

June 10, 2009

Ms. Jemellee Cruz  
Flood Maintenance Division  
Department of Public Works  
County of Los Angeles  
900 South Fremont Ave  
Annex Building, 2<sup>nd</sup> Floor  
Alhambra, CA 91802-1460

**VIA EMAIL**  
**[jcruz@dpw.lacounty.gov](mailto:jcruz@dpw.lacounty.gov)**

**Subject:** Results of Biological Reconnaissance Surveys of Three Soft-Bottom Channels, Los Angeles County, California

Dear Ms. Cruz:

This letter report presents the findings of biological reconnaissance surveys of three soft-bottom channel (SBC) reaches to be added to the Los Angeles County Department of Public Work's (LACDPW's) existing California Department of Fish and Game (CDFG), U.S. Army Corps of Engineers (USACE), and Regional Water Quality Control Board (RWQCB) permits. These SBC reaches include Dominguez Channel (Vermont Avenue – upstream limits/Henry Ford Blvd. – downstream limits), Los Angeles River (Pacific Coast Highway – upstream limits/1,600 feet north of Pacific Ocean – downstream limits), and San Gabriel River (1,750 feet north of San Diego Freeway – upstream limits/350 feet north of Pacific Ocean – downstream limits). The purpose of the surveys was to evaluate existing biological resources and map vegetation types where present in order to determine the potential for special status plant and wildlife species to occur at each SBC reach.

The LACDPW maintains numerous soft-bottom channel reaches and debris basins that primarily function to control flood waters. Maintained soft-bottom channels are located in association with concreted segments of rivers and creeks in order to prevent backup of debris and sediment that moves downstream during high rainfall events. Vegetation within the maintained segments of the soft-bottom channels increases the collection of debris, and periodic maintenance therefore involves removal of vegetation and debris from the SBC reaches.

## **METHODS**

BonTerra Consulting Biologists Brian Daniels and Andrea Edwards conducted general plant and wildlife surveys that included vegetation mapping on February 12, 2009. The California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS 2009) and CDFG's California Natural Diversity Database (CDFG 2009) were reviewed to identify special status plants, wildlife, and habitats known to occur in the vicinity of the project sites, including the following U.S. Geological Survey (USGS) quadrangles: Inglewood, South Gate, Whittier, Torrance, Long Beach, Los Alamitos, San Pedro, and Seal Beach.

All species observed were recorded in field notes. Plant species were identified in the field or collected for subsequent identification using keys in Hickman (1993) and Munz (1974).



Taxonomy follows Hickman (1993) and current scientific data (e.g., scientific journals) for scientific and common names. Nomenclature for vegetation types generally follows that of *The Vegetation Classification and Mapping Program: List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* (CDFG 2003).

Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic signs including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Fisher and Case (1997) for amphibians and reptiles, American Ornithologists Union (1998) for birds, and Baker *et al.* (2003) for mammals.

Local vicinity maps are attached as Exhibits 1A-1C, and aerial photographs are attached as Exhibits 2A-2C. Vegetation type maps are included as Exhibits 3A-3C, and site photographs are included as Exhibits 4A-4C. Table 1 presents detailed information for each reach. Elevations for the three SBC reaches are below approximately ten feet (above mean sea level). All three of these SBC reaches are within the ocean tidal zone and contain salt and brackish waters. Freshwater enters the Dominguez Channel SBC and San Gabriel River SBC reaches at their upstream limits. Freshwater enters the lower Los Angeles River near Willow Street which is upstream of the Los Angeles River SBC reach surveyed and discussed in this report.

**TABLE 1**  
**SOFT-BOTTOM CHANNEL (SBC) REACH INFORMATION**

Soft-Bottom Channel	Reach Limits (u/s = upstream; d/s = downstream) and Length	USGS Quadrangles and Watershed	Thomas Guide Location	Soil Type Associations	Maintenance Plan
Dominguez Channel	Vermont Ave (u/s) - Henry Ford Blvd (d/s); 44,742 feet	Torrance, Long Beach; Dominguez Watershed	764-B1 to 794-H7	Hanford, Tujunga-Soboba, Chino, Yolo, Oceano, Ramona-Placentia	Clearing of vegetation, debris, and brush growing within the reach right of way
Los Angeles River	Pacific Coast Hwy (u/s) - 1600' N/o Pacific Ocean (d/s); 9,000 feet	Long Beach; Los Angeles River Watershed	795-C5 to 825-C1	Hanford, Tujunga-Soboba	Clearing of all non-native vegetation growing throughout the reach using mechanical equipment
San Gabriel River	1750' N/o 405 (u/s) - 350' N/o Pacific Ocean (d/s); 21,000 feet	Los Alamitos; San Gabriel River Watershed	796-G4 to 826-F2	Chino	Clearing of vegetation, debris, and brush growing within the reach right of way

## RESULTS

### Dominguez SBC

#### **Location**

The Dominguez SBC reach is located in the Cities of Los Angeles and Carson, and is surrounded mainly by residential, commercial, and industrial development. Victoria Park and Victoria Golf Course are also located adjacent to the SBC in the upper portion of the reach. The reach starts southwest of the Highway 91 and Interstate 110 interchange, crosses Interstate 110, continues southeast along and then crosses Interstate 405, turns south to cross Highway 1, and empties into the East Basin Channel of the Los Angeles Harbor and then into the Pacific Ocean.

### **Vegetation**

Open water is present within this SBC reach, and developed areas consisting of rip-rap (large piled rocks) are present along the channel banks. These developed areas contain bands and patches of saltgrass grassland present mainly in the upper portion of the reach, dominated by saltgrass (*Distichlis spicata*). Other native species present include common woody pickleweed (*Salicornia virginica*) and sand spurrey (*Spergularia* sp.). Non-native species present include tree tobacco (*Nicotiana glauca*), bristly ox tongue (*Picris echioides*), African brass buttons (*Cotula coronopifolia*), wild radish (*Raphanus sativus*), common sow-thistle (*Sonchus oleraceus*), common groundsel (*Senecio vulgaris*), Mediterranean schismus (*Schismus barbatus*), ripgut grass (*Bromus diandrus*), bermuda grass (*Cynodon dactylon*), and wild oat (*Avena* sp.).

### **Wildlife**

Open water habitat dominates this SBC reach and is expected to attract water birds, especially during migration and the winter season. Observed during the survey were American wigeon (*Anas americana*), mallard (*Anas platyrhynchos*), cinnamon teal (*Anas cyanoptera*), red-breasted merganser (*Mergus serrator*), ruddy duck (*Oxyura jamaicensis*), pied-billed grebe (*Podilymbus podiceps*), eared grebe (*Podiceps nigricollis*), double-crested cormorant (*Phalacrocorax auritus*), and American coot (*Fulica americana*). Sandpipers use the rip-rap at edge of the water either for foraging or roosting and observed during the survey were black-bellied plover (*Pluvialis squatarola*), black-necked stilt (*Himantopus mexicanus*), least sandpiper (*Calidris minutilla*), and long-billed dowitcher (*Limnodromus scolopaceus*). Gulls are expected to commonly use this SBC reach for loafing, bathing, and preening, but also some occasional foraging. The ring-billed gull (*Larus delawarensis*), western gull (*Larus occidentalis*), and California gull (*Larus californicus*) were observed during the survey. Terrestrial habitats for land birds are generally lacking in this reach and very few of these species were observed during the survey. No raptors or birds of prey were observed at this SBC reach during the survey.

The California ground squirrel (*Spermophilus beecheyi*) was the only non-bird wildlife species observed during the survey. Other than fish, habitats for amphibians, reptiles, and mammals are very limited and only a few species are expected to occur such as the western fence lizard (*Sceloporus occidentalis*), Virginia opossum (*Didelphis virginiana*), and black rat (*Rattus rattus*). Some larger mammals such as the common raccoon (*Procyon lotor*) and coyote (*Canis latrans*) may occasionally occur. A wide variety of fish are found in the salt water environment of the Los Angeles Harbor, though the diversity decreases in the inner harbor areas. Several species are expected to occur in this SBC reach, especially near its mouth, and include common fish species such as California killifish (*Fundulus parvipinnis*) and two or more species of gobies (Gobiidae).

### **Special Status Species**

Although terrestrial habitat is very limited in this SBC reach, the southern tarplant (*Centromadia parryi* ssp. *australis*), a CNPS List 1B species, may occur within the saltgrass grassland patches on the rip-rap near the base of the levee. Several other special status plant species have potential to occur in the general project vicinity, including eight listed as State and federally Threatened and/or Endangered or as a Candidate for listing as Threatened and Endangered: Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), coastal dunes milk-vetch (*Astragalus tener* var. *titi*), salt marsh bird's beak (*Cordylanthus maritimus* ssp. *maritimus*), Gambel's water cress (*Nasturtium gambelii*), Moran's navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), Lyon's pentachaeta (*Pentachaeta lyonii*),

and Brand's star phacelia (*Phacelia stellaris*). However, the disturbed condition and limited extent of the saltgrass grassland present on the rip-rap is not suitable habitat for these species and they are not expected to occur. Eelgrass (*Zostera marina*) may occur on the mud and sand sediments on the bottom of this SBC reach especially at its downstream limits near the SBC mouth at the harbor. Although eelgrass is not considered to be a special status plant species, it is considered to be a special status vegetation type due to its functional value as habitat for wildlife.

Several special status wildlife species are expected to use this SBC reach including two bird species that are State- and federally listed as Endangered: California brown pelican (*Pelecanus occidentalis californicus*) and California least tern (*Sternula antillarum browni*). The California brown pelican is expected to occasionally occur for loafing and foraging activities throughout the year. The California least tern is expected to occur from April to August for foraging activities only. These two species would not nest in this SBC reach and most occurrences would be near the downstream limits of this SBC reach. Since the proposed maintenance activities would occur outside the nesting season and away from the aquatic habitats, the California brown pelican and California least tern are not expected to be affected.

## **Los Angeles River SBC**

### ***Location***

Los Angeles River SBC reach is located in the City of Long Beach, and is surrounded mainly by residential, commercial, and industrial development. This SBC reach starts at Pacific Coast Highway (PCH), flows south parallel to and east of Interstate 710, and empties into Queensway Bay and then into the Pacific Ocean.

### ***Vegetation***

Giant reed (*Arundo donax*), an invasive non-native plant species, is dominant near the water's edge in the upper portion of this SBC reach. Other species scattered within this vegetation include native mule fat (*Baccharis salicifolia*), willow (*Salix* sp.), and bulrush (*Scirpus* sp.); and non-native castor bean (*Ricinus communis*), African fountain grass (*Pennisetum setaceum*), tree tobacco, shortpod mustard (*Hirschfeldia incana*), wild radish, sweet fennel (*Foeniculum vulgare*), elm (*Ulmus* sp.), Mexican fan palm (*Washingtonia robusta*), gum (*Eucalyptus* sp.), and ash (*Fraxinus* sp.). Open water is present within the reach, and developed areas consisting of rip-rap (large piled rocks) are present along the banks of this SBC reach.

### ***Wildlife***

The open brackish water habitat of this SBC reach attracts a large number and diversity of water birds throughout the year. Observed during the survey were gadwall (*Anas strepera*), mallard, cinnamon teal, lesser scaup (*Aythya affinis*), ruddy duck, eared grebe, brown pelican, double-crested cormorant, and American coot. In addition to rip-rap, this SBC reach has some sediment exposed at the banks and provides some foraging and roosting habitat for sandpipers, though not as extensive as either upstream or downstream of this SBC reach. The spotted sandpiper (*Actitis macularius*) was the only sandpiper observed during the survey. Gulls are common in this channel and the ring-billed gull, western gull, California gull, and glaucous-winged gull (*Larus glaucescens*) were observed. The terns are in the gull family and two species were observed foraging in this reach: Caspian tern (*Hydroprogne caspia*) and Forster's tern (*Sterna forsteri*). Terrestrial habitats in this SBC reach are primarily limited to between PCH and Anaheim Street. Land birds observed during the survey included rock pigeon (*Columba livia*),

Eurasian collared-dove (*Streptopelia decaocto*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), yellow warbler (*Dendroica petechia*), yellow-rumped warbler (*Dendroica coronate*), common yellowthroat (*Geothlypis trichas*), house finch (*Carpodacus mexicanus*), and house sparrow (*Passer domesticus*). Osprey (*Pandion haliaetus*), red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*) were three raptors observed during the survey.

No other wildlife species were observed at this reach during the survey other than birds. The terrestrial habitats between PCH and Anaheim Street provide limited opportunities for amphibians, reptiles, and mammals. The Pacific treefrog (*Pseudacris regilla*) may be present but no other amphibian species are expected to occur. The western fence lizard is expected to occur and the southern alligator lizard (*Elgaria multicarinata*) may occur, but no other reptiles are expected. Mammals expected to occur include the California ground squirrel, Virginia opossum, black rat, and common raccoon. Several fish species are expected to occur near the mouth of this SBC and include the northern anchovy (*Engraulis mordax*), cheek-spotted goby (*Lythrypnus albigena*), arrow goby (*Clevelandia ios*), and California killifish.

### **Special Status Species**

The terrestrial habitats in this SBC reach also provide potentially suitable habitat for the southern tarplant and it may occur. In addition, eelgrass may occur on the mud and sand sediments on the bottom of this reach.

Several special status wildlife species are expected to use the SBC reach including three bird species listed as State and/or federally Endangered: California brown pelican, American peregrine falcon (*Falco peregrines anatum*)<sup>1</sup>, and California least tern. The California brown pelican was observed during the survey and is expected to occur in this reach for loafing and foraging activities throughout the year. The American peregrine falcon is expected to occur throughout the year for foraging activities only. The California least tern is only expected to occur from April to August for foraging activities only. These three species would not nest in this reach. Since the proposed maintenance activities would occur outside the nesting season and away from the aquatic habitats, the California brown pelican, American peregrine falcon, and California least tern are not expected to be affected. The native riparian habitats of this SBC reach are too disturbed and limited in extent to provide suitable habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) and least Bell's vireo (*Vireo bellii pusillus*) and they are not expected to occur.

### **San Gabriel River SBC**

#### **Location**

This San Gabriel River SBC reach is located in the Cities of Long Beach and Seal Beach, and is surrounded mainly by residential, commercial, and industrial development. Nurseries containing non-native ornamental plants are also found immediately adjacent to this SBC reach. The reach starts directly north of the Interstate 405 and Interstate 605 interchange, flows south and crosses Interstate 405 then Highway 22, and empties into the Pacific Ocean.

---

<sup>1</sup> This species was classified as Recovered and delisted from its federal status of Endangered on August 25, 1999, and as a State Candidate for delisting on November 2, 2007.

### **Vegetation**

Marsh vegetation, mixed together with ruderal and ornamental areas, is present along the SBC banks, mainly in the upper portion of the reach. The marsh vegetation is found in a narrow and patchy band along the water's edge, and is dominated by bulrush; other native species occasionally present include hoary nettle (*Urtica dioica* ssp. *holosericea*), willow, and mule fat. Ruderal areas are generally found in a thicker band upslope from the marsh vegetation, and are dominated by non-native species including castor bean and giant reed; other non-native species present include tree tobacco, common sow-thistle, and common groundsel. Ornamental areas are generally found upslope from, and mixed together with, the ruderal areas, and contain non-native species including bottlebrush (*Callistemon* sp.), Brazilian pepper tree (*Schinus terebinthifolius*), olive (*Olea europaea*), Canary Island date palm (*Phoenix canariensis*), Mexican fan palm, ash, and elm. Open water is present within this SBC reach, and developed areas consisting of rip-rap (large piled rocks) are present along the SBC banks.

### **Wildlife**

The open brackish water habitat of the reach attracts a large number and diversity of water birds throughout the year. Observed during the survey were gadwall, American wigeon, mallard, blue-winged teal (*Anas discors*), greater scaup (*Aythya marila*), lesser scaup, bufflehead (*Bucephala albeola*), red-breasted merganser, pied-billed grebe, western grebe (*Aechmophorus occidentalis*), American white pelican (*Pelecanus erythrorhynchos*), brown pelican, double-crested cormorant, common moorhen (*Gallinula chloropus*), and American coot. In addition to rip-rap, this SBC reach has some sediment exposed at the banks and provides some foraging and roosting habitat for sandpipers. The black-necked stilt, spotted sandpiper, and least sandpiper were observed during the survey. Gulls are occasionally common in this SBC reach and the ring-billed gull, California gull, and glaucous-winged gull were observed. No terns were observed foraging in this reach though they are expected to occasionally occur. Terrestrial habitats in this SBC reach are primarily limited to upstream of the 7<sup>th</sup> Street/State Highway 22 (Garden Grove Freeway) bridge. Land birds observed during the survey included rock pigeon, black phoebe, common raven (*Corvus corax*), yellow-rumped warbler, common yellowthroat, song sparrow (*Melospiza melodia*), and red-winged blackbird (*Agelaius phoeniceus*). Turkey vulture (*Cathartes aura*), osprey, red-tailed hawk, and American kestrel were four raptors observed during the survey.

California ground squirrel was the only non-bird wildlife species observed at this SBC reach. The terrestrial habitats upstream of the 7<sup>th</sup> Street/State Highway 22 bridge provide limited opportunities for amphibians, reptiles, and mammals. The Pacific treefrog may be present but no other amphibian species are expected to occur. The western fence lizard and southern alligator lizard are expected to occur. Unlike the Los Angeles River and the Dominguez Channel reaches, this SBC reach has some adjacent open spaces and there is potential for snakes such as the gopher snake (*Pituophis catenifer*) to occur. Mammals expected to occur include the California ground squirrel, Virginia opossum, black rat, common raccoon, and coyote. This SBC reach has a more direct connection with the ocean that the other two SBC reaches discussed above, so marine mammals such as the California sea lion (*Zalophus californianus*) and harbor seal (*Phoca vitulina*) may occasionally occur. Several fish species are expected to occur near the mouth of this SBC reach and include the northern anchovy, cheek-spotted goby, arrow goby, and California killifish.

### ***Special Status Species***

The terrestrial habitats in this SBC reach also provide potentially suitable habitat for the southern tarplant and it may occur. In addition, eelgrass may occur on the mud and sand sediments on the bottom of this reach.

Several special status wildlife species are expected to use this reach including one reptile and three bird species listed as State and/or federally Threatened and/or Endangered: green sea turtle (*Chelonia mydas*), California brown pelican, American peregrine falcon, and California least tern. The cold ocean currents of California seem inhospitable to the a tropical species such as the green sea turtle, but its regular occurrence in the San Gabriel River has recently been well documented. It appears to be attracted to the warm water effluents from the adjacent power plant. The California brown pelican was observed during the survey and is expected to occur in the reach for loafing and foraging activities throughout the year. The American peregrine falcon is expected to occur throughout the year for foraging activities only. The California least tern is only expected to occur from April to August for foraging activities only. These three bird species would not nest in the reach. This SBC reach does not provide suitable habitat for egg-laying by the green sea turtle. Since the proposed maintenance activities would occur outside the nesting season and away from the aquatic habitats, the green sea turtle, California brown pelican, American peregrine falcon, and California least tern are not expected to be affected. The native riparian habitats of this SBC reach are too disturbed and limited in extent to provide suitable habitat for the southwestern willow flycatcher and least Bell's vireo and they are not expected to occur.

### **RECOMMENDATIONS**

Since the proposed maintenance activities for these three SBC reaches would only occur in the terrestrial habitats, only the special status plant species discussed above would potentially be affected. Therefore, BonTerra Consulting recommends that focused botanical surveys be conducted for the southern tarplant during the appropriate blooming time (approximately June) at all three channels to determine the presence or absence of this special status plant species.

If any proposed maintenance activities in these SBC reaches would occur in the aquatic habitats, then avoidance measures would need to be developed and implemented to avoid potential impacts on eelgrass and, for the San Gabriel River SBC reach, the green sea turtle.

BonTerra Consulting has appreciated the opportunity to assist on this project. If you have any comments or questions, please call Marc Blain or Tom Smith at (626) 351-2000.

Sincerely,

BONTERRA CONSULTING



Thomas E. Smith, Jr., AICP  
Principal

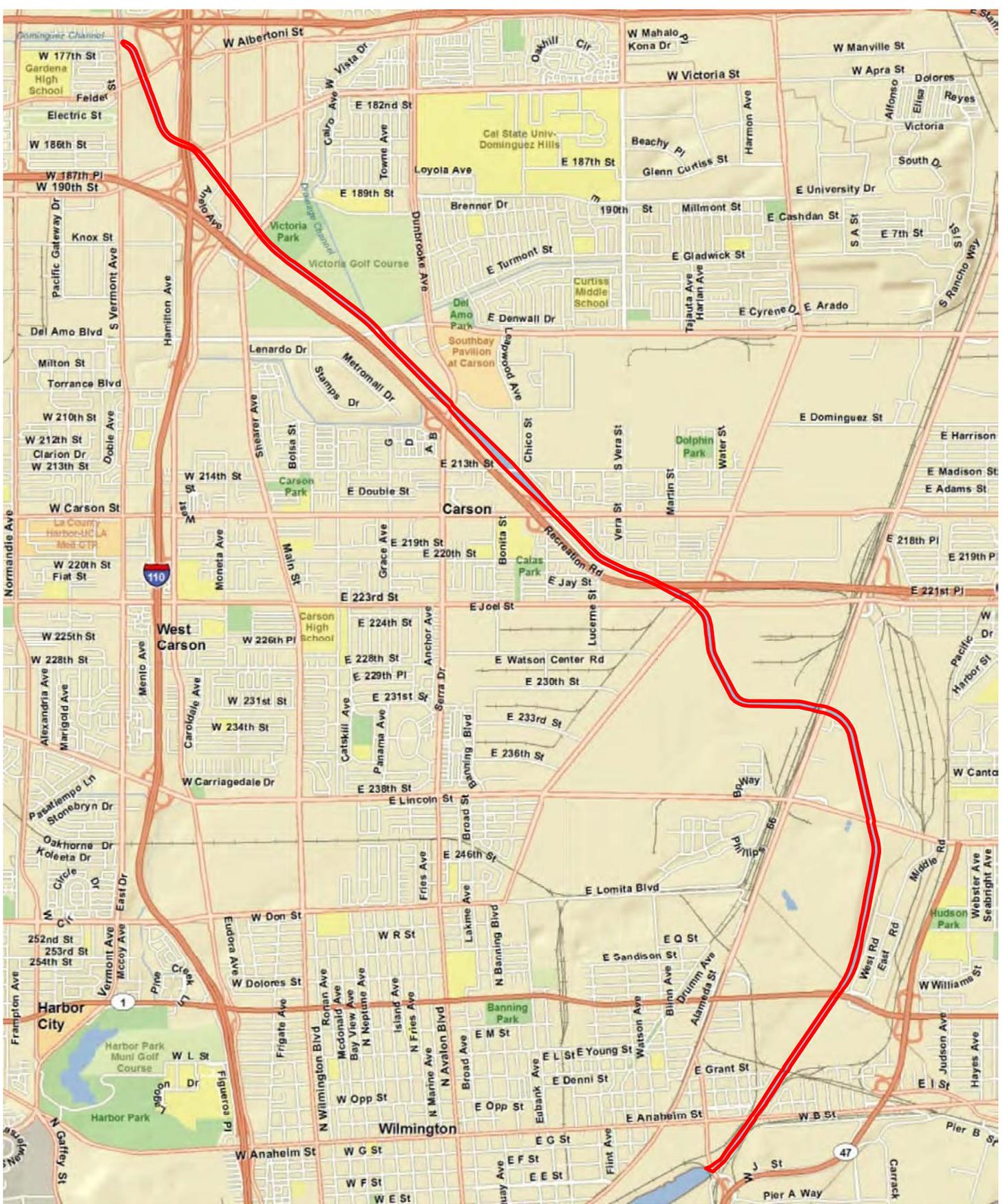


Marc T. Blain  
Biological Resources Manager

Attachments: Exhibits 1A, 1B, and 1C – Local Vicinity  
Exhibits 2A, 2B, and 2C – Aerial Photograph  
Exhibits 3A, 3B, and 3C-1 to 3C-4 – Vegetation Map  
Exhibits 4A, 4B, and 4C – Site Photographs

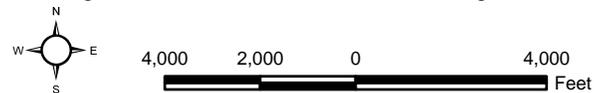
## REFERENCES

- American Ornithologists' Union. 1998. *Check-list of North American Birds, 7th ed.* American Ornithologists' Union, Washington, D.C.
- Baker, R. J., L. C. Bradley, R. D. Bradley, J. W. Dragoo, M. D. Engstrom, R. S. Hoffmann, C. A. Jones, F. Reid, D. W. Rice, C. Jones. 2003 (December). *Revised Checklist of North American Mammals North of Mexico, 2003*. Occasional Papers (No. 229). Waco, TX: Museum of Texas Tech University.
- California Department of Fish and Game (CDFG). 2009. California Natural Diversity Database. Records of Occurrence for Inglewood, South Gate, Whittier, Torrance, Long Beach, Los Alamitos, San Pedro, and Seal Beach quadrangle maps. Sacramento, CA: CDFG, Natural Heritage Division.
- California Department of Fish and Game (CDFG). 2003. *The Vegetation Classification and Mapping Program: List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database*. Wildlife and Habitat Data Analysis Branch, Sacramento, California. [http://www.dfg.ca.gov/whdab/html/natural\\_communities.html](http://www.dfg.ca.gov/whdab/html/natural_communities.html)
- California Native Plant Society (CNPS). 2009. Electronic Inventory of Rare and Endangered Vascular Plants of California. Records of Occurrence for Inglewood, South Gate, Whittier, Torrance, Long Beach, Los Alamitos, San Pedro, and Seal Beach quadrangle maps. Sacramento, CA: CNPS. <http://www.cnps.org/inventory>.
- Fisher, R. N. and T. J. Case. 1997. *A Field Guide to the Reptiles and Amphibians of Coastal Southern California*. San Mateo, CA: Lazer Touch.
- Hickman, J.C. Editor. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, California.
- Munz, P.A. 1974. *A Flora of Southern California*. University of California Press, Berkeley, California.
- United States Department of Agriculture (USDA). Revised 1969. *Report and General Soil Map, Los Angeles County, California*. Natural Resources Conservation Service (NRCS), Lancaster, California.



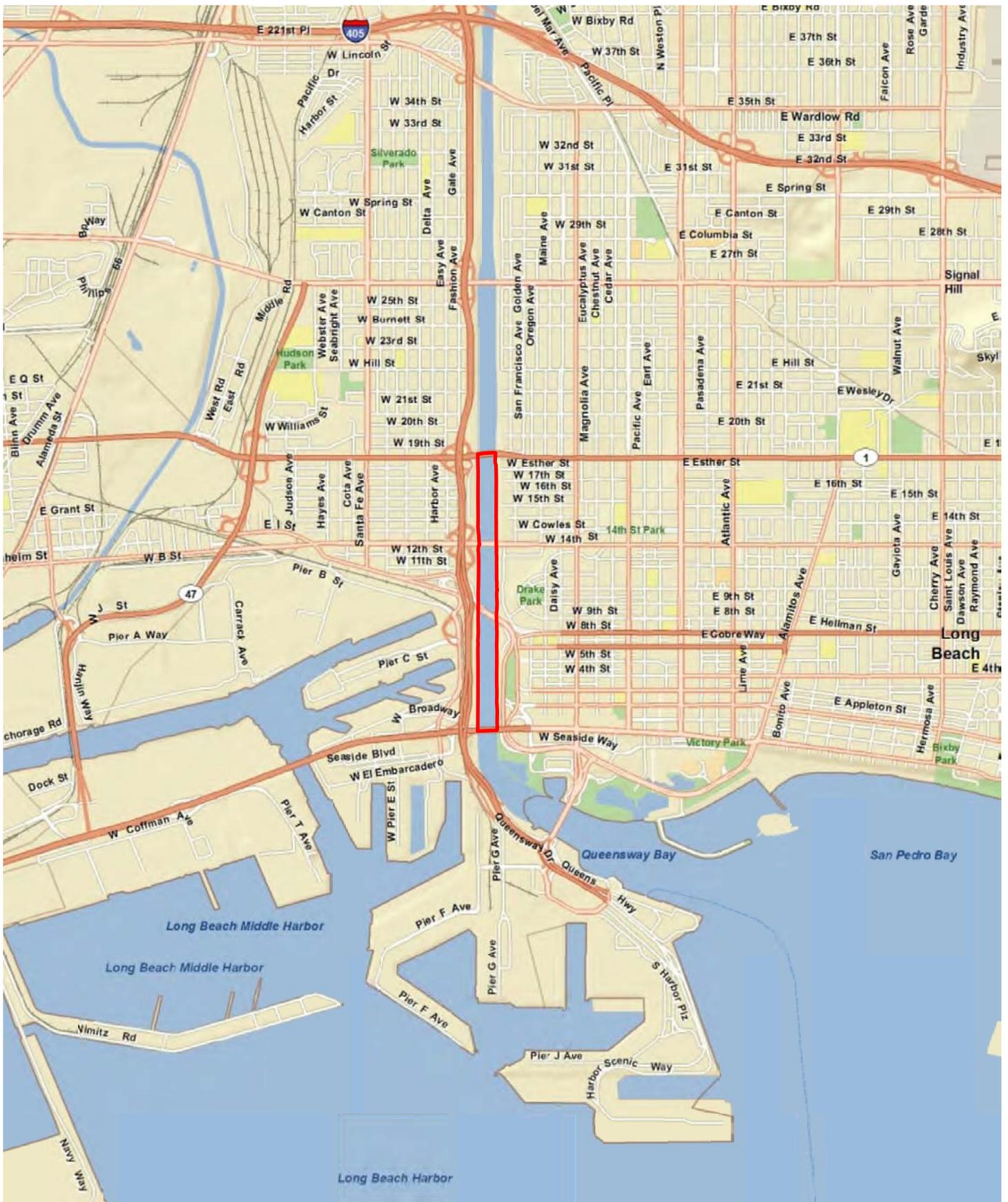
## Local Vicinity

Dominguez Soft-Bottom Channel, Los Angeles County, California



## Exhibit 1A





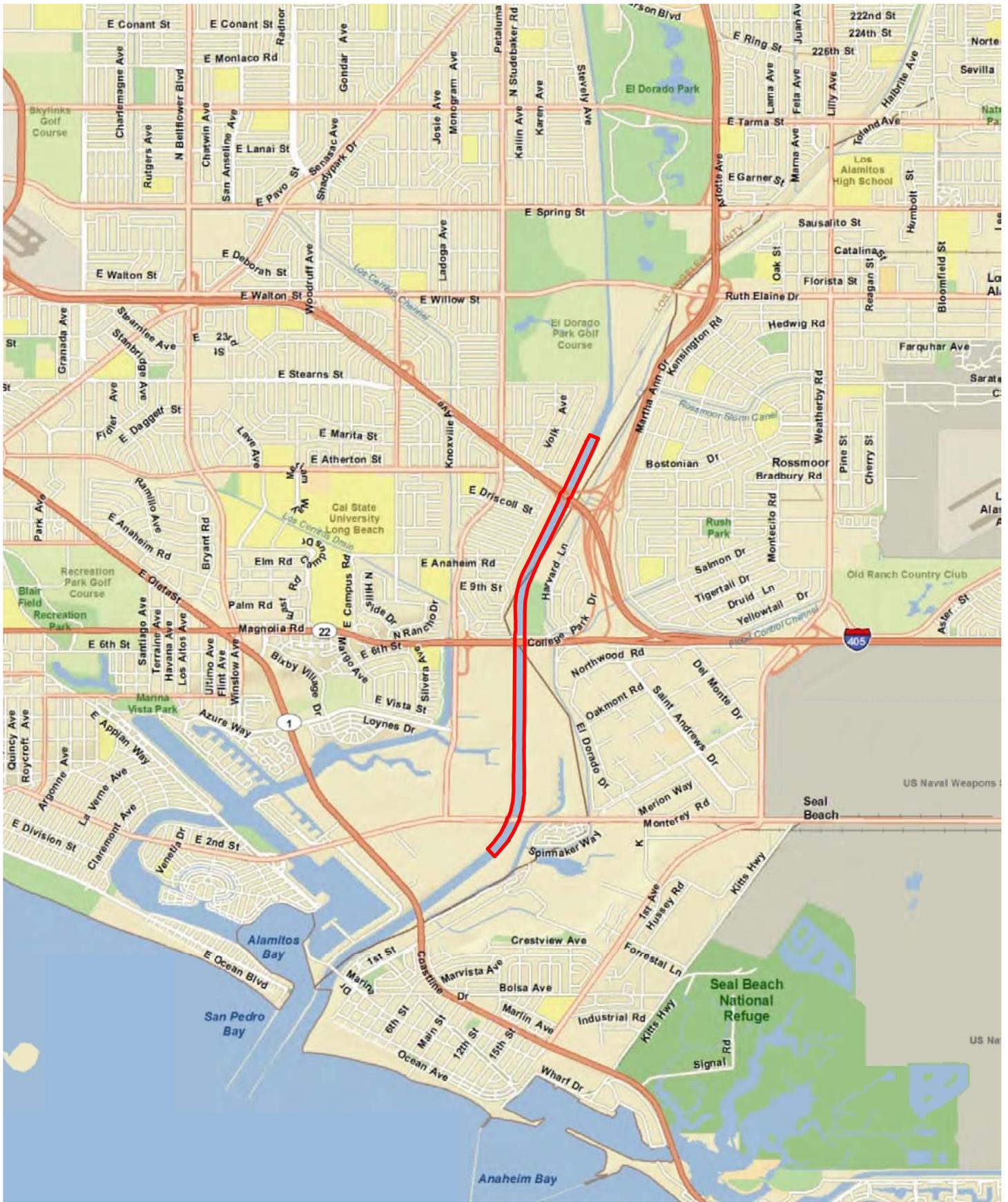
## Local Vicinity

Los Angeles River Soft-Bottom Channel, Los Angeles County, California



## Exhibit 1B



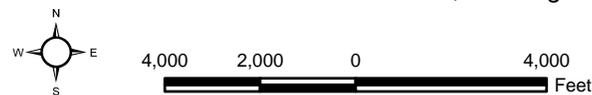


D:\Projects\ColADPW\105\Ex\_LV\_san\_gabriel\_021809.mxd

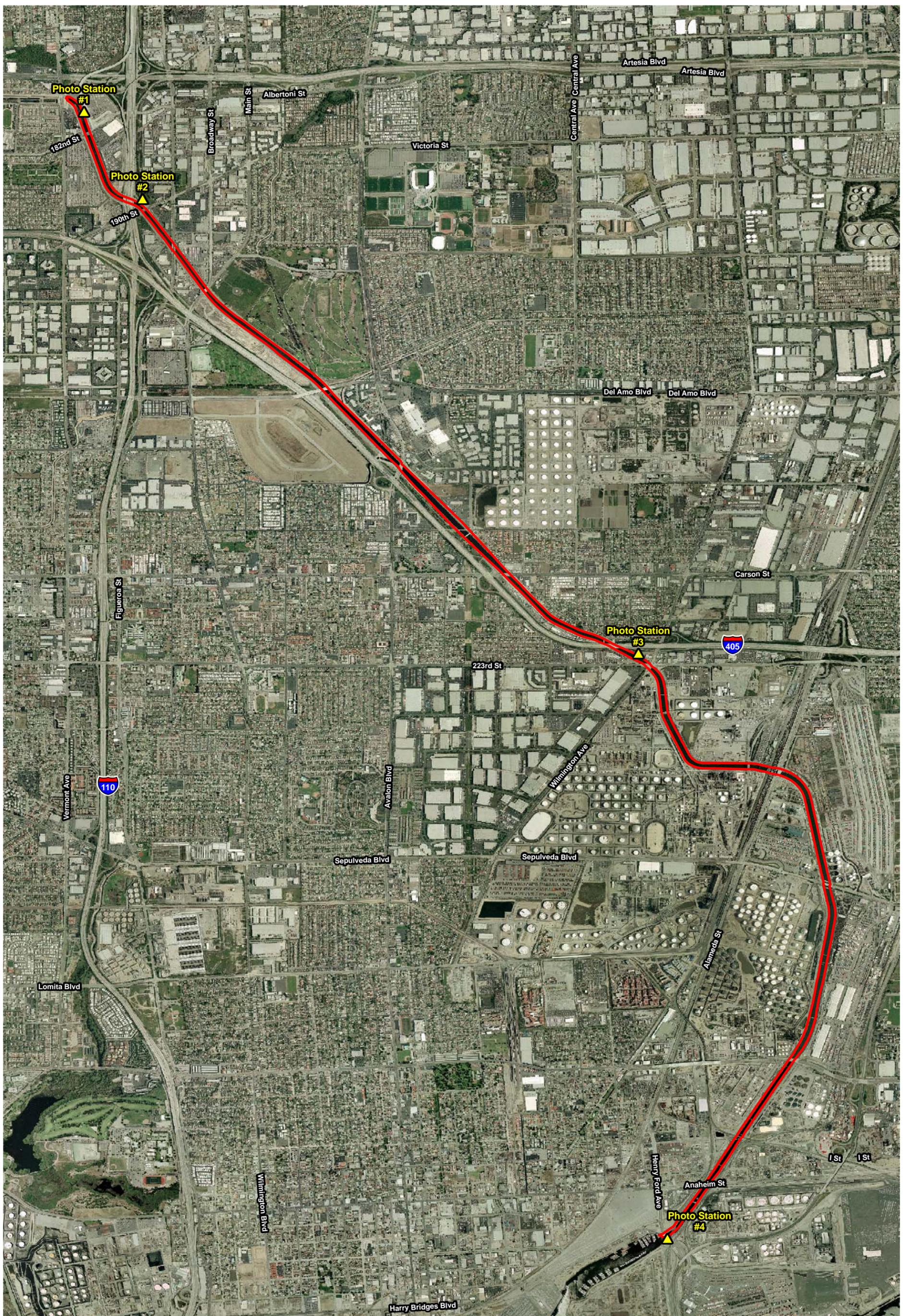
## Local Vicinity

San Gabriel River Soft-Bottom Channel, Los Angeles County, California

## Exhibit 1C



**Bonterra**  
CONSULTING



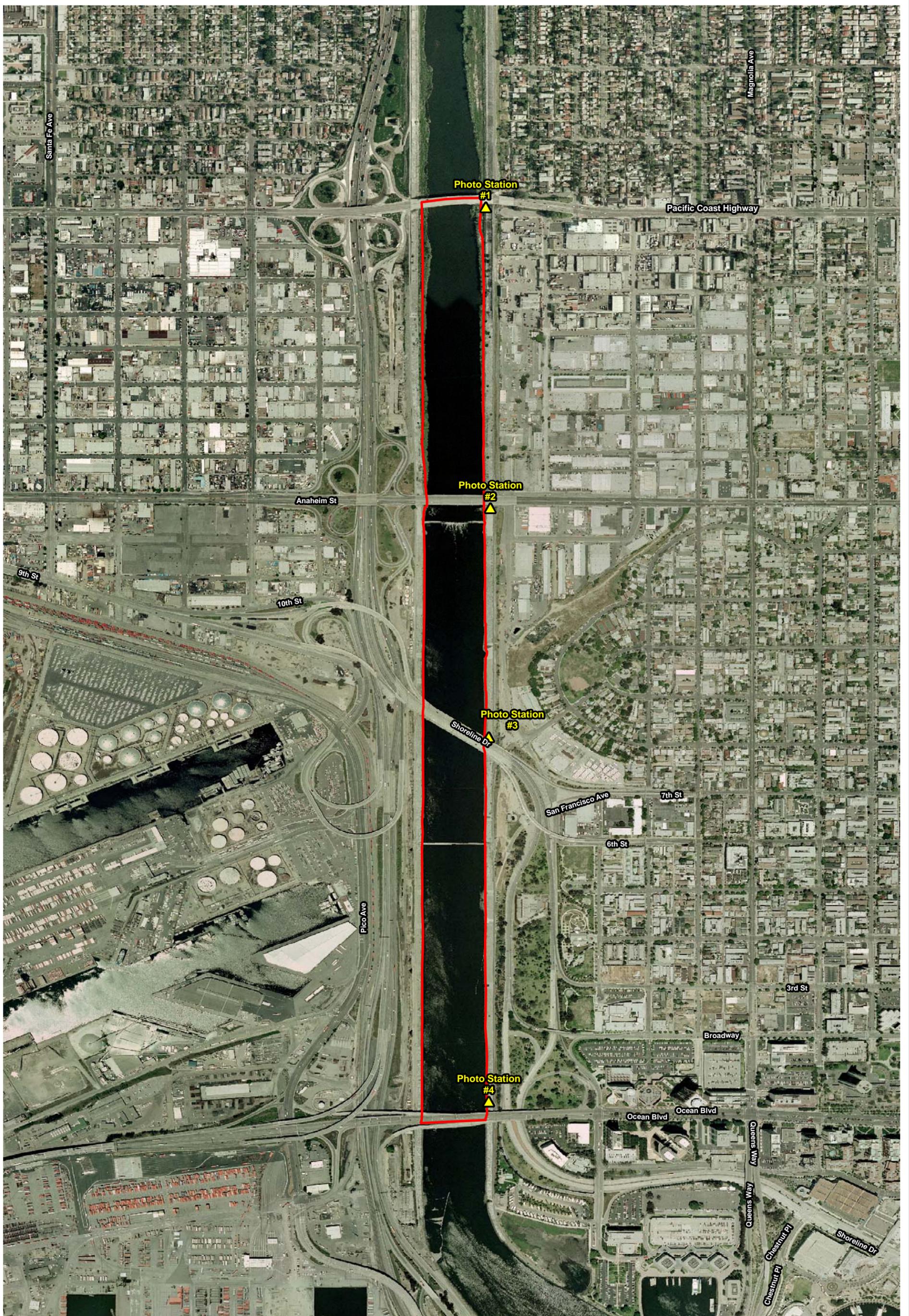
D:\Projects\Col-ADPW\1105\Ex\_aerial\_dominguez\_021908.mxd

### Aerial Photograph

Dominguez Soft-Bottom Channel, Los Angeles County California

Exhibit 2A



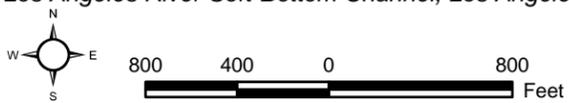


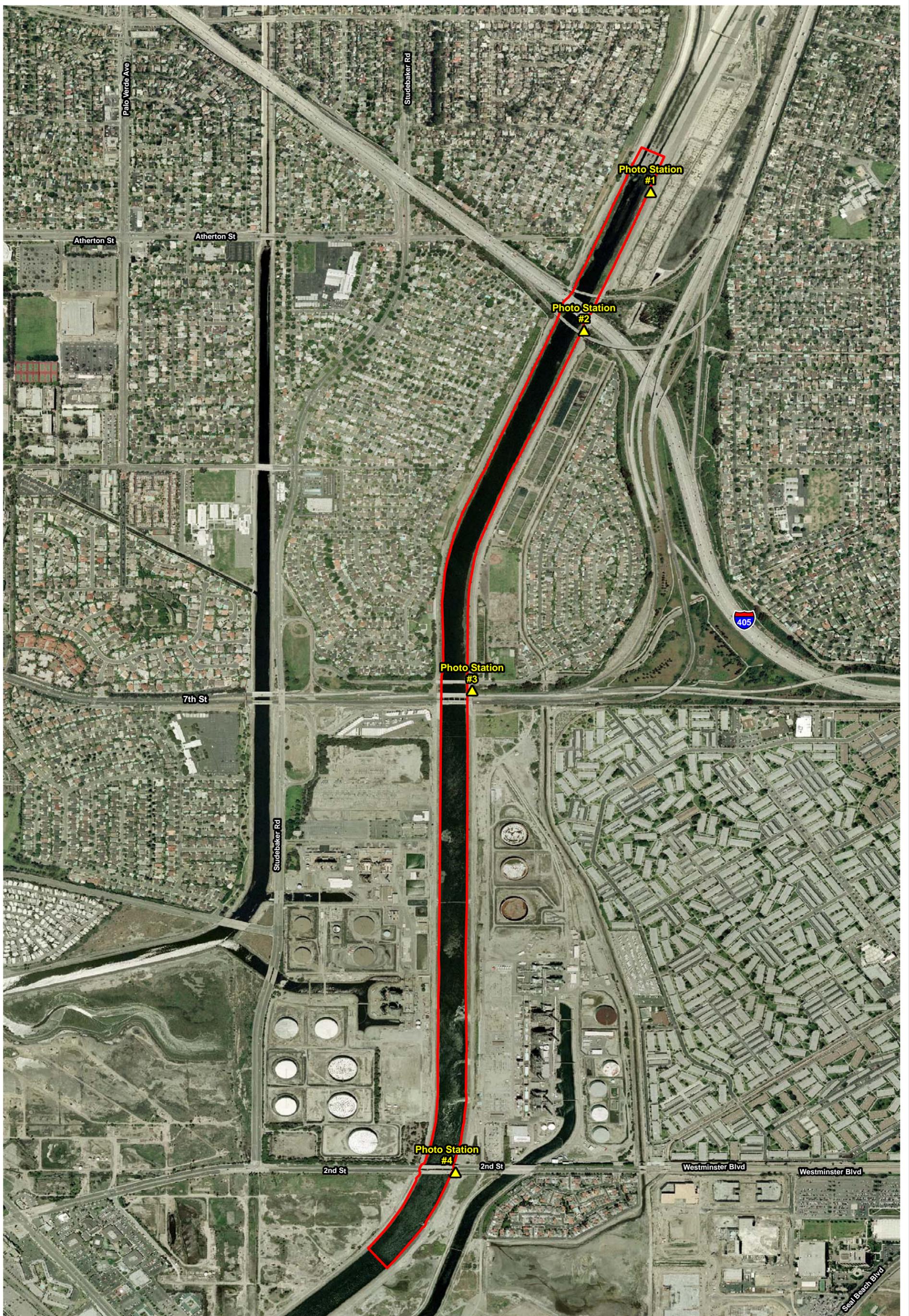
D:\Projects\Col-ADPW\105\Ex\_aerial\_los\_angeles\_021908.mxd

### Aerial Photograph

Los Angeles River Soft-Bottom Channel, Los Angeles County California

Exhibit 2B



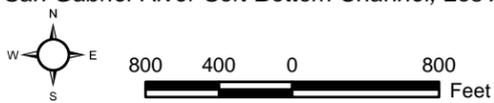


D:\Projects\CoLADPW\105\Ex\_aerial\_san\_gabriel\_021908.mxd

### Aerial Photograph

San Gabriel River Soft-Bottom Channel, Los Angeles County California

Exhibit 2C



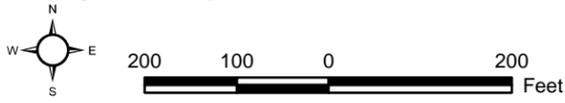


Study Area  
**Vegetation Type**  
 Developed with Patches of Saltgrass Grassland  
 Open Water

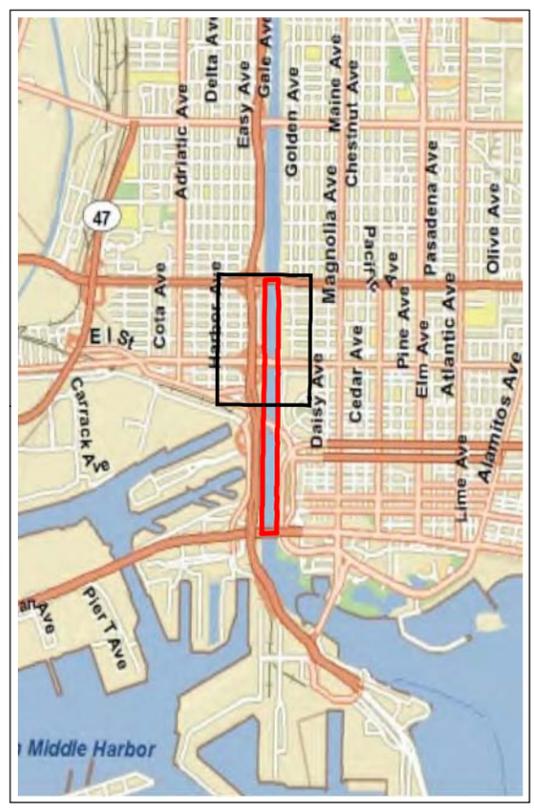
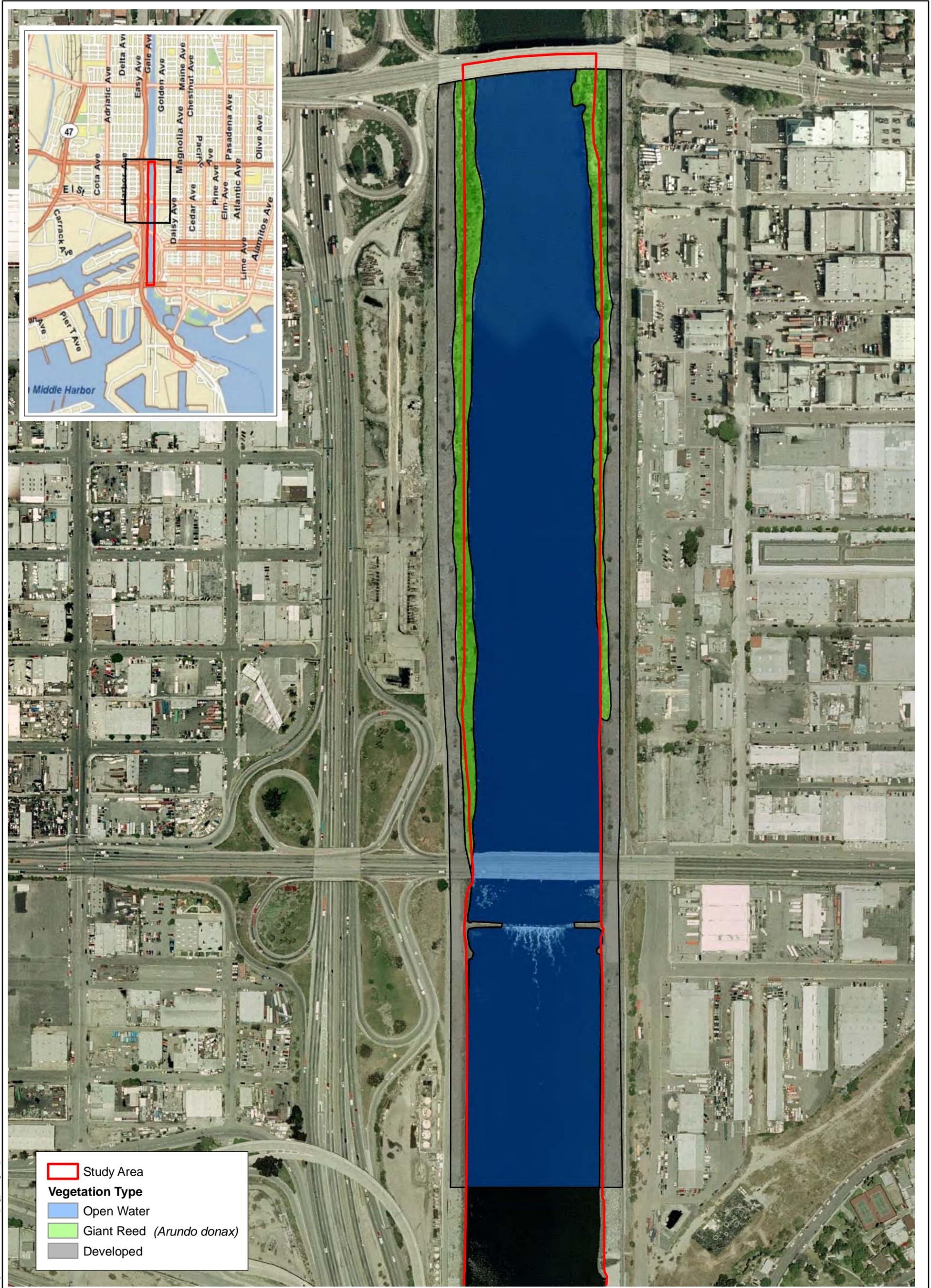
**Vegetation Map - Dominguez Soft-Bottom Channel**

Los Angeles County, California

Exhibit 3A



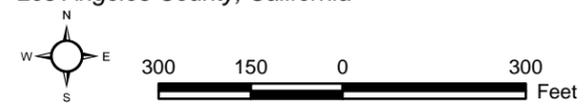
D:\Projects\CoLADPWU105\Ex\_Veg\_dominguez\_052109.mxd

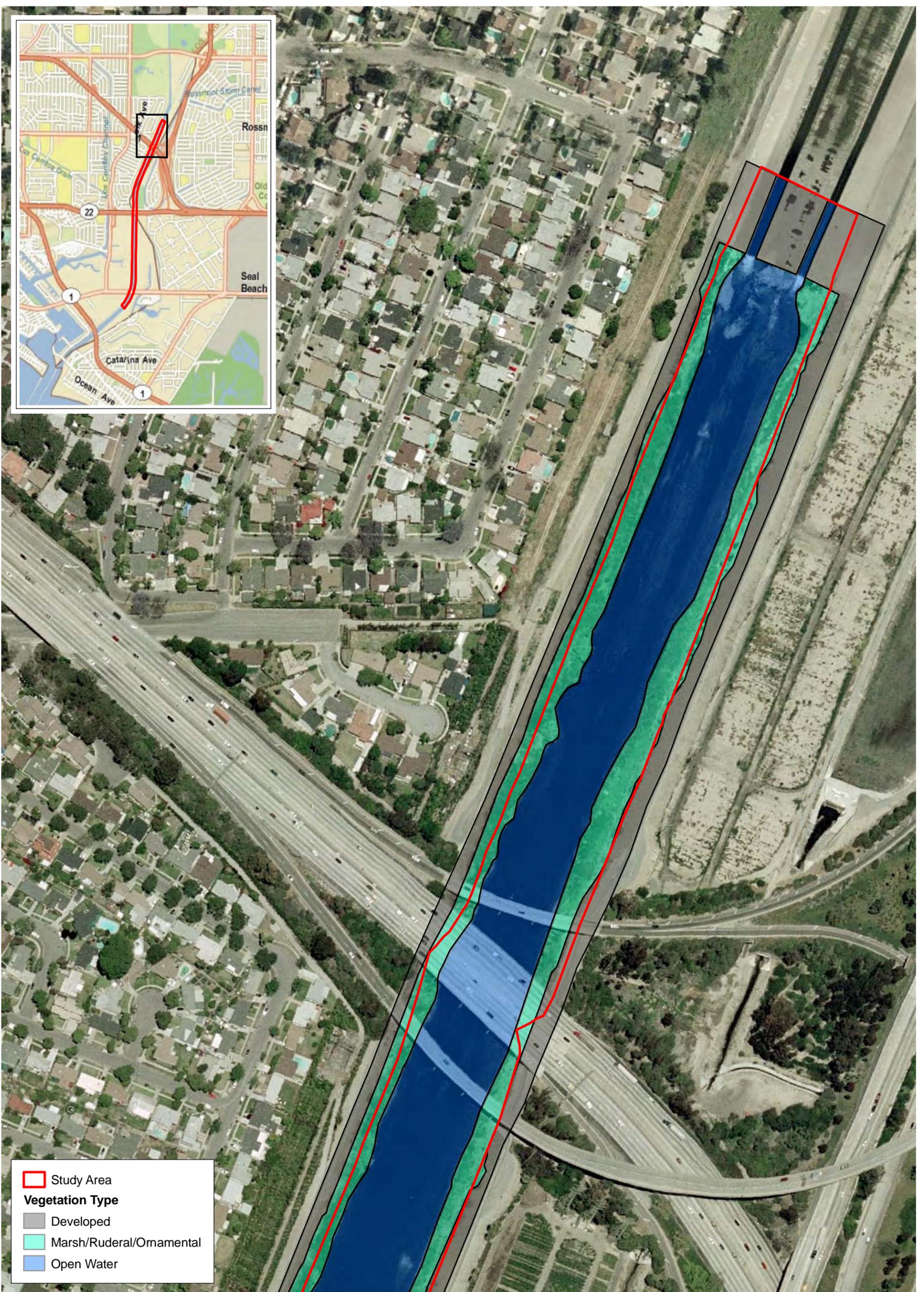


Study Area  
**Vegetation Type**  
 Open Water  
 Giant Reed (*Arundo donax*)  
 Developed

**Vegetation Map – Los Angeles River Soft-Bottom Channel**  
 Los Angeles County, California

Exhibit 3B

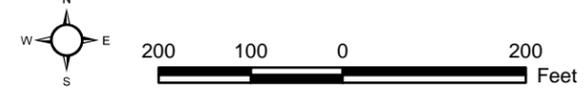




Study Area  
**Vegetation Type**  
 Developed  
 Marsh/Ruderal/Ornamental  
 Open Water

**Vegetation Map – San Gabriel River Soft-Bottom Channel**  
 Los Angeles County, California

**Exhibit 3C-1**

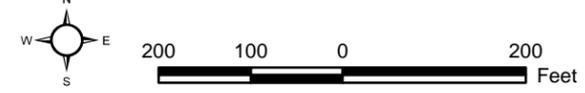


D:\Projects\CoLADPW\105\Ex\_Veg\_SanGabriel\_052109.mxd

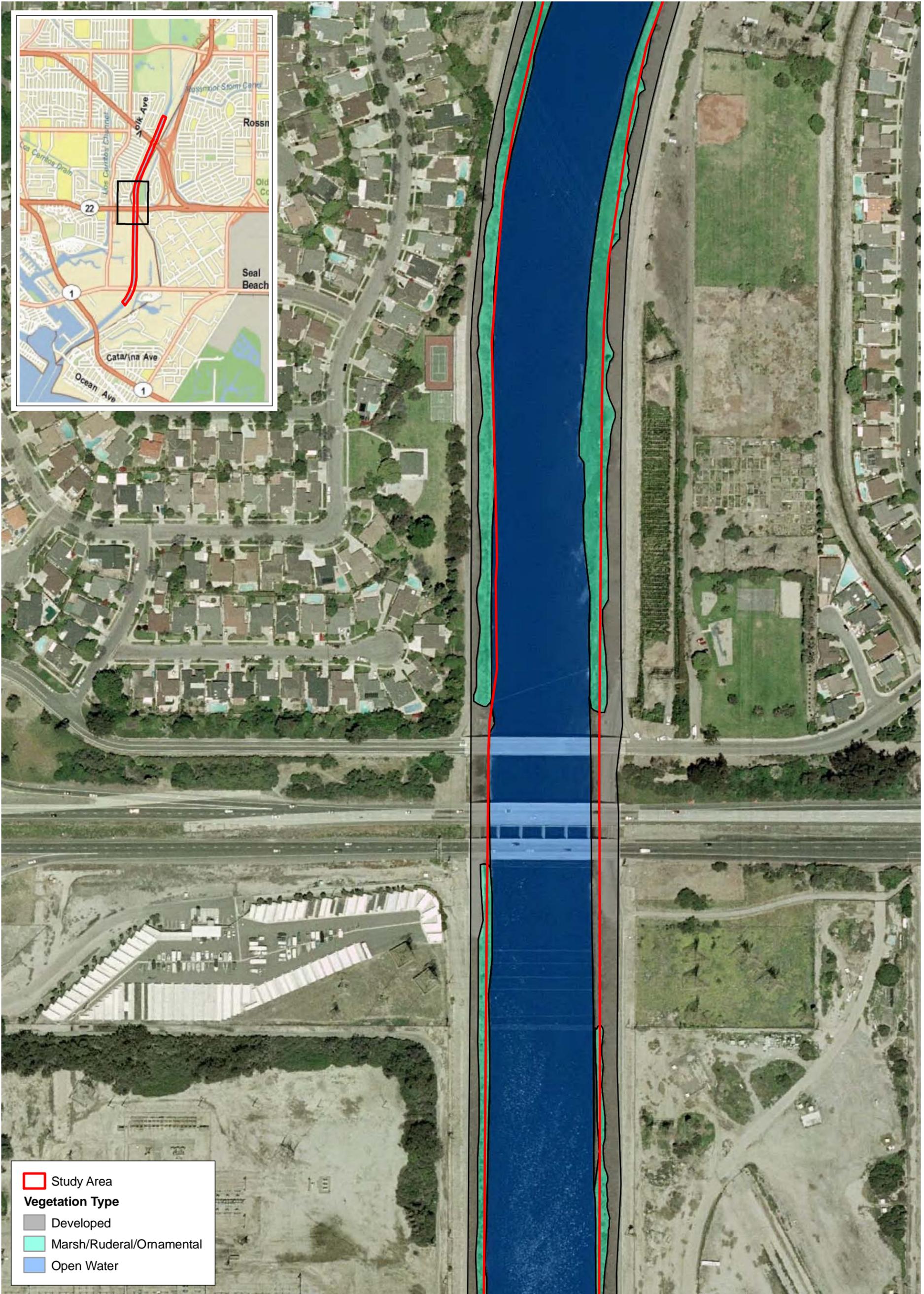


	Study Area
<b>Vegetation Type</b>	
	Developed
	Marsh/Ruderal/Ornamental
	Open Water

**Vegetation Map – San Gabriel River Soft-Bottom Channel**  
 Los Angeles County, California



D:\Projects\CoLADPWJ105\Ex\_Veg\_SanGabriel\_052109.mxd

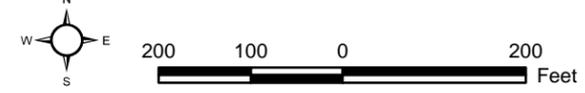


**Study Area**

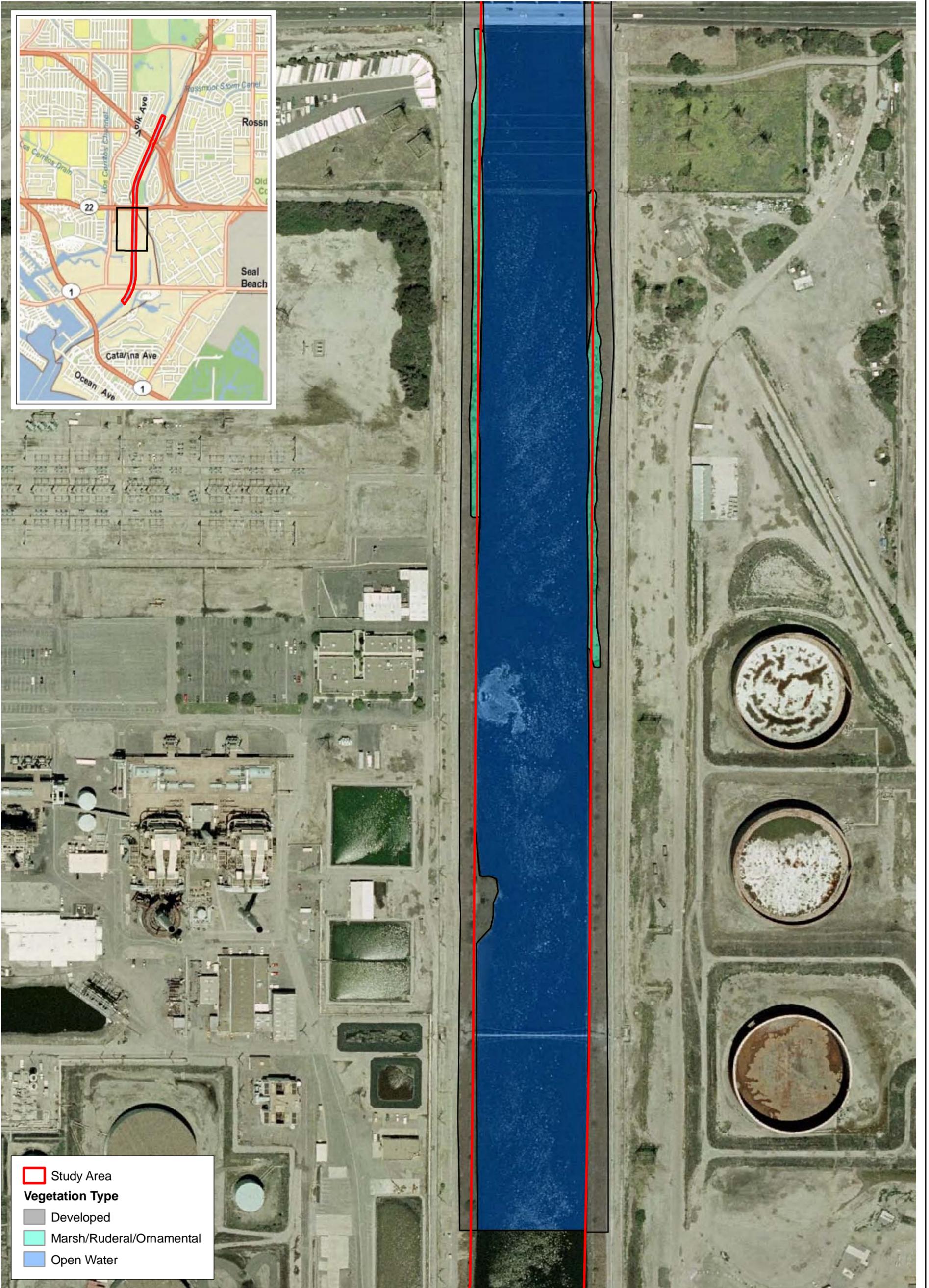
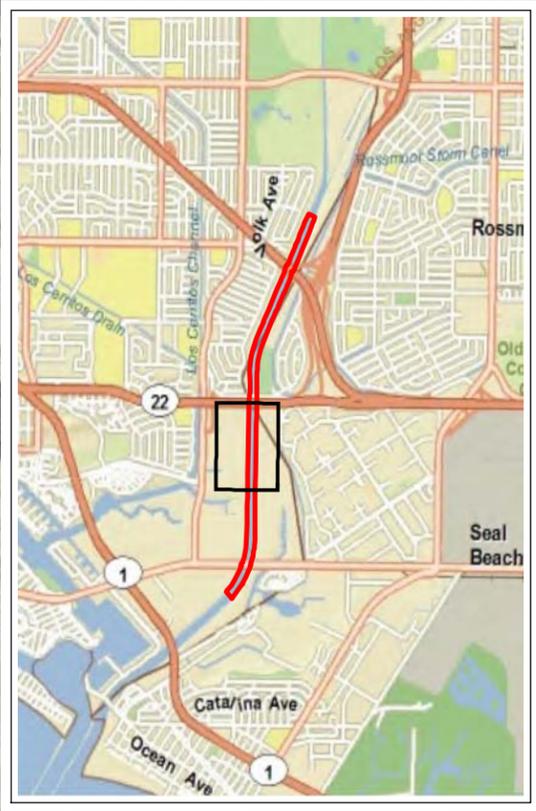
**Vegetation Type**

- Developed
- Marsh/Ruderal/Ornamental
- Open Water

**Vegetation Map – San Gabriel River Soft-Bottom Channel**  
 Los Angeles County, California



D:\Projects\CoLADPW\105\Ex\_Veg\_SanGabriel\_052109.mxd



**Study Area**

**Vegetation Type**

- Developed
- Marsh/Ruderal/Ornamental
- Open Water

**Vegetation Map – San Gabriel River Soft-Bottom Channel**

Los Angeles County, California

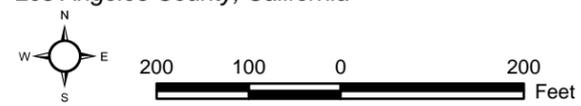


Exhibit 3C-4



D:\Projects\CoLADPW\105\Ex\_Veg\_SanGabriel\_052109.mxd



Photo Station 1



Photo Station 2



Photo Station 3

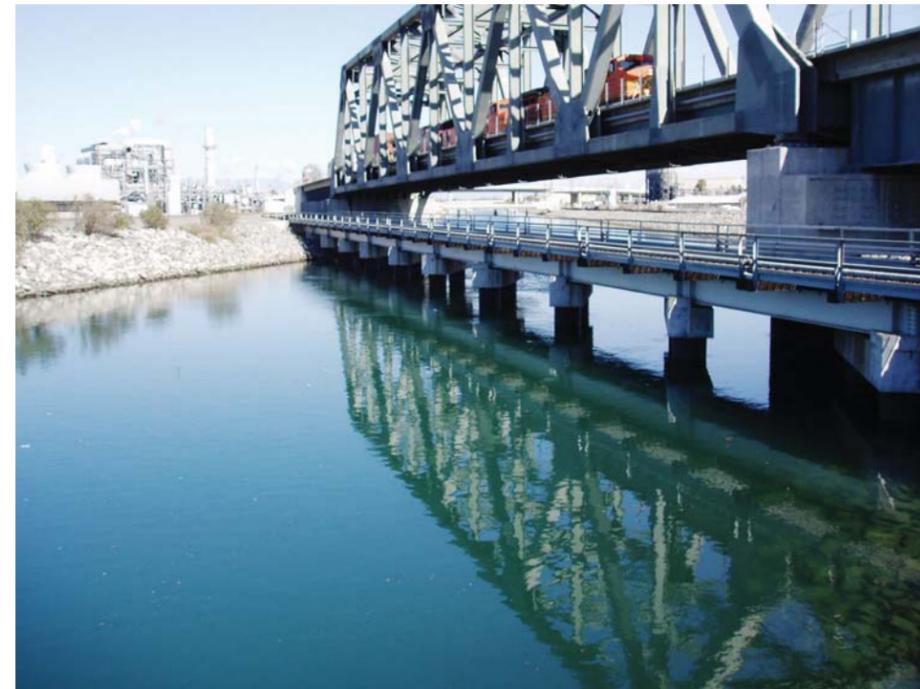


Photo Station 4

## Site Photographs

*Dominguez Soft-Bottom Channel, Los Angeles County, California*

Exhibit 4A

**BonTerra**  
CONSULTING

PAS R:/Projects/CoLADPW/J105/Graphics/Constraints/Ex4A\_Dominguez\_Photos\_052709.pdf



Photo Station 1



Photo Station 2



Photo Station 3



Photo Station 4

## Site Photographs

Los Angeles River Soft-Bottom Channel, Los Angeles County, California

Exhibit 4B

**BonTerra**  
CONSULTING

PAS R:/Projects/CoLADPW/J105/Graphics/Constraints/Ex4B\_LA\_Photos\_052709.pdf



Photo Station 1



Photo Station 2



Photo Station 3



Photo Station 4

## Site Photographs

*San Gabriel River Soft-Bottom Channel, Los Angeles County, California*

Exhibit 4C

**BonTerra**  
CONSULTING

PAS R:/Projects/CoLADPW/J105/Graphics/Constraints/Ex4C\_San\_Gabriel\_Photos\_052709.pdf