2016 Focused Survey Results for Yellow-Billed Cuckoo

Los Angeles County Flood Control District Soft-Bottom Channels Maintenance Clearing

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INTRODUCTION

Focused surveys for Threatened and Endangered species are conducted on a regular basis at selected soft-bottom channel reaches maintained by the Los Angeles County Flood Control District (LACFCD). The wildlife species include the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), Santa Ana sucker (*Catostomus santaanae*), arroyo toad (*Anaxyrus californicus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and least Bell's vireo (*Vireo bellii pusillus*). Annual biological monitoring and periodic habitat assessments of all LACFCD channel reaches provides a means by which to update and revise, when necessary, the particular channel reaches and species for which surveys are recommended. This report presents the results of focused surveys conducted in 2016 at 16 channel reaches for the yellow-billed cuckoo (*Coccyzus americanus*). The 2016 survey results are summarized below in Table 1.

TABLE 1
SUMMARY OF 2016 RESULTS OF YELLOW-BILLED CUCKOO FOCUSED SURVEYS AT 16 SOFT-BOTTOM CHANNEL REACHES

Reach Number	Reach Name	Survey Results
Los Angeles River Watershed		
14	May Channel (Main Channel Outlet into Pacoima Canyon)	Negative
Dominguez Channel Watershed		
27	Wilmington Drain	Observed
San Gabriel River Watershed		
39	Beatty Channel Outlet at San Gabriel River 25+99.00+50'	Negative
40b	San Gabriel River – I-10 Freeway to Thienes Ave	Negative
43a	San Gabriel River – Upper	Negative
43b	San Gabriel River – Lower	Negative
44	San Gabriel River	Negative
Santa Clara River Watershed		
71	Santa Clara River Main Channel (PD 1946)	Negative
79	South Fork – Santa Clara River (Valencia Blvd Bridge Stabilizer)	Negative
80	South Fork – Santa Clara River (PDs 1947 and 1946)	Negative
82	Santa Clara River Main Channel (PD 2278)	Negative
87	Castaic – Old Rd Drain (CDR 525.021D) Outlet	Negative
97	Castaic Creek – The Old Rd (PD 1982)	Negative
103	Bouquet Canyon Channel (PD 2225)	Negative
104	Castaic Creek (PD 2441 Units 1 and 2)	Negative
109	Santa Clara River – South Bank West of McBean Pkwy (MTD 1510)	Negative

As with the southwestern willow flycatcher and least Bell's vireo, the yellow-billed cuckoo is a migratory species that is present in Southern California only during the summer breeding season. These three species have departed their breeding grounds by mid-September. As required by the LACFCD's regulatory permits, maintenance activities occur outside the time period (i.e., after September 15) in those soft-bottom channels with potential habitat for these species. Also required by the LACFCD's regulatory permits, habitat areas seasonally occupied by the least

Bell's vireo that are identified in the focused surveys must be protected by flagging and these areas must be monitored by qualified biologists during clearing activities.

ENVIRONMENTAL SETTING

Regional Setting

The topography in Los Angeles County is diverse, containing coastline, flatlands, mountains, and desert within approximately 4,000 square miles. Elevations in the County range from sea level to over 10,000 feet above mean sea level (msl). The climate ranges from mild near the coast to severe in the high mountains and in the desert. This variation in environments has created a unique and diverse collection of biological resources (England and Nelson 1976).

The San Gabriel Mountains are a prominent topographic feature that include a portion of the headwaters of the Santa Clara, Los Angeles, Rio Hondo, and San Gabriel Rivers and are the source of streams that drain into the Antelope and Fremont Valleys. The San Gabriel Mountains rise 7,000 feet above msl from the Antelope and Santa Clarita Valleys and exert considerable influence on the climate, hydrology, and ecology of the lands around them. The San Andreas and other numerous faults have fractured the mountains so that they erode at a rapid rate. Hence, the stream basins along the northern slope are generally characterized by steep headwaters and sloping alluvial beds on the adjacent flatlands (CRA et al. 2001).

The Santa Monica Mountains are also a prominent topographic feature and include the headwaters of Malibu Creek and Topanga Creek; these are the source of streams that drain the Malibu Coast. The Santa Monica Mountains are up to 10 miles wide and reach an elevation of 3,100 feet above msl at Sandstone Peak. The Santa Monica Mountains have a complex structure because they have been uplifted and then eroded several times over the past 200 million years (Dale 1986; England and Nelson 1976).

There are 4 major rivers in Los Angeles County: the Los Angeles River is approximately 51 miles long (main stem) and drains 830 square miles; the Rio Hondo River is approximately 20 miles long (main stem) and drains 125 square miles; the San Gabriel River is approximately 59 miles long (main stem) and drains 350 square miles; and the Santa Clara River is approximately 75 miles long (main stem) and drains 1,616 square miles (LACDPW 2007). Numerous other streams also occur in Los Angeles County. Surface water in streams and rivers is generally only present during the winter and spring, in particular after storm events. Many storms do not generate sufficient runoff to sustain surface flow in all streams. In some areas, flows are supplemented with reclaimed water and agricultural and urban runoff. Particularly intense storms can result in flash floods or debris flows that can carry large amounts of sediment, rocks, and debris to be deposited in the valley below (CRA et al. 2001).

The Los Angeles River system has been extensively channelized to provide flood protection as it passes through several cities on its way to the Pacific Ocean. The Los Angeles River tributaries include Bell Creek, Calabasas Creek, Burbank Western Channel, Pacoima Wash, Tujunga Wash, Verdugo Wash, Arroyo Seco, Compton Creek, and the Rio Hondo River (LACDPW 2007). There are now over 400 miles of concrete-lined tributaries that feed into the main channel. Approximately 47.9 miles of the 51.0-mile river is concrete-lined. The two stretches where the river is not lined (i.e., soft or earthen-bottom channels) include the Sepulveda Flood Control Basin through the Glendale Narrows and south of Willow Street in Long Beach (LACDPW 2007). Reclaimed water enters the Los Angeles River at the Sepulveda Basin where the Los Angeles Department of Water and Power releases as much as 75 million gallons of reclaimed water daily from the Donald C. Tillman Water Reclamation Plant.

The San Gabriel River begins in the Angeles National Forest and flows through several cities on its way to the Pacific Ocean. The San Gabriel River tributaries include Walnut Creek, San Jose Creek, Coyote Creek, and numerous storm drains (LACDPW 2007). The headwaters of the San Gabriel River begin just north of Pasadena and northwest of Mount Wilson, where they flow through a steep canyon to Cogswell Reservoir. The west fork of the river then merges with the east fork and flows into the San Gabriel Reservoir. Below the reservoir, the east fork converges with the main stem of the San Gabriel River and flows through San Gabriel Canyon to Morris Reservoir. Below Morris Reservoir, the river flows through cities from Azusa to Seal Beach and empties into Long Beach Harbor.

The Santa Clara River is unique because it is the only major unchannelized river that drains the San Gabriel Mountains. The Santa Clara River is fed by five major tributaries: Sand Canyon, Mint Canyon, Bouquet Canyon, South Fork, and San Francisquito Canyon (LACDPW 2007). Further west, Castaic, Piru, Sespe, and Santa Paula Creeks join the river (CRA et al. 2001). The headwaters of the Santa Clara River are located near Acton, and the river runs approximately 100 miles to its outlet in the city of Ventura in Ventura County. Most development adjacent to the river is located in or near the city of Santa Clarita (LACDPW 2007).

The Malibu Creek Watershed is a system of independent streams that drain approximately 109 square miles in northwest Los Angeles County from the Santa Monica Mountains to the Pacific Ocean. These include Las Virgenes, Triunfo, and Cold Creeks, as well as other small streams that flow from the Santa Monica Mountains to Santa Monica Bay. These creeks flow through the cities of Agoura Hills, Calabasas, Malibu, Thousand Oaks, Westlake Village, unincorporated Los Angeles County, and Ventura County (LACDPW 2007).

The Ballona Creek Watershed is a ten-mile-long flood-control channel that drains the Los Angeles Basin from the Santa Monica Mountains to the north, the Interstate (1) 110 Freeway to the east, and the Baldwin Hills to the south. All together, the Ballona Creek Watershed drains approximately 130 square miles of the Los Angeles Basin. Creeks or drainages of this watershed include Centinela Creek, Sepulveda Channel, and Benedict Canyon Channel. These drainages pass through the cities of Beverly Hills, Culver City, Inglewood, Los Angeles, and West Hollywood (LACDPW 2007).

The Dominguez Watershed is situated in south Los Angeles County and drains approximately 133 square miles of the Los Angeles Basin into the Los Angeles Harbor. Parts of the cities of Hawthorne, Torrance, Gardena, and Carson and the community of Wilmington drain into the Dominguez Channel. Over 40 percent of this watershed consists of industrial, commercial, and transportation land uses (CRA et al. 2001; LACDPW 2007).

The Antelope Valley Watershed is a system of independent streams that drain approximately 1,200 square miles in north Los Angeles County from the San Gabriel Mountains and Kern County into the valley floor. These include Little Rock, Big Rock, and Mill Creeks, as well as other small streams that flow from the San Gabriel Mountains into the Antelope Valley. Due to the surrounding topography, these streams do not drain into the sea, but into dry lakebeds on the valley floor, with most surface flows infiltrating into groundwater basins or evaporating (CRA et al. 2001; LACDPW 2007). Because the valley lacks defined natural channels outside the foothills, it is subject to unpredictable sheet-flow patterns. The portion of the Antelope Valley Watershed in Los Angeles County includes the cities of Lancaster and Palmdale, with scattered clusters of sparse development outside these cities (LACDPW 2007).

Local Setting

In 2002, the LACFCD maintained 95 soft-bottom channel reaches located within its district boundaries, consisting of 885.58 acres that require management. Since 2002, ten soft-bottom channel reaches have been lost due to redevelopment or ownership change, but several more have been added to the list. As of 2016, the LACFCD manages 108 channel reaches (1 thru 119[1]) that are located in 9 identified watersheds or regions of Los Angeles County:

- Los Angeles River Watershed: 26 channel reaches
- Dominguez Channel Watershed: 2 channel reaches
- Malibu Creek Watershed: 9 channel reaches
- San Gabriel River Watershed: 10 channel reaches
- Santa Clara River Watershed: 55 channel reaches
- Ballona Creek Watershed: 2 channel reaches
- Santa Monica Bay: 2 channel reaches
- Antelope Valley: 1 channel reach
- Cerritos Channel: 1 channel reach

In 1997, the 95 soft-bottom flood-control channel reaches encompassed 885.58 acres that included 205.27 acres of vegetation. Based on vegetation categories developed at the time, the 205.27 acres of vegetation included an estimated 105.32 acres of riparian vegetation, 63.40 acres of mule fat vegetation, and 36.55 acres of scrub vegetation (BonTerra 1999). These acreages have not been updated since that time and are presented here only to indicate the large amount of habitat under the LACFCD's jurisdiction.

PROPOSED PROJECT

Background

To effectively control flood waters from the mountainous watersheds surrounding the Los Angeles Basin, the U.S. Army Corps of Engineers (USACE) and the LACFCD constructed concrete-bottom and earth-bottom channels leading from dams and debris basins located along the frontal slopes of the San Gabriel, Santa Monica, Verdugo, and Santa Susanna Mountains. Construction began in the 1930s.These channels, as a system, provide flood protection for Los Angeles County.

Channel maintenance activities have been performed regularly in LACFCD channels for over 50 years. Originally constructed by the USACE, upon completion, most of the channel facilities were transferred to the LACFCD for cyclic maintenance. The USACE's maintenance guidelines require that "debris, objectionable growth, shoals, and waste materials must not encroach on the invert. Excess materials that will not move readily with low flows must be removed. Measures must be taken to control objectionable growth by approved chemical or mechanical means" (USACE 1996).

The County formerly maintained channels clear of any vegetation, as required under the *Code of Federal Regulations* (CFR, specifically Title 33, Section 208.10), until the California Department of Fish and Wildlife (CDFW) began requiring the County to clear vegetation on alternating sides of the

[1] The total does not add up to 119 because 11 channel reaches have been developed or had their ownership transferred.

channels each year. The USACE allowed limited clearing between 1993 and 1995. Anticipated heavy rains during the 1997/1998 storm season caused by El Niño conditions resulted in a statewide need to remove vegetation and sediment from soft-bottom channels to restore their flood-carrying capacity. The LACFCD obtained all necessary permits to conduct this work in the 1997/1998 storm season and has continued the ongoing maintenance as approved by the permits.

Project Description

Vegetative growth in a channel system reduces channel capacity. All soft-bottom channels were designed and constructed as relatively clean, unvegetated channels. As vegetation grows more dense, the roughness of the channel increases and the velocity of flows decrease, which corresponds to a loss in the channel's carrying capacity. The vegetation also traps some of the sediments being transported by flood flows which, when deposited, further reduce channel capacity. Studies have shown that increased vegetation and sediments in the channels result in reduced flow area with a concomitant decrease in flow velocity. A loss of carrying capacity in the channels could cause flood flows to escape the channel systems and impact adjacent properties (LACDPW 1996).

Vegetation can also affect the structural integrity of bridges during a major storm event. Vegetation slows flood flows, which creates a backwater effect and increases water surface elevations upstream. Bridges are not normally designed to withstand the forces that result from significantly increased flood water elevations. Additionally, increased flood depths upstream can result in flooding of adjacent properties and erosion of channel banks.

The LACFCD performs minor grading and annual vegetation clearing in channels to retrain channel flows consistent with the clearing limits established by the permitted maintenance plan (BonTerra 1999). This ongoing program is necessary to maintain the design capacities of the channels and to ensure the proper functioning of the facilities located within the LACFCD boundaries.

Within each reach, the LACFCD proposes to clear the same areas (and acreage) that have been cleared annually since 1997. Biological impacts to these channel reaches associated with the initial vegetation clearing for maintenance activities were previously mitigated through maintaining and enhancing 62.7 acres of riparian habitats at the Big Tujunga Wash Mitigation Bank site (BonTerra 1999).

Channel clearing activities are performed primarily by mechanical means, using heavy equipment (such as trucks, bulldozers, dump trucks, and loaders), as well as other specialized equipment designed for this type of work. Hand clearing is conducted in areas where mechanical equipment cannot be used or where important biological resources exist nearby. Herbicides approved by regulatory agencies are applied, as necessary, to eradicate invasive and/or non-native vegetation including, but not limited to, giant reed (*Arundo donax*) and castor bean (*Ricinus communis*).

The channel clearing activities are performed under an existing Maintenance Plan approved by the Los Angeles Regional Water Quality Control Board (RWQCB) and USACE and modified by the CDFW under the LACFCD's existing Streambed Alteration Agreement. BonTerra Psomas has reviewed the Maintenance Plan and has extensive knowledge of channel clearing activities in all channel reaches, having worked with the LACFCD since 1997 to provide biological monitoring of flood-control channel maintenance work. Pre-clearing and post-clearing photos have been taken every year to document the biological resources in these channel reaches in compliance with the mitigation requirements of existing permits from the USACE, RWQCB, and CDFW.

SPECIAL STATUS SPECIES BACKGROUND

In order to comply fully with the regulatory permits issued to the LACFCD, surveys are performed for a variety of special status species at soft-bottom channel reaches where suitable or potentially suitable habitat has been identified. For example, the permits require annual pre-clearing surveys for the federally and State-listed Endangered unarmored threespine stickleback and federally listed Threatened Santa Ana sucker. Results of these fish surveys were included with previous focused survey efforts (BonTerra 2002, 2003), but have since been reported separately to the LACFCD. Since the 2002 and 2003 focused survey efforts, surveys for the federally listed Endangered arroyo toad as well as the federally and State-listed Endangered southwestern willow flycatcher and least Bell's vireo have been conducted every other year (BonTerra 2005, 2007, 2009, 2011, 2013, 2015).

Although State-listed Threatened on June 27, 1971, and State-listed Endangered on March 26, 1988 (CDFW 2016), focused surveys for the yellow-billed cuckoo were not conducted prior to 2016 at any soft-bottom channel reaches due to the general lack of sufficiently large areas of potentially suitable riparian habitats that this species requires for breeding. Furthermore, because of the large amount of breeding habitat required, the yellow-billed cuckoo has been considered extirpated as a breeder in Los Angeles County since the 1950s. However, the western distinct population segment of the yellow-billed cuckoo was federally listed Threatened on November 3, 2014 and the U.S. Fish and Wildlife Service (USFWS) and USACE requested the LACFCD provide a summary of the yellow-billed cuckoo's status in the project region in order to renew the Nationwide Permit 31 for soft-bottom channels.

BonTerra Psomas prepared and submitted a Technical Memorandum to the LACFCD on the status of yellow-billed cuckoo in the project region dated August 11, 2015 (BonTerra Psomas 2015). The Technical Memorandum recommended surveys at 11 soft-bottom channel reaches that support or are adjacent to willow-cottonwood habitats extensive enough to be potentially suitable for the yellow-billed cuckoo. These 11 soft-bottom channel reaches formed the following 5 proposed survey areas: (1) Reach 27; (2) Reach 43a; (3) Reaches 71, 79, 80, and 103; (4) Reaches 82 and 109; and (5) Reaches 87, 97, and 104. Note that the list includes soft-bottom channel reaches 103, 104, and 109 that are not yet permitted. Non-permitted channel reaches are included in annual monitoring surveys and, if appropriate, focused surveys for Threatened and Endangered species in order to facilitate their future permitting.

The USACE Nationwide Permit issued on November 23, 2015, covered soft-bottom channel reaches 1 thru 100 and included a requirement for yellow-billed cuckoo surveys at the following 13 channel reaches: 14, 27, 39, 40a, 43a, 43b, 44, 71, 79, 80, 82[2], 87, and 97. Combined with channel reaches 103, 104, and 109, these 16 soft-bottom channel reaches form the following 9 survey areas:

- Survey Area 1: Reach 14
- Survey Area 2: Reach 27
- Survey Area 3: Reach 39
- Survey Area 4: Reach 40b
- Survey Area 5: Reaches 43a and 43b

[2] Avoidance and minimization measure 2c of the November 23, 2015, permit lists only 12 soft-bottom channel reaches; however, the appendices of the permit include Table 1, which lists Reach 82 with the other 12 channel reaches requiring "avian bio-monitoring" for the yellow-billed cuckoo, as well as "Not Authorized" channel reaches 103, 104, and 109.

- Survey Area 6: Reach 44
- Survey Area 7: Reaches 71, 79, 80, and 103
- Survey Area 8: Reaches 82 and 109
- Survey Area 9: Reaches 87, 97, and 104

This report provides the results of surveys for the yellow-billed cuckoo at these 9 Survey Areas (i.e., 16 soft-bottom channel reaches). See Attachments A and B for Survey Area Maps and Attachment C for representative photographs for each Survey Area.

Yellow-Billed Cuckoo

The yellow-billed cuckoo formerly bred throughout the western United States to British Columbia, Canada, but has declined dramatically over the past 100 years due to the widespread loss of lowland riparian forests dominated by willows (*Salix* spp.) and cottonwoods (*Populus* spp.) (Hughes 1999). It no longer breeds in western Canada, Washington, Oregon, or Montana, and it continues to decline in California (USFWS 2014). A California statewide survey conducted in 1977 of floodplain riparian forests where this species occurred historically or where habitat appeared suitable, found a total of 141 yellow-billed cuckoos (Gaines and Laymon 1984). Another statewide survey in 1986–1987 found a total of 30 to 33 pairs and 31 unmated male yellow-billed cuckoos at 9 locations; the majority were concentrated along the upper Sacramento River from Red Bluff to Colusa and at the South Fork Kern River (Laymon and Halterman 1989). Recent surveys conducted in 2010, 2012, and 2013 along the Sacramento and Feather Rivers in the Sacramento Valley show a continuing decline in cuckoo numbers despite a net gain in suitable habitats over the last 30 years; causes for the continuing population decline along the Sacramento and Feathers Rivers is unknown (Dettling et al. 2015).

During the 1977 statewide survey discussed above, only three yellow-billed cuckoos were found in the Southern California Coastal Region from Ventura County south to San Diego County; all three cuckoos were along the Santa Ana River in the Prado Basin of western Riverside County (Gaines and Laymon 1984). A small local population of yellow-billed cuckoos persisted in the Prado Basin until 1995 with numbers ranging from three in 1985 to seven in 1987 (Pike et al. 2004). After widespread flooding in the basin during spring season 1995, only one or two yellow-billed cuckoos were detected annually until 2001, followed by no detections from 2002 to 2004 (Pike et al. 2004). Far more yellow-billed cuckoos than normal were reported in Southern California during the 2011 summer season, and included one single bird in the Prado Basin on June 23, 2011 (McCaskie and Garrett 2012; Western Riverside MSHCP 2012). As a breeder, the yellow-billed cuckoo appears to have been extirpated from the Santa Ana River Watershed, including the Prado Basin.

This species formerly nested in the Los Angeles, San Gabriel, and the Santa Clara River systems (Allen and Garrett 1996). Breeding persisted until at least 1952 in the San Gabriel River near El Monte (Long 1993; Garrett and Dunn 1981). There has been no documented nesting of this species in Los Angeles County since the late 1950s, although breeding is still “conceivable” in remnant riparian habitat along the Santa Clara River (Allen and Garrett 1996). In recent years, it occurs in Los Angeles County and elsewhere in the Southern California Coastal Region only as a rare migrant (Lehman 2015; Unitt 2004; Hamilton and Willick 1996; Garrett and Dunn 1981; Webster et al. 1980). For example, one yellow-billed cuckoo was at the Piute Ponds in the Antelope Valley, Los Angeles County, from July 1 to 6, 2015 (eBird 2015). The Piute Ponds do not support suitable breeding habitat for this species, but do serve as a migrant “trap” that holds migrants for short stays.

Estimates of how much riparian habitat is needed for breeding varies, but it is clear that the western yellow-billed cuckoo prefers large areas of suitable riparian habitat. The final draft survey protocol for the western yellow-billed cuckoo states that it nests almost exclusively in low to moderate elevation riparian woodlands with native broadleaf trees and shrubs that are 20 hectares (50 acres) or more in extent within arid to semiarid landscapes (Halterman et al. 2015). Yellow-billed cuckoos rarely use smaller patches of habitat (less than 50 acres), particularly when those small patches are distant from other patches of riparian habitat. In California, yellow-billed cuckoos prefer riparian habitats that include 3 hectares (7 acres) or more of closed canopy, with canopy heights of 5 to 30 meters (16.4 to 98.4 feet) and understory vegetation heights of 1 to 6 meters (3.28 to 19.7 feet) (Laymon and Halterman 1989). They are most commonly associated with cottonwood-willow dominated vegetation cover, but the dominant species can vary across the entire range of the western yellow-billed cuckoo. Willows and cottonwoods are the dominant species of cuckoo habitat in California (Halterman et al. 2015).

The Seasonal Reports in the journal *North American Birds* typically contain only reports of yellow-billed cuckoos observed away from known nesting localities, but often state whether or not the observed cuckoo was in an area of suitable breeding habitat. The online database, started in 2002 by the Cornell Lab of Ornithology and the National Audubon Society (eBird) is also contributing information regarding yellow-billed cuckoo distribution. Although there have been no recent confirmed breeding observations in the Southern California Coastal Region, there are multiple observations of yellow-billed cuckoos at some locations with suitable or potentially suitable breeding habitat, including the lower Santa Clara River in Ventura County, the Whittier Narrows area in Los Angeles County, Prado Basin in Riverside and San Bernardino Counties, San Joaquin Marsh in Orange County, and San Luis Rey River near Oceanside in San Diego County. These observations generally consist of single birds, but often occur at times that suggest summering individuals rather than migrants. This species is usually very difficult to see because it can remain motionless for long periods of time and typically stays within dense vegetation cover. It can also be difficult to hear as it calls intermittently on its breeding grounds and may be remain silent for long time periods.

SURVEY METHODS

The USFWS survey protocol for yellow-billed cuckoo requires a minimum of four surveys be conducted in three time periods that span the peak of breeding activity for the western populations of this species (Halterman et al. 2015). The survey protocol is designed to assess whether or not the yellow-billed cuckoo is present at a given site. The use of call-playback detects yellow-billed cuckoos that may otherwise be overlooked and has an 80 percent probability of detecting an individual yellow-billed cuckoo and 95 percent probability of detecting cuckoos present during the breeding season (Halterman et al. 2016). Survey Period 1 is from June 15 to June 30 and only one survey is required in this time period. Migrating yellow-billed cuckoos are passing through, but breeding birds are also arriving during this time period. Two surveys are required during Survey Period 2, which is from July 1 to July 31. Individual cuckoos encountered during this time period are mostly breeders, but are occasionally migrants, wandering individuals, or young of the year. Survey Period 3 is from August 1 to August 15 and only one survey is required in this time period. Most breeding yellow-billed cuckoos have finished breeding activities and are departing during this third survey time period.

BonTerra Psomas Senior Biologist Brian E. Daniels (USFWS Permit No. TE821401-5) and independent consulting biologist Sean P. Rowe (USFWS Permit No. TE64124A) conducted all surveys. Both Mr. Daniels and Mr. Rowe used compact speakers capable of broadcasting recorded bird calls in excess of 70 decibels. Per USFWS survey protocol for the species, the

recorded contact or "kowlp" calls[3] of yellow-billed cuckoo were played five times at one-minute intervals at each calling station (or point) established in the each Survey Area. Calling points were recorded on global positioning system (GPS)-capable devices for repeatability. Calling points were established approximately every 100 meters in riparian habitat that provided potentially suitable habitat for the yellow-billed cuckoo. No calling points were established in areas that lacked riparian habitats potentially suitable for the yellow-billed cuckoo. In particular, Survey Area 3 (Reach 39) and Survey Area 6 (Reach 44) lack the tree density in the riparian habitat that yellow-billed cuckoos require (see Attachments B-3, B-6a, and B-6b).

Occasional survey assistance was provided by BonTerra Psomas Biologists Lindsay Messett (USFWS Permit No. TE0607064-2), Jonathan Aguayo (USFWS Permit No. TE96514A-0), Jonathan Feenstra (USFWS Permit No. 128462-2), and Steve Morris. The surveys were conducted under optimal weather conditions and during the early morning hours when bird activity is at its peak. All bird species detected during the surveys were recorded, including all incidental observations of least Bell's vireo. Survey data are presented below in Table 2. Avian lists for each survey area are provided in Attachment D.

TABLE 2
YELLOW-BILLED CUCKOO SURVEY DATA

Survey Area	Survey No.	Surveying Biologists	Survey Date	Survey Conditions			
				Start/End Time	Temp (°F)	Cloud Cover (%)	Wind Speed (mph)
1	1	S. Rowe L. Messett	6/29/16	0600–1000	63–83	5–30	0–3
	2	B. Daniels J. Feenstra	7/17/16	0600–0945	61–77	Clear–Clear	0–3
	3	B. Daniels	7/29/16	0550–0910	72–81	Clear–Clear	0–3
	4	B. Daniels	8/10/16	0600–0915	61–70	Clear–5	0–4
2	1	B. Daniels L. Messett	6/22/16	0645–0930	68–81	100–Clear	1–5
	2	B. Daniels	7/5/16	0610–0845	66–70	100–Clear	0–5
	3	B. Daniels	7/19/16	0600–0845	66–72	5–Clear	1–6
	4	B. Daniels J. Feenstra	8/1/16	0600–0915	71–79	5–25	1–5
3	1	B. Daniels	6/29/16	0545–0730	70–72	5–Clear	0–0
	2	B. Daniels	7/18/16	0615–0815	62–69	Clear–Clear	0–0
	3	B. Daniels	7/30/16	0600–0715	71–74	5–10	0–1
	4	B. Daniels	8/12/16	0600–0715	64–66	5–5	0–2
4	1	B. Daniels	6/28/16	0615–0950	70–91	60–40	0–5
	2	B. Daniels	7/16/16	0545–0950	66–75	100–40	0–4
	3	B. Daniels	7/28/16	0545–1000	72–82	Clear–Clear	0–3
	4	B. Daniels	8/9/16	0550–0945	65–72	100–100	0–6

[3] The recorded calls were acquired by attendance at a USFWS sponsored conference for the yellow-billed cuckoo.

TABLE 2
YELLOW-BILLED CUCKOO SURVEY DATA

Survey Area	Survey No.	Surveying Biologists	Survey Date	Survey Conditions			
				Start/End Time	Temp (°F)	Cloud Cover (%)	Wind Speed (mph)
5	1	S. Rowe L. Messett	6/28/16	0605–1020	70–93	75–80	0–0
	2	B. Daniels J. Feenstra	7/10/16	0605–0945	66–75	5–Clear	0–4
	3	B. Daniels S. Morris	7/22/16	0545–0930	68–82	Clear–Clear	2–4
	4	B. Daniels	8/3/16	0600–0950	68–89	80–5	2–6
6	1	B. Daniels	6/29/16	0830–1100	75–81	Clear–Clear	0–0
	2	B. Daniels	7/18/16	0900–1115	70–78	Clear–Clear	2–6
	3	B. Daniels	7/30/16	0740–0945	74–79	20–10	3–5
	4	B. Daniels	8/12/16	0745–1000	67–73	Trace–10	4–6
7	1	S. Rowe L. Messett	6/23/16	0617–1120	60–89	Clear–Clear	0–5
	2	B. Daniels J. Feenstra	7/7/16	0610–1035	59–80	Clear–Clear	0–4
	3	B. Daniels	7/20/16	0610–1115	64–92	Clear–Clear	0–5
	4	B. Daniels J. Feenstra	8/2/16	0600–1030	66–82	Clear–Clear	0–4
8	1	B. Daniels S. Morris	6/23/16	0615–1100	60–89	Clear–Clear	0–5
	2	B. Daniels	7/11/16	0600–1050	61–84	Clear–Clear	0–4
	3	B. Daniels J. Feenstra	7/24/16	0600–1100	64–91	Clear–Clear	2–3
	4	B. Daniels	8/6/16	0615–1100	61–83	Clear–Clear	0–0
9	1	S. Rowe L. Messett	6/24/16	0620–1025	67–85	Clear–Clear	0–7
	2	B. Daniels	7/12/16	0640–1050	59–84	Clear–Clear	0–6
	3	B. Daniels	7/26/16	0615–1015	71–91	5–Clear	0–5
	4	B. Daniels	8/8/16	0615–1000	57–75	Clear–Clear	0–5

°F: degrees Fahrenheit; mph: miles per hour

SURVEY RESULTS

One yellow-billed cuckoo was heard and seen on June 22, 2016, in Wilmington Drain (Reach 27 of Survey Area 2; see Attachment B-2). This bird responded to recorded “kowlp” calls at Calling Point No. 9, which was the last calling station of the morning. After the second of five recorded “kowlp” calls, we heard a few distant “kek” notes downstream—we commented in hushed tones that it could be a cuckoo, but we were not sure. The third of five recorded “kowlp” calls then played and received an immediate “kowlp” in response from the willow tree behind us. We were not able to see the cuckoo in the willow, but within seconds we saw it leave the backside of the tree and fly downstream toward where we had heard the distant “kek” notes. Playback of “kowlp” calls ended with the third of five “kowlp” calls on the recording. We continued to listen and search for the cuckoo for the next hour until 0930, but without success. Per terms of Mr. Daniels’s Federal Endangered Species Act (FESA) recovery permit, this observation was reported to the

appropriate U.S. Fish and Wildlife Office within 24 hours of its occurrence (see Attachment E). Also, the Yellow-Billed Cuckoo Summary and Site Description forms are provided as Attachment F.

Survey Area 1

The May Channel (Reach 14) Main Channel Outlet into Pacoima Wash is 588 feet in length and contains an area of 0.63 acre. Willow riparian woodland is present along its length and in the two side outlets on the opposite side of Pacoima Wash. These three small side drainages, however, provide less than two acres of riparian woodland and not nearly enough to support breeding habitat for the yellow-billed cuckoo. As a result, the survey area was extended downstream across Harding Street to include the riparian woodland in the Lopez Debris Basin. The survey area is approximately 80 acres in size, but contains only about 10 acres of riparian woodland.

No yellow-billed cuckoos were detected during these surveys. The southwestern flycatcher was not present, but the least Bell's vireo was recorded during the surveys of Survey Area 1. These data points are presented on Attachment B-1.

Survey Area 2

The June 22, 2016, cuckoo observed at Wilmington Drain (Reach 27) was observed during a time period in which migrants occur in the region. Wilmington Drain and the adjacent Ken Malloy Regional Park (KMRP) are well-known "migrant traps", and this individual cuckoo was most likely a migrant. For the 2016 season, the survey area was confined to the limits of Reach 27 (3,045 feet long; 7.87 acres) because of the ongoing construction and restoration of KMRP.[4] In future years, the yellow-billed cuckoo survey area for Reach 27 will include the more extensive riparian woodlands south of Pacific Coast Highway in KMRP. The addition of the "north-end" willows of KMRP expands the survey area to about 50 acres, which is expected to include at least 25 or 30 acres of riparian woodland.

Although observed in previous seasons in Wilmington Drain, the least Bell's vireo was not recorded there during these surveys. The southwestern willow flycatcher was also not detected during these surveys at Reach 27.

Survey Area 3

The Beatty Channel Outlet (Reach 39) is located on the east bank of the San Gabriel River upstream of the I-210 Freeway. This small outlet is 406 feet in length and contains an area of 0.26 acre. This stretch is dominated by alluvial sage scrub vegetation with individual or isolated patches of willows. Previous surveys in this stretch of the river have observed least Bell's vireo and the coastal California gnatcatcher (*Polioptila californica californica*). Most of the willow patches have been occupied by homeless. In recent years, the combination of fires and the ongoing drought have negatively affected the habitats in the river, especially the willow clumps. Survey Area 3 for Reach 39 is approximately 50 acres and contains less than 1 acre of riparian woodland.

[4] The construction phase of the Proposition "O" Restoration project for Wilmington Drain (Reach 27) and Ken Malloy Regional Park (also known as Machado Lake) was completed in 2015 for Wilmington Drain and started in 2014 for Machado Lake.

No yellow-billed cuckoos were detected during these surveys. In addition, the southwestern willow flycatcher and least Bell's vireo were not recorded during these surveys in Survey Area 3.

Survey Area 4

Reach 40b is an approximately 2.25-mile stretch of the San Gabriel River between the I-10 and I-60 Freeways. The upper segment lacks riparian woodland, so only the lower segment at the confluence with San Jose Creek was included in Survey Area 4. This survey area was extended downstream of San Jose Creek to include more riparian woodland habitat that is not part of Reach 40b. Although Survey Area 4 contains about 120 acres, the extent of riparian woodland is limited due to permitted maintenance activities performed annually by the LACFCD. About 12 acres of riparian woodland is present in Survey Area 4.

No yellow-billed cuckoos were detected during these surveys. The southwestern flycatcher was not present, but the least Bell's vireo was recorded during the surveys of Survey Area 4. These data points are presented on Attachment B-4.

Survey Area 5

San Gabriel River Reaches 43a, and 43b are approximately 1.25 miles in length downstream of Whittier Narrows Dam and contain about 75 acres. Reach 43a has an irregular shape and contains more protected vegetation than most flood-control channels managed by the LACFCD. Reach 43b has a more standard shape (i.e., constant width) and maintenance plan (i.e., the trees are trimmed up from the ground). Survey Area 5 does not extend beyond the limits of Reaches 43a and 43b, and contains about 30 acres of riparian woodland.

No yellow-billed cuckoos were detected during these surveys. The southwestern flycatcher was not present, but the least Bell's vireo was recorded during the surveys of Survey Area 5. These data points are presented on Attachment B-5.

Survey Area 6

San Gabriel River Reach 44 is approximately 6 miles in length and contains about 175 acres. However, riparian woodland is found in Reach 44 at only three widely separated areas. The largest area consists a 0.6-mile-long linear row of willows. These and all other willow trees in Reach 44 are trimmed up to head height from the ground. In total, these three willow patches are less than one acre.

No yellow-billed cuckoos were detected during these surveys. In addition, the southwestern willow flycatcher and least Bell's vireo were not recorded during these surveys of Survey Area 6.

Survey Area 7

Survey Area 7 includes LACFCD's Reaches 71, 79, 80, and 103. These four soft-bottom channel reaches are adjacent to an open space area that consists of the Santa Clara River, South Fork Santa Clara River, and Bouquet Canyon Channel. Reaches 71 and 80 are two contiguous segments of the concrete bank that forms the south side of the Santa Clara River and the South Fork of the Santa Clara River from McBean Parkway upstream to near Valencia Boulevard. Reach 79 consists of the stabilizer that is immediately downstream of Valencia Boulevard. Reach 103 is the lower segment of Bouquet Canyon Road from Newhall Ranch Road to the confluence of Bouquet Canyon and the Santa Clara River. All together, these four flood-control facilities contain

about 18 acres. Survey Area 7 for these 4 reaches totals approximately 195 acres and includes about 50 acres of riparian woodland.

No yellow-billed cuckoos were detected during these surveys. The southwestern flycatcher was not present, but the least Bell's vireo was recorded during the surveys of Survey Area 7. These data points are presented on Attachment B-7.

Survey Area 8

Survey Area 8 includes LACFCD's Reaches 82 and 109. These two soft-bottom channel reaches are adjacent to an open space area that consists of the Santa Clara River and San Francisquito Wash. Reach 82 is the concrete bank on the downstream side of the confluence of San Francisquito Wash and the Santa Clara River. Reach 109 is a transfer drain outlet on the south bank of the Santa Clara River just downstream of McBean Parkway. Together, these two facilities contain about ten acres. Survey Area 8 for these 2 reaches totals approximately 140 acres and includes about 80 acres of riparian woodland. Unfortunately, the ongoing drought has negatively affected much of the woodland habitat in Survey Area 8.

No yellow-billed cuckoos were detected during these surveys. In addition, the southwestern willow flycatcher and least Bell's vireo were not recorded during these surveys of Survey Area 8.

Survey Area 9

Survey Area 9 includes LACFCD's Reaches 87, 97 and 104. These three soft-bottom channel reaches are adjacent to an open space area of Castaic Creek. Reach 87 is a small outlet from The Old Road next to the I-5 Freeway. Reach 97 is the concrete bank that extends downstream from Reach 87. Reach 104 is downstream from Reaches 87 and 97 and a reinforced riprap bank on the east side of the creek. Together, these 3 facilities contain about 40 acres. Survey Area 9 for these 3 reaches totals approximately 185 acres and includes about 40 acres of riparian woodland. Unfortunately, the ongoing drought has negatively affected much of the woodland habitat in Survey Area 9.

No yellow-billed cuckoos were detected during these surveys. In addition, the southwestern willow flycatcher and least Bell's vireo were not recorded during these surveys of Survey Area 9.

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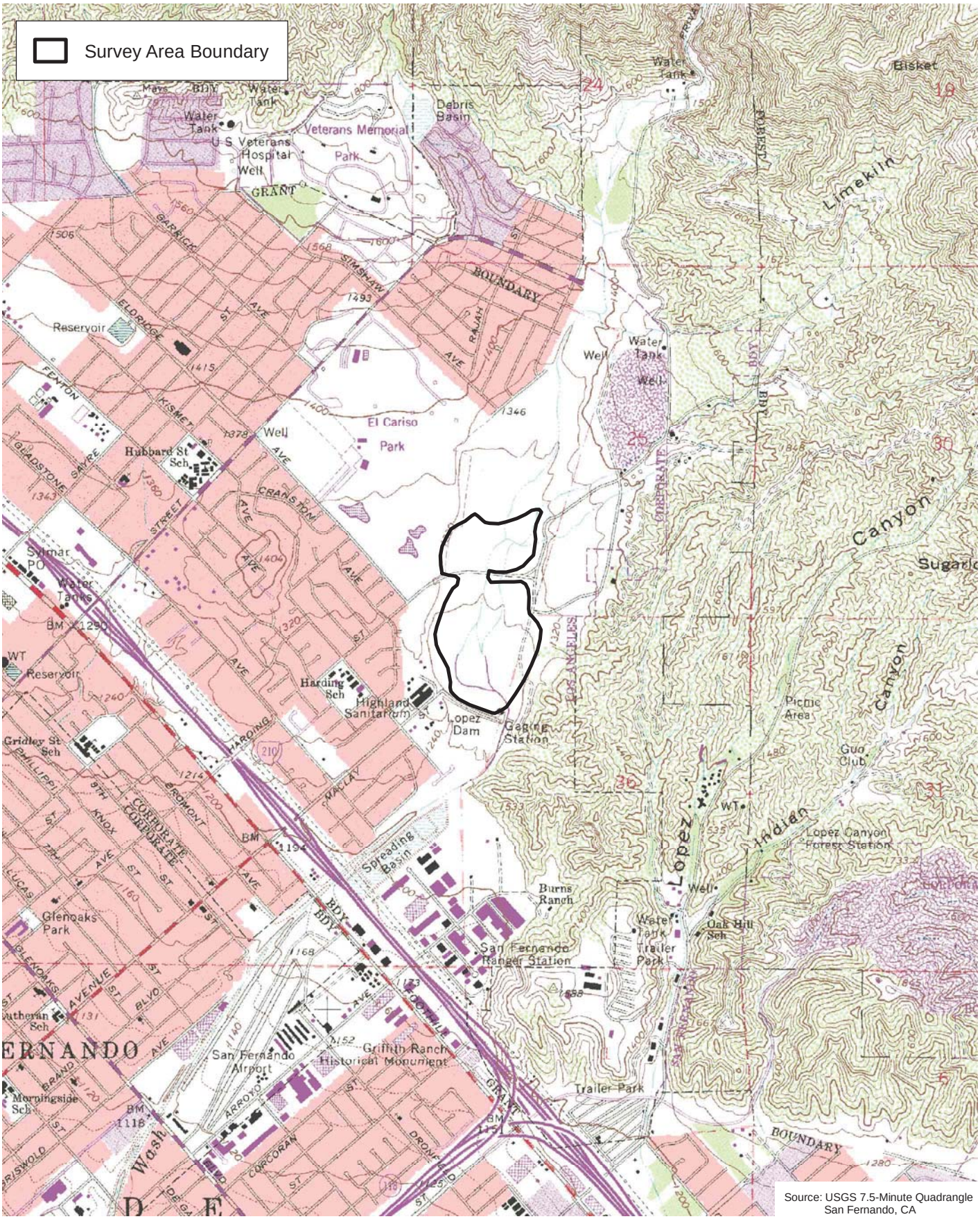
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ATTACHMENT A

SURVEY AREA USGS MAPS



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Survey Area 1 – Soft-Bottom Channel Reach 14

Attachment A-1

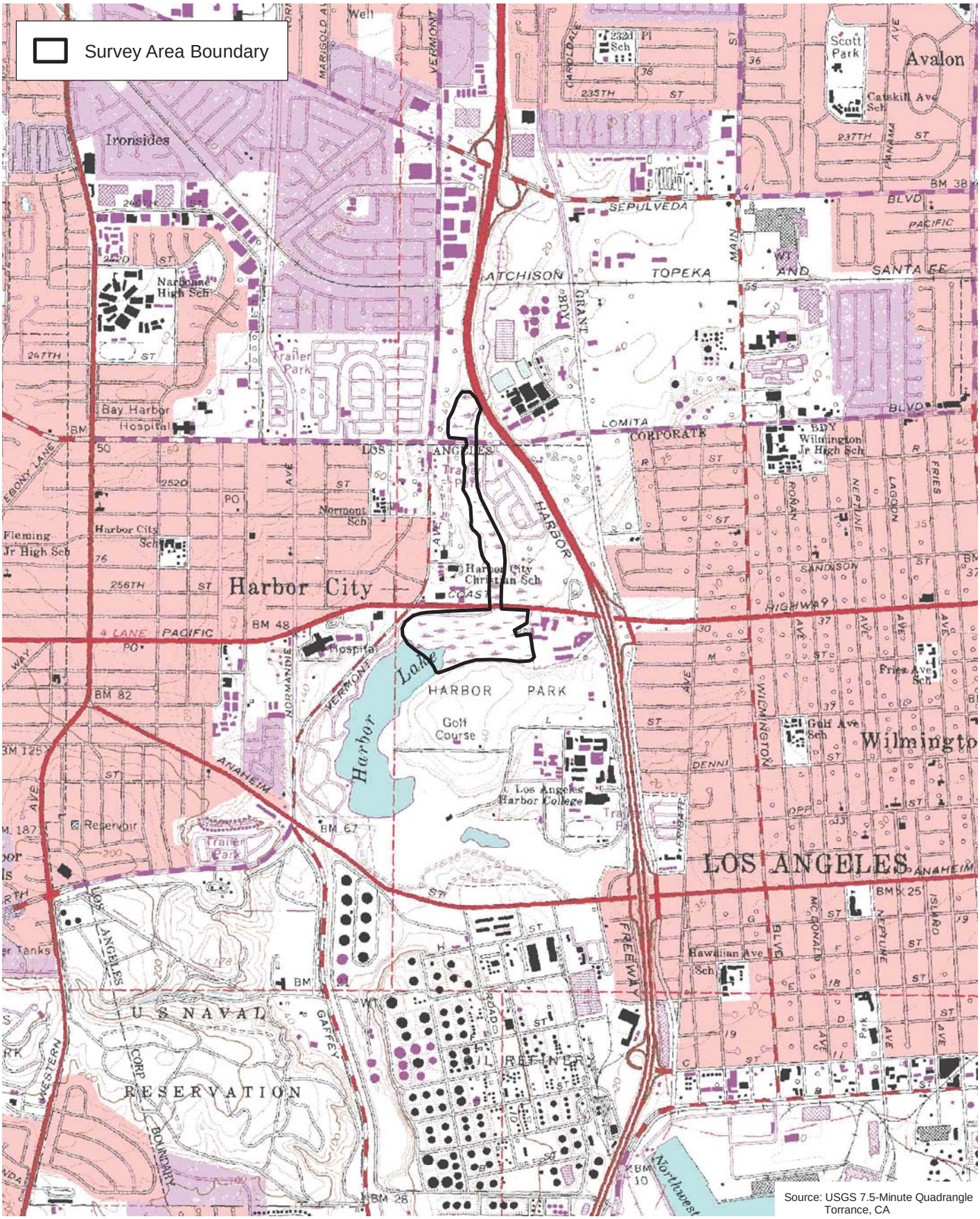
2016 Focused Survey Results for Yellow-Billed Cuckoo

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Survey Area 2 – Soft-Bottom Channel Reach 27

Attachment A-2

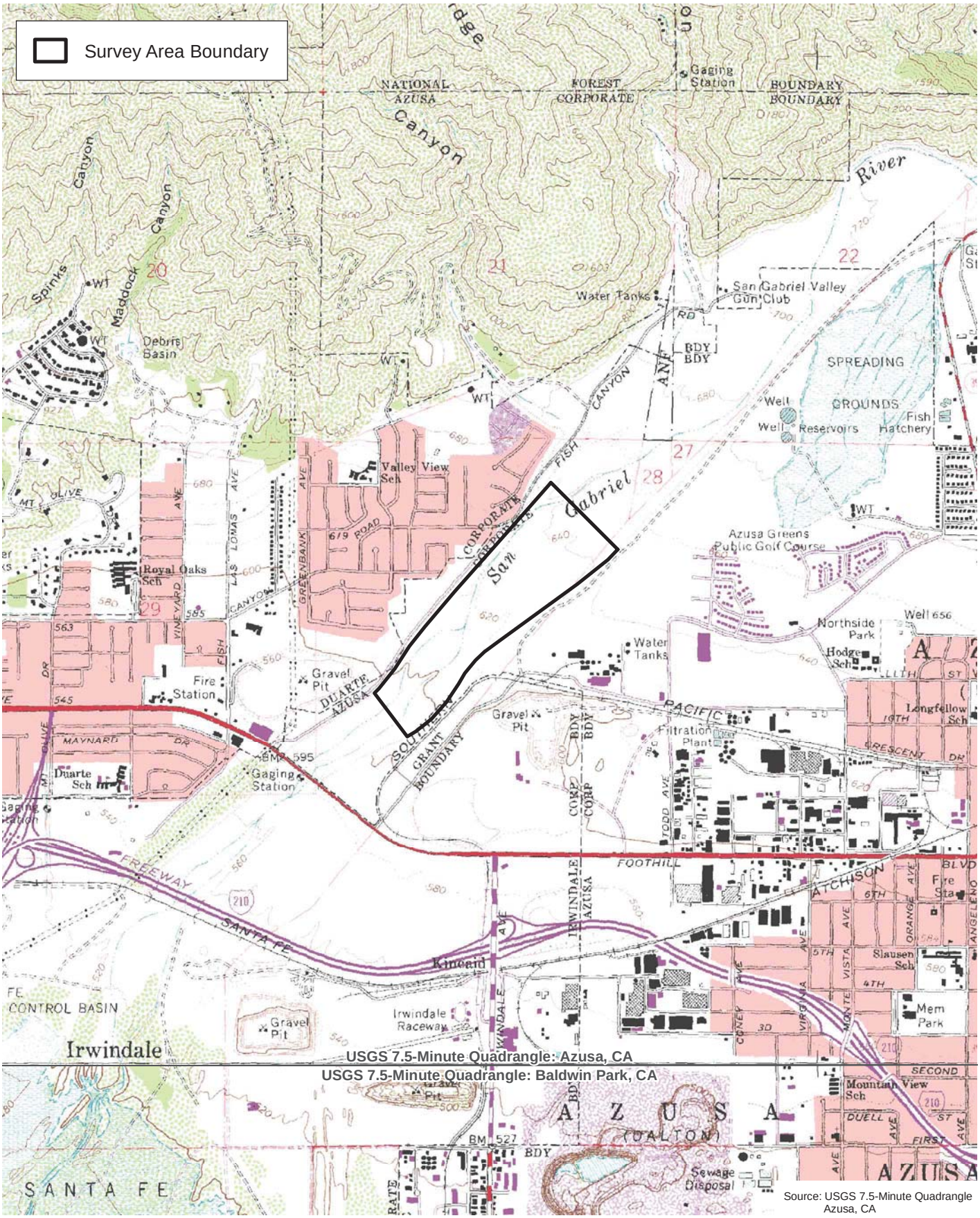
2016 Focused Survey Results for Yellow-Billed Cuckoo

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Source: USGS 7.5-Minute Quadrangle Azusa, CA

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Survey Area 3 – Soft-Bottom Channel Reach 39

Attachment A-3

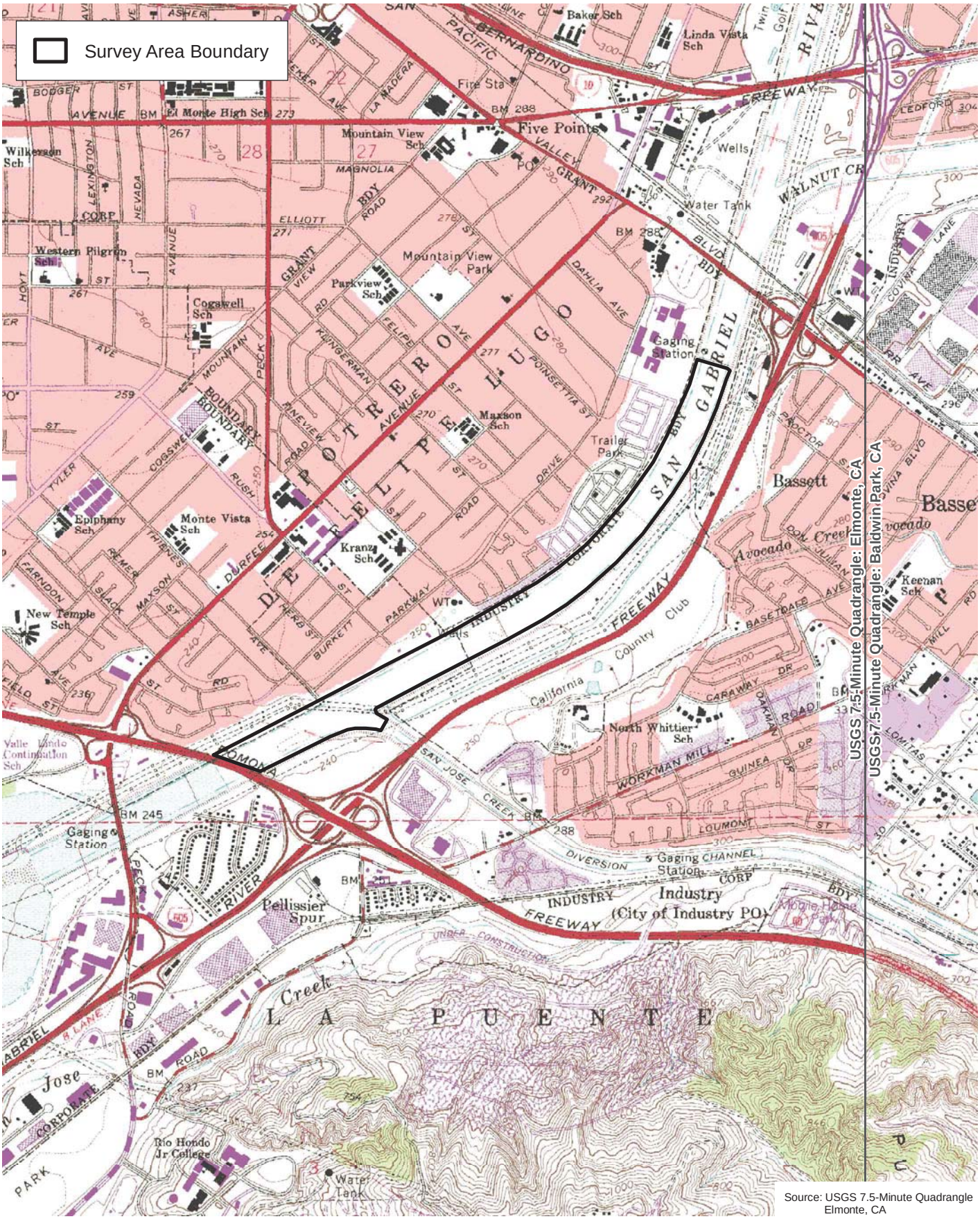
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Survey Area 4 – Soft-Bottom Channel Reach 40b

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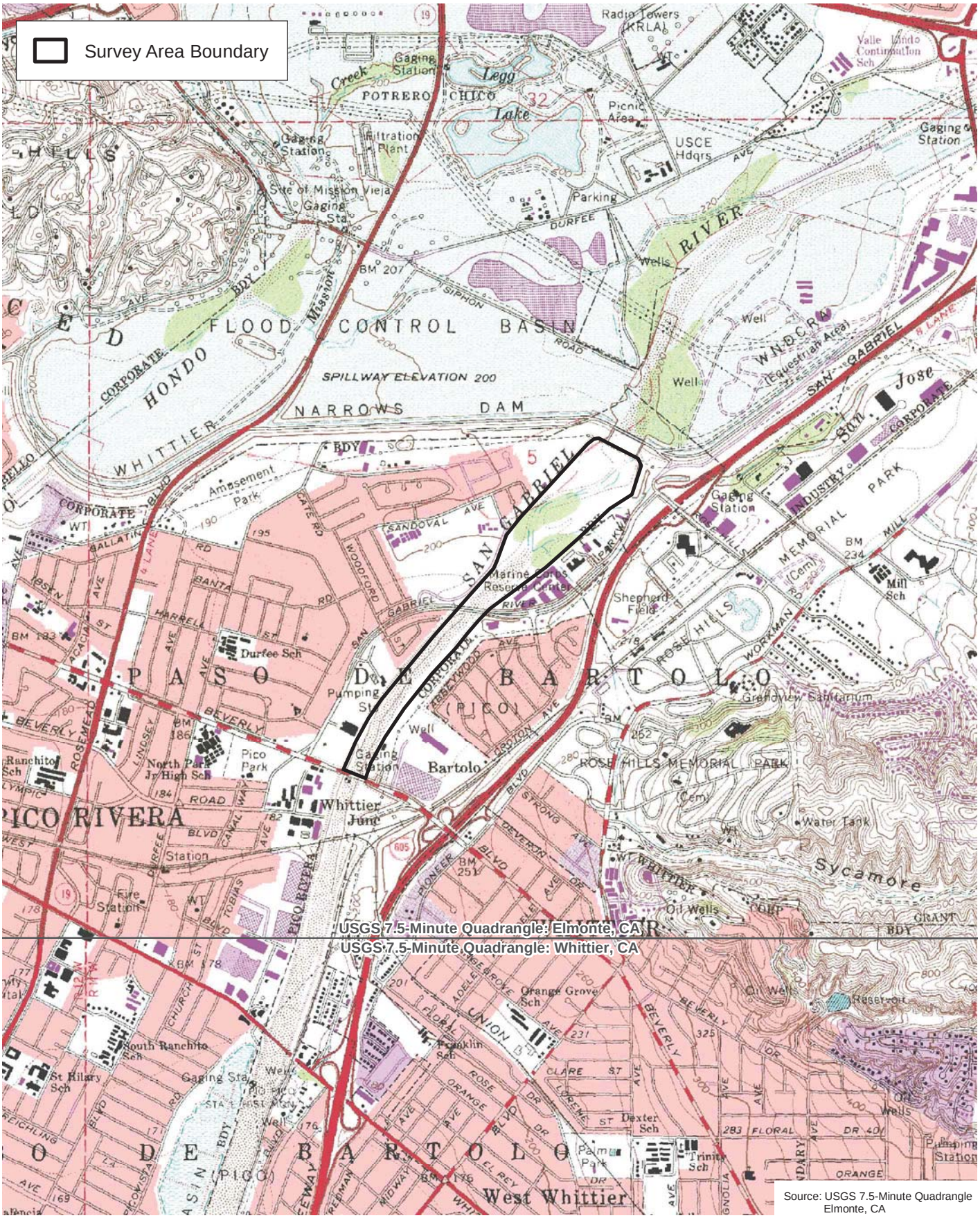
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Survey Area 5 – Soft-Bottom Channel Reach 43a and 43b

Attachment A-5

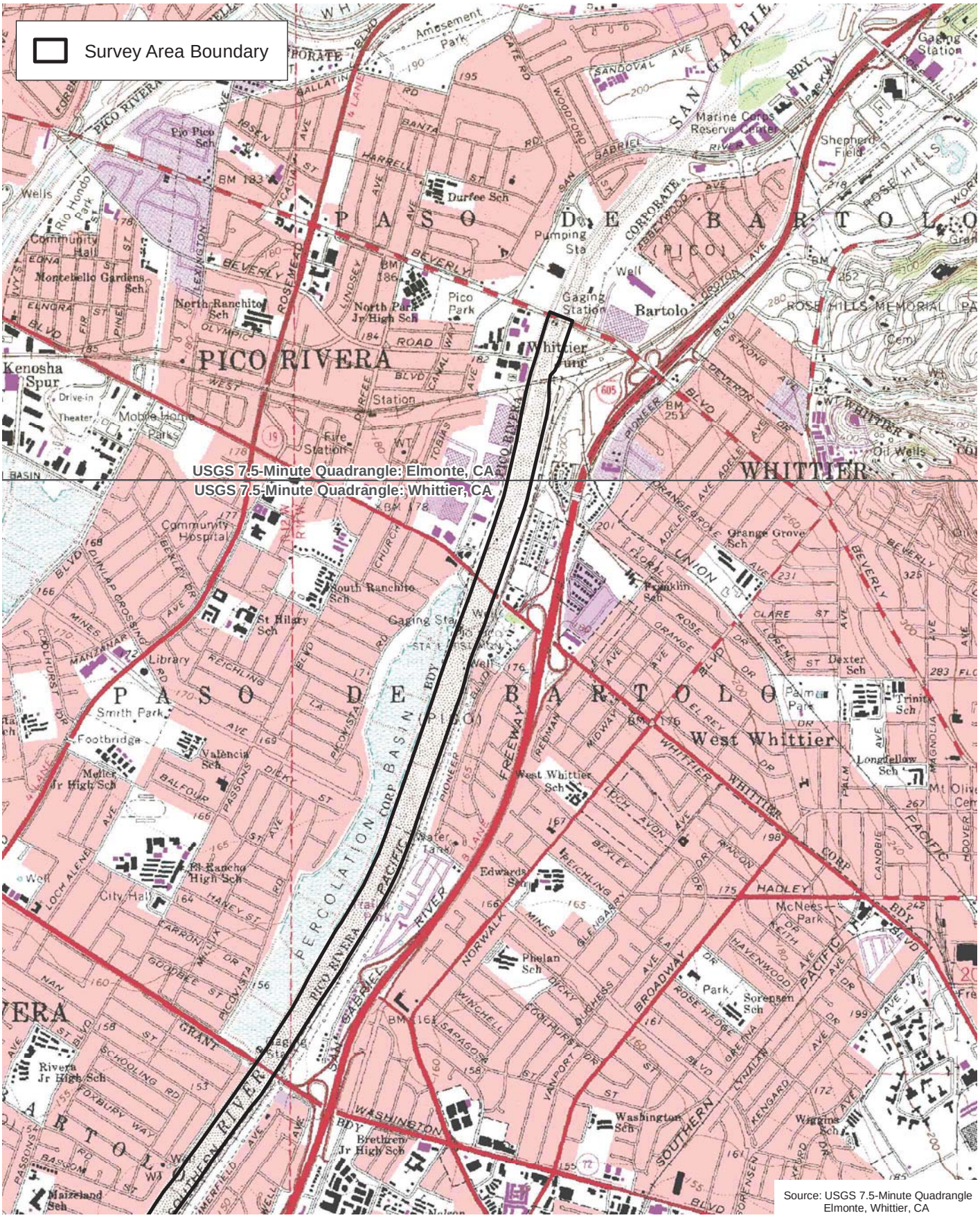
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Survey Area 6 – Soft-Bottom Channel Reach 44

Attachment A-6a

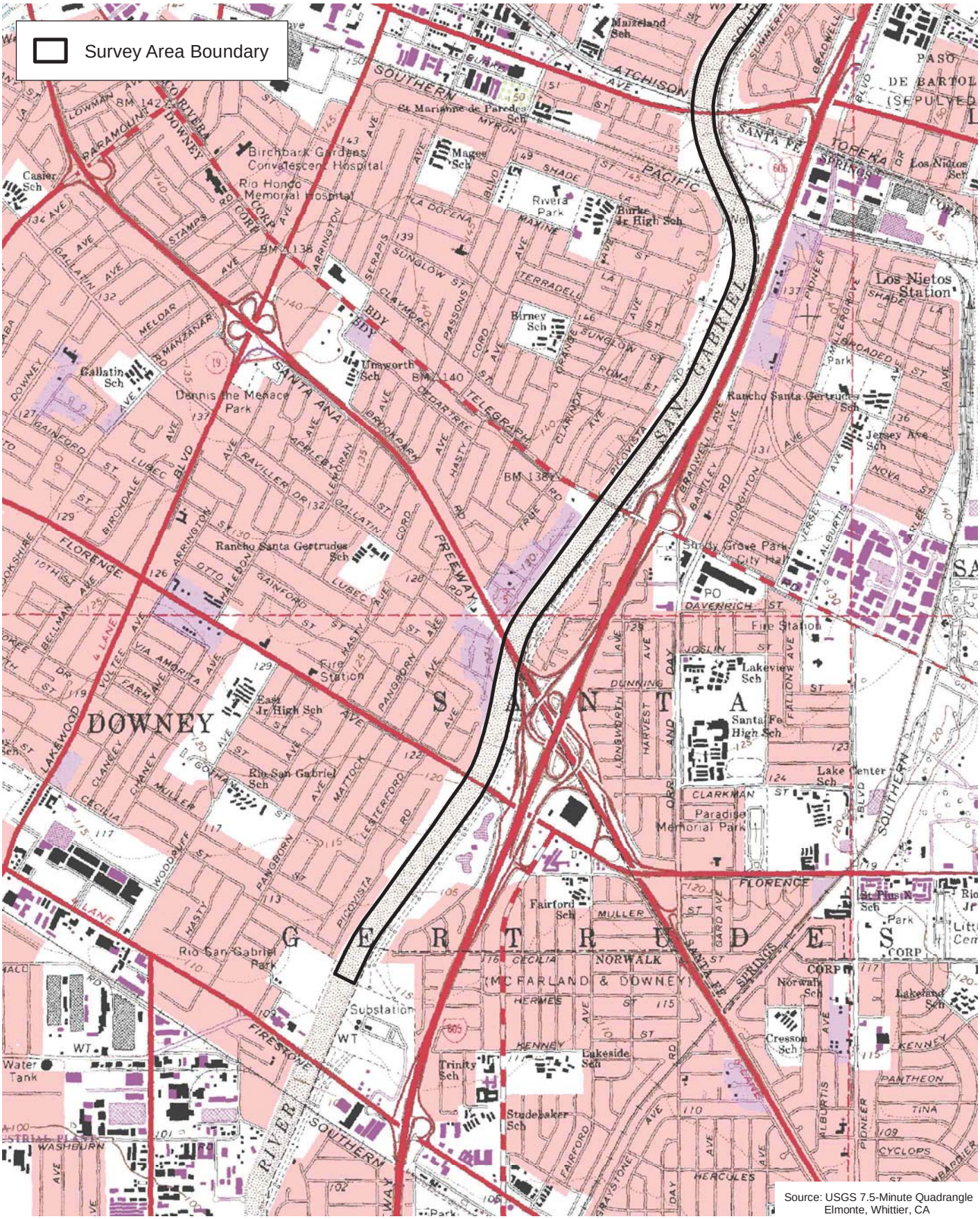
2016 Focused Survey Results for Yellow-Billed Cuckoo

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Survey Area 6 – Soft-Bottom Channel Reach 44

Attachment A-6b

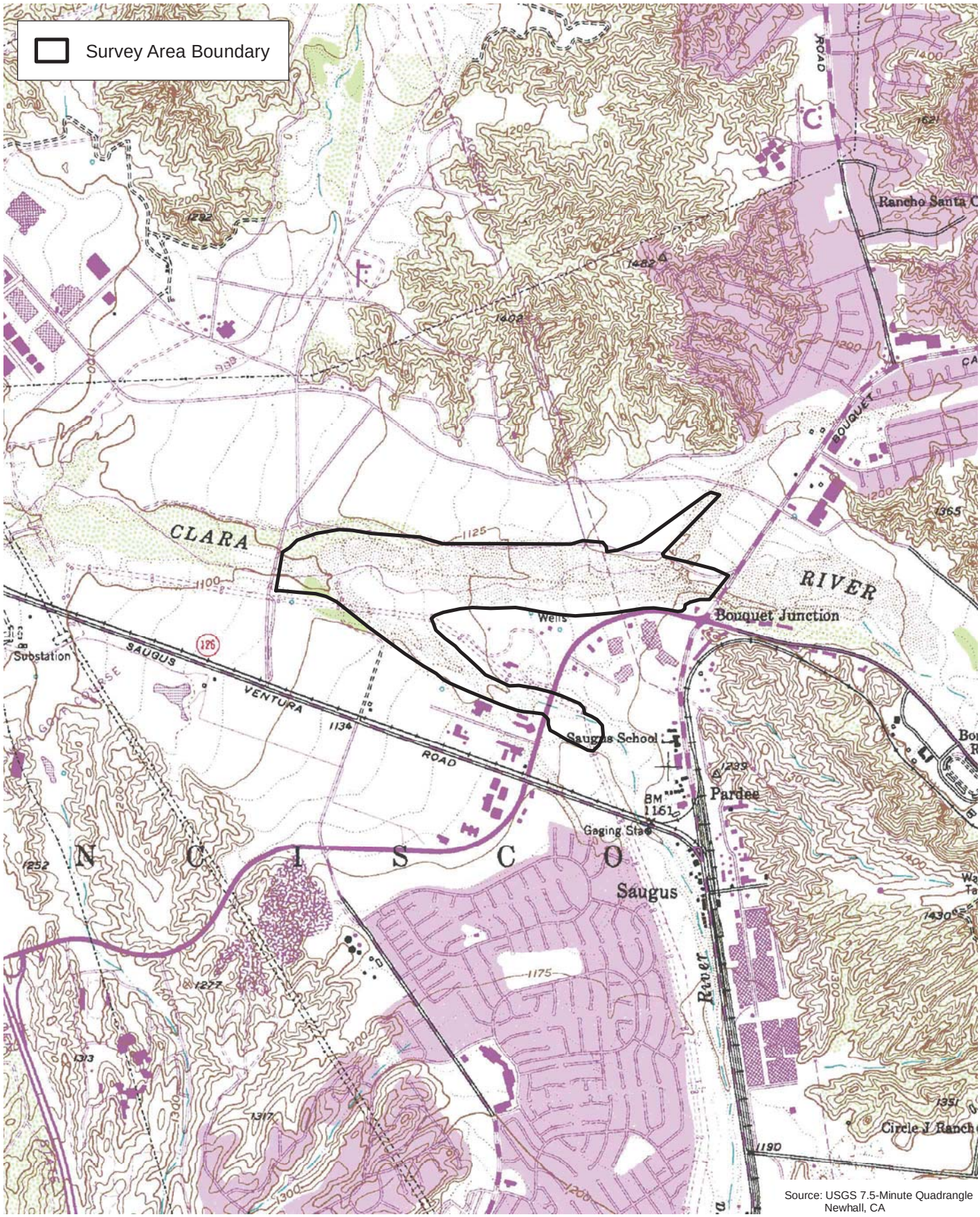
2016 Focused Survey Results for Yellow-Billed Cuckoo

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Source: USGS 7.5-Minute Quadrangle
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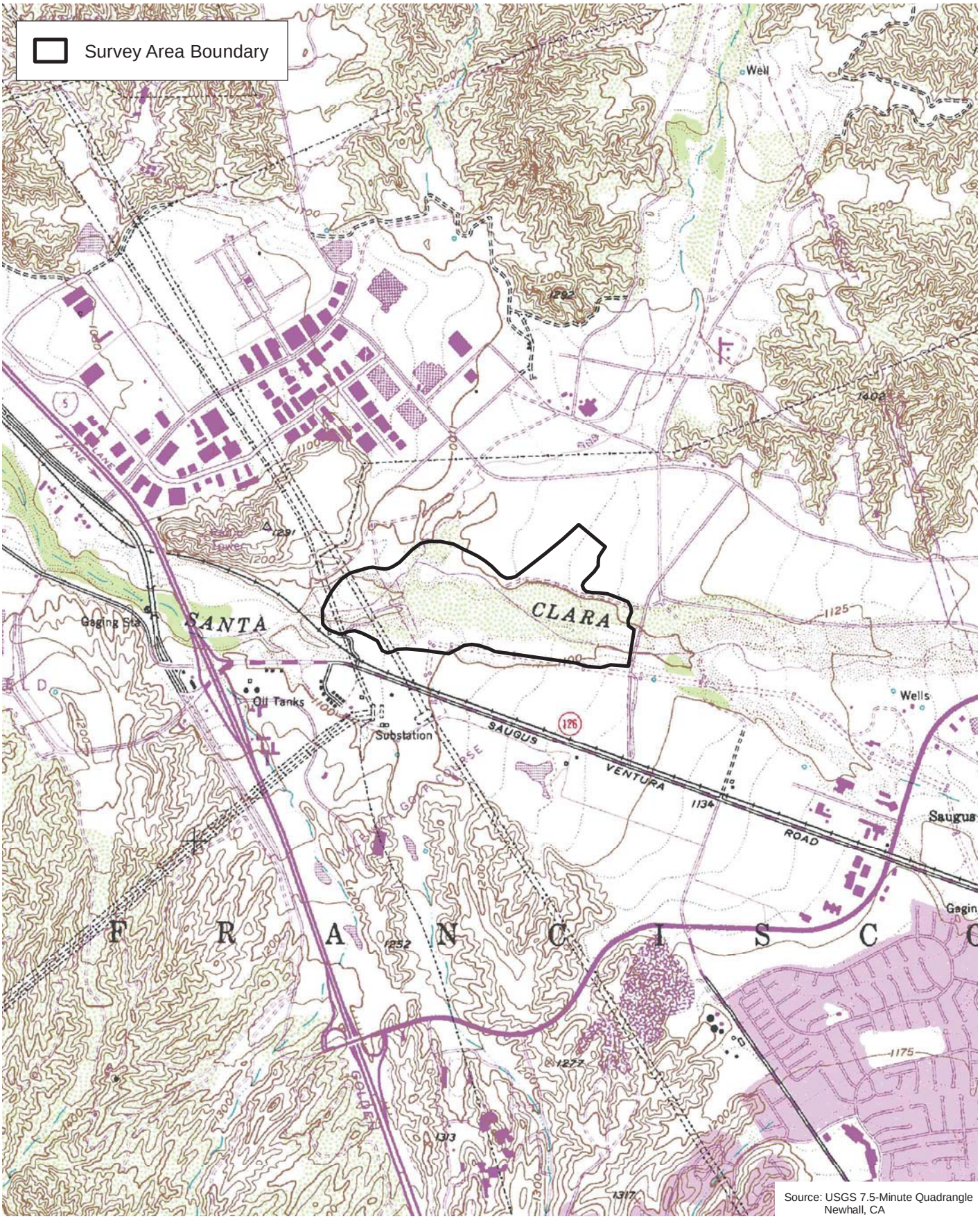
Survey Area 7 – Soft-Bottom Channel Reaches 71, 79, 80, and 103 Attachment A-7

2016 Focused Survey Results for Yellow-Billed Cuckoo

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Survey Area 8 – Soft-Bottom Channel Reaches 82 and 109

Attachment A-8

2016 Focused Survey Results for Yellow-Billed Cuckoo

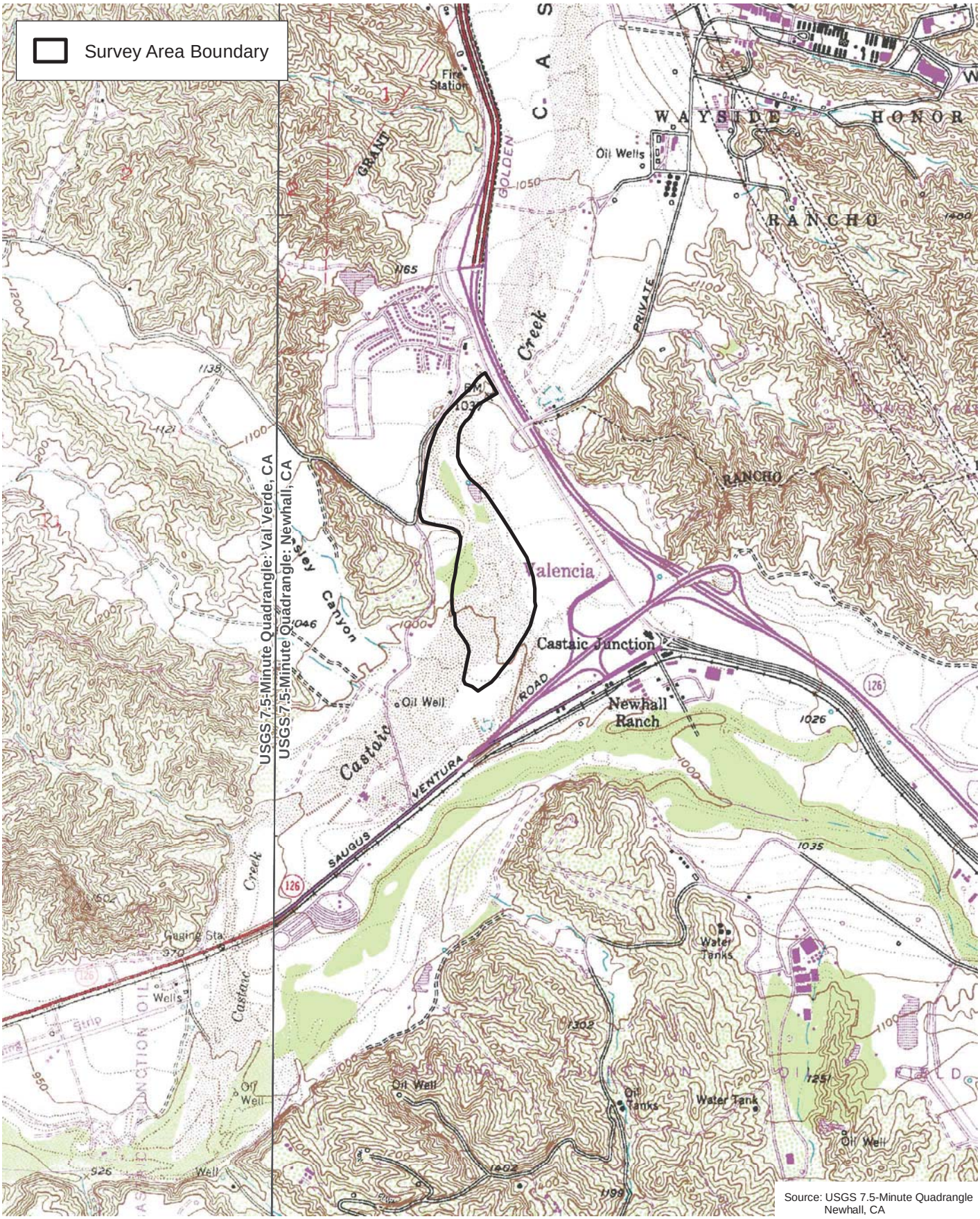
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Source: USGS 7.5-Minute Quadrangle Newhall, CA

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Survey Area 9 – Soft-Bottom Channel Reaches 87, 97, and 104

Attachment A-9

2016 Focused Survey Results for Yellow-Billed Cuckoo

N W E S

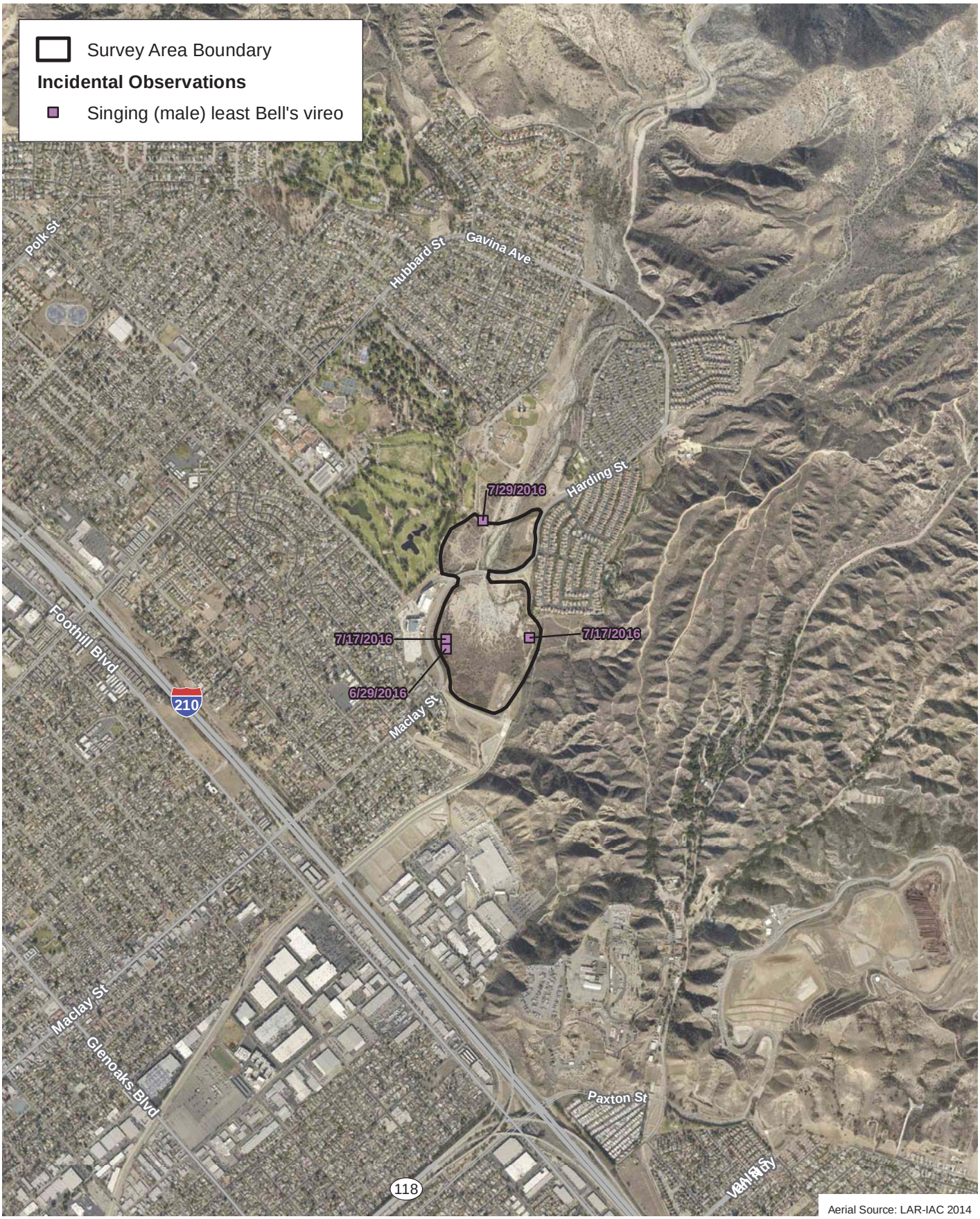
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ATTACHMENT B

SURVEY AREA AERIAL MAPS



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Survey Area 1 — Soft-Bottom Channel Reach 14

Attachment B-1

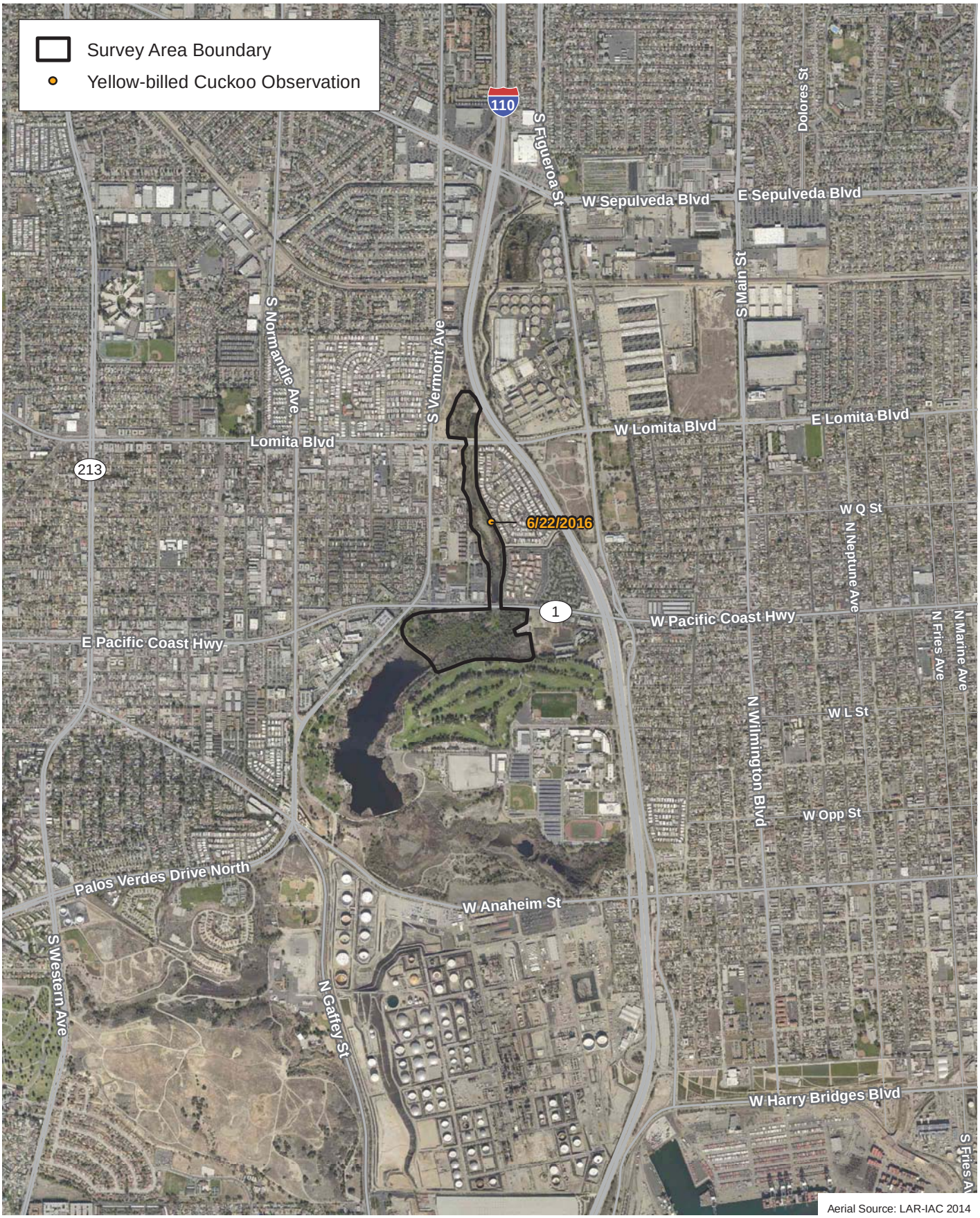
2016 Focused Survey Results for Yellow-Billed Cuckoo

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Aerial Source: LAR-IAC 2014

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Survey Area 2 — Soft-Bottom Channel Reach 27

Attachment B-2

2016 Focused Survey Results for Yellow-Billed Cuckoo

N W E S

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PSOMAS

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Survey Area 3 — Soft-Bottom Channel Reach 39

Attachment B-3

2016 Focused Survey Results for Yellow-Billed Cuckoo

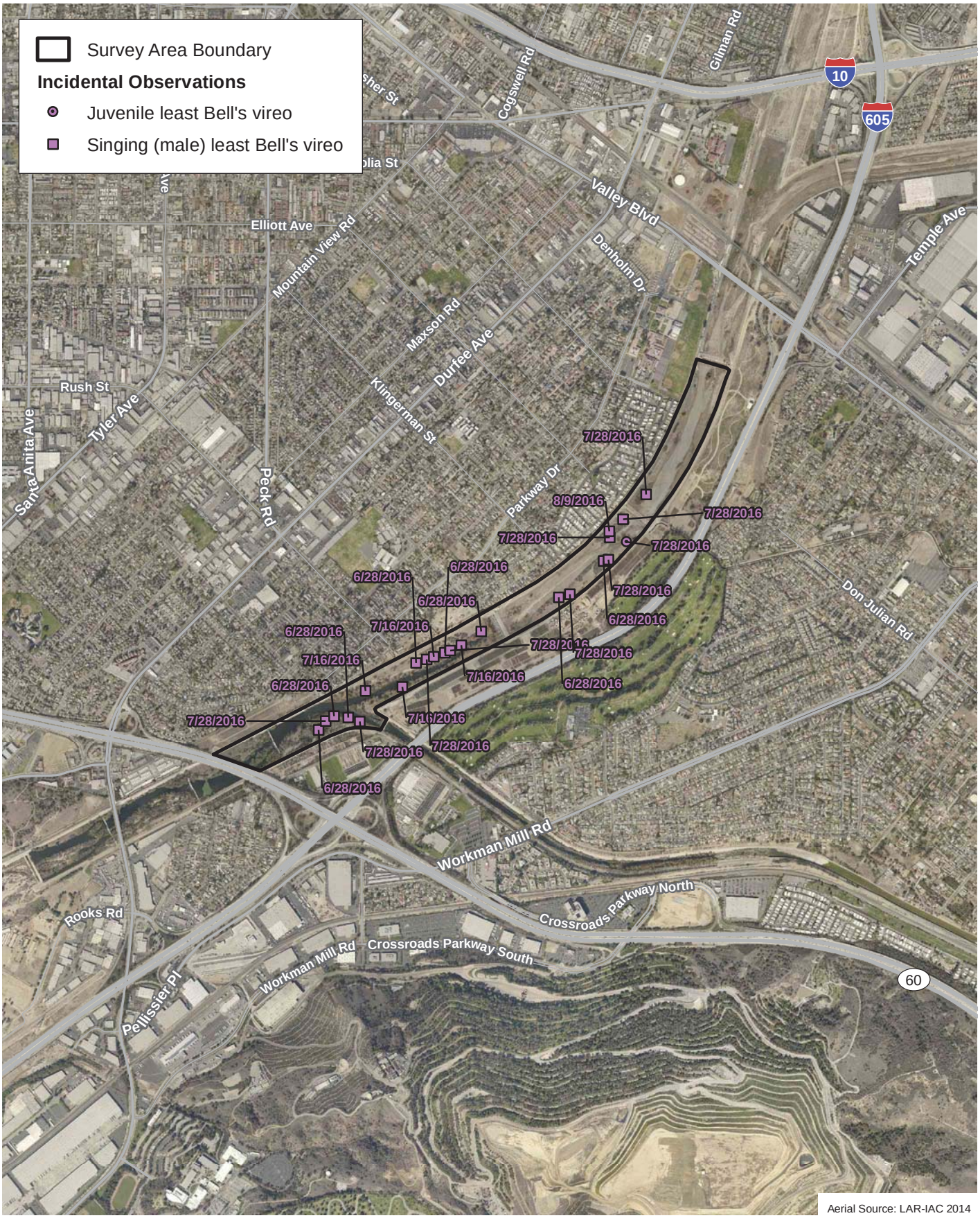
N
W E
S

2,000 1,000 0 2,000

Feet

PSOMAS

(Rev: 10/06/2016 CJS) R:\Projects\CoLADPW (DPW)\J295\Graphics\Cuckoo_Report\ExB_LV_Aerial_20161005.pdf



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Survey Area 4 — Soft-Bottom Channel Reach 40b

Attachment B-4

2016 Focused Survey Results for Yellow-Billed Cuckoo

N W E S

2,000 1,000 0 2,000 Feet

PSOMAS

(Rev: 10/06/2016 CJS) R:\Projects\CoLADPW (DPW)\J295\Graphics\Cuckoo_Report\ExB_LV_Aerial_20161005.pdf



Aerial Source: LAR-IAC 2014

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Survey Area 5 — Soft-Bottom Channel Reach 43a and 43b

Attachment B-5

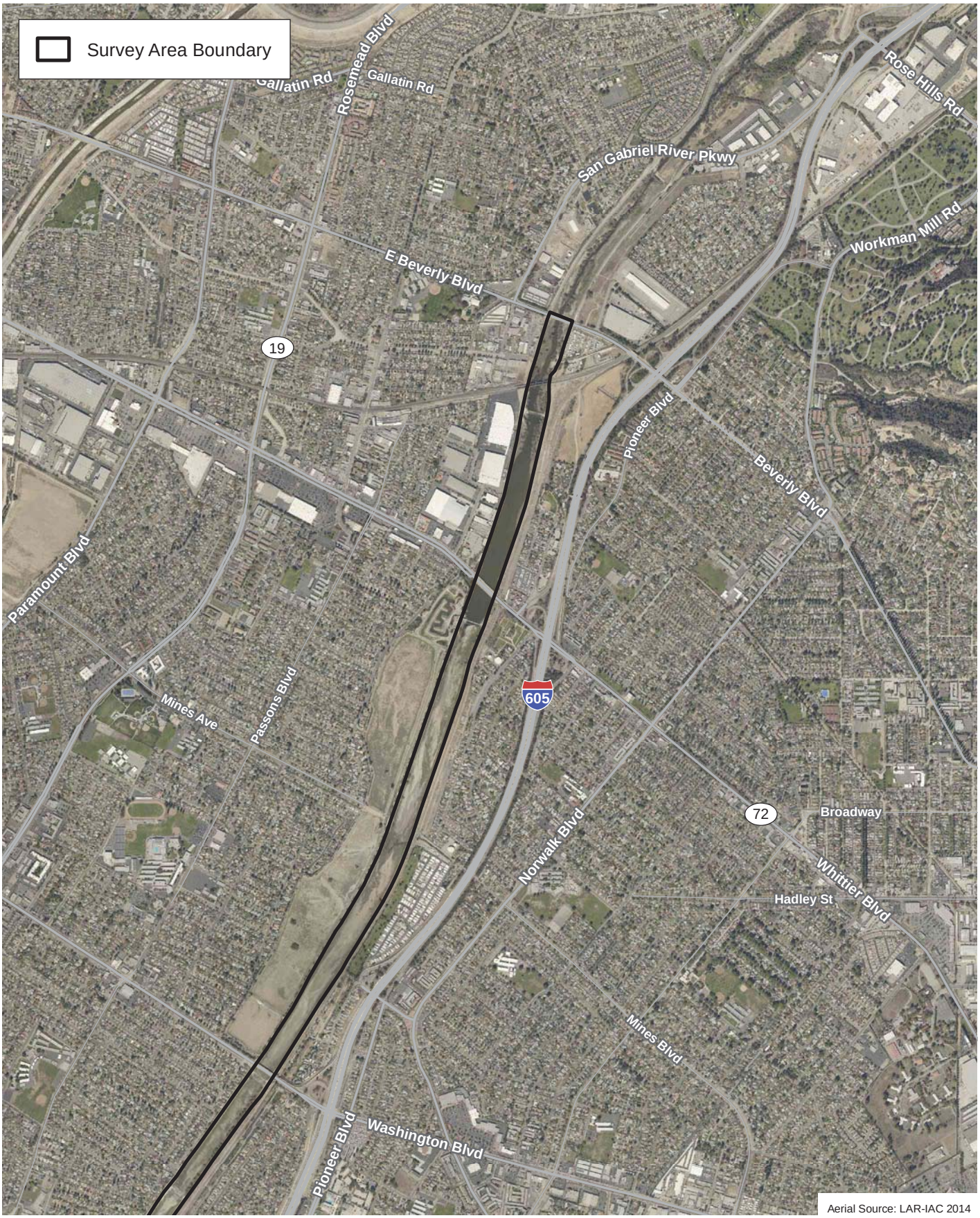
2016 Focused Survey Results for Yellow-Billed Cuckoo

N W E S

2,000 1,000 0 2,000 Feet

PSOMAS

(Rev: 10/06/2016 CJS) R:\Projects\CoLADPW (DPW)\J295\Graphics\Cuckoo_Report\ExB_LV_Aerial_20161005.pdf



Aerial Source: LAR-IAC 2014

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Survey Area 6 — Soft-Bottom Channel Reach 44

Attachment B-6a

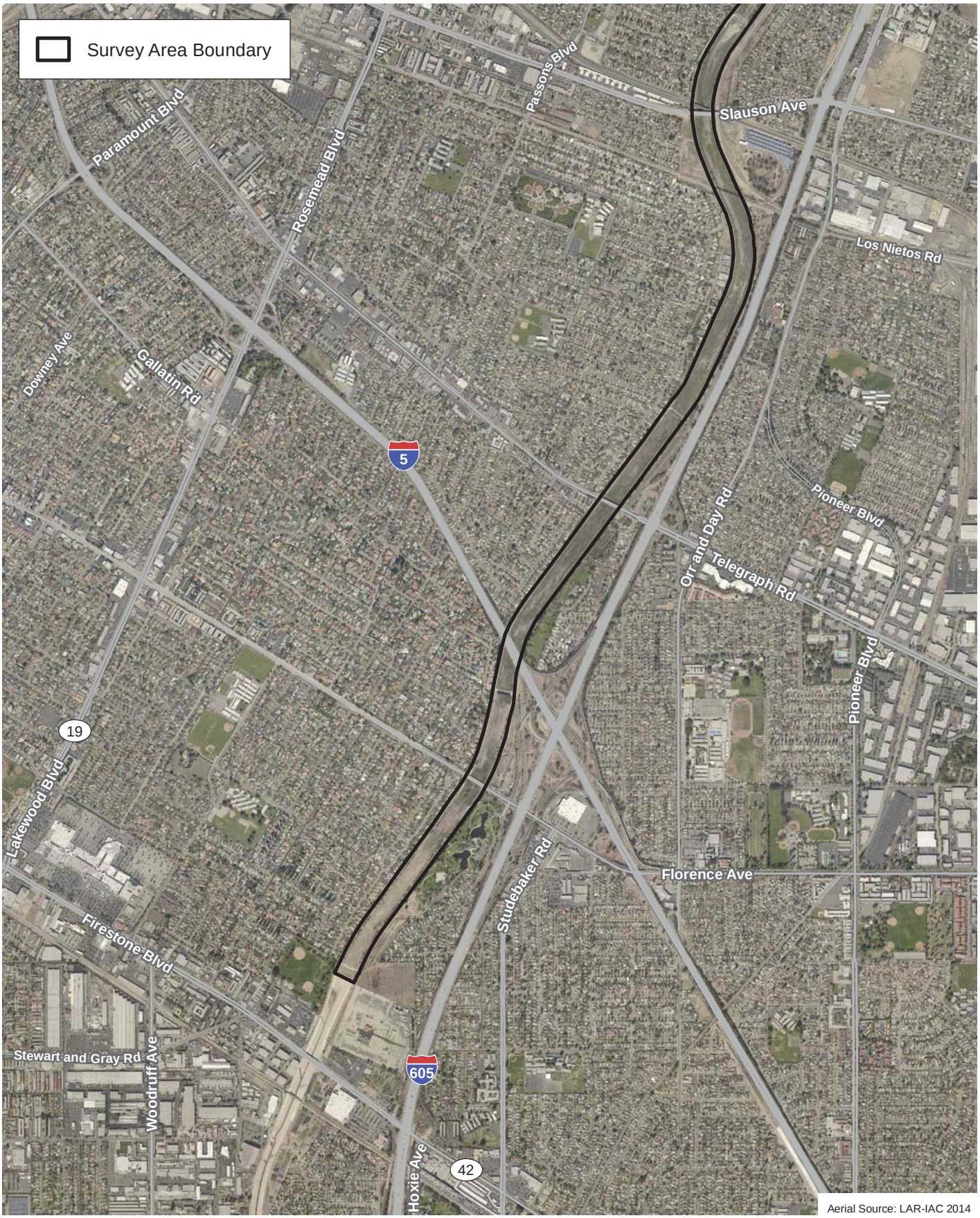
2016 Focused Survey Results for Yellow-Billed Cuckoo

N W E S

2,000 1,000 0 2,000 Feet

PSOMAS

(Rev: 10/06/2016 CJS) R:\Projects\CoLADPW (DPW)\J295\Graphics\Cuckoo_Report\ExB_LV_Aerial_20161005.pdf



Aerial Source: LAR-IAC 2014

D:\Projects\COLADPW\J295\MXD\Cuckoo_Survey_Report\Ex_LV_Aerial_20161003.mxd

Survey Area 6 — Soft-Bottom Channel Reach 44

Attachment B-6b

2016 Focused Survey Results for Yellow-Billed Cuckoo

N W E S

2,000 1,000 0 2,000 Feet

PSOMAS

(Rev: 10/06/2016 CJS) R:\Projects\CoLADPW (DPW)\J295\Graphics\Cuckoo_Report\ExB_LV_Aerial_20161005.pdf



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Survey Area 7 — Soft-Bottom Channel Reaches 71, 79, 80, and 103 Attachment B-7

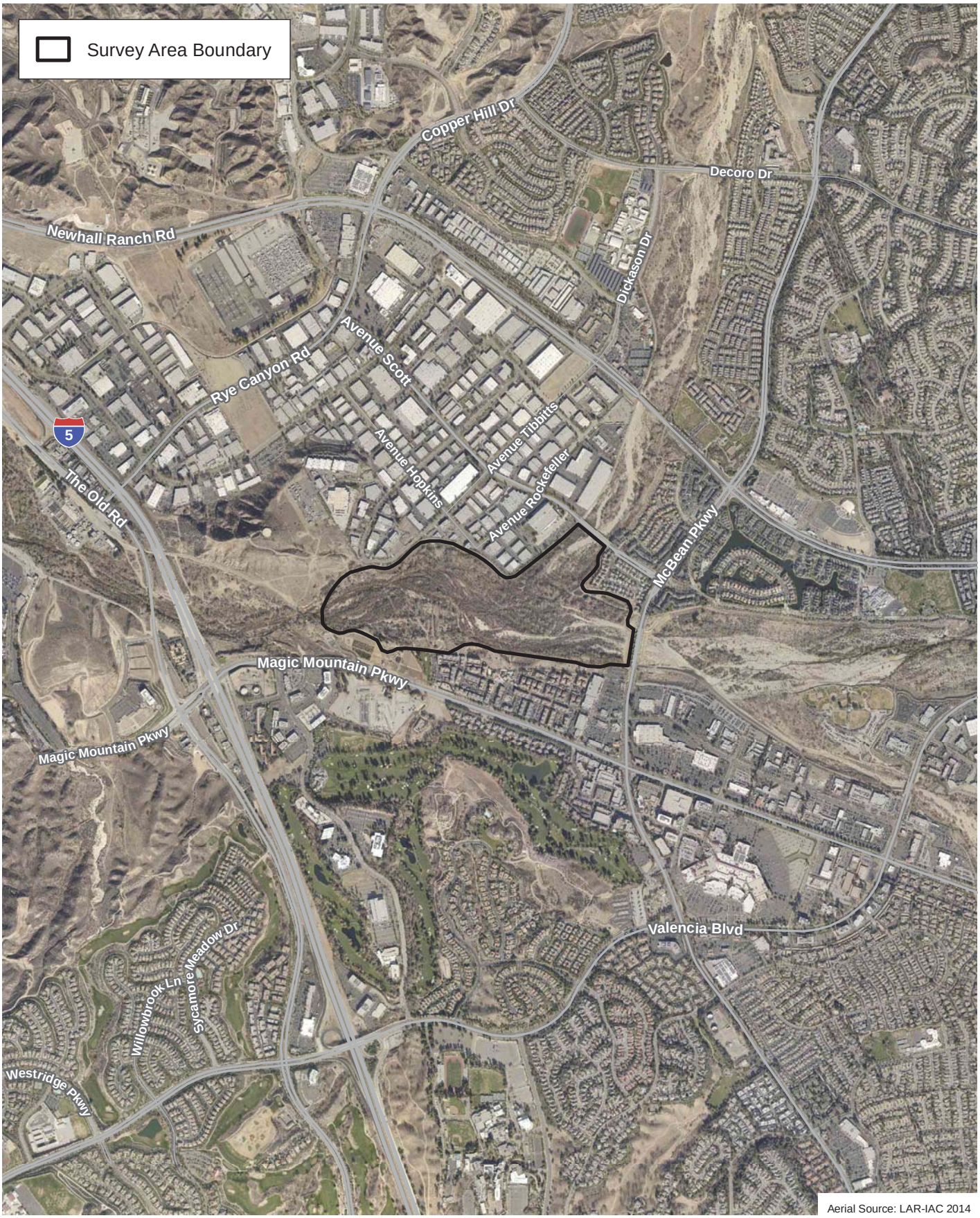
2016 Focused Survey Results for Yellow-Billed Cuckoo

N W E S

2,000 1,000 0 2,000 Feet

PSOMAS

(Rev: 10/06/2016 CJS) R:\Projects\CoLADPW (DPW)\J295\Graphics\Cuckoo_Report\ExB_LV_Aerial_20161005.pdf



Aerial Source: LAR-IAC 2014

D:\Projects\COLADPW\J295\MXD\Cuckoo_Survey_Report\Ex_LV_Aerial_20161003.mxd

Survey Area 8 — Soft-Bottom Channel Reaches 82 and 109

Attachment B-8

2016 Focused Survey Results for Yellow-Billed Cuckoo

N W E S

2,000 1,000 0 2,000 Feet

PSOMAS

(Rev: 10/06/2016 CJS) R:\Projects\CoLADPW (DPW)\J295\Graphics\Cuckoo_Report\ExB_LV_Aerial_20161005.pdf



Aerial Source: LAR-IAC 2014

D:\Projects\COLADPW\J295\MXD\Cuckoo_Survey_Report\Ex_LV_Aerial_20161003.mxd

Survey Area 9 — Soft-Bottom Channel Reaches 87, 97, and 104

Attachment B-9

2016 Focused Survey Results for Yellow-Billed Cuckoo

N W E S

2,000 1,000 0 2,000 Feet

PSOMAS

(Rev: 10/06/2016 CJS) R:\Projects\CoLADPW (DPW)\J295\Graphics\Cuckoo_Report\ExB_LV_Aerial_20161005.pdf

ATTACHMENT C

SITE PHOTOGRAPHS



August 10, 2016. View from Harding Street of Lopez Debris Basin.



August 10, 2016. View of the May Channel Outlet.

D:\Projects\CoLADPW\J295\MXD\Cuckoo_Survey_Report\Ex_photos_20161003.mxd

Site Photographs
Survey Area 1 — Soft-Bottom Channel Reach 14

Attachment C-1

2016 Focused Survey Results for Yellow-Billed Cuckoo

PSOMAS



August 22, 2016. View of Wilmington Drain from Pacific Coast Highway.



August 22, 2016. View of Wilmington Drain from Lomita Blvd.

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Site Photographs
Survey Area 2 — Soft-Bottom Channel Reach 27

Attachment C-2

2016 Focused Survey Results for Yellow-Billed Cuckoo

PSOMAS



August 18, 2016. View of San Gabriel River north of Beatty Channel Outlet.



August 17, 2016. View of San Gabriel River near Encanto Park.

D:\Projects\CoLADPW\J295\MXD\Cuckoo_Survey_Report\Ex_photos_20161003.mxd

Site Photographs
Survey Area 3 — Soft-Bottom Channel Reach 39

Attachment C-3

2016 Focused Survey Results for Yellow-Billed Cuckoo

PSOMAS



August 18, 2016. View of San Gabriel River Confluence with San Jose Creek.



August 18, 2016. View of San Gabriel River Upstream of its Confluence with San Jose Creek.

D:\Projects\COLADPW\J295\MXD\Cuckoo_Survey_Report\Ex_photos_20161003.mxd

Site Photographs
Survey Area 4 — Soft-Bottom Channel Reach 40b

Attachment C-4

2016 Focused Survey Results for Yellow-Billed Cuckoo

PSOMAS



August 12, 2016. View of Willows in San Gabriel River Downstream of Florence Avenue.



August 12, 2016. View of Willows on Left Bank of San Gabriel River Downstream of Washington Blvd.

D:\Projects\COLADPW\J295\MXD\Cuckoo_Survey_Report\Ex_photos_20161003.mxd

Site Photographs
Survey Area 5 — Soft-Bottom Channel Reaches 43a and 43b Attachment C-5

2016 Focused Survey Results for Yellow-Billed Cuckoo

PSOMAS



August 18, 2016. View of San Gabriel River Upstream of San Gabriel River Parkway.



August 18, 2016. View of San Gabriel River Downstream of San Gabriel River Parkway.

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Site Photographs
Survey Area 6 — Soft-Bottom Channel Reach 44

Attachment C-6

2016 Focused Survey Results for Yellow-Billed Cuckoo

PSOMAS



August 30, 2016. View of South Fork Santa Clara River Confluence with Santa Clara River.



August 30, 2016. View of Bouquet Canyon Confluence with Santa Clara River.

D:\Projects\COLADPW\J295\MXD\Cuckoo_Survey_Report\Ex_photos_20161003.mxd

Site Photographs
Survey Area 7 — Soft-Bottom Channel Reaches 71, 79, 80, and 103 Attachment C-7

2016 Focused Survey Results for Yellow-Billed Cuckoo

PSOMAS



June 23, 2016. View of San Francisquito Wash and Santa Clara River.



August 25, 2016. View of Santa Clara River downstream of McBean Parkway.

D:\Projects\COLADPW\J295\MXD\Cuckoo_Survey_Report\Ex_photos_20161003.mxd

Site Photographs
Survey Area 8 — Soft-Bottom Channel Reaches 82 and 109

Attachment C-8

2016 Focused Survey Results for Yellow-Billed Cuckoo

PSOMAS



August 25, 2016. View of Castaic Creek from Reach 104 Levee.



August 25, 2016. View of Castaic Creek Downstream of The Old Road Bridge.

D:\Projects\COLADPW\J295\MXD\Cuckoo_Survey_Report\Ex_photos_20161003.mxd

Site Photographs
Survey Area 9 — Soft-Bottom Channel Reaches 87, 97, and 104 Attachment C-9

2016 Focused Survey Results for Yellow-Billed Cuckoo

PSOMAS

ATTACHMENT D

AVIAN COMPENDIUM

TABLE D-1
BIRD SPECIES DETECTED DURING 2016 YELLOW-BILLED CUCKOO SURVEYS

Species	Survey Area 1	Survey Area 2	Survey Area 3	Survey Area 4	Survey Area 5	Survey Area 6	Survey Area 7	Survey Area 8	Survey Area 9
Canada goose *Branta canadensis*	X			X	X	X			
mallard *Anas platyrhynchos*		X	X	X	X	X			
California quail *Callipepla californica*	X		X				X	X	X
pied-billed grebe *Podilymbus podiceps*			X	X					
rock pigeon *Columba livia*		X		X	X	X		X	X
Eurasian collared-dove *Streptopelia decaocto*		X	X	X	X	X			X
mourning dove *Zenaida macroura*	X	X	X	X	X	X	X	X	X
yellow-billed cuckoo *Coccyzus americanus*		X							
greater roadrunner *Geococcyx californianus*								X	X
black-chinned hummingbird *Archilochus alexandri*							X		X
Anna's hummingbird *Calypte anna*	X	X	X	X	X	X	X	X	X
Costa's hummingbird *Calypte costae*	X						X	X	X
Allen's hummingbird *Selasphorus sasin*	X	X	X		X		X	X	
rufous/Allen's hummingbird *Selasphorus rufus/sasin*	X	X	X	X	X	X	X	X	
common gallinule *Gallinula galeata*				X					
American coot *Fulica americana*				X					
black-necked stilt *Himantopus mexicanus*						X			

TABLE D-1
BIRD SPECIES DETECTED DURING 2016 YELLOW-BILLED CUCKOO SURVEYS

Species	Survey Area 1	Survey Area 2	Survey Area 3	Survey Area 4	Survey Area 5	Survey Area 6	Survey Area 7	Survey Area 8	Survey Area 9
killdeer *Charadrius vociferus*				X		X	X		
western gull *Larus occidentalis*		X		X		X			
Caspian tern *Hydroprogne caspia*		X		X					
double-crested cormorant *Phalacrocorax auritus*				X	X				
least bittern *Ixobrychus exilis*				X					
great blue heron *Ardea herodias*			X	X	X		X		
great egret *Ardea alba*			X	X	X	X	X		
snowy egret *Egretta thula*		X	X	X	X	X			
green heron *Butorides virescens*		X	X	X	X		X		
black-crowned night-heron *Nycticorax nycticorax*		X	X	X	X				
turkey vulture *Cathartes aura*				X			X		
white-tailed kite *Elanus leucurus*		X							
Cooper's hawk *Accipiter cooperii*		X		X	X	X	X	X	
red-shouldered hawk *Buteo lineatus*				X				X	X
red-tailed hawk *Buteo jamaicensis*	X				X	X	X		X
belted kingfisher *Megaceryle alcyon*			X	X					
Nuttall's woodpecker *Picoides nuttallii*	X		X	X	X		X	X	X

TABLE D-1
BIRD SPECIES DETECTED DURING 2016 YELLOW-BILLED CUCKOO SURVEYS

Species	Survey Area 1	Survey Area 2	Survey Area 3	Survey Area 4	Survey Area 5	Survey Area 6	Survey Area 7	Survey Area 8	Survey Area 9
downy woodpecker *Picoides pubescens*		X	X	X	X		X	X	X
hairy woodpecker *Picoides villosus*							X	X	
American kestrel *Falco sparverius*						X			X
peregrine falcon Falco peregrinus				X					
red-crowned parrot *Amazona viridigenalis*					X				
budgerigar *Melopsittacus undulatus*		X							
Pacific-slope flycatcher *Empidonax difficilis*			X		X				
black phoebe *Sayornis nigricans*	X	X	X	X	X	X	X	X	X
Say's phoebe *Sayornis saya*	X						X	X	
ash-throated flycatcher *Myiarchus cinerascens*	X		X				X	X	X
Cassin's kingbird *Tyrannus vociferans*	X	X		X	X	X	X	X	
western kingbird *Tyrannus verticalis*	X				X		X	X	X
Bell's vireo *Vireo bellii*	X			X	X		X		
warbling vireo *Vireo gilvus*			X						
California scrub-jay *Aphelocoma californica*	X		X				X	X	X
American crow *Corvus brachyrhynchos*	X	X	X	X	X	X	X	X	X
common raven *Corvus corax*	X	X	X	X	X	X	X	X	X

TABLE D-1
BIRD SPECIES DETECTED DURING 2016 YELLOW-BILLED CUCKOO SURVEYS

Species	Survey Area 1	Survey Area 2	Survey Area 3	Survey Area 4	Survey Area 5	Survey Area 6	Survey Area 7	Survey Area 8	Survey Area 9
northern rough-winged swallow *Stelgidopteryx serripennis*	X		X	X	X	X	X		
cliff swallow *Petrochelidon pyrrhonota*	X			X	X		X		
barn swallow *Hirundo rustica*	X	X	X	X	X	X		X	
oak titmouse *Baeolophus inornatus*							X	X	X
bushtit *Psaltriparus minimus*		X	X	X	X	X	X	X	X
white-breasted nuthatch *Sitta carolinensis*							X	X	X
rock wren *Salpinctes obsoletus*	X								
marsh wren *Cistothorus palustris*		X							
Bewick's wren *Thryomanes bewickii*	X		X				X	X	X
red-whiskered bulbul *Pycnonotus jocosus*				X					
wrentit *Chamaea fasciata*	X		X						
western bluebird *Sialia Mexicana*								X	X
Swainson's thrush *Catharus ustulatus*					X				
American robin *Turdus migratorius*					X				
California thrasher *Toxostoma redivivum*	X		X				X	X	X
northern mockingbird *Mimus polyglottos*	X	X	X	X	X	X	X	X	X

TABLE D-1
BIRD SPECIES DETECTED DURING 2016 YELLOW-BILLED CUCKOO SURVEYS

Species	Survey Area 1	Survey Area 2	Survey Area 3	Survey Area 4	Survey Area 5	Survey Area 6	Survey Area 7	Survey Area 8	Survey Area 9
European starling *Sturnus vulgaris*	X	X				X	X	X	
scaly-breasted munia *Lonchura punctulata*		X	X	X	X	X			
house sparrow *Passer domesticus*	X	X		X		X			
northern red bishop *Euplectes franciscanus*		X		X					
pin-tailed whydah *Vidua macroura*		X			X				
house finch *Haemorhous mexicanus*	X	X	X	X	X	X	X	X	X
lesser goldfinch *Spinus psaltria*	X	X	X	X	X		X	X	X
Lawrence's goldfinch *Spinus lawrencei*								X	
American goldfinch *Spinus tristis*		X	X	X	X	X			
orange-crowned warbler *Oreothlypis celata*		X							
common yellowthroat *Geothlypis trichas*	X	X	X	X	X	X	X	X	
yellow warbler *Setophaga petechial*		X	X	X	X	X	X	X	X
yellow-breasted chat *Icteria virens*				X	X		X		
spotted towhee *Pipilo maculatus*	X				X		X	X	X
California towhee *Melozone crissalis*	X	X	X	X	X		X	X	X
lark sparrow *Chondestes grammacus*	X				X				
song sparrow *Melospiza melodia*	X	X	X	X	X	X	X	X	

TABLE D-1
BIRD SPECIES DETECTED DURING 2016 YELLOW-BILLED CUCKOO SURVEYS

Species	Survey Area 1	Survey Area 2	Survey Area 3	Survey Area 4	Survey Area 5	Survey Area 6	Survey Area 7	Survey Area 8	Survey Area 9
western tanager *Piranga flava*	X	X							
black-headed grosbeak *Pheucticus melanocephalus*	X		X	X	X	X	X		
blue grosbeak *Passerina caerulea*	X	X		X	X	X	X		X
lazuli bunting *Passerina amoena*	X	X			X		X		
red-winged blackbird *Agelaius phoeniceus*		X	X	X	X	X			
Brewer's blackbird *Euphagus cyanocephalus*						X			
great-tailed grackle *Quiscalus mexicanus*				X			X		
brown-headed cowbird *Molothrus ater*			X	X	X				
hooded oriole *Icterus cucullatus*	X	X	X	X	X	X			X
Bullock's oriole *Icterus bullockii*		X		X					X

ATTACHMENT E

USFWS JUNE 22, 2016 CUCKOO SIGHTING REPORT

Brian Daniels

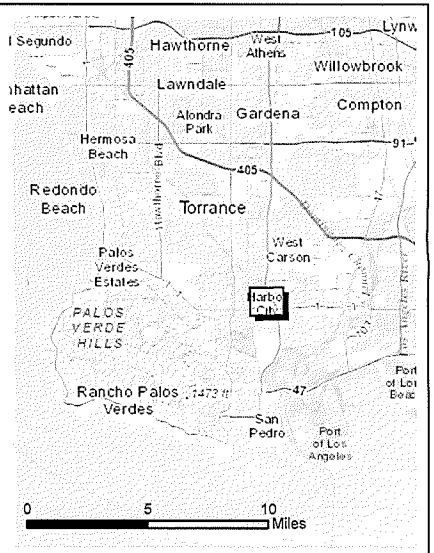
From: Brian Daniels
Sent: Wednesday, June 22, 2016 2:21 PM
To: Daniel_Marquez@fws.gov; Stacey_Love@fws.gov; Robert Krijgsman
Cc: Lindsay Messett; Marc Blain
Subject: June 22, 2016 Yellow-billed Cuckoo Observation at Wilmington Drain, Los Angeles County
Attachments: daily_results_20160622.pdf

Good afternoon,

Per Condition 10e of my Native Endangered & Threatened Sp. Recovery permit (TE821401-5), I am reporting a Yellow-billed Cuckoo seen and heard during a focused survey conducted this morning at Wilmington Drain, Los Angeles County. Lindsay Messett and I heard and saw the Yellow-billed Cuckoo at 0830 after playing recorded "kowlp" calls per the survey protocol at Calling Point 9 as shown on the attached exhibit.

Brian Daniels





Yellow-billed Cuckoo Observation

Reach Alignment

Yellow-billed Cuckoo Survey Area

N

W E

S

500 250 0 500 Feet

Aerial Source: LAR-IAC 2011

Reach 27 - 6/22/2016

Yellow-billed Cuckoo Focused Surveys

Bonterra PSOMAS

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ATTACHMENT F

YELLOW-BILLED CUCKOO SURVEY SUMMARY AND SITE DESCRIPTION FORMS

Yellow Billed Cuckoo Survey Summary Form

Site Name: Reach 14 County: Los Angeles State: CA.
USGS Quad Name: San Fernando Elevation: 1,310 Ft.
Creek, River, Wetland, or Lake Name Pacoima Wash
Site Coordinates: Start: E 370255 N 3797649 UTM Zone: 11S
Stop: E 370265 N 3796793 Datum: WGS84
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County & Federal (ACOE)
Was site surveyed in previous year? Yes No Unknown If yes, what site name was used?

Survey # Observer(s) (Last Name, First Initial)	Date (m/d/y) Survey, Time, Total Hours	Total Number of YBCUs detected.	Time Detected (AM):	Detect Type: I=Incidental P=Playback A=aural V=visual B=both	Voc. Type: CN=Contact CO=coo AL=alarm OT=other (describe)	Playback #: Number of times 'Kowlp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates UTM E	Surveyor Detection Coordinates UTM N	Distance (m)	Bearing	Cuckoo #	Corrected Coordinates UTM E	Corrected Coordinates UTM N
~~Survey Period~~ #1	Date: 6/29/16													
Observer(s): S. Rowe, L. Merrett	Start: 0600													
	Stop: 1000													
	Total hrs: 4	Total: 0												
~~Survey Period~~ #2	Date: 7/17/16													
Observer(s): B. Daniels	Start: 0600													
	Stop: 0945													
	Total hrs: 3.8	Total: 0												
~~Survey Period~~ #3	Date: 7/24/16													
Observer(s): B. Daniels	Start: 0550													
	Stop: 0910													
	Total hrs: 3.3	Total: 0												
~~Survey Period~~ #4	Date: 8/10/16													
Observer(s): B. Daniels, J. Fenette	Start: 0600													
	Stop: 0915													
	Total hrs: 3.3	Total: 0												
~~Survey Period~~ #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary:	# Det	#PO	#PR	#CO	#Nests found	Total Survey Hours:
Total YBCUs*	0					14.4

Notes (refer to Cuckoo # associated with individual detections)

*Include justification for these designations.

VOCALIZATION	CODE
Contact	CON
Coo	COO
Knock/Alarm	ALA
Juvenile Calls	JUVC
Other Vocalization	OV

BEHAVIOR	CODE
No visual	NV
Sitting	ST
Foraging	FO
Preening	PRE
Flying	FLY
Distraction Display	DD

BEHAVIOR	CODE
Catches Prey	CP
Carry Food	CF
Eats Food	EF
At Nest	AN
Juvenile	JUV
Vocal Exchange	VEX

BREEDING	CODE
Copulation	COP
Feeds Mate	FM
Carry Nest Material	CN
Brooding/Incubating	BI
Feeds Nestling	FN
Feeds Fledgling	FF

NB = nest building, NE = active nest with unbroken eggs in it, NY = nest with young seen or heard in it, ON = occupied nest, US = used, inactive nest with blue-green eggshells.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general descrition of the habitat surveyed at a site. More detailed vegetation analysis requires precise measurements, and is outside the scope of this survey protocol. Please check your permit for additional requirements.

Fill in the following information completely		**Date Report completed:** 9/28/16
Site Name: Reach 14	State: CA.	County: Los Angeles
Name of Reporting Individual B. Daniels	Affiliation BonTerra Psomas	
Phone # (626) 351-2000	Email: brian.daniels@psomas.com	
USFWS Permit # TE821401-5	State Permit # SC-4535	

Site Coordinates:	Start: E 370255	N 3797649	UTM Zone: 11S
	Stop: E 370265	N 3796793	NAD: W6584
USGS Quad Name(s): San Fernando	Length of area surveyed (in kilometers) 0.85		Elevation: 1,130 ft.
Name of nearest Creek, River, Wetland, or Lake: Pacoima Wash			
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County) + Fed (ACOE)			

Was site surveyed in previous year? Yes (No) Unknown	If yes, what site name was used?	
Did you survey the same general area during each visit this year? (Yes) / No	If no, summarize in comments below	
If "Yes", was the same general area surveyed this year? (Yes) / No	If no, summarize in comments below	

Native/Exotic: The species in tree/shrub layer at this site are comprised predominantly of (check one):			
Native broadleaf plants (>75% native)	✓	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)		Mixed native and exotic plants (mostly exotic 51%-75%)	

List up to 5 species of overstory vegetation and percent canopy cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Salix spp. % cover: 95	2. Populus fremontii % cover: 4	3. Platanus racemosa % cover: <1
4. % cover:	5. % cover:	
Average height of overstory (m)(do not include a range) 7	Estimated Overall Canopy Cover (percent) 10%	

List up to 5 species of understory/shrub vegetation (not all sites will have a separate understory) and estimate percent understory cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. — % cover:	2. % cover:	3. % cover:
4. % cover:	5. % cover:	
Average height of understory (m)(do not include a range) —	Estimated Overall Cover (percent) —	

Describe adjacent habitat (e.g. upland vegetation; desert scrub; urban/residential; agriculture/orchard; oak woodland)

Alluvial sage scrub is the dominate vegetation type in Pacoima wash and downstream in the Lopez Debris Basin. There are also stands of mule fat scrub in the basin. Also ruderal (weedy) areas.

List up to five categories of adjacent habitat, and estimate percent cover. Use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. alluvial s. scrub % cover: 60	2. Baccharis salicifolia % cover: 15	3. ruderal % cover: 15
4. disturbed % cover: 10	5. % cover:	

Was surface water or saturated soil present at or adjacent to site within 300 meters?	(Yes) No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	Yes (No) (circle one)

Comments. Reach 14 is a side outlet (May channel outlet) between golf course and Pacoima Wash. It is 588 ft. long (0.63 acre) and supports a "strip" of riparian trees (mostly willows) along its length and at its north in Pacoima Wash. There are two additional side outlets on opposite side of Pacoima Wash. The cuckoo survey area was extended downstream into the debris basin to "capture" more trees. In all, the survey area is about 80 acres and contains about 10 acres of riparian woodland.

Yellow Billed Cuckoo Survey Summary Form

Site Name: Reach 27 County: Los Angeles State: CA.
USGS Quad Name: Torrance Elevation: 23 ft.
Creek, River, Wetland, or Lake Name: Wilmington Drain
Site Coordinates: Start: E 380689 N 3740705 UTM Zone: 11S
Stop: E 380302 N 3739757 Datum: WGS84
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County) L.A. City + County
Was site surveyed in previous year? Yes (No) Unknown If yes, what site name was used?

Survey # Observer(s) (Last Name, First Initial)	Date (m/d/y) Survey, Time, Total Hours	Total Number of YBCUs detected.	Time Detected (AM):	Detect Type: I=Incidental P=Playback A=aural V=visual B=both	Voc. Type: CN=Contact CO=coo AL=alarm OT=other (describe)	Playback #: Number of times 'Kowlp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates UTM E	Surveyor Detection Coordinates UTM N	Distance (m)	Bearing	Cuckoo #	Corrected Coordinates UTM E	Corrected Coordinates UTM N
~~Survey Period~~ #1	Date: 6/22/16		0830	P B	CN	3	VSX	380788	3740112					
Observer(s): B. Daniels, L. Messett	Start: 0645													
	Stop: 0930													
	Total hrs: 2.8	Total: 1												
~~Survey Period~~ #2	Date: 7/5/16													
Observer(s): B. Daniels	Start: 0610													
	Stop: 0845													
	Total hrs: 2.6	Total: 0												
~~Survey Period~~ #3	Date: 7/19/16													
Observer(s): B. Daniels	Start: 0600													
	Stop: 0845													
	Total hrs: 2.8	Total: 0												
~~Survey Period~~ #4	Date: 8/1/16													
Observer(s): B. Daniels, J. Feenstra	Start: 0600													
	Stop: 0915													
	Total hrs: 3.3	Total: 0												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary:	# Det	#PO	#PR	#CO	#Nests found	Total Survey Hours:
Total YBCUs*	1					11.5

Notes (refer to Cuckoo # associated with individual detections)

*Include justification for these designations.

VOCALIZATION	CODE
Contact	CON
Coo	COO
Knock/Alarm	ALA
Juvenile Calls	JUVC
Other Vocalization	OV

BEHAVIOR	CODE
No visual	NV
Sitting	ST
Foraging	FO
Preening	PRE
Flying	FLY
Distraction Display	DD

BEHAVIOR	CODE
Catches Prey	CP
Carry Food	CF
Eats Food	EF
At Nest	AN
Juvenile	JUV
Vocal Exchange	VEX

BREEDING	CODE
Copulation	COP
Feeds Mate	FM
Carry Nest Material	CN
Brooding/Incubating	BI
Feeds Nestling	FN
Feeds Fledgling	FF

NB = nest building, NE = active nest with unbroken eggs in it, NY = nest with young seen or heard in it, ON = occupied nest, US = used, inactive nest with blue-green eggshells.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general descrition of the habitat surveyed at a site. More detailed vegetation analysis requires precise measurements, and is outside the scope of this survey protocol. Please check your permit for additional requirements.

Fill in the following information completely		**Date Report completed:** 9/28/16
Site Name: Reach 27	State: CA.	County: Los Angeles
Name of Reporting Individual B. Daniels	Affiliation BonTerra Psomas	
Phone # (626) 351-2000	Email: brian.daniels@psomas.com	
USFWS Permit # TE-824401-5	State Permit # SC-4535	

Site Coordinates:	Start: E 380689	N 3740705	UTM Zone: 11S
	Stop: E 380802	N 3739757	NAD: W6584
USGS Quad Name(s): Torrance	Length of area surveyed (in kilometers) 1.0		Elevation: 23 ft.
Name of nearest Creek, River, Wetland, or Lake: Wilmington Drain			
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal) (County) L.A. City + County			
Was site surveyed in previous year? Yes (No) Unknown	If yes, what site name was used?		
Did you survey the same general area during each visit this year? (Yes) / No	If no, summarize in comments below		
If "Yes", was the same general area surveyed this year? (Yes) / No	If no, summarize in comments below		

Native/Exotic: The species in tree/shrub layer at this site are comprised predominantly of (check one):			
Native broadleaf plants (>75% native)	✓	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)		Mixed native and exotic plants (mostly exotic 51%-75%)	

List up to 5 species of overstory vegetation and percent canopy cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Salix spp. % cover: 90	2. Populus fremontii % cover: 6	3. Platanus racemosa % cover: 2
4. Alnus rhombifolia % cover: 2	5. % cover:	
Average height of overstory (m)(do not include a range) 5	Estimated Overall Canopy Cover (percent) 40%	

List up to 5 species of understory/shrub vegetation (not all sites will have a separate understory) and estimate percent understory cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. — % cover:	2. % cover:	3. % cover:
4. % cover:	5. % cover:	
Average height of understory (m)(do not include a range) —	Estimated Overall Cover (percent) —	

Describe adjacent habitat (e.g. upland vegetation; desert scrub; urban/residential; agriculture/orchard; oak woodland)

Wilmington Drain is surrounded by residential and some remnant oil field installations.

List up to five categories of adjacent habitat, and estimate percent cover. Use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. residential % cover: 60	2. o.f./disturbed % cover: 30	3. planted scrub % cover: 10
4. % cover:	5. % cover:	

Was surface water or saturated soil present at or adjacent to site within 300 meters?	(Yes) No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	(Yes) No (circle one)

Comments. Wilmington Drain (~8 acres) empties into Ken Malloy Regional Park south of Pacific Coast Highway. The Proposition "O" project was implemented about 5 years ago for Wilmington Drain. The habitat was restored and enhanced with additional plantings of native species. The park is now off-limits and under construction, but in future years will be included in the survey area that includes Wilmington Drain. (The above % are only for Reach 27.)

Yellow Billed Cuckoo Survey Summary Form

Site Name: Reach 39 County: Los Angeles State: CA.
USGS Quad Name: Azusa Elevation: 625 Ft.
Creek, River, Wetland, or Lake Name San Gabriel River
Site Coordinates: Start: E 414301 N 3778921 UTM Zone: 11S
Stop: E 413438 N 3778025 Datum: W6584
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal, County) + Federal (ACOE)
Was site surveyed in previous year? Yes (No) Unknown If yes, what site name was used?

Survey # Observer(s) (Last Name, First Initial)	Date (m/d/y) Survey, Time, Total Hours	Total Number of YBCUs detected.	Time Detected (AM):	Detect Type: I=Incidental P=Playback A=aural V=visual B=both	Voc. Type: CN=Contact CO=coo AL=alarm OT=other (describe)	Playback #: Number of times 'Kowlp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates UTM E	Surveyor Detection Coordinates UTM N	Distance (m)	Bearing	Cuckoo #	Corrected Coordinates UTM E	Corrected Coordinates UTM N
~~Survey Period~~ #1	Date: 6/29/16													
Observer(s): B. Daniels	Start: 0545													
	Stop: 0730													
	Total hrs: 1.8	Total: 0												
~~Survey Period~~ #2	Date: 7/18/16													
Observer(s): B. Daniels	Start: 0615													
	Stop: 0815													
	Total hrs: 2	Total: 0												
~~Survey Period~~ #3	Date: 7/30/16													
Observer(s): B. Daniels	Start: 0600													
	Stop: 0715													
	Total hrs: 1.3	Total: 0												
~~Survey Period~~ #4	Date: 8/12/16													
Observer(s): B. Daniels	Start: 0600													
	Stop: 0715													
	Total hrs: 1.3	Total: 0												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary:	# Det	#PO	#PR	#CO	#Nests found	Total Survey Hours:
Total YBCUs*	0					6.4

Notes (refer to Cuckoo # associated with individual detections)

*Include justification for these designations.

VOCALIZATION	CODE
Contact	CON
Coo	COO
Knock/Alarm	ALA
Juvenile Calls	JUVC
Other Vocalization	OV

BEHAVIOR	CODE
No visual	NV
Sitting	ST
Foraging	FO
Preening	PRE
Flying	FLY
Distraction Display	DD

BEHAVIOR	CODE
Catches Prey	CP
Carry Food	CF
Eats Food	EF
At Nest	AN
Juvenile	JUV
Vocal Exchange	VEX

BREEDING	CODE
Copulation	COP
Feeds Mate	FM
Carry Nest Material	CN
Brooding/Incubating	BI
Feeds Nestling	FN
Feeds Fledgling	FF

NB = nest building, NE = active nest with unbroken eggs in it, NY = nest with young seen or heard in it, ON = occupied nest, US = used, inactive nest with blue-green eggshells.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general descrition of the habitat surveyed at a site. More detailed vegetation analysis requires precise measurements, and is outside the scope of this survey protocol. Please check your permit for additional requirements.

Fill in the following information completely		**Date Report completed:** 9/28/16	
Site Name: Reach 39	State: CA.		County: Los Angeles
Name of Reporting Individual B. Daniels	Affiliation BonTerra Psomas		
Phone # (626) 351-2000	Email: brian.daniels@psomas.com		
USFWS Permit # TE-821401-5	State Permit # SC-4535		

Site Coordinates:	Start: E 414301	N 3778921	UTM Zone: 11S
	Stop: E 413438	N 3778025	NAD: W6584
USGS Quad Name(s): Azusa	Length of area surveyed (in kilometers) 1.25		Elevation: 625 ft.
Name of nearest Creek, River, Wetland, or Lake: San Gabriel River			
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County) Fee (ACOE)			
Was site surveyed in previous year? Yes (No) Unknown	If yes, what site name was used?		
Did you survey the same general area during each visit this year? (Yes)/ No	If no, summarize in comments below		
If "Yes", was the same general area surveyed this year? (Yes)/ No	If no, summarize in comments below		

Native/Exotic: The species in tree/shrub layer at this site are comprised predominantly of (check one):			
Native broadleaf plants (>75% native)	✓	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)		Mixed native and exotic plants (mostly exotic 51%-75%)	

List up to 5 species of overstory vegetation and percent canopy cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Salix spp. % cover: 95	2. Eucalyptus sp. % cover: 4	3. ornamental sp. % cover: 1
4. % cover:	5. % cover:	
Average height of overstory (m)(do not include a range) 7	Estimated Overall Canopy Cover (percent) <1%	

List up to 5 species of understory/shrub vegetation (not all sites will have a separate understory) and estimate percent understory cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. — % cover:	2. % cover:	3. % cover:
4. % cover:	5. % cover:	
Average height of understory (m)(do not include a range) —	Estimated Overall Cover (percent) —	

Describe adjacent habitat (e.g. upland vegetation; desert scrub; urban/residential; agriculture/orchard; oak woodland) - Alluvial sage scrub dominated the San Gabriel River channel in vicinity of the Beatty Channel Outlet (Reach 39). Least Bell's vireo and coastal California gnatcatcher occur here.

List up to five categories of adjacent habitat, and estimate percent cover. Use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. alluvial sage scrub % cover: 90	2. ruderal % cover: 10	3. disturbed % cover: <1
4. % cover:	5. % cover:	

Was surface water or saturated soil present at or adjacent to site within 300 meters?	(Yes) No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	(Yes) No (circle one)

Comments. Willows are primarily found in small clumps in the river here upstream of the 210 freeway. Most of these clumps have been occupied by homeless. The combination of fires started at these encampments and the continuing drought has definitely affected the habitat here in negative ways. The alluvial sage scrubs and willows are slowly being converted to ruderal habitats.

Yellow Billed Cuckoo Survey Summary Form

Site Name: Reach 405 County: Los Angeles State: CA.
USGS Quad Name: El Monte Elevation: 255 Ft.
Creek, River, Wetland, or Lake Name San Gabriel River
Site Coordinates: Start: E 406580 N 3767801 UTM Zone: 11S
Stop: E 404790 N 3766641 Datum: WGS84
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal, County, Federal (ACOE))
Was site surveyed in previous year? Yes (No) Unknown If yes, what site name was used?

Survey # Observer(s) (Last Name, First Initial)	Date (m/d/y) Survey, Time, Total Hours	Total Number of YBCUs detected.	Time Detected (AM):	Detect Type: I=Incidental P=Playback A=aural V=visual B=both	Voc. Type: CN=Contact CO=coo AL=alarm OT=other (describe)	Playback #: Number of times 'Kowlp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates UTM E	Surveyor Detection Coordinates UTM N	Distance (m)	Bearing	Cuckoo #	Corrected Coordinates UTM E	Corrected Coordinates UTM N
~~Survey Period~~ #1	Date: 6/28/16													
Observer(s): B. Daniels	Start: 0615													
	Stop: 0950													
	Total hrs: 3.6	Total: 0												
~~Survey Period~~ #2	Date: 7/16/16													
Observer(s): B. Daniels	Start: 0545													
	Stop: 0950													
	Total hrs: 4.1	Total: 0												
~~Survey Period~~ #3	Date: 7/28/16													
Observer(s): B. Daniels	Start: 0545													
	Stop: 1000													
	Total hrs: 4.3	Total: 0												
~~Survey Period~~ #4	Date: 8/9/16													
Observer(s): B. Daniels	Start: 0550													
	Stop: 0945													
	Total hrs: 3.9	Total: 0												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total: 0												

Survey Summary:	# Det	#PO	#PR	#CO	#Nests found	Total Survey Hours:
Total YBCUs*	0					15.9

Notes (refer to Cuckoo # associated with individual detections)

*Include justification for these designations.

VOCALIZATION	CODE
Contact	CON
Coo	COO
Knock/Alarm	ALA
Juvenile Calls	JUVC
Other Vocalization	OV

BEHAVIOR	CODE
No visual	NV
Sitting	ST
Foraging	FO
Preening	PRE
Flying	FLY
Distraction Display	DD

BEHAVIOR	CODE
Catches Prey	CP
Carry Food	CF
Eats Food	EF
At Nest	AN
Juvenile	JUV
Vocal Exchange	VEX

BREEDING	CODE
Copulation	COP
Feeds Mate	FM
Carry Nest Material	CN
Brooding/Incubating	BI
Feeds Nestling	FN
Feeds Fledgling	FF

NB = nest building, NE = active nest with unbroken eggs in it, NY = nest with young seen or heard in it, ON = occupied nest, US = used, inactive nest with blue-green eggshells.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general descrition of the habitat surveyed at a site. More detailed vegetation analysis requires precise measurements, and is outside the scope of this survey protocol. Please check your permit for additional requirements.

Fill in the following information completely		**Date Report completed:** 9/28/16	
Site Name: Reach 405	State: CA.		County: Los Angeles
Name of Reporting Individual B. Daniels	Affiliation BonTerra Psomas		
Phone # (626)351-2000	Email: brian.daniels@psomas.com		
USFWS Permit # TE821401-5	State Permit # SC-4535		

Site Coordinates:	Start: E 406580	N 3767801	UTM Zone: 11S
	Stop: E 404790	N 3766641	NAD: W6584
USGS Quad Name(s): El Monte	Length of area surveyed (in kilometers) 2.15		Elevation: 255 ft.
Name of nearest Creek, River, Wetland, or Lake: San Gabriel River			
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County) + Fed (ACOE)			
Was site surveyed in previous year? Yes (No) Unknown	If yes, what site name was used?		
Did you survey the same general area during each visit this year? (Yes) / No	If no, summarize in comments below		
If "Yes", was the same general area surveyed this year? (Yes) / No	If no, summarize in comments below		

Native/Exotic: The species in tree/shrub layer at this site are comprised predominantly of (check one):			
Native broadleaf plants (>75% native) ✓		Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)		Mixed native and exotic plants (mostly exotic 51%-75%)	

List up to 5 species of overstory vegetation and percent canopy cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Salix spp. % cover: 98	2. Ornamental spp. % cover: 2	3. Populus fremontii % cover: <1
4. % cover:	5. % cover:	
Average height of overstory (m)(do not include a range) 8	Estimated Overall Canopy Cover (percent) 10%	

List up to 5 species of understory/shrub vegetation (not all sites will have a separate understory) and estimate percent understory cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Salix exigua % cover: 95	2. Baccharis salicifolia % cover: 5	3. % cover:
4. % cover:	5. % cover:	
Average height of understory (m)(do not include a range) 2.5	Estimated Overall Cover (percent) 50	

Describe adjacent habitat (e.g. upland vegetation; desert scrub; urban/residential; agriculture/orchard; oak woodland) The adjacent habitat within the flood control channel is cleared every year per conditions of the regulatory permits required to manage the channel. They come back in spring mostly as ruderal, but some riparian herb depending

List up to five categories of adjacent habitat, and estimate percent cover. Use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. residential % cover: 50	2. nursery % cover: 35	3. disturbed % cover: 15
4. % cover:	5. % cover:	

Was surface water or saturated soil present at or adjacent to site within 300 meters?	~~Yes~~ No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	Yes (No) (circle one)

Comments. on rainfall amounts.

Yellow Billed Cuckoo Survey Summary Form

Site Name: Reaches 43a, b County: Los Angeles State: CA
USGS Quad Name: El Monte Elevation: 185 ft.
Creek, River, Wetland, or Lake Name: San Gabriel River
Site Coordinates: Start: E 402547 N 3764877 UTM Zone: 11S
Stop: E 401283 N 3763435 Datum: WGS84
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal County + federal (ACoE))
Was site surveyed in previous year? Yes (No) Unknown If yes, what site name was used?

Survey # Observer(s) (Last Name, First Initial)	Date (m/d/y) Survey, Time, Total Hours	Total Number of YBCUs detected.	Time Detected (AM):	Detect Type: I=Incidental P=Playback A=aural V=visual B=both	Voc. Type: CN=Contact CO=coo AL=alarm OT=other (describe)	Playback #: Number of times 'Kowlp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates UTM E	Surveyor Detection Coordinates UTM N	Distance (m)	Bearing	Cuckoo #	Corrected Coordinates UTM E	Corrected Coordinates UTM N
~~Survey Period~~ #1	Date: 6/28/16													
Observer(s): S. Rowe, L. Messett	Start: 0605													
	Stop: 1020													
	Total hrs: 4.3	Total: 0												
~~Survey Period~~ #2	Date: 7/10/16													
Observer(s): B. Daniels, J Feenstra	Start: 0605													
	Stop: 0945													
	Total hrs: 3.7	Total: 0												
~~Survey Period~~ #3	Date: 7/22/16													
Observer(s): B. Daniels, S. Morris	Start: 0545													
	Stop: 0930													
	Total hrs: 3.8	Total: 0												
~~Survey Period~~ #4	Date: 8/3/16													
Observer(s): B. Daniels	Start: 0600													
	Stop: 0950													
	Total hrs: 3.8	Total: 0												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary:	# Det	#PO	#PR	#CO	#Nests found	Total Survey Hours:		
Total YBCUs*	0					15.6		

Notes (refer to Cuckoo # associated with individual detections)

*Include justification for these designations.

VOCALIZATION	CODE
Contact	CON
Coo	COO
Knock/Alarm	ALA
Juvenile Calls	JUVC
Other Vocalization	OV

BEHAVIOR	CODE
No visual	NV
Sitting	ST
Foraging	FO
Preening	PRE
Flying	FLY
Distraction Display	DD

BEHAVIOR	CODE
Catches Prey	CP
Carry Food	CF
Eats Food	EF
At Nest	AN
Juvenile	JUV
Vocal Exchange	VEX

BREEDING	CODE
Copulation	COP
Feeds Mate	FM
Carry Nest Material	CN
Brooding/Incubating	BI
Feeds Nestling	FN
Feeds Fledgling	FF

NB = nest building, NE = active nest with unbroken eggs in it, NY = nest with young seen or heard in it, ON = occupied nest, US = used, inactive nest with blue-green eggshells.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general descrition of the habitat surveyed at a site. More detailed vegetation analysis requires precise measurements, and is outside the scope of this survey protocol. Please check your permit for additional requirements.

Fill in the following information completely		**Date Report completed:** 9/23/16
Site Name: Reaches 43a, b	State: CA.	County: Los Angeles
Name of Reporting Individual B. Daniels	Affiliation BonTerra Consulting	
Phone # (626) 351-2000	Email: brian.daniels@bonterra.com	
USFWS Permit # TE821401-5	State Permit # SC-4535	

Site Coordinates:	Start: E 402547	N 3764877	UTM Zone: 11S
	Stop: E 401288	N 3763435	NAD: WGS84
USGS Quad Name(s): El Monte	Length of area surveyed (in kilometers) 1.9		Elevation: 185 ft.
Name of nearest Creek, River, Wetland, or Lake: San Gabriel River			
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County)			
Was site surveyed in previous year? Yes (No) Unknown	If yes, what site name was used?		
Did you survey the same general area during each visit this year? (Yes) / No	If no, summarize in comments below		
If "Yes", was the same general area surveyed this year? (Yes) / No	If no, summarize in comments below		

Native/Exotic: The species in tree/shrub layer at this site are comprised predominantly of (check one):			
Native broadleaf plants (>75% native)	✓	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)		Mixed native and exotic plants (mostly exotic 51%-75%)	

List up to 5 species of overstory vegetation and percent canopy cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Salix spp. % cover: 90	2. Fraxinus sp. % cover: 5	3. Populus fremontii % cover: 2
4. Eucalyptus sp. % cover: 2	5. % cover:	
Average height of overstory (m)(do not include a range) 7	Estimated Overall Canopy Cover (percent) 40%	

List up to 5 species of understory/shrub vegetation (not all sites will have a separate understory) and estimate percent understory cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Baccharis sarothroides % cover: 70	2. Salix exigua % cover: 25	3. ornamental spp. % cover: 5
4. % cover:	5. % cover:	
Average height of understory (m)(do not include a range) 2.5	Estimated Overall Cover (percent) 75%	

Describe adjacent habitat (e.g. upland vegetation; desert scrub; urban/residential; agriculture/orchard; oak woodland) Adjacent habitat in flood control channel is cleared every year per conditions of the regulatory permits required to manage the channel. Prior to clearing, these areas are primarily ruderal, but can support young riparian growth especially after wet years.

List up to five categories of adjacent habitat, and estimate percent cover. Use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. residential % cover: 40	2. industrial % cover: 25	3. disturbed % cover: 25
4. golf course % cover: 10	5. % cover:	

Was surface water or saturated soil present at or adjacent to site within 300 meters?	(Yes) No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	Yes (No) (circle one)

Comments.

Yellow Billed Cuckoo Survey Summary Form

Site Name: Reach 44 County: Los Angeles State: CA
USGS Quad Name: Whittier Elevation: 132 Ft.
Creek, River, Wetland, or Lake Name San Gabriel River
Site Coordinates: Start: E 399911 N 3759918 UTM Zone: 11S
Stop: E 399560 N 3759437 Datum: WGS84
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal, County)
Was site surveyed in previous year? Yes (No) Unknown If yes, what site name was used?

Survey # Observer(s) (Last Name, First Initial)	Date (m/d/y) Survey, Time, Total Hours	Total Number of YBCUs detected.	Time Detected (AM):	Detect Type: I=Incidental P=Playback A=aural V=visual B=both	Voc. Type: CN=Contact CO=coo AL=alarm OT=other (describe)	Playback #: Number of times 'Kowlp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates UTM E	Surveyor Detection Coordinates UTM N	Distance (m)	Bearing	Cuckoo #	Corrected Coordinates UTM E	Corrected Coordinates UTM N
~~Survey Period~~ #1	Date: 6/29/16													
Observer(s): B. Daniels	Start: 0830													
	Stop: 1100													
	Total hrs: 2.5	Total: 0												
~~Survey Period~~ #2	Date: 7/18/16													
Observer(s): B. Daniels	Start: 0900													
	Stop: 1115													
	Total hrs: 2.3	Total: 0												
~~Survey Period~~ #3	Date: 7/30/16													
Observer(s): B. Daniels	Start: 0740													
	Stop: 0945													
	Total hrs: 2.1	Total: 0												
~~Survey Period~~ #4	Date: 8/12/16													
Observer(s): B. Daniels	Start: 0745													
	Stop: 1000													
	Total hrs: 2.3	Total: 0												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary:	# Det	#PO	#PR	#CO	#Nests found	Total Survey Hours:
Total YBCUs*	0					9.2

Notes (refer to Cuckoo # associated with individual detections)

*Include justification for these designations.

VOCALIZATION	CODE
Contact	CON
Coo	COO
Knock/Alarm	ALA
Juvenile Calls	JUVC
Other Vocalization	OV

BEHAVIOR	CODE
No visual	NV
Sitting	ST
Foraging	FO
Preening	PRE
Flying	FLY
Distraction Display	DD

BEHAVIOR	CODE
Catches Prey	CP
Carry Food	CF
Eats Food	EF
At Nest	AN
Juvenile	JUV
Vocal Exchange	VEX

BREEDING	CODE
Copulation	COP
Feeds Mate	FM
Carry Nest Material	CN
Brooding/Incubating	BI
Feeds Nestling	FN
Feeds Fledgling	FF

NB = nest building, NE = active nest with unbroken eggs in it, NY = nest with young seen or heard in it, ON = occupied nest, US = used, inactive nest with blue-green eggshells.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general descrition of the habitat surveyed at a site. More detailed vegetation analysis requires precise measurements, and is outside the scope of this survey protocol. Please check your permit for additional requirements.

Fill in the following information completely	**Date Report completed:** 9/28/16	
Site Name: Reach 44	State: CA.	County: Los Angeles
Name of Reporting Individual B. Daniels	Affiliation BonTerra Psomas	
Phone # (626) 351-2000	Email: brian.daniels@psomas.com	
USFWS Permit # TE821401-5	State Permit # SC-4535	

Site Coordinates:	Start: E 399911	N 3759918	UTM Zone: 11S
	Stop: E 399560	N 3759437	NAD: W6584
USGS Quad Name(s): Whittier	Length of area surveyed (in kilometers) 0.6		Elevation: 132 ft.
Name of nearest Creek, River, Wetland, or Lake: San Gabriel River			
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County)			
Was site surveyed in previous year? Yes (No) Unknown	If yes, what site name was used?		
Did you survey the same general area during each visit this year?	(Yes) / No	If no, summarize in comments below	
If "Yes", was the same general area surveyed this year?	(Yes) / No	If no, summarize in comments below	

Native/Exotic: The species in tree/shrub layer at this site are comprised predominantly of (check one):			
Native broadleaf plants (>75% native)	✓	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)		Mixed native and exotic plants (mostly exotic 51%-75%)	

List up to 5 species of overstory vegetation and percent canopy cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Salix spp. % cover: 100	2. % cover:	3. % cover:
4. % cover:	5. % cover:	
Average height of overstory (m)(do not include a range)	Estimated Overall Canopy Cover (percent)	<1%

List up to 5 species of understory/shrub vegetation (not all sites will have a separate understory) and estimate percent understory cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. — % cover:	2. % cover:	3. % cover:
4. % cover:	5. % cover:	
Average height of understory (m)(do not include a range) —	Estimated Overall Cover (percent) —	

Describe adjacent habitat (e.g. upland vegetation; desert scrub; urban/residential; agriculture/orchard; oak woodland) Cleared annually per regulatory permits required for maintenance of this flood control channel.

List up to five categories of adjacent habitat, and estimate percent cover. Use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Residential % cover: 75	2. Parks % cover: 10	3. Industrial % cover: 10
4. Disturbed % cover: 5	5. Grandstand % cover: 1	

Was surface water or saturated soil present at or adjacent to site within 300 meters?	(Yes) No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	Yes (No) (circle one)

Comments. This flood control channel reach of the San Gabriel River is about 6 miles long. Other than isolated trees + shrubs outside the low-flow channel, there are only 3 clumps of willows, the longest of which is 0.6 mile long. All these willows are trimmed up from ground ("lollipopped") during annual maintenance activities (no nesting habitat for Least Bell's vireo).

Yellow Billed Cuckoo Survey Summary Form

Site Name: Reaches 71, 79, 80, 103 County: Los Angeles State: CA.
USGS Quad Name: Newhall Elevation: 1,160 Ft.
Creek, River, Wetland, or Lake Name: Santa Clara River

Site Coordinates: Start: E 356440 N 3810312 UTM Zone: 11S
Stop: E 358431 N 3810218 Datum: WGS84

Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal County) Santa Clarita + County
Was site surveyed in previous year? Yes No Unknown If yes, what site name was used?

Survey # Observer(s) (Last Name, First Initial)	Date (m/d/y) Survey, Time, Total Hours	Total Number of YBCUs detected.	Time Detected (AM):	Detect Type: I=Incidental P=Playback A=aural V=visual B=both	Voc. Type: CN=Contact CO=coo AL=alarm OT=other (describe)	Playback #: Number of times 'Kowlp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates		Distance (m)	Bearing	Cuckoo #	Corrected Coordinates	
								UTM E	UTM N				UTM E	UTM N
Survey Period #1	Date: 6/23/16													
Observer(s): S. Rowe, L. Messett	Start: 0615													
	Stop: 1120													
	Total hrs: 5.1	Total: 0												
Survey Period #2	Date: 7/7/16													
Observer(s): B. Daniels, J. Frenstra	Start: 0610													
	Stop: 1035													
	Total hrs: 4.4	Total: 0												
Survey Period #3	Date: 7/20/16													
Observer(s): B. Daniels	Start: 0610													
	Stop: 1115													
	Total hrs: 5.1	Total: 0												
Survey Period #4	Date: 8/2/16													
Observer(s): B. Daniels, J. Frenstra	Start: 0600													
	Stop: 1030													
	Total hrs: 4.5	Total: 0												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary:	# Det	#PO	#PR	#CO	#Nests found	Total Survey Hours:
Total YBCUs*	0					19.1

Notes (refer to Cuckoo # associated with individual detections)

*Include justification for these designations.

VOCALIZATION	CODE
Contact	CON
Coo	COO
Knock/Alarm	ALA
Juvenile Calls	JUVC
Other Vocalization	OV

BEHAVIOR	CODE
No visual	NV
Sitting	ST
Foraging	FO
Preening	PRE
Flying	FLY
Distraction Display	DD

BEHAVIOR	CODE
Catches Prey	CP
Carry Food	CF
Eats Food	EF
At Nest	AN
Juvenile	JUV
Vocal Exchange	VEX

BREEDING	CODE
Copulation	COP
Feeds Mate	FM
Carry Nest Material	CN
Brooding/Incubating	BI
Feeds Nestling	FN
Feeds Fledgling	FF

NB = nest building, NE = active nest with unbroken eggs in it, NY = nest with young seen or heard in it, ON = occupied nest, US = used, inactive nest with blue-green eggshells.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general descrition of the habitat surveyed at a site. More detailed vegetation analysis requires precise measurements, and is outside the scope of this survey protocol. Please check your permit for additional requirements.

Fill in the following information completely		**Date Report completed:** 9/28/16
Site Name: Reaches 71, 79, 80, 103	State: CA.	County: Los Angeles
Name of Reporting Individual B. Daniels	Affiliation BonTerra Psomas	
Phone # (626)351-2000	Email: brian.daniels@psomas.com	
USFWS Permit # TE821401-5	State Permit # SC-4535	

Site Coordinates:	Start: E 356440	N 3810312	UTM Zone: 11S
	Stop: E 358431	N 3810218	NAD: WGS84
USGS Quad Name(s): Newhall	Length of area surveyed (in kilometers) 2.0		Elevation: 1,160 ft.
Name of nearest Creek, River, Wetland, or Lake: Santa Clara River			
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County) Santa Clarita			
Was site surveyed in previous year? Yes (No) Unknown	If yes, what site name was used?		
Did you survey the same general area during each visit this year? (Yes)/ No	If no, summarize in comments below		
If "Yes", was the same general area surveyed this year? (Yes) / No	If no, summarize in comments below		

Native/Exotic: The species in tree/shrub layer at this site are comprised predominantly of (check one):			
Native broadleaf plants (>75% native)	✓	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)		Mixed native and exotic plants (mostly exotic 51%-75%)	

List up to 5 species of overstory vegetation and percent canopy cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Salix spp. % cover: 90	2. Populus fremontii % cover: 10	3. Quercus lobata % cover: <1
4. % cover:	5. % cover:	
Average height of overstory (m)(do not include a range) 8	Estimated Overall Canopy Cover (percent) 25%	

List up to 5 species of understory/shrub vegetation (not all sites will have a separate understory) and estimate percent understory cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Baccharis salicifolia % cover: 50	2. Salix exigua % cover: 30	3. Tamarix ramosissima % cover: 15
4. Salix spp. % cover: 5	5. Typha sp. % cover: 1	
Average height of understory (m)(do not include a range) 2	Estimated Overall Cover (percent) 50%	

Describe adjacent habitat (e.g. upland vegetation; desert scrub; urban/residential; agriculture/orchard; oak woodland) – Great Basin sagebrush scrub, open wash, disturbed areas, ruderal vegetation, and tamarisk scrub

List up to five categories of adjacent habitat, and estimate percent cover. Use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. open wash % cover: 50	2. ruderal % cover: 15	3. Great Basin sage % cover: 15
4. tamarisk % cover: 15	5. disturbed % cover: 5	

Was surface water or saturated soil present at or adjacent to site within 300 meters?	(Yes) No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	Yes (No) (circle one)

Comments. The highest quality riparian woodland habitat was present in the main Santa Clara River channel west and just downstream of its confluence with Bouquet Cyn Channel (Reach 103). This area is not within the limits of flood control channel reaches 71, 79, 80 or 103, ~~but~~ nor is it in the survey area for least Bell's vireo for those 4 reaches, but it is for the cuckoo.

Yellow Billed Cuckoo Survey Summary Form

Site Name: Reaches 22, 109 County: Los Angeles State: CA.
USGS Quad Name: Newhall Elevation: 1,095 Ft.
Creek, River, Wetland, or Lake Name: Santa Clara River
Site Coordinates: Start: E 356424 N 3810411 UTM Zone: 11S
Stop: E 355044 N 3810550 Datum: WGS84
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal) (County) Santa Clarita + County
Was site surveyed in previous year? Yes No Unknown If yes, what site name was used?

Survey # Observer(s) (Last Name, First Initial)	Date (m/d/y) Survey, Time, Total Hours	Total Number of YBCUs detected.	Time Detected (AM):	Detect Type: I=Incidental P=Playback A=aural V=visual B=both	Voc. Type: CN=Contact CO=coo AL=alarm OT=other (describe)	Playback #: Number of times 'Kowlp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates UTM E	Surveyor Detection Coordinates UTM N	Distance (m)	Bearing	Cuckoo #	Corrected Coordinates UTM E	Corrected Coordinates UTM N
~~Survey Period~~ #1	Date: 6/23/16													
Observer(s): B. Daniels S. Simons	Start: 0615													
	Stop: 1100													
	Total hrs: 4.8	Total: 0												
~~Survey Period~~ #2	Date: 7/11/16													
Observer(s): B. Daniels	Start: 0600													
	Stop: 1050													
	Total hrs: 4.8	Total: 0												
~~Survey Period~~ #3	Date: 7/24/16													
Observer(s): B. Daniels J. Feenstra	Start: 0600													
	Stop: 1100													
	Total hrs: 5	Total: 0												
~~Survey Period~~ #4	Date: 8/6/16													
Observer(s): B. Daniels	Start: 0615													
	Stop: 1100													
	Total hrs: 4.8	Total: 0												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary:	# Det	#PO	#PR	#CO	#Nests found	Total Survey Hours:
Total YBCUs*	0					19.4

Notes (refer to Cuckoo # associated with individual detections)

*Include justification for these designations.

VOCALIZATION	CODE
Contact	CON
Coo	COO
Knock/Alarm	ALA
Juvenile Calls	JUVC
Other Vocalization	OV

BEHAVIOR	CODE
No visual	NV
Sitting	ST
Foraging	FO
Preening	PRE
Flying	FLY
Distraction Display	DD

BEHAVIOR	CODE
Catches Prey	CP
Carry Food	CF
Eats Food	EF
At Nest	AN
Juvenile	JUV
Vocal Exchange	VEX

BREEDING	CODE
Copulation	COP
Feeds Mate	FM
Carry Nest Material	CN
Brooding/Incubating	BI
Feeds Nestling	FN
Feeds Fledgling	FF

NB = nest building, NE = active nest with unbroken eggs in it, NY = nest with young seen or heard in it, ON = occupied nest, US = used, inactive nest with blue-green eggshells.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general descrition of the habitat surveyed at a site. More detailed vegetation analysis requires precise measurements, and is outside the scope of this survey protocol. Please check your permit for additional requirements.

Fill in the following information completely		**Date Report completed:** 9/28/16
Site Name: Reaches 82, 109	State: CA.	County: Los Angeles
Name of Reporting Individual B. Daniels	Affiliation BonTerra Psomas	
Phone # (626) 351-2000	Email: brian.daniels@psomas.com	
USFWS Permit # TE821401-5	State Permit # SC-4535	

Site Coordinates:				
	Start: E 356424	N 3810411	UTM Zone: 11S	
	Stop: E 355044	N 3810550	NAD: W6584	
USGS Quad Name(s): Newhall	Length of area surveyed (in kilometers) 1.40		Elevation: 1,095 ft.	
Name of nearest Creek, River, Wetland, or Lake: Santa Clara River				
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County) Santa Clarita				
Was site surveyed in previous year? Yes (No) Unknown	If yes, what site name was used?			
Did you survey the same general area during each visit this year? (Yes) / No	If no, summarize in comments below			
If "Yes", was the same general area surveyed this year? (Yes) / No	If no, summarize in comments below			

Native/Exotic: The species in tree/shrub layer at this site are comprised predominantly of (check one):			
Native broadleaf plants (>75% native)	✓	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)		Mixed native and exotic plants (mostly exotic 51%-75%)	

List up to 5 species of overstory vegetation and percent canopy cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Salix spp. % cover: 80	2. Populus fremontii % cover: 20	3. Eucalyptus sp. % cover: 1
4. % cover:	5. % cover:	
Average height of overstory (m)(do not include a range) 8	Estimated Overall Canopy Cover (percent) 60%	

List up to 5 species of understory/shrub vegetation (not all sites will have a separate understory) and estimate percent understory cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Baccharis salicifolia % cover: 50	2. Salix exigua % cover: 20	3. Tamarix ramosissima % cover: 20
4. Salix spp. % cover: 5	5. % cover:	
Average height of understory (m)(do not include a range) 2	Estimated Overall Cover (percent) 60	

Describe adjacent habitat (e.g. upland vegetation; desert scrub; urban/residential; agriculture/orchard; oak woodland) some sage scrub including Great Basin sagebrush scrub, open wash, ruderal, and disturbed

List up to five categories of adjacent habitat, and estimate percent cover. Use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. open wash % cover: 30	2. ruderal % cover: 30	3. sage scrub % cover: 15
4. tamarisk % cover: 15	5. disturbed % cover: 10	

Was surface water or saturated soil present at or adjacent to site within 300 meters?	(Yes) No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	Yes (No) (circle one)

Comments. The center of the channel downstream of McBean Pkwy was a mitigation site. It was densely vegetated until the current drought. Now most of it is dead. Even the long-established cottonwoods in some areas are dying.

Yellow Billed Cuckoo Survey Summary Form

Site Name: Reaches 87, 97, 104 County: Los Angeles State: CA.
USGS Quad Name: Newhall Elevation: 1,035 Ft.
Creek, River, Wetland, or Lake Name: Castaic Creek

Site Coordinates: Start: E 351616 N 3813380 UTM Zone: 11S
Stop: E 351570 N 3812029 Datum: WGS84

Ownership: BLM Reclamation NPS USFWS USFS Tribal State (Private) Other (Municipal (County))
Was site surveyed in previous year? Yes (No) Unknown If yes, what site name was used?

Survey # Observer(s) (Last Name, First Initial)	Date (m/d/y) Survey, Time, Total Hours	Total Number of YBCUs detected.	Time Detected (AM):	Detect Type: I=Incidental P=Playback A=aural V=visual B=both	Voc. Type: CN=Contact CO=coo AL=alarm OT=other (describe)	Playback #: Number of times 'Kowlp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates		Distance (m)	Bearing	Cuckoo #	Corrected Coordinates	
								UTM E	UTM N				UTM E	UTM N
~~Survey Period~~ #1	Date: 6/24/16													
Observer(s): S. Rose L. Messett	Start: 0620													
	Stop: 1025													
	Total hrs: 4.1	Total: 0												
~~Survey Period~~ #2	Date: 7/12/16													
Observer(s): B. Daniels	Start: 0640													
	Stop: 1050													
	Total hrs: 4.2	Total: 0												
~~Survey Period~~ #3	Date: 7/26/16													
Observer(s): B. Daniels	Start: 0615													
	Stop: 1015													
	Total hrs: 4	Total: 0												
~~Survey Period~~ #4	Date: 8/8/16													
Observer(s): B. Daniels	Start: 0615													
	Stop: 1000													
	Total hrs: 3.8	Total: 0												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary:	# Det	#PO	#PR	#CO	#Nests found	Total Survey Hours:
Total YBCUs*	0					16.1

Notes (refer to Cuckoo # associated with individual detections)

*Include justification for these designations.

VOCALIZATION	CODE
Contact	CON
Coo	COO
Knock/Alarm	ALA
Juvenile Calls	JUVC
Other Vocalization	OV

BEHAVIOR	CODE
No visual	NV
Sitting	ST
Foraging	FO
Preening	PRE
Flying	FLY
Distraction Display	DD

BEHAVIOR	CODE
Catches Prey	CP
Carry Food	CF
Eats Food	EF
At Nest	AN
Juvenile	JUV
Vocal Exchange	VEX

BREEDING	CODE
Copulation	COP
Feeds Mate	FM
Carry Nest Material	CN
Brooding/Incubating	BI
Feeds Nestling	FN
Feeds Fledgling	FF

NB = nest building, NE = active nest with unbroken eggs in it, NY = nest with young seen or heard in it, ON = occupied nest, US = used, inactive nest with blue-green eggshells.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general descrition of the habitat surveyed at a site. More detailed vegetation analysis requires precise measurements, and is outside the scope of this survey protocol. Please check your permit for additional requirements.

Fill in the following information completely		**Date Report completed:** 9/28/16
Site Name: Reaches 87, 97, 104	State: CA.	County: Los Angeles
Name of Reporting Individual B. Daniels	Affiliation BonTerra Psomas	
Phone # (626) 351-2000	Email: brian.daniels@psomas.com	
USFWS Permit # TE821401-5	State Permit # SC-4535	

Site Coordinates:	Start: E 351616	N 3813380	UTM Zone: 11S
	Stop: E 351570	N 3812029	NAD: W6584
USGS Quad Name(s): Newhall	Length of area surveyed (in kilometers) 1.4		Elevation: 1,035 ft.
Name of nearest Creek, River, Wetland, or Lake: Castaic Creek			
Ownership: BLM Reclamation NPS USFWS USFS Tribal State (Private) Other (Municipal/County)			
Was site surveyed in previous year? Yes (No) Unknown	If yes, what site name was used?		
Did you survey the same general area during each visit this year? (Yes) / No	If no, summarize in comments below		
If "Yes", was the same general area surveyed this year? (Yes) / No	If no, summarize in comments below		

Native/Exotic: The species in tree/shrub layer at this site are comprised predominantly of (check one):			
Native broadleaf plants (>75% native)	✓	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)		Mixed native and exotic plants (mostly exotic 51%-75%)	

List up to 5 species of overstory vegetation and percent canopy cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Salix spp. % cover: 60	2. Populus fremontii % cover: 40	3. % cover:
4. % cover:	5. % cover:	
Average height of overstory (m)(do not include a range) 7	Estimated Overall Canopy Cover (percent) 50%	

List up to 5 species of understory/shrub vegetation (not all sites will have a separate understory) and estimate percent understory cover of each species. Use scientific names. For percent cover, please use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. Baccharis salicifolia % cover:	2. Tamarix ramosissima % cover:	3. Salix exigua % cover:
4. % cover:	5. % cover:	
Average height of understory (m)(do not include a range) 2	Estimated Overall Cover (percent) 70	

Describe adjacent habitat (e.g. upland vegetation; desert scrub; urban/residential; agriculture/orchard; oak woodland) open wash, alluvial sage scrub, tamarisk scrub, tamarisk-mule fat scrub.

List up to five categories of adjacent habitat, and estimate percent cover. Use <1%; 10%, 25%, 50%, 75%, 90%, 100%.

1. tamarisk-mule fat % cover: 50	2. open wash % cover: 30	3. alluvial sage scrub % cover: 20
4. % cover:	5. % cover:	

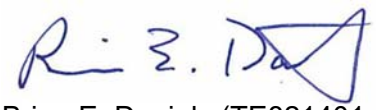
Was surface water or saturated soil present at or adjacent to site within 300 meters?	(Yes) No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	Yes (No) (circle one)

Comments. A mitigation site no longer active produced lots of vegetation in middle of channel (west of Reach 104 reinforced bank + outlets). With the drought, this vegetation is dead and dying. The large cottonwoods are also negatively affected by the ongoing drought.

ATTACHMENT G

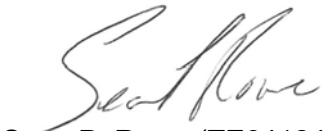
SURVEYOR CERTIFICATE STATEMENT

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.



Brian E. Daniels (TE821401-5)

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.



Sean P. Rowe (TE64124A)