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## Memorandum

**To:** John Yeakel and Matthew Rechs, Caltrans

**From:** Sandra Etchell and Cuyler Stapelmann, WRECO

**Date:** June 7, 2019

**Re:** I-80/Gilman Street Interchange Improvement Project (EA 04-0A7700)  
Addendum to the Natural Environment Study Report

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### 1.0 Purpose and Organization of the Addendum

The purpose of this Addendum to the Natural Environment Study (NES) report of the Interstate 80 (I-80)/Gilman Street Interchange Improvement Project (Project) is to document reanalysis of tree impacts considering the results of an additional tree survey, refined impact analysis for Central Valley spring run chinook as a result of insights gained through consultation with NOAA Fisheries, diction changes to avoidance and minimization measures (AMM), and consultation with the resources agencies that have occurred since the NES was approved by Caltrans on August 24, 2018. Minor changes have been made to the Project description, but none affect biological resources or the boundary of the Biological Study Area (BSA). Additionally, special-status species lists from resources agencies were revalidated, and no new species were added that require discussion in this NES addendum. Thus, the revisions presented in this NES Addendum do not trigger the need for analysis of Project impacts on additional biological resources or reanalysis of Project impacts, except as noted above. Because the approved NES included Project features and AMMs to reduce Project impacts in accordance with Caltrans' standard specifications and the requirements of the California Environmental Quality Act (CEQA) and no additional biological resources are affected, supplementary Project features or AMMs are not required. However, the wording of several existing AMMs has been revised for clarity of intent.

This NES Addendum is organized as follows:

- Section 1, Purpose and Organization of the Addendum
- Section 2, Project Description
- Section 3, Revised Environmental Consequences
- Section 4, Revised AMMs
- Section 5, Revised Conclusions and Regulatory Determinations
- Appendix A, Updated Species Lists from Resources Agencies

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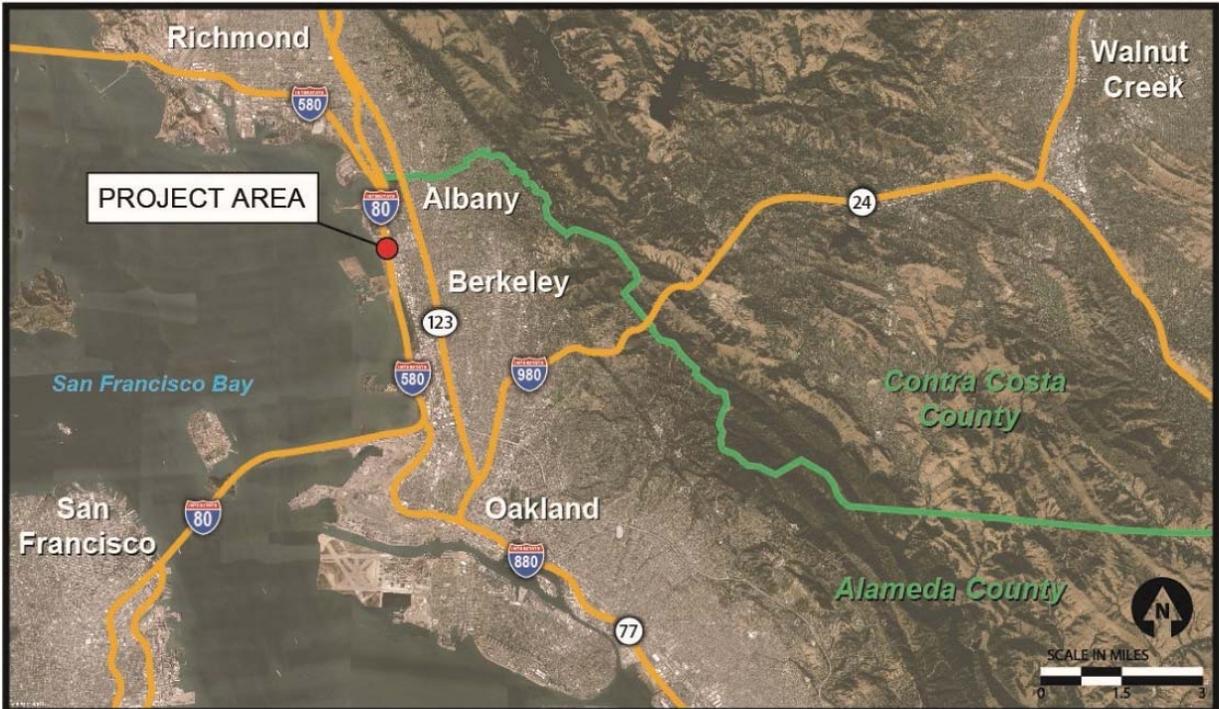
## 2.0 Project Description

*Minor revisions have been made to the Project description since approval of the NES, but these revisions do not affect biological resources or the boundary of the BSA. The following Project description replaces Section 1.2, Project Description, of the approved NES:*

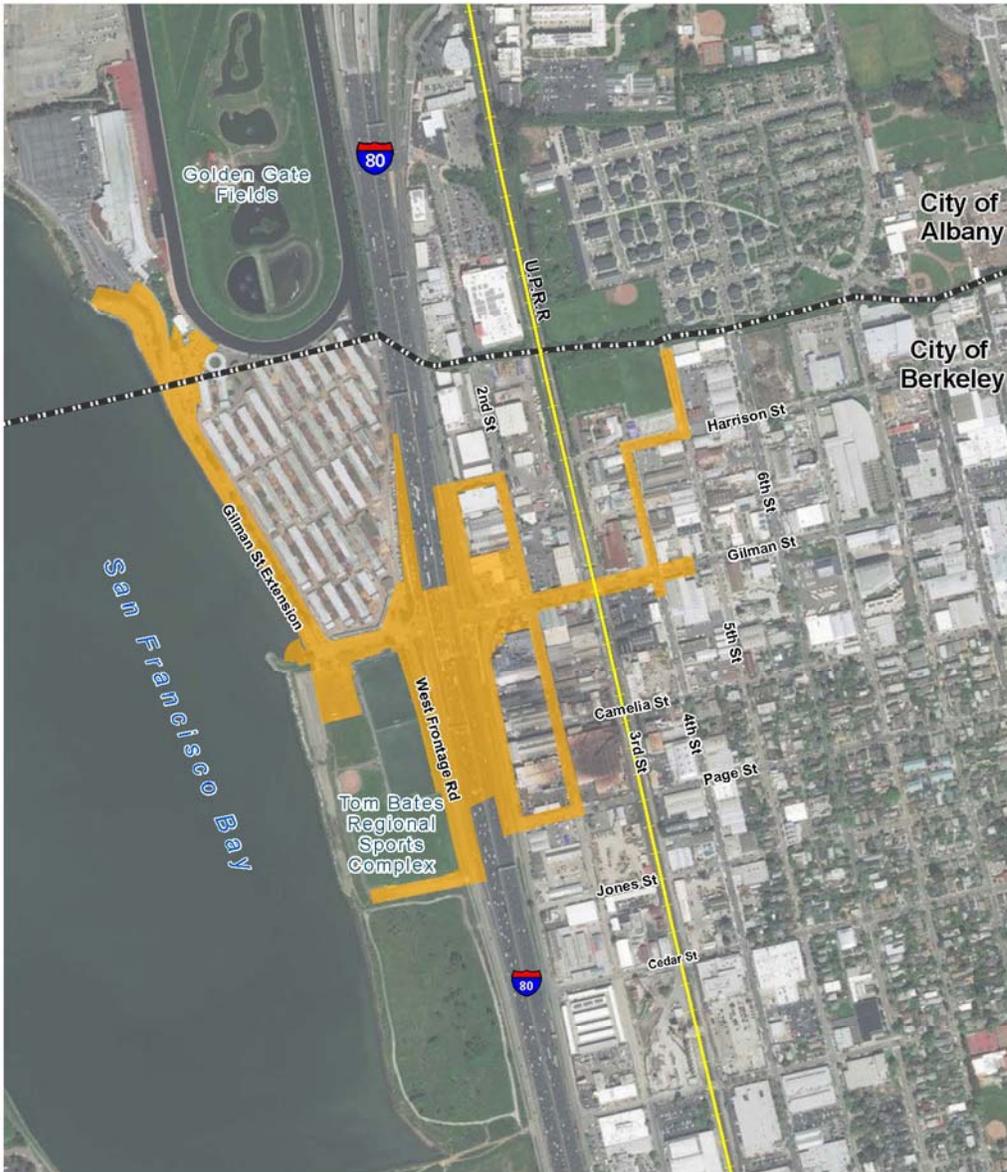
This section describes proposed actions and Project alternatives developed to meet the identified purpose and need of the Project, while avoiding or minimizing environmental impacts. The two alternatives include the Roundabout Alternative and the No Build Alternative.

The project is located in Alameda County at the Interstate 80 (I-80)/Gilman Street interchange in the cities of Berkeley and Albany (Post Miles [PM] 6.38 to PM 6.95). The purpose of the project is to simplify and improve navigation, mobility, and traffic operations; reduce congestion, vehicle queues and conflicts; improve local and regional bicycle connections and pedestrian facilities; and improve safety at the I-80/Gilman Street interchange. Two alternatives are under consideration for the proposed project, the No Build Alternative and the Build Alternative – a Roundabout Alternative. The Build Alternative includes the reconfiguration of I-80 ramps and intersections at Gilman Street with roundabouts. The Build Alternative includes construction of pedestrian and bicycle facilities.

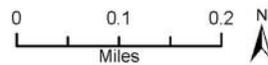
Figure 1 shows the Project location map and Figure 2 shows the Project vicinity map.



**NES Figure 1. Project Location Map**



- Project Limits
- City Limits
- Rail



**NES Figure 2. Project Vicinity Map**

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## 2.1 Build Alternative – Roundabout Alternative

The Build Alternative includes the reconfiguration of I-80 ramps and intersections at Gilman Street. The existing nonsignalized intersection configuration with stop-controlled ramp termini would be replaced with two hybrid single-lane roundabouts with multilane portions on Gilman Street at the I-80 ramp terminals. The I-80 ramps and frontage road intersections at each ramp intersection would be combined to form a single roundabout intersection on each side of I-80. Gilman Street would be reconstructed on the west from the parking lots at Tom Bates Regional Sports Complex along the western portion of Gilman Street to the eastern side of the 4<sup>th</sup> Street intersection. Work would also include reconstruction of West Frontage Road and Eastshore Highway within the project limits. In addition, the northern and southern legs of the eastern roundabout would be reduced from two lanes to one lane entering the roundabout. The southbound and northbound movements onto Eastshore Highway would instead be made via 2<sup>nd</sup> Street to Page Street or 2<sup>nd</sup> Street to Harrison Street.

Improvements associated with installation of the roundabouts would extend approximately 280 feet south on West Frontage Road from the Gilman Street interchange and approximately 250 feet north and 1,010 feet south on Eastshore Highway from the Gilman Street interchange. Work associated with reconfiguration of the eastbound I-80 off-ramp and on-ramp would extend approximately 820 feet south and 280 feet north of the interchange. Work associated with reconfiguration of the westbound I-80 off-ramp and on-ramp would extend approximately 370 feet north and 230 feet south of the interchange. There are no proposed improvements to the freeway mainline.

The western roundabout intersection would consist of four approaching legs: eastbound and westbound Gilman Street, West Frontage Road, and I-80 westbound off-ramp. There would be four exiting legs on the western roundabout: westbound Gilman Street, southbound West Frontage Road, westbound I-80 Gilman on-ramp, and eastbound Gilman Street. The eastern roundabout intersection would include five approaching legs: I-80 eastbound off-ramp, northbound and southbound Eastshore Highway, and eastbound and westbound Gilman Street. There would be three exiting legs on the eastern roundabout: eastbound on-ramp, and westbound and eastbound exits on Gilman Street. A left-turn pocket would be provided on Gilman Street for vehicles traveling eastbound turning onto northbound 2<sup>nd</sup> Street. Left turns would be restricted from westbound Gilman Street turning onto southbound 2<sup>nd</sup> Street.

Improvements on 2<sup>nd</sup> Street north of Gilman Street would include reduced crossing distances, new striping, signing, new pavement, additional landscaping, and new light poles. South of Gilman Street, improvements on 2<sup>nd</sup> Street would include a bulb-out on the southeast corner of the intersection, which is a curb extension that reduces the pedestrian crossing distance, and converting

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the road to a single southbound lane, while the space would be used as a designated parking/loading zone for businesses.

All modified roadways, including ramps, frontage roads, and arterials, would be improved. Improvements would include mill and overlay of pavement, striping, relocation of drainage inlets, lighting, and signage.

Several operational improvements would be incorporated into the project. A metering signal would be installed on the northbound leg of the western roundabout to limit the volume of traffic that is bypassing the freeway using West Frontage Road. A ramp meter, ramp signal, or metering light is a device, usually a basic traffic light or a two-section signal light (red and green only, no yellow) together with a signal controller, that regulates the flow of traffic entering freeways according to current traffic conditions. A queue cutting signal would be placed on the eastbound leg of the UPRR crossing at 3<sup>rd</sup> Street to prevent traffic from extending across the UPRR tracks. A queue cutting signal is a traffic control signal that prevents waiting lines of vehicles from backing up across tracks at a road or highway-rail grade crossing and is activated for one direction of travel, either an approaching train, queue detection, or coordination with adjacent traffic signals.

#### 2.1.1 Pedestrian and Bicycle Facilities

A shared-use Class I path for pedestrians and bicyclists consisting of a 10-foot-wide travel way with a 2-foot-wide shoulder would be constructed on the south side of Gilman Street from 2<sup>nd</sup> Street to the eastern roundabout. The shared-use path would extend south along Eastshore Highway, where it would then connect to a proposed pedestrian and bicycle overcrossing. The overcrossing would be constructed over I-80, merging into the existing Bay Trail that runs parallel to West Frontage Road. The at-grade shared-use path would continue on the south side of Gilman Street under I-80 and terminate at the Bay Trail on the west side of the interchange. The pedestrian and bicycle facilities were developed with input from community members.

The pedestrian and bicycle overcrossing would be similar to the existing pedestrian and bicycle overcrossing over I-80 at University Avenue. The structure would be located south of Gilman Street and have a minimum of three spans with a maximum span length of approximately 230 feet over I-80. The foundations for the pedestrian bridge would be located on 2-foot-diameter cast-in-drilled-hole piles 120 feet below the existing ground surface. There would be two staircases incorporated into the overcrossing, one on each side of I-80. They would be approximately 45 feet long with a height of 25 feet to connect to the overcrossing. There would also be retaining walls on the east and west side of the overcrossing; they would be approximately 6 feet tall at the highest point and taper down to zero. The maximum depth of the retaining wall piles is expected to be 50 feet below ground surface.

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Improvements would be made to provide bicycle connectivity from 4<sup>th</sup> Street to Harrison Street to 5<sup>th</sup> Street between the Codornices Creek Path and the two-way cycle track on Gilman Street. These improvements would consist of painted shared-lane markings, also known as sharrows, on the pavement throughout this corridor. Bicycle signage and pedestrian-scale lighting would be constructed as part of the improvements.

Approximately 125 feet of new curb, gutter, and sidewalk would be constructed beginning at the corner of Harrison Street and 4<sup>th</sup> Street and ending half way down the block towards 5<sup>th</sup> Street. Parallel parking would be added along this new section of curb and sidewalk. The bus stop located at the corner of 4<sup>th</sup> Street and Gilman Street would be removed.

The Build Alternative includes a two-way cycle track on the south side of Gilman Street between the eastern I-80/Gilman Street ramps and 4<sup>th</sup> Street. The two-way cycle track is separated from vehicle traffic with a minimum 3-foot-wide striped buffer and a parking lane in some locations. A segmented 6-inch-high curbed median would be constructed within the 3-foot-wide buffer to create a vertical separation. The addition of the two-way cycle track would require installation of a traffic signal at the intersection of 4<sup>th</sup> Street and Gilman Street. The northern curb line on Gilman Street would also be shifted 2 to 5 feet north. Along Eastshore Highway, the sidewalk, curb, and gutter would be replaced between Page Street and Gilman Street.

West of the I-80/Gilman Street interchange, the existing Bay Trail would be extended approximately 660 feet west along the south side of Gilman Street from its current terminus at the intersection of West Frontage Road and Gilman Street to just beyond Berkeley city limits. The proposed Bay Trail extension would be 14 feet wide. On-street parking would be reduced by approximately 18 spaces at the west end of Gilman Street as a result of the new trail extension.

Additional pedestrian and bicycle improvements include upgrading the 3<sup>rd</sup> Street/ UPRR crossing at Gilman Street to accommodate the cycle track. Improvements would include relocation of the railroad crossing gate and flashing beacons, addition of a bicycle signal, installation of medians, and improvement of striping and signage. All improvements were developed with UPRR input and would be approved by UPRR and the California Public Utilities Commission.

#### 2.1.2 Utilities, Landscaping, and Drainage

Existing Pacific Gas & Electric (PG&E) overhead electric lines along Gilman Street, West Frontage Road, and Eastshore Highway would be relocated as part of the Build Alternative and would be coordinated with ongoing consultation with PG&E. Some of these overhead lines may be placed underground. Minor drainage modifications would also be required to conform to the new roundabout alignment, and drainage improvements associated with the two-way cycle track

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along Gilman Street would also be required. Utility relocations and new drainage systems may require trenching to a depth of approximately 6 feet. New light pole foundations and ramp metering poles would be 2 feet in diameter and would range from 5 to 13 feet deep near the roundabout.

A separation device would be installed underground along Gilman Street to separate trash, mercury, and polychlorinated biphenyls (PCBs). A tidal flap gate would be installed at the existing headwall of the 60-inch reinforced concrete pipe at the western terminus of Gilman Street. Replacement of the existing headwall and associated rip rap will include in-water work. Work below the mean high water mark would be required. Dewatering or a coffer dam may also be required.

An existing East Bay Municipal Utility District (EBMUD) recycled water transmission line would be relocated and extended as part of the project. Approximately 1,100 feet of a new 12-inch recycled water transmission pipeline within Eastshore Highway from Page Street to Gilman Street and approximately 1,050 feet of pipeline within Gilman Street from 2<sup>nd</sup> Street to the Buchanan Street extension are part of the Build Alternative. The maximum excavations for the pipe trench would be approximately 24 inches wide by 60 inches deep. Approximately 1,100 feet of an existing 10-inch EBMUD recycled water pipeline located within Caltrans right-of-way along the eastbound Gilman Street off-ramp shoulder would be abandoned in place or removed. A new City of Berkeley sewer line would be installed underneath Gilman Street beginning at a point east of the interchange and ending on the west side of I-80 at the approximate entrance to the Tom Bates Regional Sports Complex parking lots.

Existing vegetation is sparse in the project footprint and consists of ornamental plantings or ruderal vegetation. The Build Alternative would remove existing landscaping and trees on the sidewalk along Eastshore Highway from Page Street to Gilman Street. In addition, trees and/or shrubs would be removed at the I-80 off-ramps, westbound I-80 on-ramp, and along the Bay Trail. Opportunities for new landscaping would be available in the surrounding areas outside of the roundabouts. Replacement plantings would occur near the areas of impact where feasible, as well as within the project limits. Aesthetic treatment of the roundabout would consider hardscape treatments and the possibility of planting. Final determination would occur during the design phase of the project.

### 2.1.3 Golden Gate Fields Access

The existing driveway entrance to Golden Gate Fields stables is located immediately adjacent to the westbound I-80 off-ramp at the end of the curb return on Gilman Street. Construction of the roundabout would expand the ramp intersection to the north and would require relocation of the access gate to Golden Gate Fields stables.

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Alternate entrance and exit gate options to access Golden Gate Fields stables were evaluated and discussed with Golden Gate Fields management in a series of meetings.

The Build Alternative would relocate the entrance and exit gate to the Gilman Street Extension. The existing gate would be connected to Golden Gate Fields Access Road allowing for the existing security shed to remain in place. The intersection of Gilman Street Extension with Golden Gate Fields Access Road would be improved, and Gilman Street would be widened to the south to provide space for two 2-lane roads separated by a median. The Golden Gate Fields northeast (upper) parking lot would be resized and restriped to allow space for the Gilman Street Extension/Golden Gate Fields Access Road intersection. The existing security shed leading to the northeast and northwest (lower) parking lots would be moved north and reconstructed with new gates. The Golden Gate Fields northwest (lower) parking lot would be restriped to maximize the parking spaces. Both parking lots would be repaved and restriped, and lighting and landscaping elements would be added. Golden Gate Fields Access Road and the Gilman Street Extension would be repaved and restriped between Gilman Street and the northeast and northwest parking lots. Fifteen new parallel parking spaces would be striped along the Gilman Street access road. There would be no net loss of parking for Golden Gate Fields.

The Roundabout Alternative is shown in Figure 3.

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NES Figure 3. Roundabout Alternative

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#### 2.1.4 Property Acquisitions

The Build Alternative would require acquisition of portions of right-of-way from Golden Gate Fields and East Bay Regional Park District (EBRPD). Relocation of the driveway currently facing Gilman Street would be required from a private property located on the south side of Gilman Street and 2<sup>nd</sup> Street. Additionally, a permit to construct from Golden Gate Fields would be required to complete improvements on their property. Temporary construction easements would be required for construction equipment storage, staging, and laydown from EBRPD and various property owners along Gilman Street, 4<sup>th</sup> Street, Harrison Street, and 5<sup>th</sup> Street. Ongoing consultation and coordination with EBRPD.

#### 2.1.5 Construction Activities

Construction work for the Build Alternative would be done primarily during daylight hours from 7:00 a.m. to 6:00 p.m.; however, there may be some work during night-time hours to avoid temporary roadway closures for tasks that could interfere with traffic or create safety hazards. Work hours along the internal access road within Golden Gate Fields property would only occur from 10:00 a.m. to 5:00 p.m., and night work would be restricted within or adjacent to Golden Gate Fields property. Examples of work activities throughout the project limits include striping operations, traffic control setup, installation of storm drain crossings, and asphalt pavement mill and overlay.

Anticipated temporary project impacts would include lane and ramp closures, detours, closure of existing bicycle or pedestrian facilities, and rerouting of transit service. A Transportation Management Plan (TMP) would be developed and implemented as part of the project construction planning phase. The TMP would address potential impacts to circulation of all modes of travel (i.e., transit, bicycles, pedestrians, and private vehicles). Roadway and/or pedestrian access to all occupied businesses and respective parking lots would be maintained during project construction. The TMP would include an evaluation of potential detour impacts, and it would also include measures to minimize, avoid, and/or mitigate impacts to alternate routes, such as agreements with local agencies to provide enhanced infrastructure on arterial roads or intersections. The TMP would address coordination with local agencies for traffic personnel, especially for special event traffic through or near the construction zone.

Available staging areas include areas within the existing roadway and Caltrans right-of-way. Additional staging areas may be required west of the project on Gilman Street in one or two parking lots owned by EBRPD. These potential additional staging areas would be subject to additional permits and owner permissions to be secured by the contractor before the staging area could be used.

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The following types of equipment are anticipated to be used during construction: auger drill rig, backhoe, compactor, concrete pump, crane, dozer, excavator, front end loader, grader, heavy duty dump trucks, jackhammer, vibratory roller, and pavement breaker.

This project contains several standardized project measures that are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project.

### 3.0 Revised Environmental Consequences

#### 3.1 Trees

##### 3.1.1 Survey Results

*The following will replace “Survey Results” in Section 4.2.2, Trees, of the approved NES:*

As part of preparing the approved NES, tree surveys were performed on May 18, 2016 and April 25, 2018. These surveys identified a total of 101 trees with trunk diameters greater than 4 inches at breast height. Tree species observed within the BSA during these surveys were predominantly exotic species used for landscaping.

An additional tree survey was performed on March 19, 2019. The survey identified 45 additional trees with trunk diameters greater than 4 inches at breast height within the BSA. The increase in the number of trees within the BSA is associated with maturation of some trees since the original surveys were performed as well as refinements in Project scope and design that included a landscaping area along the Gilman Street Extension. The tree species observed during the 2019 survey were consistent with previous surveys.

The tree surveys performed in 2016, 2018, and 2019 identified a total of 146 trees within the BSA (NES Addendum Table 1).

**NES Addendum Table 1. Tree Survey Results**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Quantity within BSA</b>
<i>Acacia</i> spp.	Acacia	2
<i>Acer</i> spp.	Maple	1
<i>Arbutus</i> spp.	Strawberry tree	2
<i>Betula</i> sp.	Birch	2
<i>Eucalyptus globulus</i>	Blue gum	2
<i>Eucalyptus polyanthemos</i>	Silver dollar gum	26
<i>Eucalyptus</i> sp.	Gum	4
<i>Hesperocyparis macrocarpa</i>	Monterey cypress	6
<i>Myoporum laetum</i>	Ngaio tree	2
<i>Olea europaea</i>	Olive	3
<i>Platanus hybrida</i>	London plane tree	26
<i>Platanus racemosa</i>	California sycamore	5
<i>Prunus</i> sp.	Plum	1
<i>Punica granatum</i>	Pomegranate	1
<i>Pyrus kawakamii</i>	Evergreen pear	23
<i>Sequoia sempervirens</i>	Coast redwood	2
Varies	Exotic landscape species	35
<b>Total Quantity</b>		<b>146</b>

Note: an equivalent table is not provided within the approved NES

### 3.1.2 Project Impacts

*The following will replace “Project Impacts” in Section 4.2.2, Trees, of the approved NES:*

Construction would require the removal of approximately 47 trees. This number represents an increase of 32 trees compared to the total in the approved NES, which identified 15 trees for removal. Within Caltrans’ ROW, two cypress trees and two acacia trees would be removed from the I-80 off-ramps. Within the city of Berkeley, seven evergreen pear trees would be removed from Eastshore Highway, and five evergreen pear trees would be removed along 2nd Street. Three landscaping trees would be removed along West Frontage Road. Along Gilman Street Extension, 26 eucalyptus trees would be removed. Two landscaping trees would be removed along Gilman Street.

### 3.1 Chinook Salmon – Central Valley Spring Run Evolutionary Significant Unit (ESU)

Caltrans provided the approved NES to NOAA Fisheries on February 25, 2019, which stated the Project “may affect, but is not likely to adversely affect” Central Valley spring run chinook. NOAA

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Fisheries subsequently requested a Biological Assessment to support the effects findings on federally listed fish species that were presented in the approved NES. The Biological Assessment also concluded the Project “may affect, but is not likely to adversely affect” Central Valley spring run chinook. However, during the consultation process NOAA Fisheries determined the Project would have “no effect” on the Central Valley spring run ESU of chinook, a reduction in Project impacts compared to the approved NES and Biological Assessment. Therefore, the following sections of this NES addendum describes the reasoning that supports NOAA Fisheries’ conclusion there would be no impact on or take of this ESU. Refer to Section 5.1 of this NES addendum for a detailed description of the Section 7 consultation process with NOAA Fisheries.

### 3.1.1 Survey Results

*The following will replace “Survey Results” in Section 4.3.4, Chinook Salmon – Central Valley Spring Run ESU, of the approved NES:*

No focused fish surveys were conducted. However, adult Central Valley spring run chinook are known to use the San Francisco Bay estuary as a migration corridor between the Pacific Ocean and their upstream spawning habitat while juveniles use the San Francisco Bay as rearing habitat before smolting and emigrating to the Pacific Ocean. Adult migration upstream into freshwater occurs between December and May. Fry emerge from eggs during winter. The timing of downstream migration into estuarine and marine waters by juveniles is highly variable: fry may emigrate between December and January, fingerlings may emigrate between February and May, and yearlings may emigrate up to one year after emerging between October and February. Juvenile spring run chinook rear in natal tributaries, the Sacramento River mainstem, non-natal tributaries to the Sacramento River, the Sacramento-San Joaquin River Delta, and San Francisco Bay, where they are thought to remain for extended periods when adequate forage is available. While adults are present in San Francisco Bay during the winter months and juvenile Central Valley spring run chinook may be present San Francisco Bay nearly year-round, NOAA Fisheries indicates that water depths within the BSA are too shallow (less than 6 inches) to provide suitable estuarine habitat for federally listed fish, including chinook.

### 3.1.1 Project Impacts

*The following will replace “Project Impacts” in Section 4.3.4, Chinook Salmon – Central Valley Spring Run ESU, of the approved NES:*

The absence of suitable estuarine habitat for chinook within the BSA effectively precludes the possibility for individuals to become entrapped during the installation of the proposed cofferdam within San Francisco Bay. Therefore, NOAA Fisheries considers the potential for take associated with entrapment within the cofferdam to be discountable. Considering the scope of proposed work

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within San Francisco Bay and the Project features that would reduce resulting impacts on estuarine habitat, NOAA Fisheries believes that Project effects on water quality would be minimal and localized around the work area, such that work in San Francisco Bay would not impact estuarine habitat suitable for chinook in the vicinity of the BSA. Unlike other federally listed fish species analyzed in the approved in NES that have designated critical habitat within the BSA, there is no critical habitat for Central Valley spring run chinook within the BSA. Because individuals of this ESU of chinook would neither be affected directly from entrapment within the proposed cofferdam or potential excursions of water quality parameters beyond existing conditions nor affected indirectly via impacts on critical habitat, NOAA Fisheries determined there would be “no effect” on Central Valley spring run chinook. Nevertheless, the Project features titled Protect Water Quality and Implement Project Site Best Management Practices in Table 6 of the approved NES would reduce potential impacts on chinook habitat within San Francisco Bay during construction.

#### 3.1.1 Avoidance and Minimization Efforts

*The following will replace “Avoidance and Minimization Efforts” in Section 4.3.4, Chinook Salmon – Central Valley Spring Run ESU, of the approved NES:*

Project impacts on Central Valley spring run chinook are not anticipated, therefore AMMs specific to chinook are not proposed. However, the AMM titled Protect Fish, Aquatic Species, and Birds in Table 7 of the approved NES would reduce potential impacts on San Francisco Bay, the habitat of this ESU.

#### 3.1.1 Compensatory Mitigation

*The following will replace “Compensatory Mitigation” in Section 4.3.4, Chinook Salmon – Central Valley Spring Run ESU, of the approved NES:*

There would be no impacts on and no potential for take of Central Valley spring run chinook. Therefore, compensatory mitigation is not proposed.

#### 4.0 Revised Avoidance and Minimization Measures

Based on the Project description and impacts, the approved NES included Project features and AMMs to reduce impacts on jurisdictional areas, special-status species and their habitat, roosting bats, migratory birds, trees, and to prevent the spread of invasive, non-native plant species. In the approved NES, Project features and general AMMs are described in Section 4.0, and AMMs specific to jurisdiction, habitat, and species are provided in Sections 4.1, 4.2, and 4.3.

*The following will replace the AMM titled “Evaluate and Replace Trees” in Table 7, Section 4.0, Results: Biological Resources, Discussion of Impacts, and Mitigation, of the approved NES:*

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- Tree removal or alterations will be avoided wherever possible.
  - Prior to any tree removals or alterations, a survey will be conducted to identify potential structural issues that could result in safety hazards and ensure remaining trees can withstand strong winds.
  - To minimize impacts to nesting bird habitat, all native trees removed within the Project footprint will be replaced by native trees at a 1:1 ratio. All other trees removed will be replaced in-kind or with trees of other native species to the extent possible. Trees will be planted close to the original removal location if possible, or at a minimum, within the same city/right-of-way.

*The following will replace the AMM titled “Conduct Preconstruction Surveys and Biological Monitoring” in Table 7, Section 4.0, Results: Biological Resources, Discussion of Impacts, and Mitigation, of the approved NES:*

- Preconstruction surveys for nesting birds will be conducted by a qualified Caltrans-approved biologist no more than 72 hours prior to commencing construction activities during the nesting season (February 1 to September 30). Surveys will cover any potential nesting substrates within 300 feet of construction activity. If an active nest is found during surveys, the qualified Caltrans-approved biologist (who shall be knowledgeable about the behavior of nesting birds) shall consult with California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) regarding appropriate action to comply with State and federal laws. Active nest sites shall be designated as Environmentally Sensitive Areas (ESA) and protected (while occupied) during Project construction with the installation of a high-visibility fence barrier surrounding each nest site or other appropriate markers. A qualified Caltrans-approved biologist shall develop buffer recommendations that are site specific and at an appropriate distance, that protects normal bird behavior to prevent nesting failure or abandonment. The buffer distance recommendation shall be developed after field investigations that evaluate the bird(s) apparent distress in the presence of people or equipment at various distances and shall be approved by CDFW and/or USFWS. The qualified Caltrans-approved biologist shall monitor the behavior of the birds (adults and young, when present) at the nest site to ensure they are not disturbed by Project construction work. Nest monitoring shall continue during construction until the young have fully fledged (have completely left the nest site and are no longer being fed by the parents) as determined by the qualified Caltrans-approved biologist in consultation with CDFW and/or USFWS.
- If it is necessary to prevent birds from nesting at a specific location within the construction area, a nesting bird exclusion plan will be prepared by the contractor. It will specify what Caltrans-approved exclusion measures can be used under what conditions. The exclusion plan will be approved by Caltrans and/or CDFW and/or USFWS prior to implementation.

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- No more than 48 hours prior to tree removal, a qualified Caltrans-approved biologist will conduct a preconstruction survey of trees slated for removal for crevices and cavities that can provide bat roosting habitat or support active bat roosts. If active roosts are identified, the project will implement exclusion devices determined in consultation with CDFW.
  - Within 48 hours prior to any work around the 60-inch culvert outfall into San Francisco Bay, including installation of the cofferdam, removal of rock slope protection, and sediment excavation, a qualified Caltrans-approved biologist will conduct preconstruction surveys for special-status species and marine mammals that may occur in the area.
  - A qualified Caltrans-approved and agency-approved biological monitor will be present during all work within San Francisco Bay associated with modifying the outfall of the 60-inch culvert. The biological monitor will be present for installation, operation, and removal of the cofferdam, as well as for installation of the flap gate after cofferdam removal and sediment excavation.
  - If a protected species is discovered during preconstruction surveys or during construction within the BSA, the qualified Caltrans-approved biologist will notify the Resident Engineer, who has the authority to stop all construction work on the site until the appropriate corrective measures have been conducted, and it is determined that the animal will not be harmed. Caltrans will notify USFWS, National Oceanic and Atmospheric Association (NOAA) Fisheries, and/or CDFW as required in resource agency permits and approvals.

*In addition to the AMMs presented by the approved NES, the following AMMs have been incorporated into the Project to minimize impacts on visual resources and aesthetics:*

- **Light and Glare:** For areas associated with an open sky (i.e., in places where the darkness of the night sky is relatively free of interference from artificial light), the design lighting shall be dark sky friendly. Lighting along the San Francisco Bay waterfront shall be designed so that it does not shine light onto the water.
- **Landscape Plantings:** To the extent feasible, plant the surrounding available areas outside of the roundabouts to soften the hard surfaces of the intersections.
- **Landscape Plantings:** To the extent feasible, include street tree plantings, and associated tree grates if necessary, within the project footprint to replace those removed by the project. Minimum spacing of trees within the City rights-of-way shall be no greater than 35 feet on-center. Low-maintenance and drought-tolerant plantings will be provided within Caltrans right-of-way
- **Landscape Plantings:** For areas of the project that fall within the San Francisco Bay Conservation and Development Commission (BCDC) jurisdictional area, develop any plantings or revegetation in compliance with BCDC's Landscape Guidelines and permit approvals.

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## 5.0 Revised Conclusions and Regulatory Determinations

The content of the approved NES is based on species lists obtained from the USFWS, NOAA Fisheries, California Natural Diversity Database (CNDDDB), and California Native Plant Society (CNPS) on April 11, 2018, October 18, 2018, and February 1, 2019. To prepare this NES addendum, updated species lists were acquired and reviewed on May 14, 2019 (Appendix A). No changes have been made to the species lists since October 18, 2018. Therefore, the Project impacts, conclusions, and regulatory determinations described in the approved NES remain valid and accurate unless specified herein.

### 5.1 Federal Endangered Species Act Consultation

*The following will replace Section 5.1, Federal Endangered Species Act Consultation Summary, of the approved NES:*

Official species lists were obtained from the USFWS San Francisco Bay-Delta and Sacramento offices and NOAA Fisheries West Coast Region on April 11, 2018, October 18, 2018, February 1, 2019, and May 14, 2019. Evaluations of federally-listed species resulted in a total of three species with “no effect” and four species with “may affect, but not likely to adversely affect” determinations. Project features and AMMs are proposed that would avoid and minimize effects on federally-listed wildlife species resulting from construction of the Project. NES Table 13 summarizes the Project’s impact on federally-listed species.

**NES Table 13. Summary of Effects Determinations for Federally Listed Wildlife**

<b>Species</b>	<b>Federal Status</b>	<b>Potential to Occur</b>	<b>Effects Finding for Federally-listed Species</b>
Green sturgeon – southern DPS	FT	Low	May affect, but not likely to adversely affect.
Steelhead – central California coast DPS	FT	Low	May affect, but not likely to adversely affect.
Steelhead –Central Valley DPS	FT	Low	May affect, but not likely to adversely affect.
Chinook salmon – Central Valley spring run ESU	FT	Low	No effect. Not present.
Chinook salmon – Sacramento River winter run ESU	FE	Low	May affect, but not likely to adversely affect.
Western snowy plover	FT	Low	No effect. No potential for take.
California least tern	FE	Low	No effect. No potential for take.

Notes: FT = threatened under the Federal Endangered Species Act  
FE = endangered under the Federal Endangered Species Act

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Caltrans conducted Section 7 consultation with NOAA Fisheries. Technical assistance was initiated on August 11, 2018 and August 17, 2018 via phone and e-mail by Caltrans biologist, Matthew Rechs. Preliminary information, including a map of the BSA and a diagram of the cofferdam at the Gilman Street outfall, was provided to Darren Howe, Caltrans NOAA Fisheries Service liaison. NOAA Fisheries Service requested a copy of the NES. Based on the initial call, the liaison indicated the Project may qualify for a letter of concurrence on a “may affect, but not likely to adversely affect” finding. The NES was submitted to the liaison on August 28, 2018. An informal consultation meeting was held in September 2018. During the meeting, the NOAA liaison requested the preparation and submission of a Biological Assessment to support the effect finding. The Biological Assessment was submitted to NOAA Fisheries on February 25, 2019, initiating informal consultation. A field review was held on March 7, 2019. NOAA staff reviewer Ryan Bernstein requested additional information on March 8, 2019. Requested information was provided on April 4, 2019. On May 3, 2019, Ryan Bernstein requested results of sediment contamination testing, which Caltrans provided on May 6, 2019. A conference call with NOAA and the project development team was held on May 17, 2019 during which supplemental information required by NOAA was identified. This information was provided to NOAA on May 22, 2019. The letter of concurrence on a “may affect, but not likely to adversely affect” finding for green sturgeon, steelhead, and chinook was subsequently issued by NOAA.

## 5.2 Essential Fish Habitat Consultation Summary

*The following will replace Section 5.2, Essential Fish Habitat Consultation Summary, of the approved NES:*

Project-related activities in San Francisco Bay have the potential to affect Essential Fish Habitat protected by the Magnuson-Stevens Fishery Conservation and Management Act. The entire San Francisco Bay is classified as Essential Fish Habitat for species managed under the Pacific Coast Salmon Fishery Management Plan (FMP; coho and Chinook salmon), Coastal Pelagic Species FMP, and Pacific Coast Groundfish FMP. San Francisco Bay is also considered a Habitat Area of Particular Concern for various federally-managed fish species within the Pacific Coast Groundfish FMP. Under the Magnuson-Stevens Fishery Conservation and Management Act, an adverse effect is any impact that reduces either the quality or quantity of Essential Fish Habitat, including direct, indirect, site-specific, or habitat-wide impacts from individual, cumulative, or synergistic consequences of actions.

Essential Fish Habitat consultation with NOAA Fisheries occurred concurrently with Section 7 consultation. NOAA Fisheries agreed that the Project would adversely affect Essential Fish Habitat, but the effects would be minimal and localized around the work area given the relatively

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small size of work within San Francisco Bay and implementation of Project features and AMMs. No additional AMMs were required to avoid or minimize effects on Essential Fish Habitat as a result of consultation.

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Appendix A. Updated Species Lists from Resources Agencies

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## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
San Francisco Bay-Delta Fish And Wildlife  
650 Capitol Mall  
Suite 8-300  
Sacramento, CA 95814  
Phone: (916) 930-5603 Fax: (916) 930-5654  
[http://kim\\_squires@fws.gov](mailto:kim_squires@fws.gov)

In Reply Refer To:

May 28, 2019

Consultation Code: 08FBDT00-2018-SLI-0187

Event Code: 08FBDT00-2019-E-00475

Project Name: Interstate 80/Gilman Street Interchange

Subject: Updated 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.*).

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](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
-

## 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:

### **San Francisco Bay-Delta Fish And Wildlife**

650 Capitol Mall

Suite 8-300

Sacramento, CA 95814

(916) 930-5603

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

### **Sacramento Fish And Wildlife Office**

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

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## Project Summary

Consultation Code: 08FBDT00-2018-SLI-0187

Event Code: 08FBDT00-2019-E-00475

Project Name: Interstate 80/Gilman Street Interchange

Project Type: TRANSPORTATION

Project Description: Interchange improvements

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.87836351948595N122.30695679437571W>



Counties: Alameda, CA

## Endangered Species Act Species

There is a total of 12 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.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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.

- 
1. [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.

## Mammals

NAME	STATUS
Salt Marsh Harvest Mouse <i>Reithrodontomys raviventris</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/613">https://ecos.fws.gov/ecp/species/613</a>	Endangered

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## Birds

NAME	STATUS
California Clapper Rail <i>Rallus longirostris obsoletus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4240">https://ecos.fws.gov/ecp/species/4240</a>	Endangered
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8104">https://ecos.fws.gov/ecp/species/8104</a>	Endangered
Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a>	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is <b>proposed</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	Threatened

## Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) <i>Masticophis lateralis euryxanthus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5524">https://ecos.fws.gov/ecp/species/5524</a>	Threatened

## Amphibians

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

## Fishes

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

## Insects

NAME	STATUS
<p>Callippe Silverspot Butterfly <i>Speyeria callippe callippe</i></p> <p>There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/3779">https://ecos.fws.gov/ecp/species/3779</a></p>	Endangered
<p>San Bruno Elfin Butterfly <i>Callophrys mossii bayensis</i></p> <p>There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/3394">https://ecos.fws.gov/ecp/species/3394</a></p>	Endangered

## Flowering Plants

NAME	STATUS
<p>California Seablite <i>Suaeda californica</i></p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/6310">https://ecos.fws.gov/ecp/species/6310</a></p>	Endangered
<p>Pallid Manzanita <i>Arctostaphylos pallida</i></p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/8292">https://ecos.fws.gov/ecp/species/8292</a></p>	Threatened

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Sacramento Fish And Wildlife Office  
Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846  
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:

May 28, 2019

Consultation Code: 08ESMF00-2018-SLI-1814

Event Code: 08ESMF00-2019-E-06480

Project Name: Interstate 80/Gilman Street Interchange

Subject: Updated 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, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) 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 Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

[http://www.nwr.noaa.gov/protected\\_species/species\\_list/species\\_lists.html](http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html)

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.

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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](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.

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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.

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Attachment(s):

- Official Species List

## Official Species List

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### **Sacramento Fish And Wildlife Office**

Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846  
(916) 414-6600

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

### **San Francisco Bay-Delta Fish And Wildlife**

650 Capitol Mall  
Suite 8-300  
Sacramento, CA 95814  
(916) 930-5603

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## Project Summary

Consultation Code: 08ESMF00-2018-SLI-1814

Event Code: 08ESMF00-2019-E-06480

Project Name: Interstate 80/Gilman Street Interchange

Project Type: TRANSPORTATION

Project Description: Interchange improvements

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.87836351948595N122.30695679437571W>



Counties: Alameda, CA

## Endangered Species Act Species

There is a total of 15 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.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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.

- 
1. [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.

## Mammals

NAME	STATUS
Salt Marsh Harvest Mouse <i>Reithrodontomys raviventris</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/613">https://ecos.fws.gov/ecp/species/613</a>	Endangered

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## Birds

NAME	STATUS
California Clapper Rail <i>Rallus longirostris obsoletus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4240">https://ecos.fws.gov/ecp/species/4240</a>	Endangered
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8104">https://ecos.fws.gov/ecp/species/8104</a>	Endangered
Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a>	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is <b>proposed</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	Threatened

## Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) <i>Masticophis lateralis euryxanthus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5524">https://ecos.fws.gov/ecp/species/5524</a>	Threatened
Green Sea Turtle <i>Chelonia mydas</i> Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6199">https://ecos.fws.gov/ecp/species/6199</a>	Threatened

## Amphibians

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

## Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	Threatened
Tidewater Goby <i>Eucyclogobius newberryi</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/57">https://ecos.fws.gov/ecp/species/57</a>	Endangered

## Insects

NAME	STATUS
Callippe Silverspot Butterfly <i>Speyeria callippe callippe</i> There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/3779">https://ecos.fws.gov/ecp/species/3779</a>	Endangered
San Bruno Elfin Butterfly <i>Callophrys mossii bayensis</i> There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/3394">https://ecos.fws.gov/ecp/species/3394</a>	Endangered

## Flowering Plants

NAME	STATUS
California Seablite <i>Suaeda californica</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6310">https://ecos.fws.gov/ecp/species/6310</a>	Endangered
Pallid Manzanita <i>Arctostaphylos pallida</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8292">https://ecos.fws.gov/ecp/species/8292</a>	Threatened
Santa Cruz Tarplant <i>Holocarpha macradenia</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6832">https://ecos.fws.gov/ecp/species/6832</a>	Threatened

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

List Date **May 28, 2019**

Source **Nmfs\_wcr\_ca\_species\_list\_december\_2016.kmz**

Quad Names **San Quentin, Richmond, Briones Valley, San Francisco North, Oakland West, Oakland East**

Quad Numbers **37122-H4, 37122-H3, 37122-H2, 37122-G4, 37122-G3, 37122-G2**

### **ESA Anadromous Fish**

SONCC Coho ESU (T) -  
CCC Coho ESU (E) - **X**  
CC Chinook Salmon ESU (T) -  
CVSR Chinook Salmon ESU (T) - **X**  
SRWR Chinook Salmon ESU (E) - **X**  
NC Steelhead DPS (T) -  
CCC Steelhead DPS (T) - **X**  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) -  
CCV Steelhead DPS (T) - **X**  
Eulachon (T) -  
sDPS Green Sturgeon (T) - **X**

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat -  
CCC Coho Critical Habitat - **X**  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat - **X**  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat - **X**  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat - **X**

### **ESA Marine Invertebrates**

Range Black Abalone (E) - **X**  
Range White Abalone (E) -

**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

**ESA Sea Turtles**

- East Pacific Green Sea Turtle (T) - X
- Olive Ridley Sea Turtle (T/E) - X
- Leatherback Sea Turtle (E) - X
- North Pacific Loggerhead Sea Turtle (E) - X

**ESA Whales**

- Blue Whale (E) - X
- Fin Whale (E) - X
- Humpback Whale (E) - X
- Southern Resident Killer Whale (E) - X
- North Pacific Right Whale (E) - X
- Sei Whale (E) - X
- Sperm Whale (E) - X

**ESA Pinnipeds**

- Guadalupe Fur Seal (T) - X
- Steller Sea Lion Critical Habitat -

**Essential Fish Habitat**

- Coho EFH - X
- Chinook Salmon EFH - X
- Groundfish EFH - X
- Coastal Pelagics EFH - X
- Highly Migratory Species EFH -

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**

See list at left and consult the NMFS Long Beach office  
562-980-4000

- MMPA Cetaceans - X
- MMPA Pinnipeds - X



# Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Richmond) OR San Quentin OR Oakland East OR Oakland West OR San Francisco North OR Briones Valley AND Taxonomic Group (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	PDFAB08012	None	None	G4T2	S2	1B.2
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	PDBOR01070	None	None	G3	S3	1B.2
<i>Arctostaphylos franciscana</i> Franciscan manzanita	PDERI040J3	Endangered	None	G1	S1	1B.1
<i>Arctostaphylos montana</i> ssp. <i>ravenii</i> Presidio manzanita	PDERI040J2	Endangered	Endangered	G3T1	S1	1B.1
<i>Arctostaphylos pallida</i> pallid manzanita	PDERI04110	Threatened	Endangered	G1	S1	1B.1
<i>Arenaria paludicola</i> marsh sandwort	PDCAR040L0	Endangered	Endangered	G1	S1	1B.1
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
<i>Calochortus pulchellus</i> Mt. Diablo fairy-lantern	PMLIL0D160	None	None	G2	S2	1B.2
<i>Calochortus tiburonensis</i> Tiburon mariposa-lily	PMLIL0D1C0	Threatened	Threatened	G1	S1	1B.1
<i>Calystegia purpurata</i> ssp. <i>saxicola</i> coastal bluff morning-glory	PDCON040D2	None	None	G4T2T3	S2S3	1B.2
<i>Carex comosa</i> bristly sedge	PMCYP032Y0	None	None	G5	S2	2B.1
<i>Carex praticola</i> northern meadow sedge	PMCYP03B20	None	None	G5	S2	2B.2
<i>Castilleja affinis</i> var. <i>neglecta</i> Tiburon paintbrush	PDSCR0D013	Endangered	Threatened	G4G5T1T2	S1S2	1B.2
<i>Chloropyron maritimum</i> ssp. <i>palustre</i> Point Reyes salty bird's-beak	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i> San Francisco Bay spineflower	PDPGN04081	None	None	G2T1	S1	1B.2
<i>Chorizanthe robusta</i> var. <i>robusta</i> robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
<i>Cicuta maculata</i> var. <i>bolanderi</i> Bolander's water-hemlock	PDAP10M051	None	None	G5T4T5	S2?	2B.1
<i>Cirsium andrewsii</i> Franciscan thistle	PDAST2E050	None	None	G3	S3	1B.2



Selected Elements by Scientific 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
<i>Cirsium hydrophilum</i> var. <i>vaseyi</i> Mt. Tamalpais thistle	PDAST2E1G2	None	None	G2T1	S1	1B.2
<i>Clarkia concinna</i> ssp. <i>automixa</i> Santa Clara red ribbons	PDONA050A1	None	None	G5?T3	S3	4.3
<i>Clarkia franciscana</i> Presidio clarkia	PDONA050H0	Endangered	Endangered	G1	S1	1B.1
<i>Collinsia corymbosa</i> round-headed Chinese-houses	PDSCR0H060	None	None	G1	S1	1B.2
<i>Collinsia multicolor</i> San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
<i>Dirca occidentalis</i> western leatherwood	PDTHY03010	None	None	G2	S2	1B.2
<i>Eriogonum luteolum</i> var. <i>caninum</i> Tiburon buckwheat	PDPGN083S1	None	None	G5T2	S2	1B.2
<i>Eryngium jepsonii</i> Jepson's coyote-thistle	PDAP10Z130	None	None	G2	S2	1B.2
<i>Extriplex joaquinana</i> San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
<i>Fissidens pauperculus</i> minute pocket moss	NBMUS2W0U0	None	None	G3?	S2	1B.2
<i>Fritillaria liliacea</i> fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
<i>Gilia capitata</i> ssp. <i>chamissonis</i> blue coast gilia	PDPLM040B3	None	None	G5T2	S2	1B.1
<i>Gilia millefoliata</i> dark-eyed gilia	PDPLM04130	None	None	G2	S2	1B.2
<i>Grindelia hirsutula</i> var. <i>maritima</i> San Francisco gumplant	PDAST470D3	None	None	G5T1Q	S1	3.2
<i>Helianthella castanea</i> Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
<i>Hemizonia congesta</i> ssp. <i>congesta</i> congested-headed hayfield tarplant	PDAST4R065	None	None	G5T2	S2	1B.2
<i>Hesperolinon congestum</i> Marin western flax	PDLIN01060	Threatened	Threatened	G1	S1	1B.1
<i>Heteranthera dubia</i> water star-grass	PMPON03010	None	None	G5	S2	2B.2
<i>Hoita strobilina</i> Loma Prieta hoita	PDFAB5Z030	None	None	G2?	S2?	1B.1
<i>Holocarpha macradenia</i> Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
<i>Horkelia cuneata</i> var. <i>sericea</i> Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1



Selected Elements by Scientific 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
<i>Hypogymnia schizidiata</i> island tube lichen	NLT0032640	None	None	G2	S1	1B.3
<i>Isocoma arguta</i> Carquinez goldenbush	PDAST57050	None	None	G1	S1	1B.1
<i>Layia carnosa</i> beach layia	PDAST5N010	Endangered	Endangered	G2	S2	1B.1
<i>Leptosiphon rosaceus</i> rose leptosiphon	PDPLM09180	None	None	G1	S1	1B.1
<i>Lessingia germanorum</i> San Francisco lessingia	PDAST5S010	Endangered	Endangered	G1	S1	1B.1
<i>Meconella oregana</i> Oregon meconella	PDPAP0G030	None	None	G2G3	S2	1B.1
<i>Microseris paludosa</i> marsh microseris	PDAST6E0D0	None	None	G2	S2	1B.2
<i>Monolopia gracilens</i> woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	PDAST6X030	Endangered	Endangered	G1	S1	1B.1
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2
<i>Plagiobothrys diffusus</i> San Francisco popcornflower	PDBOR0V080	None	Endangered	G1Q	S1	1B.1
<i>Plagiobothrys glaber</i> hairless popcornflower	PDBOR0V0B0	None	None	GH	SH	1A
<i>Polemonium carneum</i> Oregon polemonium	PDPLM0E050	None	None	G3G4	S2	2B.2
<i>Polygonum marinense</i> Marin knotweed	PDPGN0L1C0	None	None	G2Q	S2	3.1
<i>Sanicula maritima</i> adobe sanicle	PDAP11Z0D0	None	Rare	G2	S2	1B.1
<i>Silene verecunda</i> ssp. <i>verecunda</i> San Francisco campion	PDCAR0U213	None	None	G5T1	S1	1B.2
<i>Spergularia macrotheca</i> var. <i>longistyla</i> long-styled sand-spurrey	PDCAR0W062	None	None	G5T2	S2	1B.2
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	PDAST6E050	None	None	G2	S2	1B.2
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i> most beautiful jewelflower	PDBRA2G012	None	None	G2T2	S2	1B.2
<i>Streptanthus glandulosus</i> ssp. <i>niger</i> Tiburon jewelflower	PDBRA2G0T0	Endangered	Endangered	G4T1	S1	1B.1
<i>Stuckenia filiformis</i> ssp. <i>alpina</i> slender-leaved pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2



Selected Elements by Scientific 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
<i>Suaeda californica</i> California seablite	PDCHE0P020	Endangered	None	G1	S1	1B.1
<i>Symphotrichum lentum</i> Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
<i>Trifolium amoenum</i> two-fork clover	PDFAB40040	Endangered	None	G1	S1	1B.1
<i>Trifolium hydrophilum</i> saline clover	PDFAB400R5	None	None	G2	S2	1B.2
<i>Triphysaria floribunda</i> San Francisco owl's-clover	PDSCR2T010	None	None	G2?	S2?	1B.2
<i>Triquetrella californica</i> coastal triquetrella	NBMUS7S010	None	None	G2	S2	1B.2
<i>Viburnum ellipticum</i> oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3

Record Count: 67



# Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



**Query Criteria:** Quad (Richmond (3712283) OR San Quentin (3712284) OR Oakland East (3712272) OR Oakland West (3712273) OR San Francisco North (3712274) OR Briones Valley (3712282)) AND Taxonomic Group (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Accipiter cooperii</i> Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
<i>Adela oplerella</i> Opler's longhorn moth	IILEE0G040	None	None	G2	S2	
<i>Ambystoma californiense</i> California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Aquila chrysaetos</i> golden eagle	ABNKC22010	None	None	G5	S3	FP
<i>Archoplites interruptus</i> Sacramento perch	AFCQB07010	None	None	G2G3	S1	SSC
<i>Ardea alba</i> great egret	ABNGA04040	None	None	G5	S4	
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Asio flammeus</i> short-eared owl	ABNSB13040	None	None	G5	S3	SSC
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Bombus caliginosus</i> obscure bumble bee	IHYM24380	None	None	G4?	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IHYM24250	None	None	G2G3	S1	
<i>Branta hutchinsii leucopareia</i> cackling (=Aleutian Canada) goose	ABNJB05035	Delisted	None	G5T3	S3	WL
<i>Cicindela hirticollis gravida</i> sandy beach tiger beetle	IICOL02101	None	None	G5T2	S2	
<i>Circus hudsonius</i> northern harrier	ABNKC11011	None	None	G5	S3	SSC
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
<i>Coturnicops noveboracensis</i> yellow rail	ABNME01010	None	None	G4	S1S2	SSC
<i>Danaus plexippus pop. 1</i> monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	



Selected Elements by Scientific 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
<b><i>Dicamptodon ensatus</i></b> California giant salamander	AAAAH01020	None	None	G3	S2S3	SSC
<b><i>Dipodomys heermanni berkeleyensis</i></b> Berkeley kangaroo rat	AMAFD03061	None	None	G3G4T1	S1	
<b><i>Egretta thula</i></b> snowy egret	ABNGA06030	None	None	G5	S4	
<b><i>Elanus leucurus</i></b> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<b><i>Enhydra lutris nereis</i></b> southern sea otter	AMAJF09012	Threatened	None	G4T2	S2	FP
<b><i>Erethizon dorsatum</i></b> North American porcupine	AMAFJ01010	None	None	G5	S3	
<b><i>Eucyclogobius newberryi</i></b> tidewater goby	AFCQN04010	Endangered	None	G3	S3	SSC
<b><i>Euphydryas editha bayensis</i></b> Bay checkerspot butterfly	IILEPK4055	Threatened	None	G5T1	S1	
<b><i>Falco peregrinus anatum</i></b> American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
<b><i>Geothlypis trichas sinuosa</i></b> saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
<b><i>Haliaeetus leucocephalus</i></b> bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
<b><i>Helminthoglypta nickliniana bridgesi</i></b> Bridges' coast range shoulderband	IMGASC2362	None	None	G3T1	S1S2	
<b><i>Hydroprogne caspia</i></b> Caspian tern	ABNNM08020	None	None	G5	S4	
<b><i>Lasionycteris noctivagans</i></b> silver-haired bat	AMACC02010	None	None	G5	S3S4	
<b><i>Lasiurus blossevillii</i></b> western red bat	AMACC05060	None	None	G5	S3	SSC
<b><i>Lasiurus cinereus</i></b> hoary bat	AMACC05030	None	None	G5	S4	
<b><i>Laterallus jamaicensis coturniculus</i></b> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
<b><i>Lichnanthe ursina</i></b> bumblebee scarab beetle	IICOL67020	None	None	G2	S2	
<b><i>Masticophis lateralis euryxanthus</i></b> Alameda whipsnake	ARADB21031	Threatened	Threatened	G4T2	S2	
<b><i>Melospiza melodia maxillaris</i></b> Suisun song sparrow	ABPBXA301K	None	None	G5T3	S3	SSC



**Selected Elements by Scientific 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
<i>Melospiza melodia pusillula</i> Alameda song sparrow	ABPBXA301S	None	None	G5T2?	S2S3	SSC
<i>Melospiza melodia samuelis</i> San Pablo song sparrow	ABPBXA301W	None	None	G5T2	S2	SSC
<i>Microcina leei</i> Lee's micro-blind harvestman	ILARA47040	None	None	G1	S1	
<i>Microcina tiburona</i> Tiburon micro-blind harvestman	ILARA47060	None	None	G1	S1	
<i>Microtus californicus sanpabloensis</i> San Pablo vole	AMAFF11034	None	None	G5T1T2	S1S2	SSC
<i>Neotoma fuscipes annectens</i> San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	SSC
<i>Nycticorax nycticorax</i> black-crowned night heron	ABNGA11010	None	None	G5	S4	
<i>Nyctinomops macrotis</i> big free-tailed bat	AMACD04020	None	None	G5	S3	SSC
<i>Phalacrocorax auritus</i> double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
<i>Plebejus icarioides missionensis</i> Mission blue butterfly	IILEPG801A	Endangered	None	G5T1	S1	
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	ABNME05011	Endangered	Endangered	G5T1	S1	FP
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
<i>Rana draytonii</i> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<i>Scapanus latimanus insularis</i> Angel Island mole	AMABB02032	None	None	G5THQ	SH	
<i>Scapanus latimanus parvus</i> Alameda Island mole	AMABB02031	None	None	G5THQ	SH	SSC
<i>Sorex vagrans halicoetes</i> salt-marsh wandering shrew	AMABA01071	None	None	G5T1	S1	SSC
<i>Speyeria callippe callippe</i> callippe silverspot butterfly	IILEPJ6091	Endangered	None	G5T1	S1	
<i>Spirinchus thaleichthys</i> longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
<i>Sternula antillarum browni</i> California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP



Selected Elements by Scientific 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
<b><i>Taxidea taxus</i></b> American badger	AMAJF04010	None	None	G5	S3	SSC
<b><i>Thaleichthys pacificus</i></b> eulachon	AFCHB04010	Threatened	None	G5	S3	
<b><i>Trachusa gummifera</i></b> San Francisco Bay Area leaf-cutter bee	IIHYM80010	None	None	G1	S1	
<b><i>Tryonia imitator</i></b> mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	
<b><i>Vespericola marinensis</i></b> Marin hesperian	IMGASA4140	None	None	G2	S2	
<b><i>Xanthocephalus xanthocephalus</i></b> yellow-headed blackbird	ABPBXB3010	None	None	G5	S3	SSC
<b><i>Zapus trinotatus orarius</i></b> Point Reyes jumping mouse	AMAFH01031	None	None	G5T1T3Q	S1S3	SSC

Record Count: 67

## Plant List

### Inventory of Rare and Endangered Plants

81 matches found. [Click on scientific name for details](#)

#### Search Criteria

Found in Quads 3712283, 3712284, 3712274, 3712282 3712272 and 3712273;

[Modify Search Criteria](#)
[Export to Excel](#)
[Modify Columns](#)
[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<a href="#">Amsinckia lunaris</a>	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	1B.2	S3	G3
<a href="#">Androsace elongata ssp. acuta</a>	California androsace	Primulaceae	annual herb	Mar-Jun	4.2	S3S4	G5?T3T4
<a href="#">Arabis blepharophylla</a>	coast rockcress	Brassicaceae	perennial herb	Feb-May	4.3	S4	G4
<a href="#">Arctostaphylos franciscana</a>	Franciscan manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	1B.1	S1	G1
<a href="#">Arctostaphylos montana ssp. ravenii</a>	Presidio manzanita	Ericaceae	perennial evergreen shrub	Feb-Mar	1B.1	S1	G3T1
<a href="#">Arctostaphylos pallida</a>	pallid manzanita	Ericaceae	perennial evergreen shrub	Dec-Mar	1B.1	S1	G1
<a href="#">Arenaria paludicola</a>	marsh sandwort	Caryophyllaceae	perennial stoloniferous herb	May-Aug	1B.1	S1	G1
<a href="#">Aspidotis carlotta-halliae</a>	Carlotta Hall's lace fern	Pteridaceae	perennial rhizomatous herb	Jan-Dec	4.2	S3	G3
<a href="#">Astragalus nuttallii var. nuttallii</a>	ocean bluff milk-vetch	Fabaceae	perennial herb	Jan-Nov	4.2	S4	G4T4
<a href="#">Astragalus tener var. tener</a>	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	1B.2	S1	G2T1
<a href="#">Balsamorhiza macrolepis</a>	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
<a href="#">Calamagrostis ophitidis</a>	serpentine reed grass	Poaceae	perennial herb	Apr-Jul	4.3	S3	G3
<a href="#">Calochortus pulchellus</a>	Mt. Diablo fairy-lantern	Liliaceae	perennial bulbiferous herb	Apr-Jun	1B.2	S2	G2
<a href="#">Calochortus tiburonensis</a>	Tiburon mariposa lily	Liliaceae	perennial bulbiferous herb	Mar-Jun	1B.1	S1	G1
<a href="#">Calochortus umbellatus</a>	Oakland star-tulip	Liliaceae	perennial bulbiferous herb	Mar-May	4.2	S3?	G3?
<a href="#">Calystegia purpurata ssp. saxicola</a>	coastal bluff morning-glory	Convolvulaceae	perennial herb	(Mar)Apr-Sep	1B.2	S2S3	G4T2T3
<a href="#">Carex comosa</a>	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	2B.1	S2	G5
<a href="#">Carex praticola</a>	northern meadow sedge	Cyperaceae	perennial herb	May-Jul	2B.2	S2	G5

<a href="#"><u>Castilleja affinis var. neglecta</u></a>	Tiburon paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Apr-Jun	1B.2	S1S2	G4G5T1T2
<a href="#"><u>Castilleja ambigua var. ambigua</u></a>	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	4.2	S3S4	G4T4
<a href="#"><u>Chloropyron maritimum ssp. palustre</u></a>	Point Reyes bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	1B.2	S2	G4?T2
<a href="#"><u>Chorizanthe cuspidata var. cuspidata</u></a>	San Francisco Bay spineflower	Polygonaceae	annual herb	Apr-Jul(Aug)	1B.2	S1	G2T1
<a href="#"><u>Chorizanthe robusta var. robusta</u></a>	robust spineflower	Polygonaceae	annual herb	Apr-Sep	1B.1	S1	G2T1
<a href="#"><u>Cirsium andrewsii</u></a>	Franciscan thistle	Asteraceae	perennial herb	Mar-Jul	1B.2	S3	G3
<a href="#"><u>Cirsium hydrophilum var. vaseyi</u></a>	Mt. Tamalpais thistle	Asteraceae	perennial herb	May-Aug	1B.2	S1	G2T1
<a href="#"><u>Clarkia concinna ssp. automixa</u></a>	Santa Clara red ribbons	Onagraceae	annual herb	(Apr)May-Jun(Jul)	4.3	S3	G5?T3
<a href="#"><u>Clarkia franciscana</u></a>	Presidio clarkia	Onagraceae	annual herb	May-Jul	1B.1	S1	G1
<a href="#"><u>Collinsia corymbosa</u></a>	round-headed Chinese-houses	Plantaginaceae	annual herb	Apr-Jun	1B.2	S1	G1
<a href="#"><u>Collinsia multicolor</u></a>	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar-May	1B.2	S2	G2
<a href="#"><u>Dirca occidentalis</u></a>	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	1B.2	S2	G2
<a href="#"><u>Eriogonum luteolum var. caninum</u></a>	Tiburon buckwheat	Polygonaceae	annual herb	May-Sep	1B.2	S2	G5T2
<a href="#"><u>Eriophorum gracile</u></a>	slender cottongrass	Cyperaceae	perennial rhizomatous herb (emergent)	May-Sep	4.3	S4	G5
<a href="#"><u>Eryngium jepsonii</u></a>	Jepson's coyote thistle	Apiaceae	perennial herb	Apr-Aug	1B.2	S2?	G2?
<a href="#"><u>Erysimum franciscanum</u></a>	San Francisco wallflower	Brassicaceae	perennial herb	Mar-Jun	4.2	S3	G3
<a href="#"><u>Extriplex joaquinana</u></a>	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
<a href="#"><u>Fissidens pauperculus</u></a>	minute pocket moss	Fissidentaceae	moss		1B.2	S2	G3?
<a href="#"><u>Fritillaria liliacea</u></a>	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2	G2
<a href="#"><u>Gilia capitata ssp. chamissonis</u></a>	blue coast gilia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G5T2
<a href="#"><u>Gilia millefoliata</u></a>	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	1B.2	S2	G2
<a href="#"><u>Grindelia hirsutula var. maritima</u></a>	San Francisco gumplant	Asteraceae	perennial herb	Jun-Sep	3.2	S1	G5T1Q
<a href="#"><u>Helianthella castanea</u></a>	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
<a href="#"><u>Hemizonia congesta ssp. congesta</u></a>	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	1B.2	S2	G5T2
<a href="#"><u>Hesperolinon congestum</u></a>	Marin western flax	Linaceae	annual herb	Apr-Jul	1B.1	S1	G1
<a href="#"><u>Heteranthera dubia</u></a>	water star-grass	Pontederiaceae	perennial herb (aquatic)	Jul-Oct	2B.2	S2	G5
<a href="#"><u>Hoita strobilina</u></a>	Loma Prieta hoita	Fabaceae	perennial herb	May-Jul(Aug-	1B.1	S2?	G2?

				Oct)			
<a href="#">Holocarpha macradenia</a>	Santa Cruz tarplant	Asteraceae	annual herb	Jun-Oct	1B.1	S1	G1
<a href="#">Horkelia cuneata var. sericea</a>	Kellogg's horkelia	Rosaceae	perennial herb	Apr-Sep	1B.1	S1?	G4T1?
<a href="#">Hypogymnia schizidiata</a>	island rock lichen	Parmeliaceae	foliose lichen (null)		1B.3	S1	G2
<a href="#">Iris longipetala</a>	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May	4.2	S3	G3
<a href="#">Lathyrus jepsonii var. jepsonii</a>	Delta tule pea	Fabaceae	perennial herb	May-Jul(Aug-Sep)	1B.2	S2	G5T2
<a href="#">Layia carnosa</a>	beach layia	Asteraceae	annual herb	Mar-Jul	1B.1	S2	G2
<a href="#">Leptosiphon acicularis</a>	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	4.2	S4?	G4?
<a href="#">Leptosiphon rosaceus</a>	rose leptosiphon	Polemoniaceae	annual herb	Apr-Jul	1B.1	S1	G1
<a href="#">Lessingia germanorum</a>	San Francisco lessingia	Asteraceae	annual herb	(Jun)Jul-Nov	1B.1	S1	G1
<a href="#">Lessingia hololeuca</a>	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	3	S3?	G3?
<a href="#">Meconella oregana</a>	Oregon meconella	Papaveraceae	annual herb	Mar-Apr	1B.1	S2	G2G3
<a href="#">Micropus amphibolus</a>	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	3.2	S3S4	G3G4
<a href="#">Microseris paludosa</a>	marsh microseris	Asteraceae	perennial herb	Apr-Jun(Jul)	1B.2	S2	G2
<a href="#">Monardella antonina ssp. antonina</a>	San Antonio Hills monardella	Lamiaceae	perennial rhizomatous herb	Jun-Aug	3	S1S3	G4T1T3Q
<a href="#">Monolopia gracilens</a>	woodland woolythreads	Asteraceae	annual herb	(Feb)Mar-Jul	1B.2	S3	G3
<a href="#">Pentachaeta bellidiflora</a>	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	1B.1	S1	G1
<a href="#">Piperia michaelii</a>	Michael's rein orchid	Orchidaceae	perennial herb	Apr-Aug	4.2	S3	G3
<a href="#">Plagiobothrys chorisianus var. chorisianus</a>	Choris' popcornflower	Boraginaceae	annual herb	Mar-Jun	1B.2	S1	G3T1Q
<a href="#">Plagiobothrys diffusus</a>	San Francisco popcornflower	Boraginaceae	annual herb	Mar-Jun	1B.1	S1	G1Q
<a href="#">Polemonium carneum</a>	Oregon polemonium	Polemoniaceae	perennial herb	Apr-Sep	2B.2	S2	G3G4
<a href="#">Polygonum marinense</a>	Marin knotweed	Polygonaceae	annual herb	(Apr)May-Aug(Oct)	3.1	S2	G2Q
<a href="#">Ranunculus lobbii</a>	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	4.2	S3	G4
<a href="#">Sanicula maritima</a>	adobe sanicle	Apiaceae	perennial herb	Feb-May	1B.1	S2	G2
<a href="#">Silene verecunda ssp. verecunda</a>	San Francisco campion	Caryophyllaceae	perennial herb	(Feb)Mar-Jun(Aug)	1B.2	S1	G5T1
<a href="#">Spergularia macrotheca var. longistyla</a>	long-styled sand-spurrey	Caryophyllaceae	perennial herb	Feb-May	1B.2	S2	G5T2
<a href="#">Stebbinsoseris decipiens</a>	Santa Cruz microseris	Asteraceae	annual herb	Apr-May	1B.2	S2	G2
<a href="#">Streptanthus albidus ssp. peramoenus</a>	most beautiful jewelflower	Brassicaceae	annual herb	(Mar)Apr-Sep(Oct)	1B.2	S2	G2T2
<a href="#">Streptanthus glandulosus ssp. niger</a>	Tiburon jewelflower	Brassicaceae	annual herb	May-Jun	1B.1	S1	G4T1

<a href="#"><u>Stuckenia filiformis ssp. alpina</u></a>	slender-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	2B.2	S2S3	G5T5
<a href="#"><u>Suaeda californica</u></a>	California seablite	Chenopodiaceae	perennial evergreen shrub	Jul-Oct	1B.1	S1	G1
<a href="#"><u>Symphyotrichum lentum</u></a>	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	1B.2	S2	G2
<a href="#"><u>Trifolium amoenum</u></a>	two-fork clover	Fabaceae	annual herb	Apr-Jun	1B.1	S1	G1
<a href="#"><u>Trifolium hydrophilum</u></a>	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2
<a href="#"><u>Triphysaria floribunda</u></a>	San Francisco owl's-clover	Orobanchaceae	annual herb	Apr-Jun	1B.2	S2?	G2?
<a href="#"><u>Triquetrella californica</u></a>	coastal triquetrella	Pottiaceae	moss		1B.2	S2	G2
<a href="#"><u>Viburnum ellipticum</u></a>	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	2B.3	S3?	G4G5

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