BonTerra PSOMAS

Balancing the Natural and Built Environment

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 105, San Francisquito Canyon Channel (PD 2456), in 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 105, San Francisquito Canyon Channel (PD 2456), in the City of Santa Clarita (Exhibit 1). Reach 105 is 833 feet in length with an area of 3.78 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 105 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 6, 9, and June 3, 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 2007a).

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

The SBC Reach 105 supports seven vegetation types (alluvial sage scrub, ruderal, mule fat scrub, disturbed mule fat scrub, revegetated riparian scrub, southern cottonwood willow riparian forest/mule fat scrub, and southern cottonwood willow riparian forest) and five other areas (open wash, developed, ungrouted riprap, grouted riprap, and disturbed) as illustrated on Exhibit 3 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. Site photographs are included as Exhibits 4a and 4b.

TABLE 1
VEGETATION TYPES AND OTHER AREAS

Vegetation Type	Acres
Alluvial Sage Scrub	0.28
Ruderal	0.36
Mule Fat Scrub	4.52
Disturbed Mule Fat Scrub	0.86
Revegetated Riparian Scrub	0.05
Southern Cottonwood Willow Riparian Forest/Mule Fat Scrub	0.46
Southern Cottonwood Willow Riparian Forest	0.63
Open Wash	2.11
Developed	1.32
Ungrouted Riprap	0.16
Grouted Riprap	0.02
Disturbed	0.08
TOTAL ACRES	**10.86***
* This total exceeds the total amount described for Reach 105 (3.78 acres) as it includes a buffer area	

Alluvial sage scrub is co-dominated by scale-broom (*Lepidospartum squamatum*), California buckwheat (*Eriogonum fasciculatum*) and sagebrush (*Artemisia tridentata*). Herbaceous species scattered throughout the alluvial sage scrub include annual bur-sage (*Ambrosia acanthicarpa*), common fiddleneck (*Amsinckia menziesii*), hairy peppergrass (*Lepidium lasiocarpum*), lupine (*Lupinus* sp.), and deerweed (*Acmispon glaber*).

Ruderal vegetation type is dominated by non-native ruderal (weedy) species that are generally well adapted to disturbed areas. Ruderal species present at SBC Reach 105 included tumbleweed (*Amaranthus albus*), Italian thistle (*Carduus pycnocephalus*), tocalote (*Centaurea melitensis*), shortpod mustard (*Hirschfeldia incana*), and London rocket (*Sisymbrium irio*).

The mule fat scrub vegetation type is the predominant vegetation type at Reach 105 and is dominated by mule fat (*Baccharis salisifolia*). Other trees and shrubs scattered throughout this vegetation type include Freemont cottonwood (*Populus fremontii*), sandbar willow (*Salix exigua*), and tree tobacco (*Nicotiana glauca*). Herbaceous species also occurring include salt heliotrope (*Heliotropium curassavicum*), annual bur-sage (*Ambrosia acanthicarpa*), prickly lettuce (*Lactuca serriola*), and brome grasses (*Bromus* sp.). Disturbed mule fat scrub is composed of similar species as described above for mule fat scrub, but evidence of mechanical disturbance and trash accumulation is evident in this area and non-native weedy species (such as Italian thistle and shortpod mustard) are more prevalent.

Southern cottonwood willow riparian forest and southern cottonwood willow riparian forest/mule fat scrub are both dominated by large (over 20 feet tall) Fremont cottonwood and willow (*Salix* sp.) trees. The southern cottonwood willow riparian forest canopy is dense, while the southern cottonwood willow riparian forest/mule fat scrub canopy is less dense allowing for mule fat scrub to grow within the canopy gaps. Associated species include those mentioned for mule fat scrub and can be found interspersed between trees in these vegetation types.

Open or unvegetated wash are areas that consist of bare sand, silt, or cobble that generally contain no vegetation. These areas have been scoured or otherwise kept mostly clear of vegetation e.g. clearing activities). Some small seedlings occur here from species such as mule fat, shortpod mustard, scale-broom, and red-stemmed filaree (*Erodium cicutarium*).

Wildlife

Wildlife use of Reach 105 is expected to be relatively high due to its location within a mostly undisturbed segment of San Francisquito Creek. Except for during storm events, standing water is typically not present in the primary channel bottom of this reach. Two side outlets on the left bank (i.e. east bank), however, often contain standing nuisance water from dry season runoff. Mule fat scrub is the dominant vegetation type of this reach. Mule fat scrub generally provides low to moderate value wildlife habitat. There are also three patches of cottonwood-willow riparian forest vegetation that 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*) have been observed in previous

surveys (BonTerra Consulting 2005; 2007b) and are expected to occur periodically in Reach 105, particularly at the two side outlets with standing water. The common side-blotched lizard (*Uta stansburiana*) and the coastal western whiptail (*Aspidoscelis [Cnemidophorus] tigris stejnegeri*) were observed during the surveys, but the western fence lizard (*Sceloporus occidentalis*) and southern alligator lizard (*Elgaria multicarinata*) are two other common lizards expected to occur at Reach 105. No snakes were observed during the surveys, but the coachwip (*Masticophis flagellum*), common kingsnake (*Lampropeltis getula*), and gopher snake (*Pituophis catenifer*) are expected to occur. Birds observed during the surveys included mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), Nuttall's woodpecker (*Picoides nuttallii*), American kestrel (*Falco sparverius*), ash-throated flycatcher (*Myiarchus cinerascens*), western scrub-jay (*Aphelocoma californica*), bushtit (*Psaltriparus minimus*), common yellowthroat (*Geothlypis trichas*), Wilson's warbler (*Cardellina* [*Wilsonia*] *pusilla*), spotted towhee (*Pipilo maculatus*), California *towhee (Melozone* [*Pipilo*] *crissalis*), song sparrow (*Melospiza melodia*), house finch (*Haemorhous* [*Carpodacus*] *mexicanus*), and lesser goldfinch (*Spinus* [*Carduelis*] *psaltria*). Except for the Wilson's warbler, all of these species are expected to breed at Reach 105. No mammals were detected during the surveys, but the following are expected to occur at Reach 105: Virginia opossum (*Didelphis virginiana*), desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), northern raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

CONCLUSIONS AND RECOMMENDATIONS

Alluvial sage scrub habitat is generally considered to be of high value in the region due its relative scarcity. At Reach 105 however, the alluvial sage scrub is sparse and localized to a small patch, and would not be considered of high value for these reasons. Riparian forest vegetation is generally considered to be of high value in the region, but more so because of the relatively rich diversity of wildlife species it tends to support. At this location, however, the riparian vegetation exists in small isolated patches (0.46 acre southern cottonwood willow riparian forest/mule fat scrub and 0.63 acre southern cottonwood willow riparian forest) and is not expected to provide the biological value it would otherwise provide on a larger scale.

A habitat assessment conducted soon after construction of the levee for Reach 105 determined that potentially suitable habitat for the slender-horned spineflower (*Dodecahema leptoceras*) existed in the wash outside the clearing footprint (BonTerra Consulting 2004). Neither the slender-horned spineflower or any other species status plants species were found during focused surveys conducted in 2014 at Reach 105 for the Santa Clara River Watershed Feasibility Study.

It was determined in 2004 that Reach 105 provided potentially suitable habitat for the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) and arroyo toad (*Anaxyrus californicus*). Although this SBC reach is not yet permitted for maintenance activities, annual "pre-clearing" surveys for the unarmored threespine stickleback have been conducted annually here since 2005. The surveys were conducted in conjunction with the regular pre-clearing surveys for the permitted reaches under the soft-bottom channel maintenance program. The results for unarmored threespine stickleback have been negative at Reach 105 from 2005 to 2013 (BonTerra Psomas 2014). Focused surveys for the arroyo toad have been conducted at Reach 105 in 2005, 2007, 2009, 2011, and 2013 with negative results (BonTerra Consulting 2005; 2007a; 2009; 2011; 2013) .

Although no potentially suitable habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) or least Bell's vireo (*Vireo bellii pusillus*) was present in 2004, no maintenance activities have occurred and existing conditions have changed. Potentially suitable habitat developed in about five years at this SBC reach for these two migratory birds. As a result, focused surveys have been conducted at Reach 105 biannually since 2009 (BonTerra Consulting 2009; 2011; 2013). There was a transitory male found singing on June 10, 2011, within the survey "buffer"[1] for this SBC reach, but it was not present thereafter and considered to be a transitory male. No southwestern willow flycatcher or least Bell's vireo has yet established a breeding territory at Reach 105; therefore, the survey results are considered to be negative for these two species.

Because Reach 105 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.

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 3 – Vegetation Types and Other Areas Map
Exhibit 4a-b – Site Photographs
Attachment A – Plant and Wildlife Compendia

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[1] A survey buffer of 500 to 1,000 feet is typically required for these species to cover potential indirect effects that may be associated with any proposed activity.

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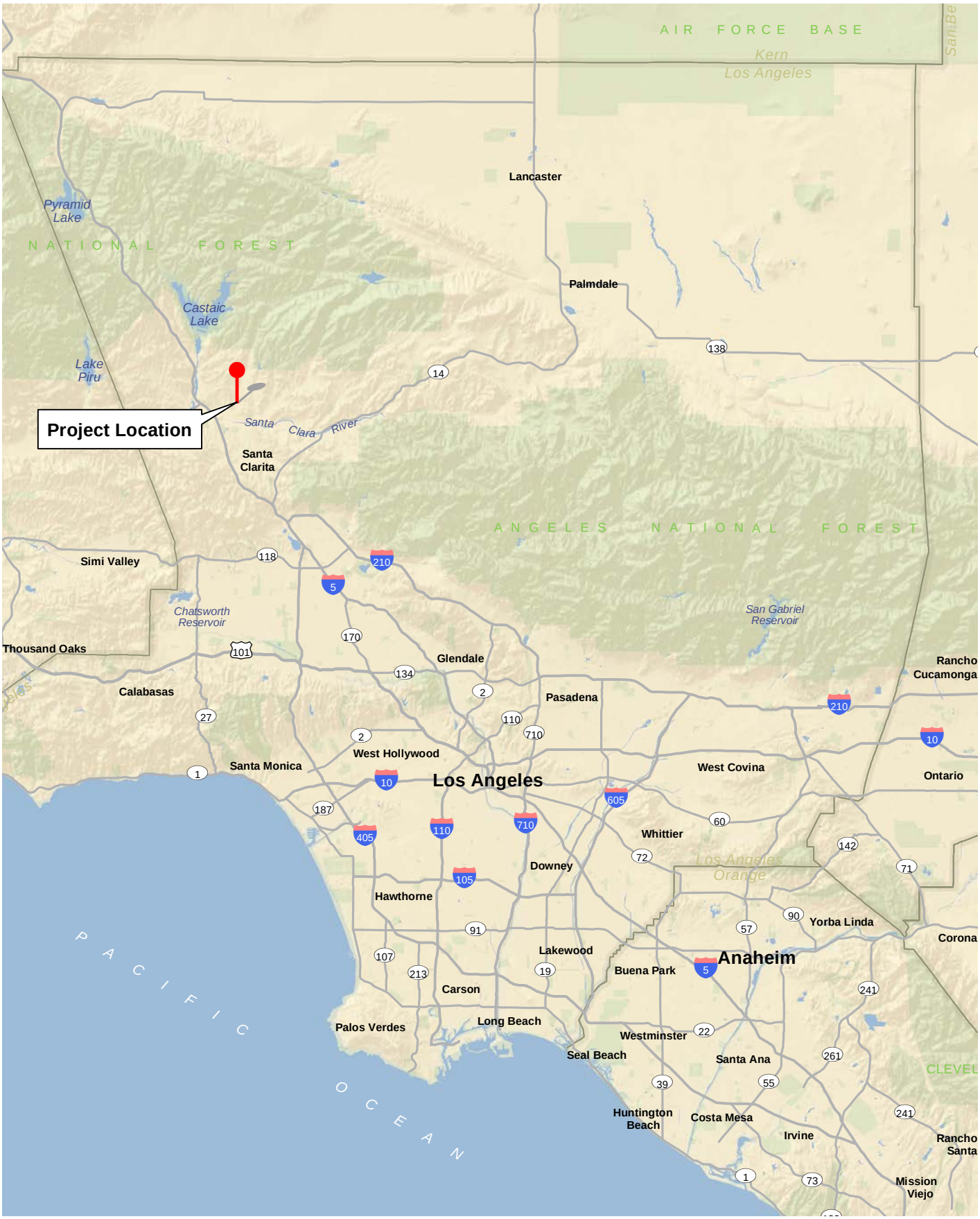

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Regional Location

Exhibit 1

San Francisquito Canyon Channel - Reach 105

N W E S

10 5 0 10 Miles

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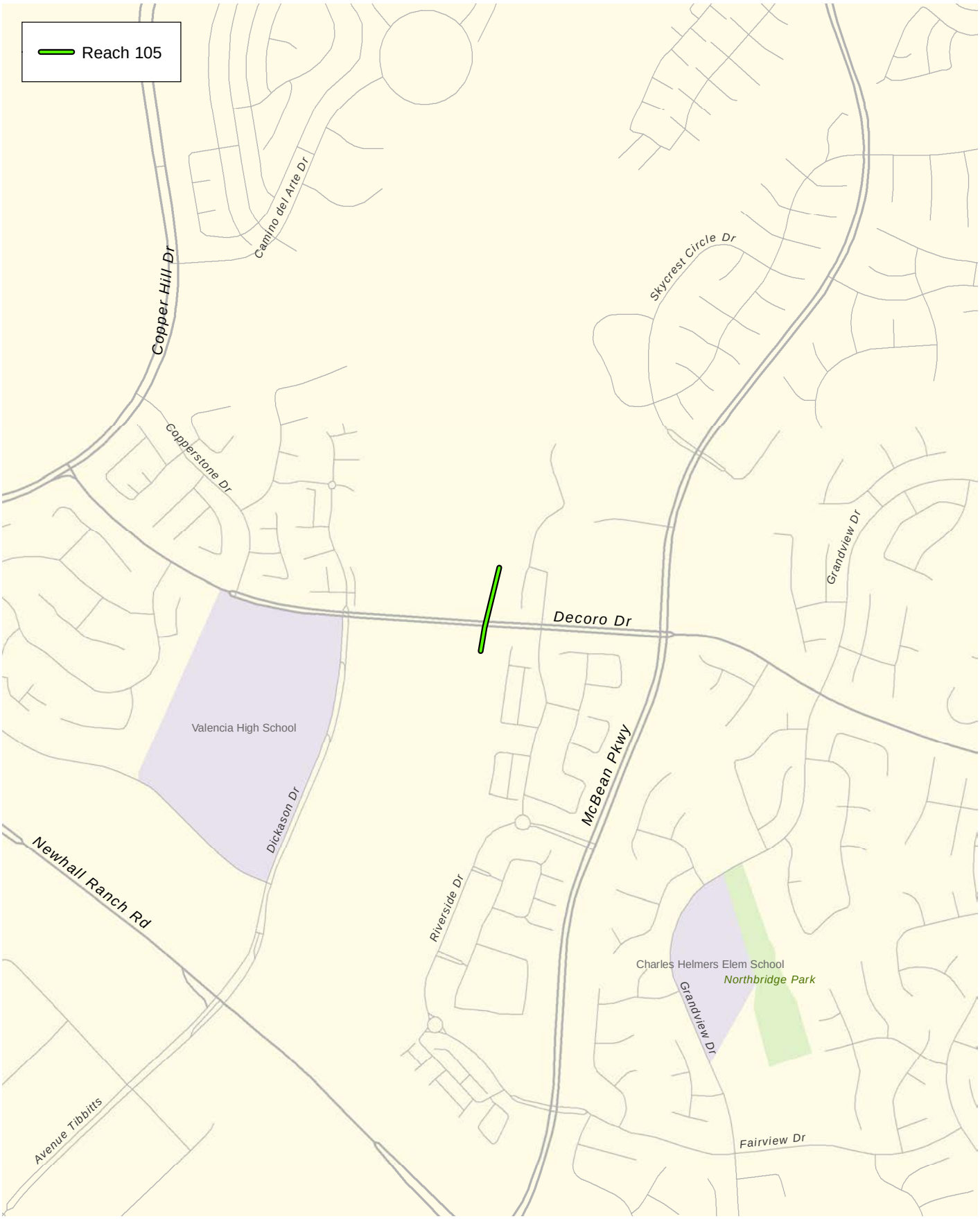

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Local Vicinity map

Exhibit 2

San Francisquito Canyon Channel - Reach 105

N
W E
S

1,000 500 0 1,000

Feet

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Aerial Source: LAR-IAC 2011

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Vegetation Types and Other Areas

Exhibit 3

San Francisquito Canyon Channel - Reach 105

N W E S

150 75 0 150

Feet

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June 3, 2014. View upstream from east bank just north of Decoro Dr.

June 3, 2014. View upstream from east bank showing mule fat scrub and southern cottonwood willow riparian forest.

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Site Photographs

Exhibit 4a

San Francisquito Canyon Channel - Reach 105

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June 3, 2014. View just south of Decoro Dr. facing west. Showing mule fat scrub.

June 3, 2014. View just north of Decoro Dr. facing west. Showing open wash in the foreground.

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Site Photographs

Exhibit 4b

San Francisquito Canyon Channel - Reach 105

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ATTACHMENT A

PLANT AND WILDLIFE COMPENDIUM

REACH 105 PLANT COMPENDIA

Species	
***ANGIOSPERMAE* – FLOWERING PLANTS**	
EUDICOTS	
ADOXACEAE – MUSKROOT FAMILY	
Sambucus nigra ssp. *caerulea* [*S. mexicana*]	blue elderberry
AMARANTHACEAE – AMARANTH FAMILY	
*Amaranthus albus**	tumbleweed
ASTERACEAE – SUNFLOWER FAMILY	
Ambrosia acanthicarpa	annual bur-sage
Artemisia californica	California sagebrush
Artemisia douglasiana	mugwort
Artemisia tridentata ssp. *tridentata*	big sagebrush, great basin sagebrush
Baccharis salicifolia ssp. *salicifolia* [*B. salicifolia*]	mule fat
Carduus pycnocephalus ssp. *pycnocephalus**	Italian thistle
*Centaurea melitensis**	tocalote, Malta star-thistle
*Cirsium vulgare**	bull thistle
Heterotheca grandiflora	telegraph weed
*Lactuca serriola**	prickly lettuce
Lepidospartum squamatum	scale-broom
Xanthium strumarium	cocklebur
BORAGINACEAE – BORAGE FAMILY	
Amsinckia menziesii [*Amsinckia m.* var. *m.*]	common fiddleneck, small-flowered fiddleneck
Heliotropium curassavicum var. *oculatum*	salt heliotrope, alkali heliotrope
BRASSICACEAE – MUSTARD FAMILY	
*Hirschfeldia incana**	shortpod mustard
Lepidium lasiocarpum ssp. *lasiocarpum*	hairy peppergrass, sand peppergrass
*Lepidium latifolium**	broad-leaved peppergrass
*Sisymbrium irio**	London rocket
FABACEAE – LEGUME FAMILY	
Acmispon glaber	deerweed
Astragalus trichopodus	locoweed
Lupinus microcarpus var. *microcarpus*	chick lupine
Lupinus sp.	lupine
*Melilotus indica**	sourclover
FAGACEAE – OAK/BEECH FAMILY	
Quercus lobata	valley oak
GERANIACEAE – GERANIUM FAMILY	
*Erodium cicutarium**	red-stemmed filaree
LAMIACEAE – MINT FAMILY	
Salvia apiana	white sage
Salvia columbariae	chia
Salvia leucophylla	purple sage
Salvia mellifera	black sage
LOASACEAE – LOASA FAMILY	
Mentzelia laevicaulis	stick-leaf

Species	
***ANGIOSPERMAE* – FLOWERING PLANTS**	
EUDICOTS	
MALVACEAE – MALLOW FAMILY	
*Malva parviflora**	cheeseweed
ONAGRACEAE – EVENING-PRIMROSE FAMILY	
Oenothera elata ssp. *hirsutissima*	great marsh evening primrose
Eulobus californicus [*Camissonia californica*]	mustard-like evening primrose
POLYGONACEAE – BUCKWHEAT FAMILY	
Eriogonum sp.	buckwheat
Eriogonum fasciculatum	California buckwheat
SALICACEAE – WILLOW FAMILY	
Populus fremontii ssp. *fremontii*	Fremont cottonwood
Salix exigua	narrow-leaved willow
Salix laevigata	red willow
Salix lasiolepis	arroyo willow
SCROPHULARIACEAE – FIGWORT FAMILY	
*Verbascum virgatum**	wand mullein
SOLANACEAE – NIGHTSHADE FAMILY	
*Nicotiana glauca**	tree tobacco
Datura wrightii	jimson weed
TAMARICACEAE – TAMARISK FAMILY	
*Tamarix ramosissima**	saltcedar
ZYGOPHYLLACEAE – CALTROP FAMILY	
*Tribulus terrestris**	puncture vine
***MONOCOTYLEDONES* – MONOCOTS**	
POACEAE – GRASS FAMILY	
*Arundo donax**	giant reed
*Avena barbata**	slender wild oat
Avena sp.	oat
*Bromus diandrus**	ripgut grass
Bromus madritensis ssp. *rubens**	red brome
*Bromus tectorum**	cheat grass
*Cynodon dactylon**	bermuda grass
Elymus condensatus [*Leymus c.*]	giant wild rye
Hordeum murinum var. *leporinum**	hare barley
*Schismus barbatus**	Mediterranean schismus
TYPHACEAE – CATTAIL FAMILY	
Typha sp.	cattail
* non-native to the region it was found	

REACH 105 WILDLIFE COMPENDIA

Species		Number Sighted
REPTILES		
***LEPIDOSAURIA* – LIZARDS AND SNAKES**		
PHRYNOSOMATIDAE – ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS		
Uta stansburiana	side-blotched lizard	5
TEIIDAE – WHIPTAIL LIZARDS		
Aspidoscelis [*Cnemidophorus*] *tigris stejnegeri*	coastal western whiptail	1
BIRDS		
***AVES* – BIRDS**		
COLUMBIDAE – PIGEONS AND DOVES		
Zenaida macroura	mourning dove	5
TROCHILIDAE – HUMMINGBIRDS		
Calypte anna	Anna's hummingbird	2
PICIDAE – WOODPECKERS		
Picoides nuttallii	Nuttall's woodpecker	2
FALCONIDAE – FALCONS		
Falco sparverius	American kestrel	1
TYRANNIDAE – TYRANT FLYCATCHERS		
Myiarchus cinerascens	ash-throated flycatcher	2
CORVIDAE – CROWS AND JAYS		
Aphelocoma californica	western scrub-jay	1
AEGITHALIDAE – BUSHTITS		
Psaltriparus minimus	bushtit	
PARULIDAE – WARBLERS		6
Geothlypis trichas	common yellowthroat	1
Cardellina [*Wilsonia*] *pusilla*	Wilson's warbler	1
EMBERIZIDAE – SPARROWS AND JUNCOS		
Pipilo maculatus	spotted towhee	1
Melozone [*Pipilo*] *crissalis*	California towhee	3
Melospiza melodia	song sparrow	3
FRINGILLIDAE – FINCHES		
Haemorhous [*Carpodacus*] *mexicanus*	house finch	20
Spinus [*Carduelis*] *psaltria*	lesser goldfinch	10