APPENDIX D
ENDANGERED SPECIES ACT DOCUMENTATION

This page intentionally left blank.

DEPARTMENT OF THE NAVY
COMMANDING OFFICER
NAVAL BASE CORONADO
PO BOX 357033
SAN DIEGO, CA 92135-7033

IN REPLY REFER TO:
5090
Ser N00/991
28 Dec 17

Mr. Mendel Stewart, Field Supervisor
U.S. Fish & Wildlife Service
Carlsbad Fish & Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, CA 92008-7331

SUBJECT: INFORMAL CONSULTATION FOR THE PROPOSED TRANSITION FROM C-2A TO CMV-22B AIRCRAFT AT NAVAL AIR STATION NORTH ISLAND SAN DIEGO, CALIFORNIA

Dear Mr. Stewart:

The Department of the Navy has prepared a Draft Environmental Assessment (EA) to analyze the potential environmental consequences associated with the transition from C-2A to CMV-22B (hereinafter referred to as "Navy V-22") aircraft at Naval Air Station (NAS) North Island, California and Naval Station (NS) Norfolk, Virginia. This letter is to request informal consultation with the United States Fish and Wildlife Service (USFWS), including review of the Navy's determination for the Proposed Action at NAS North Island. Any potential effects to environment or listed species on the East Coast will be consulted on separately in the appropriate local USFWS field office.

Project Description

The Proposed Action would replace the C-2A with the new CMV-22B aircraft, referred to herein as the Navy V-22, at NAS North Island, California and NS Norfolk, Virginia in co-location with established Fleet Logistics Centers. The existing Fleet Logistics Support Squadrons are based at NAS North Island, California and NS Norfolk, Virginia. The Fleet Logistics Centers provide logistics, supply, and support services to fleet units and shore commands. Under the Proposed Action, the Navy plans to replace 27 legacy C-2A aircraft operated by existing logistics support squadrons with 38 Navy V-22 aircraft operated by logistics support multi-mission squadrons; establish a Navy V-22 training squadron for pilots and aircrew; establish a maintenance school for maintenance personnel; construct, renovate, and maintain facilities to accommodate Navy V-22 squadron aircraft and personnel; make adjustments to personnel levels associated with the Navy V-22 squadrons and the maintenance school; and conduct Navy V-22 flight training operations.

The Proposed Action would be implemented over a 10-year period beginning in 2018 with facility renovations and some personnel actions at NAS North Island and NS Norfolk. The transition of Fleet Logistics Support Squadrons from C-2A to Navy V-22 would begin with Navy V-22 aircrews and maintenance personnel initially training at the existing U.S. Marine Corps

5090
Ser N00/991
28 Dec 17

MV-22B training squadron and maintenance school at Marine Corps Air Station (MCAS) New River, North Carolina for several years before returning to their home base location. Under the Proposed Action, the Navy V-22 training squadron and a maintenance school would be established either on the West Coast or the East Coast to fully support Navy training requirements. Under the National Environmental Policy Act (NEPA), the Navy evaluated a No Action Alternative (i.e., retaining the C-2A aircraft) and two action alternatives (Alternative 1 and Alternative 2). Alternative 1 would establish two Navy V-22 squadrons (one operational and one training) at NAS North Island and one operational squadron at NS Norfolk. Alternative 2 would establish two Navy V-22 squadrons (one operational and one training) at NS Norfolk and one operational squadron at NAS North Island. This document addresses solely Alternative 1 (hereinafter referred to as the "Proposed Action") as it encompasses all of the possible actions proposed for NAS North Island (Figure 1) analyzed in the EA for this project. The following summarizes the proposed facilities and aircraft operations at NAS North Island under the Proposed Action:

Facilities

The Proposed Action at NAS North Island (within the consortium of Naval Base Coronado (NBC) installations) includes construction and/or renovation of facilities to accommodate Navy V-22 operational squadron and fleet training squadron aircraft and personnel including aircraft hangar space, aircraft parking, aircraft wash racks, flight training devices, aircraft maintenance trainer, utilities, and personnel parking. In addition, the Navy V-22 maintenance school would be co-located with the fleet training squadron at NAS North Island. Construction at NAS North Island would include 156,000 square feet of hangar space, full-depth replacement of approximately 35 acres of an existing parking apron, and demolition of 26 existing buildings to accommodate construction of the new facilities (Figure 1). The proposed site is currently developed with hangars and a parking apron, and there would be no additional impervious surface added for the Proposed Action at NAS North Island.

Home Airfield Flight Operations

Navy V-22 training requirements and methods for fleet squadron, replacement, and maintenance personnel training are expected to generally resemble those of the legacy system with few exceptions. The Navy anticipates a total of approximately 16,000 annual airfield operations by Navy V-22 aircraft at NAS North Island, which represents an increase of approximately 11,500 aircraft operations or an increase of approximately 14 percent of all aircraft operations conducted at NAS North Island compared to the No Action Alternative C-2A operations (Table 1). The Proposed Action would have no impact on the Air Installations Compatible Use Zone (AICUZ) Program at NAS North Island.

5090
Ser N00/991
28 Dec 17

Secondary Training Airfield Operations

In addition to home airfield flight operations, the Navy V-22 flight training would require the use of secondary training airfields in the regional vicinity of NAS North Island. Six secondary training airfields were identified on each coast. Secondary airfields for the West Coast include: Naval Auxiliary Field El Centro, MCAS Miramar, MCAS Camp Pendleton, Naval Auxiliary Landing Field San Clemente, Marine Corps Outlying Field Camp Pendleton, and MCAS Yuma (Table 2). It is anticipated these six airfields would accommodate most of the required Navy V-22 training operations. However, some Navy V-22 operations may occur at other fields not listed, where such fields already accommodate periodic V-22 or C-2 flight operations. The secondary training airfield operations estimates at West Coast airfields include operations conducted by a West Coast Navy V-22 training squadron.

5090
Ser N00/991
28 Dec 17

Table 1. Annual Home Airfield Operations for Current C-2A and Proposed Navy V-22 at NAS North Island

	NAS North Island		
Type of Operation	***No Action Alternative C-2A Operations****	***Alternative 1 Navy V-22 Operations****	***Proposed Change****
Departures	800	2,500	+1,700
VFR Arrivals	700	2,300	+1,600
IFR Arrivals	100	300	+200
Visual Closed Patterns (Touch-and-Go)	2,600	10,000	+7,400
Instrument Patterns (GCA)	300	900	+600
Total Annual Operations (C-2A and V-22)	**4,500**	**16,000**	**+11,500**
Total Annual Operations (All Aircraft)	**79,800**	**91,300**	**+11,500**

Notes: IFR=Instrument Flight Rules; GCA=ground-controlled approach; VFR=Visual Flight Rules; operation=aircraft departure (take-off) or arrival (landing)
*Numbers are rounded to the nearest 100.

Table 2. Secondary Training Airfield Proposed Operations

Training Airfield	***Total Estimated Annual Navy V-22 Airfield Operations***	***Maximum Increase in Overall Annual Training Airfield Operations (All Aircraft)[1]***	***Percent Distribution (Day/Evening /Night – CA) (Day/Night – AZ, VA, NC)***
NAF El Centro, CA MCAS Miramar, CA MCAS Camp Pendleton, CA	Up to 10,000 distributed across any of the three fields	7 – 15 percent	75/15/10
NALF San Clemente, CA MCOLF Camp Pendleton, CA[2], MCAS Yuma, AZ	Up to 2,500 distributed across any of the three fields	2 – 9 percent	75/15/10 90/10 (MCAS Yuma, AZ)

Notes: AAF=Army Airfield; AZ=Arizona; CA=California; MCAS=Marine Corps Air Station; MCOLF=Marine Corps Outlying Field; NAF=Naval Auxiliary Field; NALF=Naval Auxiliary Landing Field

Day/Evening/Night operating hours observed in California = day (7:00 a.m.-6:59 p.m.), evening (7:00 p.m.-9:59 p.m.), night (10:00 p.m. to 6:59 a.m.); Day/Night operating

5090
Ser N00/991
28 Dec 17

Training Airfield	*Total Estimated Annual Navy V-22 Airfield Operations*	*Maximum Increase in Overall Annual Training Airfield Operations (All Aircraft)*[1]	*Percent Distribution (Day/Evening /Night – CA) (Day/Night – AZ, VA, NC)*
hours observed in Virginia = day (7:00 a.m.-9:59 p.m.), night (10:00 p.m.-6:59 a.m.) [1] Percent of total existing operations of all aircraft occurring at the airfield. [2] Existing operations data not available for MCOLF Camp Pendleton; percentage of overall Camp Pendleton operations would be less than 1 percent.			

Proposed Navy V-22 usage of airspace and secondary training airfields, even in the unlikely scenario the maximum annual operations would be conducted at any one of the airfields, would represent a small percentage of operations currently operating in the airspace and at the airfields. Existing airfield operations, including those of fixed-wing jet and rotary-wing aircraft, at the secondary airfields where most of the Navy V-22 training operations are proposed, have been previously analyzed in other NEPA documents listed in Section 1.6 (Key Documents) of the EA. The percentage increases provided in Table 2 represent the percent of total existing operations for all aircraft occurring at the airfields. In addition to the six airfields listed in Table 2, occasional, transient use of other airfields available for public use in the southwest United States region may be made for flight training by Navy V-22 logistics squadrons.

The previous analysis in other NEPA documents listed in Section 1.6 (Key Documents) of the EA adequately assesses the environmental effects of the Proposed Action. Proposed annual operations in the airspace and airfield environments under the Proposed Action would be similar to existing operations and would represent a small percentage of the operations that have already been analyzed under NEPA for operations at these airfields. Therefore, proposed operations at the training airfields would be expected to have negligible environmental impacts to the airspace and airfield environments.

In summary, the use of training airfields by Navy V-22 aircraft present no new information or circumstances that would result in significantly different environmental effects than those previously analyzed under NEPA. Therefore, analysis of environmental and operational impacts associated with the Navy V-22 use of secondary training airfields is not considered further.

Threatened and Endangered Species

NAS North Island supports populations of the federally endangered California Least Tern and federally threatened Western Snowy Plover. California Least Terns and Western Snowy Plovers at NAS North Island are managed in accordance with the NBC Integrated Natural Resources Management Plan (INRMP) (Navy, 2013) and in accordance with several Biological Opinions (BOs) and informal consultations with the USFWS, including Ongoing Airfield

5090
Ser N00/991
28 Dec 17

Operations and Management Strategies at NAS North Island BO (FWS-SDG-3908.3, 1 April 2005) (herein referred to as the "Airfield BO") addressing airfield operations at NAS North Island. There have been several amendments to the Airfield BO. Applicable amendments are discussed further below.

California Least Tern and Western Snowy Plover are known to nest within a 21-acre managed nesting site (herein referred to as the "MAT site") located adjacent to the southern boundary of the project area (Figure 2). All Snowy Plover nests found on the NAS North Island airfield (including those laid within the MAT site) are collected for captive-rearing. This is conducted under the Airfield BO and associated amendment dated 17 June 2015 (FWS-SDG-11B0284-11F0424-R003). In addition, California Least Tern and Western Snowy Plover nests have been found within and adjacent to the northern portion of the project area near Helipad 2 and Taxiway Juliet. `As authorized within the Airfield BO amendment dated 23 July 2014 (FWS-SDG-11B0284-11F0424), the Navy actively deters California Least Terns from nesting at the Taxiway Juliet site (primarily via habitat modification). This species has not nested at the site since 2015 when only a single nest was laid and soon abandoned. For the first time in 2017, three Western Snowy Plover nests were found near Taxiway Juliet and were collected under the Airfield BO. Because the Taxiway Juliet site is not a designated nesting area, it will not be considered further within this document. Potential effects from the Proposed Action to the California Least Tern and Western Snowy Plover from construction and operation of the Proposed Action are described below.

Construction

Under the Proposed Action, construction activities that occur in proximity (defined as 500 feet) from the MAT site or other nesting locations during the nesting season may disturb nesting California Least Terns and/or Western Snowy Plovers. However, because all Western Snowy Plover nests found on the airfield will be collected for captive-rearing, the Navy assumes there will be no effect to this species from construction-related activities. Building demolition and new building construction within the project area would occur greater than 500 feet from the MAT site. However, construction within the parking apron and along the taxiway would occur within 500 feet of the MAT site. In order to avoid impacts to California Least Terns nesting at the MAT site, construction activity will be restricted as follows: (1) no construction activity will be permitted within 300 feet of the MAT site during the least tern nesting season; and (2) no heavy construction will be permitted 300-500 feet from the MAT site during the nesting season. Heavy construction activity is defined as activity that produces loud noises and/or utilizes heavy equipment (to include but not be limited to grading, jackhammering, excavating, and removal of large debris). Construction occurring greater than 500 feet from the existing MAT site could occur during the California Least Tern nesting season. The project area is a developed military industrial land use subject to frequent elevated noise and activity levels. Therefore, construction activities more than 500 feet from the MAT site would not be anticipated to result in harassment of nesting California Least Tern. For any construction that occurs during the nesting season, all

5090
Ser N00/991
28 Dec 17

cranes or other tall construction equipment will be lowered when not in use to preclude raptor and corvid perching.

The operational squadron hangar and training squadron hangar, buildings, and associated facilities within the project area could result in an increase in perching opportunities for predators of the California Least Tern and Western Snowy Plover, including raptors, crows, and ravens. The potential for perching habitat and associated predation would be minimized by constructing the hangars and any other support buildings with a slanted roof, or other design that discourages perching and loafing by birds, and including anti-perch devices (e.g., Nixalite on perches) as part of the facility design. These design elements would also support the Navy's requirements to reduce Bird/Animal Aircraft Strike Hazard (BASH) risks on NAS North Island. In addition, to minimize potential impacts to nesting within the MAT site, the Navy would incorporate the following measures into the project design: (1) permanent outdoor lighting installed within the project area would be shielded to maximally reduce light pollution into any areas that are occupied by a listed species, including the California Least Tern; (2) other methods of reducing light pollution (e.g., dusk-to-dawn sensor activation, low-lumen or limited-spectrum lighting) would be applied wherever possible; (3) light poles and light placement would be constructed at the lowest height possible (considering security constraints) to reduce impacts to the surrounding natural resources by reducing raptor perching sites and to reduce light pollution; and (4) any trash receptacles placed around the new buildings will be designed with secure lids to reduce the potential for attracting Least Tern predators (e.g. Corvids). Should any antennas be constructed, additional review would be required by the NBC Wildlife Biologist. In addition, written approval by the NBC Wildlife Biologist would be required prior to finalization and implementation of construction activities. Engagement and coordination with the aforementioned subject matter expert in the Request for Proposal (RFP) and design process would occur from the beginning to ensure timely coordination so as to afford appropriate opportunities for project review and modification to comply with Federal laws and regulations, to protect endangered/threatened species and habitats in proximity to the project area. Subject matter experts would be contacted during RFP development and prior to the kickoff-meeting of the project design.

Operations

Aircraft operations under the Proposed Action would be generally similar to the current C-2A airfield operations, but the quantity of operations, types of operations, and flight patterns would be slightly different. An operation represents a single movement or individual flight in the home base airfield or airspace environment. For example, one aircraft departing and returning would represent two airfield flight operations. The Navy V-22 squadrons would execute the following types of airfield operations at NAS North Island: arrival (landing); departure (take-off); and closed patterns (i.e., touch-and-go and ground-controlled approach). Actual operations can vary somewhat depending on specific training missions or need at any given time.

5090
Ser N00/991
28 Dec 17

Potential impacts to California Least Tern and Western Snowy Plover could result from increased noise during aircraft operations. A supplemental noise study prepared in support of the EA analysis concludes that the Proposed Action would not result in a noticeable change in the primary noise metric, CNEL, and that results are nearly indistinguishable from the No Action (or baseline condition) (Figure 3) (Cardno, 2017). Noise modeling was completed for all flight operations and ground operations for all existing aircraft and proposed Navy V-22 aircraft. Proposed Navy V-22 ground operations that would occur in the aircraft parking and maintenance area, closest to the MAT site, would include low-power engine maintenance tests and startup procedures. Representative points were analyzed to cover a range of locations and orientations of the aircraft. The points are labeled in Figure 4 as "P1", "P2", and "P3". P1 is a point roughly in the center of the polygon that is the MAT site. P2 is the point in the MAT site located closest to the proposed Navy V-22 taxiway – expected to be the most affected by additional noise sources in the project area. P3 is the point in the MAT site that had the highest baseline CNEL. Only low-power operations would be performed at the aircraft parking area and taxiway. High-power operations and hover operations would only be performed on Runway 18/36. Navy V-22 take-off and landings would occur on both runways (i.e., Runway 18/36 and Runway 11/29). The proposed increase in aircraft operations is estimated to have negligible effects (1 decibel maximum) on the existing noise environment (Figure 4). The modeling results from the noise study show that the noisiest events at the MAT Site are all produced by aircraft that would not change due to the Proposed Action. This indicates that the aircraft and types of events that cause the primary contribution to the CNEL are not affected by the proposed change at NAS North Island. California Least Terns and Western Snowy Plovers have established nesting and continue to nest under the existing noise environment indicates they are not likely impacted by these existing operations and would not be expected to be adversely impacted by the Proposed Action. Additionally, the noise analysis conducted at three points on the MAT site (Figure 4) concluded that there would be a maximum of one decibel increase in noise levels at the MAT site. There is no standard for determining significance of changes in cumulative noise effects on California Least Tern and Western Snowy Plover, but it is reasonable to conclude that a worst case rise of 1 decibel CNEL, which is imperceptible to humans, would not result in adverse effects. This is consistent with observations at Camp Pendleton that found minimal response by California least terns from periodic helicopter overflight (Johnston, 1995).

As described above, the Navy V-22 aircraft would operate at the existing airfield (i.e., taxiing along the existing taxiways and low-power engine maintenance tests and startup procedures within the parking area) within 500 feet of the MAT site in areas currently used for aircraft operations at NAS North Island. Potential issues from aircraft operations include heat effects from the aircraft engines and rotor wash (winds generated from the aircraft rotors during operations). The Navy V-22 would be operated in accordance with the Naval Air Training and Operating Procedures Standardization training manual. The manual identifies measures and limitations on how the aircraft is operated, including time on the ground and requirements for nacelle rotation when landed to reduce heat effects. During normal ground operations, the exhaust deflector system of the Navy V-22 is engaged at all times for safety purposes. While on

5090
Ser N00/991
28 Dec 17

the ground, the primary high-heat exhaust would be directed downward close to the ground directly under the aircraft engine with temperatures dissipating to ambient outdoor temperatures within approximately 20 feet of the engine (Aitchison, 2017). Operations on the taxiway or the parking apron would not be expected to result in a change in ambient temperature at the MAT site.

Operation of the Navy V-22 would result in aircraft rotor wash similar to that of the CH-53 (U.S. Marine Corps, 2011), which currently operate at NAS North Island. Rotor wash forces are relative to the engine power settings and the aircraft's proximity to the ground. Navy V-22 aircraft on the taxiway and parking apron would be on the ground (i.e., not hovering) and operated in low-power setting. Wind velocities associated with rotor wash would diminish substantially beyond 100 feet from the aircraft. For example, in the prevailing temperature and rotor wash conditions, aircrew and support personnel can safely and comfortably move around the aircraft and load and unload cargo. In addition, the Navy V-22 would taxi westward from the parking apron (i.e., not adjacent to the MAT site). Therefore, proposed operations would not be expected to result in a change in ambient conditions at the MAT site.

The increase in aircraft operations under the Proposed Action could result in a minor increase in BASH potential at NAS North Island, and there is a potential for individual California Least Tern and Western Snowy Plover to be affected by a strike. Aircraft occasionally strike California Least Terns and Western Snowy Plovers at the NAS North Island airfield under baseline conditions. Based on the last 35 years of records of BASH incidents kept for NAS North Island, seven incidents of aircraft striking California Least Terns and two incidents of aircraft striking Western Snowy Plovers have been documented at NAS North Island (Table 3). For all wildlife species, the 10-year average (2004 - 2014) of BASH incidents at NAS North Island is seven strikes per year (USDA, 2014). Given the overall very low numbers of BASH incidents compared to the number of existing aircraft operations, this increase would not be expected to cause increased take of California Least Terns or Western Snowy Plovers above that already authorized in the Airfield BO.

Under the Reasonable and Prudent Measures of the Airfield BO, the Navy would continue to monitor the NAS North Island airfield for signs of collisions between California Least Terns/Western snowy plovers and aircraft, and report any strikes to USFWS on an annual basis. If the anticipated level of incidental take is exceeded, the Navy would reinitiate consultation and work with the USFWS to determine the best course of action to minimize future take and/or modify the level of authorized take. Under the Proposed Action, the Navy would continue annual nest monitoring of the California Least Tern and coordination with the USFWS as part of the NBC INRMP program requirements and conditions of the various BOs.

5090
Ser N00/991
28 Dec 17

Table 3. Bird/aircraft Strikes* on NBC with California Least Tern and Western Snowy Plover

Date	Species	No.	Aircraft/Altitude	Location
Aug 30-Sept 27, 2001*	Least Tern	1	Unknown	NASNI-Runway 18-36 at 2 marker from approach of RW 18
Jul 15, 2002	Least Tern	1	Unknown	NASNI-Runway 18-36; Delta Gear
Aug 2, 2002	Least Tern	1	Unknown	NASNI-Midpoint on Taxiway L
Jun 10, 2004	Snowy Plover	1	Unknown	NASNI-Runway 29 – found within 20 yards of the plover's nest
Jul 13, 2007	Least Tern fledgling hatched at NASNI	1	Taxiing Propeller plane (possibly C-12)	NASNI-Taxiway Lima adjacent to MAT nesting site (strike was observed)
Jul 23, 2008	Least Tern fledgling-hatched at Camp Pendleton	1	Unknown	NASNI- intersection of Taxiway Alpha & Bravo-1
Jun 30, 2009	Snowy Plover fledgling hatched at NASNI	1	Unknown	NASNI-center of runway near Charlie gear of Runway 36
May 29, 2014	Least Tern adult (bird was unbanded)	1	Likely MH-60 helicopter/ground level	NASNI-in vicinity of Helo Pad 2 (location of Least Tern nesting activity). Presumed BASH strike due to location and injuries.
June 10, 2014	Least Tern chick hatched near Helo Pad 2	1	Likely incidental strike caused by MH-60 helicopter rotor wash/ground level	NASNI-in vicinity of Helo Pad 2 (location of Least Tern nesting activity). Presumed incidental BASH strike due to location and injuries.

5090
Ser N00/991
28 Dec 17

Notes:
*Dates are reported this way in 2001 NBC Annual BASH Report
1. Table originally compiled and sent to the USFWS in Navy letter dated Aug 26, 2010, "Informal Consultation for Proposed Helicopter Wings Realignment and MH60-R/S Helicopter Transition at Naval Base Coronado, CA (Navy, 2011)"
2. Table was originally compiled from all available NBC BASH and bird strike data (1981 through 2010).
3. Unless otherwise noted, the above were determined as strikes due to location found (on runway, or in close proximity to it).
4. Table is updated and provided annually to USFWS to meet requirement of the 2011 Amendment to the 2005 NASNI Airfield Biological Opinion. Amendment dated 3 June 2011.
4. Strike data was last reviewed by NBC Wildlife Biologist, Tiffany Shepherd on 21 Feb 2017 and table was updated as necessary.

5090
Ser N00/991
28 Dec 17

Conclusion

In light of the above discussion, the Navy believes that the Proposed Action *may affect, but is not likely to adversely affect* the California Least Tern and the Western Snowy Plover at NAS North Island. The Navy appreciates consideration by the USFWS of the Proposed Action and requests the USFWS's concurrence with the Navy's determination. The Navy point of contact on this issue is Ms. Tiffany Shepherd, Wildlife Biologist for NBC, (619) 545-3703 or tiffany.shepherd@navy.mil.

Sincerely,

S. T. MULVEHILL
Captain, U.S. Navy
Commanding Officer
Naval Base Coronado

Copy to: United States Fleet Forces, N46
COMNAVEREGSW, Regional Environmental Counsel
NAVFAC SW, EV2

Enclosures:
1. Figure 1. NAS North Island Project Area
2. Figure 2. Federally Listed and Other Special Status Species Near Project Area at NAS North Island
3. Figure 3. Proposed Action CNEL Contours Compared to No Action
4. Figure 4. CNEL Point Analysis Locations on NAS North Island California Least Tern Management Area
5. Literature Cited

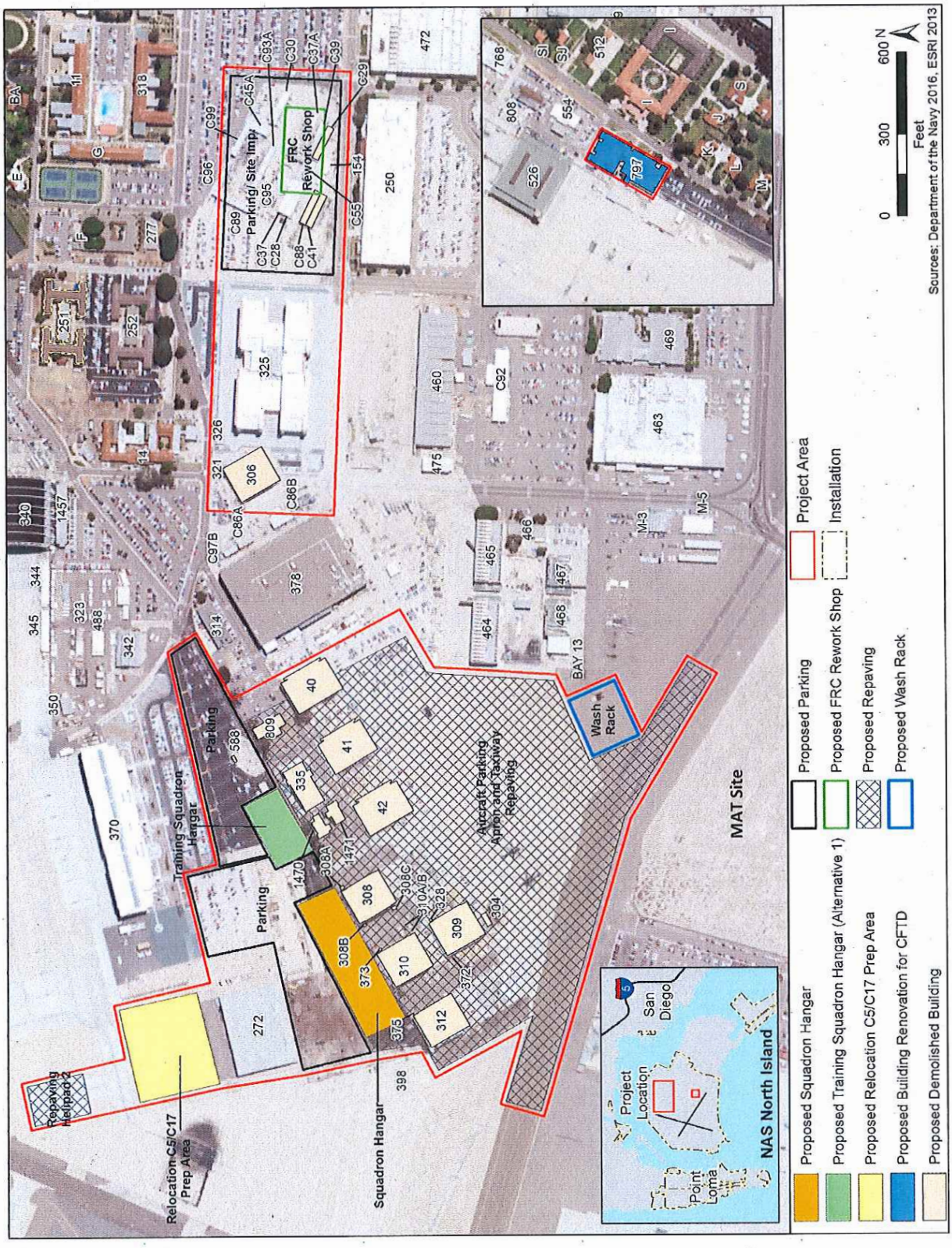


Figure 1. NAS North Island Project Area

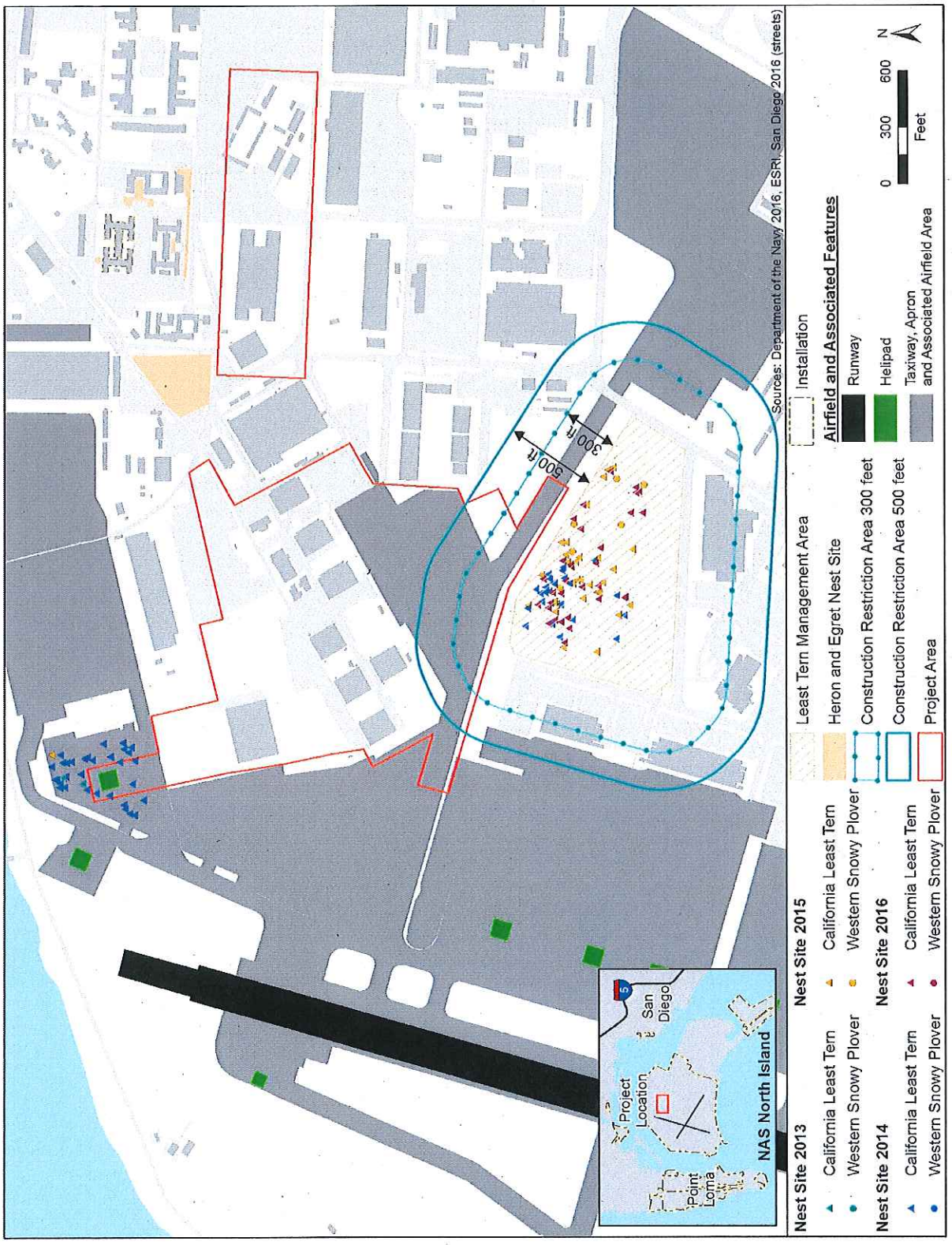


Figure 2. Federally Listed and Other Special Status Species Near Project Area at NAS North Island

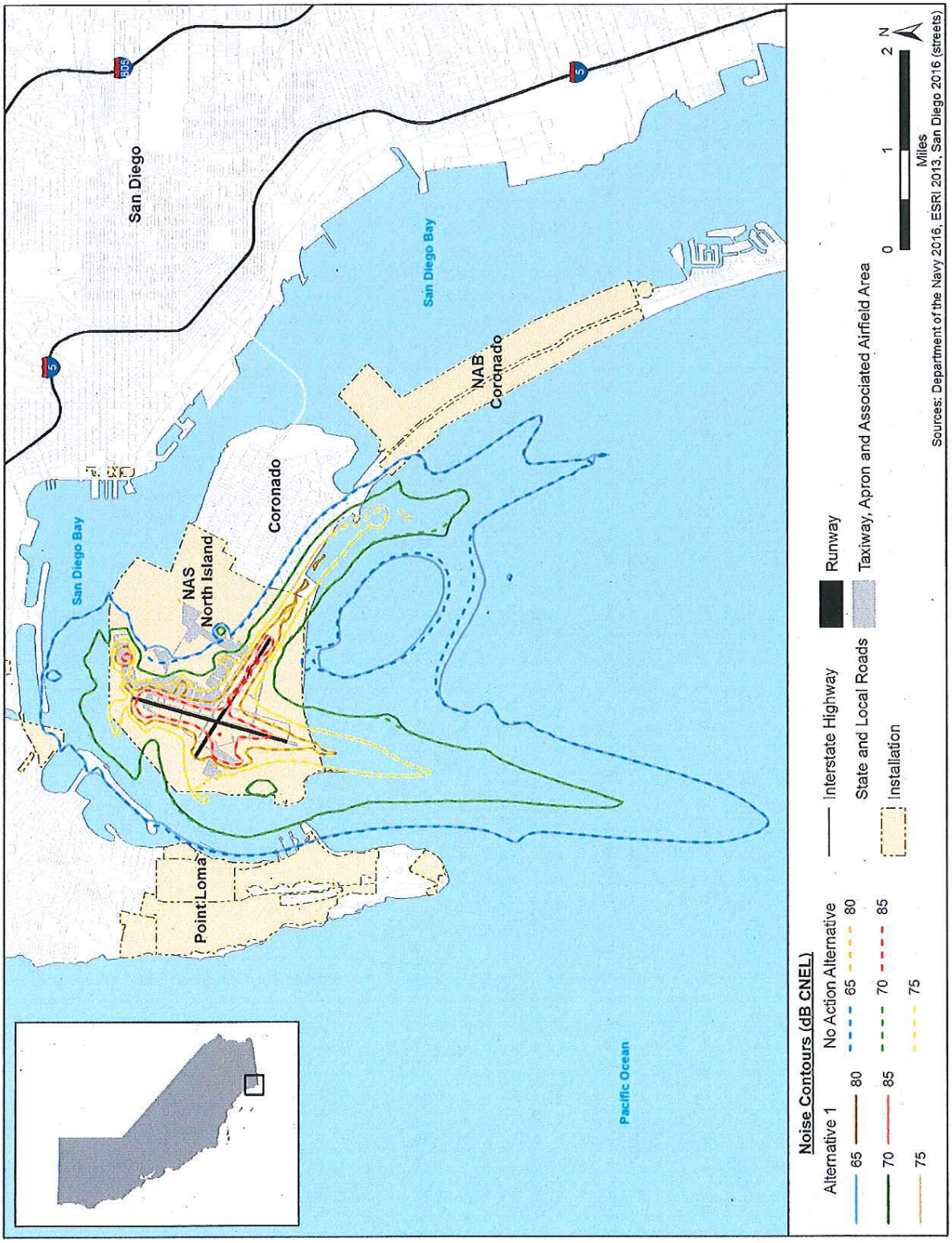


Figure 3. Proposed Action CNEL Contours Compared to No Action

ENCLOSURE (3)

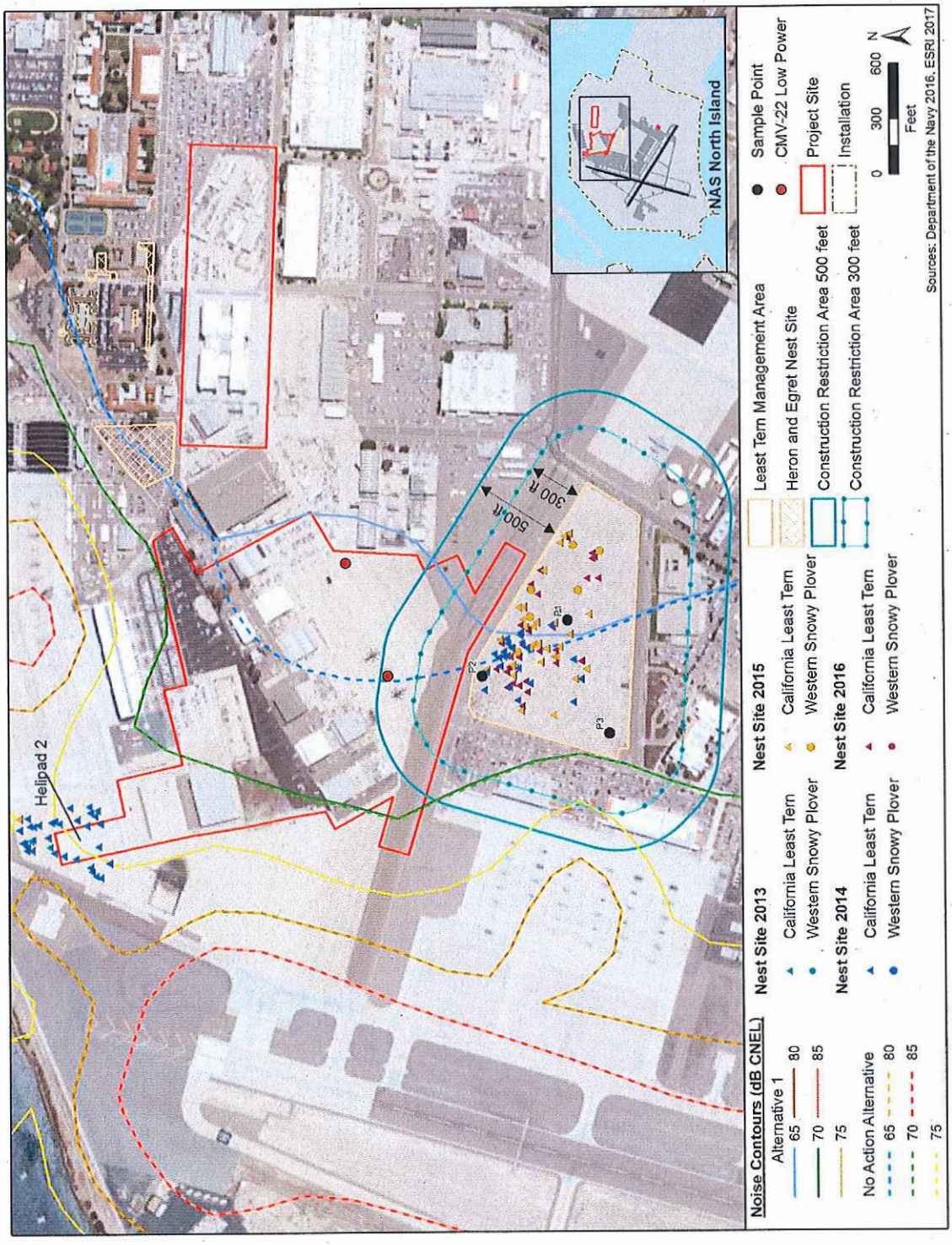


Figure 4. CNEL Point Analysis Locations on NAS North Island California Least Tern Management Area.

ENCLOSURE (4)

Literature Cited

Aitchison, R. 2017. Personal communication regarding high heat effects of the V-22. Robert Aitchison, NAVAIR PMA-275. September 19.

Cardno. 2017. Memorandum. Subject: Additional Noise Analysis of Least Tern Nesting Site at Naval Station North Island, California. Noise Analysis in Support of Environmental Assessment for the Transition from C-2A to Navy V-22 Aircraft at Fleet Logistics Centers Naval Air Station North Island, California. June..

California Department of Fish and Wildlife (CDFW). 2016. California Least Tern Breeding Survey for the 2015 Season. March.

Department of Defense (DoD). 2014. 2014 Demographics Profile of the Military Community. Published by the Office of the Deputy Assistant Secretary of Defense (Military Community and Family Policy) Under Contract with ICF International.

Johnston, S.M. 1995. The Effects of Human Disturbance on Time Allocation of Nesting California Least Terns. Master's Thesis, University of California, Los Angeles. 38 pp.

Navy (United States Department of the Navy). 2011. Final Environmental Assessment for Helicopter Wings Realignment and MH-60R/S Helicopter Transition, Naval Base Coronado, California. August 2011. Prepared by TEC Inc. for Naval Facilities Engineering Command, Southwest.

_____. 2013. Final Naval Base Coronado Integrated Natural Resources Management Plan. Prepared by HDR for Naval Facilities Engineering Command, Southwest.

U.S. Department of Agriculture (USDA). Comprehensive Bird/Animal Aircraft Strike Hazard (BASH) Program at Naval Base Coronado, San Diego, California. 2014 Report. USDA APHIS Wildlife Services.

U.S. Fish and Wildlife Service (USFWS). 2016. 2016 Summer Window Survey for Snowy Plovers on U.S. Pacific Coast. Retrieved September 18, 2017 from: https://www.fws.gov/arcata/es/birds/WSP/documents/2016%20Pacific%20Coast%20breeding%20SNPL%20survey%20draft_with%20RU%201,2,3,4,5,6%20.pdf.

U.S. Marine Corps. 2012. V-22 Osprey Guidebook 2011/2012. Retrieved October, 16, 2017 from: http://www.boeing.com/ospreynews/2011/issue_02/final_2011_2012_guidebook.pdf.

This page intentionally left blank

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

In Reply Refer To:
FWS-SDG-18B0127-18I0616

March 26, 2018
Sent by Email

Captain S.T. Mulvehill
Commanding Officer
Naval Base Coronado
P.O Box 357033
San Diego, California 92135-7033

Attention: Tiffany Shepherd, Wildlife Biologist

Subject: Informal Section 7 Consultation for the Transition from C-2A to CMV-22B Aircraft Project at Naval Air Station North Island, San Diego County, California

Dear Captain Mulvehill:

This letter is in response to your December 28, 2017, letter requesting our concurrence with your determination that the U.S Navy's transition from C-2A to CMV-22B (Navy V-22) aircraft project at Naval Air Station North Island (NASNI) is not likely to adversely affect the federally endangered California least tern [*Sternula antillarum browni* (*Sterna a. b.*); least tern] and the federally threatened western snowy plover (Pacific Coast population DPS) [*Charadrius nivosus nivosus* (*C. alexandrinus n.*); plover] in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq*.). This consultation is based on information provided in your request for consultation, the draft Environmental Assessment (draft EA; Navy 2018), and subsequent email correspondence. We received your request for consultation on January 3, 2018.

The proposed project will replace the C-2A with the new Navy V-22 aircraft at existing Fleet Logistics Centers, which are based at NASNI and Naval Station (NS) Norfolk, Virginia. The Navy proposes to replace 27 legacy C-2A aircraft operated by existing logistics support squadrons with 38 Navy V-22 aircraft operated by logistics support multi-mission squadrons; establish a Navy V-22 training squadron for pilots and aircrew; establish a maintenance school for maintenance personnel; construct, renovate, and maintain facilities to accommodate Navy V-22 squadron aircraft and personnel; make adjustments to personnel levels associated with the Navy V-22 squadrons and the maintenance school; and conduct Navy V-22 flight training operations. The project will be implemented over a 10-year period beginning with facility renovations and some personnel actions in 2018. The draft EA evaluates three alternatives: a No Action Alternative (i.e., retaining the C-2A aircraft), and two action alternatives. Alternative 1 would establish two Navy V-22 squadrons (one operational and one training) at NASNI and one operational squadron at NS Norfolk. Alternative 2 would establish two Navy V-22 squadrons

(one operational and one training) at NS Norfolk and one operational squadron at NASNI. Because Alternative 1 encompasses all actions that may be implemented at NASNI, this consultation addresses potential impacts that may result from implementation of Alternative 1. This consultation only addresses impacts that may occur at NASNI; the potential impacts from project implementation at NS Norfolk will be evaluated by the appropriate U. S. Fish and Wildlife Service (Service) office.

The Navy proposes facilities improvements at NASNI to accommodate the aircraft and personnel changes, including aircraft hangar space, aircraft parking, aircraft wash racks, flight training devices, aircraft maintenance trainer, utilities, and personnel parking. Construction and/or renovation of facilities would include 156,000 square feet of hangar space, full-depth replacement of about 35 acres of an existing parking apron and taxiway, and demolition of 26 existing buildings to accommodate construction of the new facilities (Figure 1). The area proposed for renovation is currently developed with hangars, buildings, a taxiway, and a parking apron.

As a result of the transition to Navy V-22 training and operation squadrons at NASNI, airfield operations will increase by about 11,500 aircraft operations per year, which represents a 14 percent increase of all aircraft operations conducted at NASNI compared to baseline levels. In addition, the Navy V-22 flight training would require the use of secondary training airfields, including Naval Auxiliary Field El Centro, Marine Corps Air Station (MCAS) Miramar, MCAS Camp Pendleton, Naval Auxiliary Landing Field San Clemente, Marine Corps Outlying Field Camp Pendleton, and MCAS Yuma. The increase of Navy V-22 aircraft operations at secondary airfields would result in a maximum increase of only a small percentage (2 to 15 percent) of the overall operations at each airfield.

NASNI supports a nesting colony of least terns at the 21-acre MAT site, located about 100 feet south of the taxiway on the southern end of the project site (Figures 1 and 2). Least terns have also nested on Taxiway Juliet (Helipad 2) on the northwest side of the project site. Plovers occur at NASNI on the beaches to the south of the project site. Plovers have also initiated nests on the NASNI airfield, including Taxiway Juliet and the MAT site. The Biological Opinion for Ongoing Airfield Operations and Management Strategies at NASNI (Airfield BO; FWS-SDG-3908.3 and subsequent amendments) addresses the collection of plover eggs from the NASNI airfield, including Taxiway Juliet and the MAT site, and hazing of least terns away from Taxiway Juliet. The Airfield BO also addresses potential take of plovers and least terns on the airfield as a result of Bird Air Strike Hazard (BASH) occurrences. All collected plover eggs are hatched and captive-reared for release elsewhere at Naval Base Coronado (NBC). Though all plover eggs on the NASNI airfield are ultimately collected unless they naturally fail, this consultation addresses potential harm or injury to plovers and eggs that may result from project construction before eggs are collected.

To ensure that plovers and eggs are not struck by construction equipment, the Navy will monitor plover activity on the airfield and coordinate with construction personnel if plovers are detected in the vicinity of construction. Any plover nests initiated within or adjacent to project

construction will be marked with blue cones and construction personnel will be directed away from the area until eggs can be collected under the Airfield BO.

Facilities construction and renovation activities may produce noise and visual impacts that could disturb nesting least terns at the NASNI airfield MAT site. The Navy will implement measures (Appendix) to avoid and minimize impacts to least terns from project construction. No construction activities will occur within 300 feet of the MAT site during the least tern breeding season (April 1 to August 30). Construction activities that generate excessive noise (i.e. use of heavy equipment, jackhammering, grading, excavating, etc.) will not occur within 500 feet of the MAT site during the breeding season. Outside of 500 feet, the loudest activities will be phased to occur outside the breeding season to the maximum extent practicable. For construction that must occur during the breeding season, construction personnel will coordinate on a weekly basis with the NBC Wildlife Biologist. The NBC Wildlife Biologist will evaluate whether proposed activities will generate excessive noise or visual impacts and assign a biological monitor to observe the MAT site during those activities. If the biological monitor determines that any construction activities are disturbing nesting least terns, the Navy will cease or alter disruptive activities to minimize disturbance until least tern nesting is complete. In the event that the Navy's efforts to haze least terns away from Taxiway Juliet under the Airfield BO are not successful and least terns initiate nesting, the Navy will either implement the same minimization measures at Taxiway Juliet as the MAT site or reinitiate consultation with the CFWO to address potential impacts to nesting least terns.

New facilities and construction could attract predators of the least tern and plover and increase night-time lighting adjacent to the MAT site. The Navy will minimize predator perches by incorporating anti-perch designs on new hangars, support buildings, antennas, and light poles (e.g., Nixalite, slanted roofs). If new antennas are proposed, the NBC Wildlife Biologist will review and approve proposed antenna locations and designs to minimize predator perching opportunities near the MAT site. Cranes and other tall construction equipment will be lowered while not in use to prevent predator perching. All permanent lighting will be shielded and directed downward or away from the MAT site. New light poles will be as low as possible and designed to prevent predator perching. Prior to construction, the Navy will provide a draft lighting plan to the CFWO for approval. Trash receptacles will be required to have lids to prevent attraction of corvids and other predators of the least tern and plover.

Operation of the project may result in altered noise levels, rotor wash, and exhaust heat as a result of the proposed aircraft changes at NASNI. Though aircraft operation levels will increase by about 14 percent at NASNI, the aircraft that generate the most noise at NASNI will not change as a result of the project. A noise analysis conducted for the project determined that noise levels will only increase by a maximum of 1 decibel, which is imperceptible to the human ear, over baseline levels (Cardno 2017). High power and hover operations that generate the most noise will occur only on the runways, which are over 2,000 feet from the MAT site. Only low power engine maintenance and aircraft taxiing will occur within the parking apron and taxiway closest to the MAT site, in areas that currently support similar activities. Rotor wash from Navy V-22 aircraft is similar to CH-53 aircraft currently used at NASNI and is expected to diminish

within 100 feet of aircraft. High heat exhaust from Navy V-22 aircraft will be directed at the ground and temperatures are anticipated to diminish within 20 feet of aircraft. Therefore, we anticipate that effects to least terns resulting from noise, rotor wash, and heat generated by operation of the project will not differ significantly from baseline levels.

Based on the site and species information described above and the Navy's commitment to implement the proposed conservation measures (Appendix), we conclude that all potential impacts of the project on the least tern and plover will be avoided or reduced to a level of insignificance[1] warranting our concurrence with the Navy's determination that the project is not likely to adversely affect the least tern and plover. Therefore, the interagency consultation requirements of section 7 of the Act have been satisfied.

Thank you for your coordination on this project, and your continued efforts to conserve the least tern and plover while supporting the Navy's military mission. If you have any questions or concerns regarding this informal consultation, please contact Lauren Kershek at 760-431-9440, extension 208.

Sincerely,

DAVID ZOUTENDYK Digitally signed by DAVID ZOUTENDYK Date: 2018.03.26 15:23:42 -07'00'

for Karen Goebel
Assistant Field Supervisor

LITERATURE CITED

Cardno. 2017. Noise analysis in support of environmental assessment for the transition from C-2A to Navy V-22 aircraft at fleet logistics centers, Naval Air Station North Island, California. Prepared for Naval Facilities Engineering Command, Atlantic. June.

[Navy] U.S. Department of the Navy. 2018. Draft environmental assessment for the transition from C-2A to CMV-22B aircraft at fleet logistics centers Naval Air Station North Island and Naval Station Norfolk. January.

[1] An insignificant effect is one that is sufficiently small that a person would not be able to meaningfully measure, detect, or evaluate it.

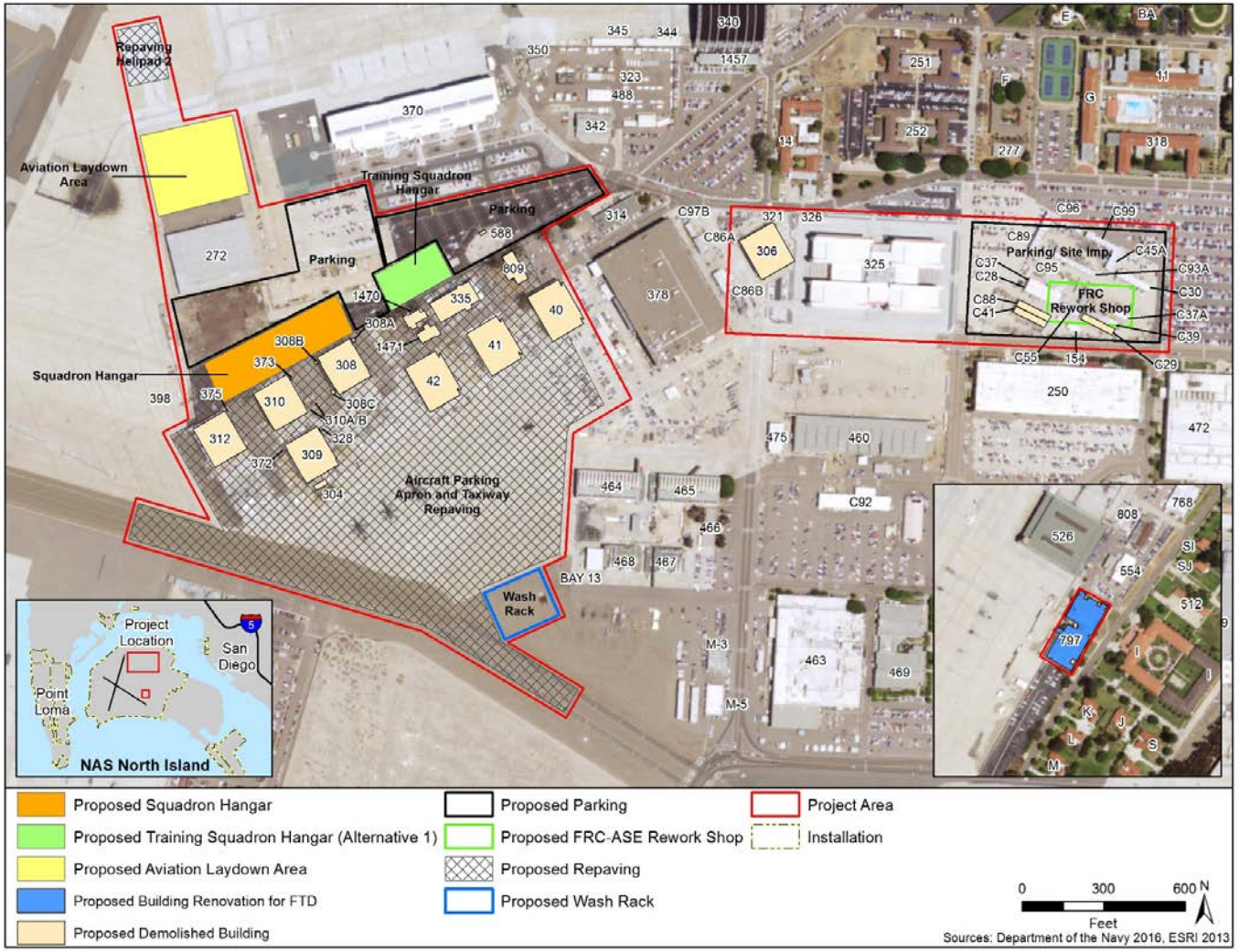


Figure 1. Proposed facilities construction and renovation at NASNI to accommodate Navy V-22 aircraft and personnel (Source: Navy 2017, Figure 2.1-1).

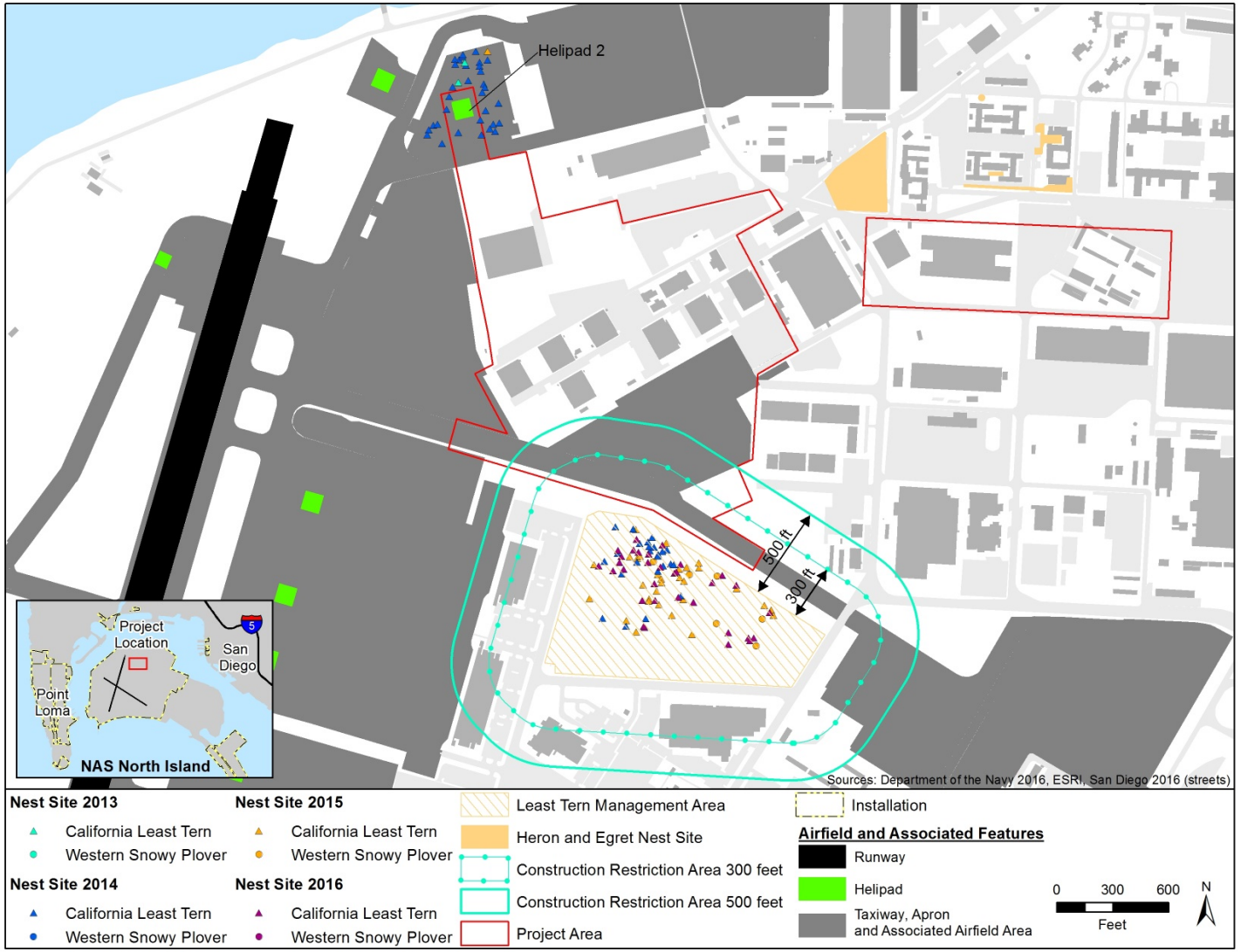


Figure 2. Project site in reference to MAT and Taxiway Juliet (Helipad 2) sites (Source: Navy 2017, Figure 3.6-2)

APPENDIX

Transition from C-2A to CMV-22B Aircraft Project at Naval Air Station North Island Conservation Measures to avoid and minimize potential adverse effects to the California least tern and Western Snowy plover

The Transition from C-2A to CMV-22B Aircraft Project at Naval Air Station North Island includes the following conservation measures that the Navy's has committed to implement to avoid and minimize potential adverse effects to the least tern and plover to an insignificant level (i.e., will not rise to the level of take and cannot be meaningfully measured, detected, or evaluated). These measures support the Service's concurrence with the Navy's "not likely to adversely affect" determination for these species:

CM 1. No construction will occur within 300 feet of the MAT site during the least tern breeding season [April 1 to August 30[2], or sooner if a Biological Monitor[3] demonstrates to the satisfaction of the Carlsbad Fish and Wildlife Office (CFWO) that all nesting is complete]. No heavy construction (e.g., use of heavy equipment, jackhammering, grading, excavating) will occur within 500 feet of the MAT site during the least tern breeding season. Outside 500 feet, construction that may result in noise or visual impacts to nesting least terns (e.g., building demolition, jackhammering) will be conducted outside the breeding season to the maximum extent practicable. All construction activities proposed during the breeding season will be reviewed on a weekly basis by the NBC Wildlife Biologist. If the NBC Wildlife Biologist determines that proposed activities have the potential to disrupt nesting terns, a Biological Monitor will observe least tern nesting at the MAT site during those activities and determine whether nesting is being disrupted. If the Biological Monitor determines that nesting is being disrupted, the Navy will stop work and coordinate with the CFWO to review additional avoidance/minimization measures that can be implemented. Upon agreement as to the necessary revisions to the avoidance/minimization approach, work may resume subject to the revisions and continued nest monitoring until least tern nesting at the MAT site is complete.

CM 2. The Navy will monitor least tern activity in the Taxiway Juliet area. If least terns initiate nesting at Taxiway Juliet despite the Navy's efforts to deter nesting, the Navy will implement CM 1 at Taxiway Juliet in addition to the MAT site or reinitiate consultation with the CFWO to address the potential effects of construction on least tern nesting at Taxiway Juliet.

CM 3. The Navy will monitor plover activity on the airfield and coordinate with construction personnel if plovers are detected in areas adjacent to the project site. Any plover nests initiated within or adjacent to project construction will be

[2] The latest date least terns have been recorded at the MAT site is August 20 (2001). In the last decade, least terns have departed the MAT site by the end of July.
[3] The Biological Monitor will be familiar with least tern behavior and ecology and have documented experience locating and monitoring least tern nests. If necessary, more than one biologist may be used.

marked with blue cones and construction personnel will be directed away from the area until eggs can be collected.

CM 4. For any construction that occurs during the nesting season, all cranes or other tall construction equipment will be lowered when not in use to preclude raptor and corvid perching.

CM 5. Hangars and any other support buildings will be designed and constructed with a slanted roof, or other design that discourages perching, roosting, nesting, and loafing by birds. Bird deterrent devices (e.g., Nixalite on perches) will be installed on all hangars, support buildings, antennas, light poles, and other perching surfaces. If revegetation or landscaping will occur within the areas of new construction, trees and large shrubs will not be considered for planting because they may increase avian usage of the site and predation risk.

CM 6. If any new antennas are proposed within the project site, the NBC Wildlife Biologist will review and approve proposed antenna locations and designs to minimize predator perching opportunities near the MAT site.

CM 7. The Navy will submit a draft lighting plan to the CFWO for review at least 30 days prior to project construction. Permanent outdoor lighting installed within the project area will be shielded to maximally reduce light pollution into the MAT site. Other methods of reducing light pollution (e.g., dusk-to-dawn-sensor activation, low-lumen or limited-spectrum lighting) will be applied wherever possible. Light poles and light placement will be constructed at the lowest height possible (considering security constraints).

CM 8. Any trash receptacles placed around the new buildings will be designed with secure lids to reduce the potential for attracting least tern and plover predators (e.g., corvids).

IPaC **U.S. Fish & Wildlife Service**

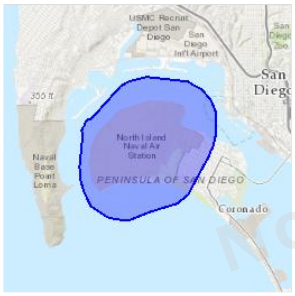
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Diego County, California



Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

http://www.fws.gov/carlsbad/

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Pacific Pocket Mouse Perognathus longimembris pacificus No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8080	Endangered

Birds

NAME	STATUS
California Least Tern Sterna antillarum browni No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Coastal California Gnatcatcher Polioptila californica californica There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo Vireo bellii pusillus There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher Empidonax traillii extimus There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered
Western Snowy Plover Charadrius alexandrinus nivosus There is a **final** critical habitat designated for this species. Your location overlaps the designated critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened

Flowering Plants

NAME	STATUS
Orcutt's Spineflower Chorizanthe orcuttiana No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7573	Endangered
San Diego Ambrosia Ambrosia pumila There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/8287	Endangered
San Diego Button-celery Eryngium aristulatum var. parishii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5937	Endangered
San Diego Thornmint Acanthomintha ilicifolia There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/351	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Western Snowy Plover Charadrius alexandrinus nivosus https://ecos.fws.gov/ecp/species/8035#crithab	Final designated

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
Allen's Hummingbird Selasphorus sasin https://ecos.fws.gov/ecp/species/9637	Breeding

Ashy Storm-petrel Oceanodroma homochroa https://ecos.fws.gov/ecp/species/7237	Breeding
Bald Eagle Haliaeetus leucocephalus https://ecos.fws.gov/ecp/species/1626	Wintering
Bell's Sparrow Amphispiza belli https://ecos.fws.gov/ecp/species/9303	Year-round
Bell's Vireo Vireo bellii https://ecos.fws.gov/ecp/species/9507	Breeding
Black Oystercatcher Haematopus bachmani https://ecos.fws.gov/ecp/species/9591	Year-round
Black Skimmer Rynchops niger https://ecos.fws.gov/ecp/species/5234	Year-round
Black-chinned Sparrow Spizella atrogularis https://ecos.fws.gov/ecp/species/9447	Breeding
Black-vented Shearwater Puffinus opisthomelas	Wintering
Brewer's Sparrow Spizella breweri https://ecos.fws.gov/ecp/species/9291	Year-round
Burrowing Owl Athene cunicularia https://ecos.fws.gov/ecp/species/9737	Year-round
Cactus Wren Campylorhynchus brunneicapillus https://ecos.fws.gov/ecp/species/8834	Year-round
Calliope Hummingbird Stellula calliope https://ecos.fws.gov/ecp/species/9526	Migrating
Cassin's Auklet Ptychoramphus aleuticus https://ecos.fws.gov/ecp/species/6967	Wintering
Costa's Hummingbird Calypte costae https://ecos.fws.gov/ecp/species/9470	Year-round
Fox Sparrow Passerella iliaca	Wintering
Green-tailed Towhee Pipilo chlorurus https://ecos.fws.gov/ecp/species/9444	Breeding
Gull-billed Tern Gelochelidon nilotica https://ecos.fws.gov/ecp/species/9501	Breeding
Lawrence's Goldfinch Carduelis lawrencei https://ecos.fws.gov/ecp/species/9464	Year-round
Least Bittern Ixobrychus exilis https://ecos.fws.gov/ecp/species/6175	Year-round
Lesser Yellowlegs Tringa flavipes https://ecos.fws.gov/ecp/species/9679	Wintering
Lewis's Woodpecker Melanerpes lewis https://ecos.fws.gov/ecp/species/9408	Wintering

Long-billed Curlew Numenius americanus https://ecos.fws.gov/ecp/species/5511	Wintering
Marbled Godwit Limosa fedoa https://ecos.fws.gov/ecp/species/9481	Wintering
Mountain Plover Charadrius montanus https://ecos.fws.gov/ecp/species/3638	Wintering
Nuttall's Woodpecker Picoides nuttallii https://ecos.fws.gov/ecp/species/9410	Year-round
Oak Titmouse Baeolophus inornatus https://ecos.fws.gov/ecp/species/9656	Year-round
Peregrine Falcon Falco peregrinus https://ecos.fws.gov/ecp/species/8831	Wintering
Pink-footed Shearwater Puffinus creatopus	Year-round
Red Knot Calidris canutus ssp. roselaari https://ecos.fws.gov/ecp/species/8880	Wintering
Red-crowned Parrot Amazona viridigenalis https://ecos.fws.gov/ecp/species/9022	Year-round
Rufous-crowned Sparrow Aimophila ruficeps https://ecos.fws.gov/ecp/species/9718	Year-round
Sage Thrasher Oreoscoptes montanus https://ecos.fws.gov/ecp/species/9433	Wintering
Scripp's Murrelet Synthliboramphus hypoleucus scrippsi	Year-round
Short-billed Dowitcher Limnodromus griseus https://ecos.fws.gov/ecp/species/9480	Wintering
Short-eared Owl Asio flammeus https://ecos.fws.gov/ecp/species/9295	Wintering
Snowy Plover Charadrius alexandrinus	Breeding
Tricolored Blackbird Agelaius tricolor https://ecos.fws.gov/ecp/species/3910	Year-round
Western Grebe aechmophorus occidentalis https://ecos.fws.gov/ecp/species/6743	Wintering
Whimbrel Numenius phaeopus https://ecos.fws.gov/ecp/species/9483	Wintering
Yellow Warbler dendroica petechia ssp. brewsteri https://ecos.fws.gov/ecp/species/3230	Breeding

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions,

if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Facilities

Wildlife refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

This page intentionally left blank

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Virginia Field Office
6669 Short Lane
Gloucester, VA 23061

Date: 7 September 2017

Self-Certification Letter
Transition from C-2 to Navy V-22 at Fleet Logistics Centers
Project Name:

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Virginia Ecological Services online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. . 1531-1544, 87 Stat. 884), as amended (ESA), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended (Eagle Act). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA and Eagle Act conclusions. These conclusions resulted in:

- "no effect" determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- "may affect, not likely to adversely affect" determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- "may affect, likely to adversely affect" determination for the Northern long-eared bat (*Myotis septentrionalis*) and relying on the findings of the January 5, 2016 Programmatic Biological Opinion for the Final 4(d) Rule on the Northern long-eared bat; and/or
- "no Eagle Act permit required" determinations for eagles.

We certify that use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the "no effect" or "not likely to adversely affect" determinations for proposed and listed species and proposed and designated critical habitat; the "may affect" determination for Northern long-eared bat; and/or the "no Eagle Act permit required" determinations for eagles. Additional coordination with this office is not needed.

Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species.

Should project plans change or if additional information on the distribution of proposed or listed species, proposed or designated critical habitat, or bald eagles becomes available, this determination may be reconsidered. This certification letter is valid for 1 year.

Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Virginia is available at our website http://www.fws.gov/northeast/virginiafield/endspecies/project_reviews.html. If you have any questions, please contact Troy Andersen of this office at (804) 824-2428.

Sincerely,

Cindy Schulz
Field Supervisor
Virginia Ecological Services

Enclosures - project review package

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032
http://www.fws.gov/northeast/virginiafield/

In Reply Refer To: September 01, 2017
Consultation Code: 05E2VA00-2017-SLI-4748
Event Code: 05E2VA00-2017-E-10717
Project Name: Transition from C-2 to V-22 Aircraft at Naval Station Norfolk

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2017-SLI-4748

Event Code: 05E2VA00-2017-E-10717

Project Name: Transition from C-2 to V-22 Aircraft at Naval Station Norfolk

Project Type: MILITARY OPERATIONS / MANEUVERS

Project Description: The Navy V-22 is being procured to replace older C-2A aircraft for the carrier on-board delivery mission. The transition from the C-2A to the Navy V-22 would begin in 2021, with the final retirement of the C-2A planned for 2026. The primary infrastructure requirements for the Navy V-22 are an aircraft hangar, aircraft parking, wash racks, containerized flight training device (CFTD), utilities, and personnel parking. At NS Norfolk, these infrastructure improvements would be located in the same area as existing hangars, parking aprons and taxiways.

Project Location:

Approximate location of the project can be viewed in Google Maps:
https://www.google.com/maps/place/36.93805840531124N76.28836160107079W

Counties: Norfolk, VA

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Critical habitats

There are no critical habitats within your project area under this office's jurisdiction.

USFWS National Wildlife Refuges And Fish Hatcheries

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuges or fish hatcheries within your project area.

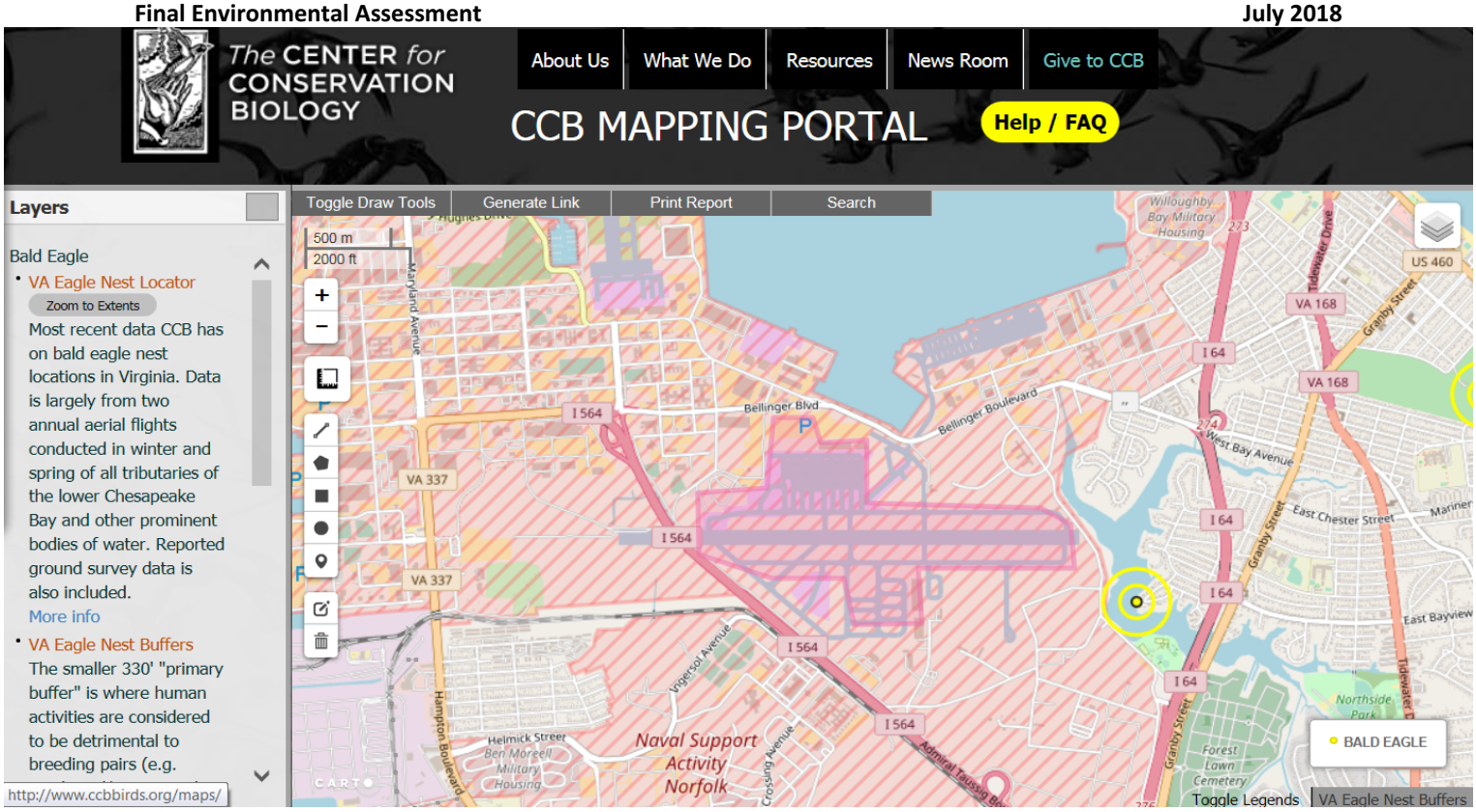
SPECIES CONCLUSION TABLE

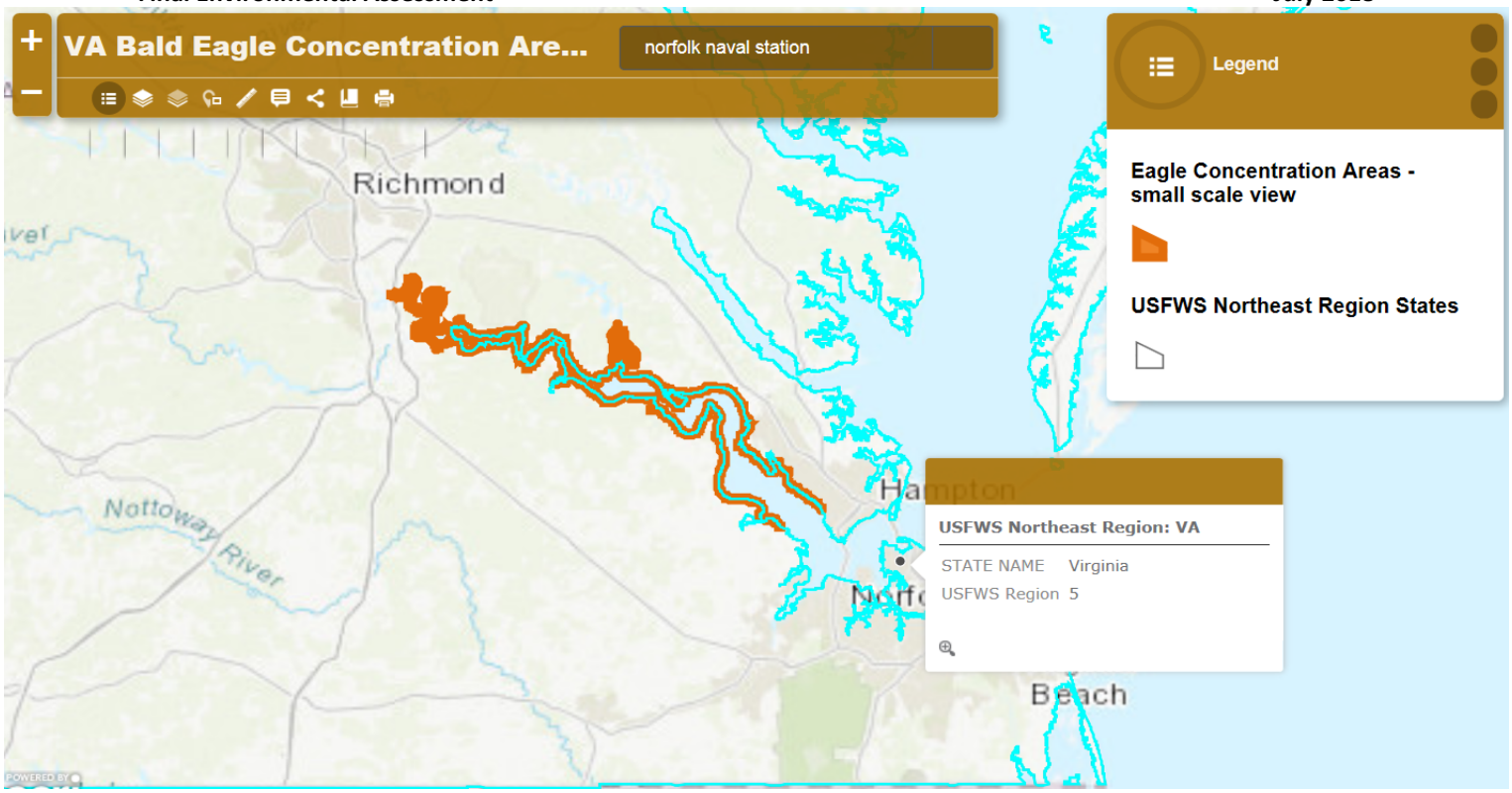
(*for NS Norfolk Project Area*)

Project Name: Transition from C-2A to Navy V-22 at Fleet Logistics Centers (NS Norfolk and NAS North Island)

Date: 09-07-2017

Species/Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Note/Documentation
No species on Official Species List	Species not present	No effect	No endangered, threatened or candidate species on species list
Bald Eagle	Unlikely to disturb nesting bald eagles	No Eagle Act permit required	No nests within 660 feet and not within a concentration area
Critical habitat	No critical habitat present	No effect	


The CENTER for CONSERVATION BIOLOGY
About Us
What We Do
Resources
News Room
Give to CCB
CCB MAPPING PORTAL
Help / FAQ
Layers
Bald Eagle
VA Eagle Nest Locator
Zoom to Extents
Most recent data CCB has on bald eagle nest locations in Virginia. Data is largely from two annual aerial flights conducted in winter and spring of all tributaries of the lower Chesapeake Bay and other prominent bodies of water. Reported ground survey data is also included.
More info
VA Eagle Nest Buffers
The smaller 330' "primary buffer" is where human activities are considered to be detrimental to breeding pairs (e.g.
http://www.ccbbirds.org/maps/
Toggle Draw Tools
Generate Link
Print Report
Search
500 m
2000 ft
Maryland Avenue
I 564
Bellinger Blvd
Bellinger Boulevard
VA 337
Naval Support Activity Norfolk
Helmick Street
Ben Moreell Military Housing
Hampton Boulevard
Vogelsong Avenue
Crossing Avenue
Admiral Taussig Blvd
Willoughby Bay Military Housing
Tidewater Drive
US 460
VA 168
Granby Street
I 64
West Bay Avenue
East Chester Street
Mariner
East Bayview
Northside Park
Forest Lawn Cemetery
BALD EAGLE
Toggle Legends
VA Eagle Nest Buffers


VA Bald Eagle Concentration Are...
norfolk naval station
Legend
Eagle Concentration Areas - small scale view
USFWS Northeast Region States
Richmond
Nottoway River
Hampton
Beach
USFWS Northeast Region: VA
STATE NAME Virginia
USFWS Region 5

This page intentionally left blank