

**Clipper Yacht Harbor
Marina Dock Replacement Project**

Initial Study / Mitigated Negative Declaration

**Appendix B
Biological Resources Documentation**



City of Sausalito
420 Litho Street
Sausalito, CA 94965

May 2021

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Appendix B Biological Resources Documentation,
USACE LOP with NOAA Fisheries Concurrence

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DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

DECEMBER 23, 2019

Regulatory Division

Subject: File Number 2013-00060N

Mr. Ken Pedersen
Clipper Yacht Co. LLC
Post Office box 187
310 Harbor Drive
Sausalito, California 94966

Dear Mr. Pedersen:

This correspondence is in reference to your submittal of June 13, 2019, concerning Department of the Army (DA) authorization to demolish existing harbor infrastructure and redevelop 2.28 acres of Clipper Yacht Harbor Basin 3 and 4 with new concrete piles and dock system located at 310 Harbor Drive in Sausalito, California. Coordinates for the project location are 37°52'57.2"W and -122°30'11.3"N.

Enclosed is a "Provisional Letter of Permission" (provisional LOP). This provisional LOP is NOT VALID and does not constitute authorization for you to do work. The provisional LOP describes the work that will be authorized, including general and special conditions which will be placed on your final DA permit, should you receive a Coastal Zone Management (CZM) consistency concurrence from the San Francisco Bay Conservation and Development Commission (BCDC). No work is to be performed until you have received a validated copy of the DA permit.

By Federal law, no DA permit can be issued until the state has concurred with a permit applicant's CZM consistency certification. This requirement can be satisfied by obtaining CZM consistency concurrence, or providing evidence that six months have passed since you applied to the BCDC for concurrence. Be aware that any conditions placed on your CZM consistency concurrence will become conditions on your DA permit, unless the U.S. Army Corps of Engineers (Corps) deems these conditions to be either unreasonable or unenforceable.

You may refer any questions on this matter to Roberta.A.Morganstern of the Regulatory staff by telephone at 415-503-6782 or by e-mail at Roberta.A.Morganstern@usace.army.mil. All correspondence should be addressed to the Regulatory Division North Branch referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. My Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner, while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer

Service Survey Form available on our website: <http://www.spn.usace.army.mil/Missions/Regulatory.aspx>.

Sincerely,



Digitally signed by Sahrye Cohen
Date: 2019.12.23 15:53:38 -08'00'

Sahrye Cohen
North Branch Chief Regulatory Division

Enclosures

Copy Furnished (electronically):

Usmita Pokhrel: upokhrel@bellingham-marine.com

Nicole Fairley: Nicole.Fairley@Waterboards.ca.gov



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

Regulatory Division

SUBJECT: File Number 2013-00060N

LETTER OF PERMISSION

Mr. Ken Pedersen
Clipper Yacht Co. LLC
Post Office box 187
310 Harbor Drive
Sausalito, California 94966

Dear Mr. Pedersen:

You are hereby granted Department of the Army authorization to demolish existing harbor infrastructure and redevelop 2.28 acres of Clipper Yacht Harbor Basin 3 and 4 with new concrete piles and dock system located at 310 Harbor Drive in Sausalito, California. Coordinates for the project location are 37°52'57.2"W and -122°30'11.3"N. The above activity must be performed in accordance with the enclosed plans and drawings (Enclosure 1).

This authorization is issued pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403 *et seq.*) and is subject to the enclosed conditions (Enclosure 2), as applicable. You may require additional authorization from the Regional Water Quality Control Board (RWQCB) prior to starting this activity.

You are advised that the U.S. Army Corps of Engineers (Corps) has established an Administrative Appeal Process, as described in our regulations at 33 C.F.R. § 331 (65 Fed. Reg. 16486; March 28, 2000) and outlined in the enclosed flowchart (Enclosure 3) and Notification of Administrative Appeal Options, Process and Request for Appeal (NAO-RFA) form (Enclosure 3). The following two options are available to you in your evaluation of this Letter of Permission:

1. You may accept the Letter of Permission as offered, and your project is authorized. If you accept this permit, you waive all rights to appeal the permit, including its terms and conditions. You are responsible for ensuring that the contractors or workers executing the activity authorized herein are knowledgeable of the terms and conditions of this authorization.

2. You may decline the Letter of Permission because you object to certain terms and conditions, and you may request that the permit be modified. If you decline the permit, you must return the permit to the District Engineer and may not proceed with your project until notified by the District Engineer. You must outline your objections to the terms and conditions of the permit by completing Section II of the NAO-RFA form. Your objections must be received by the District Engineer within 60 days of the date of this letter, or you will forfeit your right to request changes to the terms and conditions of the permit.

Upon receipt of the completed NAO-RFA form, the District Engineer will evaluate your objections and may: (a) modify the permit to address all of your objections; (b) modify the permit to address some of your objections; or (c) not modify the permit, having determined that the permit should be issued as previously written. In any of these three cases, the District Engineer will send you a final permit for your reconsideration, as well as a second NAO-RFA form. Should you decline the final proffered permit, you can appeal the declined permit by submitting the completed NAO-RFA form to the Division Engineer. The NAO-RFA form must be received by the Division Engineer within 60 days of the date of the second transmittal letter, or you will forfeit your right to pursue an appeal.

You may refer any questions on this matter to Roberta.A.Morganstern of the Regulatory staff by telephone at 415-503-6782 or by e-mail at Roberta.A.Morganstern@usace.army.mil. All correspondence should be addressed to the Regulatory Division North Branch referencing the file number at the head of this letter.

Please address all correspondence to the Regulatory Division and refer to the File Number at the head of this letter. If you would like to provide comments on our permit review process, please complete the Customer Survey Form available through the Forms and Contacts Block on our website: <http://www.spn.usace.army.mil/Missions/Regulatory.aspx>.

Sincerely,
ORIGINAL SIGNED
BY Sahrye Cohen
ACTING CHIEF, REG. DIV., NORTH BR.
FOR

Sahrye Cohen
North Branch Chief

Enclosures

Copy Furnished:

US CG, Alameda CA
US EPA, San Francisco, CA; Attn: Jennifer Siu
CA RWQCB, Oakland, CA
SF BCDC, San Francisco, CA

CONDITIONS TO LETTER OF PERMISSION

PERMITTEE: Ken Pedersen / Clipper Yacht Club

FILE NO.: 2013-00060N

GENERAL CONDITIONS:

1. The time limit for completing the work authorized ends on December 31, 2029. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.
7. You understand and agree that if future operations by the United State require the removal, relocation or other alteration of the structure or work authorized herein, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, you will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

SPECIAL CONDITIONS:

1. The NMFS concurred with the determination that the project was not likely to adversely affect Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central California Coast steelhead, Central Valley steelhead, North American Green Sturgeon and critical habitat for these species. Concurrence was premised on project work restrictions outlined in enclosure 4. These work restrictions are incorporated as special conditions to the LOP authorization for your project to ensure unauthorized incidental take of species and loss of critical habitat does not occur.
2. The Corps initiated consultation with the NMFS to address project related impacts to Essential Fish Habitat. No conservation recommendations have been stipulated.

3. To remain exempt from the prohibitions of Section 9 of the Endangered Species Act, the non-discretionary Terms and Conditions for incidental take of federally-listed Species shall be fully implemented as stipulated in the Endangered species Act Section 7(a)(2) Concurrence Letter and Magnuson –Stevens Fishery Conservation and Management Act Essential fish Habitat Response for the Clipper Yacht Harbor Redevelopment Project, dated September 26, 2019, enclosure 4. Project authorization under the LOP is conditional upon compliance with the mandatory terms and conditions associated with incidental take. Failure to comply with the terms and conditions for incidental take, where a take of a federally-listed species occurs, would constitute an unauthorized take and non-compliance with the NWP authorization for your project. The NMFS is the authoritative federal agency for determining compliance with the incidental take statement and for initiating appropriate enforcement actions or penalties under the Endangered Species Act.
4. Incidents where any individuals of fish listed by NOAA Fisheries under the Endangered Species Act appear to be injured or killed as a result of discharges of dredged or fill material into waters of the United States or structures or work in navigable waters of the United States authorized by this NWP shall be reported to NOAA Fisheries, Office of Protected Resources, at (301) 713-1401 and the Regulatory Office of the San Francisco District of the U.S. Army Corps of Engineers at (415) 503-6795. The finder should leave the plant or animal alone, make note of any circumstances likely causing the death or injury, note the location and number of individuals involved, and, if possible, take photographs. Adult animals should not be disturbed unless circumstances arise where they are obviously injured or killed by discharge exposure or some unnatural cause. The finder may be asked to carry out instructions provided by NOAA Fisheries, Office of Protected Resources, to collect specimens or take other measures to ensure that evidence intrinsic to the specimen is preserved.

FURTHER INFORMATION:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403 *et seq.*).
2. Limits of this authorization:
 - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
 - b. This permit does not grant any property rights or exclusive privileges.
 - c. This permit does not authorize any injury to the property or rights of others.
 - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability: In issuing this permit, the Federal Government does not assume any liability for the following:
 - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
 - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
 - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - d. Design or construction deficiencies associate with the permitted work.

- e. **Damage claims associated with any future modification, suspension, or revocation of this permit.**
- 4. **Reliance on Applicant's Data:** The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
- 5. **Reevaluation of Permit Decision:** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
 - a. **You fail to comply with the terms and conditions of this permit.**
 - b. **The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate. (See Item 4 above.)**
 - c. **Significant new information surfaces which this office did not consider in reaching the original public interest decision.**

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 C.F.R. § 325.7 or enforcement procedures such as those contained in 33 C.F.R. § 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 C.F.R. § 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

- 6. **Extensions:** General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEEE)

(DATE)



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404-4731

September 26, 2019

Refer to NMFS No: WCRO-2019-01605

James Mazza
Acting Chief, Regulatory Division
Department of the Army
San Francisco District, Corps of Engineers
450 Golden Gate Ave, 4th Floor
San Francisco, California 94102

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Clipper Yacht Harbor Redevelopment Project (U.S. Corps of Engineers File 2013-00060N)

Dear Mr. Mazza:

On June 24, 2019, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence that U.S. Army Corps of Engineers' (Corps) proposal to issue a permit pursuant to Section 404 of the Clean Water Act (CWA) of 1972, as amended 33 U.S.C. § 1344 *et seq.*, and Section 10 of the Rivers and Harbors Act (RHA) of 1899, as amended, 33 U.S.C. § 403 *et seq.*, for the Clipper Yacht Harbor Redevelopment Project (Corps File No. 2013-00060N) is not likely to adversely affect (NLAA) species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

Updates to the regulations governing interagency consultation (50 CFR part 402) will become effective on October 28, 2019 [84 FR 44976 and 84 FR 50333]. Because this consultation was pending and will be completed prior to that time, we are applying the previous regulations to the consultation. However, as the preamble to the final rule adopting the new regulations noted, "[t]his final rule does not lower or raise the bar on section 7 consultations, and it does not alter what is required or analyzed during a consultation. Instead, it improves clarity and consistency, streamlines consultations, and codifies existing practice." Thus, the updated regulations would not be expected to alter our analysis.

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.



This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). A complete record of this consultation is on file at NMFS North-Central Coast Office in Santa Rosa, California.

Proposed Action and Action Area

Usmita Pokhrel of Bellingham Marine (Applicant) on behalf of the Clipper Yacht Harbor has requested Corps' authorization to conduct work in 2.28 acres of jurisdictional waters of the United States for the redevelopment of Basins 3 and 4 at the Clipper Yacht Harbor in San Francisco Bay. Clipper Yacht Harbor is located along Richardson Bay approximately three miles north of the Golden Gate Bridge in the City of Sausalito, Marin County, California. Specifically, the project location is at 310 Harbor Drive in Sausalito.

The proposed modification of Basins 3 and 4 includes replacing all existing dock floats, gangways, and pilings with a new concrete Unifloat Dock System. The existing docks in Basins 3 and 4 create an area totaling 101,845 square feet of overwater structure (53,498 square feet in Basin 3 and 48,347 square feet in Basin 4). The Clipper Yacht Harbor Redevelopment Project proposes to replace these docks with the concrete Unifloat dock system. In addition, two new aluminum gangways will be installed to comply with the Americans with Disabilities Act. One gangway will be 5 feet x 80 feet and the second gangway will be 4 feet x 45 feet. In total, the new Unifloat Dock System and new gangways will create 99,359 square feet of overwater structure in Basins 3 and 4. All the above proposed waterside improvements are anticipated to occur from August 2020 through August 2021.

To install the new concrete Unifloat Dock System, existing docks, supportive piles, and gangways in Basins 3 and 4 will be removed. The existing docks are supported by 284 piles (134 round wooden piles are twelve inches in diameter and 150 square concrete piles vary from twelve to fourteen-inches in diameter). The existing docks will be disassembled by hand tools and a work-boat. The disassembled pieces will be rafted together with rope and floated to a location where the docks can be removed out of the water by either land-based crane, forklift, or by a waterside barge mounted crane. The removed docks will be hauled off to a landfill or recycling center by truck. Pile removal will be achieved by directly pulling the existing 284 wood and concrete piles individually with a barge and crane.

The new concrete Unifloat Dock System and its concrete piles will be manufactured off-site and shipped to the project site by truck. To support the new Unifloat Dock System, 211 new square pre-stressed concrete piles (86 fourteen-inch square, 76 sixteen-inch square guides, and 49 sixteen-inch heavy duty square guide) will be installed. A diesel impact hammer with a ¾-inch cushion block and a curtain will be placed into position from the barge and will be used to drive piles the final five feet into the substrate. The material of the curtain will be composed of ultra-violet stable materials that are enclosed with expanded polystyrene foam logs atop of the sleeve to provide floatation. The maximum number of hours for pile driving is 6-8 hours per day during daylight hours over approximately 90 days. The dock system will be placed in the water by a land-based crane or forklift. Once the docks are assembled together and the piles are driven, the final dock assembly will take place. This includes installation of fenders, cover boards, pile guides, wet and dry utilities, fire standpipes, power centers, and dock boxes. The final dock assembly will be completed by hand tools.

The applicant proposes the following Best Management Practices (BMPs):

- Curtains will be utilized to control turbidity and noise during pile removal and pile installation.
- All pile driving activities will commence with a “soft start”.
- Floating booms shall be maintained around the project site during all demolition and construction phases.
- Divers will recover any non-buoyant debris.
- Netting, sandbags, tarps and other forms of barriers shall be installed between the water and work areas including the equipment staging areas.

The Applicant also proposes to monitor and mitigation for potential impacts to eelgrass during project construction. The Applicant submitted to the Corps the “Clipper Yacht Harbor Eelgrass Mitigation Plan” prepared by WRA dated July 10, 2007 and a Corps 2010 Eelgrass Monitoring Report for Clipper Yacht Harbor. On August 12, 2019 the Applicant confirmed with NMFS and the Corps that a pre-and-post construction eelgrass survey will be conducted in the vicinity of Basins 3 and 4 in accordance with NMFS’ California Eelgrass Mitigation Policy and Implementation Guidelines (October 2014). The pre-construction eelgrass survey is expected to occur during August 2020 or later; the post-construction survey is anticipated to occur in 2021 or later. The Applicant will provide NMFS the survey results to review and approve. If impacts to eelgrass are observed from the project, a mitigation plan would be provided to NMFS.

Specifically:

- A qualitative survey would be conducted prior to construction (within the April – October growing season) for presence/absence of eelgrass shoots by examining the project footprint and immediate vicinity (10 meter buffer) at low tide.
- If any eelgrass shoots are present, quantitative pre- and post-construction eelgrass surveys and monitoring would be conducted in the footprint (and buffer) of the project. A reference site used as a control shall also be included in the monitoring plan. Quantitative surveys, monitoring and mitigation would be performed in accordance with the 2014 California Eelgrass Mitigation Policy and Implementation Guidelines. Survey and monitoring plans would be provided to NMFS 45 days prior to construction for review and approval.
- If monitoring indicates that a loss of eelgrass has occurred as a result of the project, a Corps’-approved mitigation plan will be developed and implement, in consultation with NMFS. The monitoring and mitigation plan would compensate for negative impacts to eelgrass resulting from the project.

The proposed project is located at Clipper Yacht Harbor on the western shore of Richardson Bay in Sausalito, California. Richardson Bay is an ecologically rich arm of San Francisco Bay and joins San Francisco Bay immediately east of the Golden Gate. The action area for the project consists of Clipper Yacht Harbor’s Basins 3 and 4, an area of approximately 2.28 acres. The harbor provides slips for sail and power boats up to 80 feet in length. Water depths in the harbor are up to +7 feet. Substrate is primarily silt and clay. The area is subject to frequent vessel traffic and the harbor is periodically dredge to provide safe navigation for vessels. The site is subject to tidal action from Richardson Bay.

Action Agency's Effects Determination

The Corps determined the proposed project is not likely to adversely affect (NLAA) ESA-listed anadromous salmonids, the threatened South Distinct Population Segment of North American green sturgeon and their designated critical habitats. The Corps finding of NLAA is based on the project's proposed avoidance and minimization measures.

Available information indicates the following listed species (Evolutionarily Significant Units (ESU) or Distinct Population Segment [DPS]) under the jurisdiction of NMFS may be affected by the proposed project:

- Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*)**
 endangered (June 28, 2005, 70 FR 37160)
 critical habitat (June 16, 1993, 58 FR 33212);
- Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*)**
 threatened (June 28, 2005, 70 FR 37160);
- Central California Coast steelhead (*Oncorhynchus mykiss*)**
 threatened (August 18, 1997, 62 FR 43937)
 critical habitat (70 FR 52488; September 2, 2005);
- Central Valley steelhead (*Oncorhynchus mykiss*)**
 threatened (March 19, 1998, 63 FR 13347);
- North American Green Sturgeon southern DPS (*Acipenser medirostris*)**
 threatened (71 FR 17757; April 7, 2006)
 critical habitat (74 FR 52300; October 9, 2009).

The anadromous salmonids listed above use San Francisco Bay primarily as a migration corridor en route to the Pacific Ocean to rear as juveniles or to upstream areas to spawn as adults. Adult steelhead and adult winter-run Chinook salmon typically begin their migrations through San Francisco Bay in early December. Adult spring-run Chinook salmon migrate through San Francisco Bay during the spring months. Juvenile steelhead and Chinook salmon migrate downstream through San Francisco Bay during the late winter and spring months. Adult and juvenile ESA-listed anadromous salmonids may be seasonally present in Richardson Bay. The life history of steelhead is summarized in Busby *et al.* (1996) and Chinook salmon life history is summarized in Myers *et al.* (1998).

The life history of green sturgeon in California is summarized in Adams *et al.* (2002) and NMFS (2005). The southern DPS of North American green sturgeon spawns in the deep turbulent sections of the upper reaches of the Sacramento River. As juvenile green sturgeon age, they migrate downstream and live in the lower delta and bays, spending from three to four years there before entering the ocean. Adult green sturgeon return from the ocean every few years to spawn, and generally show fidelity to their upper Sacramento River spawning sites. Adult and juvenile green sturgeon may be present in Richardson Bay and near the project site year-round.

Regarding EFH, the Corps has determined that the project may adversely affect EFH, but project effects are minimized and/or mitigated by the Applicant's proposed avoidance, minimization measures. The project area is located within an area identified as EFH for various life stages of fish species managed with the Pacific Coast Salmon Fishery Management Plans (FMP), the Pacific Groundfish FMP, and the Coastal Pelagic FMP. The project area is also within an area designated as Habitat Areas of Particular Concern (HAPC) for various federally-managed fish species within the

Pacific Groundfish FMP. HAPC are described in the regulations as subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. Designated HAPC are not afforded any additional regulatory protection under MSA; however, federal projects with potential adverse impacts to HAPC are more carefully scrutinized during the consultation process. As defined in the Pacific Groundfish FMP and Pacific Coast Salmon FMP, San Francisco Bay, including the project area, is identified as estuary HAPC.

Consultation History

The Corps requested consultation with NMFS for the Clipper Yacht Harbor Redevelopment Project by letter dated on June 24, 2019. NMFS requested additional information regarding the Corps' findings pertaining to listed fish species and EFH, as well as, the Applicant's proposed construction methods and materials by letter dated July 12, 2019. Via letter received on August 8, 2019, the Corps provided NMFS with additional information on the effects to EFH, ESA-listed species, project impacts, and clarification on pile and dock modifications. Information provided by the Corps on August 8, 2019, was sufficient for NMFS to initiate consultation.

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, "effects of the action" means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

The effects of the proposed action are reasonably likely to include degradation of water quality, disturbance of benthic substrate, and elevated underwater sound levels during construction. Post-construction, the project will have effects through overwater shading of the water column.

In-water construction activities have the potential to disturb substrate and result in temporary increases in turbidity in the action area. Turbidity is most likely to increase during pile removal and pile installation. If turbidity and suspended sediment loads in the water column remain high for an extended period of time, the primary productivity of an aquatic area may be reduced (Cloern 1987) and fish may suffer reduced feeding ability and be prone to fish gill injury (Benfield and Minello 1996; Nightingale and Simenstad 2001). Although temporary increases in turbidity in the adjacent water column are expected during project construction, the Applicant proposes to use silt curtains which will contain suspected sediments. Outside the silt curtain, elevated levels of turbidity are expected to be low and rapidly return to background levels with tidal circulation after work ceases. Based on the above, construction activities are expected to only cause short-term and minor increased levels of turbidity in the water column where listed fish may be present. Green sturgeon and listed anadromous salmonids are adapted to living in estuaries with fine sediment bottoms and are tolerant of levels of turbidity that exceed levels expected to result from this project. For the above reasons, the effects of degraded water quality during project construction activities are expected to be insignificant on listed fish.

Demolition and removal of the existing docks may accidentally discharge materials into waters of the harbor and Richardson Bay. To ensure materials do not become debris in Richardson Bay, the Applicant proposes the use of floating booms and divers to contain and collect debris. Therefore, discharge of materials into waters of Richardson Bay is unlikely to occur during project activities.

The proposed project includes the use of a diesel impact hammer to install concrete piles. Pile driving may occur from 6-8 hours per day during daylight hours over a period of approximately 90 days. Available information indicates that fish may be injured or killed when exposed to high levels of underwater sound pressure waves generated from use of impact hammers (Buehler *et al.* 2015). To assess the potential effects of pile driving with an impact hammer, NMFS uses a dual metric criterion of 206 dB re one micropascal peak sound pressure level for any single strike and an accumulated Sound Exposure Level (SEL) of 187 dB re one micropascal squared-second to correlate physical injury to fish from underwater sound. The size, shape, and material from which the piles are constructed all affect the underwater sound levels generated by pile driving. Based on hydroacoustic data collected previously from projects using similar sized concrete piles in San Francisco Bay (Buehler *et al.* 2015), sound pressure levels should not present a risk of physical injury to listed salmonids or sturgeon. For this project, NMFS anticipates the sound pressure levels during pile driving with an impact hammer will not exceed 190 dB (peak) and 160 dB (SEL). These sound levels are significantly lower than the NMFS thresholds for the onset of physical injury to fish. Further, the applicant proposes to use a “soft start” and a cushion block atop the pile during pile driving activities. This soft start is meant to divert fish away from the pile driving site by starting with a lower sound level rather than starting right away with strongest pile strikes that generate the highest sound levels. If ESA-listed salmonids or southern DPS green sturgeon react behaviorally (i.e., startled and disperse) to the elevated underwater sound produced during the installation of these piles, Richardson Bay offers adequate areas to escape this disturbance during pile driving. Based on the above, the effects of exposure to elevated underwater sound levels during pile driving by this project are expected to be insignificant to ESA-listed salmonids and southern DPS green sturgeon.

The action area is located within designated critical habitat for winter-run Chinook salmon, CCC steelhead, and the southern DPS of green sturgeon. The designation of critical habitat for winter-run Chinook salmon, CCC steelhead and the southern DPS of green sturgeon uses the term primary constituent element (PCE) or essential features. The new critical habitat regulations (81 FR 7414) replace this term with physical or biological features (PBFs). This shift in terminology does not change the approach used in conducting our analysis, whether the original designation identified primary constituent elements, physical or biological features, or essential features. In this letter of concurrence, we use the term PBF to mean PCE or essential feature, as appropriate for the specific critical habitat.

The PBFs essential for the conservation of Sacramento River winter-run Chinook salmon are: (1) access from the Pacific Ocean to appropriate areas in the upper Sacramento river, (2) availability of clean gravel for spawning substrate, (3) adequate river flow for spawning, incubation of eggs, fry development and emergence, and downstream transport of juveniles, (4) water temperatures between 42.5 and 57.5 °F (5.8 and 14.1 °C) for successful spawning, egg incubation, and fry development, (5) habitat areas and adequate prey that are not contaminated, (6) riparian habitat that provides for successful juvenile development and survival, and (7) access downstream so that juveniles can migrate from spawning grounds to San Francisco Bay and the Pacific Ocean. PBFs of CCC steelhead critical habitat include estuarine areas free of obstruction with water quality, water

quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh-and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation. PBFs of designated critical habitat for the southern DPS green sturgeon in estuarine areas include food resources, water flow, water quality, migratory corridor, water depth, and sediment quality.

During project construction, critical habitat will be temporarily affected by increased turbidity and disturbance of the substrate. As discussed above, effects to water quality are expected to be insignificant. Pile removal and installation are expected to disturb the substrate which may impact the benthic community, including the loss of benthic invertebrates. However, following the installation of new piles, it is expected that benthic organisms will re-colonize impacted areas quickly due to the small area affected by individual pilings. Based on rates of benthic community recovery presented in the scientific literature, NMFS expects the benthic community in the project area to recover within a few months (Oliver *et al.* 1977, Watling *et al.* 2001). Additionally, the action area is a working marina that provides marginal foraging habitat for listed fish due to frequent vessel traffic and periodical dredging for navigation. For these reasons, the project's anticipated effects on foraging PBFs of critical habitat will be insignificant.

The post-constructed Unifloat Dock System is expected to benefit critical habitat conditions in the action area by reducing the total number of pilings in the Clipper Yacht Harbor from 284 to 211 (reduction of 73 pilings), and the new docking system will result in a net decrease of overwater shading of 2,486 square feet. Fewer pilings and less overwater structure will improve the forage conditions for listed fish in the action area by increasing the amount of light transmittance in the water column. The reduction in overwater shading also has the potential to reduce the amount of predatory fish habitat and could allow for the development of submerged aquatic vegetation; although frequent vessel traffic and periodic dredging reduces the suitability of the harbor for eelgrass bed development. If eelgrass is detected within the action area by the pre-construction survey, monitoring will be performed to detect impacts and any resulting impacts will be mitigated. Based on the above, the potential effects of the proposed project on designated critical habitat are expected to benefit existing habitat values and will not result in adverse impacts to designated critical habitat.

Conclusion

Based on this analysis, NMFS concurs with Corps' that the proposed action is not likely to adversely affect the subject listed species and designated critical habitats.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by Corps or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT

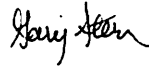
Under the MSA, this consultation is intended to promote the protection, conservation and enhancement of EFH as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the associated physical, chemical, and biological properties that are used by fish (50 CFR 600.10), and "adverse effect" means any impact which reduces either the quality or quantity of EFH (50 CFR 600.910(a)). Adverse effects may include direct, indirect, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

NMFS determined the proposed action would adversely affect EFH as follows for various life stages of fish species managed under the Pacific Groundfish and Coastal Pelagic FMPs due to pile removal and pile installation activities during the redevelopment of docks in Basins 3 and 4 at the Clipper Yacht Harbor. These effects include degraded water quality, disturbance to benthic habitat, elevated underwater sound levels, and overwater shading. However, the anticipated effects to EFH are expected to be localized and minimal in nature. Therefore, NMFS has no EFH Conservation Recommendations to offer at this time.

The Corps must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600.920(l)). This concludes the MSA portion of this consultation.

Please direct questions regarding this letter to Ryan Bernstein, North-Central Coast Office in Santa Rosa, California at 707-575-1251, or via email at ryan.bernstein@noaa.gov.

Sincerely,



Gary Stern
San Francisco Bay Branch Supervisor
North-Central Coast Office

cc: Roberta A Morganstern, Corps-San Francisco District Regulatory Division
Usmita Pokhrel, Bellingham Marine, Dixon, CA
Copy to ARN File # 151422WCR2019SR00132

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Appendix B Biological Resources Documentation,
MTS Eelgrass Memo

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Memorandum

To: Usmita Pokhrel

From: Robert Mooney

Date: 2/25/2020

Marine Taxonomic Services, Ltd.

920 Rancheros Drive, Suite F-1

San Marcos, CA 92069

Re: Baseline eelgrass data to support evaluation of the Clipper Yacht Harbor Redevelopment Project permit application

This memo is written to provide baseline eelgrass data in response to comments received from the San Francisco Bay Conservation and Development Commission (BCDC) regarding the Clipper Yacht Harbor Basins 3 and 4 Redevelopment Project (Project) BCDC Permit Application No. 1984.009.13A. Specifically, BCDC made the following comment:

Eelgrass. Please clarify as to whether there is any eelgrass habitat present at or near the project site.

To address the above comment, MTS created a cumulative eelgrass distribution map using San Francisco bay-wide eelgrass census data as compiled from surveys performed in 2004, 2009, and 2014 (Merkel & Associates, 2015). The use of all data from the three prior bay-wide eelgrass inventories provides a means to evaluate the Project area relative to all available historic data.

The results of the data compilation indicate that while eelgrass occurs in Richardson Bay, it has not historically extended into the marina Project area. In 2014, the nearest eelgrass was mapped approximately 60.5 meters away from basin 4 and approximately 23 meters away from basin 3. Eelgrass in both areas was only present on the bay-ward side of the wave dampening barrier (Figure 1). Based on this and project details provided in the application, there is no potential to impact eelgrass because the Project is an in-kind dock replacement. This means there will be no impacts associated with shading or changes in use which could lead to cumulative impacts.

The findings provided here do not negate the need for pre-construction and post-construction eelgrass surveys. These surveys will be implemented in accordance with the California Eelgrass Mitigation Policy. The intent of the pre- and post-construction surveys will be to perform a Project specific survey at a scale appropriate to evaluate the Project for eelgrass impacts. However, even if eelgrass is found within the marina basins, the in-kind nature of the replacement means that impacts can be readily avoided through implementation of best management practices during construction.

Literature Cited

Merkel & Associates, Inc. 2015. San Francisco Bay Eelgrass Inventory. Prepared for National Marine Fisheries Service.

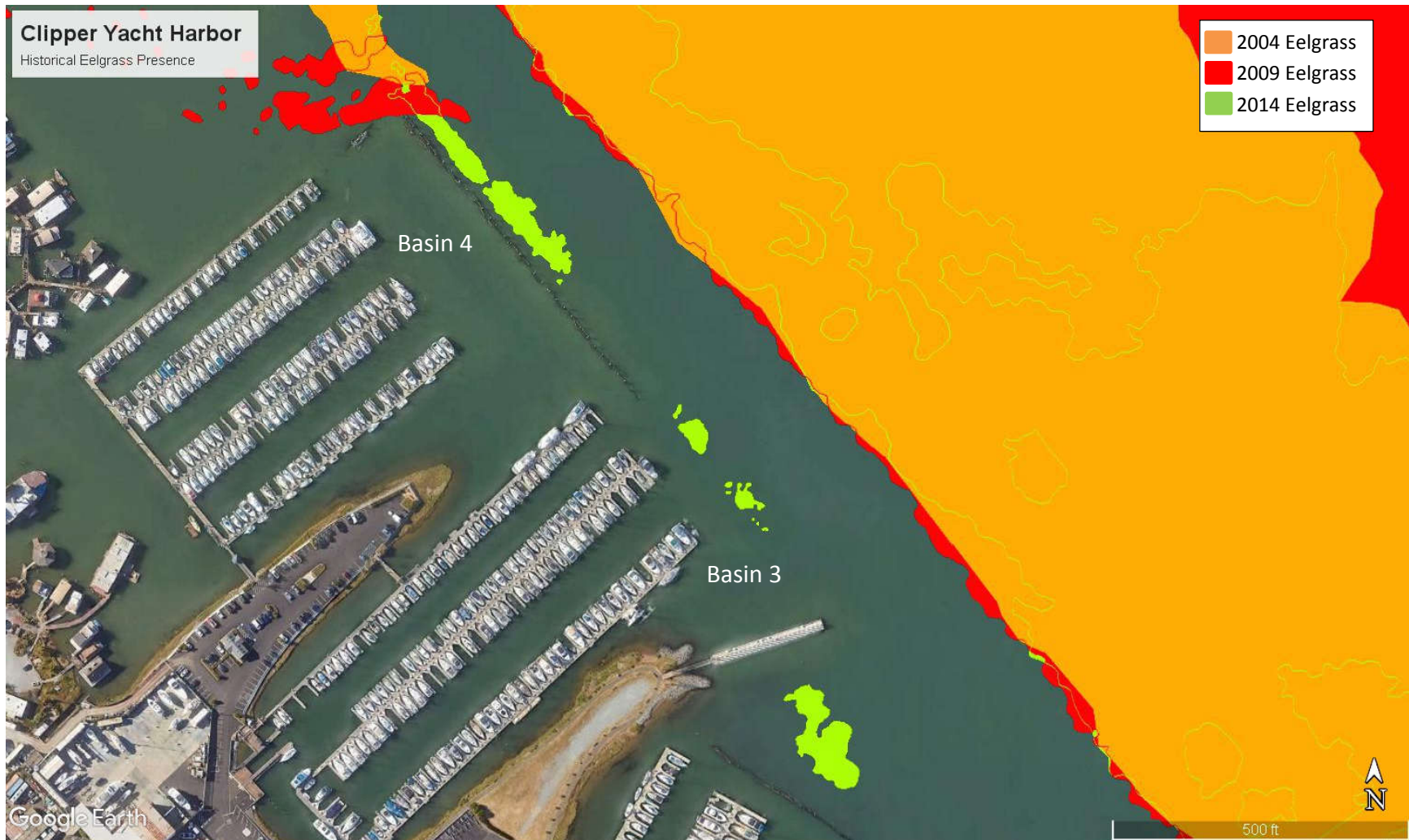


Figure 1. Historical eelgrass cover in the proximity of Clipper Yacht Harbor.

Appendix B Biological Resources Documentation,
CNDDDB 9 Quad Wildlife Search

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Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (San Rafael (3712285) OR San Francisco North (3712274) OR San Francisco South (3712264) OR San Quentin (3712284) OR Richmond (3712283) OR Hunters Point (3712263) OR Point Bonita (3712275) OR Oakland West (3712273)) AND Taxonomic Group (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects) AND (Federal Listing Status (Endangered IS OR Proposed Endangered OR Proposed Threatened OR Candidate OR All CNDDDB element occurrences OR Delisted) OR State Listing Status IS (Endangered OR Threatened OR Rare OR All CNDDDB element occurrences OR Delisted OR Candidate Endangered OR Candidate Threatened))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Alameda Island mole <i>Scapanus latimanus parvus</i>	AMABB02031	None	None	G5THQ	SH	SSC
Alameda song sparrow <i>Melospiza melodia pusillula</i>	ABPBXA301S	None	None	G5T2?	S2S3	SSC
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	ARADB21031	Threatened	Threatened	G4T2	S2	
American badger <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
American peregrine falcon <i>Falco peregrinus anatum</i>	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
Angel Island mole <i>Scapanus latimanus insularis</i>	AMABB02032	None	None	G5THQ	SH	
bank swallow <i>Riparia riparia</i>	ABPAU08010	None	Threatened	G5	S2	
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	IILEPK4055	Threatened	None	G5T1	S1	
big free-tailed bat <i>Nyctinomops macrotis</i>	AMACD04020	None	None	G5	S3	SSC
black-crowned night heron <i>Nycticorax nycticorax</i>	ABNGA11010	None	None	G5	S4	
Bridges' coast range shoulderband <i>Helminthoglypta nickliniana bridgesi</i>	IMGASC2362	None	None	G3T1	S1S2	
bumblebee scarab beetle <i>Lichnanthe ursina</i>	IICOL67020	None	None	G2	S2	
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
California black rail <i>Laterallus jamaicensis coturniculus</i>	ABNME03041	None	Threatened	G3G4T1	S1	FP
California giant salamander <i>Dicamptodon ensatus</i>	AAAAH01020	None	None	G3	S2S3	SSC



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
California least tern <i>Sterna antillarum browni</i>	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
California red-legged frog <i>Rana draytonii</i>	AAABH01022	Threatened	None	G2G3	S2S3	SSC
California Ridgway's rail <i>Rallus obsoletus obsoletus</i>	ABNME05011	Endangered	Endangered	G5T1	S1	FP
California tiger salamander <i>Ambystoma californiense</i>	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
callippe silverspot butterfly <i>Speyeria callippe callippe</i>	IILEPJ6091	Endangered	None	G5T1	S1	
Caspian tern <i>Hydroprogne caspia</i>	ABNNM08020	None	None	G5	S4	
coho salmon - central California coast ESU <i>Oncorhynchus kisutch pop. 4</i>	AFCHA02034	Endangered	Endangered	G4	S2	
Cooper's hawk <i>Accipiter cooperii</i>	ABNKC12040	None	None	G5	S4	WL
Crotch bumble bee <i>Bombus crotchii</i>	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
double-crested cormorant <i>Phalacrocorax auritus</i>	ABNFD01020	None	None	G5	S4	WL
eulachon <i>Thaleichthys pacificus</i>	AFCHB04010	Threatened	None	G5	S2	
foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050	None	Endangered	G3	S3	SSC
great blue heron <i>Ardea herodias</i>	ABNGA04010	None	None	G5	S4	
great egret <i>Ardea alba</i>	ABNGA04040	None	None	G5	S4	
hardhead <i>Mylopharodon conocephalus</i>	AFCJB25010	None	None	G3	S3	SSC
hoary bat <i>Lasiurus cinereus</i>	AMACC05030	None	None	G5	S4	
incredible harvestman <i>Banksula incredula</i>	ILARA14100	None	None	G1	S1	
Leech's skyline diving beetle <i>Hydroporus leechi</i>	IICOL55040	None	None	G1?	S1?	
Lee's micro-blind harvestman <i>Microcina leei</i>	ILARA47040	None	None	G1	S1	
longfin smelt <i>Spirinchus thaleichthys</i>	AFCHB03010	Candidate	Threatened	G5	S1	
Marin elfin butterfly <i>Callophrys mossii marinensis</i>	IILEPE2207	None	None	G4T1	S1	



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Marin hesperian <i>Vespericola marinensis</i>	IMGASA4140	None	None	G2	S2	
mimic tryonia (=California brackishwater snail) <i>Tryonia imitator</i>	IMGASJ7040	None	None	G2	S2	
Mission blue butterfly <i>Plebejus icarioides missionensis</i>	IILEPG801A	Endangered	None	G5T1	S1	
monarch - California overwintering population <i>Danaus plexippus pop. 1</i>	IILEPP2012	None	None	G4T2T3	S2S3	
North American porcupine <i>Erethizon dorsatum</i>	AMAFJ01010	None	None	G5	S3	
northern harrier <i>Circus hudsonius</i>	ABNKC11011	None	None	G5	S3	SSC
obscure bumble bee <i>Bombus caliginosus</i>	IIHYM24380	None	None	G4?	S1S2	
Opler's longhorn moth <i>Adela oplerella</i>	IILEEG040	None	None	G2	S2	
pallid bat <i>Antrozous pallidus</i>	AMACC10010	None	None	G5	S3	SSC
Point Reyes jumping mouse <i>Zapus trinotatus orarius</i>	AMAFH01031	None	None	G5T1T3Q	S1S3	SSC
robust walker <i>Pomatiopsis binneyi</i>	IMGASJ9010	None	None	G1	S1	
Sacramento perch <i>Archoplites interruptus</i>	AFCQB07010	None	None	G2G3	S1	SSC
saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	ABPBX1201A	None	None	G5T3	S3	SSC
salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
salt-marsh wandering shrew <i>Sorex vagrans halicoetes</i>	AMABA01071	None	None	G5T1	S1	SSC
San Bruno elfin butterfly <i>Callophrys mossii bayensis</i>	IILEPE2202	Endangered	None	G4T1	S3	
San Francisco Bay Area leaf-cutter bee <i>Trachusa gummifera</i>	IIHYM80010	None	None	G1	S1	
San Francisco forktail damselfly <i>Ischnura gemina</i>	IIODO72010	None	None	G2	S2	
San Francisco gartersnake <i>Thamnophis sirtalis tetrataenia</i>	ARADB3613B	Endangered	Endangered	G5T2Q	S2	FP
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	ABPBXA301W	None	None	G5T2	S2	SSC
San Pablo vole <i>Microtus californicus sanpabloensis</i>	AMAFF11034	None	None	G5T1T2	S1S2	SSC



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	IICOL02101	None	None	G5T2	S2	
short-eared owl <i>Asio flammeus</i>	ABNSB13040	None	None	G5	S3	SSC
silver-haired bat <i>Lasionycteris noctivagans</i>	AMACC02010	None	None	G5	S3S4	
snowy egret <i>Egretta thula</i>	ABNGA06030	None	None	G5	S4	
southern sea otter <i>Enhydra lutris nereis</i>	AMAJF09012	Threatened	None	G4T2	S2	FP
Stage's dufourine bee <i>Dufourea stagei</i>	IIHYM22010	None	None	G1G2	S1	
Steller (=northern) sea-lion <i>Eumetopias jubatus</i>	AMAJC03010	Delisted	None	G3	S2	
Tiburón micro-blind harvestman <i>Microcina tiburona</i>	ILARA47060	None	None	G1	S1	
tidewater goby <i>Eucyclogobius newberryi</i>	AFCQN04010	Endangered	None	G3	S3	
Temales isopod <i>Caecidotea tomalensis</i>	ICMAL01220	None	None	G2	S2S3	
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	AMACC08010	None	None	G3G4	S2	SSC
western bumble bee <i>Bombus occidentalis</i>	IIHYM24250	None	Candidate Endangered	G2G3	S1	
western pond turtle <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
western red bat <i>Lasiurus blossevillii</i>	AMACC05060	None	None	G5	S3	SSC
western ridged mussel <i>Gonidea angulata</i>	IMBIV19010	None	None	G3	S1S2	
western snowy plover <i>Charadrius alexandrinus nivosus</i>	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
white-tailed kite <i>Elanus leucurus</i>	ABNKC06010	None	None	G5	S3S4	FP
yellow rail <i>Coturnicops noveboracensis</i>	ABNME01010	None	None	G4	S1S2	SSC
yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 76

Appendix B Biological Resources Documentation,
IPaC Results

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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

Marin County, California



Local office

San Francisco Bay-Delta Fish And Wildlife

☎ (916) 930-5603

📠 (916) 930-5654

650 Capitol Mall

Suite 8-300

Sacramento, CA 95814

[http://kim_squires@fws.gov](mailto:kim_squires@fws.gov)

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 species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

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.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

Mammals

NAME	STATUS
------	--------

Salt Marsh Harvest Mouse *Reithrodontomys raviventris* Endangered
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/613>

Southern Sea Otter *Enhydra lutris nereis* Threatened
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/8560>
 Marine mammal

Birds

NAME	STATUS
California Clapper Rail <i>Rallus longirostris obsoletus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Western Snowy Plover <i>Charadrius nivosus nivosus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Bay Checkerspot Butterfly <i>Euphydryas editha bayensis</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2320	Threatened

Callippe Silverspot Butterfly <i>Speyeria callippe callippe</i>	Endangered
There is proposed critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3779	
Mission Blue Butterfly <i>Icaricia icarioides missionensis</i>	Endangered
There is proposed critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/6928	
San Bruno Elfin Butterfly <i>Callophrys mossii bayensis</i>	Endangered
There is proposed critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3394	

Flowering Plants

NAME	STATUS
Franciscan Manzanita <i>Arctostaphylos franciscana</i>	Endangered
There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5350	
Marsh Sandwort <i>Arenaria paludicola</i>	Endangered
No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	
Presidio Clarkia <i>Clarkia franciscana</i>	Endangered
No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3890	
Presidio Manzanita <i>Arctostaphylos hookeri</i> var. <i>ravenii</i>	Endangered
No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7216	
San Francisco Lessingia <i>Lessingia germanorum</i> (=L.g. var. <i>germanorum</i>)	Endangered
No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8174	
Sonoma Sunshine <i>Blennosperma bakeri</i>	Endangered
No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1260	

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

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>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A

VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

<p>Allen's Hummingbird <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637</p>	Breeds Feb 1 to Jul 15
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626</p>	Breeds Jan 1 to Aug 31
<p>Black Oystercatcher <i>Haematopus bachmani</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591</p>	Breeds Apr 15 to Oct 31
<p>Black Rail <i>Laterallus jamaicensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7717</p>	Breeds Mar 1 to Sep 15
<p>Black Turnstone <i>Arenaria melanocephala</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere
<p>Burrowing Owl <i>Athene cunicularia</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737</p>	Breeds Mar 15 to Aug 31
<p>California Spotted Owl <i>Strix occidentalis occidentalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7266</p>	Breeds Mar 10 to Jun 15
<p>Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jan 1 to Dec 31

<p>Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084</p>	Breeds May 20 to Jul 31
<p>Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680</p>	Breeds Jan 1 to Aug 31
<p>Long-billed Curlew <i>Numenius americanus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511</p>	Breeds elsewhere
<p>Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481</p>	Breeds elsewhere
<p>Nuttall's Woodpecker <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410</p>	Breeds Apr 1 to Jul 20
<p>Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656</p>	Breeds Mar 15 to Jul 15
<p>Red-throated Loon <i>Gavia stellata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere
<p>Rufous Hummingbird <i>selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002</p>	Breeds elsewhere
<p>Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480</p>	Breeds elsewhere
<p>Song Sparrow <i>Melospiza melodia</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Feb 20 to Sep 5

Spotted Towhee *Pipilo maculatus clementae*

Breeds Apr 15 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/4243>

Whimbrel *Numenius phaeopus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9483>

Willet *Tringa semipalmata*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit *Chamaea fasciata*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Black Turnstone
 BCC Rangwide (CON)
 (This is a Bird of
 Conservation Concern
 (BCC) throughout its
 range in the
 continental USA and
 Alaska.)



Burrowing Owl
 BCC - BCR (This is a
 Bird of Conservation
 Concern (BCC) only in
 particular Bird
 Conservation Regions
 (BCRs) in the
 continental USA)



California Spotted
 Owl
 BCC Rangwide (CON)
 (This is a Bird of
 Conservation Concern
 (BCC) throughout its
 range in the
 continental USA and
 Alaska.)



Clark's Grebe
 BCC Rangwide (CON)
 (This is a Bird of
 Conservation Concern
 (BCC) throughout its
 range in the
 continental USA and
 Alaska.)



Common
 Yellowthroat
 BCC - BCR (This is a
 Bird of Conservation
 Concern (BCC) only in
 particular Bird
 Conservation Regions
 (BCRs) in the
 continental USA)



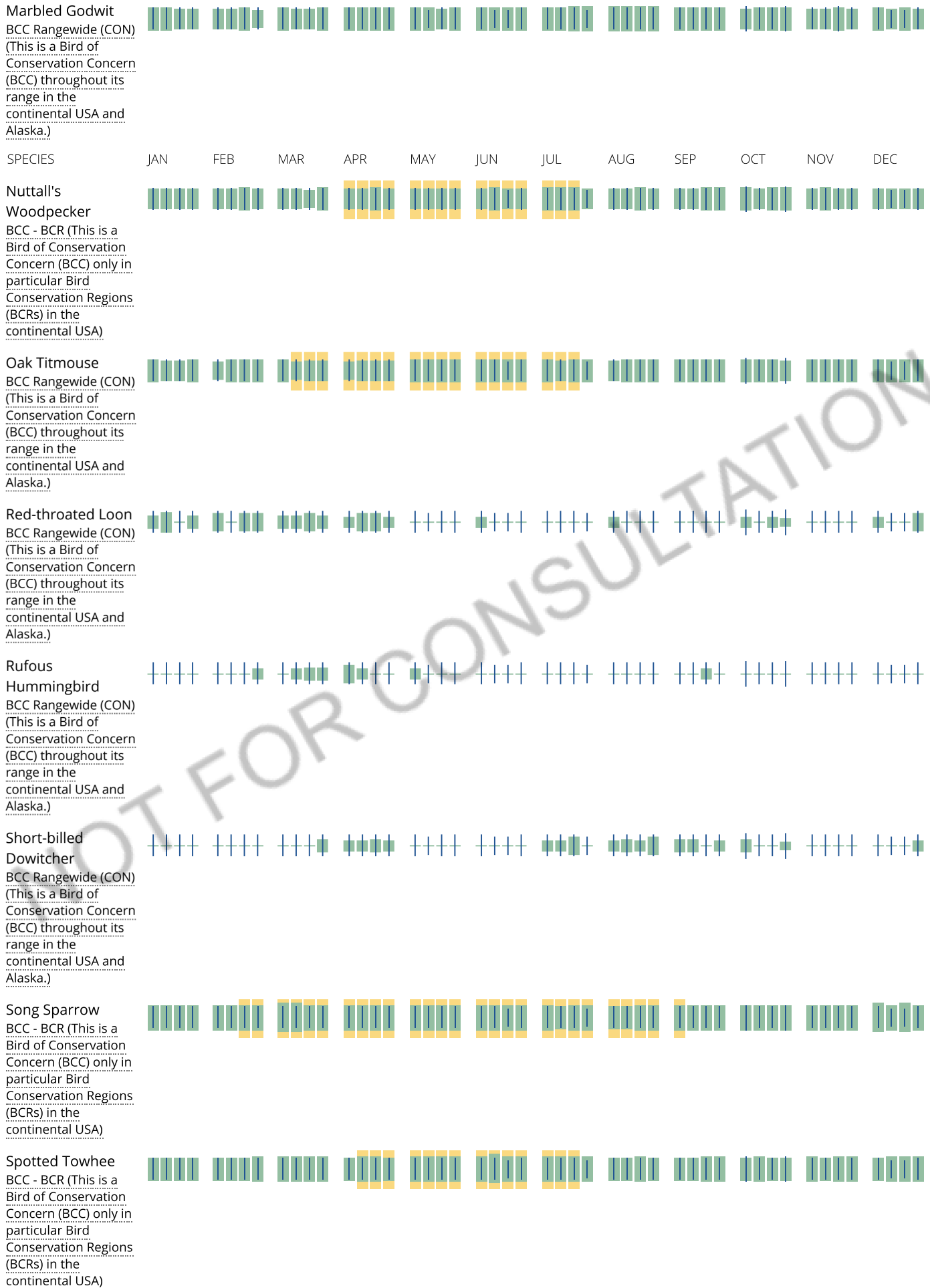
Golden Eagle
 Non-BCC Vulnerable
 (This is not a Bird of
 Conservation Concern
 (BCC) in this area, but
 warrants attention
 because of the Eagle
 Act or for potential
 susceptibilities in
 offshore areas from
 certain types of
 development or
 activities.)

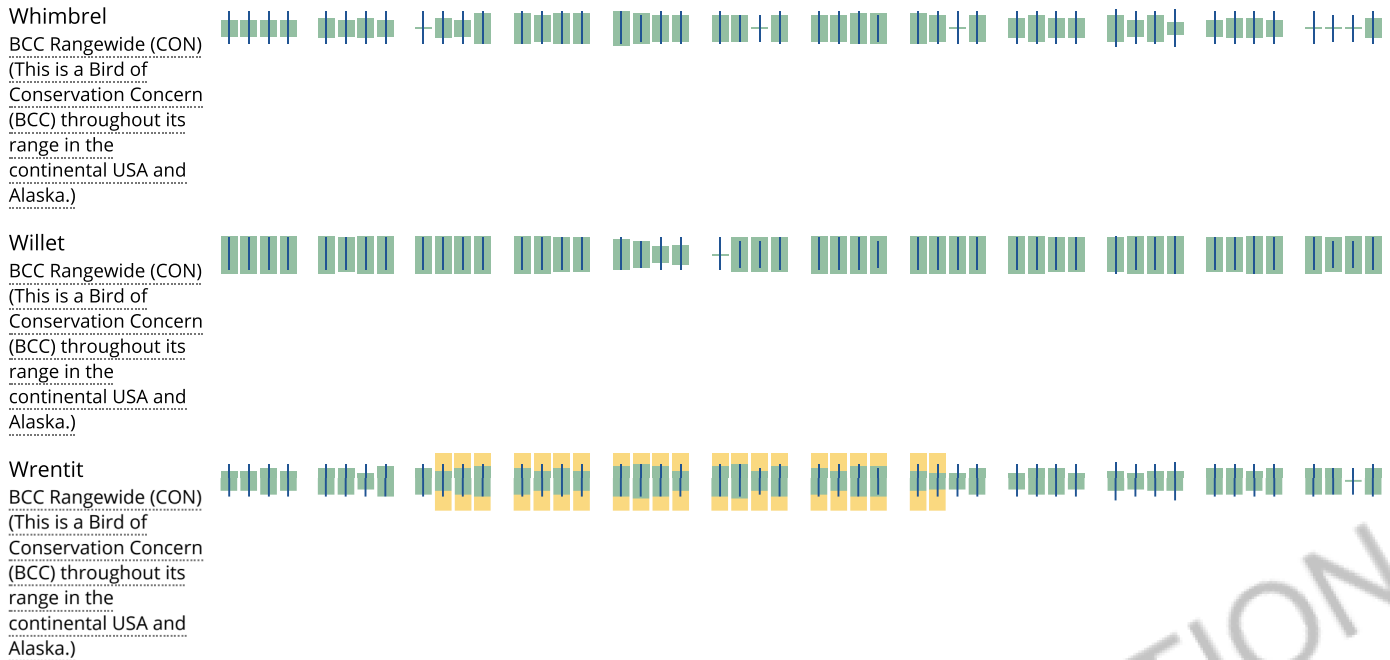


Long-billed Curlew
 BCC Rangwide (CON)
 (This is a Bird of
 Conservation Concern
 (BCC) throughout its
 range in the
 continental USA and
 Alaska.)



NOT FOR CONSULTATION





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

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 [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities,

should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

NOT FOR CONSULTATION

Marine mammals

Marine mammals are protected under the [Marine Mammal Protection Act](#). Some are also protected under the Endangered Species Act¹ and the Convention on International Trade in Endangered Species of Wild Fauna and Flora².

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries³ [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the [Marine Mammals](#) page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The [Endangered Species Act](#) (ESA) of 1973.
2. The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

Southern Sea Otter *Enhydra lutris nereis*
<https://ecos.fws.gov/ecp/species/8560>

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS 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](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

ESTUARINE AND MARINE DEEPWATER

[E1UBL](#)

ESTUARINE AND MARINE WETLAND

[E2USM](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

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 tubercid 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.

NOT FOR CONSULTATION