APPENDIX B

Biological Resources Letter Report

DUDEK

31878 CAMINO CAPISTRANO #200
SAN JUAN CAPISTRANO, CALIFORNIA 92675
T 949.450.2525 F 949.450.2626

June 29, 2016 9688

Mr. David Shissler, PE
City of Laguna Beach
505 Forest Avenue
Laguna Beach, California 92651

Subject: ***Biological Resources Letter Report for the Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project, City of Laguna Beach, California***

Dear Mr. Norris:

On June 14, 2016, Dudek biologists conducted a general biological survey and essential fish habitat (EFH) assessment of the proposed Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project located at 1601 Pacific Coast Highway in Orange County, California (the project site). This report describes the results of a biological reconnaissance of the study area and discusses survey methods, vegetation communities and sensitive biological resources present or potentially present on site, the relationship of the project to regional conservation planning, an analysis of proposed impacts, and recommended mitigation.

PROJECT LOCATION AND DESCRIPTION

The project site is located within the City of Laguna Beach, Orange County, California (Appendix A, Figure 1). The proposed project site is located off the Bluebird Canyon Drive beach access area, between 1585 South Coast Highway and 1601 South Coast Highway. The study area is located within Section 25, Township 7 South, Range 9 West on the Laguna Beach U.S. Geological Survey (USGS) 7.5-minute quadrangle map (2015); latitude 33.52966° and longitude -117.77346°. Appendix A, Figures 1 and 2, show the regional location and local vicinity, respectively.

The 0.03-acre project site is occupied by the existing Bluebird Canyon Outfall and diversion structure. The outfall is an 84-inch reinforced concrete pipe that discharges seasonal flows to the beach. The outfall is located under Glenneyre Street and South Coast Highway, is approximately 900 feet long, and terminates with a concrete headwall. The diversion structure is located approximately six feet from the main storm drain outlet.

The proposed project will involve the reconstruction of the Bluebird Canyon Outfall outlet structure to prevent sand from entering the diversion structure and provide a structure to access the interior of the outlet structure.

A condominium complex is located immediately north of the proposed project site. To the south are single-family residences. Several commercial buildings are located east of the proposed project area, across South Coast Highway. The Pacific Ocean is located west of the proposed project. Elevations at the project site range from approximately 12 to 18 feet above mean sea level (MSL).

METHODS

To evaluate the natural resources found or potentially occurring on the property, literature searches and database reviews were conducted by Dudek. The most recent versions of the California Natural Diversity Data Base (CNDDB) and special-status species lists (2016a-e) and the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants* (CNPS 2016) were reviewed to identify sensitive biological resources present or potentially present for the USGS 7.5-minute quadrangle on which the project site is located (i.e., Laguna Beach) and the five surrounding quadrangles (i.e., El Toro, San Juan Capistrano, Dana Point, Tustin, and Newport Beach). Potentially occurring sensitive biological resources were also compiled from the California Department of Fish and Wildlife (CDFW) (2016a-e). Appendix B summarizes the current federal and state species sensitivity categories. Additionally, Dudek reviewed the *Laguna Beach Biological Resources Inventory* (Marsh et al. 1983).

Dudek biologist Ryan Henry conducted a general biological survey of the property on June 14, 2016. The survey was conducted from 1215 to 1315 and weather conditions were favorable with overcast skies, wind speeds from 2 to 4 miles per hour, and a temperature of 64° F. All native and naturalized plant species encountered on the project site were identified and recorded. The potential for sensitive plant and wildlife species to occur on the project site was evaluated based on the vegetation communities and soils present. Vegetation communities and land covers on site were mapped in the field directly onto maps with an aerial photography base. An EFH assessment was conducted to evaluate potential impacts/disturbance associated with proposed construction activities on fish, fish habitat, and on other marine resources within and adjacent to the project area. Essential Fish Habitat is regulated under the Magnuson-Stevens Fishery Conservation and Management Act (MFCMA), protecting waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (Magnuson-Stevens Act, 16 U.S.C. 1801 et seq.), which also includes eelgrass beds. Substrates include soft substrates (sand), hard (rocky) substrates, structures underlying waters, and associated biological communities. In addition, a formal investigation of the extent and distribution

of U.S. Army Corps of Engineers (USACE) jurisdictional waters of the U.S., Regional Water Quality Control Board (RWQCB) jurisdictional waters of the State, and CDFW jurisdictional streambed and associated riparian habitat was conducted.

Latin and common names for plant species with a California Rare Plant Rank (formerly CNPS List) follow the CNPS *Inventory of Rare and Endangered Plants* (CNPS 2016). For plant species without a California Rare Plant Rank, Latin names follow the *Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California* (Jepson Flora Project 2016) and common names follow the United States Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2016). Plant community classifications follow Gray and Bramlet (1992). Latin and common names of animals follow Crother (2008) for reptiles and amphibians, American Ornithologists' Union (AOU 2016) for birds, Wilson and Reeder (2005) for mammals, North American Butterfly Association (NABA) (2016) or San Diego Natural History Museum (SDNHM) for butterflies (SDNHM 2002), and Moyle (2002) for fish.

Dudek Geographic Information Systems (GIS) specialist Andrew Greis mapped biological resources into a GIS coverage and provided figures using ArcGIS software.

RESULTS

Site Description

The 0.03-acre project site occurs entirely on the beach located at the end of Bluebird Canyon Road. Elevations range from approximately 12 to 18 feet above mean sea level (AMSL). The developed property consists of urban and commercial developments, and ornamental landscaping land covers. Areas adjacent to the property include existing duplexes and residences to the north, northwest, and southeast, and the Pacific Ocean to the south. Representative photographs of the project site are included in Appendix C.

Soils

A single soil type is mapped on the property: Beaches (115). Although not part of a typical soil series, the beaches mapping unit consists of sandy, gravelly, or cobbly coastal shores affected by tidal action (Wachtell 1978). This mapping unit supports little to no vegetation and has a high erosion potential (Wachtell 1978).

Vegetation Communities and Land Covers

Vegetation communities and land covers were classified according to the Orange County Habitat Classification System (Gray and Bramlet 1992). Descriptions of each vegetation community or land cover are provided below. In addition, the corresponding acreage within the study area is given in parentheses after the title. A map of the vegetation communities and land covers is included in Appendix A, Figure 3 and representative photographs of the project site are included in Appendix C.

Scrub Habitats

Southern Coastal Bluff Scrub (0.03 acre)

This scrub community is typically dominated by lemonade sumac (*Rhus integrifolia*), dudleya (*Dudleya* sp.), iceplants (*Carpobrotus*, *Mesembryanthemum*, etc.), cliff spurge (*Euphorbia misera*), bladderpod spiderflower (*Peritoma arborea*), California brittlebush (*Encelia californica*), California box-thorn (*Lycium californicum*), coyote brush (*Baccharis pilularis*), and coastal sagebrush (*Artemisia californica*). According to Gray and Bramlet (1992), this community is typically found on exposed cliffs with low or prostate plant cover along Dana Point headlands, Laguna Beach, San Clemente, and Crystal Cove State Park. The southern coastal bluff scrub community within the study area was limited to iceplants and other ornamental species.

Marine and Coastal Habitats

Beach (Sand) (0.41 acre)

This cover type consists of open beach sand that typically supports little to no vegetation. This land cover within the study area was unvegetated. A high level of beach recreation and human activity occur within the study area.

Rocky Shore and Intertidal Zone (0.03 acre)

The rocky shore and intertidal zone within the study area contained small patches of surfgrass (*Phyllospadix torreyi*), as well as intertidal communities typical of rock and sand habitats along the southern California coast. This intertidal community provides substrate and shelter for algae and invertebrates (Gray and Bramlet 1992).

Developed Areas

Ornamental Plantings (0.15 acre)

This cover type consists of introduced plantings of exotic species as landscaping. This land cover within the study area is occupied by aloe (*Aloe maculata*), amaranth (*Amaranthus* sp.), century plant (*Agave americana*), common iceplant (*Mesembryanthemum crystallinum*), European searocket (*Cakile maritima*), hottentot fig (*Carpobrotus edulis*), sea lavender (*Limonium perezii*), slenderleaf iceplant (*Mesembryanthemum nodiflorum*), and Washington palm (*Washingtonia robusta*).

Urban and Commercial Mapping Unit (0.47 acre)

The urban and commercial mapping unit is not recognized by the Natural Communities List (CDFG 2010) but is described by Jones & Stokes (1993). The urban and commercial mapping unit, also identified by Gray and Bramlet (1992) as urban, describes areas occupied by residential and commercial structures, paving, and other impermeable surfaces that typically do not support vegetation or habitat for species; however, non-native ornamental landscaping may occur within the mapping unit.

Floral Diversity

A total of 7 species of vascular plants were recorded on the site, including 1 native (14%) and 6 non-native (86%) species. The low plant diversity reflects the small size of the property and its proximity to adjacent disturbed and developed areas. Plant species observed on site are listed in Appendix D, Table D-1.

Wildlife

The property represents a small fragment of native habitat (beaches) that is surrounded by existing development (roads and houses) on three sides and bordered by the Pacific Ocean to the south. Wildlife use is therefore expected to be limited. Wildlife species observed on site are listed in Appendix E. Results of the EFH assessment is included within Appendix F.

Four bird species were detected on or adjacent to the site including American crow (*Corvus brachyrhynchos*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), and Heermann's gull (*Larus heermanni*). No active bird nesting was observed during the fieldwork, but the various shrubs in the study area could support nesting birds. One amphibian species was detected on site: Baja California treefrog (*Pseudacris hypochondriaca*). No reptile species were observed during the survey; however, a common and widespread species such as

western fence lizard (*Sceloporus occidentalis*) is likely to occur on site. One mammal species was detected during the survey: domestic dog (*Canis lupus familiaris*). Additionally, the California ground squirrel (*Spermophilus beecheyi*) could occur on site. Other aquatic species detected within the intertidal zone of the study area included starburst anemone (*Anthopleura sola*) and bat stars (*Patiria miniata*). Wildlife species detected on site are listed in Appendix D, Table D-2.

Special-Status Plant Species

Special-status plants include those listed, or candidates for listing, as threatened or endangered by the USFWS and CDFW, and species identified as rare by the CNPS (particularly California Rare Plant Rank [CRPR] 1A – Presumed extinct in California; CRPR 1B – Rare, threatened, or endangered throughout its range; and CRPR 2 – Rare or Endangered in California, more common elsewhere). A total of 55 special-status plant species were reported were reported in the CNDDB, USFWS, and CNPS databases as occurring in the vicinity of the study area. However, no special-status plant species were observed within the study area during the site visit.

Appendix E, Table E-1 lists the special-status plant species that are known to occur within a 10-mile radius of the project site (CDFW 2016e), or are identified as occurring or potentially occurring according to the City's biological inventory (Marsh et al. 1983). For each species listed, a determination is made regarding the potential for the species to occur on site based on information gathered during the field reconnaissance including the location of the site, habitats present, current site conditions, and past and present land use.

A number of species listed in Table E-1 including summery holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), cliff spurge (*Euphorbia misera*), and Nuttall's scrub oak (*Quercus dumosa*) are conspicuous (i.e., large, woody shrubs) and readily observed if present within a small site. Unless observed during the reconnaissance survey, it is assumed that such conspicuous and readily observed species are not present on site. In addition, the presence or absence of certain species of perennial herbs can reliably be determined by observation of vegetative structures that remain beyond their respective blooming periods. The state- and federally listed threatened Laguna Beach dudleya (*Dudleya stolonifera*) typically bloom during the spring and summer but is expected to be detectable, if present on site, based on the observation of vegetative structures.

Based on the species ranges, and vegetation communities/land covers (e.g., developed, ornamental) and soils present on the project site, there is little to no potential for special-status plants to occur within the study area.

Sensitive Wildlife Species

Special-status wildlife include those listed, or candidates for listing, as threatened or endangered by the USFWS and CDFW, and designated as SSC by CDFW. A total of 50 special-status wildlife species were reported in the CNDDB and USFWS databases as occurring in the vicinity of the study area. However, no special-status wildlife species were observed within the study area during the site visit.

Appendix E, Table E-2 lists the special-status wildlife species that are known to occur in the vicinity of the site (CDFW 2016e) or are identified as occurring or potentially occurring according to the City's biological inventory (Marsh et al. 1983). For each species listed, a determination is made regarding the potential use of the site based on information gathered during the field reconnaissance, known habitat preferences and knowledge of their relative distributions in the area.

Based on the species ranges, and vegetation communities/land covers (e.g., developed, ornamental, and beach) and urban pressures present on the project site, there is little to no potential for special-status wildlife to occur.

Jurisdictional Waters and Significant Drainage Courses

The study area was analyzed to determine the presence and distribution of jurisdictional aquatic resources and significant drainage courses, as defined by the City's General Plan (1992). Results of the formal jurisdictional delineation conducted throughout the entire study area identified one underground drainage feature (Bluebird Canyon Culvert) and the Pacific Ocean (Appendix A, Figure 3). No "significant drainage course" as identified in the City's General Plan occurs within the study area.

The Bluebird Canyon Culvert was determined to be a non-jurisdictional feature that lacked an OHWM, or hydrological or physical connection to the Pacific Ocean. As a result, the project site does not contain drainage features that would be regulated under the jurisdiction of the USACE, RWQCB, CDFW, and CCC.

The mean high tide line of the Pacific Ocean was mapped at 8 feet, which occurs outside the project site but within the study area. Approximately 0.13 acre within the study area are USACE jurisdictional. The study area does not support any RWQCB or CDFW jurisdictional lake or streambed habitat. However, final determinations of jurisdictional extents cannot be made until the resource agencies have verified the findings of this investigation.

The complete jurisdictional delineation report is provided in Appendix F.

Essential Fish Habitat

The project is located adjacent to Laguna Beach State Marine Reserve, which extends seaward from the mean high tide line. In a State Marine Reserve, it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource, except under a scientific collecting permit issued by the CDFW or specific authorization from the California Fish and Game Commission for research, restoration, or monitoring purposes (CCR Title 14, Section 632(a)(1)(A)). The project is also located adjacent to an area designated as Essential Fish Habitat in the Pacific Coast Groundfish Fishery Management Plan (FMP; PFMC 2016). The FMP manages 85 species over a large and ecologically diverse area extending from the Pacific coast border with Mexico to the Pacific coast border between Washington and Canada.

The substrate immediately surrounding the project site consists of a dry sandy beach, with minimal wrack of common kelp and algal species that may be periodically cleaned by beach maintenance crews. The relatively exposed coastline and associated wave action within the project vicinity precludes the establishment of eelgrass beds (*Zostera marina*). The nearest rocky intertidal habitat that was exposed on the survey date was approximately 100 feet seaward from the existing headwall. Small clumps of surfgrass (*P. torreyi*) were observed on some of the nearshore rocks and dislodged surfgrass was present on-shore in the swash zone. Because the rocky intertidal habitat was not exposed during the site visit on June 14 2016 (which was conducted during a low tide of +1.4 feet), a complete census of intertidal species was not conducted. Species that were observed from the shore using binoculars included starburst anemone (*Anthopleura sola*), and bat stars (*Patiria miniata*). Another fish species potentially present in the intertidal zone, includes the California grunion (*Leuresthes tenuis*), which is present along the Southern California shoreline in the spring and summer (primarily from March through August) during night-time spawning runs. No marine mammals were hauled out on the rocks in the area, and no shorebirds or seabirds were observed roosting or perching on any of the rocks in the general vicinity. The only bird species observed were various gull species (*Larus* spp.).

The complete EFH report is provided in Appendix G.

Regional Resource Planning Context

Policies and guidance for resource planning in the City are provided by the City's Open Space/Conservation Element of the General Plan (1992), which also serves as the City's certified Local Coastal Program (LCP) pursuant to the 1976 California Coastal Act. According to the City's Open Space/Conservation Element of the General Plan, the project site is not located within a very high value habitat, high value habitat, or moderate value habitat Environmentally

Sensitive Area (ESA). Further, the project site is not located within a Specific Plan Area as identified by the City.

The project site occurs just outside of one of the 124 Southern California Marine Protected Areas (MPAs). The Laguna Beach State Marine Reserve (SMR) encompasses 5.2 miles of shoreline habitat and 6.33 square miles of protected ocean. The Laguna Beach SMR protects resources by prohibiting the recreational and/or commercial take of all marine resources (i.e., injure, damage, or possess any living, geological, or cultural marine resource). The SMR is bounded by the mean high tide line and straight lines connecting the following points in the order listed: 33° 33.224' N. latitude 117° 49.184' W. longitude; 33° 30.211' N. latitude 117° 49.200' W. longitude; 33° 30.713' N. latitude 117° 49.200' W. longitude; and 33° 30.713' N. latitude 117° 45.264' W. longitude.

Additionally, the project site occurs within the Laguna Canyon Channel watershed at one of the "local out-fall" discharge locations identified on the WQESA Map (1992). The portion of the project site occurring parallel to the coast occurs within the 200-foot buffer of the Pacific Ocean WQESA.

The project site is located approximately 1,000 feet from the Orange County Central and Coastal Natural Community Conservation Plan (NCCP) habitat reserve, which contains 32,818 acres of intact natural habitat. This nature reserve provides large blocks of intact natural vegetation communities providing habitat and also wildlife corridors and habitat linkages for a range of species.

The 0.03-acre property is constrained by development to the north and east. To the south and west, the project site is contiguous with a narrow strip of beach (sand) and the Pacific Ocean. The beach (sand) land cover on site is not a sensitive vegetation community. Additionally, no sensitive plant or wildlife species were observed on site and the diversity of native plant species is limited.

Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as stepping stones for wildlife dispersal. Due to the limited size and constrained limits of the habitat on site, the property has very little potential to facilitate wildlife movement or to function as a habitat linkage.

IMPACTS AND MITIGATION

The proposed project consists of the reconstruction of the Bluebird Canyon Outfall structure to prevent sand from entering the diversion structure and provide a structure to access the interior of the outlet structure. The proposed improvements would occur in the same footprint as the existing structure and result in direct, temporary impacts to 0.01 acre of Beach (sand), 0.02 acre to Urban and Commercial, and less than 0.001 acre to Ornamental land covers (Appendix A, Figure 4).

Based on a site-specific assessment, the vegetation communities and land covers on site are not sensitive, or considered very high value habitat, high value habitat, or moderate value habitat according to the City's General Plan (1992). No special-status plant or wildlife species would be significantly impacted by the proposed project. Additionally, no jurisdictional wetland or waters of the United States would be impacted by the proposed project.

Potential impacts resulting from construction of the project are expected to be minimal and temporary to the managed fish species occurring in the nearshore coastal habitat. It is anticipated that individuals of managed pelagic or groundfish species that occur in the adjacent nearshore vicinity of the project area would not be affected by construction activities or have to relocate to another area of open water or other shallow water habitat to avoid any disturbances caused by construction activities. No adverse effects are expected from construction activities that will impact recruitment or populations of the protected species within Laguna Beach State Marine Reserve or affect night-time spawning runs of California grunion (if they occur in the general vicinity). A review of the current habitat data does not indicate that eelgrass (*Zostera marina*) is present within the vicinity of the proposed construction site, and kelp forests are located outside the direct influence of proposed construction activities in the project area, which further reduces the potential for occurrence of managed species near the site.

Dudek recommends the following measures to avoid and minimize potential environmental effects resulting from the residential construction:

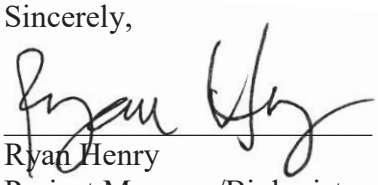
- Implement standard construction best management practices to control erosion and construction debris.
- Avoid the use of any invasive, non-native plant species rated as "high" or "moderate" by the California Invasive Plant Council's Invasive Plant Inventory (Cal-IPC 2016) for future landscaping of the site.
- Avoid construction activities during the bird breeding season (generally March through August) to ensure compliance with the federal Migratory Bird Treaty Act. If avoidance of the bird breeding season is not feasible, then a preconstruction nesting bird survey should

be conducted by a qualified biologist to ensure birds are not engaged in active nesting within 100 feet of the project's construction limits. If nesting birds are discovered during preconstruction surveys, then the qualified biologist should identify an appropriate buffer where no ground-breaking activities are allowed to occur until after the birds have fledged from the nest.

- Avoid nighttime construction activities, especially between March and August, to avoid impacts to marine aquatic resources such as the California grunion.

If you have any questions regarding the contents of this report, please call me at 949.373.8321.

Sincerely,



Ryan Henry
Project Manager/Biologist

Att.: Appendix A – Figures
1 Regional Map
2 Vicinity Map
3 Biological and Jurisdictional Aquatic Resources Map
4 Proposed Project Impact Map
Appendix B – Species Sensitivity Categories
Appendix C – Site Photographs
Appendix D – Species Compendium
Appendix E – Special-Status Species Detected or Potentially Occurring in the Project Area
Appendix F – Jurisdictional Delineation Report
Appendix G – Essential Fish Habitat Assessment

cc: Thomas Ryan, Dudek

REFERENCES CITED

AOU (American Ornithologists' Union). 2016. *Check-List of North American Birds*. Accessed from http://checklist.aou.org/.

Cal-IPC (California Invasive Plant Council). 2016. *California Invasive Plant Inventory Database*. Website http://www.cal-ipc.org/paf/ [accessed June 3, 2016].

CDFW (California Department of Fish and Wildlife, Natural Diversity Data Base). 2016a. *Special Vascular Plants, Bryophytes, and Lichens List*. Biannual publication. April. 145 pp.

CDFW. 2016b. *State and Federally Listed Endangered and Threatened, and Rare Plants of California*. Biannual publication. April. 7 pp.

CDFW. 2016c. *State and Federally Listed Endangered and Threatened Animals of California*. Biannual publication. April. 14 pp.

CDFW. 2016d. *Special Animals List*. Periodic publication. April. 51 pp.

CDFW. 2016e. RareFind 5, Version 5.1.1. Biogeographic Data Branch. Sacramento, California: California Natural Diversity Database. Accessed June 3, 2016. https://map.dfg.ca.gov/rarefind/view/RareFind.aspx.

City of Laguna Beach. 1992. *General Plan*. November 27.

CNPS (California Native Plant Society), Rare Plant Program. 2016. *Inventory of Rare and Endangered Plants* (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed 3 June 2016].

Crother, B.I. 2008. *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in our Understanding*. 6th ed. Herpetological Circular No. 37. Ed. J.J. Moriarty. Shoreview, Minnesota: Society for the Study of Amphibians and Reptiles.

Gray, J. and Bramlet, D. 1992. *Habitat Classification System Natural Resources Geographic Information System (GIS) Project*. May 1992.

Jepson Flora Project. 2016. *Jepson eFlora*. Berkeley, California: University of California. http://ucjeps.berkeley.edu/IJM.html [accessed on June 9, 2016].

Marsh, K.G, Roberts, F.M., Lubina, J.A., Marsh, G.A. 1983. *Laguna Beach Biological Resources Inventory*. Prepared for the City of Laguna Beach, January 31, 1983.

Moyle, P.B. 2002. *Inland Fishes of California*. University of California Press, Berkeley and Los Angeles, 502 pp.

NABA (North American Butterfly Association). 2016. "Checklist of North American Butterflies Occurring North of Mexico." Adapted from North American Butterfly Association (NABA) Checklist and English Names of North American Butterflies, eds. B. Cassie, J. Glassberg, A. Swengel, and G. Tudor. Edition 2.3. Morristown, New Jersey: NABA. Accessed at http://www.naba.org/pubs/checklst.html.

PFMC (Pacific Fishery Management Council). 2016. Pacific Coast Groundfish Fishery Management Plan for the California, Oregon, and Washington Groundfish Fishery.

SDNHM (San Diego Natural History Museum). 2002. "Checklist of Butterflies of San Diego County. Revised September 2002." Accessed at http://www.sdnhm.org/science/entomology/projects/checklist-of-butterflies-of-san-diego-county/.

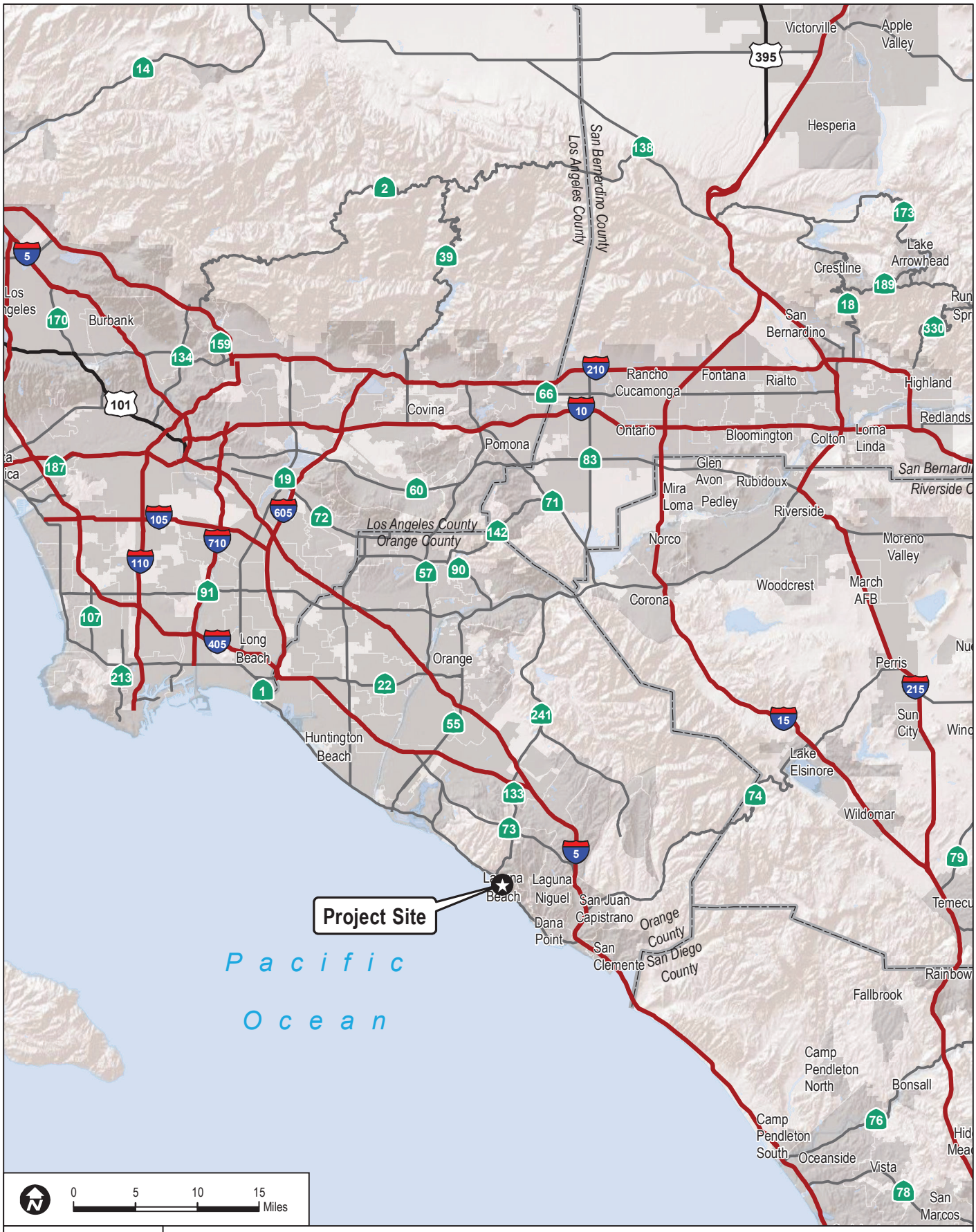
USDA (U.S. Department of Agriculture). 2016. "California." State PLANTS Checklist. Accessed June 2016. http://plants.usda.gov/dl_state.html.

Wachtell, J.K. 1978. *Soil Survey of Orange County and Western Part of Riverside County, California*.

Wilson, D.E., and D.M. Reeder, eds. 2005. *Mammal Species of the World: A Taxonomic and Geographic Reference*. 3rd ed. Baltimore, Maryland: Johns Hopkins University Press.

APPENDIX A

Figures

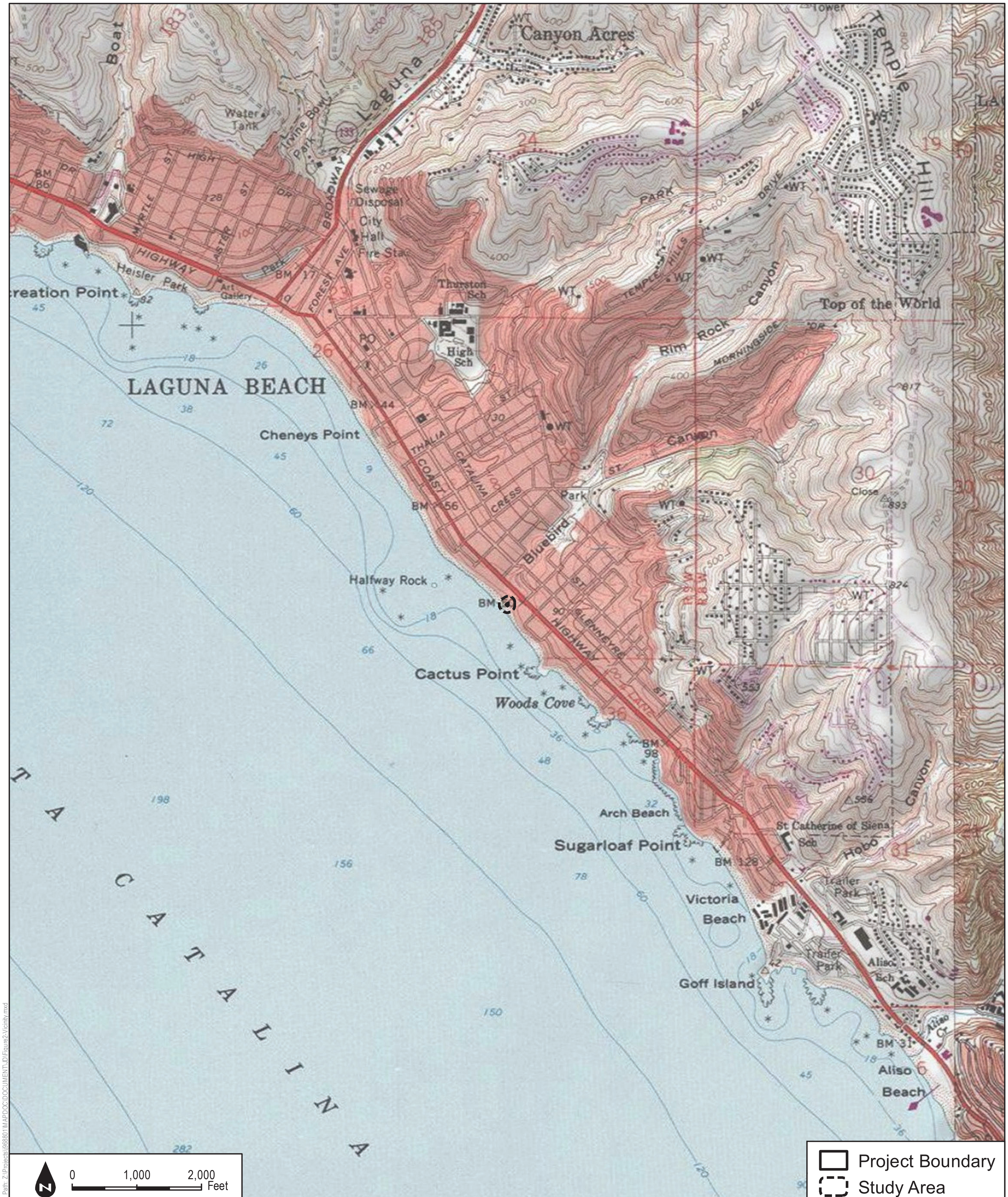


DUDEK

FIGURE 1

Regional Location

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project



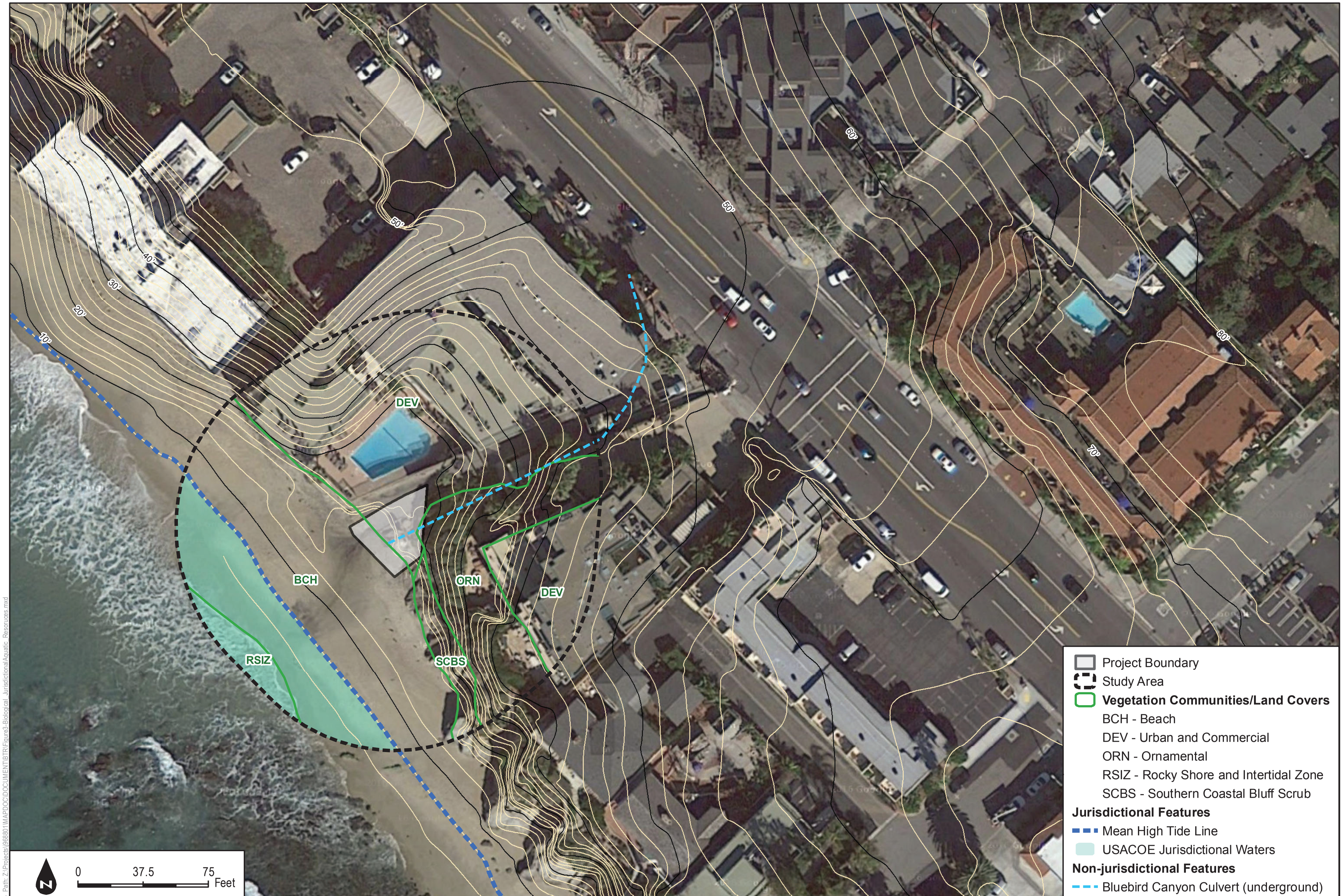
SOURCE: USGS 7.5-Minute Series Laguna Beach Quadrangle.

DUDEK

FIGURE 2

Vicinity Map

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project



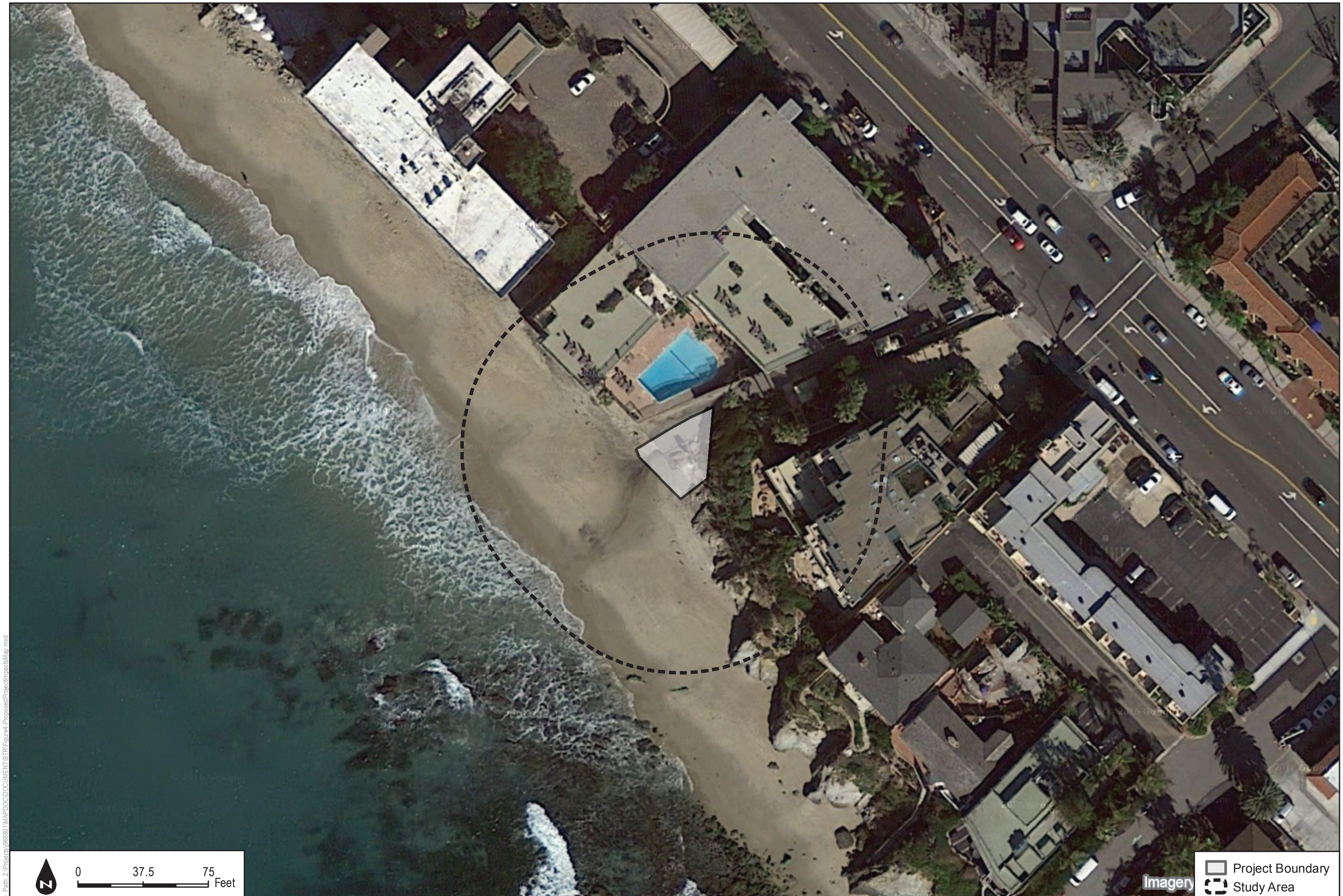
DUDEK

SOURCE: City of Laguna Beach Storm Drain Systems Online Viewer 2016 (Digitized Data Layers); Google Maps 2016

FIGURE 3

Biological and Jurisdictional Aquatic Resources Map

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project



DUDEK

SOURCE: Google Maps 2016

FIGURE 4

Proposed Project Impacts Map

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project

APPENDIX B

Species Sensitivity Categories

APPENDIX B
Species Sensitivity Categories

FEDERAL

- **Endangered**. Taxa threatened throughout all or a significant portion of their range.
- **Threatened.** Taxa likely to become endangered in the foreseeable future.
- **Candidate.** Taxa for which the USFWS currently has on file substantial information on biological vulnerability and threat(s) to support the appropriateness of proposing to list them as endangered or threatened species.
- **Federal Species of Concern.** Taxa that were formerly Category 2 Candidates for listing as threatened or endangered. This category is an "unofficial" designation for species that may warrant listing, but for which substantial information to support the listing is lacking.

STATE OF CALIFORNIA

- **Endangered.** Taxa which are in serious danger of becoming extinct throughout all, or a significant portion, of their range due to one or more causes including loss of habitat, change in habitat, over exploitation, predation, competition, or disease (Section 2062 of the Fish and Game Code).
- **Threatened.** Taxa which, although not presently threatened with extinction, are likely to become endangered species in the foreseeable future (Section 2067 of the Fish and Game Code).
- **Rare.** Taxa which, although not presently threatened with extinction, are present in such small numbers throughout their range that they may become endangered if the present environment worsens (Section 1901 of the Fish and Game Code).
- **Candidate.** Taxa which the Fish and Game Commission has formally noticed as being under review by the Department in addition to the list of threatened and endangered species.
- **Species of Special Concern.** Taxa that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats.
- **Watch List.** "Taxa to Watch" that were created in the *California Bird Species of Special Concern* (2008). The birds on this Watch List are 1) not on the current Special Concern list but were on previous lists and they have not been state listed under CESA; 2) were previously state or federally listed and now are on neither list; or 3) are on the list of "Fully Protected" species.

CALIFORNIA NATIVE PLANT SOCIETY

The CDFW and CNPS, a private organization dedicated to protection of California native plants, in collaboration with the Rare Plant Status Review groups, which comprise over 300 botanical experts from government, academia, non-government organizations, and the private sector, produced a ranked inventory of rare, threatened, and endangered vascular plant species within California ("the Rare Plant Rank" [RPR]). The rare plant inventory includes rank assignments, geographic distribution, and qualitative characterization of plant species not protected under federal or state endangered species legislation.

The CNPS's 8th Edition of the CNPS's *Inventory of Rare and Endangered Plants* (2014) separates plants of interest into five categories of rarity as presented in the table below. The list serves as the candidate list for listing as threatened and endangered by CDFW.

Summary of CNPS RPR Definitions

California RPR	Comments
1A	Plant species presumed extirpated in California because they have not been seen or collected in the wild or plants, which are presumed extinct.
1B	Plant species that are generally rare throughout their range that are also judged to be vulnerable to other threats such as declining habitat.
2A	Plant species that are presumed extirpated in California, but more common in other states
2B	Plant species rare, threatened, or endangered in California but more common in other states
3	Plant species for which additional information is needed before rarity can be determined – A Review List
4	Species of limited distribution or infrequent throughout a broader area in California; and while CDFG/CNPS cannot call these plant species "rare" from a statewide perspective, they are uncommon enough that their status should be monitored regularly – A Watch List

APPENDIX C

Site Photographs

APPENDIX C
Site Photographs

Photograph 1: Access to project site looking southwest

Photograph 2: Project site looking northeast

APPENDIX D

Species Compendium

APPENDIX D
Species Compendium

PLANT SPECIES

VASCULAR SPECIES

EUDICOTS

***AIZOACEAE*—FIG-MARIGOLD FAMILY**

* *Carpobrotus edulis*—hottentot fig

* *Mesembryanthemum crystallinum*—common iceplant

* *Mesembryanthemum nodiflorum*—slenderleaf iceplant

***BRASSICACEAE*—MUSTARD FAMILY**

* *Cakile maritima*—European searocket

***PLUMBAGINACEAE*—LEADWORT FAMILY**

* *Limonium perezii*—Perez's sea lavender

MONOCOTS

***AGAVACEAE*—AGAVE FAMILY**

Hesperoyucca whipplei—chaparral yucca

***ARECACEAE*—PALM FAMILY**

* *Washingtonia robusta*—Washington fan palm

***ASPHODELACEAE*—ASPHODEL FAMILY**

* *Aloe maculata*—no common name

***ZOSTERACEAE*—SEA GRASSES FAMILY**

Phyllospadix torreyi—surfgrass

WILDLIFE

AMPHIBIANS

FROGS

***HYLIDAE*—TREEFROGS**

Pseudacris hypochondriaca—Baja California treefrog

BIRDS

FINCHES

***FRINGILLIDAE*—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES**

Spinus psaltria—lesser goldfinch

Haemorhous mexicanus—house finch

JAYS, MAGPIES AND CROWS

***CORVIDAE*—CROWS AND JAYS**

Corvus brachyrhynchos—American crow

PIGEONS AND DOVES

***COLUMBIDAE*—PIGEONS AND DOVES**

Zenaida macroura—mourning dove

TERNS AND GULLS

***LARIDAE*—GULLS, TERNS, AND SKIMMERS**

Larus heermanni—Heermann's gull

MAMMAL

DOMESTIC

***CANIDAE*—WOLVES AND FOXES**

* *Canis lupus familiaris*—domestic dog

INVERTEBRATES

SEA ANEMONES

***ACTINIIDAE*—SEA ANEMONES**

Anthopleura sola—starburst anemone

STARFISH

***ASTERINIDAE*—SEA STARS**

Patiria miniata—bat star

* signifies introduced (non-native) species

APPENDIX E

Special-Status Species Detected or Potentially Occurring in the Project Area

APPENDIX E
Special-Status Species Detected or Potentially Occurring in the Project Area

Table 1
Plant Species

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Abronia maritima	red sand-verbena	None/None/4.2	Coastal dunes/perennial herb/Feb–Nov/0–328	Not expected to occur. No suitable habitat present.
Abronia villosa var. *aurita*	chaparral sand-verbena	None/None/1B.1	Chaparral, coastal scrub, desert dunes; sandy/annual herb/Jan–Sep/246–5249	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Aphanisma blitoides	aphanisma	None/None/1B.2	Coastal bluff scrub, coastal dunes, coastal scrub; sandy or gravelly/annual herb/Mar–June/3–1001	Not expected to occur. No suitable habitat present.
Atriplex coulteri	Coulter's saltbush	None/None/1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay/perennial herb/Mar–Oct/10–1509	Not expected to occur. No suitable habitat present.
Atriplex pacifica	South Coast saltscale	None/None/1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, playas/annual herb/Mar–Oct/0–459	Not expected to occur. No suitable habitat present.
Atriplex parishii	Parish's brittlescale	None/None/1B.1	Chenopod scrub, playas, vernal pools; alkaline/annual herb/June–Oct/82–6234	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	None/None/1B.2	Coastal bluff scrub, coastal scrub; alkaline/annual herb/Apr–Oct/33–656	Not expected to occur. No suitable habitat present.
Brodiaea filifolia	thread-leaved brodiaea	FT/CE/1B.1	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools; often clay/perennial bulbiferous herb/Mar–June/82–3675	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Calochortus catalinae	Catalina mariposa lily	None/None/4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/perennial bulbiferous herb/(Feb) Mar–June/49–2297	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Calochortus weedii var. *intermedius*	intermediate mariposa lily	None/None/1B.2	Chaparral, coastal scrub, valley and foothill grassland; rocky, calcareous/perennial bulbiferous herb/May–July/344–2805	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.

Table 1
Plant Species

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Camissoniopsis lewisii	Lewis' evening-primrose	None/None/3	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy or clay/annual herb/Mar–May (June)/0–984	Not expected to occur. No suitable habitat present.
Centromadia parryi ssp. *australis*	southern tarplant	None/None/1B.1	Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools/annual herb/May–Nov/0–1575	Not expected to occur. No suitable habitat present.
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	None/None/1B.1	Coastal bluff scrub (sandy), coastal dunes/annual herb/Jan–Aug/0–328	Not expected to occur. No suitable habitat present.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/CE/1B.2	Coastal dunes, marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct/0–98	Not expected to occur. No suitable habitat present.
Cistanthe maritima	seaside cistanthe	None/None/4.2	Coastal bluff scrub, coastal scrub, valley and foothill grassland; sandy/annual herb/(Feb) Mar–June (Aug)/16–984	Not expected to occur. No suitable habitat present.
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	None/None/1B.2	Chaparral, cismontane woodland/perennial evergreen shrub/Apr–June/98–2592	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Convolvulus simulans	small-flowered morning-glory	None/None/4.2	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar–July/98–2297	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Deinandra paniculata	paniculate tarplant	None/None/4.2	Coastal scrub, valley and foothill grassland, vernal pools; usually vernally mesic, sometimes sandy/annual herb/Apr–Nov/82–3084	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Dichondra occidentalis	western dichondra	None/None/4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/perennial rhizomatous herb/(Jan) Mar–July/164–1640	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.

Table 1
Plant Species

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Dodecahema leptoceras	slender-horned spineflower	FE/CE/1B.1	Chaparral, cismontane woodland, coastal scrub (alluvial fan); sandy/annual herb/Apr–June/656–2493	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	None/None/1B.1	Coastal bluff scrub, chaparral, coastal scrub, valley and foothill grassland; rocky, often clay or serpentinite/perennial herb/Apr–June/16–1476	Not expected to occur. No suitable habitat present.
Dudleya multicaulis	many-stemmed dudleya	None/None/1B.2	Chaparral, coastal scrub, valley and foothill grassland; often clay/perennial herb/Apr–July/49–2592	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Dudleya stolonifera	Laguna Beach dudleya	FT/CT/1B.1	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; rocky/perennial stoloniferous herb/May–July/33–853	Not expected to occur. Conspicuous species not observed and no suitable habitat present.
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/CE/1B.1	Coastal scrub, valley and foothill grassland, vernal pools; mesic/annual / perennial herb/Apr–June/66–2034	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Euphorbia misera	cliff spurge	None/None/2B.2	Coastal bluff scrub, coastal scrub, Mojavean desert scrub; rocky/perennial shrub/Dec–Aug (Oct)/33–1640	Not expected to occur. Conspicuous species not observed and no suitable habitat present.
Harpagonella palmeri	Palmer's grapplinghook	None/None/4.2	Chaparral, coastal scrub, valley and foothill grassland; clay/annual herb/Mar–May/66–3133	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Helianthus nuttallii ssp. *parishii*	Los Angeles sunflower	None/None/1A	Marshes and swamps (coastal salt and freshwater)/perennial rhizomatous herb/Aug–Oct/33–5495	Not expected to occur. No suitable habitat present.
Hesperocyparis forbesii	Tecate cypress	None/None/1B.1	Closed-cone coniferous forest, chaparral; clay, gabbroic or metavolcanic/perennial evergreen tree/N.A./262–4921	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.

Table 1
Plant Species

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Hordeum intercedens	vernal barley	None/None/3.2	Coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), vernal pools/annual herb/Mar–June/16–3281	Not expected to occur. No suitable habitat present.
Horkelia cuneata var. *puberula*	mesa horkelia	None/None/1B.1	Chaparral (maritime), cismontane woodland, coastal scrub; sandy or gravelly/perennial herb/Feb–July (Sep)/230–2657	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Isocoma menziesii var. *decumbens*	decumbent goldenbush	None/None/1B.2	Chaparral, coastal scrub (sandy, often in disturbed areas)/perennial shrub/Apr–Nov/33–443	Not expected to occur. No suitable habitat present.
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	None/None/4.2	Coastal dunes (mesic), meadows and seeps (alkaline seeps), marshes and swamps (coastal salt)/perennial rhizomatous herb/(Mar) May–June/10–2953	Not expected to occur. No suitable habitat present.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1	Marshes and swamps (coastal salt), playas, vernal pools/annual herb/Feb–June/3–4003	Not expected to occur. No suitable habitat present.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/None/4.3	Chaparral, coastal scrub/annual herb/Jan–July/3–2904	Not expected to occur. No suitable habitat present.
Lycium californicum	California box-thorn	None/None/4.2	Coastal bluff scrub, coastal scrub/perennial shrub/(Dec) Mar–Aug/16–492	Not expected to occur. No suitable habitat present.
Malacothrix saxatilis var. *saxatilis*	cliff malacothrix	None/None/4.2	Coastal bluff scrub, coastal scrub/perennial rhizomatous herb/Mar–Sep/10–656	Not expected to occur. No suitable habitat present.
Monardella hypoleuca ssp. *intermedia*	intermediate monardella	None/None/1B.3	Chaparral, cismontane woodland, lower montane coniferous forest (sometimes); usually understory/perennial rhizomatous herb/Apr–Sep/1312–4101	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Nama stenocarpa	mud nama	None/None/2B.2	Marshes and swamps (lake margins, riverbanks)/annual / perennial herb/Jan–July/16–1640	Not expected to occur. No suitable habitat present.

Table 1
Plant Species

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Nasturtium gambelii	Gambel's water cress	FE/CT/1B.1	Marshes and swamps (freshwater or brackish)/perennial rhizomatous herb/Apr–Oct/16–1083	Not expected to occur. No suitable habitat present.
Navarretia prostrata	prostrate vernal pool navarretia	None/None/1B.1	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools; mesic/annual herb/Apr–July/10–3970	Not expected to occur. No suitable habitat present.
Nemacaulis denudata var. *denudata*	coast woolly-heads	None/None/1B.2	Coastal dunes/annual herb/Apr–Sep/0–328	Not expected to occur. No suitable habitat present.
Nolina cismontana	chaparral nolina	None/None/1B.2	Chaparral, coastal scrub; sandstone or gabbro/perennial evergreen shrub/(Mar) May–July/459–4183	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Orcuttia californica	California Orcutt grass	FE/CE/1B.1	Vernal pools/annual herb/Apr–Aug/49–2165	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Pentachaeta aurea ssp. *allenii*	Allen's pentachaeta	None/None/1B.1	Coastal scrub (openings), valley and foothill grassland/annual herb/Mar–June/246–1706	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Phacelia ramosissima var. *austrolitoralis*	south coast branching phacelia	None/None/3.2	Chaparral, coastal dunes, coastal scrub, marshes and swamps (coastal salt); sandy, sometimes rocky/perennial herb/Mar–Aug/16–984	Not expected to occur. No suitable habitat present.
Pseudognaphalium leucocephalum	white rabbit-tobacco	None/None/2B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland; sandy, gravelly/perennial herb/(July) Aug–Nov (Dec)/0–6890	Not expected to occur. No suitable habitat present.
Quercus dumosa	Nuttall's scrub oak	None/None/1B.1	Closed-cone coniferous forest, chaparral, coastal scrub; sandy, clay loam/perennial evergreen shrub/Feb–Apr (Aug)/49–1312	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.

Table 1
Plant Species

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Sagittaria sanfordii	Sanford's arrowhead	None/None/1B.2	Marshes and swamps (assorted shallow freshwater)/perennial rhizomatous herb/May–Oct (Nov)/0–2133	Not expected to occur. No suitable habitat present.
Senecio aphanactis	chaparral ragwort	None/None/2B.2	Chaparral, cismontane woodland, coastal scrub; sometimes alkaline/annual herb/Jan–Apr/49–2625	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas; alkaline, mesic/perennial herb/Mar–June/49–5020	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Suaeda esteroa	estuary seablite	None/None/1B.2	Marshes and swamps (coastal salt)/perennial herb/May–Oct (Jan)/0–16	Not expected to occur. No suitable habitat present.
Suaeda taxifolia	woolly seablite	None/None/4.2	Coastal bluff scrub, coastal dunes, marshes and swamps (margins of coastal salt)/perennial evergreen shrub/Jan–Dec/0–164	Not expected to occur. No suitable habitat present.
Symphyotrichum defoliatum	San Bernardino aster	None/None/1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic); near ditches, streams, springs/perennial rhizomatous herb/July–Nov/7–6693	Not expected to occur. No suitable habitat present.
Tetracoccus dioicus	Parry's tetracoccus	None/None/1B.2	Chaparral, coastal scrub/perennial deciduous shrub/Apr–May/541–3281	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Verbesina dissita	big-leaved crownbeard	FT/CT/1B.1	Chaparral (maritime), coastal scrub/perennial herb/Apr–July/148–673	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.

Table 2
Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Amphibians				
Anaxyrus californicus	arroyo toad	FE/SSC	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. No suitable habitat present.
Spea hammondii	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	Not expected to occur. No suitable habitat present.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Not expected to occur. No suitable habitat present.
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Not expected to occur. No suitable habitat present.
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Not expected to occur. No suitable habitat present.
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Not expected to occur. No suitable habitat present.
Buteo regalis (wintering)	ferruginous hawk	BCC/WL	Winters and forages in open, dry country, grasslands, open fields, agriculture	Not expected to occur. No suitable habitat present.
Campylorhynchus brunneicapillus sandiegensis (San Diego and Orange Counties only)	coastal cactus wren	BCC/SSC	Southern cactus scrub patches	Not expected to occur. No suitable habitat present.

Table 2
Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Charadrius alexandrinus nivosus (nesting)	western snowy plover	FT, BCC/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Low potential to occur. There is very marginal nesting/foraging habitat that has not been disturbed within the study area. This beach experiences heavy public use.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT, BCC/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable habitat present.
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Not expected to occur. No suitable habitat present.
Eremophila alpestris actia	California horned lark	None/WL	Nests and forages in grasslands, disturbed lands, agriculture, and beaches; nests in alpine fell fields of the Sierra Nevada	Not expected to occur. No suitable habitat present.
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Not expected to occur. No suitable habitat present.
Laterallus jamaicensis coturniculus	California black rail	BCC/ST, FP	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. No suitable habitat present.
Pandion haliaetus (nesting)	osprey	None/WL	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	Not expected to occur. No suitable habitat present.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	None/SE	Nests and forages in coastal saltmarsh dominated by pickleweed (*Salicornia* spp.)	Not expected to occur. No suitable habitat present.
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Not expected to occur. No suitable habitat present.

Table 2
Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Rallus obsoletus obsoletus	Ridgway's rail	FE/SE, FP	Coastal salt or brackish marshes	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable habitat present.
Riparia riparia (nesting)	bank swallow	None/ST	Nests in riparian, lacustrian, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	Not expected to occur. No suitable habitat present.
Sternula antillarum browni (nesting colony)	California least tern	FE/SE, FP	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Low potential to occur. There is very marginal habitat that has not been disturbed within the study area. This beach experiences heavy public use.
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No suitable habitat present.
Fishes				
Eucyclogobius newberryi	tidewater goby	FE/SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River	Not expected to occur. No suitable habitat present.
Gila orcuttii	arroyo chub	None/SSC	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud	Not expected to occur. No suitable habitat present.
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	None/SSC	Headwaters of the Santa Ana and San Gabriel Rivers; may be extirpated from the Los Angeles River system	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable habitat present.
Invertebrates				
Branchinecta sandiegonensis	San Diego fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No suitable habitat present.
Cicindela gabbii	western tidal-flat tiger beetle	None/None	Inhabits estuaries and mudflats along the coast of Southern California	Not expected to occur. No suitable habitat present.

Table 2
Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Cicindela hirticollis gravida	sandy beach tiger beetle	None/None	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico	Not expected to occur. No suitable habitat present.
Cicindela latesignata latesignata	western beach tiger beetle	None/None	Mudflats and beaches in coastal Southern California	Not expected to occur. No suitable habitat present.
Coelus globosus	globose dune beetle	None/None	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico	Not expected to occur. No suitable habitat present.
Danaus plexippus	monarch	None/None	Wind-protected tree groves with nectar sources and nearby water sources	Not expected to occur. No suitable habitat present.
Panoquina errans	wandering skipper	None/None	Saltmarsh	Not expected to occur. No suitable habitat present.
Streptocephalus woottoni	Riverside fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No suitable habitat present.
Tryonia imitator	mimic tryonia (=California brackishwater snail)	None/None	Inhabits coastal lagoons, estuaries, and saltmarshes, from Sonoma County south to San Diego County	Not expected to occur. No suitable habitat present.
Mammals				
Chaetodipus californicus femoralis	Dulzura pocket mouse	None/SSC	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	Not expected to occur. No suitable habitat present.
Choeronycteris mexicana	Mexican long-tongued bat	None/SSC	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon–juniper woodland; roosts in caves, mines, and buildings	Not expected to occur. No suitable habitat present.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Not expected to occur. No suitable habitat present.

Table 2
Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Lasiurus cinereus	hoary bat	None/None	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes	Not expected to occur. No suitable habitat present.
Myotis yumanensis	Yuma myotis	None/None	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, cliff crevices, caves, mines, and trees	Not expected to occur. No suitable habitat present.
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur. No suitable habitat present.
Nyctinomops macrotis	big free-tailed bat	None/SSC	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Not expected to occur. No suitable habitat present.
Perognathus longimembris pacificus	Pacific pocket mouse	FE/SSC	Fine-grained sandy substrates in open coastal strand, coastal dunes, and river alluvium	Not expected to occur. No suitable habitat present.
Sorex ornatus salicornicus	southern California saltmarsh shrew	None/SSC	Saltmarsh, saltgrass, dense willow, bulrush	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable habitat present.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. No suitable habitat present.
Reptiles				
Actinemys marmorata	western pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. The site is outside of the species' known geographic range.
Aspidoscelis hyperythra	orangethroat whiptail	None/SSC	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	Not expected to occur. No suitable habitat present.
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	None/None	Open areas in semiarid grasslands, scrublands, and woodlands	Not expected to occur. No suitable habitat present.
Crotalus ruber	red diamondback rattlesnake	None/SSC	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Not expected to occur. No suitable habitat present.

Table 2
Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Not expected to occur. No suitable habitat present.
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Not expected to occur. No suitable habitat present.
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. No suitable habitat present.

APPENDIX F

Jurisdictional Delineation Report

DUDEK

31878 CAMINO CAPISTRANO #200
SAN JUAN CAPISTRANO, CALIFORNIA 92675
T 949.450.2525 F 949.450.2626

June 24, 2016 9688

Mr. David Shissler, PE
City of Laguna Beach
505 Forest Avenue
Laguna Beach, California 92651

Subject: ***Jurisdictional Delineation Report for the Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project, City of Laguna Beach, California***

Dear Mr. Shissler:

This report presents the findings of a jurisdictional delineation of aquatic resources conducted by Dudek at the proposed Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project located at 1601 Pacific Coast Highway in Orange County, California (the project site; Figure 1). The purpose of this investigation was to evaluate the presence and extent of aquatic resources that may be subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), California Department of Fish and Wildlife (CDFW), and/or the California Coastal Commission (CCC). The investigation included an analysis of one drainage outfall that represents an actively maintained facility (Bluebird Canyon Culvert), which is proposed to be modified as part of renovations to the outfall structure.

This report is intended to satisfy formal documentation according to the delineation guidelines and protocols stipulated by the USACE under Section 404 of the federal Clean Water Act (CWA), and the CDFW under Section 1600-1607 of the California Fish and Game Code.

PROJECT LOCATION AND DESCRIPTION

The project site is located within the City of Laguna Beach, Orange County, California. The proposed project site is located off the Bluebird Canyon Drive beach access area, between 1585 South Coast Highway and 1601 South Coast Highway. Dudek evaluated the proposed project site, plus a 100-foot buffer for jurisdictional aquatic resources (the study area). The 1.10-acre study area is located within Section 25, Township 7 South, Range 9 West on the Laguna Beach U.S. Geological Survey (USGS) 7.5-minute quadrangle map (2015); latitude 33.52966° and longitude -117.77346°. Figures 1 and 2 show the regional location and local vicinity, respectively.

The 0.03-acre project site is occupied by the existing Bluebird Canyon Outfall and diversion structure. The outfall is an 84-inch reinforced concrete pipe that discharges seasonal flows to the beach. The outfall is located under Glenneyre Street and South Coast Highway, is approximately 900 feet long, and terminates with a concrete headwall. The diversion structure is located approximately six feet from the main storm drain outlet.

A condominium complex is located immediately north of the proposed project site. To the south are single-family residences. Several commercial buildings are located east of the proposed project area, across South Coast Highway. The Pacific Ocean is located west of the proposed project. Elevations range from approximately 12 to 18 feet above mean sea level (MSL).

SUMMARY OF REGULATIONS

There are four key agencies that regulate activities within streams, wetlands, and riparian areas in California. The USACE Regulatory Program regulates activities pursuant to Section 404 of the CWA, the CDFW regulates activities under the Fish and Game Code Sections 1600–1616, the RWQCB regulates activities under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and the CCC regulates activities under the California Coastal Act.

The USACE regulates "discharge of dredged or fill material" into "waters of the U.S.," which includes tidal waters, interstate waters, and all other waters that are part of a tributary system to interstate waters or to navigable "waters of the U.S.," the use, degradation, or destruction of which could affect interstate or foreign commerce or which are tributaries to waters subject to the ebb and flow of the tide (33 CFR, Part 328.3(a)), pursuant to provisions of Section 404 of the CWA. The USACE generally takes jurisdiction within rivers and streams to the "ordinary high water mark" (OHWM) determined by erosion, the deposition of vegetation or debris, and changes in vegetation. The USACE defines jurisdictional wetlands as areas that contain hydrophytic vegetation, hydric soils, and wetland hydrology, in accordance with the procedures established in the *Corps Wetland Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Environmental Laboratory 2008). The EPA and USACE recently published a final rule (33 CFR, Part 328) defining the scope of waters protected under the CWA in response to several U.S. Supreme Court rulings including the U.S. vs. Riverside Bayview Homes, 474 U.S. 121 (1985; Riverside), Solid Waste Agency of Northern Cook County vs. U.S. Army Corps of Engineers, 531 U.S. 159 (2001; SWANCC), and Rapanos vs. United States, 547 U.S. 715 (2006; Rapanos). As a result of the final rule, EPA and USACE agencies define "waters of the U.S." to include eight categories of jurisdictional waters: traditional navigable waters (TNW), interstate

waters, territorial seas, impoundments of jurisdictional waters, tributary waters, adjacent waters, case-by-case determination that require a significant nexus (combined), and case-by-case determination that requires a significant nexus (individually).

In accordance with Section 1600 et seq. of the California Fish and Game Code (Streambed Alteration), the CDFW regulates activities which "will substantially divert, obstruct, or substantially change the natural flow or bed, channel or bank, of any river, stream, or lake designated by the Department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit." The CDFW takes jurisdiction to the top of bank of the stream, or the limit of the adjacent riparian vegetation, referred to in this report as "streambed and associated riparian habitats." Applications to the CDFW must include a complete certified California Environmental Quality Act (CEQA) document.

The RWQCB regulates "discharging waste, or proposing to discharge waste, within any region that could affect the "water of the state" (Water Code Section 13260 (a)), pursuant to provisions of the Porter-Cologne Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050 (e)). Before the USACE will issue a CWA Section 404 permit, applicants must receive a CWA Section 401 Water Quality Certification from the RWQCB. If a CWA Section 404 permit is not required for the project, the RWQCB may still require a permit (i.e., Waste Discharge Requirement) under the Porter-Cologne Act. Applications to the RWQCB must include a complete certified CEQA document.

The CCC plans and regulates development activities on land and water within the coastal zone. Development activities includes construction of buildings, divisions of land, and undertakings that change the intensity of use of land or public access to coastal waters. The California Coastal Act defines wetlands as "lands within the Coastal Zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens." In addition, the California Coastal Act defines environmentally sensitive areas in a manner that would include rivers, streams or other aquatic habitat. The CCC utilizes the Cowardin Wetland Classification System, which includes both wetlands and deepwater habitats as defined by the USFWS, to guide implementation of their wetland protection policies.

METHODS

Data regarding aquatic resources present within the study area were obtained through a review of pertinent literature and field assessment; both are described in detail below.

Literature Review

Prior to visiting the study area, potential and/or historic drainages and aquatic features were investigated based on a review of the following: USGS topographic maps (1:24,000 scale), aerial photographs, the National Wetland Inventory (NWI) database, and *The Soil Survey of Orange County and Western Part of Riverside County* (Wachtell 1978). In addition, hydrologic information from gauge stations within the vicinity of the study area was obtained.

Jurisdictional Delineation – Field Assessment

Following the initial data collection, Dudek biologist Ryan Henry performed a formal (routine) wetlands delineation within the study area on June 14, 2016. All areas that were identified as being potentially subject to the jurisdiction of the USACE, RWQCB, CDFW, and CCC were field verified and mapped.

The USACE wetlands delineation was performed in accordance with the *Corps Wetlands Delineation Manual* (Environmental Laboratory 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Environmental Laboratory 2008), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Lichvar and McColley 2008), and changes to 33 CFR, Part 328 provided by the USACE and EPA on the geographic extent of jurisdiction based on the U.S. Supreme Court's interpretation of the CWA. Non-wetland waters of the U.S. were delineated based on the limits of an OHWM. During the jurisdictional delineation, drainage features were examined for evidence of an OHWM, saturation, permanence of surface water, wetland vegetation, and nexus to a traditional navigable water of the U.S. If any of these criteria were met, transects were run to determine the extent of each regulatory agencies' jurisdiction.

Areas regulated by the RWQCB are generally coincident with the USACE, but include features isolated from navigable waters of the U.S. that have evidence of surface water inundation. The CDFW and CCC jurisdiction were defined to the bank of the stream/channels or to the limit of the adjacent riparian vegetation.

Drainage features were identified during the field observation to obtain characteristic parameters and detailed descriptions using standard measurement tools. The location of transects, upstream and downstream extents of each feature, and sample points were collected in the field using a 1:2,400 scale (1 inch = 200 feet) aerial photograph, topographic base, and global positioning system (GPS) equipment with sub-meter accuracy. Dudek Geographic Information System (GIS) technician Andrew Greis digitized the jurisdictional extents based on the GPS data and transect width measurements into a project-specific GIS using ArcGIS software.

RESULTS

Dudek used the methods described above to determine the presence or absence of USACE, RWQCB, CDFW, and CCC jurisdiction within the study area. The outfall at Bluebird Canyon was investigated within the study area as potential jurisdictional resources. The identification of jurisdictional features within the study area was complicated by the historic and ongoing management practices as well as extreme tidal processes that have altered the natural vegetation, soils, and hydrology of the area. The determination of aquatic resource jurisdiction within the study area was supported by information obtained from the USGS topographic map, soil survey, USFWS NWI map, and field assessment. Information obtained from each source is described below.

USGS Topographic Map

The USGS 7.5-minute Laguna Beach, California topographic map was utilized to identify natural as well as man-made features occurring within the vicinity of the study area. Information obtained from the map included contour lines, streets, streams, and vegetation. The Laguna Beach map was based on aerial photography that was photorevised in 2015 (Figure 2). The study area was generally mapped as developed land with buildings in the northern portion of the study area. Several paved roads occur around the study area. An unnamed "blue-line stream" (Bluebird Canyon Creek) occurs north of the study area and is mapped in a northeast to southwest orientation. The beach and Pacific Ocean are identified immediately south and southwest of the study area. No other aquatic features or significant structural features are identified on the map within the study area's boundaries.

Soils

The U.S. Department of Agriculture, Natural Resources Conservation Service's (NRCS) *The Soil Survey of Orange County and Western Part of Riverside County, California Soil Survey* (Wachtell 1978) was consulted and identified one soil association as occurring throughout the study area: the Beaches (115)(Figure 4).

- Beaches (115) – Although not part of a typical soil series, the beaches mapping unit consists of sandy, gravelly, or cobbly coastal shores affected by tidal action (Wachtell 1978). This mapping unit supports little to no vegetation and has a high erosion potential (Wachtell 1978).

According to the Hydric Soils List of California (USDA-NRCS 2012), Beaches (115) is listed as hydric.

National Wetlands Inventory

Two wetland features were identified within the study area according to the USFWS' NWI database.

- **R4SBC** (Bluebird Canyon Creek): riverine (R), intermittent (4), streambed (SB), seasonally flooded (C) wetland. Riverine systems, as defined by the NWI database, include wetlands and deepwater habitats that occur in natural or artificial channels that periodically or continuously containing flowing water, or which form links between two bodies of standing water. The intermittent subsystem generally refers to seasonally flowing rivers. The streambed class of wetlands refers to periodically flooded channels composed of gravel, sand, or bedrock. The seasonally flooded water regime refers to wetlands that support surface water for extended periods of time, but absent by the end of the growing season in most years. The water table varies following flood conditions from saturation of the ground surface to well below the ground surface.
- **M2USP** (Pacific Ocean): marine (M), intertidal (2), unconsolidated shore (US), irregularly flooded (P). Marine systems, as defined by the NWI database, include open ocean and coastline of the continental shelf. The water regime is determined by the ebb and flow of oceanic tides. The intertidal subsystem generally refers to substrates that are flooded and exposed by tides. The unconsolidated shore refers to wetland habitats that characterized by substrates with less than 75% cover of stones, boulders, or bedrock; and less than 30% cover of vegetation. The irregularly flooded water regime refers to wetlands that are tidally flooded less often than daily.

Field Assessment

The project site occurs within Laguna Beach Hydrologic Subarea (901.12) of the Laguna Hydrologic Area (901.10), which occurs within the larger San Juan Hydrologic Unit (901.00) (RWQCB 1994; Figure 3). According to the USGS, the project site occurs within the Laguna Beach subwatershed of the larger San Juan watershed (USGS HUC8: 18070301). The Bluebird Canyon tributary watershed encompasses a drainage area of approximately 641 acres, of which 402 acres is considered urban areas. The shoreline segment of the Laguna Beach HAS is designated as water quality limited for indicator bacteria pursuant to Clean Water Act section 303(d) (RWQCB 1994).

The entire portion of the Bluebird Canyon Creek occurs underground within a 84-inch RCP. This feature and any outfall to the Pacific Ocean were investigated during the assessment. Figure 5

illustrates the location and extent of jurisdictional "waters of the United States" within the study area, and Table 1 summarizes the amount of jurisdiction calculated within the study area.

Table 1
Summary of Jurisdictional Features

Feature	Length (feet)	Width (feet)		Area (acre)		Nature
		USACE / RWQCB	*CDFW / CCC*	*USACE / RWQCB*	*CDFW / CCC*	
Bluebird Canyon Culvert	140	-	-	-	-	Intermittent
Pacific Ocean	-	-	-	0.15	-	Perennial
Total	**140**			**0.15**	**-**	

The following description is a detailed account of the potentially jurisdictional features investigated on the project site and within the study area. The feature is described from its upstream to downstream extent. The wetland indicator status was assigned to each species using the *National Wetland Plant List (California)* (Lichvar et al. 2014), as shown in Table 1. The wetland indicator status of each plant species observed within the OHWM is provided for easy reference (Table 2).

Table 2
Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability of >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability of 67% to 99%)
Facultative (FAC)	Equally likely to occur in wetlands/non-wetlands (estimated probability of 34% to 66%)
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67% to 99%)
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%)

Bluebird Canyon Culvert

The Bluebird Canyon Culvert originates to the north of the study area within the urban environs of Laguna Beach and transports stormwater and urban nuisance runoff toward the Pacific Ocean within an underground reinforced concrete pipe. Under normal conditions, seasonal surface water from the culvert does not reach the Pacific Ocean, which would remain impounded behind a wood barrier that covers the culvert opening. This wood barrier was installed to prevent beach sand from encroaching within the culvert. As a result, the underground, culvert segment within the study area

was determined to be non-jurisdictional due to the lack of an OHWM with no hydrologic or physical connection to the Pacific Ocean. Additionally, the storm channel has a less than speculative effect on the physical, chemical, and biological integrity of the Pacific Ocean.

Pacific Ocean

The Pacific Ocean is a navigable waterbody that occurs within the southwestern extent of the project site. The jurisdictional extent within the study area was determined by the mean high tide line (MHTL). The MHTL was determined to be 8 feet above msl using data from the closest National Oceanic and Atmospheric Administration's tide gauge station. The Beaches (115) soil type was confirmed within the study area. As a result, no soil pit was excavated since this soil type is hydric (NRCS 2012). No vegetation was identified below the MHTL.

CONCLUSION

The Bluebird Canyon Culvert was determined to be a non-jurisdictional feature that lacked an OHWM, or hydrological or physical connection to the Pacific Ocean. The MHTL of the Pacific Ocean was mapped at 8 feet, which occurs outside the project site but within the study area. Approximately 0.15 acre within the study area are USACE jurisdictional waters of the United States. The study area does not support any RWQCB or CDFW jurisdictional lake or streambed habitat. However, final determinations of jurisdictional extents cannot be made until the resource agencies have verified the findings of this investigation.

Any proposal that involves impacting the MHTL through filling, stockpiling, or any other modification would require permits from the USACE before any earth-moving activities could commence. Both permanent and temporary impacts are regulated and would trigger the need for these permits if impacts would occur within the MHTL.

If you have any questions regarding the contents of this report, please call me at 949.450.2525.

Sincerely,

Ryan Henry
Project Manager/Biologist

Att.: Figures 1–6

REFERENCES CITED

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1*, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

Environmental Laboratory. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*. ERDC/EL TR-08-028. September.

Lichvar, R.W. and S.M. McColley. 2008. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual*. ERDC/CRREL TR-08-12. August.

Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. *The National Wetland Plant List: 2014 Update of Wetland Ratings*. Phytoneuron 2014-41: 1-42.

RWQCB (Regional Water Quality Control Board, San Diego Region). 1994. *Water Quality Control Plan for the San Diego Basin (9). September 8, 1994*.

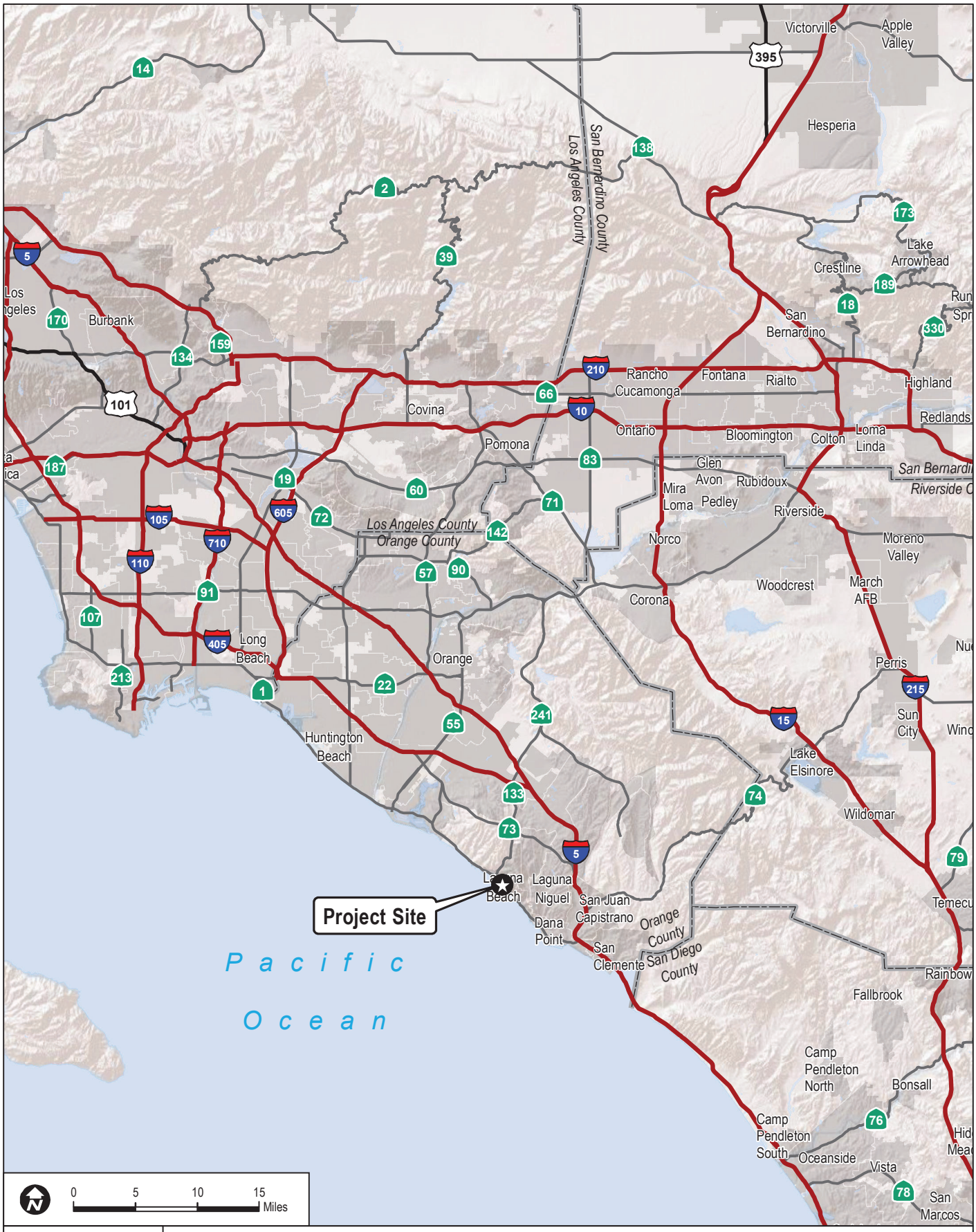
SWANCC (Solid Waste Association of Northern Cook Counties) v. United States Corps of Engineers, 531 U.S. 159 (2001).

U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (EPA). 2007. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States*. June 5.

USDA-NRCS (U.S. Department of Agriculture, Natural Resources Conservation Service). 2012. *Hydric Soils of California*. April.

U.S. Geological Survey. 2015. Laguna Beach Quadrangle, California [map]. 1:24,000. 7.5-minute Series. Photo-revised 2015. Washington D.C.

Wachtell, J.K. 1978. Soil Survey of Orange County and Western Part of Riverside County, California.

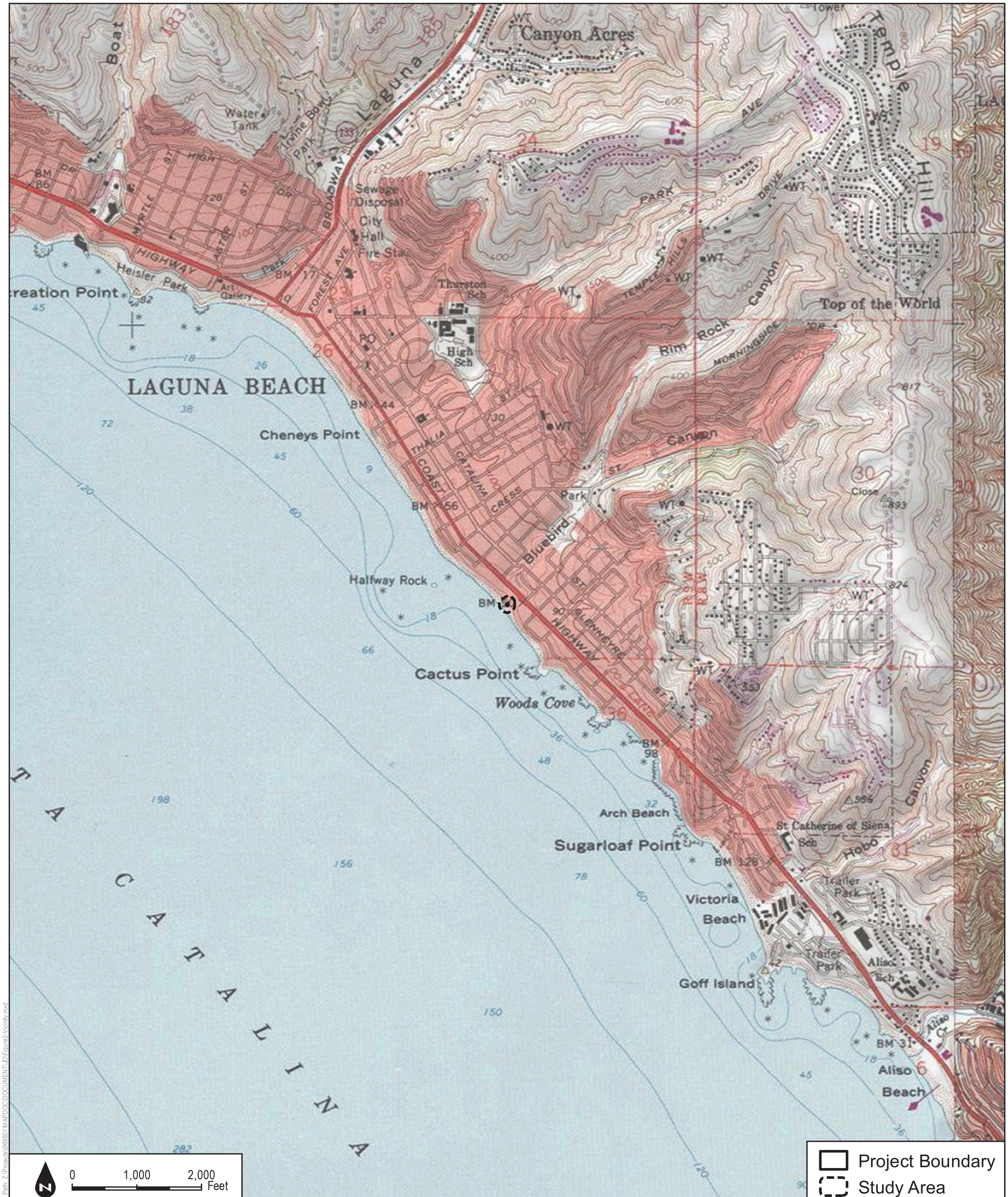


DUDEK

FIGURE 1

Regional Location

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project



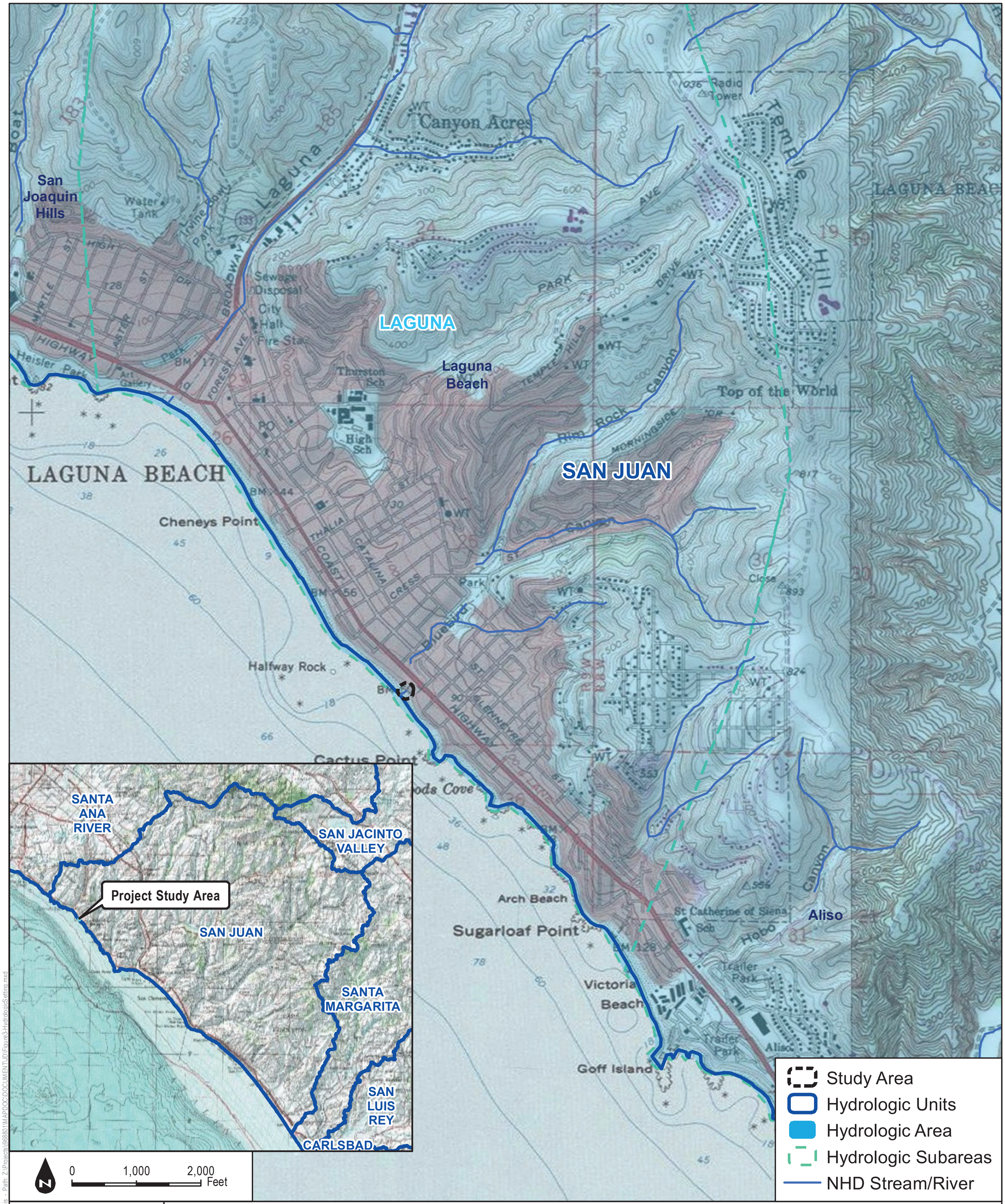
SOURCE: USGS 7.5-Minute Series Laguna Beach Quadrangle.

FIGURE 2

Vicinity Map

DUDEK

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project



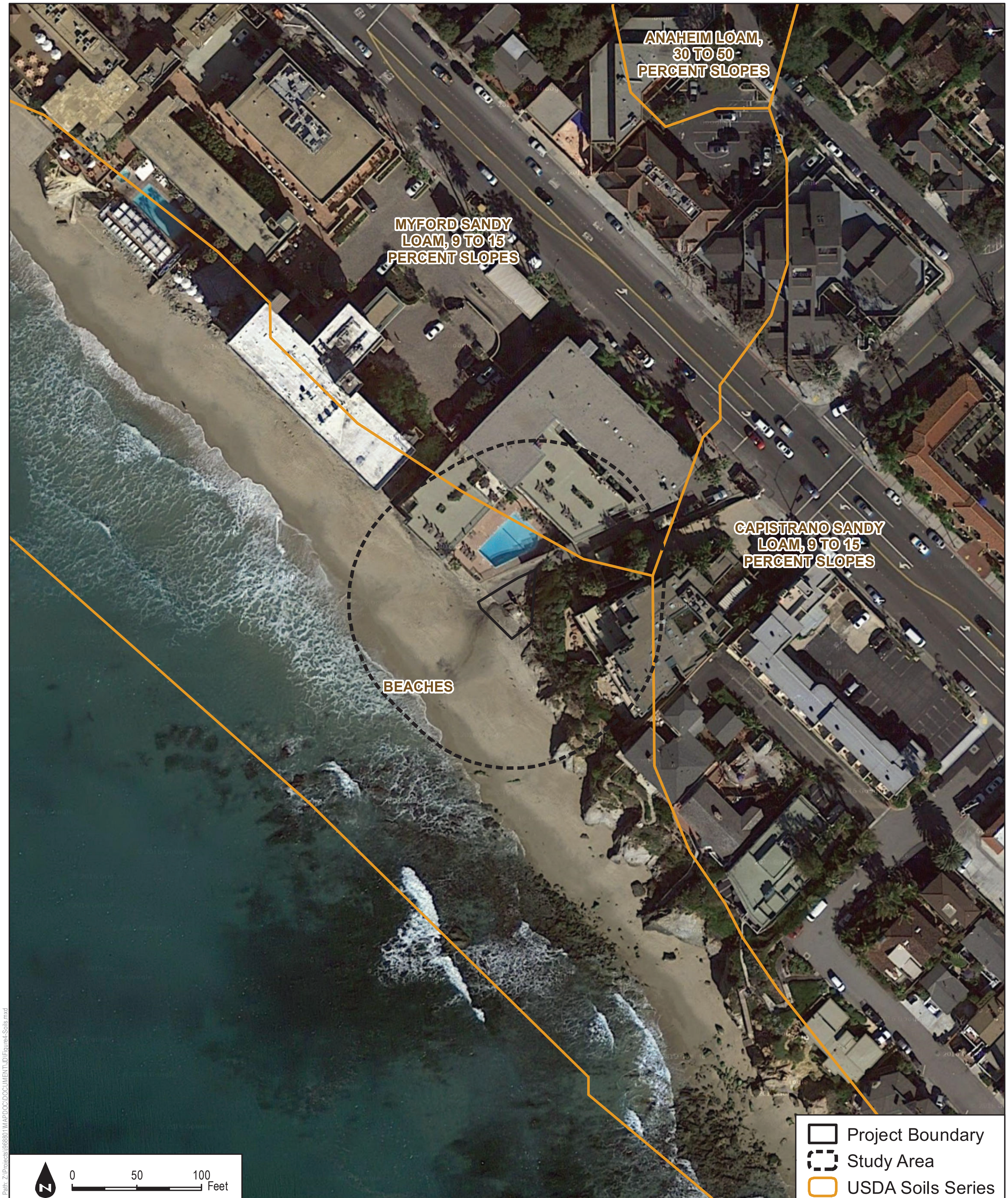
SOURCE: USGS 7.5-Minute Series Laguna Beach Quadrangle; USGS NHD 2015; CA DWR

FIGURE 3

Hydrologic Setting

DUDEK

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project



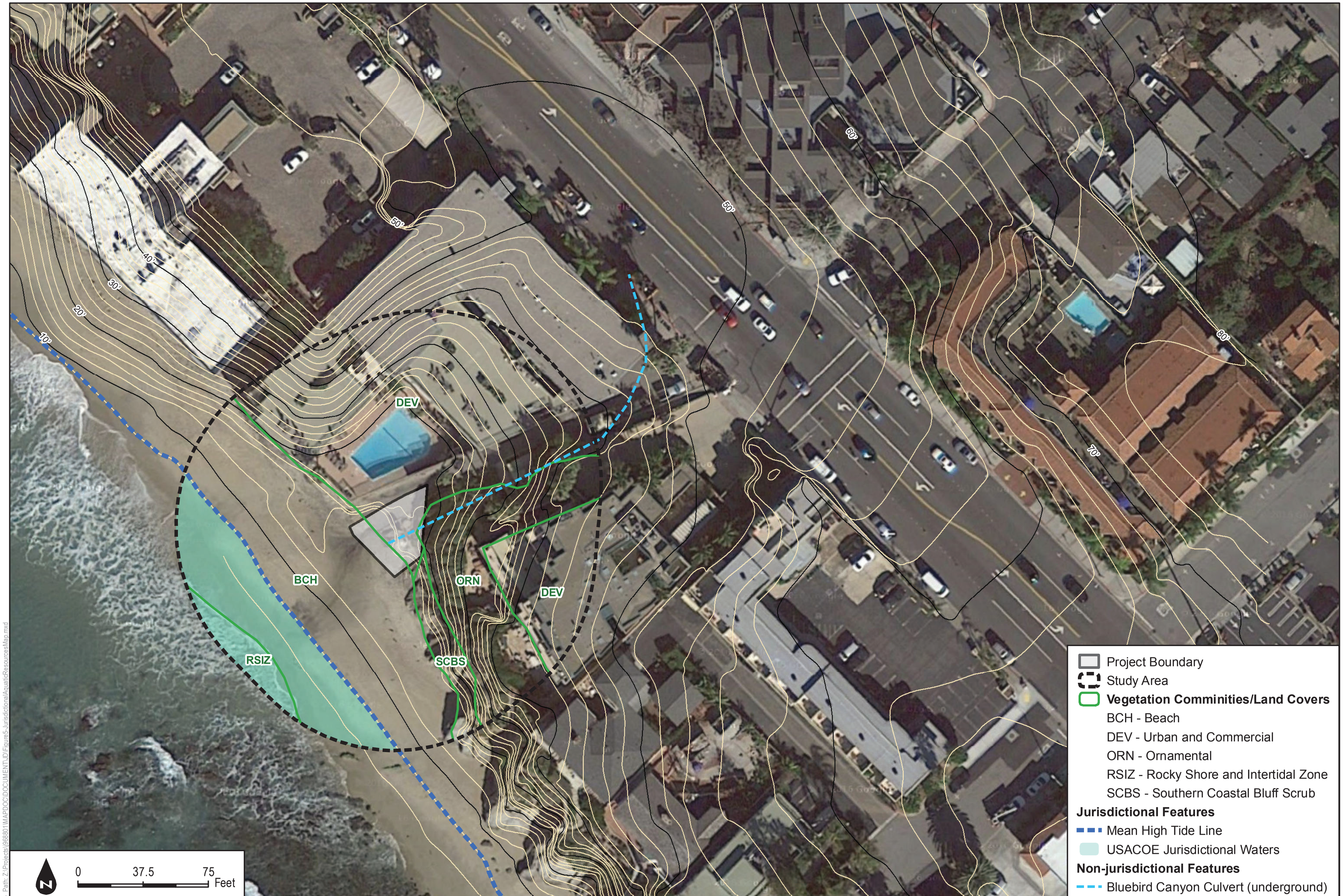
SOURCE: USDS Soils; Wachtell 1978; Google Maps.

FIGURE 4

Soils Map

DUDEK

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project



DUDEK

SOURCE: City of Laguna Beach Storm Drain Systems Online Viewer 2016 (Digitized Data Layers); Google Maps 2016

FIGURE 5

Biological and Jurisdictional Aquatice Resources Map

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project

Left: Bluebird Canyon Culvert looking northeast.
Right: Pacific Ocean looking southwest

APPENDIX G

Essential Fish Habitat Assessment

DRAFT

Bluebird Canyon Essential Fish Habitat Assessment

Prepared for:

City of Laguna Beach
505 Forest Avenue
Laguna Beach, California 92651
Contact: Mr. David Shissler, PE

Prepared by:

DUDEK
605 Third Street
Encinitas, California 92024
Contact: Craig Seltenrich

JUNE 2016

TABLE OF CONTENTS

INTENTIONALLY LEFT BLANK

1 INTRODUCTION

The City of Laguna Beach has proposed improvements to provide long-term solutions to blockage of an existing stormwater outfall at the mouth of Bluebird Canyon. The improvements will include removal and replacement of the existing headwall, construction of an intermediate wall between the headwall and the outfall and diversion pipes, and installation of two Tideflex duckbill valves on this intermediate wall to allow stormwater to pass through the intermediate wall, but prevent the surcharge of sea water, sand, and sediment.

To comply with the Magnuson–Stevens Fishery Conservation and Management Act (MFCMA), and in accordance with National Marine Fisheries Service (NMFS) regulations, an Essential Fish Habitat (EFH) assessment was prepared to evaluate potential impacts due to proposed construction activities. The EFH includes an assessment of fish species and marine biological resources that may be potentially disturbed during the construction activities. Project construction activities to support the outflow project site are completely land-based and do not extend out to the Mean Higher High Water (MHHW) line, minimizing the potential for impacts to fish and sensitive resources in habitats adjacent to the construction area. The Laguna Beach State Marine Reserve is adjacent to the project area extending up to the MHHW line. The Marine Reserve MHHW boundary separates the project area from tidal waters, and will reduce the chance of suspending material in the water column as is common with coastal construction projects.

INTENTIONALLY LEFT BLANK

2 PROJECT DESCRIPTION AND PURPOSE

The Bluebird Canyon outfall and diversion structure was constructed in 1965 by the Orange County Flood Control District (OCFCD) and is located off the Bluebird Canyon Drive beach access area, between 1585 South Coast Highway and 1601 South Coast Highway in the City of Laguna Beach (City). The outfall is an 84-inch reinforced concrete pipe that discharges flows directly to the Pacific Ocean. The outfall is located under Glenneyre Street and South Coast Highway, is approximately 900 feet long, and terminates with a concrete headwall. The diversion structure is located approximately six feet from the main storm drain outlet. This storm drain facility is part of a water quality program designed to divert dry season urban runoff to the Bluebird Canyon Lift Station. Due to age and exposure to the elements, the outfall and diversion structure is in need of repair.

The outlet elevation of the main storm drain invert is relatively low as compared to the sea level. Large storm events and high tides push sand and sediment into the pipe, blocking the diversion. The City has placed a temporary wood header on the lower third of the outlet to direct flows into the diversion pipe, and to prevent sand from entering the outfall pipe. During large storm events, larger flows move sediment out of the pipe and channelize the sand through the beach to the ocean. The City is proposing the rehabilitation of the Bluebird Canyon outfall and diversion structure (proposed project) to prevent sand from entering the structure, rather than relying on temporary solutions.

The objectives of the Bluebird Canyon outfall and diversion structure rehabilitation project are to:

- Reduce sand and debris from accumulating in the pipe and diversion structure.
- Repair the existing facility which is 50-years old and has been exposed to the elements
- Provide safe and easy access to the facility for maintenance and repair.
- Enhance safety through redesign by reducing accessibility to the outfall structure by the public
- Allow for better hydraulic efficiency while diverting flows.
- Divert storm water flows for a longer duration of time, which could add to available reclaimed water supply
- Improve water quality on the beach

The 0.03-acre project site is occupied by the existing Bluebird Canyon Outfall and diversion structure. The outfall is an 84-inch diameter reinforced concrete pipe that discharges seasonal flows to the beach. The outfall is located under Glenneyre Street and South Coast Highway anf terminates with a concrete headwall. The diversion structure is located approximately 6 feet from

the main storm drain outlet. The Pacific Ocean is located west of the proposed project. Elevations range from approximately 12 to 18 feet above mean sea level (MSL).

The proposed project will involve the reconstruction of the Bluebird Canyon Outfall outlet structure to prevent sand from entering the diversion structure and provide a structure to access the interior of the outlet structure.

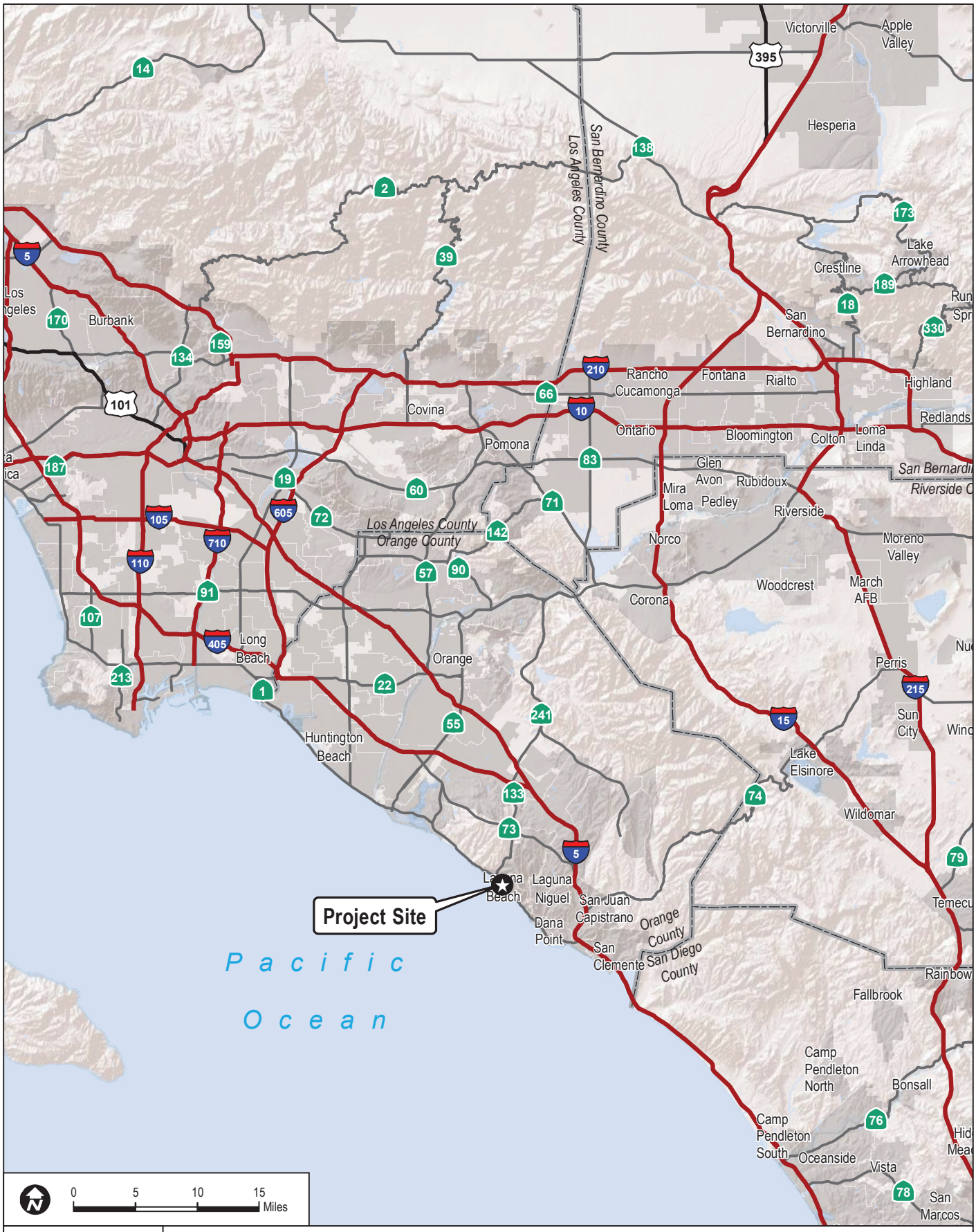
The existing headwall would be removed and replaced with a new headwall, which would be located on the same footprint and would be constructed in concrete, colored to blend aesthetically with the surrounding environment. An intermediate wall would be constructed between the headwall and the outfall and diversion pipes, creating an enclosure for the outfall and diversion pipes. Two Tideflex duckbills valves would be installed on this intermediate wall to allow stormwater to pass through the intermediate wall, but prevent the surcharge of sea water, sand, and sediment. A manhole and cover would be located above the outfall and diversion pipes (behind the intermediate wall), with stairs leading to this enclosure.

3 DESCRIPTION OF STUDY AREA

The proposed project is located off the Bluebird Canyon Drive beach access area, in the City of Laguna Beach (Figure 1). The project site and associated study area are depicted in Figure 2. Construction staging and worker parking would be located along the beach access road while maintaining pedestrian access to the beach along the beach access road. Vehicular access into the project site would be from the South Coast Highway.

A condominium complex is located immediately north of the proposed project site. To the south are single-family residences. Several commercial buildings are located east of the proposed project area, across South Coast Highway. The Pacific Ocean is located west of the proposed project.

INTENTIONALLY LEFT BLANK



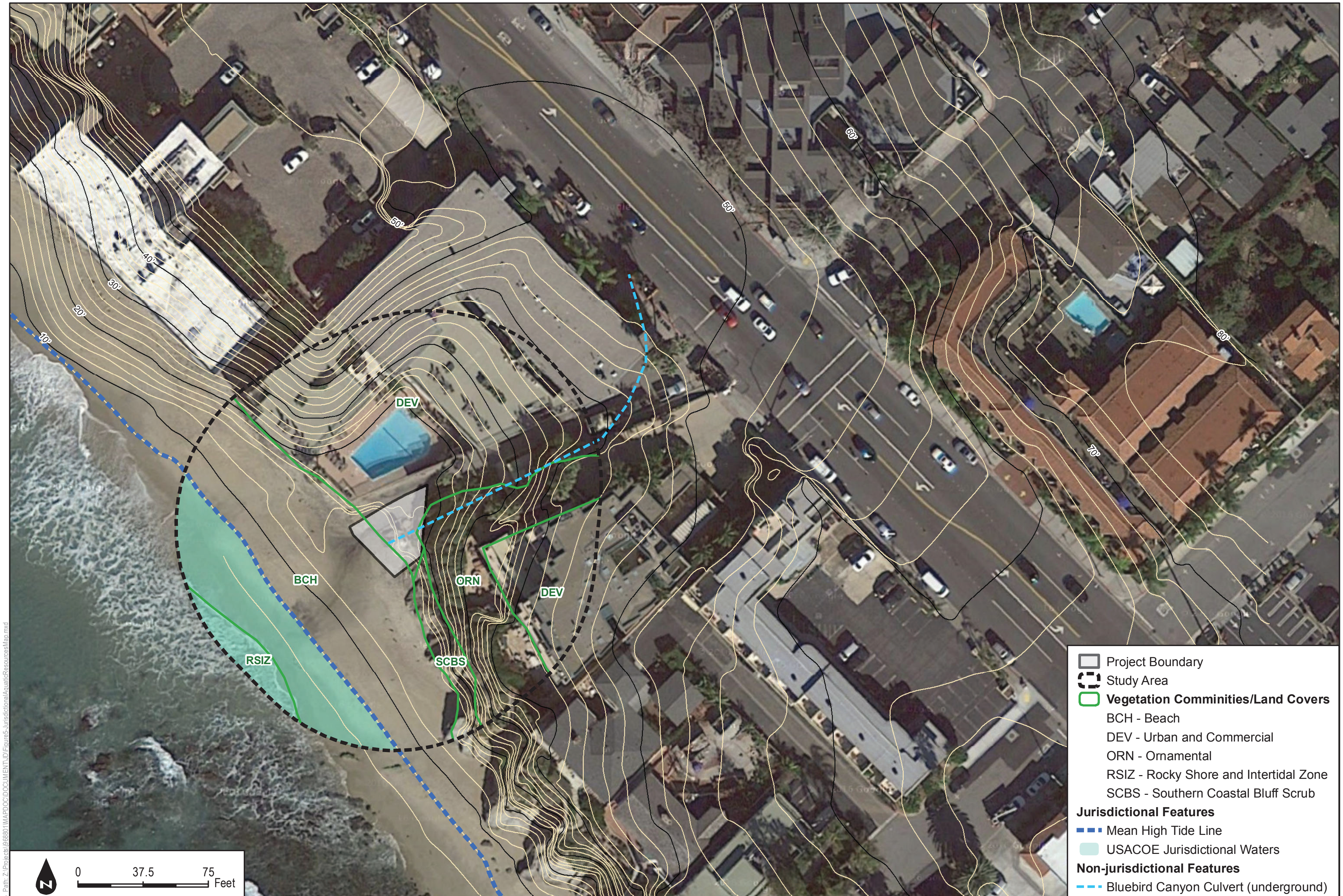
DUDEK

FIGURE 1

Project Location

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project

INTENTIONALLY LEFT BLANK



DUDEK

SOURCE: City of Laguna Beach Storm Drain Systems Online Viewer 2016 (Digitized Data Layers); Google Maps 2016

FIGURE 2

Biological and Jurisdictional Aquatic Resources Map

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project

INTENTIONALLY LEFT BLANK

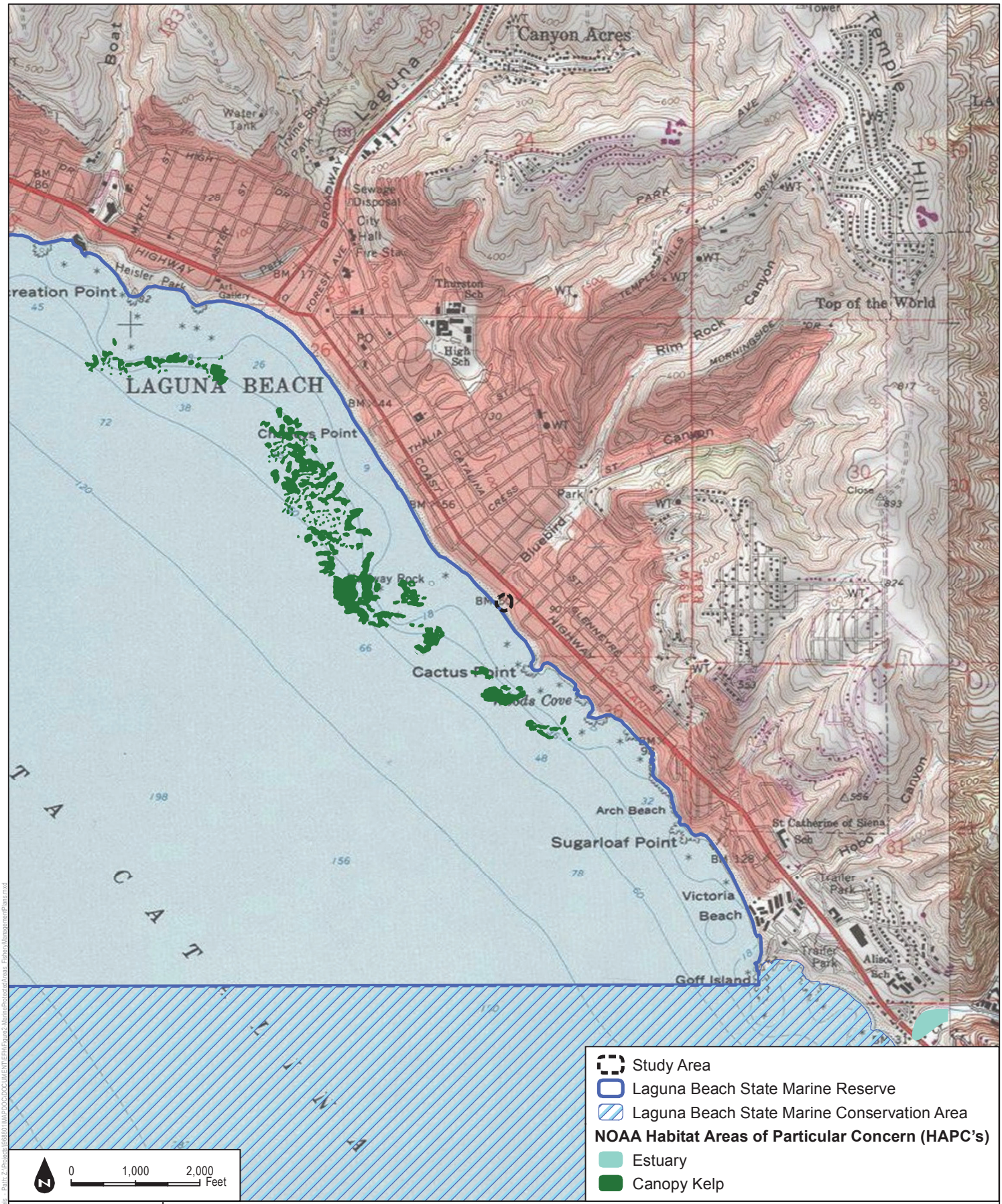
4 REGULATORY ENVIRONMENT

Essential Fish Habitat is regulated under the MFCMA, protecting waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (Magnuson-Stevens Act, 16 U.S.C. 1801 et seq.), which also includes eelgrass beds. Substrates that are considered include sediment, hard bottom, structures underlying waters, and associated biological communities.

The project is located adjacent to Laguna Beach State Marine Reserve, which extends seaward from the mean high tide line as shown on Figure 3. In a State Marine Reserve, it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource, except under a scientific collecting permit issued by the CDFW or specific authorization from the California Fish and Game Commission for research, restoration, or monitoring purposes (CCR Title 14, Section 632(a)(1)(A)).

The project is also located adjacent to an area designated as EFH in the Pacific Coast Groundfish Fishery Management Plan (FMP) (PFMC 2016a) (see Figure 3). This FMP manages 85 species over a large and ecologically diverse area extending from the Pacific coast border with Mexico to the Pacific coast border with between Washington and Canada (Pacific Fishery Management Council 2016). Because the EFH determination from this FMP addresses such a large number of species, it ocean covers areas out to 3,500 meters in depth, shoreline areas up to the MHHW line, and areas up coastal rivers where ocean-derived salinity is at least 0.5 parts per thousand during average annual low flows. The FMP also identifies Habitat Areas of Particular Concern (HAPCs), considered high priority areas for conservation, management, or research because they are rare, sensitive, stressed by development, or important to ecosystem function. The HAPC designation does not necessarily mean additional protections or restrictions are afforded an area, but they help to prioritize and focus conservation efforts. Current HAPC types are estuaries, canopy kelp, seagrass, rocky reefs, and "areas of interest" (a variety of submarine features, such as banks, seamounts, and canyons).

INTENTIONALLY LEFT BLANK



DUDEK

SOURCE: USGS 7.5-Minute Series Laguna Beach Quadrangle; NOAA 2006

FIGURE 3

Marine Protected Areas, Fishery Management Plans

Bluebird Canyon Outfall and Diversion Structure Rehabilitation Project

INTENTIONALLY LEFT BLANK

5 METHODS

Dudek aquatic ecologists Craig Seltenrich and Mike Henry conducted an EFH assessment within and in the general vicinity of the project site on June 14, 2016. The survey was conducted from 1200-1330 during low tide (+1.4 feet) with favorable weather conditions, overcast skies, wind speeds from 0-2 miles per hour, and temperatures around 64° F. The EFH assessment evaluated potential impacts/disturbance associated with proposed construction activities on fish, fish habitat, and on other marine resources within and adjacent to the project area.

INTENTIONALLY LEFT BLANK

6 SITE OBSERVATIONS

The substrate immediately surrounding the project site consists of a dry sandy beach, with minimal wrack of common kelp and algal species that may be periodically cleaned by beach maintenance crews (Figure 2). The nearest rocky intertidal habitat that was exposed on the survey date was approximately 100 feet seaward from the existing headwall. Small clumps of surfgrass (*Phyllospadix torreyi*) were observed on some of the nearshore rocks and dislodged surfgrass was present on-shore in the swash zone. Because the rocky intertidal habitat was not exposed during the site visit on June 14 2016 (which was conducted during a low tide of +1.4 feet), a complete census of intertidal species was not conducted. Species that were observed from the shore using binoculars included starburst anemone (*Anthopleura sola*), bat stars (*Patiria miniata*). The relatively exposed coastline and associated wave action within the project vicinity precludes the establishment of eelgrass beds (*Zostera marina*). No marine mammals were hauled out on the rocks in the area, and no shorebirds or seabirds were observed roosting or perching on any of the exposed rocks in the area. The only bird species observed were various gull species (*Larus* spp.).

Representative photographs of the outfall site and bluffs, adjacent beach habitat, and nearshore intertidal and subtidal areas are provided in Attachment A.

INTENTIONALLY LEFT BLANK

7 EFH AND MANAGED SPECIES

Under the MFCMA, the federal government has jurisdiction to manage fisheries in the U.S. Exclusive Economic Zone (EEZ), which extends from the outer boundary of state waters (3 nautical miles [NM] from shore) to a distance of 200 NM from shore (see Figure 3). Fishery Management Plans (FMPs) are extensive documents that are regularly updated. The goals of FMPs include the development and sustainability of an efficient and profitable fishery, optimal yield, adequate forage for dependent species, and long-term monitoring. There are two FMPs that include waters adjacent to the proposed project site; the Coastal Pelagic FMP covering 6 species and the Pacific Groundfish FMP covering 89 species.

Not all of the species covered by the Coastal Pelagics and Pacific Groundfish FMPs occur near the proposed project area. Table 1 lists species that have been collected near or occur in similar coastal conditions as the project area and are discussed below.

Orange County Sanitation District (OCSD) conducts semi-annual trawls to collect fish and large invertebrates at pre-determined stations and depth regimes adjacent to the project area. In the 2014 and 2015 surveys, a 7.6-meter (m) wide otter trawl with a 0.64 centimeter cod-end mesh net (towed by a research vessel) was used to collect fish and large invertebrates. The net was towed for 450 m at approximately 2 knots (OCSD 2016). A total of 7,162 fish were collected during the 2014 and 2015 surveys, representing a total of 34 species. However, according to Allen (2006) there have been 142 species captured in the coastal Southern California Bight during studies conducted over the last four decades.

In addition to the species managed by these two FMPs, the CDFW also provides protection for grunion (*Leuresthes tenuis*), which spawn on coastal beaches of Southern California. No take of grunion is permitted during April and May. Grunion can potentially spawn between the months of March and August, depending on ocean conditions.

7.1 Coastal Pelagics

As of 2016 the Coastal Pelagic FMP covered one invertebrate (market squid) and four fish species (northern anchovy, jack mackerel, Pacific mackerel, and Pacific sardine), as well as krill (PFMC 2016b). Pacific herring (*Clupea pallasii pallasii*) and jacksmelt (*Atherinopsis californiensis*) are also included in the Coastal Pelagic FMP as Ecosystem Component Species. EFHs for Coastal Pelagics are defined as all marine and estuarine waters from the shoreline of the coasts of California, Oregon and Washington offshore to the limits of the EEZ and above the thermocline.

Although no Coastal Pelagic FMP species were observed during the 2014 and 2015 surveys for the adjacent Orange County Sanitation District, all species covered could be present at some point during their life stages (Allen 2006). The northern anchovy historically ranged from the

Queen Charlotte Islands, British Columbia, south to Cabo San Lucas, Baja California. More recently, populations have moved into the Gulf of California, Mexico. Larvae and juveniles are often abundant in nearshore areas and estuaries with adults being more oceanic; however, adults may also be found in shallow nearshore areas and estuaries. Anchovy are non-migratory but do make extensive inshore-offshore and along-shore movements (Emmett et al. 1991). During historic periods of high abundance (from the early part of the 20th century into the 1940s) Pacific sardines ranged from the Gulf of California north to Washington State before the fishery crashed in the 1950s. Today, large populations still occur south of Point Conception into Baja California. The Pacific sardine is epipelagic, occurring in loosely aggregated schools. When abundant, this species can occur up to 150 miles offshore (Wolf et al. 2001). Jack mackerel and Pacific mackerel occur from Santa Maria Bay, Mexico to Yaquina Bay, Oregon. They occur in California bays, estuaries and coastal pelagic ocean waters throughout the year. Both species are schooling fish which prefer shallow water less than 100 feet deep and are most common at depths of 5 to 50 (CDFW 2013). All coastal pelagics are associated with the water column except for the female market squid, which lays egg masses on sandy bottoms at depths of about 15–180 feet. The market squid ranges coastally from Baja California to Alaska and can be found within 200 miles of the shore (PFMC 2008).

7.2 Pacific Groundfish

There are 89 fish species included in the Pacific Groundfish FMP. EFH for Pacific Groundfish include all waters off southern California between Mean Higher High Water (MHHW) and depths to 11,483 ft. The Groundfish FMP also includes the extent of salt water intrusion into freshwater inputs (e.g., rivers). Habitat Areas of Particular Concern (HAPCs) include but are not limited to estuaries, canopy kelp, seagrass, and rocky reefs.

The most abundant Pacific Groundfish groups captured during the OCSD 2014 and 2015 surveys were the flatfish followed by the rockfish and skates. No groundfish or sharks were captured. Of the 89 fish species covered in this FMP, 13 species were observed during the surveys. In the flatfish group, Pacific sanddabs had the greatest abundance (2,911 individuals) representing 40.6% of the total catch. Dover sole (6th most abundant) accounted for 2.8% of the total catch with 200 individuals, while English sole were the 7th most abundant species (177 individuals) representing 2.5% of the total catch. Curlfin sole (17th most abundant) accounted for 1.1% of the catch with 17 individuals, and Petrale sole (32nd most abundant) represented less than 1% of the catch (< 10 individuals).

The rockfish group included stripetail (5th most abundant) which accounted for 4.0% of the total catch with 287 individuals. All of the remaining rockfish species occurred in low numbers. The halfbanded rockfish (22nd most abundant), calico rockfish (26th most abundant), and greenstripe rockfish (27th most abundant) combined accounted for less than 1% of the total catch with 14, 5,

5 individuals captured, respectively. While the pink rockfish (28th most abundant), cowcod (29th most abundant) and vermilion rockfish (31st most abundant) accounted for less than 5 individuals captured per species.

California skate (19th most abundant) was the only species recorded from the FMPs Ecosystem Component Species group representing less than 0.3% of the total catch with 23 individuals (Table 1).

Table 1
Presence, Abundance, Percent of Catch, and Habitat of NMFS Managed Species Captured in Offshore Trawls in Orange County

Common Name	Scientific Name	Observed During OCSD 2014 and 2015 Survey	Abundance Rank and % of Total	Habitat
Coastal Pelagics				
Northern Anchovy	*Engraulis mordax*	No		Open water
Pacific Sardine	*Sardinops sagax*	No		Open water
Pacific Mackerel	*Scomber japonicus*	No		Open shallow water
Jack Mackerel	*Trachurus symmetricus*	No		Open shallow water
Market Squid	*Doryteuthis opalescens*	No		Open water
Pacific Groundfish				
Pacific Sanddab	*Citharichthys sordidus*	Yes	#1, 40.6%	Soft bottom habitats
English Sole	*Parophyrys vetulus*	Yes	#7, 2.5%	Soft bottom habitats
Stripetail Rockfish	*Sebastes saxicola*	Yes	#5, 4.0%	Hard substrate and kelp
Dover Sole	*Microstomus pacificus*	Yes	#6, 2.8%	Soft bottom habitats
Halfbanded Rockfish	*Sebastes semicinctus*	Yes	#22, 0.2%	Hard substrate and kelp
California Scorpion fish	*Scorpaena gutatta*	No		Soft and hard substrate
Lingcod	*Ophiodon elongatus*	No		Hard substrate
California Skate	*Raja inornata*	Yes	#19, 0.3%	Open water
Calico Rockfish	*Sebastes dallii*	Yes	#26, 0.1%	Hard substrate and kelp
Greenstripe Rockfish	*Sebastes elongatus*	Yes	#27, 0.1%	Hard substrate and kelp
Treefish	*Sebastes serriceps*	No		Hard substrate and kelp
Petrale Sole	*Eopsetta jordani*	Yes	#32, <0.1%	Soft bottom habitats
Pink Rockfish	*Sebastes eos*	Yes	#28, 0.1%	Hard substrate and kelp
Cowcod	*Sebastes levis*	Yes	#29, <0.1%	Hard substrate and kelp
Pacific Whiting (Hake)	*Merluccius productus*	No		Open water and hard substrate
Curlfin Sole	*Pleuronichthys decurrens*	Yes	#17, 1.1%	Soft bottom habitats
Vermilion Rockfish	*Sebastes miniatus*	Yes	#31, <0.1%	Hard substrate and kelp

INTENTIONALLY LEFT BLANK

8 POTENTIAL PROJECT IMPACTS

Operation of the proposed project would not change the location, volume, or water quality of the stormwater exiting the Bluebird Canyon stormwater outfall. Therefore, the following section includes a discussion of the potential impacts resulting from the construction of the proposed project. Potential effects to the marine environment could result from:

- Increased turbidity from construction equipment and land manipulations
- Fluid spills from construction related equipment

The assessment of impacts is based on the assumption that the proposed project would include coverage under the General Construction Activity Storm Water Permit for the proposed project. The associated Stormwater Pollution Prevention Plan (SWPPP) would contain the following measures:

- Equipment shall be inspected regularly (daily) during construction, and any leaks found shall be repaired immediately.
- Refueling of vehicles and equipment shall be in a designated, contained area.
- Drip pans shall be used under stationary equipment during refueling and maintenance.
- Drip pans that are used shall be covered during rainfall to prevent leaching of contaminants.
- Construction and maintenance requirements of appropriate containment structures to prevent offsite transport of pollutants from spills and construction debris.
- Monitoring to verify Best Management Practices (BMPs) are implemented and kept in good working order.

8.1 Construction

The project site is bordered by open waters of the Pacific Ocean at Bluebird Canyon and all construction activity is land-based, extending westward to near the MHHW line. Activities associated with the project could slightly affect water quality if BMPs fail. If BMPs were unable to capture runoff or construction activities breach the tidal system, sediments could become suspended in the available water column.

However, all suspended sediments would be introduced to open waters and rapidly mixed with receiving waters so impacts would be minimized, of short duration, and easily dissipated. There are no special aquatic habitats or other sensitive natural communities that have been identified at the proposed project site. The project area, bordered by the MHHW line, will not extend into any area that will affect bottom substrate essential to fish habitat. The limited rocky intertidal, sandy bottom and kelp forests existing in the nearshore zone adjacent to the project area are outside of

any construction activities and will not be affected or disturbed by construction activities. The sandy bottom in adjacent waters does not provide substrate to support eelgrass (*Zostera marina*); therefore construction activities are not expected to affect eelgrass beds.

Other effects of project construction include the unnatural occurrence of light and noise. Both would be short-term during daytime construction activities. It is unlikely that these effects would lead to reduced survival of any species potentially occurring in the vicinity of the project; however, if effects do occur, only a small percentage of individuals within fish populations would potentially be affected.

Fish eggs and larval, juvenile, and adult fish would likely experience few to no effects due to construction activities. Fish eggs and larval fish are primarily found in the water column in this area and are dispersed by water movement away from the intertidal zone during lower tides, while juvenile and adult fishes have the ability to move to avoid disturbances during construction activities. Short-term water quality impacts (e.g., turbidity) may temporarily have minor effects on resident fishes; however, these impacts would likely not affect the success of fish populations due to the ability of the juvenile and adult fishes to relocate to other adjacent areas. The water replenishment that continually occurs in open waters transports fish larvae and eggs to various areas within coastal nearshore habitats which are abundant in the region. Temporary relocation of these transient species would not result in biologically significant impacts with regard to competition, predation, or spawning.

No adverse effects are expected from construction activities that will impact recruitment or populations of the protected species within Laguna Beach State Marine Reserve or affect night-time spawning runs of California grunion (if they occur in the general vicinity). Additionally, a review of current habitat data does not indicate that eelgrass is present within the general vicinity of the proposed construction site, and kelp forests are located outside the direct influence of proposed construction activities within the project area, which reduces the potential for occurrence of managed species near the site.

9 ASSESSMENT SUMMARY

The potential impacts resulting from construction of the project are expected to be minimal and temporary to managed fish species occurring in this nearshore coastal habitat. During construction activities, should any individuals of managed pelagic or groundfish species occur within the adjacent vicinity of the project area, they could relocate to another area of open water or other shallow water habitat to avoid any disturbances caused by construction activities. No adverse effects are expected from construction activities that will impact recruitment or

populations of the protected species within Laguna Beach State Marine Reserve. Based on the apparent absence of eelgrass in the vicinity of the proposed construction site, and kelp forests are located outside the direct influences of the project area, there is low potential for occurrence of managed species near the site.

INTENTIONALLY LEFT BLANK

10 REFERENCES

Allen, L.G., Horn, M.H., Pondella, D.J., 2006. The Ecology of Marine Fishes: California and Adjacent Waters. University of California Press, Los Angeles, California.

California Department of Fish and Wildlife. 2013. Marine Sportfish Identification: Jack Mackerel. Accessed June 25, 2016, at https://www.wildlife.ca.gov/Fishing/Ocean/Fish-ID/Sportfish/Other-Fishes#mackerel.

Emmett, R.L., S.A. Hinton, S.L. Stone, M.E. Monaco. 1991. Distribution and abundance of fishes and invertebrates in west coast estuaries volume II: Species life history summaries. ELMR report number 8. August 1991.

OCSD. 2016. Annual Report, July 1 2014 – June 30 2015. Marine Monitoring, Fountain Valley, California. Accessed June 23, 2016 at http://www.ocsd.com/opengov/annual-reports/-folder-792.

Pacific Fishery Management Council (PFMC). 2008. Pacific Coast Groundfish Fishery Management Plan For the California, Oregon, and Washington Groundfish Fishery. July. Submitted by the PFMC in conjunction with NMFS Southwest Region. Accessed June 29, 2016, at http://www.pcouncil.org/wp-content/uploads/fmpthru19.pdf.

PFMC. 2016. Pacific Coast Groundfish Fishery Management Plan For the California, Oregon, and Washington Groundfish Fishery. March. Submitted by the PFMC in conjunction with NMFS Southwest Region. Accessed June 25, 2016, at http://www.pcouncil.org/wp-content/uploads/2016/03/GF_FMP_FINAL_Mar2016_Mar282016.pdf.

PFMC 2016b. Coastal Pelagic Species Fishery Management Plan, as Amended Through Amendment 15. Submitted by the PFMC in conjunction with NMFS Southwest Region. Feb. Accessed June 25, 2016 at http://www.pcouncil.org/wp-content/uploads/2016/05/CPS_FMP_as_Amended_thru_A15.pdf.

Wolf P, Smith, P.E. and D.R.Bergen. 2001. Pacific Sardine. In: W. S. Leet, C.M. Dewees, R. Klingbeil and E.J. Larson [Editors]. California's living marine resources: a status report. California Department of Fish and Game. Sacramento, California. pp 299-302.

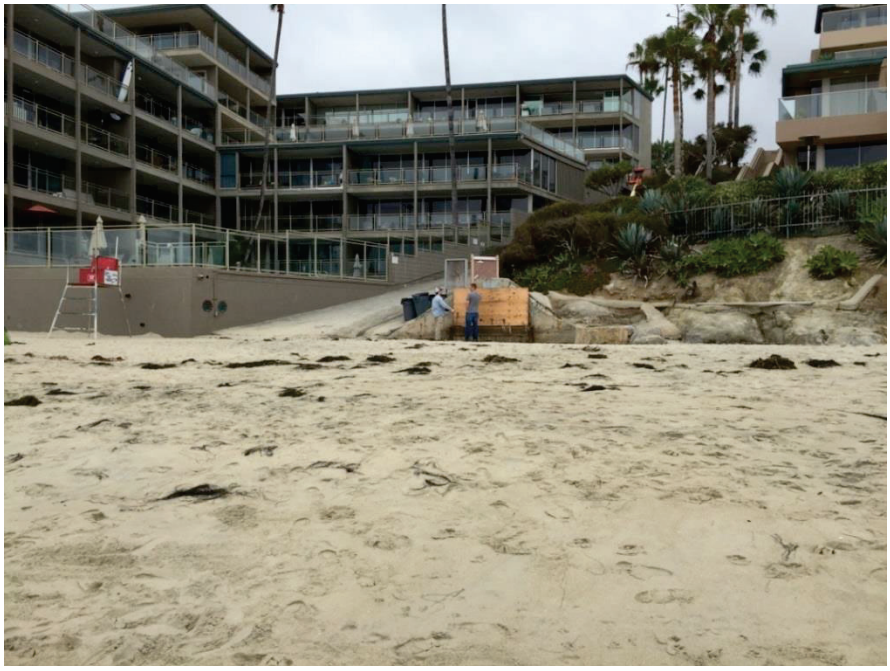
INTENTIONALLY LEFT BLANK

ATTACHMENT A

Representative Photographs of the Existing Bluebird Canyon Concrete Outfall Headwall and Adjacent Coastal Habitats

ATTACHMENT A
Representative Photographs of the Existing Bluebird Canyon Concrete Outfall Headwall and Adjacent Coastal Habitats

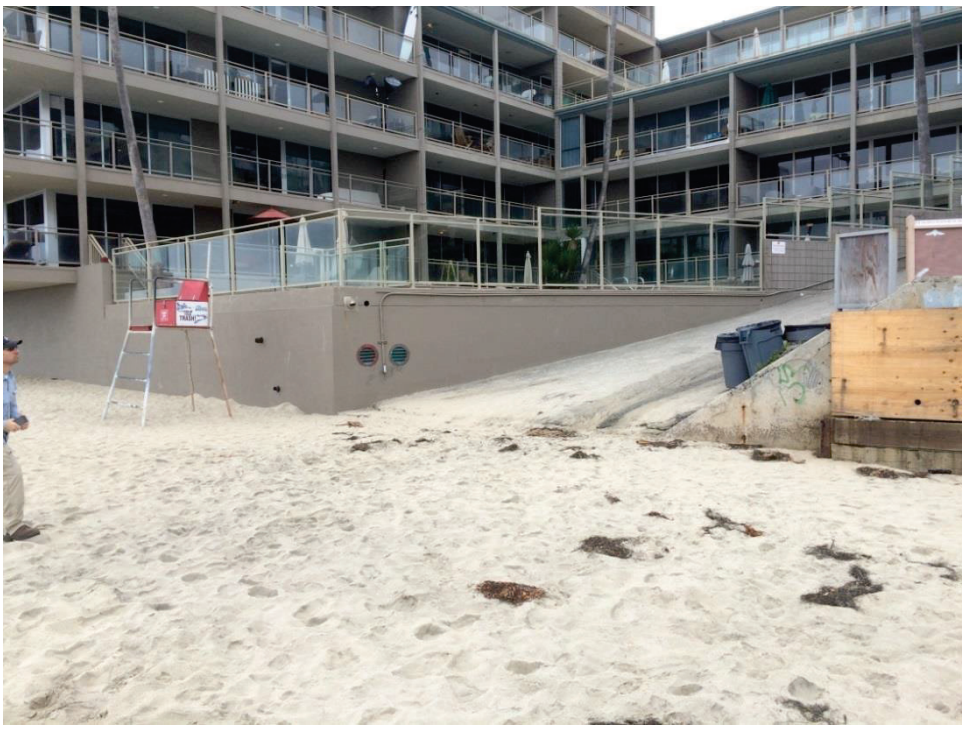
1. Existing Bluebird Canyon Concrete Outfall Headwall



2. Existing Bluebird Canyon Concrete Outfall Headwall and Adjacent Sand Beach

3. Bluffs Immediately South of the Existing Concrete Outfall Headwall

4. Bluffs, Sand Beach, and Rocky Outcrops Further South of the Existing Concrete Outfall Headwall



5. Bluffs and Sand Beach Immediately North of the Existing Concrete Outfall Headwall

6. Bluffs and Sand Beach Further North of the Existing Concrete Outfall Headwall

7. Rocky Outcrops North and Seaward of the Existing Concrete Outfall Headwall

8. Rocky Outcrops Immediately Seaward of the Existing Concrete Outfall Headwall