

2018 Focused Survey Results for Yellow-Billed Cuckoo

Los Angeles County Flood Control District Soft-Bottom Channels Maintenance

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1.0 INTRODUCTION

This report presents the results of focused surveys conducted in 2018 at 15 soft-bottom channel reaches for the federally Threatened and State Endangered yellow-billed cuckoo (*Coccyzus americanus*). The 2018 survey results are summarized below in Table 1.

TABLE 1
SUMMARY OF RESULTS OF 2018 YELLOW-BILLED CUCKOO FOCUSED
SURVEYS AT 15 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	Negative
San Gabriel River Watershed		
40b	San Gabriel River – I-10 Freeway to Thienes Ave	Positive
43a	San Gabriel River – Upper	Negative
43b	San Gabriel River – Lower	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
121	Santa Clara River – San Francisquito Creek	Negative

As with the southwestern willow flycatcher (*Empidonax traillii extimus*) and least Bell's vireo (*Empidonax traillii extimus*), 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.

2.0 ENVIRONMENTAL SETTING

2.1 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. Altogether, 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).

2.2 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 2018, the LACFCD manages 110 channel reaches (1 thru 121¹) 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: 57 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.

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

3.0 PROPOSED PROJECT

3.1 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 (soft-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 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.

3.2 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 denser, 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 authorized by permit condition, 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.

4.0 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 (*Gasterosteus aculeatus williamsoni*) and federally listed Threatened Santa Ana sucker (*Catostomus santaanae*). 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, Psomas 2017).

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.

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, 109, and 121 that are not yet fully 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, 82², 87, and 97. San Gabriel River Watershed Reaches 39 and 44 were originally required and conducted in 2016 but subsequently in 2018, the Army Corps of Engineers staff authorized discontinuation of cuckoo surveys at these reaches due to lack of potentially suitable habitat. The 11 reaches originally included in the Nationwide Permit surveyed in 2018 include 14, 27, 40a, 43a, 43b, 71, 79, 80, 82, 87, and 97.

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. A biological reconnaissance survey was conducted for Reach 121 and it was determined to contain potentially suitable habitat for the cuckoo.

Combined with unpermitted channel reaches 103, 104, 109, and 121, these 15 soft-bottom channel reaches form the following 7 survey areas:

- Survey Area 1: Reach 14
- Survey Area 2: Reach 27
- Survey Area 3: Reach 40b
- Survey Area 4: Reaches 43a and 43b
- Survey Area 5: Reaches 71, 79, 80, and 103
- Survey Area 6: Reaches 82, 109, and 121
- Survey Area 7: Reaches 87, 97, and 104

This report provides the results of surveys for the yellow-billed cuckoo at these 7 Survey Areas (i.e., 15 soft-bottom channel reaches). See Attachments A and B for Survey Area Maps and Attachment C for representative photographs for each Survey Area.

4.1 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 Feather Rivers are 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 observed 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. Additionally, one cuckoo was observed on June 22, 2016 during focused surveys for LADPW in Reach 27 (Psomas 2016). This cuckoo observed at Wilmington Drain (Reach 27) was observed during a time period in which migrants occur in the region, and this individual cuckoo was most likely a migrant (Psomas 2016).

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 contain 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 plant 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.

5.0 **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.

Psomas Senior Biologists Brian E. Daniels (USFWS Permit No. TE821401-5) and Lindsay Messett (USFWS Permit No. TE-067064-3) conducted all surveys. Both Mr. Daniels and Ms. Messett 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” calls³ of yellow-billed cuckoo were played five times at one-minute intervals at each calling station (or point) established in 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.

Occasional survey assistance was provided by Psomas Senior Biologist Marc Blain, and Biologists Sarah Thomas, and Cristhian Mace. 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.

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)
1	1	B. Daniels	6/17/18	0610–0930	57–59	100–100	9–8
	2	B. Daniels	7/5/18	0600–0900	61–76	5–10	10–2
	3	B. Daniels	7/12/18	0610–0815	72–75	60–60	2–3
	4	L. Messett	8/3/18	0630–0900	72–79	30–20	0–1
2	1	B. Daniels	6/27/18	0620–0900	63–68	100–20	2–2
	2	B. Daniels	7/6/18	0645–0845	69–77	Clear–Clear	2–6
	3	B. Daniels	7/16/18	0640–0830	68–72	90–60	3–4
	4	L. Messett	8/8/18	0620–0915	71–85	100–30	0–1
3	1	B. Daniels	6/29/18	0600–0930	64–68	100–100	4–2
	2	B. Daniels	7/10/18	0600–0950	74–81	80–50	1–2
	3	B. Daniels	7/17/18	0600–1000	71–76	100–Clear	1–3
	4	L. Messett	8/1/18	0600–0905	73–84	Clear–Clear	0–1
4	1	B. Daniels	6/16/18	0600–1045	64–66	100–100	3–6
	2	B. Daniels	7/9/18	0600–1015	75–89	80–50	3–3
	3	B. Daniels	7/13/18	0600–0830	70–73	5–Clear	2–2
	4	L. Messett	8/2/18	0550–1000	70–83	Clear–Clear	0–1
5	1	L. Messett	6/20/18	0600–1100	60–79	40–15	0–3
	2	L. Messett	7/5/18	0620–1055	63–87	25–45	0–1
	3	L. Messett	7/27/18	0545–1120	70–88	Clear–Clear	0–2
	4	L. Messett	8/13/18	0600–1105	68–84	Clear–Clear	0–3
6	1	B. Daniels	6/19/18	0545–1100	55–79	Clear–Clear	4–3
	2	B. Daniels	7/3/18	0610–1100	59–75	100–Clear	3–9
	3	B. Daniels	7/11/18	0610–1045	70–84	5–20	3–4
	4	L. Messett	8/7/18	0605–1050	72–87	Clear–Clear	0–2
7	1	J. Feenstra	6/6/18 *	-	-	-	-
	2	L. Messett	7/2/18	0615–1045	62–77	50–25	0–1
	3	L. Messett	7/26/18	0600–1020	73–92	Clear–Clear	0–2
	4	L. Messett	8/9/18	0555–0935	70–86	Clear–Clear	0–2

°F: degrees Fahrenheit; mph: miles per hour

* USFWS approved survey was conducted with negative results by other entity: The Western Foundation of Vertebrate Zoology.

6.0 SURVEY RESULTS

One yellow-billed cuckoo was heard and seen on July 17, 2018, in the San Gabriel River (Reach 40b of Survey Area 3; see Attachment B-2). This bird flew in silently from upstream after broadcasting recorded “kowlp” call five at the Calling Point. The cuckoo perched approximately 8 feet above the ground in a small dense willow next to open water, moved a couple of feet, then perched and looked in Mr. Daniels’ direction. It then gave two or three quiet contact “kowlp” calls from this location, then moved higher in the trees before flying upstream a short distance where one more series of “kowlp” calls were heard. No more audible or visual detections of the cuckoo were made. 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.

6.1 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. The area burned during the 2016 Sage Fire. Burned 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 burned riparian woodland.

No yellow-billed cuckoos were detected during these surveys, and no southwestern willow flycatcher or least Bell’s vireo were present.

6.2 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 2018, the yellow-billed cuckoo survey area for Reach 27 included 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 includes at least 25 or 30 acres of riparian woodland.

No yellow-billed cuckoos were detected during these surveys, and no southwestern willow flycatcher or least Bell’s vireo were present.

6.3 SURVEY AREA 3

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

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.

downstream of San Jose Creek to include more riparian woodland habitat that is not part of Reach 40b. Although Survey Area 3 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 3.

One yellow-billed cuckoo was detected during these surveys on July 17, 2018. The southwestern willow flycatcher was not present, but the least Bell's vireo was recorded during the surveys of Survey Area 3. These data points are presented on Attachment B.

6.4 SURVEY AREA 4

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 4 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 willow 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.

6.5 SURVEY AREA 5

Survey Area 5 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 5 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 willow 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.

6.6 SURVEY AREA 6

Survey Area 6 includes LACFCD's Reaches 82, 109, and 121. These three 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. Reach 121 is located on the east bank of the San Francisquito Creek. Together, these three facilities contain about 16 acres. Survey Area 6 for these 3 reaches totals approximately 146 acres and includes about 81 acres of riparian woodland. Unfortunately, the ongoing drought has negatively affected much of the woodland habitat in Survey Area 6.

No yellow-billed cuckoos were detected during these surveys. The southwestern willow flycatcher was not present, but the least Bell's vireo was recorded during the surveys of Survey Area 6. These data points are presented on Attachment B.

6.7 SURVEY AREA 7

Survey Area 7 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 7 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 7.

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 7.

7.0 **REFERENCES CITED**

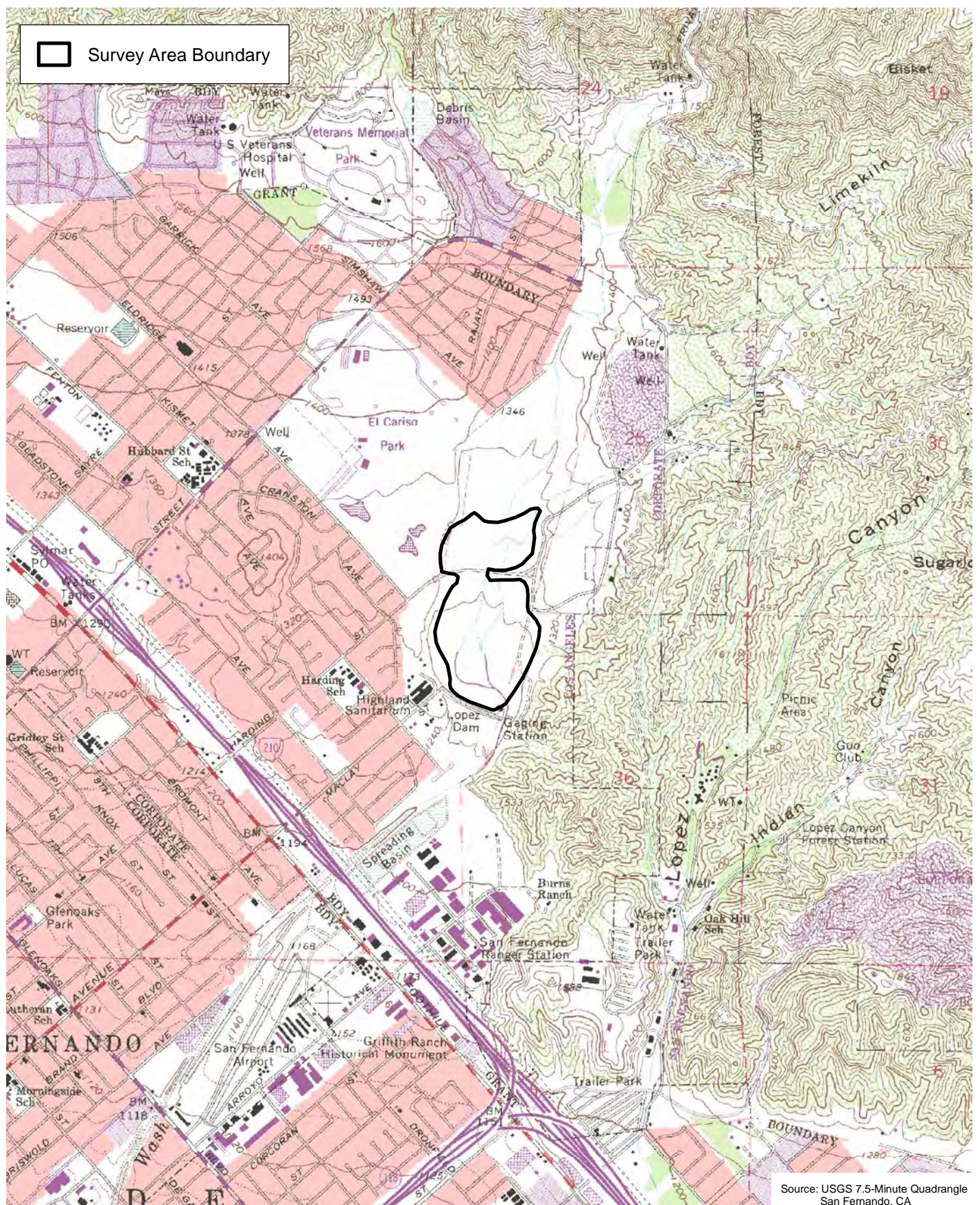
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ATTACHMENT A
SURVEY AREA USGS MAPS

 Survey Area Boundary



Source: USGS 7.5-Minute Quadrangle
San Fernando, CA

Survey Area 1: Reach 14

2018 Focused Survey for Yellow-Billed Cuckoo

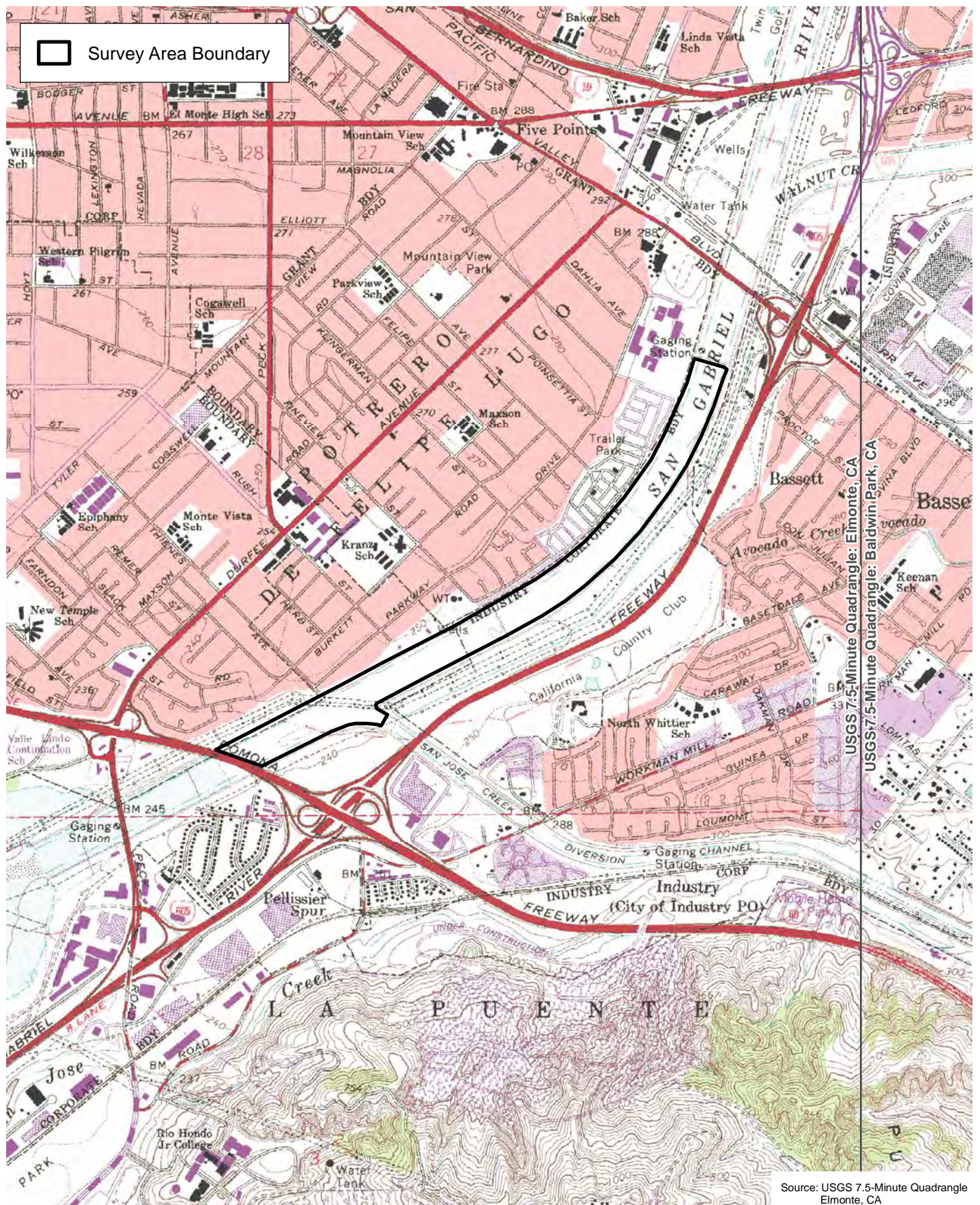
Attachment A-1



2,000 1,000 0 2,000
Feet



Survey Area Boundary



Source: USGS 7.5-Minute Quadrangle
El Monte, CA

Survey Area 3: Reach 40b

2018 Focused Survey for Yellow-Billed Cuckoo

Attachment A-3

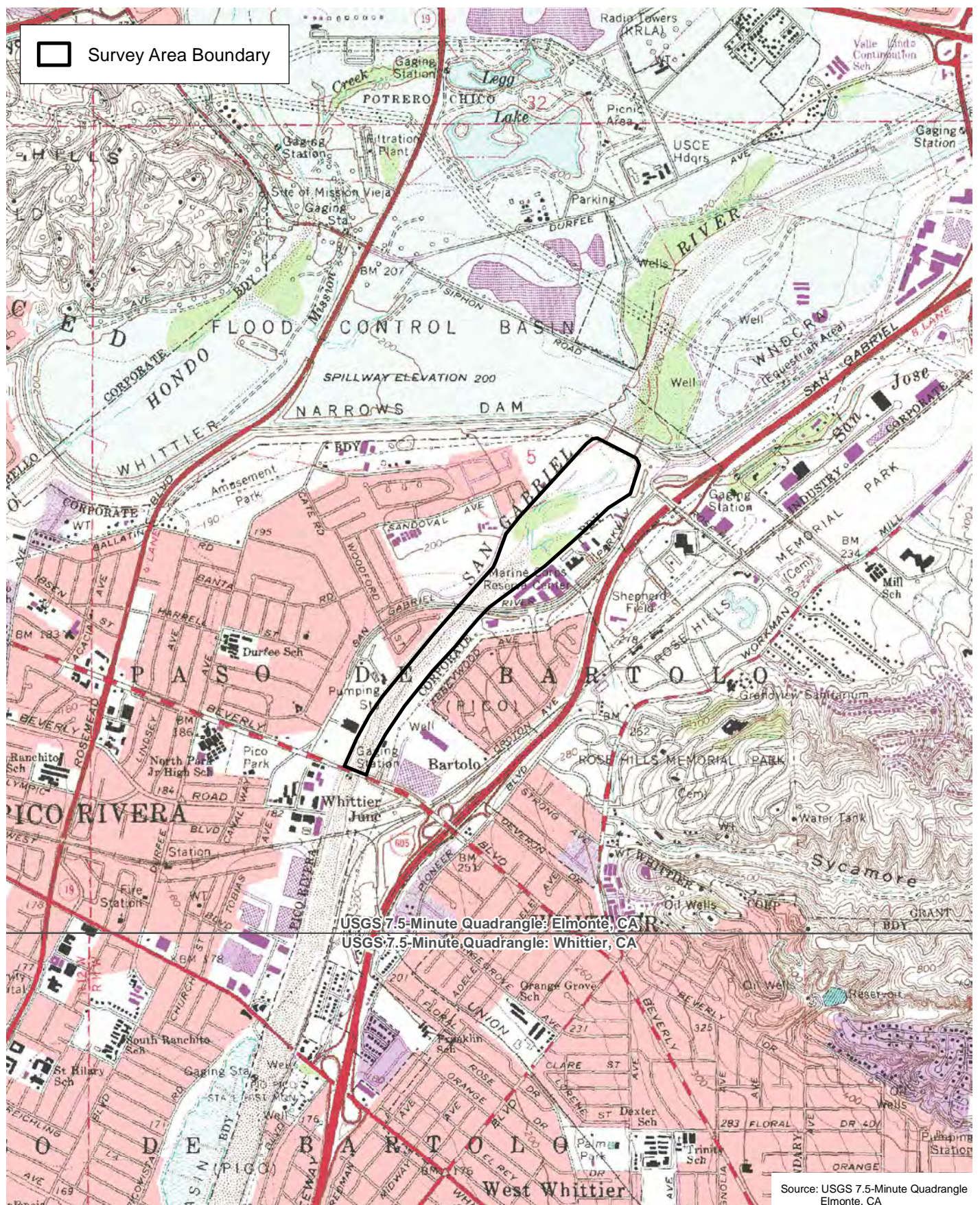


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Survey Area Boundary



Source: USGS 7.5-Minute Quadrangle
El Monte, CA

Survey Area 4: Reach 43a and 43b

2018 Focused Survey for Yellow-Billed Cuckoo

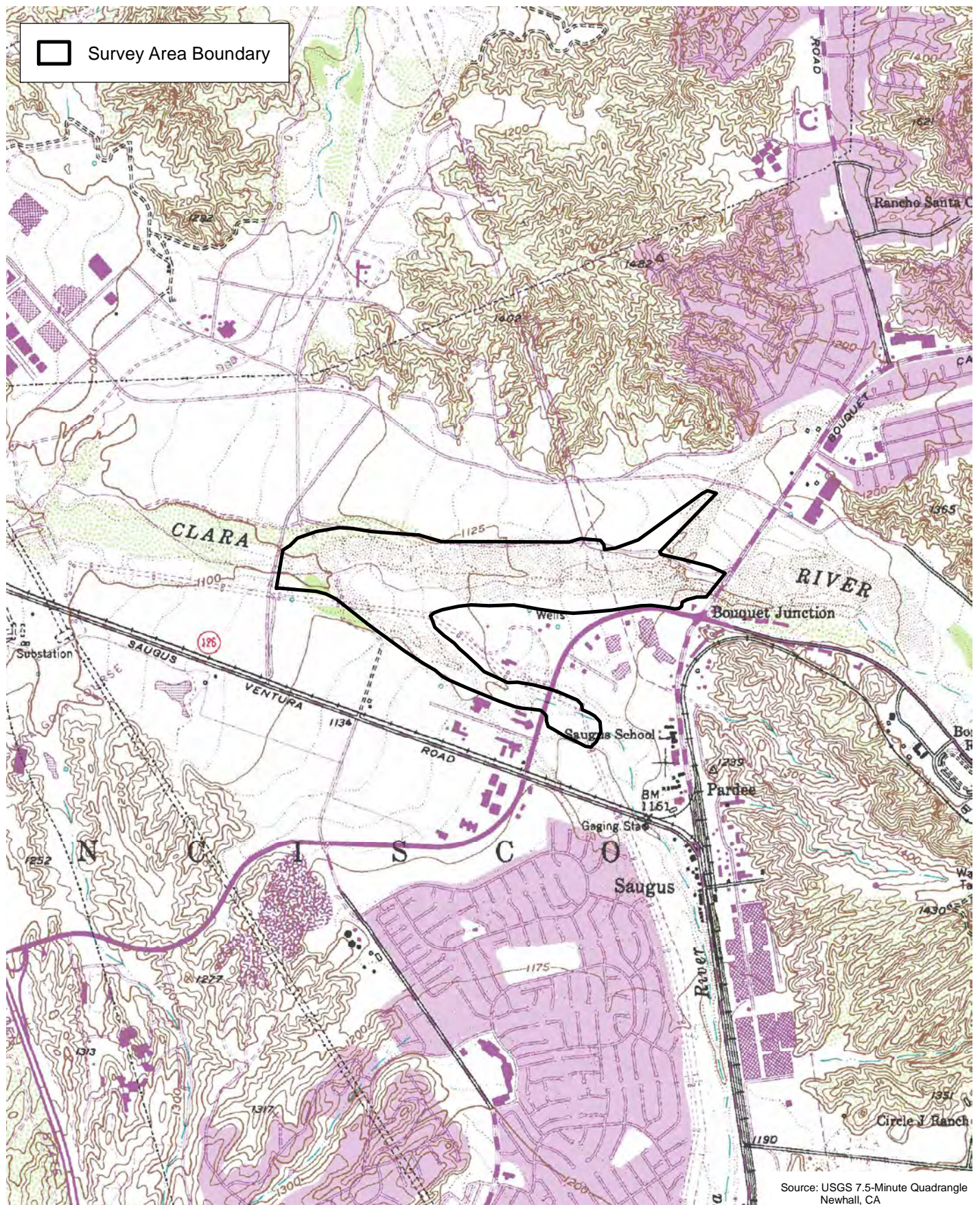
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Feet



Survey Area Boundary



Source: USGS 7.5-Minute Quadrangle
Newhall, CA

Survey Area 5: Reaches 71, 79, 80, and 103

Attachment A-5

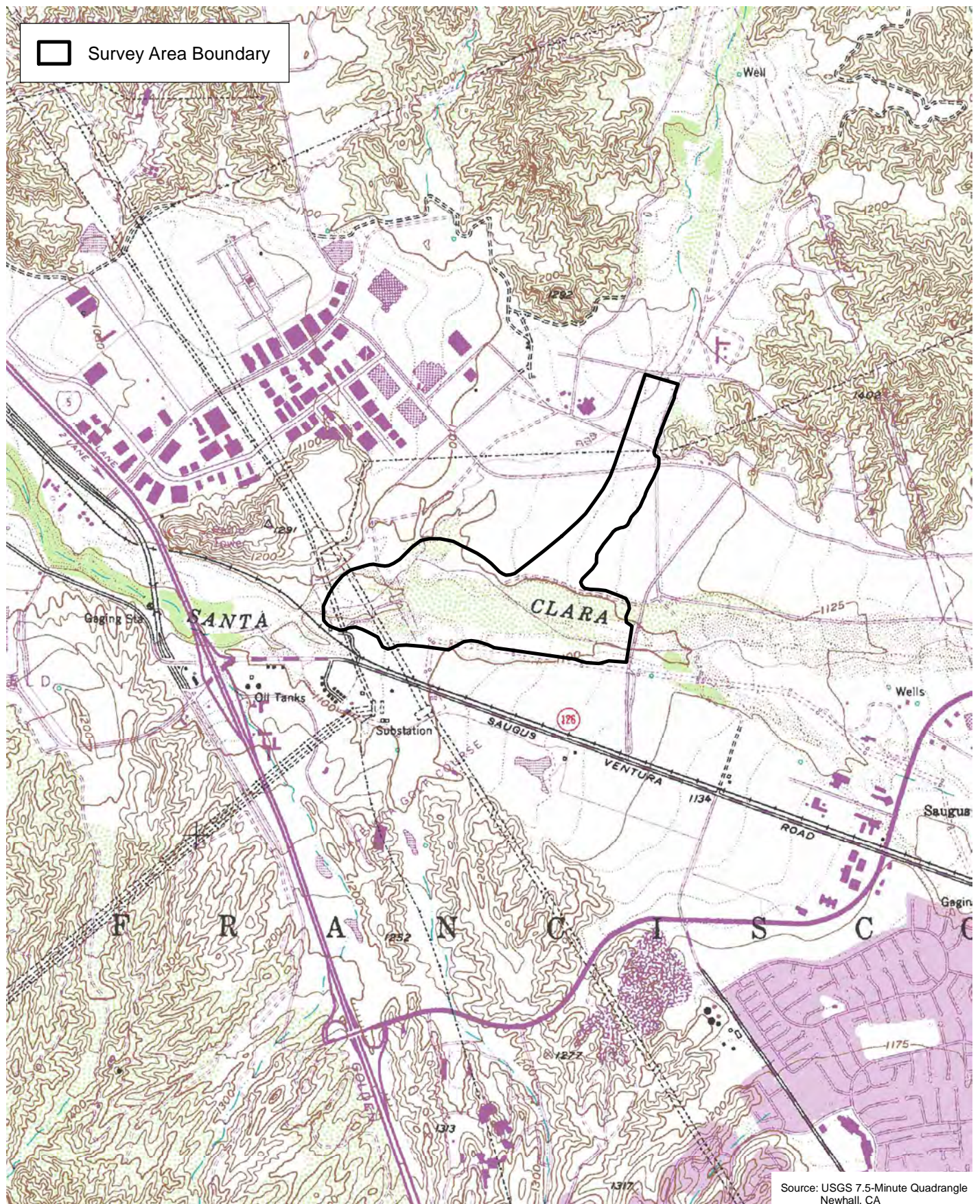
2018 Focused Survey for Yellow-Billed Cuckoo



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Feet



Survey Area Boundary



Source: USGS 7.5-Minute Quadrangle
Newhall, CA

Survey Area 6: Reaches 82, 109 and 121

2018 Focused Survey for Yellow-Billed Cuckoo

Attachment A-6

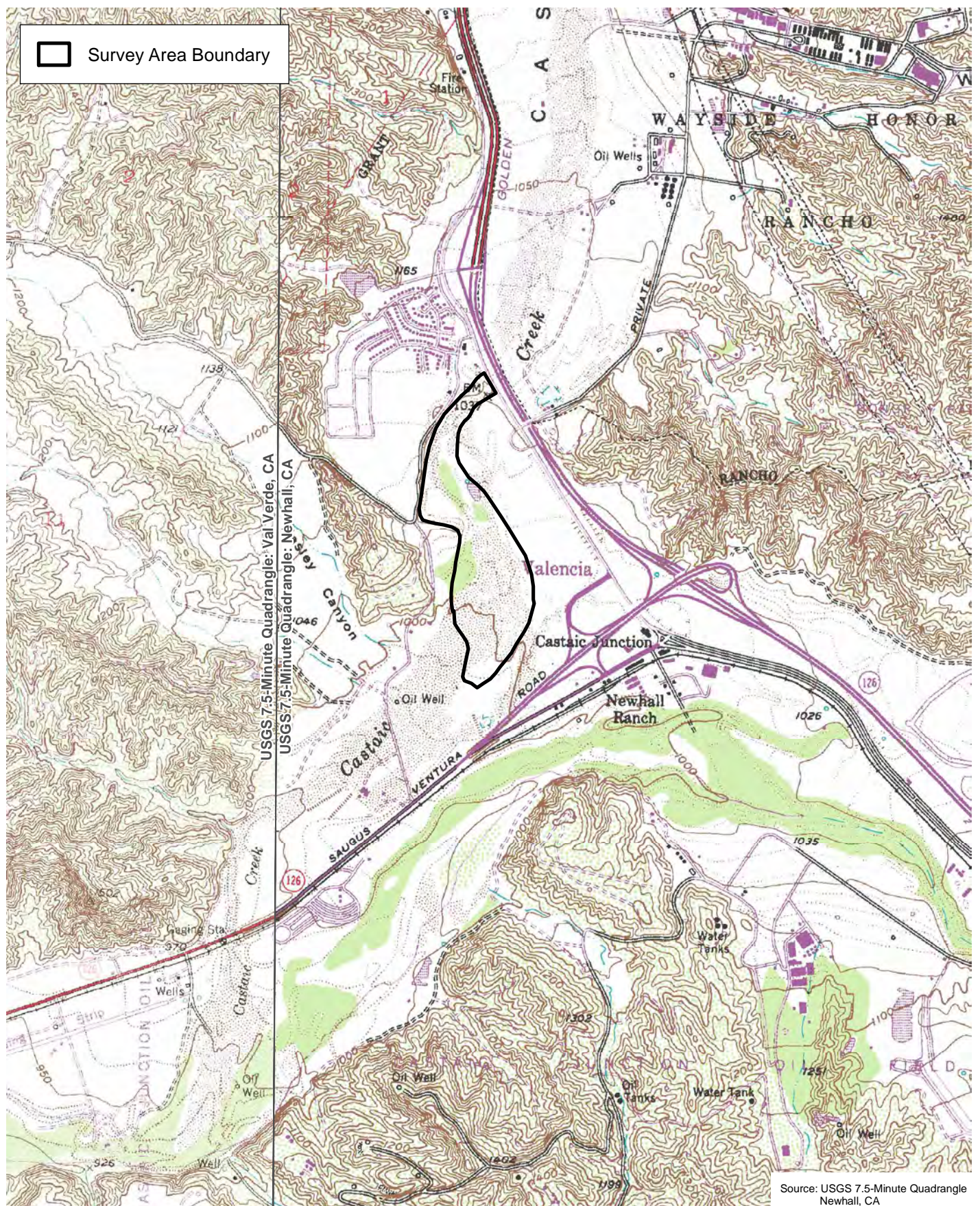


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 Survey Area Boundary



Survey Area 7: Reaches 87, 97, and 104

2018 Focused Survey for Yellow-Billed Cuckoo

Attachment A-7



2,000 1,000 0 2,000
Feet



ATTACHMENT B

SURVEY AREA AERIAL AND RESULTS MAPS



Survey Area Boundary

Note: There were no observations at this survey area.



Aerial Source: LAR-IAC 2014

Survey Area 1: Reach 14

2018 Focused Survey for Yellow-Billed Cuckoo

Attachment B-1



1,000 500 0 1,000
Feet



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Survey Area Boundary

Note: There were no observations at this survey area.



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Survey Area 2: Reach 27

2018 Focused Survey for Yellow-Billed Cuckoo

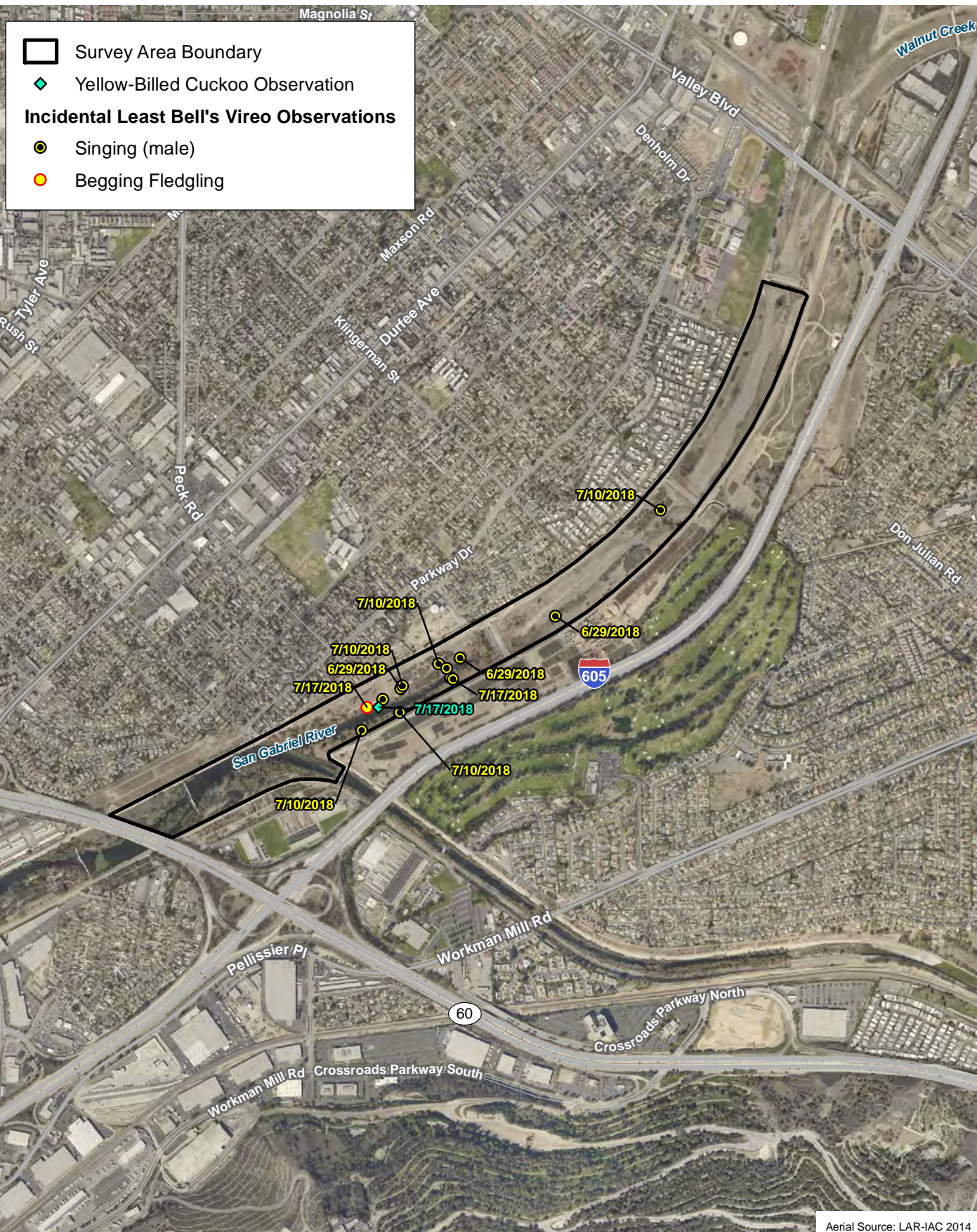
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Feet



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Survey Area 3: Reach 40b




2018 Focused Survey for Yellow-Billed Cuckoo

Attachment B-3



1,500 750 0 1,500 Feet



-  Survey Area Boundary
Incidental Least Bell's Vireo Observations
 Singing (male)
 Pair



Aerial Source: LAR-IAC 2014

Survey Area 4: Reach 43a and 43b

2018 Focused Survey for Yellow-Billed Cuckoo

Attachment B-4



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Feet



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- Survey Area Boundary
- Incidental Least Bell's Vireo Observations
- Singing (male)



Aerial Source: LAR-IAC 2014

Survey Area 5: Reaches 71, 79, 80, and 103

Attachment B-5



2018 Focused Survey for Yellow-Billed Cuckoo



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Feet



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-  Survey Area Boundary
- Incidental Least Bell's Vireo Observations**
-  Singing (male)



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Aerial Source: LAR-IAC 2014

Survey Area 6: Reaches 82, 109 and 121

Attachment B-6

2018 Focused Survey for Yellow-Billed Cuckoo



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Feet



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Survey Area Boundary

Note: There were no observations at this survey area.



Aerial Source: LAR-IAC 2014

Survey Area 7: Reaches 87, 97, and 104

2018 Focused Survey for Yellow-Billed Cuckoo

Attachment B-7



1,100 550 0 1,100
Feet



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ATTACHMENT C
SITE PHOTOGRAPHS



View east from Harding St. of burned cottonwood and willow trees in Lopez Debris Basin downstream of Reach 14.



View of dying cottonwood trees at Reach 82, facing south east.



View of marsh and riparian vegetation at Reach 27, facing downstream (south) from Lomita Blvd.



View of Reach 27, facing upstream (north) from Lomita Blvd.



View of Reach 40b, facing downstream (southwest) toward last drop structure before San Jose Creek.



Photo of the yellow-billed cuckoo observed at Reach 40b on July 17, 2018.

Representative Site Photographs

2018 Focused Survey for Yellow-Billed Cuckoo

Attachment C



ATTACHMENT D
AVIAN COMPENDIUM

Species	Survey Area 1	Survey Area 2	Survey Area 3	Survey Area 4	Survey Area 5	Survey Area 6	Survey Area 7
Canada goose <i>Branta canadensis</i>	X	X		X		X	
mallard <i>Anas platyrhynchos</i>		X	X	X			
California quail <i>Callipepla californica</i>	X				X	X	X
pied-billed grebe <i>Podilymbus podiceps</i>		X	X				
western/Clark's grebe <i>Aechmophorus occidentalis/clarkii</i>		X					
rock pigeon <i>Columba livia</i>	X	X	X	X	X		X
Eurasian collared-dove <i>Streptopelia decaocto</i>	X	X	X	X	X		X
mourning dove <i>Zenaida macroura</i>	X	X	X	X	X	X	X
yellow-billed cuckoo <i>Coccyzus americanus</i>			X				
greater roadrunner <i>Geococcyx californianus</i>							X
white-throated swift <i>Aeronautes saxatalis</i>			X	X		X	X
black-chinned hummingbird <i>Archilochus alexandri</i>				X	X	X	X
Anna's hummingbird <i>Calypte anna</i>	X	X	X	X	X	X	X
Costa's hummingbird <i>Calypte costae</i>							X
Allen's hummingbird <i>Selasphorus sasin</i>	X					X	
rufous/Allen's hummingbird <i>Selasphorus rufus/sasin</i>	X	X	X	X	X	X	X
common gallinule <i>Gallinula galeata</i>			X				
American coot <i>Fulica americana</i>			X				

Species	Survey Area 1	Survey Area 2	Survey Area 3	Survey Area 4	Survey Area 5	Survey Area 6	Survey Area 7
killdeer <i>Charadrius vociferus</i>			X	X	X		X
western gull <i>Larus occidentalis</i>	X	X		X			
Caspian tern <i>Hydroprogne caspia</i>		X					
double-crested cormorant <i>Phalacrocorax auritus</i>		X	X	X			
least bittern <i>Ixobrychus exilis</i>			X				
great blue heron <i>Ardea herodias</i>	X	X	X		X		
great egret <i>Ardea alba</i>	X	X	X		X		
snowy egret <i>Egretta thula</i>	X		X				
green heron <i>Butorides virescens</i>		X	X		X		
black-crowned night-heron <i>Nycticorax nycticorax</i>			X	X	X		
turkey vulture <i>Cathartes aura</i>					X	X	X
Cooper's hawk <i>Accipiter cooperii</i>		X	X	X	X	X	X
red-shouldered hawk <i>Buteo lineatus</i>		X		X	X	X	
red-tailed hawk <i>Buteo jamaicensis</i>	X		X	X	X	X	X
acorn woodpecker <i>Melanerpes formicivorus</i>				X		X	
Nuttall's woodpecker <i>Picoides nuttallii</i>	X		X	X	X	X	X
downy woodpecker <i>Picoides pubescens</i>	X	X	X	X	X	X	X
hairy woodpecker <i>Picoides villosus</i>					X		
American kestrel <i>Falco sparverius</i>				X			X

Species	Survey Area 1	Survey Area 2	Survey Area 3	Survey Area 4	Survey Area 5	Survey Area 6	Survey Area 7
red-crowned parrot <i>Amazona viridigenalis</i>				X			
Pacific-slope flycatcher <i>Empidonax difficilis</i>					X		X
black phoebe <i>Sayornis nigricans</i>	X	X	X	X	X	X	X
Say's phoebe <i>Sayornis saya</i>	X				X		
ash-throated flycatcher <i>Myiarchus cinerascens</i>	X			X	X	X	X
Cassin's kingbird <i>Tyrannus vociferans</i>	X		X	X	X		X
Bell's vireo <i>Vireo bellii</i>			X	X	X	X	
warbling vireo <i>Vireo gilvus</i>	X	X					
California scrub-jay <i>Aphelocoma californica</i>	X				X	X	X
American crow <i>Corvus brachyrhynchos</i>	X	X	X	X	X	X	X
common raven <i>Corvus corax</i>	X		X	X	X	X	X
tree swallow <i>Tachycineta bicolor</i>						X	
northern rough-winged swallow <i>Stelgidopteryx serripennis</i>	X	X	X	X	X	X	
cliff swallow <i>Petrochelidon pyrrhonota</i>	X		X	X	X	X	
barn swallow <i>Hirundo rustica</i>	X	X	X	X	X		X
oak titmouse <i>Baeolophus inornatus</i>					X	X	X
bushtit <i>Psaltirparus minimus</i>	X	X	X	X	X	X	X
white-breasted nuthatch <i>Sitta carolinensis</i>					X	X	
house wren <i>Troglodytes aedon</i>	X			X	X	X	X

Species	Survey Area 1	Survey Area 2	Survey Area 3	Survey Area 4	Survey Area 5	Survey Area 6	Survey Area 7
marsh wren <i>Cistothorus palustris</i>	X	X					
Bewick's wren <i>Thryomanes bewickii</i>	X			X	X	X	X
red-whiskered bulbul <i>Pycnonotus jocosus</i>			X				
wrentit <i>Chamaea fasciata</i>	X					X	
western bluebird <i>Sialia Mexicana</i>	X	X			X	X	X
Swainson's thrush <i>Catharus ustulatus</i>							
American robin <i>Turdus migratorius</i>	X		X				
California thrasher <i>Toxostoma redivivum</i>	X				X	X	X
northern mockingbird <i>Mimus polyglottos</i>	X	X	X	X	X		X
European starling <i>Sturnus vulgaris</i>			X	X	X	X	
phainopepla <i>Phainopepla nitens</i>	X			X		X	
northern red bishop <i>Euplectes franciscanus</i>			X				
scaly-breasted munia <i>Lonchura punctulata</i>	X	X	X	X		X	
house sparrow <i>Passer domesticus</i>	X		X	X	X		
house finch <i>Haemorhous mexicanus</i>	X	X	X	X	X	X	X
purple finch <i>Haemorhous purpureus</i>				X			
lesser goldfinch <i>Spinus psaltria</i>	X	X	X	X	X	X	X
Lawrence's goldfinch <i>Spinus lawrencei</i>	X					X	
American goldfinch <i>Spinus tristis</i>			X	X			X

Species	Survey Area 1	Survey Area 2	Survey Area 3	Survey Area 4	Survey Area 5	Survey Area 6	Survey Area 7
yellow-breasted chat <i>Icteria virens</i>			X				
spotted towhee <i>Pipilo maculatus</i>	X		X	X	X	X	X
Rufous-crowned sparrow <i>Aimophila ruficeps</i>	X						
California towhee <i>Melospiza crissalis</i>	X	X	X	X	X	X	X
song sparrow <i>Melospiza melodia</i>	X	X	X	X	X	X	X
hooded oriole <i>Icterus cucullatus</i>	X	X	X	X			X
Bullock's oriole <i>Icterus bullockii</i>	X		X	X			X
red-winged blackbird <i>Agelaius phoeniceus</i>			X	X			
brown-headed cowbird <i>Molothrus ater</i>			X	X			
Brewer's blackbird <i>Euphagus cyanocephalus</i>					X		
great-tailed grackle <i>Quiscalus mexicanus</i>	X		X	X	X		
orange-crowned warbler <i>Oreothlypis celata</i>							
common yellowthroat <i>Geothlypis trichas</i>	X	X	X	X	X	X	
yellow warbler <i>Setophaga petechial</i>	X	X	X	X	X	X	X
black-headed grosbeak <i>Pheucticus melanocephalus</i>	X	X			X	X	X
blue grosbeak <i>Passerina caerulea</i>	X	X	X	X			X
lazuli bunting <i>Passerina amoena</i>	X				X		

ATTACHMENT E

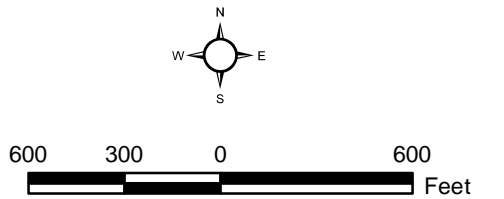
USFWS JULY 17, 2018 CUCKOO SIGHTING REPORT



7/18/2018 – Photograph of observed Yellow-billed Cuckoo.



- Yellow-billed Cuckoo Observation
- Reach Alignment



Aerial Source: LAR-IAC 2011

Reach 40b – 7/17/2018

24-Hour Notification



ATTACHMENT F

**YELLOW-BILLED CUCKOO SURVEY SUMMARY
AND SITE DESCRIPTION FORMS**

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general description 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: 10/17/18

Site Name: Reach 14	State: CA	County: Los Angeles
Name of Reporting Individual: Brian Daniels	Affiliation: 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: WGS84
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) <u>+FER (Acce)</u>			
Was site surveyed in previous year? <u>Yes</u> No Unknown		If yes, what site name was used? <u>same</u>	
Did you survey the same general area during each visit this year?		<u>Yes</u> / No	If no, summarize in comments below
If "Yes", was the same general area surveyed this year?		<u>Yes</u> / 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)	<input checked="" type="checkbox"/>	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)	<input type="checkbox"/>	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) <u>6</u>			Estimated Overall Canopy Cover (percent) <u>5%</u>		

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

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

Alluvial sage scrub is the dominant vegetation type from Lopez Debris Basin upstream to Pacoima Dam.

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: 50	2. Disturbed	% cover: 20	3. Ruderal	% cover: 20
4. Baccharis salicifolia	% cover: 10	5.	% cover:		

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

Comments. Reach 14 is a small side channel that outlets into Pacoima Wash upstream of Harding Street. It is situated between a golf course and the main channel of Pacoima Wash. It is 588 ft long and supports strip of riparian habitat (0.63 acre). Two other small side channels supporting willows are on opposite side of Pacoima Wash. Riparian is upstream between Gavina St and the dam and downstream in the Lopez Debris Basin. This area has been impacted by recent wildfires including the Sage fire in July 2016 and Creek fire in December 2017. Even before these fires, this survey area contained no more than 10 acres of discontinuous riparian habitats. It was not recommended for these surveys in the habitat assessment, but required by the permits.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general description 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: 10/17/18

Site Name: Reach 27	State: CA	County: Los Angeles
Name of Reporting Individual: Brian Daniels	Affiliation: Psomas	
Phone #: (626) 351-2000	Email: brian.daniels@psomas.com	
USFWS Permit #: TE821401-5	State Permit #: SC-4535	

Site Coordinates:	Start: E 380689	N 3740705	UTM Zone: 11s
	Stop: E 380802	N 3739757	NAD: WGS84
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)			
Was site surveyed in previous year? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		If yes, what site name was used?	
Did you survey the same general area during each visit this year? <input checked="" type="radio"/> Yes <input type="radio"/> No		If no, summarize in comments below	
If "Yes", was the same general area surveyed this year? <input checked="" type="radio"/> Yes <input type="radio"/> 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)	<input checked="" type="checkbox"/>	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)	<input type="checkbox"/>	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): 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. —	% 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 industrial (mainly oil) from the Harbor Freeway to PCH, but empties into the north side of Ken Malloy Regional Park that supports a relatively large willow woodland. Native habitats in this area are currently being restored and protected.

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. Industrial	% cover: 40	3.	% cover:
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. The Proposition "O" Project restored Wilmington Drain and opened it to public use. However, the area is also used by homeless that now occupy the park. Between Lomita and PCH, the gates were locked this year with Do Not Enter signs citing "dangerous conditions" as the reason for the closure.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general description 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: 10/17/18
Site Name: Reach 40b	State: CA	County: Los Angeles
Name of Reporting Individual: Brian Daniels	Affiliation: 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: WGS84
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? <u>Yes</u> No Unknown		If yes, what site name was used?	
Did you survey the same general area during each visit this year?		<u>Yes</u> /No	If no, summarize in comments below
If "Yes", was the same general area surveyed this year?		<u>Yes</u> /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)	<input checked="" type="checkbox"/>	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		Estimated Overall Cover (percent): 50	

Describe adjacent habitat (e.g. upland vegetation; desert scrub; urban/residential; agriculture/orchard; oak woodland)			
Adjacent habitats within flood control channel are cleared every year per conditions of the regulatory permits necessary for management of the channel. These areas grow back in spring mainly as areas of ruderal (non-native weeds) vegetation.			
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?	<u>Yes</u> No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	Yes <u>No</u> (circle one)

Comments. The combination of maintained areas (cleared) adjacent to protected polygons of riparian habitat have been productive for the least Bell's vireo. This year's Yellow-billed Cuckoo was surprising but in a general area (Whittier Narrows) that historically supported the species.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general description 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: 10/17/18
Site Name: Reach 43a & b	State: CA	County: Los Angeles
Name of Reporting Individual: Brian Daniels	Affiliation: Psomas	
Phone #: (626) 351-2000	Email: brian.daniels@psomas.com	
USFWS Permit #: TE821401-5	State Permit #: SC4535	

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? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		If yes, what site name was used?	
Did you survey the same general area during each visit this year? <input checked="" type="radio"/> Yes <input type="radio"/> No		If no, summarize in comments below	
If "Yes", was the same general area surveyed this year? <input checked="" type="radio"/> Yes <input type="radio"/> 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)	<input checked="" type="checkbox"/>	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)	<input type="checkbox"/>	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: 2.5	4. Eucalyptus sp	% cover: 2.5
Average height of overstory (m)(do not include a range) 7		Estimated Overall Canopy Cover (percent) 75	

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

Describe adjacent habitat (e.g. upland vegetation; desert scrub; urban/residential; agriculture/orchard; oak woodland)	
Adjacent habitats within flood control channel are cleared every year per conditions of the regulatory permits necessary for management of the channel. These areas grow back in spring mainly as areas of ruderal (non-native weeds) vegetation.	

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?	<input checked="" type="radio"/> Yes <input type="radio"/> No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	Yes <input checked="" type="radio"/> No (circle one)

Comments.
The continuing regional drought is impacting the riparian vegetation especially hard in this survey area.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general description 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: 10/17/18

Site Name: Reaches 71, 79, 80, and 103	State: CA	County: Los Angeles
Name of Reporting Individual: Brian Daniels	Affiliation: 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)			
Was site surveyed in previous year? <u>Yes</u> No Unknown If yes, what site name was used?			
Did you survey the same general area during each visit this year? <u>Yes</u> / No If no, summarize in comments below			
If "Yes", was the same general area surveyed this year? <u>Yes</u> / 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)	<input checked="" type="checkbox"/>	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)	<input type="checkbox"/>	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, open wash, disturbed areas, ruderal (weedy) 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 sagebrush	% 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?	<u>Yes</u>	No	(circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	<u>Yes</u>	No	(circle one)

Comments.

This survey area also includes the lower portions of the South Fork Santa Clara River and Bouquet Canyon Creek. The highest quality riparian habitats are located in the Santa Clara River Channel downstream of its confluence with Bouquet Canyon. These habitats are outside the maintenance areas of all four reaches included in this survey area.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general description 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: 10/17/18
Site Name: Reaches 82, 109, and 121	State: CA	County: Los Angeles
Name of Reporting Individual: Brian Daniels	Affiliation: Psomas	
Phone #: (626) 251-2000	Email: brian.daniels@psomas.com	
USFWS Permit #: TE821401-5	State Permit #: SC-4535	

Site Coordinates:	Start: E 356374	N 3810289	UTM Zone: 11s
	Stop: E 356632	N 3811724	NAD: WGS84
USGS Quad Name(s): Newhall	Length of area surveyed (in kilometers): 2.3		Elevation: 1,095 ft
Name of nearest Creek, River, Wetland, or Lake: Santa Clara River and San Francisquito Wash			
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County)			
Was site surveyed in previous year? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		If yes, what site name was used?	
Did you survey the same general area during each visit this year? <input checked="" type="radio"/> Yes <input type="radio"/> No		If no, summarize in comments below	
If "Yes", was the same general area surveyed this year? <input checked="" type="radio"/> Yes <input type="radio"/> 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: 75	2. Populus Fremontii	% cover: 25	3.	% cover:
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)

Great Basin sagebrush scrub, open wash, ruderal and disturbed within the channel, but outside channel its a mix of residential, commercial, and light industrial.

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: 25	3. sage scrub	% cover: 15
4. tamarisk	% cover: 15	5. disturbed	% cover: 15		

Was surface water or saturated soil present at or adjacent to site within 300 meters?	<input checked="" type="radio"/> Yes <input type="radio"/> No (circle one)
Was surface water or saturated soil present at or adjacent to all patches surveyed?	Yes <input checked="" type="radio"/> No (circle one)

Comments.

Habitats at the confluence of San Francisquito Wash and the Santa Clara River have been negatively affected by the drought. Many cottonwoods are dying on the north side of the channel. Recent rains, however, have flushed out recent dead growth from center of channel and the willows in that area have responded nicely.

Yellow-Billed Cuckoo Survey Site Description Form

This form is intended to provide a general description 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: 10/17/18

Site Name: Reaches 87, 97, and 104	State: CA	County: Los Angeles
Name of Reporting Individual: Brian Daniels	Affiliation: Psomas	
Phone #: Z(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: WGS84
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? <u>Yes</u> No Unknown If yes, what site name was used?			
Did you survey the same general area during each visit this year? <u>Yes</u> No If no, summarize in comments below			
If "Yes", was the same general area surveyed this year? <u>Yes</u> 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)	<input checked="" type="checkbox"/>	Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)	<input type="checkbox"/>	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)		Estimated Overall Canopy Cover (percent)

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. Tamarix ramosissima % cover: 40	3. Salix exigua % cover: 10
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)

Within the channel its open wash, tamarisk scrub, and tamarisk-mule fat scrub; outside the channel its open space to west, residential to north, industrial to east, and agriculture to south.

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 occupies the core of this survey area. It is no longer actively maintained and is suffering from the regional drought.

Site Name: <u>Beach Mt (Survey Area 1)</u>		County: <u>Los Angeles</u>		State: <u>CA</u>	
USGS Quad Name: <u>San Fernando</u>				Elevation: <u>1,310 ft.</u>	
Creek, River, Wetland, or Lake Name: <u>Pacifica Wash</u>					
Site Coordinates:	Start: E <u>370255</u> N <u>3797649</u>	UTM Zone: <u>11s</u>			
	Stop: E <u>370265</u> N <u>3796793</u>	Datum: <u>NAD83</u>			
Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County) <u>+ Federal (ACOE)</u>					
Was site surveyed in previous year? <u>Yes</u> No Unknown		If yes, what site name was used? <u>Same</u>			

Survey # (Observer(s) (Last Name, First Initial))	Date (m/d/y)	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	C u c k o o #	Corrected Coordinates	
								UTM E	UTM N				UTM E	UTM N
Survey Period #1 Observer(s): <u>B. Daniels</u>	Date:													
	Start:													
	Stop:													
	Total hrs:													
	Total:													
Survey Period #2 Observer(s): <u>B. Daniels</u>	Date:													
	Start:													
	Stop:													
	Total hrs:													
	Total:													
Survey Period #3 Observer(s): <u>B. Daniels</u>	Date:													
	Start:													
	Stop:													
	Total hrs:													
	Total:													
Survey Period #4 Observer(s): <u>L. Messetti</u>	Date:													
	Start:													
	Stop:													
	Total hrs:													
	Total:													
Survey Period #5 Observer(s):	Date:													
	Start:													
	Stop:													
	Total hrs:													
	Total:													
Survey Summary:		# Det	# PO	# PR	# CO	# Nests found	Total Survey Hours:							
Total YBCUs*		<u>0</u>					<u>10.8</u>							
Notes (refer to Cuckoo # associated with individual detections)													*Include justification for these designations.	

VOCALIZATION	CODE	BEHAVIOR	CODE	BEHAVIOR	CODE	BREEDING	CODE
Contact	CON	No visual	NV	Catches Prey	CP	Copulation	COP
Coo	COO	Sitting	ST	Carry Food	CF	Feeds Mate	FM
Knock/Alarm	ALA	Foraging	FO	Eats Food	EF	Carry Nest Material	CN
Juvenile Calls	JUVC	Preening	PRE	At Nest	AN	Brooding/Incubating	BI
Other Vocalization	OV	Flying	FLY	Juvenile	JUV	Feeds Nestling	FN
		Distraction Display	DD	Vocal Exchange	VEX	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 Summary Form

Site Name: Reach 27 (Survey Area 2) County: Los Angeles State: CA
 USGS Quad Name: Terrance Elevation: 23 Ft.
 Creek, River, Wetland, or Lake Name: Wilmington Drain
 Site Coordinates: Start: E 380689 N 3740705 UTM Zone: 11s
 Stop: E 380802 N 3739757 Datum: NAD83
 Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal/County) LA City + County
 Was site surveyed in previous year? ☒ Yes ☐ No ☐ Unknown If yes, what site name was used? Same

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 'Kowp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates		Distance (m)	Bearing	C u c k o o #	Corrected Coordinates	
								UTM E	UTM N				UTM E	UTM N
Survey Period #1	Date: <u>6/27/18</u>													
Observer(s):	Start: <u>0620</u>													
<u>B. Daniels</u>	Stop: <u>0900</u>													
	Total hrs: <u>2.7</u>	Total: <u>0</u>												
Survey Period #2	Date: <u>7/16/18</u>													
Observer(s):	Start: <u>0645</u>													
<u>B. Daniels</u>	Stop: <u>0845</u>													
	Total hrs: <u>2</u>	Total: <u>0</u>												
Survey Period #3	Date: <u>7/16/18</u>													
Observer(s):	Start: <u>0640</u>													
<u>B. Daniels</u>	Stop: <u>0830</u>													
	Total hrs: <u>1.9</u>	Total: <u>0</u>												
Survey Period #4	Date: <u>8/13/18</u>													
Observer(s):	Start: <u>0620</u>													
<u>L. Moxett</u>	Stop: <u>0915</u>													
	Total hrs: <u>3</u>	Total: <u>0</u>												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary: #Det 0 #PO 0 #PR 0 #CO 0 #Nests found 0 Total Survey Hours: 9.6
 Total YBCUs* 0
 Notes (refer to Cuckoo # associated with individual detections):
 *Include justification for these designations.

VOCALIZATION	CODE	BEHAVIOR	CODE	BEHAVIOR	CODE	BREEDING	CODE
Contact	CON	No visual	NV	Catches Prey	CP	Copulation	COP
Coo	COO	Sitting	ST	Carry Food	CF	Feeds Mate	FM
Knock/Alarm	ALA	Foraging	FO	Eats Food	EF	Carry Nest Material	CN
Juvenile Calls	JUVC	Preening	PRE	At Nest	AN	Brooding/Incubating	BI
Other Vocalization	OV	Flying	FLY	Juvenile	JUV	Feeds Nestling	FN
		Distraction Display	DD	Vocal Exchange	VEX	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 Summary Form

Site Name: Reach 40b (Survey Area 3) County: Los Angeles State: CA.
 USGS Quad Name: E1 Monte Elevation: 255 ft.
 Creek, River, Wetland, or Lake Name: San Gabriel River
 Site Coordinates: Start: E 406580 N 3767801 UTM Zone: 113
 Stop: E 404790 N 3766641 Datum: NAD83
 Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal County) Federal (ACOR)
 Was site surveyed in previous year? Yes No Unknown If yes, what site name was used? same

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	C u c k o o #	Corrected Coordinates	
								UTM E	UTM N				UTM E	UTM N
Survey Period #1	Date: <u>6/29/16</u>													
Observer(s): <u>B. Daniels</u>	Start: <u>0600</u>													
	Stop: <u>0930</u>													
	Total hrs: <u>3.5</u>	Total: <u>0</u>												
Survey Period #2	Date: <u>7/10/16</u>													
Observer(s): <u>B. Daniels</u>	Start: <u>0600</u>													
	Stop: <u>0950</u>													
	Total hrs: <u>3.8</u>	Total: <u>0</u>												
Survey Period #3	Date: <u>7/17/16</u>													
Observer(s): <u>B. Daniels</u>	Start: <u>0600</u>													
	Stop: <u>1000</u>													
	Total hrs: <u>4.0</u>	Total: <u>1</u>												
Survey Period #4	Date: <u>8/1/16</u>													
Observer(s): <u>L. Mezzetti</u>	Start: <u>0600</u>													
	Stop: <u>0915</u>													
	Total hrs: <u>3.3</u>	Total: <u>0</u>												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary: # Det 1 #PO 0 #PR 0 #CO 0 #Nests found 0 Total Survey Hours: 17.6

Notes (refer to Cuckoo # associated with individual detections):
 *Include justification for these designations.

VOCALIZATION	CODE	BEHAVIOR	CODE	BEHAVIOR	CODE	BREEDING	CODE
Contact	CN	No visual	NV	Catches Prey	CP	Copulation	COP
Coo	COO	Sitting	ST	Carry Food	CF	Feeds Mate	FM
Knock/Alarm	ALA	Foraging	FO	Eats Food	EF	Carry Nest Material	CN
Juvenile Calls	JUVC	Preening	PRE	At Nest	AN	Brooding/Incubating	BI
Other Vocalization	OV	Flying	FLY	Juvenile	JUV	Feeds Nestling	FN
		Distraction Display	DD	Vocal Exchange	VEX	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 Summary Form

Site Name: Reaches 4346 (Survey Area 4) County: Los Angeles State: CA
 USGS Quad Name: E1 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 401288 N 3763435 Datum: NAD83
 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? Same

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	C u c k o o #	Corrected Coordinates	
								UTM E	UTM N				UTM E	UTM N
Survey Period #1	Date: <u>6/16/18</u>													
Observer(s): <u>B. Daniels</u>	Start: <u>0600</u>													
	Stop: <u>1045</u>													
	Total hrs: <u>4.8</u>	Total: <u>0</u>												
Survey Period #2	Date: <u>7/19/18</u>													
Observer(s): <u>B. Daniels</u>	Start: <u>0600</u>													
	Stop: <u>1015</u>													
	Total hrs: <u>4.3</u>	Total: <u>0</u>												
Survey Period #3	Date: <u>7/13/18</u>													
Observer(s): <u>B. Daniels</u>	Start: <u>0600</u>													
	Stop: <u>0936</u>													
	Total hrs: <u>3.6</u>	Total: <u>0</u>												
Survey Period #4	Date: <u>8/2/18</u>													
Observer(s): <u>L. Messett</u>	Start: <u>0550</u>													
	Stop: <u>1000</u>													
	Total hrs: <u>4.2</u>	Total: <u>0</u>												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary: # Det 10 #PO 0 #PR 0 #CO 0 #Nests found 0 Total Survey Hours: 17.1
 Total YBCUs* 10
 Notes (refer to Cuckoo # associated with individual detections) _____

*Include justification for these designations.

VOCALIZATION	CODE	BEHAVIOR	CODE	BEHAVIOR	CODE	BREEDING	CODE
Contact	CON	No visual	NV	Catches Prey	CP	Copulation	COP
Coo	COO	Sitting	ST	Carry Food	CF	Feeds Mate	FM
Knock/Alarm	ALA	Foraging	FO	Eats Food	EF	Carry Nest Material	CN
Juvenile Calls	JUVC	Preening	PRE	At Nest	AN	Brooding/Incubating	BI
Other Vocalization	OV	Flying	FLY	Juvenile	JUV	Feeds Nestling	FN
		Distraction Display	DD	Vocal Exchange	VEX	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 Summary Form

Site Name: Reaches 71, 79, 80, 103 (Survey Area 5) 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: NAD 83
 Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other Municipal County Santa Clara + County
 Was site surveyed in previous year? ☒ Yes ☐ No ☐ Unknown If yes, what site name was used? Same

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 'Kowp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates		Distance (m)	Bearing	C u c k o o #	Corrected Coordinates	
								UTM E	UTM N				UTM E	UTM N
Survey Period #1	Date: <u>6/20/18</u>													
Observer(s):	Start: <u>0600</u>													
<u>L. Messett</u>	Stop: <u>1100</u>													
	Total hrs: <u>5</u>	Total: <u>0</u>												
Survey Period #2	Date: <u>7/5/18</u>													
Observer(s):	Start: <u>0620</u>													
<u>L. Messett</u>	Stop: <u>1055</u>													
	Total hrs: <u>4.6</u>	Total: <u>0</u>												
Survey Period #3	Date: <u>7/27/18</u>													
Observer(s):	Start: <u>0545</u>													
<u>L. Messett</u>	Stop: <u>1120</u>													
	Total hrs: <u>5.6</u>	Total: <u>0</u>												
Survey Period #4	Date: <u>8/13/18</u>													
Observer(s):	Start: <u>0600</u>													
<u>L. Messett</u>	Stop: <u>1105</u>													
	Total hrs: <u>5</u>	Total: <u>0</u>												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary: # Det 0 #PO 0 #PR 0 #CO 0 #Nests found 0 Total Survey Hours: 20.2
 Total YBCUs* 0
 Notes (refer to Cuckoo # associated with individual detections) _____
 *Include justification for these designations.

VOCALIZATION	CODE	BEHAVIOR	CODE	BEHAVIOR	CODE	BREEDING	CODE
Contact	CON	No visual	NV	Catches Prey	CP	Copulation	COP
Coo	COO	Sitting	ST	Carry Food	CF	Feeds Mate	FM
Knock/Alarm	ALA	Foraging	FO	Eats Food	EF	Carry Nest Material	CN
Juvenile Calls	JUVC	Preening	PRE	At Nest	AN	Brooding/Incubating	BI
Other Vocalization	OV	Flying	FLY	Juvenile	JUV	Feeds Nestling	FN
		Distraction Display	DD	Vocal Exchange	VEX	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 Summary Form

Site Name: Reading 82, 109 (Survey Area 6) County: Los Angeles State: CA.
 USGS Quad Name: Newhall Elevation: 1,025 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: NAD83
 Ownership: BLM Reclamation NPS USFWS USFS Tribal State Private Other (Municipal) County Santa Clara County
 Was site surveyed in previous year? (Yes) No Unknown If yes, what site name was used? Same

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 'Kowp' call played before YBCU responded	Behavior code	Surveyor Detection Coordinates		Distance (m)	Bearing	C u c k o o #	Corrected Coordinates	
								UTM E	UTM N				UTM E	UTM N
Survey Period #1	Date: <u>6/19/18</u>													
Observer(s): <u>B. Daniels</u>	Start: <u>0545</u>													
	Stop: <u>1100</u>													
	Total hrs: <u>15.3</u>	Total: <u>0</u>												
Survey Period #2	Date: <u>7/13/18</u>													
Observer(s): <u>B. Daniels</u>	Start: <u>0610</u>													
	Stop: <u>1100</u>													
	Total hrs: <u>4.8</u>	Total: <u>0</u>												
Survey Period #3	Date: <u>7/11/18</u>													
Observer(s): <u>B. Daniels</u>	Start: <u>0610</u>													
	Stop: <u>1045</u>													
	Total hrs: <u>4.6</u>	Total: <u>0</u>												
Survey Period #4	Date: <u>7/7/18</u>													
Observer(s): <u>L. Messt</u>	Start: <u>0605</u>													
	Stop: <u>1050</u>													
	Total hrs: <u>4.8</u>	Total: <u>0</u>												
Survey Period #5	Date:													
Observer(s):	Start:													
	Stop:													
	Total hrs:	Total:												

Survey Summary: # Det 0 #PO 0 #PR 0 #CO 0 #Nests found 0 Total Survey Hours: 19.5
 Total YBCUs* 0
 Notes (refer to Cuckoo # associated with individual detections) _____

*Include justification for these designations.

VOCALIZATION	CODE	BEHAVIOR	CODE	BEHAVIOR	CODE	BREEDING	CODE
Contact	CON	No visual	NV	Catches Prey	CP	Copulation	COP
Coo	COO	Sitting	ST	Carry Food	CF	Feeds Mate	FM
Knock/Alarm	ALA	Foraging	FO	Eats Food	EF	Carry Nest Material	CN
Juvenile Calls	JUVC	Preening	PRE	At Nest	AN	Brooding/Incubating	BI
Other Vocalization	OV	Flying	FLY	Juvenile	JUV	Feeds Nestling	FN
		Distraction Display	DD	Vocal Exchange	VEX	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 Summary Form

Site Name: Reacher 27 97.104 (Survey Area 7) 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? Same

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	C u c k o o #	Corrected Coordinates	
								UTM E	UTM N				UTM E	UTM N
Survey Period #1	Date:													
Observer(s):	Start:													
J. Fenstrom	Stop:													
	Total hrs:	Total:												
		0												
Survey Period #2	Date:													
Observer(s):	Start:													
L. Messett	Stop:													
	Total hrs:	Total:												
		0												
Survey Period #3	Date:													
Observer(s):	Start:													
L. Messett	Stop:													
	Total hrs:	Total:												
		0												
Survey Period #4	Date:													
Observer(s):	Start:													
L. Messett	Stop:													
	Total hrs:	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					

Notes (refer to Cuckoo # associated with individual detections)

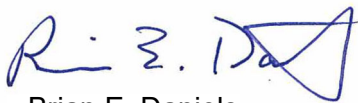
*Include justification for these designations.

VOCALIZATION	CODE	BEHAVIOR	CODE	BEHAVIOR	CODE	BREEDING	CODE
Contact	CON	No visual	NV	Catches Prey	CP	Copulation	COP
Coo	COO	Sitting	ST	Carry Food	CF	Feeds Mate	FM
Knock/Alarm	ALA	Foraging	FO	Eats Food	EF	Carry Nest Material	CN
Juvenile Calls	JUVC	Preening	PRE	At Nest	AN	Brooding/Incubating	BI
Other Vocalization	OV	Flying	FLY	Juvenile	JUV	Feeds Nestling	FN
		Distraction Display	DD	Vocal Exchange	VEX	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.

ATTACHMENT G
SURVEYOR CERTIFICATE STATEMENT

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

A handwritten signature in blue ink, appearing to read "R. E. Daniels", with a stylized flourish at the end.

Brian E. Daniels
(TE-821401-5)

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

A handwritten signature in blue ink, appearing to read "Lindsay Messett", in a cursive script.

Lindsay A. Messett, CWB®
(TE-067064-3)