Natural Environment Study

(Minimal Impacts)
12-ORA-133-8.3/9.3
EA-0N8900
EFIS-1214000130

STATE OF CALIFORNIA
Department of Transportation

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December 2019

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Summary

California Department of Transportation (Caltrans) proposes an operational improvements project on southbound SR-133 from the Southbound I-5/Southbound133 connector to the Southbound 133/Northbound I-405 connector. The proposed project includes adding an auxiliary lane on SB 133 from SB I-5 connector to 300 feet south of San Diego Creek and adding a second travel lane on the SB 133/NB I-405 connector.

The Biological Study Area (BSA) is located within a developed area surrounded by buildings and ornamental vegetation. A total of 112 acres of the BSA consists of project direct impacts and an additional buffer area to include project indirect effects on potential sensitive biological resources.

San Diego Creek is the only natural community considered sensitive by the CDFW, US Army Corps of Engineers and Regional Water Quality Control Board.

Plants and Wildlife
15 special status plant species were considered for their potential to occur within the BSA. Due to the lack of suitable habitats within the BSA and none observed within the BSA, the project is not anticipated to impact special status plant species.

26 special status wildlife species listed as Species of Special Concern under the California Department of Fish and Wildlife are considered to occur within the BSA. Due to the lack of suitable habitat and modifications to San Diego Creek, most of the species aren't expected to inhabit the BSA.

Based on literature reviews 19 Federal and State plant and wildlife species are expected to occur within the BSA. None of the species are expected to occur within the BSA due to the lack of suitable habitat in the BSA. The project will result in no direct and indirect impacts to listed plant or wildlife species. Caltrans is making a no effect determination for all federally listed species obtained for this project. Therefore, no section 7 consultations or coordination with the California Department of Fish and Wildlife under the Endangered Species Act (ESA) or California Endangered Species Act (CESA) are required for this project.

Native and non-native plants are scattered throughout the BSA. Several migratory and game birds were observed during the field survey. Mud swallow nests were observed under the SR-133 bridge over San Diego Creek. The project will require vegetation clearing and trimming during the construction period. Furthermore, the San Diego Creek bridge will be widened to accommodate the additional auxiliary lane. The project may impact nesting birds and their nests

during nesting season. With the implementation of avoidance and minimization measures, the project will avoid and minimize impacts to nesting birds/raptors and their nests.

A bat habitat assessment was conducted for this project. No sign of bats was observed within the BSA. Due to the presence of suitable habitat within the BSA, one year prior to construction, bat assessment survey will be conducted to determine the presence of bats within the bridge. Based on the finding of the future assessment, appropriate measures will be included during the project design phase.

Jurisdictional Waters

Potential Jurisdictional drainage features that are subject to Section 404 of the Clear Water Act, Fish and Game Code 1600, and Section 401 of the Clean Water Act were evaluated in the Jurisdictional Delineation report. Based on the jurisdictional delineation, San Diego Creek is the only drainage that is determined to be subject to these regulations. Due to the widening of the San Diego creek bridge, replacement of rip-rap under the bridges, and placement of the project will result in 0.096 acres of permanent and 1.62 acres of temporary impacts to non-wetland waters of the US and unvegetated streambed. The project is located within a Special Area Management Plan (SAMP) area designated by the US Army Corps of Engineers. The US Army Corps of Engineer has an alternative permitting process to facilitate reasonable economic development and infrastructure while also providing for aquatic resource protection. Therefore, the project is subject to the abbreviated alternative permitting process associated with the SAMP. The project may require a Letter of Permission (LOP)) from the US Army Corps of Engineers. A Streambed Alteration Agreement from the California Department of Fish and Wildlife and Section 401 certification from the Regional Water Quality Board are also required for this project. Since the proposed project impact occurs within existing Rock Slope Protection (RSP) footprint, no mitigation is proposed at this time.

Invasive Species

Several non-native plants listed on the California Invasive Plant Council (Cal-IPC) California invasive plant inventory identified in the BSA. Although a large portion of the project footprint is located within a disturbed and landscaped area, the project has the potential to spread invasive species to San Diego Creek through the entering and exiting of contaminated construction equipment and through the improper removal and disposal of invasive species. In compliance with Executive Order (EO) 13112, a weed abatement program will be developed to minimize the importation on non-native invasive plant material during construction.

Wildlife Movement

Although the project is located within a developed area, wildlife movement is expected to occur within the BSA. Existing drainages, mainly San Diego Creek, provide habitat for wildlife corridors for large and small animals. During construction period, implementation of the project is expected to result in temporary impacts to wildlife movement or decrease the functionality of the wildlife crossing within the creek during day light. The project will result in no permanent impacts to wildlife movement and no project specific mitigation required.

Anadromous Fish Passage

Caltrans is required by Senate Bill (SB) 857 to assess and remediate barriers to fish passage at stream crossings along the State Highway System that currently or historically supported anadromous fish. Literature reviews and a reconnaissance-level fish passage assessment were conducted for this project. A fish passage assessment was done within San Diego Creek, the only natural creek found within the BSA. Due to extensive modification and the lack of historic evidence of anadromous fish passages within the creek, this project isn't expected to affect fish passage within the BSA.

1 - Introduction

History

The Caltrans Traffic Studies branch initiated this safety improvement project due to public complaints of recurring congestion along the Southbound (SB) SR-133 mainline between the southbound (SB) I-5 connector and the northbound (NB) I-5 connector.

Project Purpose and Need

The project proposes to improve traffic flow on the southbound SR- 133 by reducing congestion and operational deficiencies between the SB I-5 connector and NB I-405 connector. In addition, the project will provide additional vehicular storage, shorten the queue length of vehicles, enhance operations, and improve safety for the drivers traveling on the SB I-5 connector and SB 133 mainline during peak periods.

Project Description

The proposed project has two alternatives. The Build and no build alternatives. The build alternative proposes to improve operations and safety of the facility by constructing a new auxiliary lane on SB Route 133 from the SB I-5 connector to the NB I-405 connector. This auxiliary lane will become the second lane on the NB I-405 connector. The project also includes extending the number three lane on SB Route 133 approximately 300ft south of San Diego Creek to match the existing roadway pavement. The project also includes:

1. Construct additional asphalt concrete pavement to provide a twelve-foot auxiliary lane from the SB I-5 connector to NB I-405 connector and twelve-foot lane from the gore area to 300 feet south of San Diego Creek.
2. Construct additional asphalt concrete pavement to provide a second twelve-foot lane on the SB Rte 133/NB I-405 connector.
3. Realign the Barranca Parkway (Pkwy) loop on-ramp and reconstruct the ramp entrance. Convert High Occupancy Vehicle (HOV) lane to General Purpose (GP) lane, install a connector ramp meter system, reconstruct loop detectors, and modify the Midwest Guardrail system (MGS) along the on-ramp left shoulder if needed.
4. Reconstruct maintenance vehicle pullouts.
5. Construct tie back walls at Barranca Pkwy Overcrossing (OC) and Alton Pkwy OC.
6. Construct approximately 500 feet long retaining wall from the end of San Diego Creek off-ramp bridge (55-0290F) towards North.

7. Construct approximately 210 feet long retaining wall from the beginning of San Diego Creek off-ramp bridge (55-0290F) towards South.
8. Construct approximately 471 feet long retaining wall along the off-ramp from SB SR-133 to I-405. (The limits will be finalized once district provided the necessary information to Structures.)
9. Replace approximately 520 ft of the existing Reinforced Concrete Channel (RCC) with a Reinforced Concrete Box (RCB) between Barranca Pkwy and Alton Pkwy.
10. Relocate and modify two existing overhead signs to accommodate pavement widening.
11. Remove and replace light poles along shoulder of SB Rte 133 and Barranca Pkwy on-ramp.
12. Install ramp metering system at SB Rte 133/NB I-405 connector.
13. Remove and replace signing as needed.
14. Construct approximately 500 feet long of MGS between wall #29 and the tie back wall at Alton Pkwy OC.
15. Remove existing metal beam guard railing and end treatments at the gore area of SB Rte 133 and SB Rte 133/NB I-405 connector.
16. Construct approximately 1200 square feet of additional bridge pavement, construct bridge rail with 20:1 taper and install REACT 350 to shield the end of bridge railings beyond the gore area of SB 133 and SB 133/NB I-405 connector.
17. Relocate 3 drainage inlets along right shoulder of SB 133 and 2 drainage inlets along right shoulder of SB 133/NB I-405 connector.
18. Refresh all striping and markers.
19. San Diego Creek Left Bridge (55-0290L) will be widened to cover the gore area. Bridge Super-Structure will be constructed to accommodate the new lane configuration.
20. San Diego Creek off-ramp bridge (55-0290F) will be widened by 14.5 feet. New Sub-Structure and Super-Structure will be constructed to accommodate the new lane configuration.
21. Approach and departure slabs, paving notch and joint seals will be added at the left bridge (55-0290L) and the off-ramp bridge (55-0290F).
22. Existing Barriers, Type 25 at the Left Bridge (55-0290L) and the Off-Ramp Bridge (55-0290F) will be replaced with Concrete Barrier Type 836.
23. Rock Slope Protection (RSP) will be replaced 6 feet below the Top of Pile Cap between the Piers/Abutment footings and flush with the footings and adjacent ground. The RSP used should be ½ ton (24 inches in diameter) installed in a pre-excavated 6-foot hole and extend 5 feet from each side of the pier wall and extend 40 feet upstream from the face of the right bridge and 10 feet from the downstream face of the New Widening of the Off-Ramp Bridge (55-0290F).

24. Slurry will be placed underneath the existing piers/abutments pile caps to fill the voids due to erosion prior to the excavation for RSP placement. The approximate area of the existing piers where slurry will be place is 0.15 acres (6540 SQFT).
25. Temporary construction easement (TCEs) are needed for constructing Reinforced Concrete Box (RCB), bridge widening, and rock slope protection.
26. Clearing and grubbing
27. Highway planting
28. Replace damaged landscape irrigation in kind where needed between Irvine Boulevard Over-Crossing to Barranca Parkway on-ramp.

Figure 1: Project Location Map

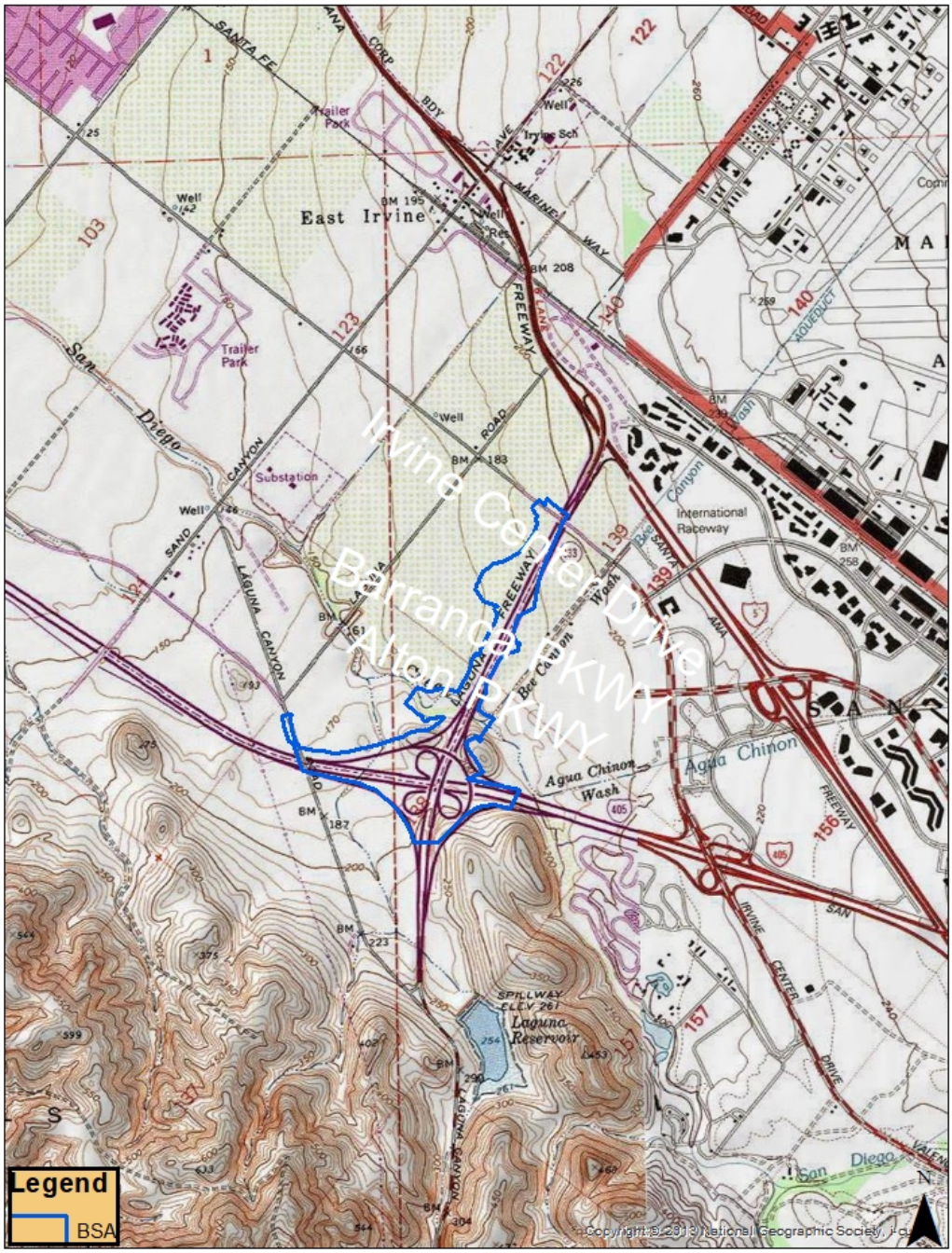


Figure 1
SR-133 Operational Improvements Project
Project Location Map
12-ORA-133 PM 8.5-9.3
EA 0N8900

2 - Study Methods

Regulatory Requirements

Federal Requirements

National Environmental Policy Act

The National Environmental Policy Act (NEPA) declares a continuing federal policy "to use all practicable means and measures...to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations." NEPA directs "a systematic, interdisciplinary approach" to planning and decision-making, and requires environmental statements for "major Federal actions significantly affecting the quality of the human environment." Implementation regulations by the Council on Environmental Quality (CEQ) (Code of Federal Regulations [CFR], title 40, Parts 1500–1508) require federal agencies to identify and assess reasonable alternatives to proposed actions that will restore and enhance the quality of the human environment and avoid or minimize adverse environmental impacts. Federal agencies are further directed to emphasize significant environmental issues in project planning and to integrate impact studies required by other environmental laws and Executive Orders into the NEPA process. The NEPA process should therefore be an overall framework for the environmental evaluation of federal actions.

Federal Endangered Species Act

Species listed as endangered and/or threatened by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (FESA) are protected under Section 9 of FESA, which forbids any person to "take" an endangered or threatened species. "Take" is defined in Section 3 of FESA as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The U.S. Supreme Court ruled in 1995 that the term "harm" includes destruction or modification of habitat. Sections 7 and 10 of FESA may authorize "incidental take" for an otherwise lawful activity (a development project, for example) if it is determined that the activity would not jeopardize the species' survival or recovery. Section 7 applies to federalized projects where a federally listed species is present and there is a federal nexus such as a federal CWA Section 404 permit (e.g., presence of WoUS) that is required. Section 7 requires federal agencies in consultation with, and with the assistance of, the Secretary of the Interior to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of Critical Habitat (CH) for these species. Section 10 applies when a federally listed species is present, but no federal nexus is present.

Fish and Wildlife Service Coordination Act

Under Federal agency permit or license, consultation with Department of the Interior, USFWS and with the head of the agency exercising administration over wildlife resources of the State

wherein activities within waters of any stream or other water constructed with a view to the conservation of wildlife resources by preventing loss of and damage to such resources.

Migratory Bird Treaty Act

This treaty makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests as well as the abandonment of nests occupied by migratory birds during the breeding season.

Clean Water Act-Sections 401 and 404

The Clean Water Act (CWA) provides a structure for regulating discharges of pollutants into the waters of the United States (WoUS). Section 404 establishes a permit program administered by the United States Army Corps of Engineers (USACE), regulating the discharge of dredged or fill material into WoUS (including wetlands). Under Section 401 of the CWA, any project activities that involve a discharge to WoUS must obtain a state certification that the discharge complies with other provisions of the CWA. The Regional Water Quality Control Boards (RWQCBs) administer the certification program in California. The RWQCBs regulate at the state level all activities that are regulated at the federal level by USACE. Therefore, RWQCB jurisdiction usually coincides with the jurisdictional boundaries for WoUS. However, if waters are determined not to be WoUS, they may still be subject to RWQCB jurisdiction based on the Porter-Cologne Water Quality Control Act.

In additions to 404 CWA regulation, the USACE has the authority to develop Special Area Management Plans (SAMPs) for certain areas designated by USACE. Within SAMP area, the USACE undertakes a comprehensive review of aquatic resources in an entire watershed. The goal is to analyze potential impacts to the watershed scale in order to identify priority area for preservation, identify potential restoration areas, determine the least environmentally damaging locations for proposed projects, and establish alterative permitting process appropriate for the SAMP area.

Executive Order 11990-Protection of Wetlands

It is a policy developed to avoid adverse impacts on wetlands wherever there is a practicable alternative. On Federally funded projects, impacts on wetlands must be identified. Alternatives that avoid wetlands must be considered. US Department of Transportation promulgated to comply with this order.

Executive Order 13112- Invasive Species

On February 3, 1999, President William J. Clinton signed executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological materials capable of propagating that is not native to the ecosystem. Federal Highway Administration (FHWA) guidance issued August 10,1999 directs to consider State recognized invasive species to be considered as part of the National Environmental Policy Act.

State Requirements

California Environmental Quality Act

The California Environmental Quality Act (CEQA) establishes state policy to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures. CEQA applies to actions directly undertaken, financed, or permitted by state lead agencies. Regulations for implementation are found in the state CEQA guidelines published by the state resources agency (Office of the Secretary).

California Endangered Species Act

The California Endangered Species Act (CESA) is regulated by the California Department of Fish and Wildlife (CDFW). This act establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under CESA. For projects that affect both a state and federally listed species, compliance with FESA would satisfy CESA if the CDFW determines that the federal incidental take authorization is consistent with CESA under Fish & Game Code Section 2080.1. For projects that would result in a "take" of a state-only listed species, Caltrans must apply for a take permit under Section 2081(b).

California Fish and Game Codes

These California Fish and Game Code sections 3503, 3503.5, 3505, 3800, and 3801.6 protect all native birds, birds of prey, and all nongame birds, including their eggs and nests, that are not already listed as fully protected and that occur naturally within the state. Furthermore, Section 5650 of the CFG code protect any affects to wildlife and fish. Furthermore, Section 3511,4700,5050, and 5515 of the CFG cod protect 37 species and prohibit the take or possession of the species at any time.

California Fish and Game Code Sections 1600–1616

Under current California Fish and Game Code Sections 1600–1616, the California Department of Fish and Wildlife (CDFW) has authority to regulate work that would substantially divert or

obstruct the natural flow—or substantially change or use any material from the bed, channel, or bank—of any river, stream, or lake. CDFW also has authority to regulate work that would deposit or dispose of debris, water, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement (SAA) and is applicable to all projects involving state or local government discretionary approvals.

Porter-Cologne Water Quality Control Act

The RWQCBs regulate activities that would involve "discharging waste, or proposing to discharge waste, within any region that could affect waters of the state" (California Water Code 13260[a]), pursuant to provisions of the state Porter-Cologne Act. Waters of the State (WoS) are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code 13050 [e]). Such waters may include waters not subject to regulation under CWA Section 404 due to a lack of connectivity with a navigable water body or lack of an OHWM (i.e., isolated features).

California Native Plant Protection Act

The Native Plant Protection Act (Fish and game code sections 1900-1913) was created to "preserve, protect, and enhance rare and endangered native plants in California: it is administered by CDFW and authorized to designate native plants as "endangered" or "rare".

Senate Bill 857: Fish Passage

Senate Bill (SB) 857 became a law in January 1, 2006 in the State of California. Article 3.5 of the bill requires for assessing and remediating barriers to fish passage at stream crossing along State Highway System that currently or historically supported anadromous fish. It also requires all projects on the state highway to perform an anadromous fish passage assessment in accordance with NMFS and CDFW guidelines prior to the commencement of project design to be submit the assessment to the CDFW. In compliance with this requirement of the bill, Caltrans developed assessment data form for all Caltrans project. Based on historic fish passage findings, If the assessment report determined the project structure does or will block fish passage, the project is required to remediate the blockage.

Studies Required

Studies included literature and record reviews, a field reconnaissance assessment and a habitat evaluation for special-status species with reasonable potential to occur in the Biological Study Area (BSA) were conducted for this project.

Literature Search

The following literature, record search, and natural resource databases were reviewed to determine the potential value of the BSA to biological resources and sensitive plant and wildlife that may occur within the project area:

- Official United States Fish and Wildlife Services (USFWS) IPaC Species List was obtained on April 12, 2019 and an updated list was obtained on October 11, 2019. Appendix B.
- CDFW 2019 California Natural Diversity Data Base (CNDDB) on the United States Geological Survey (USGS) 7.5-minute Tustin quadrangle map.
- NMFS species list obtained from KMZ resources tool, Tustin quadrangle map 0n May 16, 2019 and updated list was obtained on October 11, 2019. Appendix C
- California Native Plant Society (CNPS). California Native Plant Society, Sacramento, CA Website 7.5-minute United States Geological Survey (USGS)quadrangle searched Tustin, Newport Beach, Anaheim and Orange. Accessed April 2019

Field Reviews

Field visits were conducted on February 27, March 7, and May 8, 2019. Potential jurisdictional waters, vegetation communities, potential suitable habitat assessment for special-status species and other biological resources were evaluated by Kedest Ketsela and Chris Waterston.

Survey Methods

The BSA includes potential direct and indirect impact to biological resources within the project area. while the direct impact includes build Alternative foot print, the indirect impact area is limited to buffer zone around the project foot print. The buffer zone is limited to natural and biological resources found 200 ft from the project foot print. The project impact is limited to direct and indirect, permanent and temporary impacts on biological resources.

Agency Coordination and Professional Contacts

- January 2019, Caltrans coordinated with the County of Orange Flood Control District to obtain historic records of activities conducted within San Diego Creek.
- May 21, 2019, Caltrans obtained historic records of Steelhead within San Diego Creek from Jess Adams, National Marine Fisheries Service via email.
- September 4, 2019, a site visit with Simona Altman, California Department of Fish and Wildlife representative was conducted.

Limitations That May Influence Results

A large portion of the BSA is located within the Caltrans right of way. Binoculars were used where access was unavailable. There were no limitations that influenced the results or substantially altered the findings of the study.

3 - Results: Environmental Setting

The project is located in the City of Irvine, California. Tustin, Anaheim, and Orange 7.5-minute series USGS topographic quadrangles were reviewed to assess regional sensitive species within the project region. The BSA is located within Tustin quadrangle. The project site is surrounded by an urban setting consisting of landscape, roadways, and commercial buildings.

Description of the Existing Biological and Physical Conditions

Biological Conditions in the Study Area

The BSA is located within and adjacent to developed areas. The biological conditions of the project area are limited to an urban setting which includes landscaping, developed areas, and an improved creek. The plant communities within the BSA are shown in Figure 2. With the exception of San Diego Creek, no natural plant communities are found within the BSA. Some of the land cover types identified in the BSA are:

Ornamental
Several trees, shrubs, and ground cover within the BSA that have been planted as ornamentals throughout the BSA. This plant community is limited to native and non-native plants such as Brazilian pepper tree (*Schinus terebinthifolius*), eucalyptus tree (Eucalyptus globulus), Bottle Brush tree (*Callistemon*), Ice plant (*Carpobrotus edulis*), Peruvian pepper tree (*Schinus mole)*, Mexican fan palm (*Washingtonia robusta*), Brazilian pepper tree(*Schinus terebinthifolia)* , Acacia redolens (*Prostrate Acacia),*Carolina Laurel cherry *(Prunus caroliniana)*, and tree tobacco (*Nicotiana glauca*). Scattered native plants including western sycamore (P*lantanus racemosa*), mulefat (*Baccharis salicifolia*) were observed within the BSA.

Disturbed
The project area is mainly covered with bare ground. Several ruderal non-native plants are scattered throughout the shoulder of the freeway. Areas classified as ruderal within the BSA consist of disturbed areas dominated by weedy plant species including Rabbit foot grass (*Polypogno monspeliensis*), Caster bean (*Ricinus communis*), Russian thistle (*Salsola tragus*), and telegraph weed (*Heterotheca grandiflora*), among others.

Developed

The remainder of the BSA consists of developed lands in the form of roadway, bike trails, commercial and residential buildings. The residential and commercial developed areas contain ornamental landscaping.

Upland Sycamore Woodland Planting

The areas dominated with upland sycamore woodlands are delineated within the BSA. The Western Sycamore trees (*Platanus racemose*) and associated native shrubs (Coyote bush (*Baccharis pilularis*)) and non-native grasses appears to be part of the landscaping area for the adjacent development (buildings and bike lane) rather than naturally occurring habitat.

Upland Coastal Live Oak Planting

A few patches of Costal live oak tree (*Quercus agrifolia*) trees were also observed within the BSA. These Coastal live oak trees are located within the same area as the upland sycamore woodland plantings.

Regional Species and Habitats and Natural Communities of Concern

The project is located within a developed area and no natural plant communities were observed within the BSA. The regional special status species evaluated for this project are limited to species listed under FESA and/or CESA, CNPS, animal species considered of special concern by CDFW and species that may occur within suitable habitat found within the BSA. See table 1.

Table 1: Listed, Proposed Species, Natural Communities, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area.

Common Name	Scientific Name	Status	General Habitat Description	Habitat P/ A	Rationale
Plants					
Thread-leaved brodiaea	*Brodiaea filifolia*	S/E F/T	Chaparral, Cismontane, woodland, coastal scrub Valley & foothill grassland, vernal pool, Wetland	A	No suitable habitat occurs within the BSA
Chaparral Sand-verbena	*Abronia villosa var.aurita*	CNPS/1B.1	Coastal sage scrub	A	No suitable habitat occurs within the BSA
aphanisma	*Aphanisma blitoides*	CNPS/1B.2	Bluffs and Coastal sage scrub	A	No suitable habitat occurs within the BSA.
Parish's brittlescale	*AQtriplex parishii*	CNPS/1B.1	Playas and vernal-pools	A	No suitable habitat occurs within the BSA
Davidson's saltscale	*Atriplex Serenona*	CNPS/1B.2	Coastal bluff scrub and Coastal scrub	A	No suitable habitat occurs within the BSA

Southern tarplant	*Centromadia parryi*	CNPS/1B.1	Marshes and swamps (margins),Valley and foothill grassland (vernally mesic), and Vernal pools	A	No suitable habitat occurs within the BSA
Decumbent goldenbush	*Isocoma menziesii var.decumbens*	CNPS/1B.2	Sandy soil in chaparral, coastal scrub, south South Coast, southern Peninsular Range, southern Channel Islands	A	No suitable habitat occurs within the BSA
Santa Ana River woollystar	*Eriastrum densifolium ssp. sanctorum*	F/E S/E	Found in sandy and rocky soils, gravelly river beds mainly along Santa Ana river	A	No suitable habitat occurs within the BSA
Laguna Beach Live forever	*Dudleya stolonifera*	F/T S/T	Grow on steep sandstone cliffs in coastal sage scrub	A	No suitable habitat occurs within the BSA
Santa Monica Mountains Dudleyea	*Dudleya cymosa SSP.*	F/T	Sandstone cliffs located adjacent to Coastal scrub and chaparral	A	No suitable habitat occurs within the BSA
Big-leaved crownbeard	*Verbesina dissita*	F/T S/T	Maritime chaparral in coastal hillsides and canyons	A	No suitable habitat occurs within the BSA
California Orchutt grass	*Orcuttia californica*	F/E S/E	Found in deep ephemeral venal pools underline by clay soils	A	No suitable habitat occurs within the BSA
Gambel's water cress	*Nasturtium gambelii*	F/E S/T	Found in marshes from 20 to 1,100ft in elevation	A	No suitable habitat occurs within the BSA
Mud nama	*nama stenocarpa*	CNPS/1B.1	riparian, lake-margins, streambanks, edges	A	No suitable habitat occurs within the BSA
San Barnardino aster	*Symphyotrichum defoliatum*	CNPS/1B.2	Cismontane woodland Coastal scrub Lower montane coniferous forest Meadows and seeps Marshes and swamps	A	No suitable habitat occurs within the BSA
Animals					
Cooper's hawk	*Accipiter cooperii*	S/CSA	Inhabit in forests, open woodland forested mountain and nest in ornamental trees in the cities	HP	Potential nesting habitat found within the BSA
Southern California legless lizard	*Anniella stebbinsi*	S/SSC	Broadleaved upland forest, Chaparral Coastal dunes Coastal scrub	A	No suitable habitat occurs within the BSA
California glossy snake	*Arizona elegans occidentalis*	S/SSC	Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	A	No suitable habitat occurs within the BSA
Grasshopper sparrow	*Ammodramus savannarum*	S/SSC	Valley & foothill grassland	A	No suitable habitat occurs within the BSA
Southern California rufous crown sparrow	*Aimophila ruficeps canesens*	WL	Inhabit within coastal sage scrub coastal bluff scrub and low growing chaparral	A	No suitable habitat occurs within the BSA
Pallid bat	*Antozous palliduis*	S/SSC	Roost in rock crevices caves, mine shafts, under bridges in buildings and tree hollows	HP	Potential roosting habitat found within the BSA

Coastal whiptail	*Aspidoscelis tigris stejnegeri*	S/SSC	Ground may be firm soil, sandy, or rocky	A	No suitable habitat occurs within the BSA
Long-eared owl	*Asio otus*	S/SSC			
Burrowing owl	*Athene cunicularia*	S/SSC	Coastal prairie, Coastal scrub, Great Basin grassland, great Basin scrub, mojave desert scrub, Sonoran desert scrub, Valley & foothill grassland	A	No suitable habitat occurs within the BSA
Golden eagle	*Aquila chrysaetos*	FP	Open country with mountains, hills, and cliffs. Desert shrublands, grasslands coniferous forest farmland	A	No suitable habitat occurs within the BSA
Swainson's hawk	*Buteo swainsoni*	S/T	Open and semi-open country side with grasslands, sagebrush desert and farmlands.	A	No suitable habitat occurs within the BSA
Western mastiff bat	*Eumops perotis californicus*	S/SSC	Roosts in crevices in cliffy faces, high buildings, trees, and tunnels	A	No suitable habitat occurs within the BSA
Yellow-breasted chat	*Icteria virens*	S/SSC	Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	A	No suitable habitat occurs within the BSA
Western yellow bat	*Lasiurus xanthinus*	S/SSC	Found in riparian woodland and roost on palm trees (Native and non-native)	HP	Potential roosting habitat found within the BSA
California Black rail	*Laterallus jamaicensis coturniculus*	S/T	Inhabit within salt marshes dominated with pickleweed and bulrush	A	No suitable habitat occurs within the BSA
Northern leopard frog	*Lithobates pipiens*	SSC	Inhabit in permanent ponds, swamps, marshes and slow-moving stream with abundant aquatic vegetation	A	No suitable habitat occurs within the BSA
Tricolored blackbird	*Agelaius tricolor*	S/SSC S/candidate Endangered	nested in wetlands with cattails, bulrushes, and willows	A	No suitable habitat occurs within the BSA
San Diego desert woodrat	*Neotoma lepida intermedia*	S/SSC	CSS with Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	A	No suitable habitat occurs within the BSA
Big-free-tailed bat	*Nyctinomops macrotis*	SSC	Roost in crevices, rocks, buildings caves, and tree cavities	HP	Potential roosting habitat found within the BSA
Steelhead - southern California	*Oncorhynchus mykiss irideus pop. 10*	F/E	Aquatic South coast flowing waters	A	No suitable habitat occurs within the BSA
Southern grasshopper mouse	*Onychomys torridus ramona*	S/SSC	Chenopod scrub	A	No suitable habitat occurs within the BSA
Belding's savannah sparrow	*Passerculus sandwichensis beldingi*	S/E	Coastal salt marshes with grassy coastal dunes	A	No suitable habitat occurs within the BSA
Pacific pocket mouse	*Perognathus longimembris pacificus*	F/E S/SSC	Mainly inhabit within Coastal sage scrub in sandy coastal soils	A	No suitable habitat occurs within the BSA

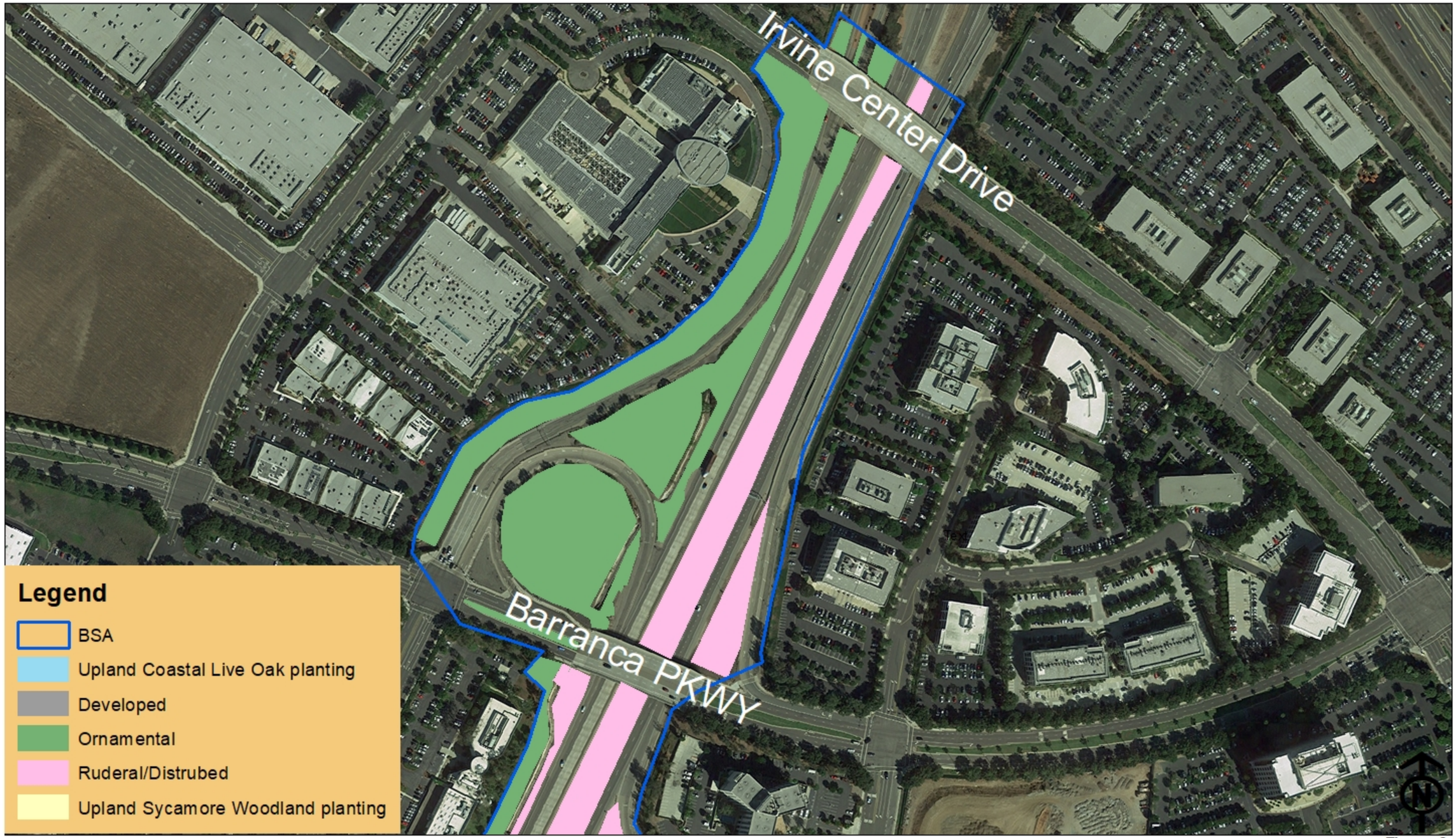
Coast horned lizard	*Phrynosoma blainvillii*	S/SSC	Inhabits in grasslands, scrublands, coniferous and broadleaf forests and woodlands	A	No suitable habitat occurs within the BSA
Coastal California Gnatcatcher	*Polioptila californica californica*	F/T S/SSC	CSS with moderate to dense shrubs	A	No suitable habitat occurs within the BSA
Santa Ana speckled dace	*Rhinichthys osculus ssp.3*	S/SSC	permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	A	No suitable habitat occurs within the BSA
Light-footed Ridgway's rail	*Rallus longirostris levipes*	F/E S/E	Inhabit within coastal salt marsh, lagoons. Nest in salt marsh with dense cordgrass	A	No suitable habitat occurs within the BSA
bank swallow	*Riparia riparia*	S/T	Live along rivers, stream ocean coasts and reservoirs.	A	No suitable habitat occurs within the BSA
yellow warbler	*Setophaga petechia*	SSC	Breed within disturbed or degrowing habitats along streams and wetlands	A	No suitable habitat occurs within the BSA
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	S/SSC	Coastal scrub	A	No suitable habitat occurs within the BSA
Western spadefoot toad	*Spea hammondii*	S/SSC	Cismontane woodland Coastal scrub Valley & foothill grassland and vernal pool	A	No suitable habitat occurs within the BSA
Riverside fairy shrimp	*Streptocephalus woottoni*	F/E	Coastal scrub Valley & foothill grassland Vernal pool Wetland	A	No suitable habitat occurs within the BSA
California least tern	*Sternula antillarum browni*	F/E S/E	Inhabit along coastal beaches	A	No suitable habitat occurs within the BSA
southern California saltmarsh shrew	*Sorex ornatus salicornicus*	SSC	Inhabit within saltmarsh vegetated with dens ground cover plants	A	No suitable habitat occurs within the BSA
American badger	*Taxidea taxus*	SSC	Inhabit within grasslands , marshes and mountain meadows	A	No suitable habitat occurs within the BSA
two-striped garter snake	*Thamnophis hammondii*	S/SSC	Marsh & swamp Riparian scrub Riparian woodland Wetland	A	No suitable habitat occurs within the BSA
least Bell's vireo	*Vireo bellii pusillus*	S/E F/E	Riparian forest Riparian scrub Riparian woodland	A	No suitable habitat occurs within the BSA
Southwestern Willow Flycatcher	*Empidonax triaillii extimus*	F/E	Breed within riparian areas of dens willows or tamarisk often with standing water.	A	No suitable habitat occurs within the BSA
Western Snowy Plover	*Charadrius nivosus nivosus*	F/T S/E	Primarily breed on coastal beaches, offshore islands bays and estuaries.	A	No suitable habitat occurs within the BSA

Absent [A] - no habitat present and no further work needed. Habitat Present [HP] -habitat is, or may be present. The species may be present. Present [P] - the species is present. CSA: California Special Animal

Natural Communities and Vegetation

In accordance with the CNDDB database search, Southern cottonwood willow riparian forests, southern Dune scrub, southern coastal salt marsh, southern coast live oak riparian forest, southern riparian scrub, and southern mixed riparian forest, are identified as potential sensitive habitats that may occur within the BSA. Although these plant communities are known to occur within and around natural streams, due to modification of San Diego Creek from its original condition and development within the project area, these natural communities are absent from the BSA. The plant and animal species found within the BSA are limited to species that are known to occur within developed areas. The plant and animal species observed within the BSA are included under Appendix D.

Figure 2: Vegetation Map



Source: Cal Giza Service and Caltrans

Figure 3
Sheet 1 of 3

SR-133 Operational Improvements Project
Vegetation
12-ORA-133 PM 8.3-9.3
EA 0N8900

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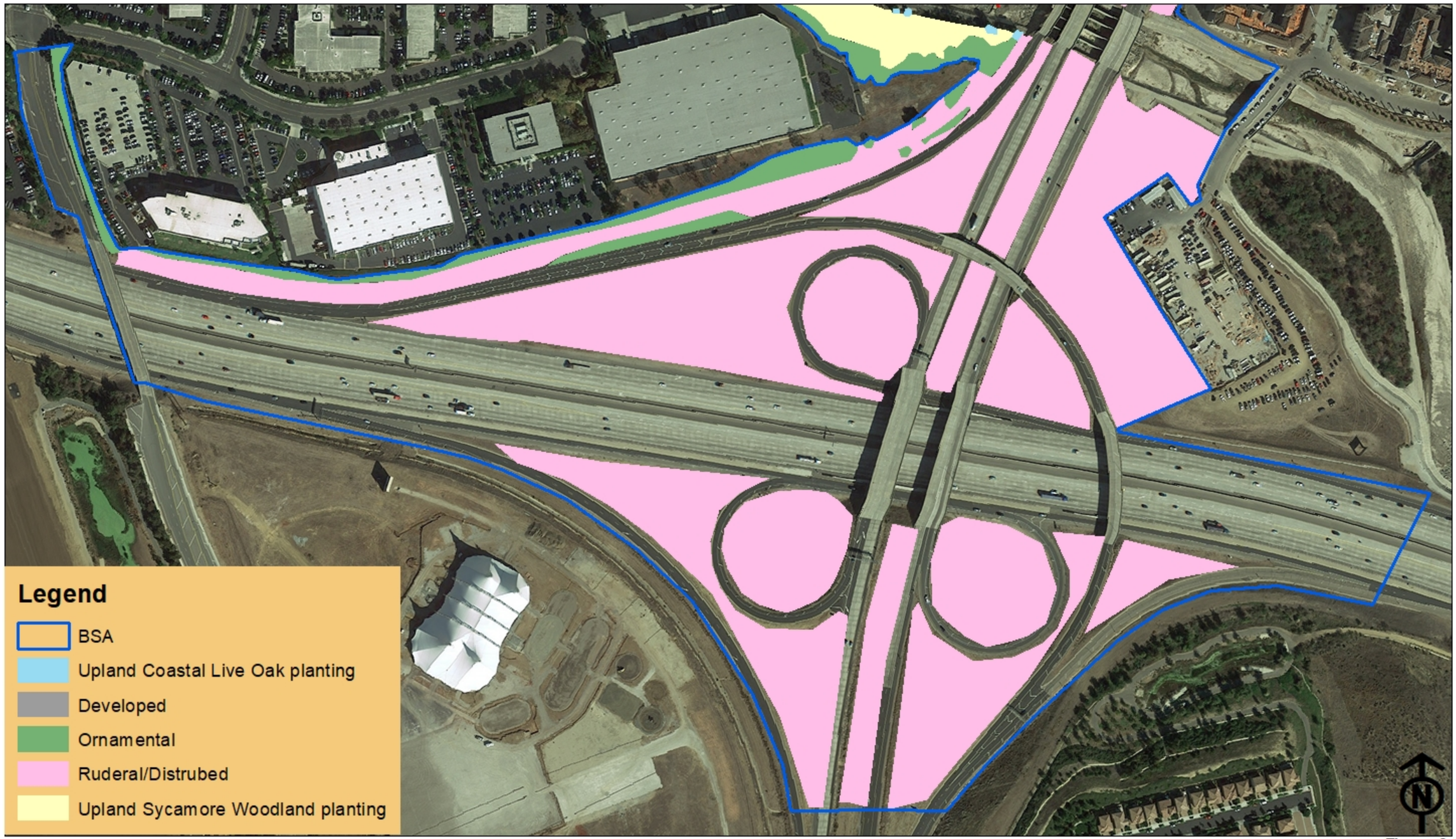
Source: California Giza Service and Caltrans

Caltrans

Figure 3
Sheet 2 of 3

SR-133 Operational Improvements Project
Vegetation
12-ORA-133 PM 8.3-9.3
EA 0N8900



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Caltrans

Figure 3
Sheet 3 of 3

SR-133 Operational Improvements Project
Vegetation
12-ORA-133 PM 8.3-9.3
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4 - Results: Biological Resources, Discussion of Impacts & Mitigation

Habitats and Natural Communities of Special Concern

Natural communities are categorized as being of special concern either due to rare and endangered species occurring within the habitat or natural communities or federal, state or local laws regulating their development. Although coastal live oak trees and sycamore woodlands are delineated within the BSA and are native plants, they aren't included under this section since they are installed as landscape trees and won't be impacted by this project. Therefore, natural communities of special concern within the BSA are limited to San Diego Creek.

Discussion of San Diego Creek

San Diego Creek is an ephemeral drainage and is depicted as a blue-line stream on USGS topography maps. The creek is a 16-mile urban waterway flowing into Upper Newport Bay. The watershed covers 112.2 square miles and is mainly located in the cities of Irvine, Tustin, and Costa Mesa. Most of the creek has been converted to a concrete flood control channel. The creek within the BSA appears to be subject to maintenance activities and has been modified from the original conditions. The project BSA is located within the Tustin quadrangle USGS topography map.

Survey Results

As shown in the vegetation map, the portion of San Diego Creek within the BSA is modified with the placement of rip-rap and by routine sediment removal activities. Upstream from the SR-133 bridge, the County of Orange Flood Control District routinely removes sediment to maintain the capacity of the creek. Upstream and downstream of the SR-133 bridge, the creek is mainly covered with RSP to protect the bridge structure. Furthermore, a concrete check dam is constructed 150 feet downstream from the bridge.

Project Impacts

To accommodate the SB133/NB 405 connector road widening, the project will result in the extension of the bridge abutments, pier walls on the west side of the connector bridge and by closing the bridge gap between the SB SR-133 and SR-133/I405 connector road. Furthermore, to mitigate for scouring within and around the SB and NB SR-133 and connector road bridges over San Diego creek, existing RSP will be replaced with large RSP. A total of 1.67 acres of temporary impacts to the creek would occur as result of project construction (closing the bridges gap and extension of the bridge), temporary access road, and replacement of RSP within San

Diego Creek. A total of 0.096 acres of permanent impacts to the creek will occur as result of extending the bridge pier wall foundations and placement of slurry material along the pier walls and abutments. The proposed widening on both sides of the SR-133/I-405 connector and Northbound SR-133 bridges are permanently impacted previously due to the installation of the RSP under and around the bridges (10-50ft from the bridge decks). Therefore, impacts resulting from the replacement of RSP and closing bridges gap are considered as temporary.

Avoidance and Minimization Efforts

- Prior to any construction, highly visible barriers (ESA fence) will be installed around the project disturbance limits to designate Environmentally Sensitive Areas within San Diego creek. The ESA fence shall be installed under the direction of a qualified Biologist. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas.
- Prior to the beginning of construction adjacent to the ESAs, a qualified biologist will survey areas adjacent to the ESA boundaries to flush any wildlife species present prior to construction and ensure all avoidance measures are properly implemented
- A Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented to comply with the National Pollutant Discharge Elimination System (NPDES) Statewide Construction General Permit (CGP). The SWPPP will identify and implement temporary Best Management Practices (BMPs) during construction to address the temporary impacts to water quality.
- Equipment including but not limited to excavators, motor vehicles and trucks shall not be allowed to operate in the ESAs. No equipment and material storage will be allowed within or adjacent to ESAs. All equipment maintenance, staging dispensing of fuel oil or any other such activities shall occur in developed or designated non-sensitive areas. This area shall be reviewed and approved by the District Biologist. Upon completion of construction, the ESA fence shall be removed.
- Appropriate permits from the US Army Corps of Engineers, the California Department of Fish and Wildlife, and the Regional Water Quality Control Board will be obtained prior to construction.

Special Status Plant Species

Based on the literature review, 15 plant species are listed as regional special status plant species. See table 1. These regional special status plant species are listed and protected under the ESA, CESA, or recognized by conservation organizations (California Native Plant Society). The

special status recognitions were given to the species due to decline and/or limitations of its population size, geographic range, distribution, and loss of habitat.

Survey results

Since the BSA is located within a developed area; none of the special status plant species were observed within the BSA; and no suitable habitat was found within the BSA, no further discussion is needed for any of the special status species plants listed under Table 1. No botanical survey was conducted.

Project Impacts

The project will impact no special status plant listed species.

Avoidance and Minimization Efforts/Compensatory Mitigation

Because no State and Federal or special status plant species occur within the BSA, no avoidance and minimization measures are warranted.

Special Status Animal Species Occurrences

Based on literature review findings included under table 1, a total of 26 special-status animal species are listed as regional special status wildlife species within the project region. These regional special status animal species are listed and protected under the ESA and CESA. CDFW considers some of the remaining species as species of "Special Concern". With the exception of bats and Coopers' hawks, no suitable habitat occurs within the BSA for the remaining animal species listed under Table 1. Cooper's hawk is one of the raptors protected under State law (See Fish and Game Code, Sections 3503, 3503.5, 3505 and 3513, and California Code of Regulation, Title 14, Sections 251.1, 652 and 783-786.6). Bats are indigenous non-game mammal species. Federal and State endangered and threatened bat species are protected under CESA and FESA. Under title 14, section 251.1 of the California Code of regulations, it prohibits harassing non-game mammals and California Fish and Game Code section 2150 and section 86 of California Fish and Game code which prohibits "take" or possession of all non-game mammals, are some of the regulations that protect bat species in the State of California.

Survey results

Due to the lack of suitable habitat within the BSA, no federal or state listed species are expected to occur within the BSA. However, suitable habitat for special status bats species and Cooper's hawks occurs within the BSA.

Potential nesting habitat (eucalyptus and sycamore trees) for Cooper's hawks was observed within the BSA. Since suitable nesting habitat for this species is located outside of the project impact area, this project will result in no direct impact to the species and its habitat.

An initial bat habitat assessment was conducted during the field survey and suitable habitat including but not limited to the SR-133 bridge over San Diego Creek and palm trees were identified within the BSA. During the field survey, no bats or sign of bats were observed within the BSA.

Project Impacts

Due to construction work under the SR-133 bridge over San Diego Creek, the project may result in temporary direct or indirect impacts to potential roosting bats and Cooper's hawk nests. Direct impact to bats may occur as a result of bridge widening and installation of joint seal under the San Diego bridges. The project will result in impact to nesting birds including hawk due to the potential removal of trees within the project footprint. Indirect impacts on bats and hawk may occur from noise, lights, and vibration when construction activities take place under the San Diego bridge.

Avoidance and Minimization Efforts/Compensatory Mitigation

In the event that suitable trees for Cooper's hawk nests are required to be removed during nesting season, a qualified biologist will conduct pre-construction nesting bird surveys. If nesting Cooper's hawk are found, the biologist will create a buffer zone and an ESA fence will be placed around the buffer zone. No construction work shall occur within the buffer zone until the nest is no longer active and all young birds fledged.

Although suitable roosting habitats are present within the BSA and no evidence of bats was observed this year, it is possible that the hinges within the San Diego Creek bridge or palm trees may be used at other times of the year or during the construction period. Therefore, one year prior to the beginning of construction, a bat assessment survey and day/nighttime emergence surveys will be conducted during maternity season. The survey includes a combination of suitable habitat assessment, exit counting, and acoustic surveys. If maternity roosting bats are found, additional avoidance and minimization measures will be included at the time of the survey.

A bat survey will be conducted two weeks prior to beginning of construction work within San Diego creek bridges. If the bridges are determined to be occupied outside maternity roosting period, bat exclusion devise (one-way doors) will be installed. A qualified bat biologist will monitor the installation and exclusion of bats during construction period. If maternity roost is present, no work under the bridge will occur during maternity season (April-August) and exclusion devise will be installed after September 1 or after all young leave the structure.

Figure 4: Impacts to Vegetation Map

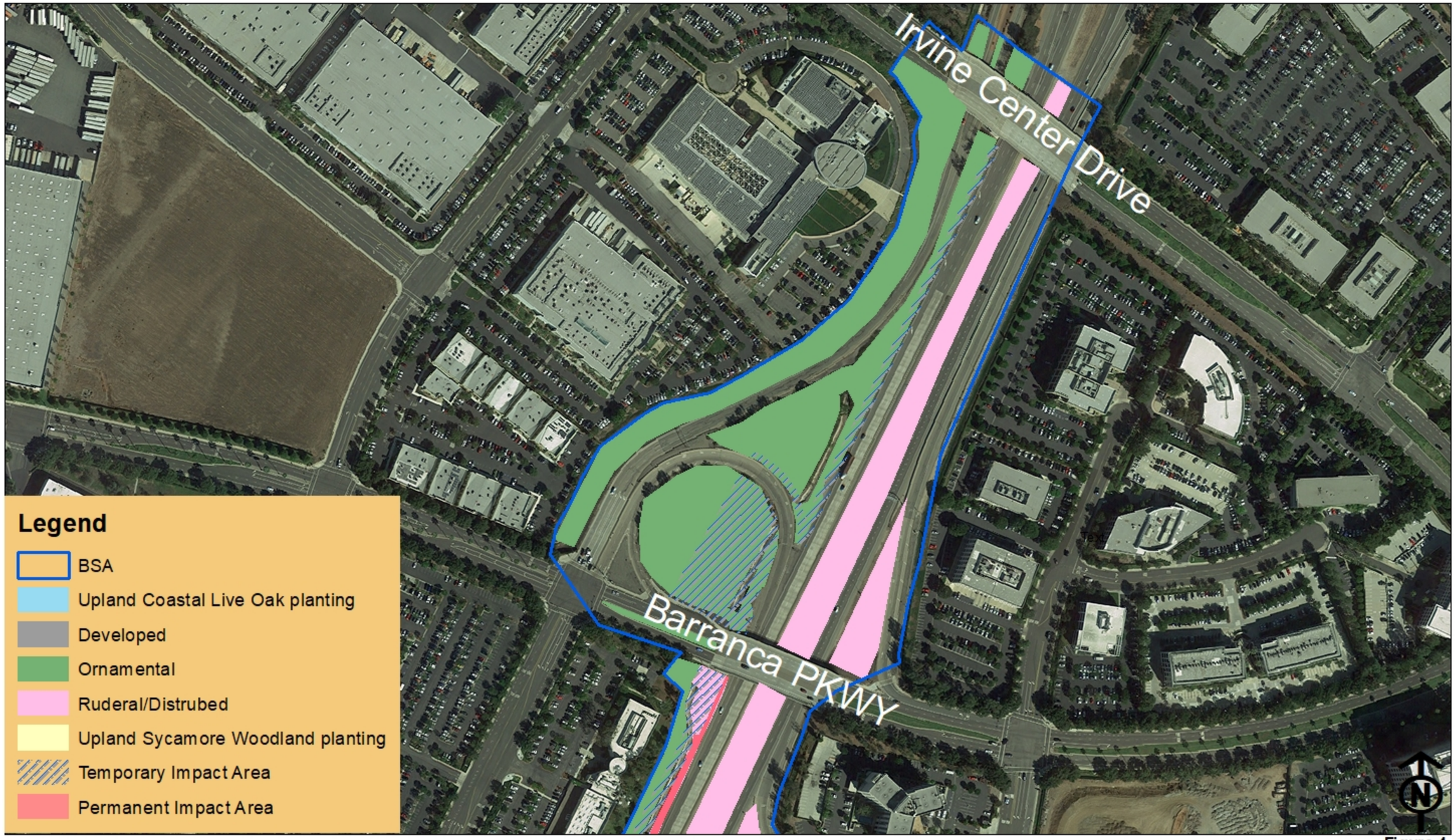

Figure 4
Sheet 2 of 3

SR-133 Operational Improvements Project
Impacts to Vegetation
12-ORA-133 PM 8.3-9.3
EA 0N8900

Figure 4
Sheet 2 of 3

SR-133 Operational Improvements Project
Impacts to Vegetation
12-ORA-133 PM 8.3-9.3
EA 0N8900

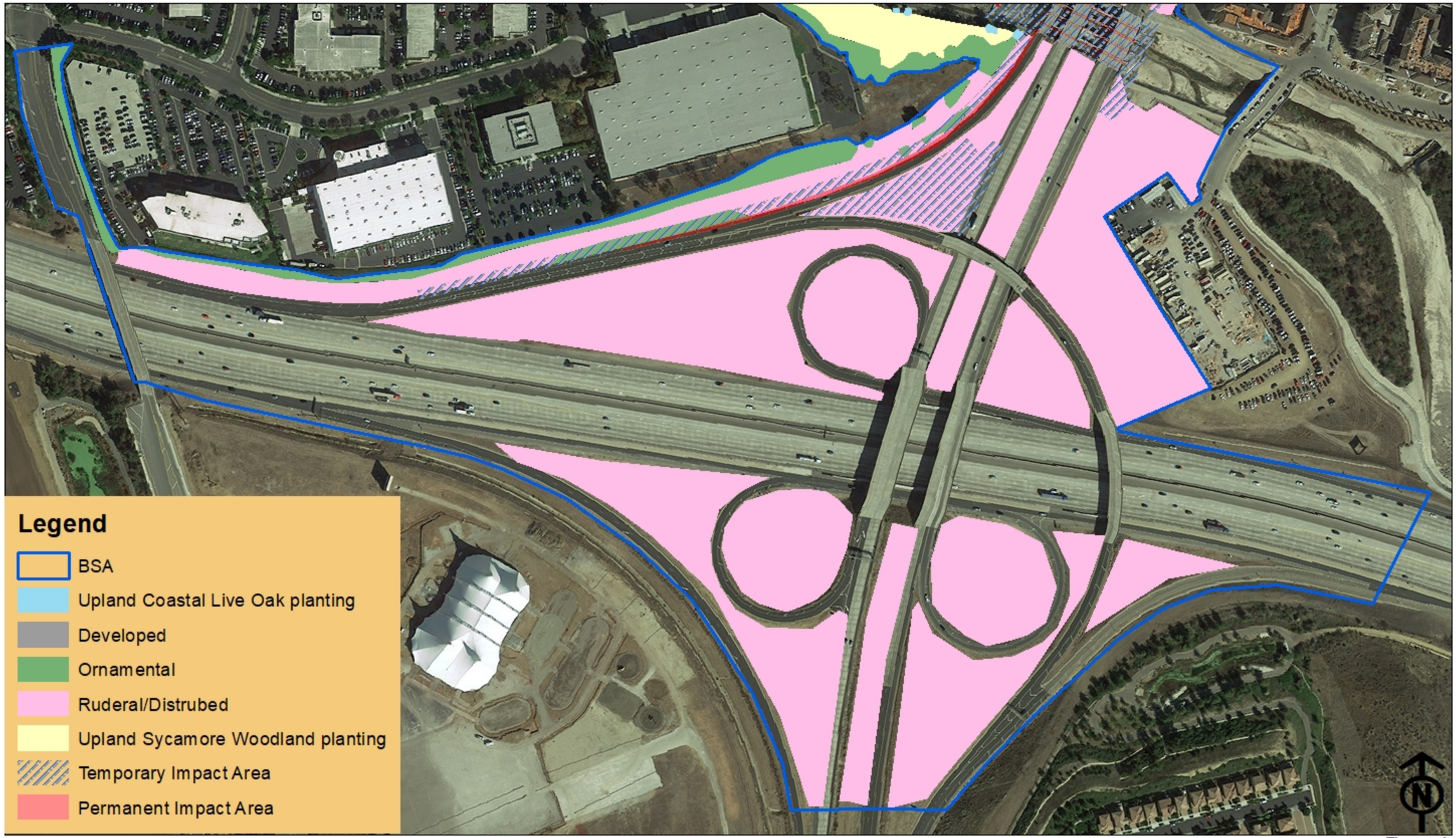

Figure 4
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SR-133 Operational Improvements Project
Impacts to Vegetation
12-ORA-133 PM 8.3-9.3
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5 - Conclusions & Regulatory Determination

Federal Endangered Species Act (ESA) Consultation Summary

Caltrans took the responsibility for compliance with all Section 7 consultation under ESA requirements from FHWA under the Memorandum of Understanding (MOU) between Caltrans and FHWA, where the California Department of Transportation, the State of California's Participation in the Project Delivery Program under 23 USC 327, which Caltrans has assumed FHWA responsibilities since October 1, 2012. The MOU was signed pursuant to the Moving Ahead for Progress in the 21st Century Act (MAP-21) effective on October 2012. Therefore, Caltrans made the following no effect determinations for the species identified by the US Fish and Wildlife Service and National Marine Fisheries Service (NMFS):

Common Name	Scientific Name	Status Federal/ State	General Habitat Description	Effect Determination
Laguna Beach Live forever	*Dudleya stolonifera*	F/T S/T	Grow on steep sandstone cliffs in coastal sage scrub	No effect
Big-leaved crownbeard	*Verbesina dissita*	F/T S/T	Maritime chaparral in coastal hillsides and canyons	No effect
least Bell's vireo	*Vireo bellii pusillus*	F/E S/E	Riparian forest Riparian scrub Riparian woodland	No effect
California least tern	*Sternula antillarum browni*	F/E S/E	Inhabit coastal beaches	No effect
Light-footed Ridgway's rail	*Rallus longirostris levipes*	F/E S/E	Inhabit within coastal salt marsh, lagoons. Nest in salt marsh with dense cordgrass	No effect
Coastal California Gnatcatcher	*Polioptila californica californica*	F/T S/SSC	CSS with moderate to dense shrubs	No effect
Steelhead - southern California	*Oncorhynchus mykiss irideus pop. 10*	F/E	Aquatic South coast flowing waters	No effect
Southwestern Willow Flycatcher	*Empidonax triaillii extimus*	F/E	Breed within riparian areas of dens willows or tamarisk often with standing water.	No effect
Western Snowy Plover	*Charadrius nivosus nivosus*	F/T S/E	Primarily breed on coastal beaches, offshore islands bays and estuaries.	No effect

No effect determinations were made to plant and animal species list obtained from USFWS and NMFS since no suitable habitats occur within the project impact area; the species weren't observed within the BSA; and/or no direct or indirect effects to these species or their habitats

will occur as result of this project. No critical habitats are found within BSA. Therefore, no Section 7 consultation with USFWS and NMFS is required.

California Endangered Species Act

The project will have no effect on State listed plant and animal species since no suitable habitats occur within the project impact area; the species weren't observed within the BSA; and/or no direct impacts to these species or their habitats occurred as result of this project.

Essential Fish Habitat Consultation Summary

Due to the absence of EFH within the BSA, no EFH consultation is anticipated.

Wetlands and Other Waters Coordination Summary

A Jurisdictional Delineation (JD) was prepared to determine the potential presence of Federal and State jurisdictional waters and wetlands within the BSA. The JD is provided as Appendix E. The BSA contains potential jurisdictional and non-jurisdictional drains. A total of nine drains were evaluated and five of the drains (D-5,6,7,8 and 9) are considered non-jurisdictional features under the Corps and CDFW since they lack OHWM and defined bed and bank. Therefore, the drains that will be discussed below excludes these drains. A jurisdictional delineation report for the County of Orange Projects and regulatory Permit Division was prepared in 2017. The report is prepared for maintenance sand removal project within San Diego creek. Since portion of this project is located within the County project boundary, the County JD is referred in the jurisdictional report prepared for this project.

United States Army Corps of Engineers and California Department of Fish and Wildlife Jurisdictions

Based on the results of the jurisdictional delineation report, San Diego Creek is the only drain that is subject to USACE under Section 404 of the CWA and Section 1602 of the Fish and Game code. This creek is a naturally occurring drainage feature that conveys ephemeral flows from adjacent drains and natural flood water during rain fall. The creek is also a flood control channel and is mainly maintained by the County of Orange throughout the watershed. To keep protect bridge structures and improve the flow within the creek, the creek within the watershed has been altered from the original condition. As a result, the creek within the BSA was altered from its natural condition due to the installation of RSP, check dam, concrete line embankments on both sides of the channel, and routine sediment removal activities. In 1988, the City of Irvine in collaboration with the County of Orange placed RSP within San Diego creek under and around SR-133 bridges to protect the structural integrity of the bridge and to mitigate the scour around the bridge pier walls and abutments. This improvement resulted in permanent impacts to the natural creek bed. Based on a bridge inspection conducted by Caltrans in 2018 and 2019,

scouring around the bridge pier walls and abutments required replacement of previous RSP with a larger RSP.

The project will result in a total of 1.62 acres of temporary impacts to Corps non-wetland waters of the US and CDFW unvegetated jurisdictional areas. These temporary impacts resulted from installation of slurry underneath pile caps, temporary access road, and replacement of RSP within San Diego Creek. The project will require installation of slurry underneath the bridge pile caps (foundation of the bridge pier walls and abutments). Since the slurry will be placed underneath concrete pile caps, this impact is considered as temporary impact to jurisdictional waters. The entire San Diego creek bed under SR-133/I-405 connector bridge and left bridge (10-50ft from the bridge decks) received RSP previously. Therefore, the proposed replacement of RSP within the San Diego creek is also considered as temporary impact to jurisdictional waters.

Due to installation of foundations for extension pier walls and abutment and installation of Slurry material underneath the pile caps within San Diego creek, the project will result in 0.096 acres of permanent impacts to Corps non-wetland waters of the US and CDFW unvegetated jurisdictional areas.

The San Diego creek is located within a SAMP area. The proposed project improvements within San Diego creek is located inside aquatic resources integrity areas. Therefore, this project is subject to a Corps developed modified permitting procedure and CDFW Watershed Streambed Alteration Agreement (WSAA) for San Diego watershed. The project may require letter of Permission from US Army Corps of Engineers. The project requires Pre-application Coordination with regulatory agencies prior to submittal of permit applications.

Since the proposed project impact occurs within existing RSP footprint, no mitigation is proposed at this time. Per Corps SAMP guidance, no mitigation plan is required as the project will not result in permanent impacts to riparian habitat, wetland, cultural resources, and endangered or threatened species.

United States Army Corps of Engineers and California Department of Fish and Wildlife Non-Jurisdictions Waters

Drainages 1, 2, and 3 are linear concrete trapezoid channels. These drains are connected to each other and drainage 3 discharge into San Diego creek. These drains are manmade, concrete-lined drainage features excavated on dry land solely for the purpose of draining upland and freeway run off. Also, these drainage features are mostly barren and don't support wetland or riparian vegetation.

These drains are not subject to Corps jurisdiction under section 6 (b) (3) of the 2015 CWA as they are not relocated tributaries or excavated in a tributary. Also, they aren't subject under Rapanos as they don't convey relatively permanent flow water and drain upland waters.

These drains aren't subject to CDFW under Fish and Game code 1600 as they don't support aquatic life, riparian vegetation or stream-dependent terrestrial wildlife (1994 Field Guide to Lake Streambed Alteration Agreement).

To accommodate the project widening, drainage 2 will be converted into a box culvert. The project will result in 0.16 acres of temporary impacts to this non-jurisdictional water.

Regional Water Control Board Jurisdiction

The water board has no public guidance on determining RWQCB jurisdictional area and is consistent with the Federal definition of wetlands and other waters of the US under section 401 certification. The project will result in 1.67 acres and 0.096 acres of temporary and permanent impacts to non-wetland waters of the US respectively. In compliance with the CWA, a 401 certification from Santa Ana Regional Board is required.

Figure 5: Impacts to Potential Jurisdictional Waters Map

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Figure 5
Sheet 1 of 3

SR-133 Operational Improvements Project
Impacts to Potential Jurisdictional Drainage
12-ORA-133 PM 8.3-9.3
EA 0N8900

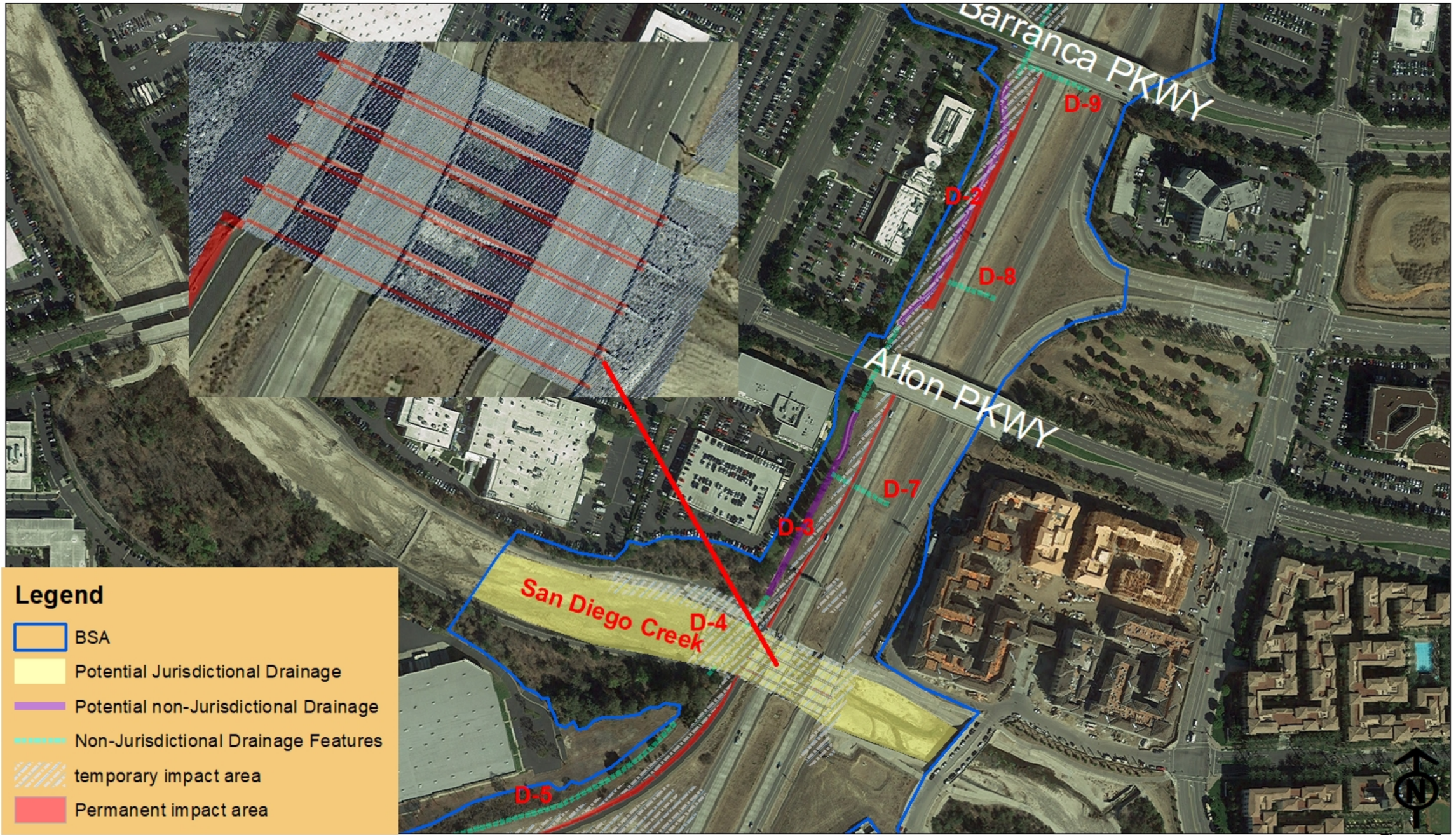

Figure 5
Sheet 2 of 3

SR-133 Operational Improvements Project
Impacts to Potential Jurisdictional Drainage
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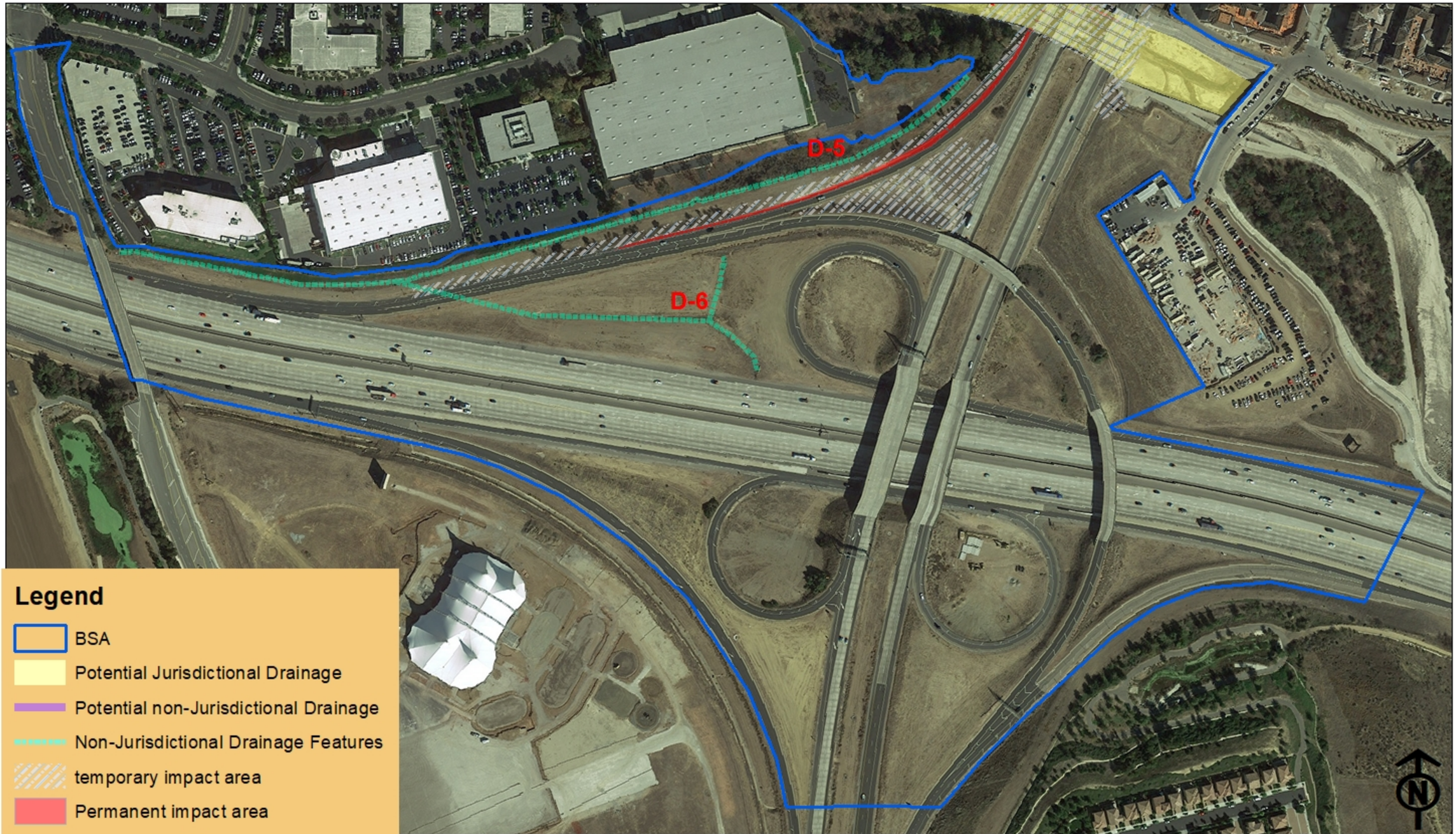

Figure 5
Sheet 3 of 3

SR-133 Operational Improvements Project
Impacts to Potential Jurisdictional Drainage
12-ORA-133 PM 8.3-9.3
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Discussion of Wildlife Movement Corridors

Often drainage structures provide wildlife corridors for animals. While wildlife movement is expected to occur through San Diego Creek, the remaining drainage structures within the BSA aren't expected to provide wildlife movement as they are located within developed areas and are not connected to regional wildlife linkages. Some of the wildlife footprints found within San Diego Creek are coyote (*Canis latrans*), domestic dogs, raccoons, and other small animals (birds). The project will result in temporary impacts to wildlife movement within San Diego Creek during construction in the creek. Since there is enough area for wildlife movement in the creek and no work is expected to occur within the creek during darkness, the project will have a minimal temporary impact to wildlife movement.

Anadromous Fish Passage

Caltrans is required by Senate Bill (SB) 857 to include remediation and assessment for barriers to historic fish passages in projects. Also, the Department is required to construct projects without presenting barriers to historic fish passages. The Department is required to collaborate with the Department of Fish and Game to prepare an annual report to the State Legislature detailing the progress in location, assessment and remediation barriers to historic fish passages. This bill prohibits construction or maintenance in certain fish and game districts, of any device or contrivance that prevents, impedes, or tends to prevent or impede, the passaging of fish up and down stream within historic fish passages.

A reconnaissance-level fish passage assessment was conducted within San Diego Creek on February 27, 2019. San Diego Creek is a tributary to the Upper Newport Bay Ecological Reserve which outlets to the Pacific Ocean. Steelhead historic data obtained from NMFS and CDFW databases was reviewed to determine the presence of anadromous fish passage within the project footprint or BSA. No record of Steelhead or anadromous fish data within San Diego Creek was obtained from either agency. According to Southern California Steelhead Recovery Plans (NMFS, 2012), neither Upper Newport bay nor San Diego Creek are included in the plans. Therefore, anadromous fish are not expected to be present and has no potential to occur within the BSA.

The proposed project isn't expected to affect fish passages as there is no evidence of historical use of Steelhead or anadromous fish passage within San Diego Creek and no anadromous fish are expected to be within the BSA. Therefore, no measures are warranted.

Invasive Species

On February 3, 1999, President Clinton signed EO 13112 (Invasive Species), requiring federal agencies to combat the introduction or spread of invasive species in the United States. This EO defines invasive species as "…any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." FHWA guidance issued August 10, 1999, directs the use of the State's noxious weed list to define the invasive plants that must be considered as part of CEQA analysis for a proposed project in California.

Several invasive plants identified under the Cal-IPC California Invasive Plant Inventory were observed within the BSA. Since the project will not require the removal of invasive plants within natural areas, the project isn't expected to spread invasive plants. However, to avoid introduction of invasive plants within San Diego Creek during construction period, the following measures will be implemented:

- During construction, the contractor shall inspect and clean construction equipment at the beginning of each day and prior to transporting equipment into the creek.
- During construction, soil and vegetation disturbance will be minimized to the greatest extent feasible.
- Contractor shall use weed-free straw and fiber rolls to use for erosion control.
- During construction, the contractor shall ensure that all material stockpiled within the creek is sufficiently watered and covered to prevent growth of invasive plants.
- During construction gravel and rock will be obtained from weed-free sources.

Migratory /non-game Nesting Birds and Bats

Native bird species along with their nests are protected under the MBTA (16 USC 703–712) and by California Fish and Game Code Sections 3503, 3503.5, and 3800. These laws prohibit the take, possession, import, export, transport, sale, purchase, barter, or offering for sale, purchase, or barter, of any migratory bird and its eggs, parts, and nests, except as authorized under a valid permit.

In addition, EO 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) directs Federal agencies "…taking actions that have, or are likely to have, a measurable negative impact on migratory bird populations to develop and implement a Memorandum of Understanding with the Fish and Wildlife Service that promotes the conservation of migratory bird populations."

Migratory and non-game birds are known to nest within ornamental vegetation. The project is expected to require removal of ornamental vegetation and trimming of native plants during construction period. Therefore, the project will result in direct or indirect impacts to nesting birds and their nests.

In order to avoid impacts to nesting birds, vegetation clearing shall occur outside nesting season (February 1- August 30). In the event that the project activities are required to occur during nesting season, a qualified biologist will conduct pre-construction nesting bird surveys. If nesting birds found, the biologist will create a buffer zone and an ESA fence will be placed around the buffer zone. No construction work shall occur within the buffer zone until the nest is no longer active and all young birds fledged.

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US Army Corps of Engineers, Special Public Notice April 2008. Revocation of Selected Nationwide Permits and Proposed Letter of Permission Procedures for San Diego Creek Watershed Special Area Management Plan (SAMP).

Appendix A: Photographs

	1) Looking RSP within the downstream area of San Diego creek bridge and ruderal vegetation adjacent to fence.
	2) Looking south of the San Diego creek. Upland Ornamental and upland Sycamore woodland Planting
	3) Looking RSP within the upstream area of San Diego creek bridge

	Looking Southbound (SB) SR-133 South of Irvine Center Drive. Ornamental landscape area adjacent to the SB SR-133
	Looking south of Southbound SR-133/ NB 405 connector road. non-native and ruderal adjacent to the freeway
	Looking north of Southbound SR-133 south of Barranca Parkway. Ornamental vegetation

Appendix B:
USFWS Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901
http://www.fws.gov/carlsbad/

In Reply Refer To:
Consultation Code: 08ECAR00-2019-SLI-0787
Event Code: 08ECAR00-2020-E-00148
Project Name: SR-133 Operational Improvements Project

October 11, 2019

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, and proposed species, designated critical habitat, and candidate species 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). 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:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2019-SLI-0787

Event Code: 08ECAR00-2020-E-00148

Project Name: SR-133 Operational Improvements Project

Project Type: TRANSPORTATION

Project Description: California Department of Transportation (Caltrans) proposes operational improvements project on southbound SR-133 from Southbound I-5/ Southbound133 connector to Southbound 133/Northbound I-405 connector. The proposed project includes to add an auxiliary lane on SB 133 from SB I-5 connector to 300 feet south of San Diego creek and add a second travel lane on SB 133/NB i-405 connector.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/33.65831659439037N117.75747811845082W

Counties: Orange, CA

Endangered Species Act Species

There is a total of 9 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[1], 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
Pacific Pocket Mouse *Perognathus longimembris pacificus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8080	Endangered

Birds

NAME	STATUS
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Light-footed Clapper Rail *Rallus longirostris levipes* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6035	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

Flowering Plants

NAME	STATUS
Big-leaved Crownbeard *Verbesina dissita* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8049	Threatened
Laguna Beach Liveforever *Dudleya stolonifera* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7919	Threatened

Critical habitats

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

Appendix C: NMFS Species List

NMFS Species list for SR- 133 Operational improvements project (EA: 0N8900) obtained from NMFS KMZ Resources tool on 05/16/2019 and updated on October 11, 2019.

Quad Name **Tustin**
Quad Number **33117-F7**

ESA Anadromous Fish

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

ESA Anadromous Fish Critical Habitat

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

ESA Marine Invertebrates

Range Black Abalone (E) -

An "X" following listed feature indicates it may be present, identified resources may be present throughout the entire quadrangle or only a portion of it.

NMFS Species list for SR- 133 Operational improvements project (EA: 0N8900) obtained from NMFS KMZ Resources tool on 05/16/2019 and updated on October 11, 2019.

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

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

ESA Whales

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

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

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

An "X" following listed feature indicates it may be present, identified resources may be present throughout the entire quadrangle or only a portion of it.

NMFS Species list for SR- 133 Operational improvements project (EA: 0N8900) obtained from NMFS KMZ Resources tool on 05/16/2019 and updated on October 11, 2019.

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 -
MMPA Pinnipeds -

An "X" following listed feature indicates it may be present, identified resources may be present throughout the entire quadrangle or only a portion of it.

Appendix D
Plant and animal species Observed

Plant Species observed

Anacardiaceae	**Sumac Family**
* *Schinus terebinthifolia*	Brazilian pepper tree
**Schinus molle*	Peruvian pepper tree
Asteraceae	**Sunflower Family**
Artemisia californica	California sagebrush
Baccharis pilularis	Coyote bush
Encelia californica	California encelia
Baccharis Solicifolia	Mule fat
Aizoaceae	**Carpetweed Family**
**Carpobrous edulis*	Ice Plant
Cactaceae	**Cactus Family**
Prickly pear	Opunia ficus
Fabaceae	**Pea Family**
**Prostrate Acacia*	Acacia redolens
Fagaceae	**Beech Family**
Quercus agrifolia var. *agrifolia*	Coast live oak
Myrtaceae	**Myrtle Family**
**Eucalyptus* sp.	Eucalyptus
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum	California buckwheat
Platanaceae	**Sycamore Family**
Platanus racemosa	Western sycamore
Rosaceae	**Rose Family**
**Prunus caroliniana*	Carolina Laurel cherry
Verbenaceae	**Verbena Family**
**Lantana montevidensis*	Lantana sellowiana

*** Introduced, nonnative species**

Animal species Observed

Phrynosomatidae	**Phrynosomatid Lizards**
Sceloporus occidentalis	Western fence lizard
Accipitridae	**Hawks, Kites, Eagles, and Allies**
Buteo jamaicensis	Red-tailed hawk
Columbidae	**Pigeons and Doves**
* *Columba livia*	Rock pigeon
Zenaida macroura	Mourning dove
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Tyrannidae	**Tyrant Flycatchers**
Tyrannus vociferans	Cassin's kingbird
Parulidae	**Wood Warblers**
Setophaga coronata	Yellow-rumped warbler
Corvidae	**Crows and Jays**
Corvus corax	Common raven
Corvus brachyrhynchos	American crow
Fringillidae	**Fringilline and Cardueline Finches and Allies**
Haemorhous mexicanus	House finch
Spinus psaltria	Lesser goldfinch
Sturnidae	**Song bird**
Sturnus vulgaris	European starling
Sciuridae	**Squirrels, Chipmunks, and Marmots**
Spermophilus beecheyi	California ground squirrel

Taxonomy and nomenclature are obtained from the following resources:

- Calflora information on wild California plants, https://www.calflora.org/
- Field Guide to the Birds of North America, fourth edition, National Geographic, Washington DC.
- The Cornerlab of Ornithology, All About Birds website: https://www.allaboutbirds.org
- Audubon Guide to North American Birds website: https://www.audubon.org/field-guide/birds

Appendix E
Jurisdictional Delineation Report

JURISDICTIONAL DELINEATION REPORT

FOR
SR-133 OPERATIONAL IMPROVMENTS BTWEEN SR-133/I-5 CONNECTOR AND SR-133/I-405 CONNECTOR ORANGE COUNTY, CALIFORNIA

Introduction

This jurisdictional delineation report is prepared for the *California Department of Transportation (Caltrans) safety project located on* southbound SR-133 from Southbound I-5/Southbound133 connector to Southbound 133/Northbound I-405 connector in the City of Irvine, California. The proposed project proposes to add an auxiliary lane on SB 133 from SB I-5 connector to 300 feet south of San Diego Creek and add a second travel lane on SB 133/NB I-405 connector. This report is a routine-level jurisdictional delineation report that identifies the presence /absence of potential jurisdictional areas within the project limits. Thus, the report can supplement regulatory agency permit applications for Section 404 of the Clear Water Act, 401 certification, and Streambed Alteration Agreements from the US Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) respectively.

Regulatory Background

United States Army Corps of Engineers

The United States Army Corps of Engineers regulates discharges of dredged or filled material into waters of the United states. Waters of the United States include wetland and non-wetlands bodies that are subject to the Clean Water Act. Although the Corps takes jurisdiction over wetlands that meet the three criteria (hydrology, soil and vegetation) pursuant to the 1987 manual, they take jurisdiction over non-wetland waters that are tributaries to Traditional Navigable Waters (TNW). Under 33 code of Federal Regulations (CFR) 328.3 (a), the Corps defines waters of the US as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use interstate or foreign commerce
2. All interstate waters including interstate wetlands
3. All other waters such as intrastate lakes, rivers, streams (including intermittent stream) mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows playa lakes, or natural ponds the use, degradation or destruction of which could affect interstate or foreign commerce…
4. All impoundments of waters otherwise defined as Waters of the United States under the definition
5. Tributaries of waters defined in paragraphs (a)(1)-(4) of CFR 328.3

In 1985 the US Environmental Protection Agency (EPA) signed a memo which opined the movement of migratory birds across the state boundaries. In 1986 the Corps adapted the EPA memo to take jurisdiction over all-natural water bodies that were used or could be used as habitat

by migratory birds. Although this migratory bird rule was invalidated by the US Supreme Court decision in the SWANCC vs. Corps US Supreme Court's decision in 2001, the Corps believed to be taking jurisdiction over traditional navigable water and any tributary to traditional navigable water and wetland adjacent to any of these waters.

Following the SWANCC Supreme Court decision, in 2006, the US Supreme Court further extends the Corps jurisdiction due to Rapanos vs. United States and Carabell vs. United States court decisions. Thereafter, these court decisions are referred as "Rapanos". The Supreme Court concluded that water bodies that are not Traditional Navigable Water (TNW) including wetlands adjacent to those non-TNWs are subjected to CWA jurisdiction if the water body is relatively permanent (flow water at least seasonally) or if the water body is a wetland that directly abuts a relatively permanent water body (RPW), or if a water body, in combination with all wetlands adjacent to that water body, have a significant nexus with the TNWs. Following these Supreme Court decisions several memorandums and Rapanos guidance letters were developed by the EPA and the Corps to implement the Court decision. In accordance with the June 5, 2007 Rapanos guidance: the following geographic features generally are not jurisdictional waters because they are not tributaries, or they do not have a significant nexus to TNWs:

- Swales, erosional features (e.g. gullies) and small washes characterized by low volume, infrequent, and short duration flow
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water
- Uplands transporting over land flow generated from precipitation (i.e rain events and snowmelt)

In light of supreme court decisions on SWANCC, and Rapanos, the Environmental Protection Agency (EPA) and USACE, published a final rule defining the scope of waters protected under the CWA in 2015. This rule became effective on August 28, 2015. The rule is expected to protect the nation public health and aquatic resources and increase CWA program predictability and consistency by clarifying the scope of "Water of the United States" protected under the Act. In accordance with Corps, here are the clarifications of "Waters of the United States" CFR 328.3 (a)revised under the 2015 rule:

1. "Isolated" other waters are no longer a category (a) (3) is the territorial seas in CWA and under the CWA geographically isolated waters are evaluated for a significant nexus under (a) (7) or (a)(8) along with hydrologically connected wetlands that don't meet the new definition of neighboring.
2. Ponds and lakes are no longer (a)(5) tributaries even when they contribute flow to the tributary network. Instead they are (a)(6) adjacent (only wetlands could be adjacent under 1986 regulations). Wetland directly abut (a)(6) ponds and lakes are adjacent even if they don't meet the definition of neighboring.

3. Definition of adjacent (a)(6) are: any portion is within 100ft of the OHWM of an (a)(1)-(a)(5) water or any portion is within 100-year floodplain of an (a)(1)-(a)(3) water but not more than 1, 500ft from OHWM, or any portion is within 1,500ft of the high tide line of an (a)(1)-(a)(3) water or the OHWM of the great lakes. But excludes waters being used for established normal farming, ranching and silviculture activities. Also, adjacent (a)(6) includes:
    a. Non-wetland waters
    b. No case-specific significant test required
    c. Excludes established adjunct land use
    d. Hydraulic connection no longer a factor
    e. Man-made dikes or barriers, natural river berms, beach dunes and the like now limited by neighboring
    f. Non-adjacent water subjected to (a)(7) or (a)(8) case-specific significant nexus evaluation is required.
4. Abutting used only in the context of wetlands associated with lakes and ponds which were taken out of the category of tributaries. However, abut or abutting not defined under the new rule.
5. Relatively permanent waters under the Rapanos guidance is no longer a category. Instead If a water meets the definition of tributary, it is an (a)(5) water unless excluded. Flow regime factors into some exclusions, but using the terminology ephemeral, intermittent, and perennial rather than relatively permanent.
6. In addition to previous CWA exclusions, Waste treatment systems and prior converted cropland, the following exclusions are added to CWA rule:
    a. 1986premble derived
        i. Certain ditches
        ii. Artificially irrigated areas that would revert to dry land
        iii. Artificial, constructed lakes and ponds
        iv. Artificial reflecting pools or swimming pools
        v. Small ornamental waters
        vi. Water-filled depressions
    b. Stormwater control features
    c. Wastewater recycling features
    d. Not wetland and no OHWM… but just in case:
        i. Erosion features
        ii. Puddles
        iii. Groundwater
7. Exclude ditches (b)(3):
    a. Ditches with ephemeral flow that aren't a relocated tributary or excavated in a tributary

b. Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands
c. Ditches that don't flow, either directly or through another water, into a water identified in paragraphs (a)(1) through (3) of this section

8. Tributary and tributaries. The terms tributary and tributaries each mean a water that contributes flow, either directly or through another water (including an impoundment identified in paragraph (a)(4) of this section), to a water identified in paragraphs (a)(1) through (3) that is characterized by the presence of the physical indicators of a bed and banks and an ordinary high-water mark. These physical indicators demonstrate there is volume, frequency, and duration of flow sufficient to create a bed and banks and an ordinary high-water mark, and thus to qualify as a tributary. A tributary can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, canals, and ditches not excluded under paragraph (b) of this section. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more constructed breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if it contributes flow through a water of the United States that does not meet the definition of tributary or through a non-jurisdictional water to a water identified in paragraphs (a)(1) through (3) of this section.

Due to the litigation on this new 2015 CWA rule, the rule is only in effect in 22 States and California is one of the States. Furthermore, the President issued an Executive Order to clarify the new rule on February 28, 2017. In compliance with the EO, EPA and Corps have proposed a new definition of "Waters of the United States that clarifies federal authority under the CWA. This new definition is still in the review period and is unknown when it will be completed. Although CDFW or RWQCB do not have methods to approve/concur with this delineation report, jurisdictional determination approval request forms along with this Jurisdictional Delineation report will be submitted to the Corps for their approval. Therefore, the information included within this jurisdictional delineation report is preliminary until reviewed and approved by USACE.

Project Location

The proposed operational improvement is located on southbound SR-133 between I-5/133 connector road and SR-133/I-405 interchange. A large portion of the project is located within the Caltrans right of way. However, several right of way acquisitions and temporary easements will

be obtained to accommodate the construction. Therefore, the Biological Study Area (BSA) limits includes adjacent properties outside the Caltrans right of way.

Figure 1: Project Location Map

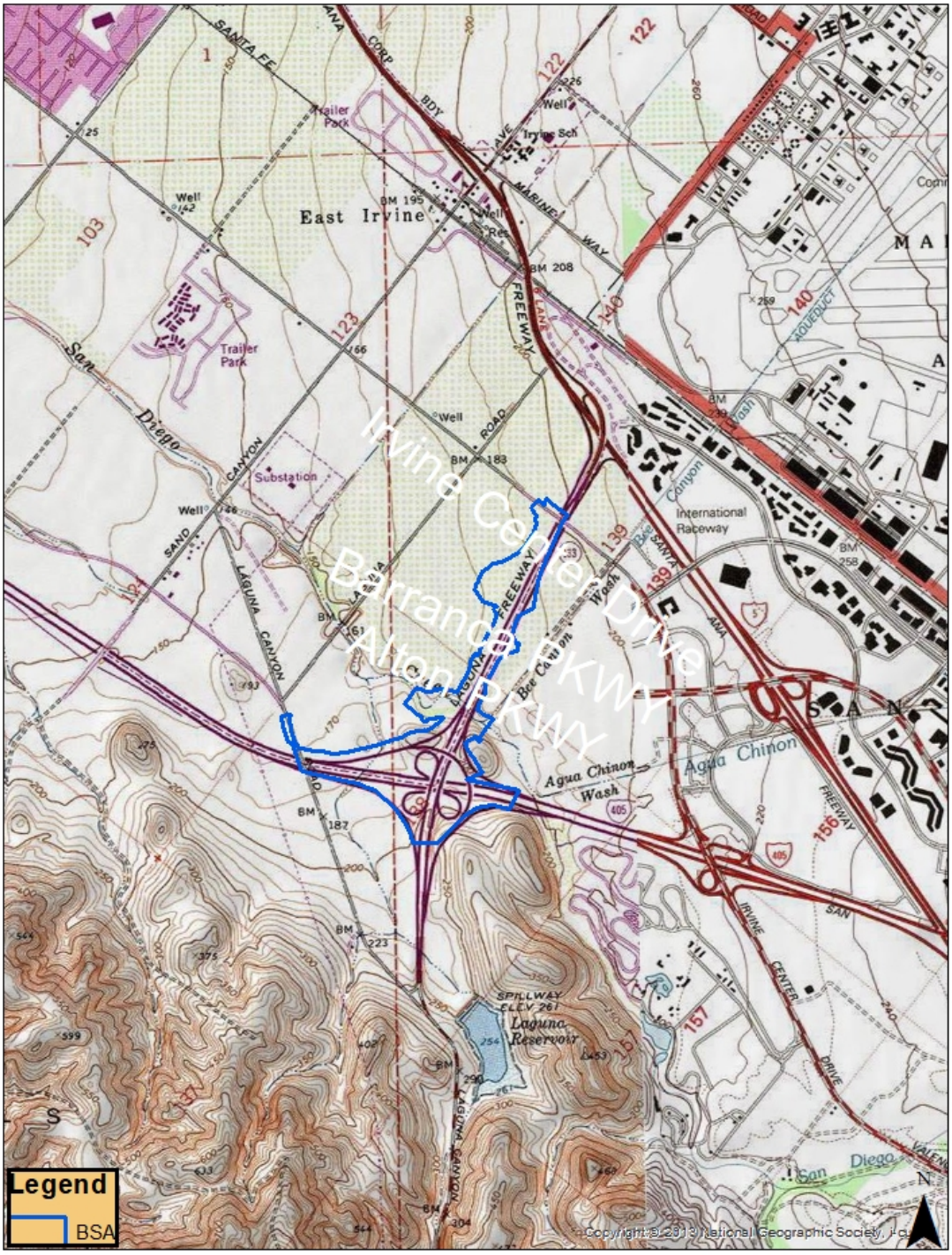


Figure 1
SR-133 Operational Improvements Project
Project Location Map
12-ORA-133 PM 8.5-9.3
EA 0N8900

Methodology

Literature reviews including, the USGS 7.5- minute topographic Tustin quadrangle and US Department of Agriculture soil survey maps were reviewed to identify drainage features within the project study area.

Based on the project preliminary design plans, the BSA is located within the USGS 7.5-minute Tustin quadrangle. Therefore, the project jurisdictional Delineation Report only focused on the drains located within the project impact areas.

The BSA was delineated on maps (see Figure 1) and is limited to drains potentially subject to State and Federal regulations, policies and acts. A field Jurisdictional Delineation was performed by Kedest Ketsela and Chris Waterston on February 28, 2019. The project study area was walked during the field assessment. The drains were evaluated based on the 1987 Wetland Delineation Manual, Interim Regional Supplement to Corps of Engineers Wetland Delineation Manual Arid West Region, A Field Guide to Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States, and 2007 and 2008 Rapanos Guidance and Memorandums. Furthermore, the 2015 CWA rule described above was used to evaluate the drains. Also, areas subject to California Department of Fish and Wildlife (CDFW) were evaluated in accordance with California Fish and Game code 1600 and A Field Guide to Lake and Streambed Alteration Agreements Section 1600-1607 California Fish and Game code.
The following three criteria that normally classify as jurisdictional wetland were used to evaluate each potential jurisdictional area:

Hydrophytic Vegetation: Based on the 1987 Wetland Delineation Manual, a site meets the hydrophytic vegetation criterion, if 50% of all the dominant species present within a site that has wetland indictors status of obligate (OBL), facultative wetland (FACW), or facultative (FAC). Furthermore, in accordance with Aird West supplement, an area is considered vegetated if it has 5 percent or more total plant cover. The plant species that meet hydrophytic vegetation criteria have 99 to 67 percent of probability to occur in wetlands under normal conditions. While OBL status plant occurs in a wetland area during growing season, FACW or FAC status plants occur in wetland or elsewhere.

Hydric Soil: Wetland soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions (USDA-NRCS 1995) or favor the growth and regeneration of hydrophytic vegetation as amended by NTCHS. However, a saturated soil for only brief periods during the growing season and support

prevalence vegetation typically adapt for life only in aerobic soil condition will qualify as non-wetland (Environmental Laboratory 1987).

Hydrology: Wetland hydrology is characterization of an area that is periodically inundated or has soils saturated to the surface at some time during the growing season. The presence of wetland hydrology has influence on characteristic of vegetation and soil due to anaerobic and reducing conditions respectively. Prolonged anaerobic conditions indicators are watermarks, visual observation of inundation or saturation, surface scour and oxidized root channels. For any area that is not inundated with water and lack of surface water, the USACE jurisdiction is limited laterally extent to water body that display an Ordinary High-Water Mark (OHWM) or beyond the OHWM to the limit of any adjacent wetlands if present.

Unlike wetland hydrology determination, the jurisdiction of non-wetland waters of the US is mainly dependent on the presence of the OHWM. However, the Corps jurisdiction on non-wetland waters of the US under Section 404 of the CWA is limited through hydrological connectivity of tributary systems linking a stream channel with TNW. In light of Supreme Court Decisions on SWANCC and Rapanos cases, the US Army Corps of Engineers and EPA developed guidelines on evaluating each drainage and required that all determinations for non-navigable and isolated waters be elevated for Corps and EPA HQ review prior to the district making a final decision on the Jurisdictional Determination. An Approved Jurisdictional Determination form was used as the Corps Regulatory National Standard Operating procedure for conducting an approved Jurisdictional Determination.

In 2015, the US Army Corps of Engineers and Environmental Protection Agency (EPA) published the Clean Water Rule to clarify water resources management in the United States under a provision of the Clean Water Act of 1972. Although the 2015 CWA rule became effective in 22 States, the rule is in the process of revision due to an Executive Order issued by the President of the United States on February 28, 2017.

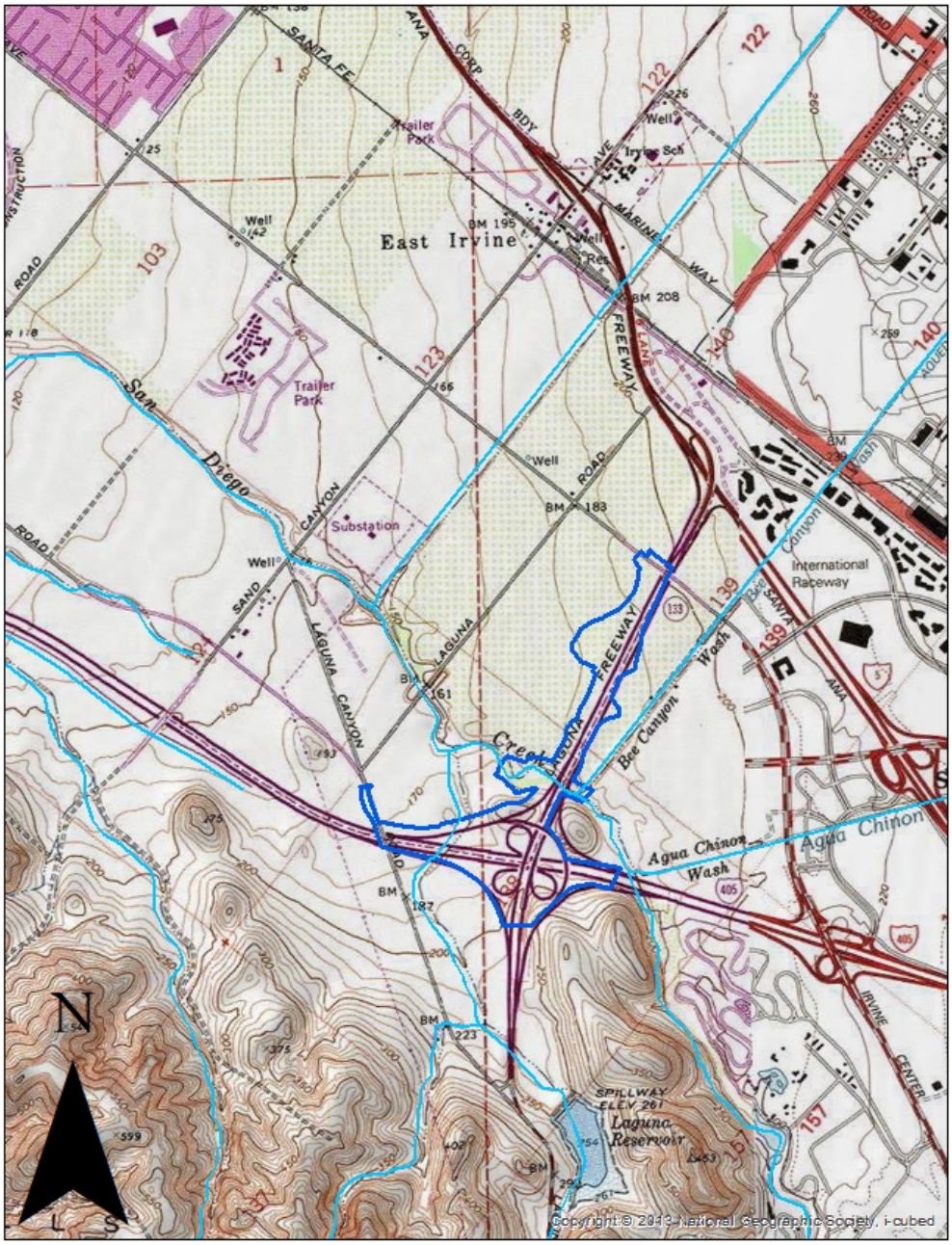
Typically, the California Department of Fish and Wildlife jurisdiction is consistent with Corps jurisdictional areas except the CDFW jurisdictional area includes defined bed and bank either to the extent of associated riparian vegetation or the top of the bank.
Simultaneously, the Regional Water Quality Control Board jurisdiction is similar to the Corps, except the Board regulates isolated waters (not subjected to CWA) under the State Porter-Cologne Water Quality Act (Porter-Cologne Act) using the three parameters.

Environmental Setting

The project is located within a highly urbanized area and lacking natural environment. The developed area includes transportations roads, buildings (commercial, residential, industrial and business), ornamental landscape and disturbed lands. Therefore, the natural and physical features of the topography of the study area has been modified from the original elevations. The project is located within San Diego watershed and HUC 12. The elevation of the project region ranges from 180-1188 ft. above mean sea level. Although San Diego creek is the only remaining natural resource occuring within the biological study area, the creek itself has been modified from the natural conditions due to the placement of rip-rap, a check dam, and concrete embankments. The project study area is located within the San Diego Creek Watershed. The annual regional precipitation is approximately 13 inches during the rainy season. Modified natural drains and manmade storm and nuisance waters discharge into San Diego Creek. Based on the Jurisdictional delineation report prepared for the County project, Bee Canyon and Agua Chinon washes (are now concrete lined box culverts) are located within and outside the BSA respectively and the soil within the creek is limited to Riverwash.

Furthermore, the project is located with a Special Area Management Plan (SAMP) area developed by the US Army Corps of Engineers and the California Department of Fish and Wildlife to integrate a watershed approach to address anticipated regulated activities and aquatic resource conservation needs. In collaboration with these two agencies, a program Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) was prepared for the San Diego watershed in 2009. The Corps developed an analytical framework as a decision-making tool for evaluating regulated activities that would affect aquatic resources. Based on the framework developed by the Crops, the Corps modified the permitting procedure and CDFW established a Watershed Streambed Alteration Agreement (WSAA) for the San Diego watershed. This watershed specific plan was established to address anticipated permitting needs and compensatory mitigation to improve the long-term management of aquatic resources within the watershed.

Figure 2: Regional Drainage



0 1,300 2,600 5,200 feet

Figure 2
SR-133 Operational Improvements Project
Regional Drainage features
12-ORA-133 PM 8.5-9.3
EA 0N8900

Result

Based on the field assessment conducted on February 27, with the exception of San Diego Creek, the remaining drainages evaluated within the BSA are manmade concrete lined drainages and were built to collect run off from the freeway, irrigation system, and adjacent properties. Since the field survey was conducted during the rainy season, natural water was observed within San Diego Creek and no water was observed within the remaining drains. While ruderal and non-native plants grow on top of the concrete lined drains (drainage 1, 2 and 3), no riparian plants were observed within all the drains evaluated under this jurisdictional report. A total of 9 drainage features were evaluated within the BSA. D-5, 6,7,8, and 9 are non-jurisdictional features since they convey surface runoff and don't have OHWM and lack defined beds and banks. See Figure 3. Therefore, they aren't considered to be subject to jurisdictional waters and will not be discussed further. However, the Corps/CDFW/RWQCB may reserve the right to regulate these drainage features.

Drainage Descriptions

Drainage 1

This concrete lined drain runs parallel to SR-133. The drain is approximately 623 ft in length and 4.3 ft wide under the Corps jurisdiction and 11.10ft under CDFW jurisdiction. The OHWM is approximately 2.5-inch-deep and is evidenced by the presence of sediment deposits on the concrete bank. The ditch lacks vegetation and soil to meet the Corps criteria for wetland. The drain collects upland water (freeway run off and irrigation water) and drains into drainage 2. This channel is not subject to Corps jurisdiction under section 6 (b) (3) of the 2015 CWA as it isn't a relocated tributary or excavated in a tributary. Also, this drain isn't subject under Rapanos as they don't convey relatively permanent flow water and drain upland waters.

Drainage 2

This concrete lined drain runs parallel to SR-133. The ditch is approximately 724 ft in length and 7.7 feet wide under the Corps jurisdiction and 15ft under CDFW jurisdiction. The OHWM is approximately 6-inch deep and is evidenced by the presence of sediment deposits on the concrete bank. The drain lacks vegetation and soil to meet the Corps criteria for a wetland. It collects water from drainage 1, the freeway, and landscape irrigation water. This channel drains into drainage 3. This channel is not subject to Corps jurisdiction under section 6 (b) (3) of the 2015 CWA as it isn't a relocated tributary or excavated in a tributary. Also, this drain isn't subject under Rapanos as they don't convey relatively permanent flow water and drain upland waters.

Drainage 3

This concrete lined drain runs parallel to SR-133. The ditch is approximately 534 ft in length and 3ft- 13.10ft wide. The OHWM is approximately 1 inch deep and is evidenced by the presence of sediment deposits on the concrete bank. This drain collects water from Drainage 1, 2 and adjacent landscape irrigation before it discharges into San Diego creek via a concrete box culvert. This channel is not subject to Corps jurisdiction under section 6 (b) (3) of the 2015 CWA as it isn't a relocated tributary or excavated in a tributary. Also, this drain isn't subject under Rapanos as they don't convey relatively permanent flow water and drain upland waters.

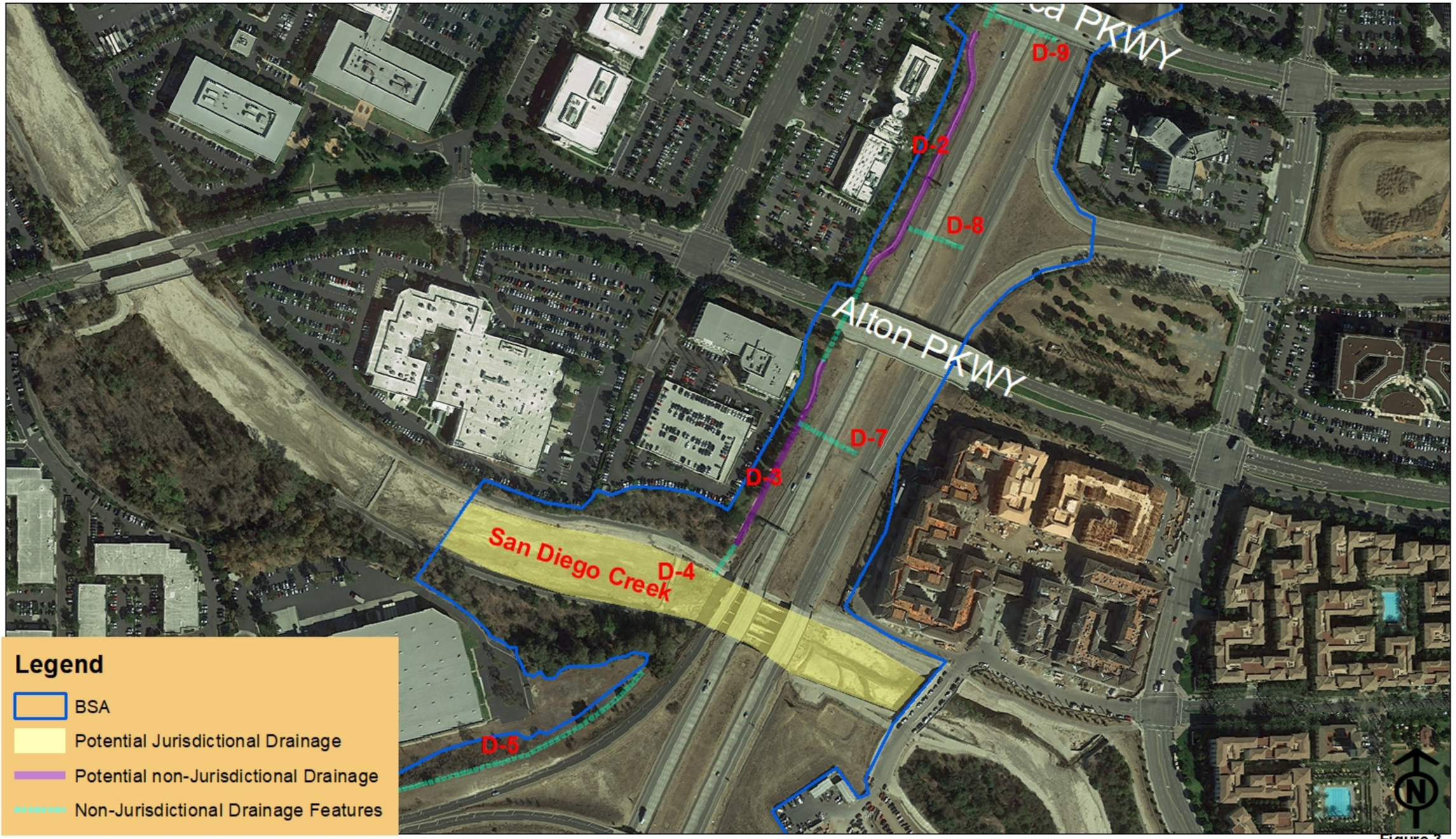
Drainage 4

Drainage 4 is identified as San Diego Creek. This creek is a naturally occurring drainage feature that conveys ephemeral flows from adjacent drains and natural flood water during rain fall. The creek within the BSA was altered from its natural condition due to the installation of rip-rap and a check dam within the main channel, concrete line embankments on both sides of the channel, and routine sediment removal activities conducted by the Orange County Flood Control District (OCFCD). The creek within the BSA is mainly covered with large Rock Slope Protection (RSP) and lacks vegetation. In January 2017, ICF prepared a Jurisdictional Delineation report for the County of Orange Projects and Regulatory Permit Division. The report is prepared for sand removal maintenance project proposed by the County of Orange. The entire BSA for this project is located within the County project limits. Based on the County Jurisdictional report, the portion of San Diego Creek within this BSA is subject to Corps jurisdiction as non-wetland WO US and CDFW as an unvegetated streambed. A total of 3.5 acres and 4.2 acres of the creek within the BSA are subject to Corps and CDFW jurisdictions respectively.

Figure 3: Potential Jurisdictional Delineation Map

Figure 3
Sheet 1 of 3

SR-133 Operational Improvements Project
Potential Jurisdictional Drainage
12-ORA-133 PM 8.3-9.3
EA 0N8900



0 350 700 1,400 Feet

Caltrans

Figure 3
Sheet 2 of 3

SR-133 Operational Improvements Project
Potential Jurisdictional Drainage
12-ORA-133 PM 8.3-9.3
EA 0N8900

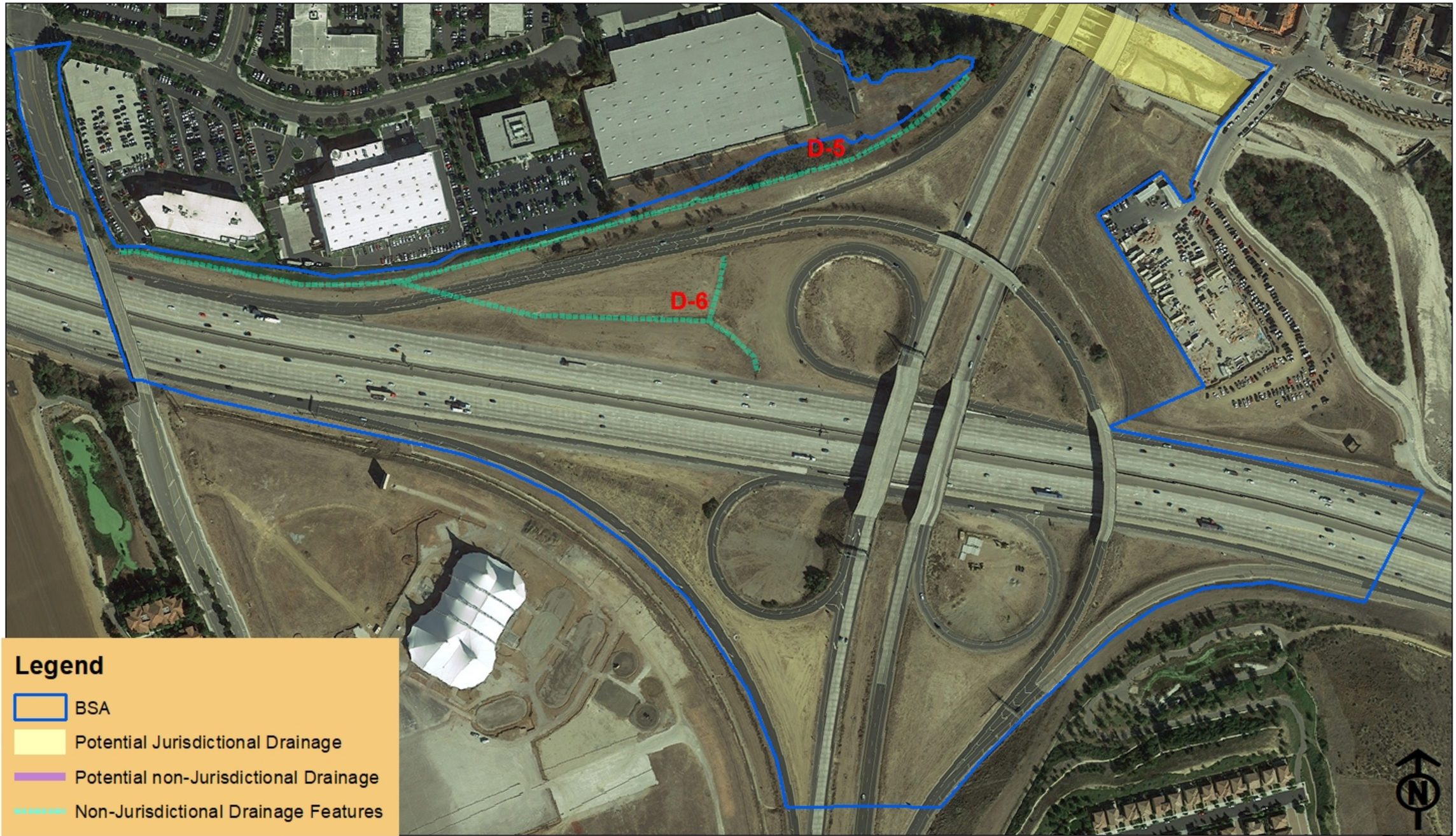


Figure 3
Sheet 3 of 3

SR-133 Operational Improvements Project
Potential Jurisdictional Drainage
12-ORA-133 PM 8.3-9.3
EA 0N8900

US Army Corps of Engineers Jurisdiction

Drainages 1, 2, and 3 are linear concrete trapezoid channels. The drains are connected to each other and drainage 3 is directly connected to San Diego Creek. These channels mainly discharge freeway run-off and waters from adjacent irrigation systems. These drainages convey water in response to rainfall and discharges water from adjacent irrigation systems. These drains are constructed as ditches to collect freeway run-off and are not expected to be subject to Corps jurisdiction under section 6 (b) (3) of the 2015 CWA as they are not a relocated tributary or excavated in a tributary. Also, they aren't expected to be subject under Rapanos as they don't convey relatively permanent flow water and constructed and drain upland waters.

Drainage 4, San Diego creek is a blue line stream and a direct tributary to the Pacific Ocean (Navigable water). Since the creek within the BSA lacks vegetation to meet Corps wetland criteria, the creek is subject to Corps Jurisdiction under non-wetland waters of the US.

Regional Water Quality Control Board Jurisdiction

Typically, the Water Board jurisdiction under section 401 of the CWA is similar to the area subject to the Corps jurisdiction unless the area is determined to be an isolated wetland. Based on the project site conditions, the area subject to the Corps jurisdiction is expected to meet the Board Jurisdiction. Therefore, with the exception of Drainage 4, the remaining drainage ditches are not expected to be subject to Regional Water Quality Control Board jurisdiction.

California Department of Fish and Wildlife

California Department of Fish and Wildlife jurisdiction under Fish and Game code 1600 is also consistent with Corps jurisdictional areas except the CDFW jurisdictional area includes defined beds and banks either to the extent of associated riparian vegetation or the top of the bank. Although Drainages 1, 2, and 3 have bed and bank features and are constructed as drainage ditches to collect freeway run-off, they aren't subject to CDFW under Fish and Game code 1600 as they don't support aquatic life, riparian vegetation or stream-dependent terrestrial wildlife (1994 Field Guide to Lake Streambed Alteration Agreement). However, San Diego Creek is subject to CDFW as an unvegetated streambed as it is a blue line stream and collects natural waters.

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Appendix A

Project Representative Site Photographs

Drainage 1

Drainage 2

Drainage 3

Drainage 4