suitable coastal sage scrub vegetation within the DFSP San Pedro Main Terminal (Figure 2) during six surveys conducted between March and April 2015.

2.0 METHODS

Surveys for CAGN were conducted at the DFSP San Pedro Main Terminal during the spring of 2015. Survey methodology followed the 1997 U.S. Fish and Wildlife Service (USFWS) protocol for breeding season presence/absence surveys (USFWS 1997). Surveys were conducted by a USFWS permitted biologist. Before CAGN surveys, the required notice of intent to conduct surveys was sent to the USFWS (submitted 25 February 2015; refer to Appendix A).

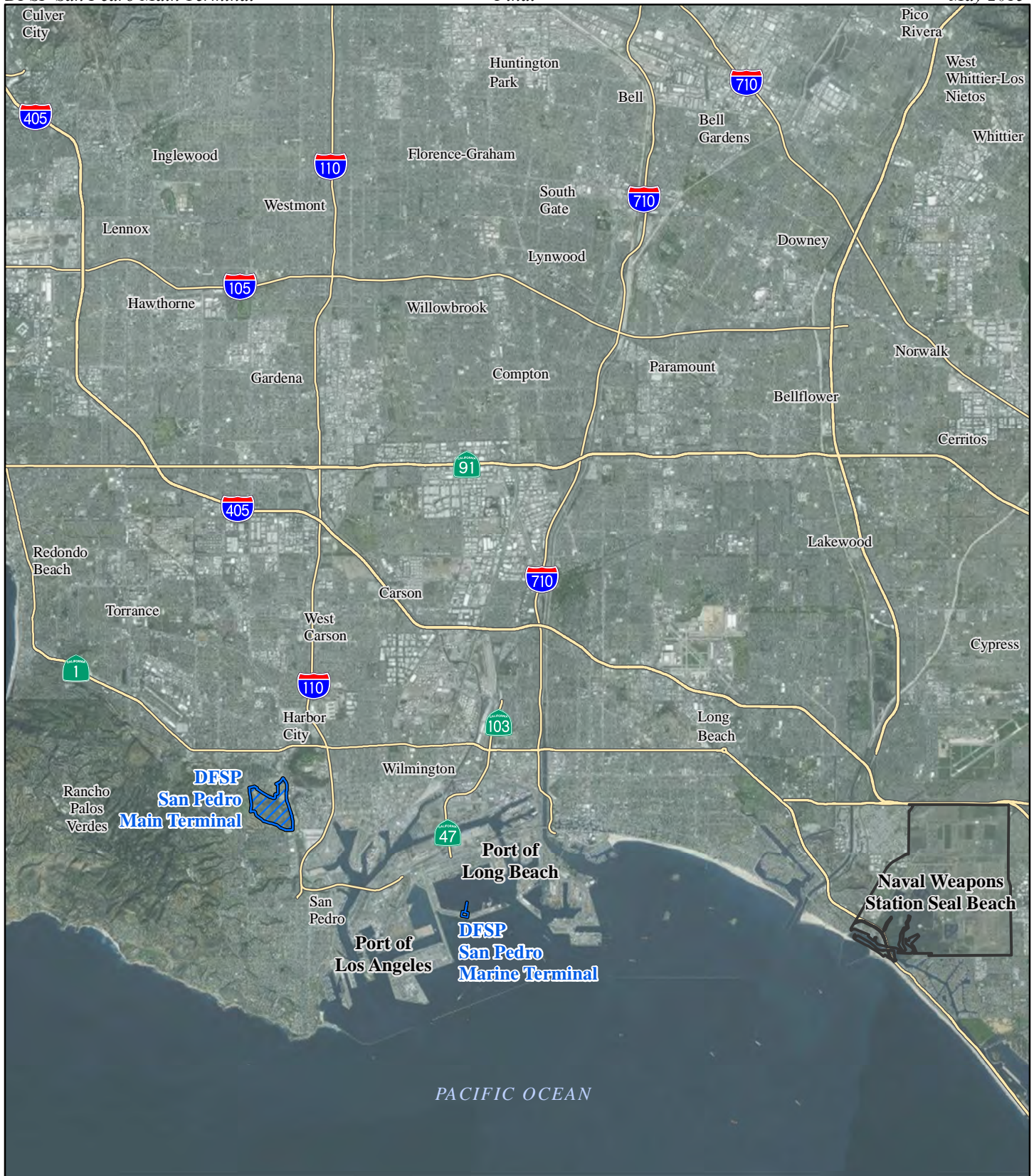
USFWS permitted surveyor, Melissa Tu (permit number TE-64138A-0), conducted all six of the CAGN surveys. Clint Scheuerman, USFWS permitted surveyor (permit number TE-44855A-1), conducted the final survey with Ms. Tu. During the first five surveys, Ms. Tu always had another person with her for safety and assistance. Cardno's assistant surveyors included Scott Coombs and Caitlin Jafolla.

All suitable habitat, including marginal habitat, within the DFSP San Pedro Main Terminal was surveyed for CAGN. Suitable habitat consisted of 56 acres of Diegan coastal sage scrub (DCSS) (Figure 2) and all ecotonal (bordering) communities. Although CAGN can occur in other habitat types (e.g., maritime succulent scrub, coastal sage-chaparral scrub), these habitat types do not occur at the DFSP San Pedro Main Terminal. Suitable habitat was surveyed on six separate occasions separated by at least 7 days. Surveys were scheduled to avoid periods of extreme weather conditions. Surveys were started between 0750 and 0830 and concluded between 1130 and 1200.

Survey procedures included, but were not limited to: visually searching suitable habitat with binoculars and listening for CAGN calls; utilizing conspecific taped playbacks; and pishing, a technique in which birders make vocalizations in the field to attract birds.

While walking through suitable CAGN habitat, a CAGN-taped vocalization was played to elicit a response from any CAGN within the area. The recording was played for 5 to 10 seconds. The recording was not played when corvids (members of the Corvidae family, including: common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), or western scrub jay (*Aphelocoma californica*) were present, as corvids are potential CAGN nest predators.

Surveyors also documented any other listed species or California Department of Fish and Wildlife (CDFW) species of special concern. CDFW species of special concern are species with declining population levels, limited ranges, and/or continuing threats that have made them vulnerable to extinction (CDFW 2015).

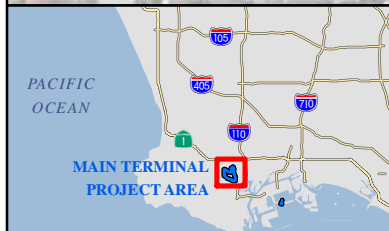
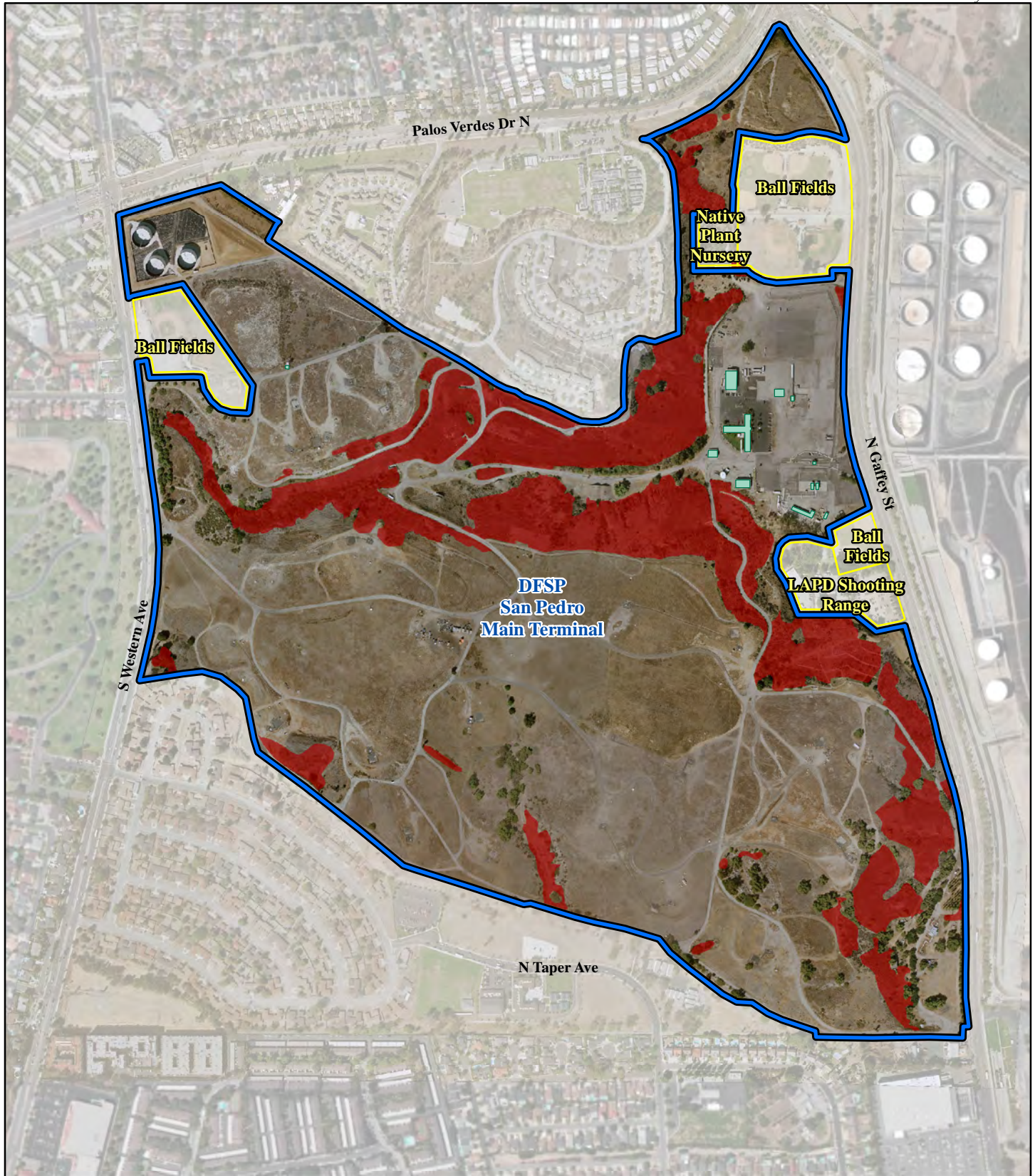


LEGEND

- Highway
- Naval Weapons Station Seal Beach
- Defense Fuel Support Point (DFSP) San Pedro Fuel Facility
- Main Terminal and Marine Terminal

Figure 1
 Regional Location of the
 Defense Fuel Support Point
 San Pedro Fuel Facility
 Main Terminal

0 1 2 Miles
 0 1 2 Kilometers



- LEGEND**
- Main Terminal Project Area
 - Existing Structures
 - Areas Not Part of the Project Area
 - Suitable CAGN Habitat/Survey Area (56 acres)

Figure 2
 Coastal California Gnatcatcher
 Suitable Habitat and Survey Area
 at the Defense Fuel Support Point
 San Pedro Main Terminal

0 200 400 Feet
 0 100 200 Meters
 Source: NWSSB 2015

3.0 RESULTS

A total of 56 acres of DCSS were covered during each survey. DCSS in the project area was dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), California sunflower (*Encelia californica*), and coastal pricklypear (*Opuntia littoralis*). DCSS in the survey area also supported scattered individuals of purple sage (*Salvia leucophylla*), black sage (*Salvia mellifera*), deerweed (*Acmispon glaber*), bladderpod (*Isomeris arborea*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and lemonade berry (*Rhus integrifolia*).

The six CAGN breeding season surveys within the project area were conducted between 18 March and 24 April 2015. Table 1 presents the dates, times, and weather conditions for the six surveys. Conditions were valid¹ during every survey and CAGNs were observed during all six surveys.

Table 1. 2015 Coastal California Gnatcatcher Survey Dates and Conditions

Survey	Date	Start – Stop Time	Temperature (°F)	Cloud Cover (%)	Conditions Valid ¹	CAGN Present
1	18 March	0815-1200	64-66	100-100	Yes	Yes
2	25 March	0805-1159	64-74	74-5	Yes	Yes
3	1 April	0750-1156	59-67	65-35	Yes	Yes
4	8 April	0830-1130	54-65	100-80	Yes	Yes
5	17 April	0800-1150	56-79	0-0	Yes	Yes
6	24 April	0830-1200	59-68	100-100	Yes	Yes

Figure 3 presents the general locations of CAGN observations from each survey and CAGN use areas. CAGNs are estimated to be using seven areas of DCSS at the DFSP San Pedro Main Terminal (Figure 3). Some areas are relatively small and close together (e.g., Areas 4, 5, and 6). The highest quality DCSS at the Main Terminal is primarily north and west facing and relatively steep. Although use Areas 4, 5, and 6 are close together, they are separated by small canyons/drainages. CAGNs observed during each survey are presented in Table 2 and are described below.

Table 2. 2015 Coastal California Gnatcatcher Survey Results

Survey	Date	Estimated CAGN	Age and Sex
1	18 March	8	2 pair (2 males and 2 females) 1 adult male 3 adults, undetermined sex
2	25 March	8	1 pair 1 adult female 5 adults, undetermined sex ¹
3	1 April	8 - 10	1-2 pair 1 adult female 2 adult males 3 adults, undetermined sex
4	8 April	7-8	1 pair 2 adult males 2 adults, undetermined sex 1-2 juveniles (with the pair)

¹ Per USFWS protocol, surveys may only be conducted between 0600 and 1200 and periods of excessive or abnormal heat, wind, rain, fog, or other inclement weather must be avoided.

Table 2. 2015 Coastal California Gnatcatcher Survey Results

Survey	Date	Estimated CAGN	Age and Sex
5	17 April	10-14	2-3 pair 1 adult male 3 adults, undetermined sex 2-4 juveniles
6	24 April	5-6	1 adult male 3 adults, undetermined sex 2-4 juveniles ²

Notes: ¹ Most birds were hidden, presumably nesting.

² Adults with fledglings probably moved to new areas and were not detected during this survey.

At least three pairs of nesting CAGNs are estimated to occur at the DFSP San Pedro Main Terminal, but likely four to seven pairs occur at the Main Terminal (Figure 3). It is likely that some adult females were not identified during surveys, as females are often quiet and elusive when they are nesting.

Survey 1: During this survey, an estimated eight adult CAGNs were observed in six patches of DCSS at DFSP San Pedro Main Terminal. The two pairs were observed in Areas 2 and 4 and were quiet. The females tried to stay hidden in the DCSS. The third male was vocal. The three undetermined sex CAGNs were vocal and were likely males.

Survey 2: During this survey, an estimated eight adult CAGNs were observed in five patches of DCSS. It was estimated that some of these birds were nesting and could have already hatched chicks. This assumption was made because most of the males were quiet and all the birds stayed hidden low in the DCSS. Often, if the surveyor is not too close to a nest with eggs, the male will be vocal and territorial and try to lead the surveyor away from the nest. The nests may have had chicks in them and the adult male and female could have been trying to keep them quiet. Based on the fledglings observed during surveys four through six, at least two pairs of CAGNs were nesting and at least one nest likely had chicks during this survey (CAGNs incubate eggs for approximately 14 days and chicks are usually in the nest for 10-15 days after hatching [Grishaver et al 1998]).

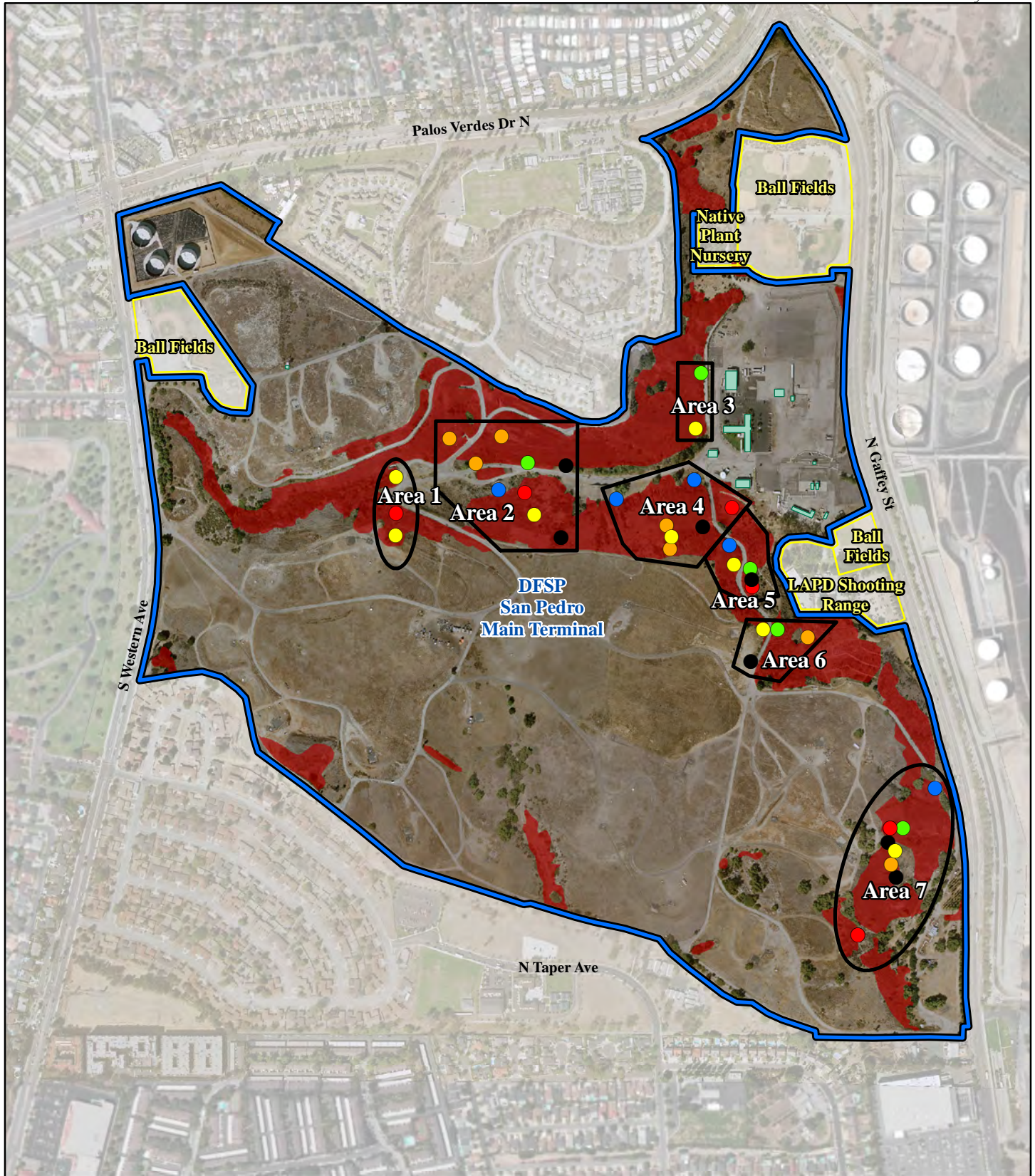
Survey 3: During this survey, an estimated eight to ten adult CAGNs were observed in seven patches of DCSS. The pair was in Area 2 (Photo 1). An individual male was observed in Area 3 (Photo 2).



Photo 1. DCSS in Area 2
 Source: Cardno 2015



Photo 2. DCSS in Area 3
 Source: Cardno 2015



<p>PACIFIC OCEAN</p> <p>MAIN TERMINAL PROJECT AREA</p>	<p style="text-align: center;">LEGEND</p> <ul style="list-style-type: none"> Main Terminal Project Area Existing Structures Areas Not Part of the Project Area California Gnatcatcher Use Areas Suitable CAGN Habitat/Survey Area (56 acres) <table border="0" style="width: 100%;"> <thead> <tr> <th colspan="2" style="text-align: left;">Survey Date</th> </tr> </thead> <tbody> <tr> <td>● 3/18/15</td> <td>● 4/8/15</td> </tr> <tr> <td>● 3/25/15</td> <td>● 4/17/15</td> </tr> <tr> <td>● 4/1/15</td> <td>● 4/24/15</td> </tr> </tbody> </table>	Survey Date		● 3/18/15	● 4/8/15	● 3/25/15	● 4/17/15	● 4/1/15	● 4/24/15	<p style="text-align: right;">Figure 3 Coastal California Gnatcatcher 2015 Observations</p> <div style="text-align: right;"> <p>0 200 400 Feet 0 100 200 Meters</p> <p>Source: NWSSB 2015</p> </div>
Survey Date										
● 3/18/15	● 4/8/15									
● 3/25/15	● 4/17/15									
● 4/1/15	● 4/24/15									

Survey 4: It was cool and cloudy at the start of the survey and the first CAGN was not detected until 1030. During the other surveys, the first CAGN was usually detected by 0900. During this survey, an estimated seven to eight CAGNs were observed in five patches of DCSS. The pair was in Area 2. The pair and one to two fledglings flew from high quality DCSS across the road to riparian habitat.

Survey 5: During this survey, an estimated 10 to 14 CAGNs were observed in five patches of DCSS. Three family groups were observed. Two groups were observed in Area 2 and one group in Area 7. The family group in the southern portion of Area 2 could have been from Area 4. The family group that was observed multiple times in Area 2 was observed near the road within the northern portion of the area.

Survey 6: It was cloudy during the entire survey and the fewest CAGNs of any survey were observed. The low observation numbers are probably a result of adults with fledglings moving to new areas and using more marginal habitat. Other CAGNs without fledglings could have been re-nesting. The birds could have also just been quiet and hard to detect. Adults with fledglings were observed in Areas 2 and 7. The family group in Area 2 had moved to marginal CAGN habitat that was dominated by dry sunflower and California buckwheat.

No other special-status species were observed during CAGN surveys. A list of species observed during the CAGN surveys is included in Appendix B.

4.0 DISCUSSION

As of 2010, the USFWS estimated that the CAGN population in California consisted of at least 3,400 pairs, and that the CAGN population on the Palos Verde Peninsula was between 26 and 56 pairs (USFWS 2010). The CAGN population in California is historically restricted to coastal sage scrub habitat in Ventura, Los Angeles, Orange, San Diego, Riverside and San Bernardino counties. The species is thought to be extirpated from much of its historic range within Ventura and San Bernardino counties and declining in the remaining four counties due to a continuing loss of coastal sage scrub habitat (USFWS 2010).

The CAGN population on Palos Verde Peninsula is isolated from the remainder of the population in southern California (USFWS 2010) due to the loss of coastal sage scrub habitat from the greater Los Angeles region and the isolated nature of the Peninsula itself. To the south/southeast, CAGNs occur at Bolsa Chica Ecological Reserve in Huntington Beach; to the north/northwest, CAGNs were documented in the Santa Monica Mountains in 2010; and to the northeast, CAGNs occur in Whittier (USFWS 2010). The majority of the area surrounding the DFSP San Pedro Main Terminal is developed and includes houses, schools, stores, and large industrial fuel tanks. Therefore, given the isolation of occupied CAGN habitat on the Palos Verdes Peninsula from other populations within the county, the population occurring at the DFSP San Pedro Main Terminal is considered an important population (USFWS 2010).

4.1 DISTURBANCES

In some of the DCSS patches, CAGN appear tolerant of loud noise. The DFSP San Pedro Main Terminal itself is relatively quiet with a few cars slowly driving along the roads throughout the day and few employees walking on the roads for exercise at lunch. The CAGNs in Areas 4, 5, and 6 that are near the Los Angeles Police Department shooting range and North Gaffey Street (refer to Figure 3) experience noise from the range, which was often being used during the morning surveys, and from vehicle and city traffic noise on North Gaffey Street.

American crows were regularly observed flying over the occupied CAGN habitat. One crow was observed harassing a kingbird (*Tyrannus* sp.) near a utility pole southeast of Area 1 (refer to Figure 3). A red-tailed hawk (*Buteo jamaicensis*) used the utility poles west of Area 1. Based on observations, the crows seemed to spend most of their time in the grassland area south of Area 2. An occasional western scrub jay was heard during the surveys but was not observed in the DCSS. In the southeast corner of the Main Terminal there is a small stand of coast live oaks (*Quercus agrifolia*).

4.2 HABITAT QUALITY

The quality of the DCSS in the survey area varied greatly. The area mapped as DCSS on the north side of the DFSP San Pedro Main Terminal, the northern portion of Area 2, was dominated by California sunflower and California buckwheat and was marginal habitat for CAGN (refer to Figure 3). All seven of the use areas had patches of high quality DCSS, which were dominated by dense California sagebrush shrubs.

4.3 RECOMMENDATIONS

Due to the high quality of much of the habitat and the presence of CAGN, it is recommended that the DCSS habitat at the DFSP San Pedro Main Terminal remain unchanged or continue to be enhanced.

5.0 REFERENCES

Cardno. 2015. Survey Photos. April.

Grishaver, M.A., Mock, P.J., and K. L Preston. 1998. Western Birds Volume 29:299-322.

USFWS. 1997. Coastal California gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol. USFWS Field Office, Carlsbad, CA.

USFWS. 2010. Coastal California gnatcatcher (*Polioptila californica californica*) 5-year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. 51 pp.

6.0 LIST OF PREPARERS

Cardno prepared this report under contract to Naval Facilities Engineering Command Southwest. Members of the professional staff include:

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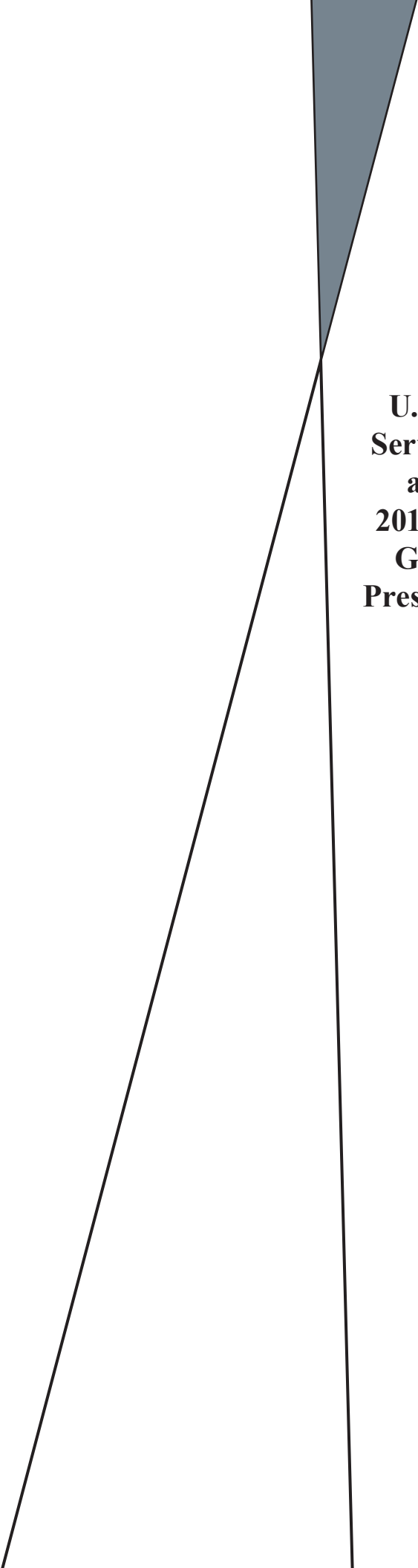
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Appendix A
U.S. Fish and Wildlife
Service Survey Protocols
and Notification for
2015 Coastal California
Gnatcatcher Protocol
Presence/Absence Surveys

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March 2, 2015

Ms. Stacey Love
USFWS
Recovery Permit Coordinator
Carlsbad Fish & Wildlife Office
2177 Salk Avenue, Ste. 250
Carlsbad, California 920008

Subject: 15-day Notification for 2015 Coastal California Gnatcatcher Protocol Surveys at Defense Fuel Support Point, San Pedro, Los Angeles County, California

Dear Ms. Love:

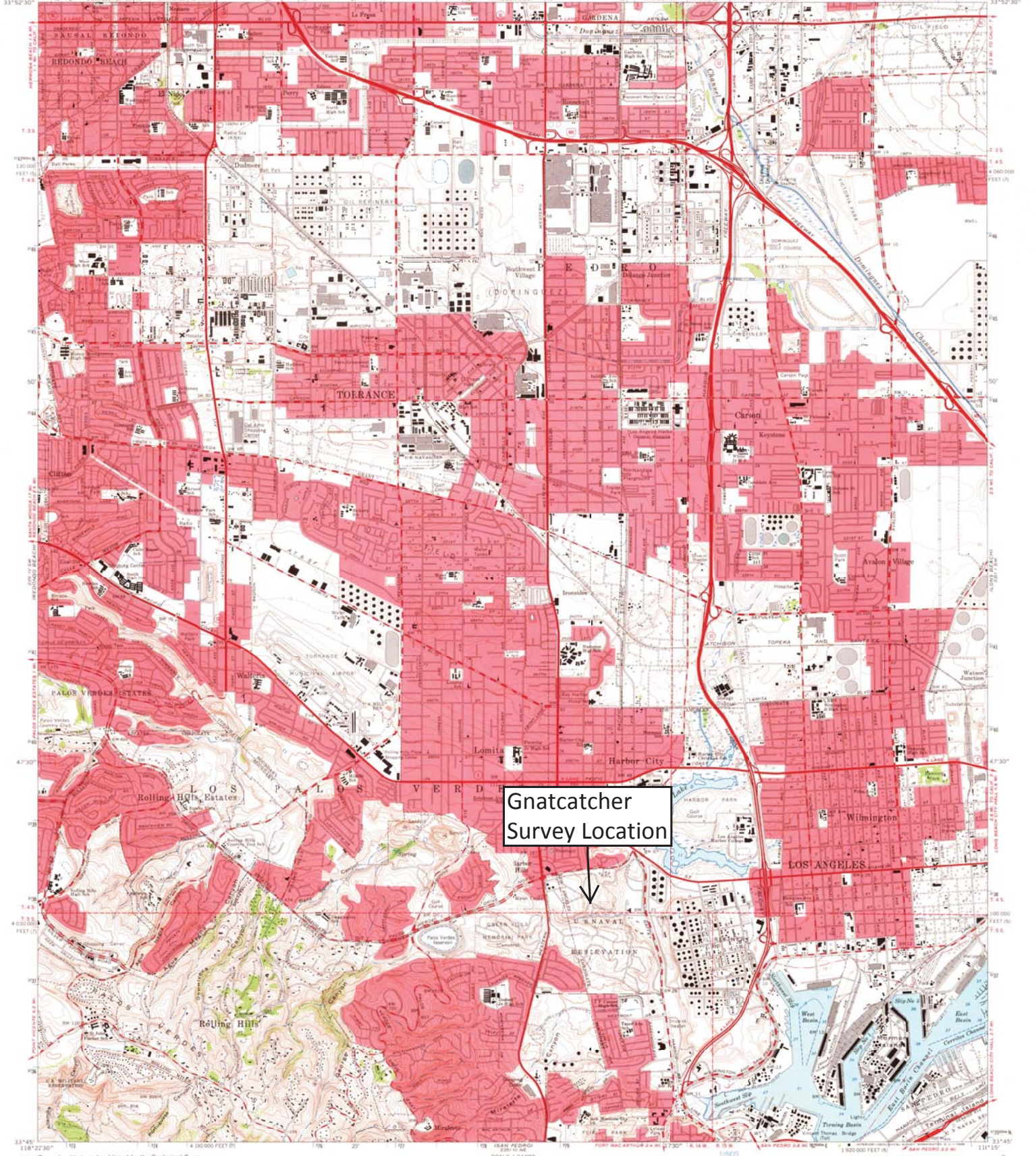
Under contract with Naval Facilities Engineering Command Southwest Melissa Tu (permit# TE-64138A-0), via Cardno, hereby provides notification to conduct protocol coastal California gnatcatcher surveys (six total) in support of the proposed partial or complete closure of Defense Fuel Support Point, San Pedro, California. The surveys will support the preparation of the Environmental Assessment and Cardno is conducting the surveys for the proposed action. The surveys will occur within approximately 56 acres of potential coastal California gnatcatcher habitat within the project area. A map of the general survey area is attached.

I plan to begin surveys after March 17, 2015 and continue the surveys through the breeding season in accordance with the survey protocol. Please contact me at (858) 509-3157, email: Melissa.Tu@Cardno-gs.com, if you have any questions.

Sincerely,

Melissa Tu
Permit #: TE-64138A-0

Attachment: USGS Quadrangle, Torrance, CA



Gnatcatcher
Survey Location

Coastal California Gnatcatcher (*Polioptila californica californica*)
Presence/Absence Survey Guidelines
February 28, 1997

The coastal California gnatcatcher (*Polioptila californica californica*) was listed as threatened on March 25, 1993, under the Endangered Species Act of 1973, as amended (Act). The final rule for this action was published in the Federal Register on March 30, 1993 (58 Federal Register 16742). On December 10, 1993, pursuant to section 4(d) of the Act, the U.S. Fish and Wildlife Service (Service) defined specific conditions associated with certain land use activities under which incidental take of coastal California gnatcatchers and their habitat would not be a violation of section 9 of the Act (58 Federal Register 65088).

The coastal California gnatcatcher, a small gray songbird, is a resident of scrub dominated plant communities from southern Ventura County southward through Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, California into Baja California, Mexico, to approximately 30 degrees North latitude near El Rosario (American Ornithologists' Union 1957; Atwood 1980, 1990; Jones and Ramirez 1995). The coastal California gnatcatcher is strongly associated with sage scrub in its various successional stages.

The majority of plant species found in sage scrub are low-growing, drought-deciduous shrubs and sub-shrubs, including California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia mellifera*, *S. apiana*) (Holland 1986, Sawyer and Keeler-Wolf 1995). Other commonly occurring species include lemonadeberry (*Rhus integrifolia*), coast goldenbush (*Isocoma menziesii*), laurel sumac (*Malosma laurina*), boxthorn (*Lycium* spp.), cliff spurge (*Euphorbia misera*), and jojoba (*Simmondsia chinensis*). Succulent species, such as cacti (*Opuntia littoralis*, *O. prolifera*, *Ferocactus viridescens*), and *Dudleya* spp. are represented in maritime succulent and southern coastal bluff scrubs. Sage scrub often occurs in a patchy, or mosaic, distribution pattern throughout the range of the coastal California gnatcatcher. Coastal California gnatcatchers also use chaparral, grassland, and riparian plant communities where they occur adjacent to or intermixed with sage scrub. Although existing quantitative data may reveal relatively little about coastal California gnatcatcher use of these other habitats, these areas may be critical during certain times of year for dispersal or as foraging areas during inclement conditions (e.g., drought). Breeding territories also have been documented in non-sage scrub habitat (e.g., chaparral and grassland/ruderal habitat).

The breeding season of the coastal California gnatcatcher extends from about February 15 through August 30, with the peak of nesting activity occurring from mid-March through mid-May. Incubation takes 14 days. The young fledge at 8 to 13 days of age and are dependent upon their parents for as little as three to four weeks (ERCE 1990), but fledglings may associate with their parents for several months.

This protocol is based on the best available scientific information regarding the detectability of the coastal California gnatcatcher and is subject to change pending receipt of additional pertinent scientific data. Information used to create this protocol included: Braden and Woulfe (1995a, 1995b), Brussard *et al.* (1992), Mock *et al.* (1990), and other unpublished information in the Service files.

The following protocol is issued as guidance to section 10(a)(1)(A) permittees. A section 10(a)(1)(A) permit under the Act shall be obtained prior to initiating any field surveys. Any surveys not conducted under a valid 10(a)(1)(A) permit will not be accepted by the Service. Failure to obtain a scientific permit prior to survey work may result in violation(s) of section 9 of the Act.

- I. Coastal California gnatcatcher surveys shall be completed by permitted biologists if proposed projects contain coastal sage scrub, alluvial fan scrub, chaparral, or intermixed or adjacent areas of grassland and riparian habitats, and is located within the range of this species. The protocol should be followed for all surveys unless otherwise authorized by the Service in writing.

II. The permittee shall notify the appropriate Service Fish and Wildlife Office in writing, at least ten (10) working days prior to the anticipated start date of survey work and receive approval prior to beginning work. The Ventura Fish and Wildlife Office (2493 Portola Road, Suite B, Ventura, California 93003, Tel: 805/644-1766, FAX 805/644-3958) shall be notified for all work in Ventura County and in the areas north and west of the San Gabriel Mountains in Los Angeles County. The Carlsbad Fish and Wildlife Office (2730 Loker Avenue West, Carlsbad, California 92008, Tel: 619/431-9440, FAX 619/431-9624) shall be notified for all work south of the above areas.

III. Jurisdictions participating in the NCCP interim section 4(d) process:

The number of surveys conducted within active NCCP areas is based on the prior recommended guidelines and the fact that, through the interim section 4(d) process, loss of coastal sage scrub requires mitigation on a habitat basis, regardless of whether habitat is occupied by coastal California gnatcatchers.

C From February 15 and August 30, a minimum of **three (3)** surveys shall be conducted at least one week apart, to determine presence/absence of coastal California gnatcatchers. Whenever possible, additional surveys should be conducted. Any deviation from this protocol will require concurrence from the Service.

IV. All other jurisdictions:

Breeding and non-breeding season survey protocol for presence/absence of coastal California gnatcatchers in non-NCCP areas are as follows:

C From March 15 through June 30, a minimum of **six (6)** surveys shall be conducted at least one week apart. The protocol for the breeding season was designed to provide a 95% confidence level of detecting coastal California gnatcatchers at a site when they are present.

C From July 1 through March 14, a minimum of **nine (9)** surveys shall be conducted at least two weeks apart.

V. Surveys shall be conducted between 6:00 a.m. and 12:00 p.m. Surveys shall avoid periods of excessive or abnormal heat, wind, rain, fog, or other inclement weather.

VI. Taped coastal California gnatcatcher vocalizations shall be used only until individuals have been initially located. Tapes shall not be used frequently or to elicit further behaviors from the birds.

VII. Surveys shall be conducted by slowly walking survey routes. Sites with deep canyons, ridge lines, steep terrain, and thick shrub cover should be surveyed more slowly. Prevailing site conditions and professional judgment must be applied to determine appropriate survey rates and acreage covered per day. These factors may dictate that the maximum daily coverage specified below is not prudent under certain conditions.

Jurisdictions participating in the NCCP interim section 4(d) process:

C No more than 100 acres (40 ha) shall be surveyed per biologist per day.

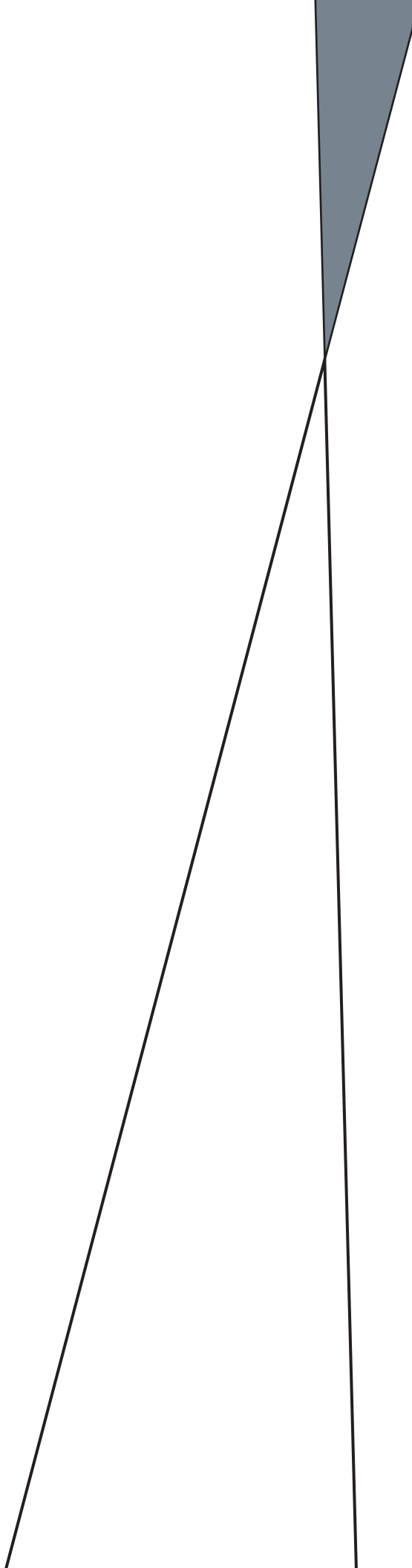
All other jurisdictions:

- C. No more than 80 acres (32 ha) shall be surveyed per biologist per day.
- VIII. No attempts shall be made to closely approach or examine coastal California gnatcatcher nests unless authorized by Service permits.
- IX. The permittee shall provide the following information in a report to the appropriate Service Fish and Wildlife Office, described above, and the California Department of Fish and Game within 45 days following the field surveys.
 - A. The location of the survey area delineated on a 7.5 minute U.S. Geological Survey topographic map at 1:24,000 and 1:200 scale.
 - B. Names of all biologists and associated personnel with reference to their section 10(a)(1)(A) permit number. A complete description of survey methods, including, the number of acres surveyed per biologist per hour and how many total acres surveyed per day per biologist, the number and dates of surveys, start and stop time of surveys, survey routes delineated on maps, the temperature and weather conditions at the beginning and end of each survey, and how frequently taped vocalizations were used.
 - C. Written and mapped qualitative descriptions of plant communities (including dominant species and habitat quality) on and adjacent to the area surveyed.
 - D. The number, age (adult, independent juvenile, dependent juvenile, recently fledged juvenile, nestling, unknown), sex of all coastal California gnatcatchers, and color band information (from top to bottom and from left to right) if any. These data also shall be plotted on 1:24,000 and 1:200 scale maps of the survey area.
 - E. Copies of all reports or other documents that include information gathered under the authority of Service permits (e.g., reports for clients prepared by consulting firm) shall be submitted to the appropriate Service Fish and Wildlife Office immediately upon completion. Raw/field data, notes, and other information resulting from work conducted under this permit shall be submitted to the Service immediately upon request.

This protocol was prepared by the Service's Carlsbad Fish and Wildlife Office, 2730 Loker Avenue West, Carlsbad, California 92008. If you have any questions regarding the development of this protocol please call 619/431-9440.

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Appendix B
Fauna List

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San Pedro 2015 Fauna List

<i>Scientific Name</i>	<i>Common Name</i>
REPTILES	
Iguanidae <i>Uta stansburiana</i>	Iguanids side-blotched lizard
BIRDS	
Accipitridae <i>Buteo jamaicensis</i>	Hawks red-tailed hawk
Aegithalidae <i>Psaltriparus minimus</i>	Bushtits Bushtit
Bombycillidae <i>Bombycilla cedrorum</i>	Waxwing s cedar waxwing
Columbidae <i>Zenaida macroura</i>	Pigeons and Doves mourning dove
Corvidae <i>Aphelocoma californica</i> <i>Corvus brachyrhynchos</i>	Jays and Crows Western scrub jay American crow
Emberizidae <i>Chondestes grammacus</i> <i>Pipilo crissalis</i> <i>Zonotrichia leucophrys</i>	Emberizids lark sparrow California towhee White-crowned sparrow
Falconidae <i>Falco sparverius</i>	Falcons American kestrel
Icteridae <i>Icterus bullockii</i> <i>Icterus cucullatus</i>	Blackbirds and Orioles Bullock's oriole hooded oriole
Fringillidae <i>Carpodacus mexicanus</i> <i>Carduelis psaltria</i>	Finches house finch lesser goldfinch
Mimidae <i>Mimus polyglottos</i>	Mockingbirds and Thrashers northern mockingbird
Muscicapidae <i>Catharus guttatus</i>	Thrushes hermit thrush

<i>Scientific Name</i>	<i>Common Name</i>
<p>Parulidae <i>Geothlypis trichas</i> <i>Setophaga coronata</i></p>	<p>Wood-Warblers common yellowthroat yellow-rumped warbler</p>
<p>Picidae <i>Colaptes auratus</i></p>	<p>Woodpecker s northern flicker</p>
<p>Sylviidae <i>Polioptila californica</i></p>	<p>Old-World Warblers and Gnatcatchers California Gnatcatcher</p>
<p>Timaliidae <i>Chamaea fasciata</i></p>	<p>Babblers wrenit</p>
<p>Trochilidae <i>Calypte anna</i> <i>Selasphorus sasin</i></p>	<p>Hummingbirds Anna's hummingbird Allen's hummingbird</p>
<p>Tyrannidae <i>Sayornis nigricans</i> <i>Sayornis saya</i> <i>Tyrannus verticalis</i> <i>Tyrannus vociferans</i></p>	<p>Tyrant Flycatchers black phoebe Say's phoebe western kingbird Cassin's kingbird</p>
<p>MAMMALS</p>	
<p>Canidae <i>Canis latrans</i></p>	<p>Wolves and Foxes coyote</p>
<p>Leporidae <i>Sylvilagus audubonii</i></p>	<p>Hares and Rabbits desert cottontail</p>
<p>Sciuridae <i>Spermophilus beecheyi</i></p>	<p>Squirrels California ground squirrel</p>