



June 30, 2014

Ms. Jemellee Cruz, P.E.
Los Angeles County Flood Control District
Flood Maintenance Division
900 South Fremont Avenue, Annex Building, 2nd Floor
Alhambra, California 91803

VIA EMAIL
jcruz@dpw.lacounty.gov

Subject: Results of Biological Inventory Surveys of Reach 104, Castaic Creek (PD 2441 Units 1 & 2), near the City of Santa Clarita, Los Angeles County, California

Dear Ms. Cruz:

This Letter Report presents the findings of plant and wildlife inventory and vegetation mapping surveys conducted at Reach 104, Castaic Creek (PD 2441 Units 1 & 2), in unincorporated Los Angeles County near the City of Santa Clarita (Exhibit 1). Reach 104 is 2,186 feet in length with an area of 4.43 acres and is located in the Santa Clara River Watershed (Exhibit 2). This soft-bottom channel (SBC) reach is in the process of being added to the Los Angeles County Flood Control District's (LACFCD's) existing California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (USACE), and Regional Water Quality Control Board (RWQCB) channel maintenance permits. The purpose of these surveys is to provide biological information in support of LACFCD's request for inclusion of SBC Reach 104 with the existing regulatory permits.

METHODS

BonTerra Psomas Senior Biologists Brian Daniels and Jennifer Pareti, and Biologists Jason Mintzer and Sarah Thomas, and Leatherman BioConsulting Senior Botanist Sandra Leatherman conducted the plant and wildlife inventory and vegetation mapping surveys on May 1, 5, and June 10, 2014. Previous survey reports of this SBC reach were reviewed, including the results of biological inventory surveys conducted at this SBC reach in 2007 (BonTerra Consulting 2007).

All plant and wildlife species observed were recorded in field notes. Plant species were identified in the field or collected for subsequent identification using keys in Baldwin et al. (2012). Taxonomy follows Baldwin et al. (2012) and current scientific data (e.g., scientific journals) for scientific and common names. Nomenclature for vegetation types generally follows that of the List of Vegetation Alliances and Associations, Vegetation Classification and Mapping Program (CDFG 2010). The vegetation types identified during the surveys reflected the vegetation shown on the aerial maps and not necessarily the actual vegetation on the channel bottom (invert).

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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 Stebbins (2012) for amphibians and reptiles, American Ornithologists' Union (2013) for birds, and Baker et al. (2003) for mammals.

RESULTS

The following discussion is primarily limited to those plant and wildlife species observed during the surveys. For a complete list of plant and wildlife species observed during the surveys, see Attachment A.

Vegetation/Plants

SBC Reach 104 supports seven vegetation types (disturbed coastal sage scrub, mixed willow riparian forest, mule fat scrub, mule fat scrub-tamarisk scrub, tamarisk thicket, southern cottonwood willow riparian forest, and Fremont cottonwood forest) and three other areas (open wash, ungrouted riprap, and developed) as illustrated on Exhibits 3a, 3b, and 3c and summarized in Table 1 below. Major vegetation types represented on site, or those with potential to be of high habitat value, are discussed below. Individual plant species are discussed below in conjunction with associated vegetation types. For a complete list of plant species see Attachment A. Representative site photographs are included as Exhibits 4a and 4b.

**TABLE 1
VEGETATION TYPES AND OTHER AREAS**

Vegetation Type	Acres
Disturbed Coastal Sage Scrub	0.31
Mixed Willow Riparian Forest	1.38
Mule Fat Scrub	0.40
Mule Fat Scrub-Tamarisk Scrub	1.28
Tamarisk Thicket	0.09
Southern Cottonwood Willow Riparian Forest	0.36
Fremont Cottonwood Forest	0.10
Open Wash	1.36
Developed	1.24
TOTAL ACRES	6.65*
* This total exceeds the total amount described for Reach 104 (4.43 acres) as it includes a buffer area	

The disturbed coastal sage scrub vegetation type is an area that shows evidence of previous mechanical disturbance. This vegetation type is dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and Douglas' threadleaf ragwort (*Senecio flaccidus* var. *douglasii*). Non-native ruderal (weedy) species that are generally well

adapted to disturbed areas also occur here, and include species such as Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*), totalote (*Centaurea melitensis*), and shortpod mustard (*Hirschfeldia incana*).

The mixed willow riparian forest, southern cottonwood willow riparian forest, and Fremont cottonwood forest vegetation types at Reach 104 are dominated by trees. The mixed willow riparian forest and southern cottonwood willow riparian forest are dominated by Fremont cottonwood, red willow (*Salix laevigata*) and arroyo willow (*Salix lasiolepis*) trees greater than 20 feet in height. Narrow-leaved willow (*Salix exigua*), mule fat (*Baccharis salicifolia* ssp. *salicifolia* [*B. salicifolia*]) and tamarisk (*Tamarix* sp.) shrubs dominate the understory in these two riparian vegetation types. Portions of the mixed willow riparian forest, particularly the upstream end, are degraded in quality due to drought stressed vegetation. The Fremont cottonwood forest is dominated by large Fremont cottonwoods (*Populus fremontii*) greater than 40 feet in height that provide an almost continuous canopy cover. The understory is sparsely populated with shrubs such as mule fat, and herbaceous species such as caterpillar phacelia (*Phacelia cicutaria*).

The mule fat scrub vegetation type was identified in those areas with almost pure stands of mule fat. In some areas of SBC Reach 104, mule fat and the non-native tamarisk are mixed together as co-dominants and these stands are identified as the mule fat – tamarisk scrub vegetation type. Where tamarisk forms almost pure stands in Reach 104, these areas are identified as tamarisk thickets.

Open wash are areas that consist of bare sand, silt, or cobble that generally contain no vegetation. These areas have been scoured or otherwise kept clear of vegetation (i.e., clearing activities). Vegetation may colonize these areas in the absence of scouring or clearing activities. The levee structure is represented by the developed and ungrouted riprap areas.

Wildlife

Wildlife use of Reach 104 is expected to be relatively high due to its location within a relatively undisturbed segment of Castaic Creek. Except for during storm events, standing water is typically not present in this reach. Two side outlets, however, sometimes contain small amounts of nuisance water from dry season runoff. Riparian forest habitat consisting of Fremont cottonwood forest, southern cottonwood-willow riparian forest, and disturbed mixed willow riparian forest vegetation types is the dominant habitat of this reach and can provide high quality wildlife habitat for specialized species. For a complete list of wildlife species see Attachment A.

Although no amphibian species were observed during the surveys, the Pacific chorus frog (*Pseudacris regilla*) and western toad (*Anaxyrus* [*Bufo*] *boreas*) are expected to occur periodically in Reach 104 during winters of above average rainfall. Two common reptiles, western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*) were observed during the surveys. Another lizard species expected to occur at Reach 104 is the southern alligator lizard (*Elgaria multicarinata*). No snakes were observed during the surveys, but the coachwhip

(*Masticophis flagellum*), common kingsnake (*Lampropeltis getula*), gopher snake (*Pituophis catenifer*), and western rattlesnake (*Crotalus oreganus*) are expected to occur at Reach 104.

Birds observed during the surveys included turkey vulture (*Cathartes aura*), Anna's hummingbird (*Calypte anna*), Nuttall's woodpecker (*Picoides nuttallii*), downy woodpecker (*Picoides pubescens*), ash-throated flycatcher (*Myiarchus cinerascens*), Cassin's kingbird (*Tyrannus vociferans*), western scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), house wren (*Troglodytes aedon*), spotted towhee (*Pipilo maculatus*), California towhee (*Melospiza [Pipilo] crissalis*), song sparrow (*Melospiza melodia*), house finch (*Haemorhous [Carpodacus] mexicanus*), and lesser goldfinch (*Spinus [Carduelis] psaltria*). Except for the turkey vulture, all of these species are expected to breed at Reach 104. No mammals were detected during the surveys, but the following are expected to occur at Reach 104: Virginia opossum (*Didelphis virginiana*), desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), northern raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

CONCLUSIONS AND RECOMMENDATIONS

The 1.84 acres of riparian forest vegetation types (1.38 acres of mixed willow riparian forest, 0.36 acre of southern cottonwood willow riparian forest, and 0.10 acre of Fremont cottonwood forest) at Reach 104 are considered to be of high value due to the localized distribution of these vegetation types in the region and the relatively rich diversity of wildlife species these habitats can support.

Focused surveys for threatened and endangered plant species have not previously been recommended for Reach 104; however, focused surveys for special status plant species were conducted in 2014 at this SBC reach for the Santa Clara River Watershed Feasibility Study and the results were negative.

A previous BonTerra Psomas habitat assessment for Reach 104 (BonTerra Consulting 2004) determined that this reach contains potentially suitable habitat for unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), arroyo toad (*Anaxyrus californicus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and least Bell's vireo (*Vireo bellii pusillus*). Focused surveys have been conducted for these four species since 2005 with negative results for all four species.

Because Reach 104 provides potentially suitable habitat for the least Bell's vireo, BonTerra Psomas recommends the following permit language be adopted for this "sensitive" reach: construction activities in waters of the U.S. shall be limited to the period outside of the nesting season (March 15-September 15) of any year.

Once the finalized scopes of work for maintenance activities at this SBC reach are developed by the LACFCD, BonTerra Psomas can calculate the acres of impact per vegetation type. A tree inventory survey for this SBC reach is expected to be conducted in Summer 2014.

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Vegetation and Wildlife Inventory Survey at Reach 104

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

Sincerely,
BonTerra Psomas



Joan Patronite Kelly, AICP
Corporate Director of Environmental
Planning and Resource Management



Marc T. Blain
Senior Project Manager

Enclosures: Exhibit 1 – Regional Location
Exhibit 2 – Local Vicinity
Exhibit 3a-c – Vegetation Types and Other Areas Map
Exhibit 4a-b – Site Photographs
Attachment A – Plant and Wildlife Compendia

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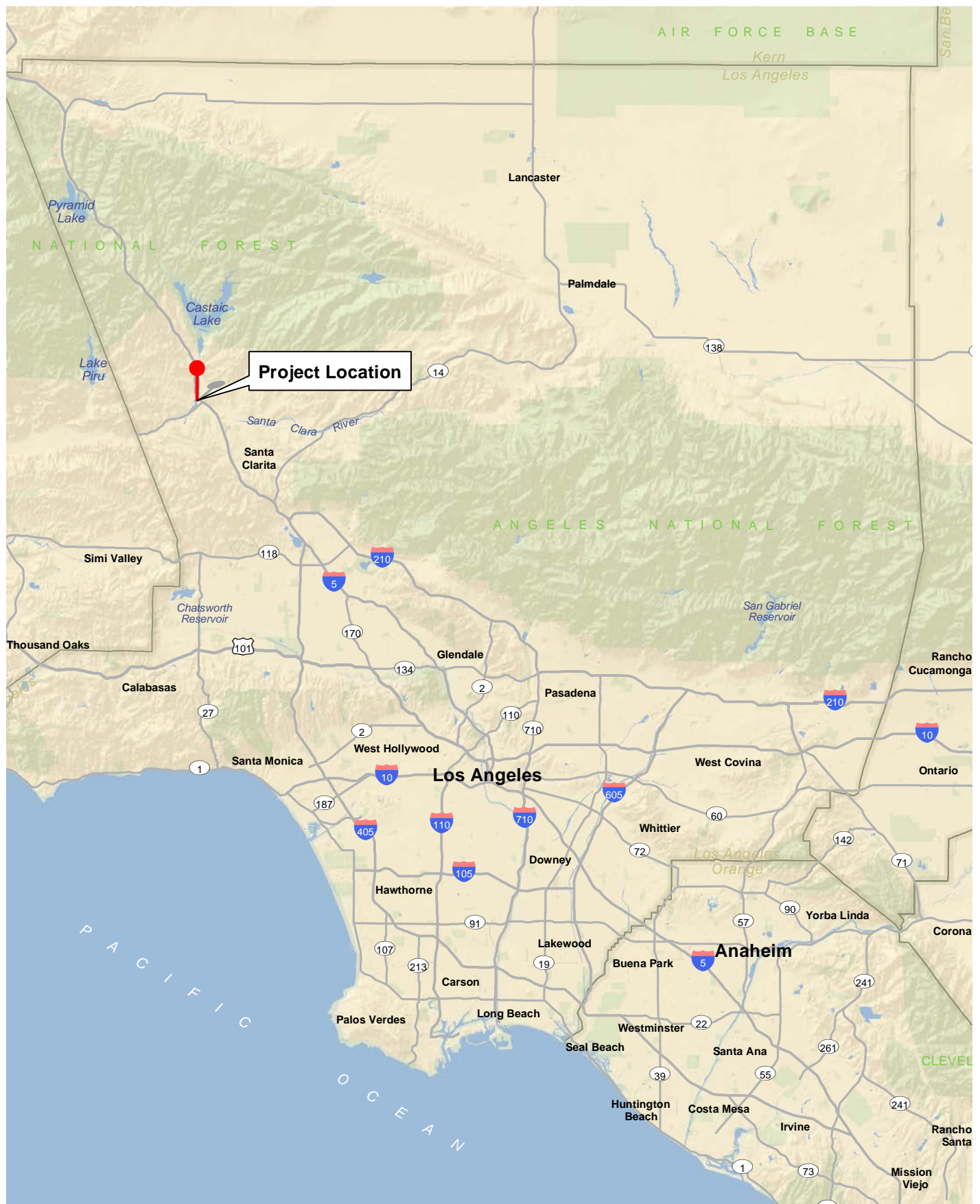
Vegetation and Wildlife Inventory Survey at Reach 104

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Regional Location

Castaic Creek - Reach 104

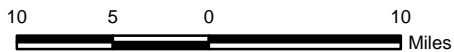
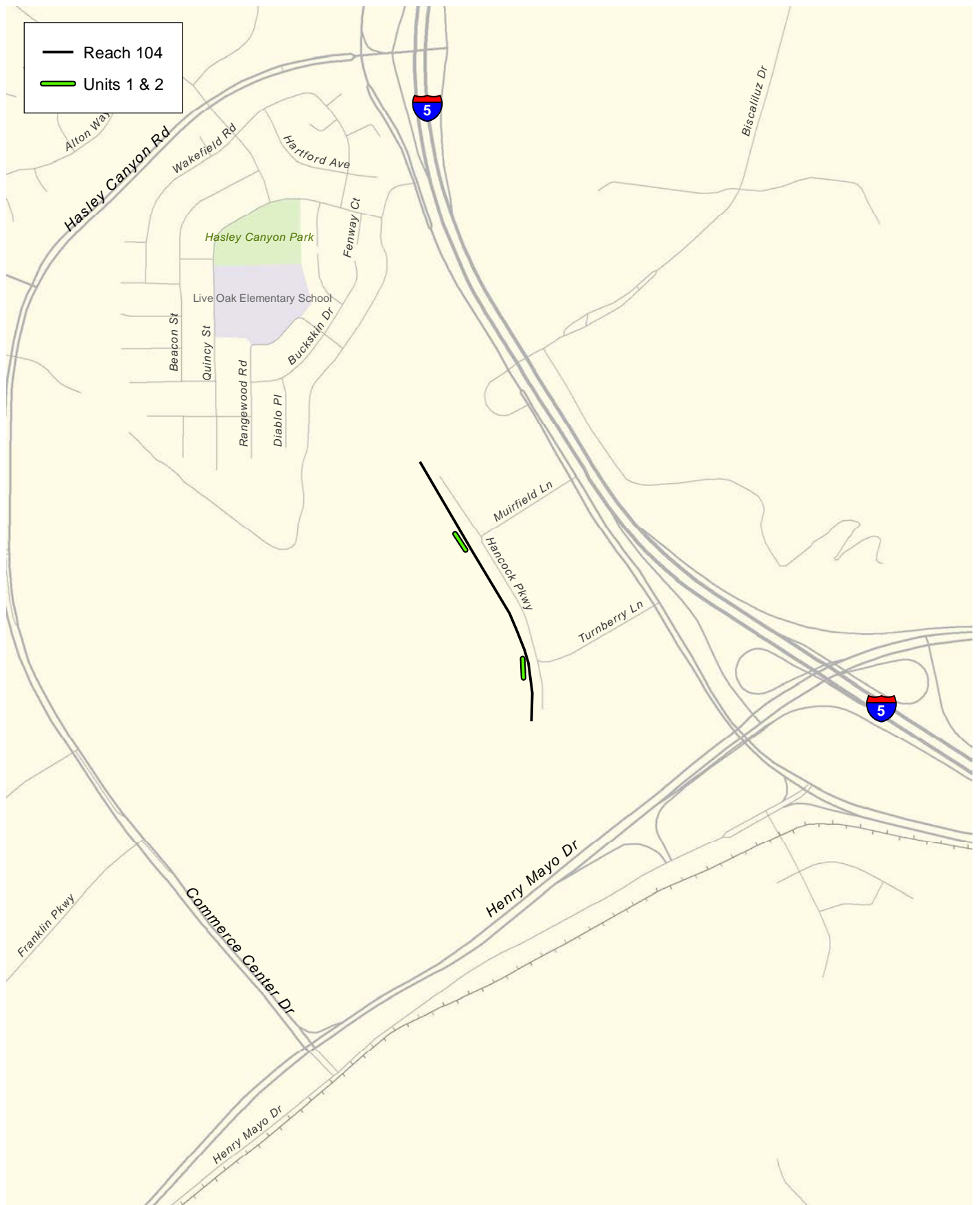


Exhibit 1

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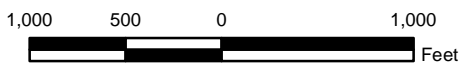
- Reach 104
- Units 1 & 2



Local Vicinity map

Castaic Creek - Reach 104

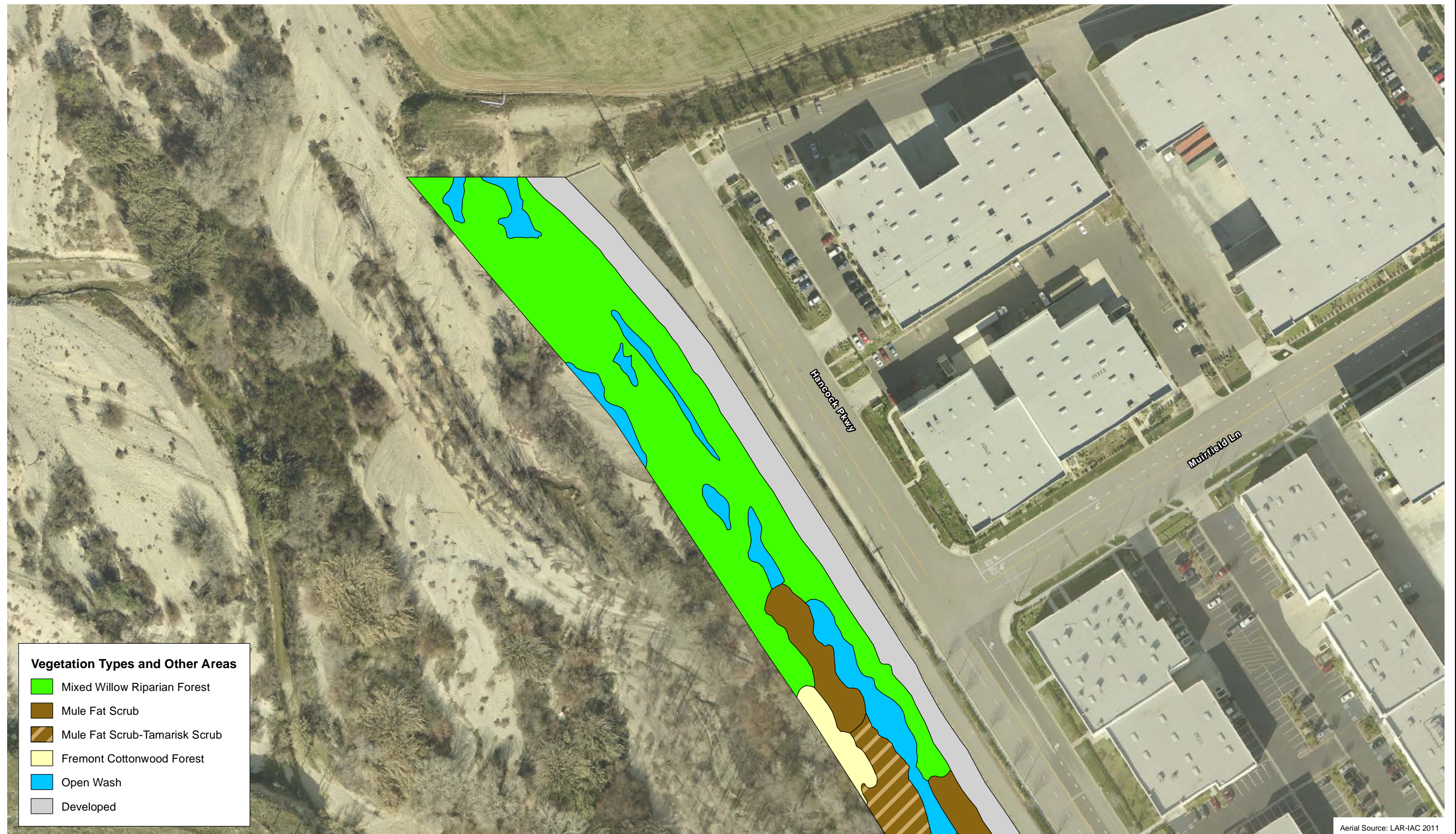
Exhibit 2



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Vegetation Types and Other Areas

Castaic Creek - Reach 104

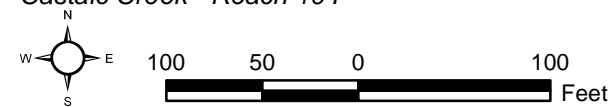


Exhibit 3a

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Vegetation Types and Other Areas

Castaic Creek - Reach 104

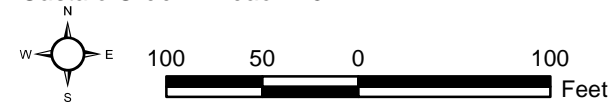
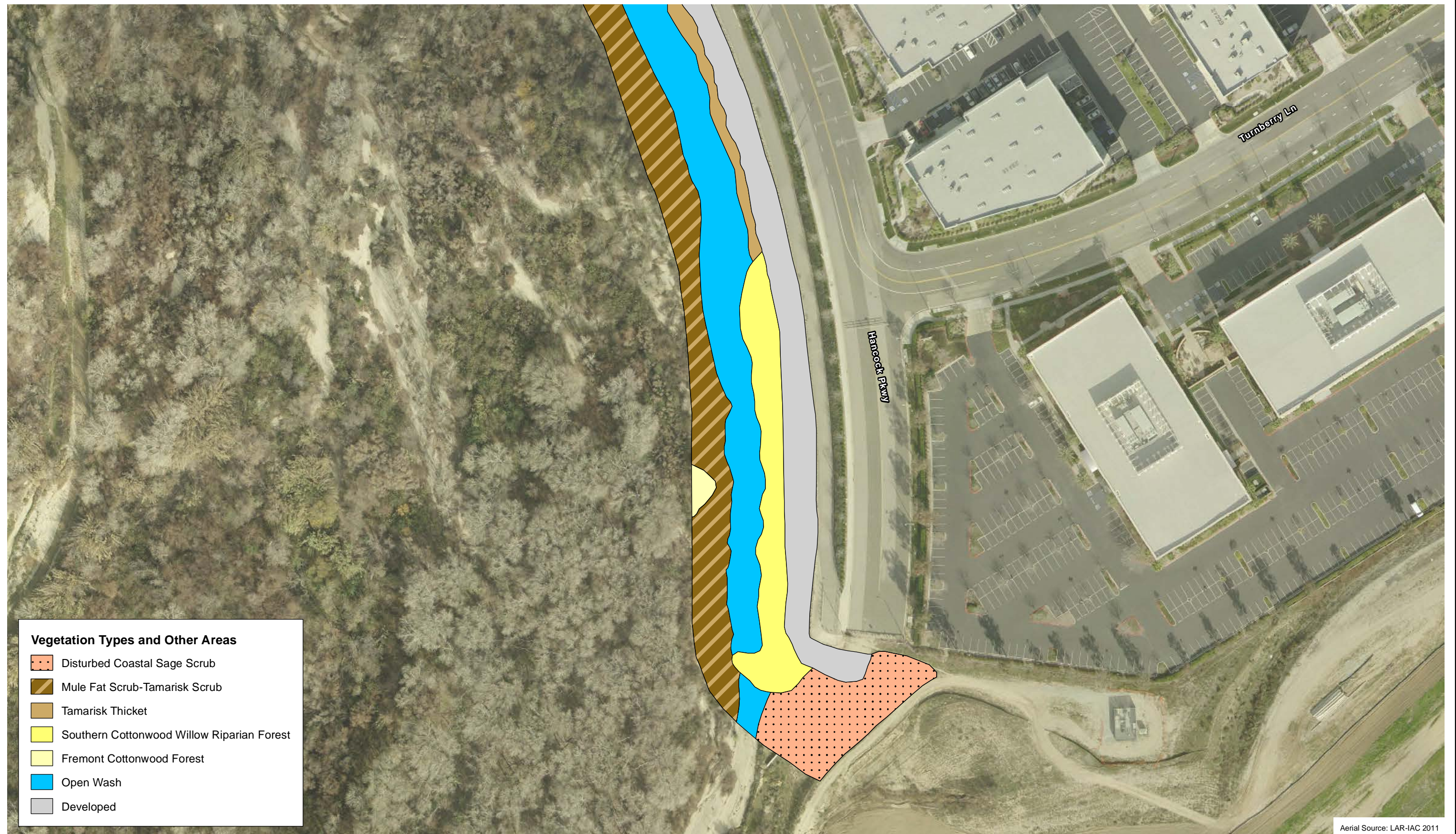


Exhibit 3b

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Vegetation Types and Other Areas

Castaic Creek - Reach 104

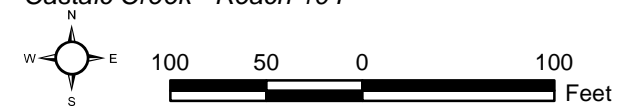


Exhibit 3c

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May 5, 2014. View upstream from downstream end of east bank.



May 5, 2014. View upstream from central portion of east bank.

Site Photographs

Castaic Creek - Reach 104

Exhibit 4a

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May 5, 2014. View downstream from central portion of east bank.



May 5, 2014. View downstream from upstream end of reach. Showing a portion of degraded Mixed Willow Riparian Forest habitat.

Site Photographs

Castaic Creek - Reach 104

Exhibit 4b

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ATTACHMENT A
PLANT AND WILDLIFE COMPENDIUM

REACH 104 PLANT COMPENDIA

Species	
ANGIOSPERMAE – FLOWERING PLANTS	
EUDICOTS	
ASTERACEAE – SUNFLOWER FAMILY	
Ambrosia acanthicarpa	annual bur-sage
Ambrosia psilostachya	western ragweed
Artemisia californica	California sagebrush
Artemisia douglasiana	mugwort
Baccharis pilularis ssp. consanguinea [B. pilularis]	coyote brush
Baccharis salicifolia ssp. salicifolia [B. salicifolia]	mule fat
Carduus pycnocephalus ssp. pycnocephalus*	Italian thistle
Centaurea melitensis*	totalote, Malta star-thistle
Corethrogyne filaginifolia[Lessingia f.]	California-aster
Ericameria nauseosa [Chrysothamnus nauseosus]	rubber rabbitbrush
Heterotheca grandiflora	telegraph weed
Lepidospartum squamatum	scale-broom
Senecio flaccidus var. douglasii	Douglas' threadleaf ragwort
Cryptantha sp.	cryptantha
Eriodictyon crassifolium	thick-leaf yerba santa
Phacelia cicutaria	caterpillar phacelia
BRASSICACEAE – MUSTARD FAMILY	
Hirschfeldia incana*	shortpod mustard
CACTACEAE – CACTUS FAMILY	
Cylindropuntia sp.	cholla
Opuntia ficus-indica*	mission prickly-pear
FABACEAE – LEGUME FAMILY	
Acmispon glaber [Lotus scoparius]	deerweed
Astragalus trichopodus	locoweed
Lupinus hirsutissimus	stinging lupine
Melilotus indica*	sourclover
FRANKENIACEAE – FRANKENIA FAMILY	
Frankenia salina	alkali heath
GERANIACEAE – GERANIUM FAMILY	
Erodium cicutarium*	red-stemmed filaree
LAMIACEAE – MINT FAMILY	
Salvia mellifera	black sage
MALVACEAE – MALLOW FAMILY	
Malacothamnus fasciculatus	chaparral bushmallow
MYRTACEAE – MYRTLE FAMILY	
Eucalyptus sp.*	gum
POLYGONACEAE – BUCKWHEAT FAMILY	
Eriogonum fasciculatum	California buckwheat
SALICACEAE – WILLOW FAMILY	
Populus fremontii ssp. fremontii	Fremont cottonwood
Salix exigua	narrow-leaved willow
Salix laevigata	red willow

Species	
ANGIOSPERMAE – FLOWERING PLANTS	
EUDICOTS	
Salix lasiolepis	arroyo willow
SOLANACEAE – NIGHTSHADE FAMILY	
Datura wrightii	jimson weed
Nicotiana quadrivalvis	Wallace's tobacco
TAMARICACEAE – TAMARISK FAMILY	
Tamarix ramosissima*	saltcedar
MONOCOTYLEDONES – MONOCOTS	
POACEAE – GRASS FAMILY	
Avena sp.	oat
Bromus madritensis ssp. rubens*	red brome
Cynodon dactylon*	bermuda grass
Schismus barbatus*	Mediterranean schismus
TYPHACEAE – CATTAIL FAMILY	
Typha sp.	cattail
* non-native to the region it was found	

REACH 104 WILDLIFE COMPENDIA

Species		Number Sighted
REPTILES		
LEPIDOSAURIA – LIZARDS AND SNAKES		
PHRYNOSOMATIDAE – ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS		
<i>Sceloporus occidentalis</i>	western fence lizard	1
<i>Uta stansburiana</i>	side-blotched lizard	1
BIRDS		
AVES – BIRDS		
CATHARTIDAE – NEW WORLD VULTURES		
<i>Cathartes aura</i>	turkey vulture	1
TROCHILIDAE – HUMMINGBIRDS		
<i>Calypte anna</i>	Anna's hummingbird	1
PICIDAE – WOODPECKERS		
<i>Picoides nuttallii</i>	Nuttall's woodpecker	1
<i>Picoides pubescens</i>	downy woodpecker	1
TYRANNIDAE – TYRANT FLYCATCHERS		
<i>Myiarchus cinerascens</i>	ash-throated flycatcher	2
<i>Tyrannus vociferans</i>	Cassin's kingbird	1
CORVIDAE – CROWS AND JAYS		
<i>Aphelocoma californica</i>	western scrub-jay	4
<i>Corvus corax</i>	common raven	1
TROGLODYTIDAE – WRENS		
<i>Troglodytes aedon</i>	house wren	1
EMBERIZIDAE – SPARROWS AND JUNCOS		
<i>Pipilo maculatus</i>	spotted towhee	1
<i>Melospiza [Pipilo] crissalis</i>	California towhee	2
<i>Melospiza melodia</i>	song sparrow	1
FRINGILLIDAE – FINCHES		
<i>Haemorhous [Carpodacus] mexicanus</i>	house finch	3
<i>Spinus [Carduelis] psaltria</i>	lesser goldfinch	1