# APPENDIX A

# BIOLOGICAL TECHNICAL ASSESSMENT REPORT

BonTerra PSOMAS

# Biological Technical Assessment

## Malibu Creek and Dominguez Watersheds Feasibility Study

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# SECTION 1.0 INTRODUCTION

This Biological Technical Assessment Report (Report) has been prepared to satisfy requirements of Waste Discharge Requirement Order No. R4-2010-0021 (WDR) adopted by the California Regional Water Quality Control Board (RWQCB), Los Angeles Region, on February 4, 2010, for the Soft-Bottom Flood Control Channels Project maintained by the Los Angeles County Flood Control District (LACFCD). The WDR requires that a Feasibility Study be conducted for all watersheds containing soft-bottom channel (SBC) reaches that are maintained by the LACFCD. As required by the WDR, the first Feasibility Study was conducted for the 24 SBC reaches in the Los Angeles River Watershed. The nine SBC reaches in the San Gabriel Watershed comprised the second Feasibility Study. This Feasibility Study combines two SBC reaches in the Dominguez Channel Watershed with nine SBC reaches in the Malibu Creek Watershed. These 11 SBC reaches are listed and described below in Table 1.

As stated in the WDR (Condition 45), the purpose of the Feasibility Study is to provide an "on-going assessment of channel conditions and hydraulic capacity" in order to "determine where a potential may exist for native vegetation to remain within the soft-bottom portion of the channel or if additional hydraulic capacity is needed". As required by the WDR (Condition 48), a Work Plan was prepared and submitted (LACFCD February 2013) to the RWQCB that provided proposed study methods for the Feasibility Study, including an "assessment of biological functions and values of these reaches" so that "comparisons of habitat type, maturity and extent of native or invasive plants can be made between reaches". The WDR (Condition 50) requires that the LACFCD "include an assessment of the biological function and values for each reach".

This Report assesses the biological function and values for each SBC reach, as required by the WDR (Condition 50). The results of this assessment are incorporated into the final recommendations which identify those SBC reaches that can sustain additional vegetation and/or replacement of non-native with native vegetation without affecting the reaches' hydraulic capacity.

**TABLE 1**
**BIOLOGICAL TECHNICAL ASSESSMENT REPORT**
**ELEVEN SOFT-BOTTOM CHANNEL REACHES**
**MALIBU CREEK AND DOMINGUEZ CHANNEL WATERSHEDS**

| Reach No. | Reach Name | Reach Limits | | Reach Length (ft) | Area (acres) |
|---|---|---|---|---|---|
| | | Upstream | Downstream | | |
| **Dominguez Channel Watershed** | | | | | |
| 26 | Tributary to Dominguez Channel Project No. 74 | 500 ft u/s of Artesia Blvd | 400 ft d/s of Artesia Blvd | 900 | 0.35 |
| 27 | Wilmington Drain | 110 Freeway | Pacific Coast Highway | 3,584 | 7.87 |
| **Malibu Creek Watershed** | | | | | |
| 28 | Triunfo Creek (PD T2200) | 384 ft u/s of Mulholland Highway | D/s edge of Mulholland Highway | 474 | 2.30 |
| 29 | Las Virgenes Creek (PD T1684) Main Channel Inlet | Los Angeles/Ventura County Boundary | 3006 ft u/s of Thousand Oaks Blvd | 371 | 1.16 |
| 32 | Stokes Canyon Channel (PD T043) | Intersection of Quad Sheet blue line with the eastern boundary of Section 6, Township 1S, Range 17W | 1600 ft u/s of intersection of Mulholland Hwy and Stokes Canyon Road | 2,255 | 1.40 |

**TABLE 1**
**BIOLOGICAL TECHNICAL ASSESSMENT REPORT**
**ELEVEN SOFT-BOTTOM CHANNEL REACHES**
**MALIBU CREEK AND DOMINGUEZ CHANNEL WATERSHEDS**

| Reach No. | Reach Name | Reach Limits | | Reach Length (ft) | Area (acres) |
|---|---|---|---|---|---|
| | | Upstream | Downstream | | |
| 33 | Medea Creek (PD T1378 u.2) | 731 ft u/s of Thousand Oaks Blvd | 215 ft d/s of Thousand Oaks Blvd | 946 | 0.69 |
| 34 | Medea Creek (PD T1005) Main Channel Outlet | 535 ft d/s of Kanan | 940 ft d/s of Kanan | 405 | 0.19 |
| 35 | Medea Creek Main Channel Inlet – under Route 101 | 98 ft u/s of u/s side of Roadside Drive | 13 ft u/s of u/s side of Roadside Drive | 85 | 0.14 |
| 36 | Cheseboro Main Channel Inlet | 100 ft u/s of Driver Ave | 44 ft u/s of Driver Ave | 56 | 0.08 |
| 37 | Medea Creek/Cheseboro Creek Inlet | 614 ft d/s of Agoura Road | 784 ft d/s of Agoura Road | 170 | 0.47 |
| 38 | Lindero Main Channel Outlet | 83 ft d/s of Agoura Road | 270 ft d/s of Agoura Road | 187 | 0.19 |

ft: feet; u/s: upstream; d/s: downstream; Ave: Avenue; Blvd: Boulevard; PD: Private Developer
Source: LACFCD as provided in WDR Order No. R4-2010-0021

## SECTION 2.0 LITERATURE REVIEW

A literature review was conducted to review and update existing information gathered through the SBC maintenance program about plant and wildlife species that (1) have been afforded special status by federal, State, and local resource agencies and organizations and (2) have potential to occur in the Malibu Creek and Dominguez Channel Watersheds.

Sources reviewed include the following: (1) special status species lists from the California Department of Fish and Wildlife (CDFW), the U.S. Fish and Wildlife Service, and the California Native Plant Society (CNPS); (2) the U.S. Geological Survey's Inglewood, Long Beach, and Torrance 7.5-minute quadrangles for the Dominguez Channel Watershed and the Calabasas, Canoga Park, Malibu Beach, Point Dume, and Thousand Oaks 7.5-minute quadrangles for the Malibu Creek Watershed in the CDFW's California Natural Diversity Database (CNDDB) (CDFW 2013) and the CNPS' Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2013); (3) the most recent *Federal Register* listing package and critical habitat determination for each federally listed Endangered or Threatened species potentially occurring in the Malibu Creek and Dominguez Channel Watersheds; (4) the CDFW Annual Report on the status of California's listed Threatened and Endangered plants and wildlife; and (5) other biological studies conducted in the Malibu Creek and Dominguez Channel Watersheds that were relevant to this Report, including those conducted previously by BonTerra Psomas for the LACFCD.

The information gathered during the literature search, including the above CNDDB database searches, was used by biologists to develop appropriate survey methods.

# SECTION 3.0 BIOLOGICAL SURVEYS

Biological surveys for plant and wildlife species were performed at each of the 11 SBC reaches (see Table 1). The survey area for each of the 11 SBC reaches included habitats in the channel and on the adjacent channel banks. Where necessary, the survey area included a buffer area outside the dimensions listed in Table 1. Most of the surveys were conducted in the spring and summer seasons prior to the LACFCD's annual maintenance activities, which are performed during the fall. The surveys at each of these 11 SBC reaches included mapping of vegetation types; focused searches for special status species including Threatened and Endangered plant and wildlife species; and summer season bird surveys. In addition, migratory bird surveys were conducted at Reach 26 (Project 74) in the Dominguez Channel Watershed and Reach 28 (Triunfo Creek) in the Malibu Creek Watershed. The methods used to complete these surveys are described below.

## 3.1 VEGETATION MAPPING SURVEYS

Nine vegetation types and four other areas were identified during the vegetation mapping surveys of the SBC reaches described in this Report (Table 2). Mapping of the vegetation types was completed simultaneously with the summer season bird surveys and the final focused plant surveys conducted in 2013 for each of these SBC reaches. Recent aerial photographs at a scale of 1 inch = 500 feet were used to map vegetation types. Nomenclature for the vegetation types identified in these surveys generally follows the *List of Vegetation Alliances and Associations, Vegetation Classification and Mapping Program* (CDFW 2010). The vegetation types identified in the surveys generally reflect the vegetation shown on the aerial maps along the alignment of each SBC reach. The exception is Reach 32 (Stokes Canyon Channel) where the canopy of trees rooted outside the channel cover parts of the channel on the aerial maps. In those parts of Reach 32, the vegetation on the invert of the channel was mapped rather than the canopy of trees rooted outside the channel. For those SBC reaches with unclear boundaries, the survey area for vegetation mapping was greater than some of the SBC reach dimensions listed in Table 1. The vegetation maps for each SBC reach are included in Appendix A.

**TABLE 2**
**VEGETATION TYPES**

| **Vegetation Type** | **Reach Numbers** |
|---|---|
| coastal sage scrub | 29 |
| California buckwheat scrub | 29 |
| coyote brush scrub | 33 |
| willow riparian | 26, 27, 28, 29, 32, 33, 34, 36, 37, 38 |
| willow riparian/ornamental | 26 |
| western sycamore | 26, 28, 33 |
| annual grassland | 32, 33, 38 |
| freshwater marsh | 26, 27, 28, 32, 33, 34, 35, 38 |
| ruderal | 26, 27, 28, 29, 33 |
| **Non-Vegetation Type** | **Reach Numbers** |
| unvegetated wash | 27, 28, 32, 35 |
| open water | 26, 28, 29, 33, 34, 35, 37, 38 |
| disturbed | 27, 35 |
| developed | 26, 27, 28, 32, 34, 37, 38 |

### 3.1.1 DESCRIPTION OF VEGETATION TYPES

**Coastal sage scrub** is present in the southeastern portion of Reach 29. Coastal sage scrub is dominated by California buckwheat (*Eriogonum fasciculatum*) with coyote bush (*Baccharis pilularis*), western ragweed (*Ambrosia psilostachya*), and non-native weedy species such as red brome (*Bromus madritensis* ssp. *rubens*), white sweetclover (*Melilotus alba*), yellow star-thistle (*Centaurea solstitialis*), and shortpod mustard (*Hirschfeldia incana*).

**California buckwheat scrub** is present next to the coastal sage scrub vegetation type in the southeastern portion of Reach 29. California buckwheat scrub is a monotypic stand of California buckwheat. Two valley oak tree saplings (*Quercus lobata*) were found in this vegetation type at Reach 29.

**Coyote brush scrub** is present in the northwestern corner of Reach 33. Coyote brush scrub is a monotypic stand of coyote bush (*Baccharis salicifolia*).

**Willow riparian** is present in various amounts and densities at Reaches 26, 27, 28, 29, 32, 33, 34, 36, 37, and 38. Reach 36 is dominated entirely by willow riparian vegetation. Willow riparian is dominated by willow trees (*Salix* spp.) including arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), Goodding's black willow (*Salix googdingii*), and narrow-leaved willow (*Salix exigua*). The understory vegetation consists of herbaceous species such as mugwort (*Artemisia douglasiana*), umbrella-sedge (*Cyperus* sp.), cattails (*Typha* sp.), smilo grass (*Stipa miliacea*), Italian thistle (*Carduus pycnocephalus*), and ripgut grass (*Bromus diandrus*).

**Willow riparian/ornamental** occurs throughout the Reach 26 survey area. In Reach 26, the willow riparian/ornamental vegetation type is co-dominated by mature Goodding's black willows and ash trees (*Fraxinus* sp.).

**Western sycamore** is present in small amounts at Reaches 26, 28, and 33. Western sycamore is composed of stands of western sycamore trees (*Platanus racemosa*) with understory shrub species such as coyote bush and understory herbaceous species including western ragweed, smilo grass, and ripgut grass.

**Freshwater marsh** is present in the survey areas of Reaches 26, 27, 28, 32, 33, 34, 35, and 38. Freshwater marsh is generally dominated at these SBC reaches by cattails, but bulrushes (*Schoenoplectus* sp.) are also present, such as at Reach 27. Freshwater marsh vegetation at these SBC reaches also includes herbaceous species such as broad-leaved peppergrass (*Lepidium latifolium*), water speedwell (*Veronica anagallis-aquatica*), water cress (*Nasturtium officinale [Rorippa nasturtium-aquaticum]*), and yellow waterweed (*Ludwigia peploides*).

**Annual grassland** occurs in Reaches 32, 33, and 38. Annual grassland vegetation is dominated by annual grass species including perennial ryegrass (*Festuca perennis [Lolium perenne]*), ripgut grass, red brome, oat (*Avena* sp.), and rattail fescue (*Fesuca myuros [Vulpia m. var. myuros]*) at these SBC reaches.

**Ruderal** vegetation is present in Reach 26, 27, 28, 29, and 33. Ruderal vegetation generally consists of non-native herbaceous species. This vegetation type is characteristic of areas that have been previously disturbed and now consist primarily of weedy species that are well-adapted to disturbed conditions. Species observed throughout the ruderal areas of these SBC reaches include yellow star-thistle, shortpod mustard, sweet fennel (*Foeniculum vulgare*), telegraph weed (*Heterotheca grandiflora*), red brome, ripgut grass, annual beard grass (*Polypogon monspeliensis*), white sweetclover, smilo grass, barnyard grass (*Echinochloa crus-galli*), lamb's quarters (*Chenopodium album*), sticktight (*Bidens frondosa*), garland daisy

(*Glebionis coronaria [Chrysanthemum coronarium]*), Russian knapweed (*Acroptilon repens*) (Reach 26), and western ragweed.

**Unvegetated wash** is present in Reaches 27, 28, 32, and 35. Unvegetated wash is not a vegetation type, but is delineated as a mapping unit on the vegetation maps. The vegetation mapping of Reach 27 (Wilmington Drain) was conducted simultaneously with clearing of non-native vegetation for the Proposition O project being implemented by the City of Los Angeles Department of Public Works. As a result, large areas of Reach 27 were cleared of vegetation and identified as unvegetated wash for this Report. Within Reaches 28, 32, and 35, unvegetated wash generally occurs along the low-flow channel where water had evaporated and vegetation had not yet begun to grow.

**Open water** is present in Reaches 26, 28, 29, 33, 34, 35, 37, and 38. Open water is not a vegetation type but is delineated as a mapping unit on the vegetation maps. Open water typically consists of flowing or ponding fresh water in the center of the SBC reaches. These areas generally contain little to no vegetation.

**Disturbed** areas are present in Reaches 27 and 35. These areas consist of dirt roads or other areas of exposed soil where regular man-made activities prevent vegetation from becoming established. A disturbed area is not a vegetation type but is delineated as a mapping unit on the vegetation maps.

**Developed** areas occur in Reaches 26, 27, 28, 32, 34, 37, and 28. Developed areas are not a vegetation type but are delineated as mapping units on the vegetation maps. In the SBC reaches, developed areas are generally structures such as grouted riprap and concrete slabs. These structures support minimal vegetation, if any.

## 3.2 SPECIAL STATUS PLANT SURVEYS

Focused surveys for special status plant species are conducted on a periodic basis for the over 100 SBC reaches maintained by the LACFCD, including the Malibu Creek and Dominguez Channel Watersheds. These special status plant species surveys for the SBC reaches covered by this Report are discussed in more detail below.

Habitat assessments for federally and/or State-listed special status plant species were conducted for the LACFCD's SBC maintenance program in 2002. These surveys found no potentially suitable habitat for the federally and State-listed Endangered slender-horned spineflower (*Dodecahema leptoceras*) in the Malibu Creek and Dominguez Channel Watersheds (BonTerra 2002). The federally and State-listed Endangered Nevin's barberry (*Berberis nevinii*), a large and conspicuous shrub that can be identified year-round, was not present at any of the SBC reaches (including Reaches 28, 32, and 38 of the Malibu Creek Watershed) which were identified as having potentially suitable habitat during the 2002 habitat assessments (BonTerra 2002). The focused plant surveys conducted in 2003 concluded that no additional surveys were recommended in the SBC reaches as long as the existing maintenance plan and associated access routes were followed (BonTerra 2003).

As part of this Report, focused surveys for special status plant species were performed in 2013 at each of the 11 SBC reaches in the Malibu Creek and Dominguez Channel Watersheds by BonTerra Psomas Senior Biologists Jennifer Pareti and Brian Daniels and Consulting Botanist Sandra Leatherman.

The survey dates and personnel are listed below in Table 3. Each SBC reach was surveyed twice during 2013 except for Reach 27, where construction for the City of Los Angeles

Department of Public Work's Proposition O project prevented performance of the second survey scheduled in August.

**TABLE 3**
**FOCUSED PLANT SURVEY DATES AND PERSONNEL**

| Reach No. | Survey 1 | | Survey 2 | | Survey 3 | |
|---|---|---|---|---|---|---|
| | Dates | Personnel | Dates | Personnel | Dates | Personnel |
| 26 | April 17, 2013 | JP, BD, SL | June 5, 2013 | JP, SL | August 22, 2013 | JP, SL |
| 27 | April 17, 2013 | JP, BD, SL | June 5, 2013 | JP, SL | N/A | N/A |
| 28 | April 10, 2013 | JP, SL | May 28, 2013 | JP, SL | August 8, 2013 | JP, SL |
| 29 | April 10, 2013 | JP, SL | May 28, 2013 | JP, SL | August 6, 2013 | JP, SL |
| 32 | April 10, 2013 | JP, SL | May 22, 2013 | JP, SL | August 8, 2013 | JP, SL |
| 33 | April 8, 2013 | JP, SL | May 22, 2013 | JP, SL | August 6, 2013 | JP, SL |
| 34 | April 8, 2013 | JP, SL | May 22, 2013 | JP, SL | August 6, 2013 | JP, SL |
| 35 | April 8, 2013 | JP, SL | May 22, 2013 | JP, SL | August 8, 2013 | JP, SL |
| 36 | April 8, 2013 | JP, SL | May 28, 2013 | JP, SL | August 6, 2013 | JP, SL |
| 37 | April 8, 2013 | JP, SL | May 28, 2013 | JP, SL | August 12, 2013 | JP, SL |
| 38 | April 8, 2013 | JP, SL | May 28, 2013 | JP, SL | August 12, 2013 | JP, SL |

BonTerra Psomas senior biologists: Jennifer Pareti (JP) and Brian Daniels (BD); Leatherman BioConsulting Senior Botanist Sandra Leatherman (SL).

Source: BonTerra 2014.

No special status plant species were observed in the 11 SBC reaches in the Malibu Creek and Dominguez Channel Watersheds. The results of the focused plant survey are included in Appendix B.

## 3.3 SPECIAL STATUS WILDLIFE SURVEYS

Focused surveys for special status wildlife species are conducted on a regular basis for the over 100 SBC reaches managed by the LACFCD. Table 4 provides a summary of these surveys performed at the SBC reaches discussed in this Report. These special status wildlife species surveys are discussed in more detail below.

**TABLE 4**
**FOCUSED SURVEY RESULTS SUMMARY FOR WILDLIFE**

| Reach Number | Reach Name | Santa Ana Sucker | Arroyo Toad | California Red-Legged Frog | Southwestern Willow Flycatcher | Least Bell's Vireo |
|---|---|---|---|---|---|---|
| **Dominguez Channel Watershed** | | | | | | |
| 26 | Tributary to Dominguez Channel Project No. 74 | N/A | N/A | N/A | N/A | N/A |
| 27 | Wilmington Drain | N/A | N/A | N/A | FS: 2002, 2003, 2005, 2007, 2009, 2011, 2013 (negative survey results) | FS: 2002, 2003, 2005, and 2009 (negative survey results); 2007, 2011, 2013, and 2015 (1 territory – solitary male). |

**TABLE 4**
**FOCUSED SURVEY RESULTS SUMMARY FOR WILDLIFE**

| Reach Number | Reach Name | Santa Ana Sucker | Arroyo Toad | California Red-Legged Frog | Southwestern Willow Flycatcher | Least Bell's Vireo |
|---|---|---|---|---|---|---|
| **Malibu Creek Watershed** | | | | | | |
| 28 | Triunfo Creek (PD T2200) | N/A | N/A | N/A. | FS: 2002, 2003, 2005, 2007, 2009, 2011, 2013, and 2015 (negative survey results) | FS: 2002, 2003, 2005, 2007, 2009, 2011, 2013, and 2015 (negative survey results) |
| 29 | Las Virgenes Creek (PD T1684) Main Channel Inlet | N/A | N/A | N/A | N/A | N/A |
| 32 | Stokes Cyn Channel (PD T043) | N/A | N/A | N/A | N/A | N/A |
| 33 | Medea Creek (PD T1378 u.2) | N/A | N/A | N/A | N/A | N/A |
| 34 | Medea Creek (PD T1005) Main Channel Outlet | N/A | N/A | N/A. | FS: 2002 (negative survey results) | FS: 2002 (negative survey results) |
| 35 | Medea Creek Main Channel Inlet – under Route 101 | N/A | N/A | N/A | N/A | N/A |
| 36 | Cheseboro Main Channel Inlet | N/A | N/A | N/A | N/A | N/A |
| 37 | Medea Creek/Cheseboro Creek Inlet | N/A | N/A | N/A | FS: 2009 (negative survey results) | FS: 2009 (negative survey results) |
| 38 | Lindero Main Channel Outlet | N/A | N/A | N/A | FS: 2009 (negative survey results) | FS: 2009 (negative survey results) |

FS: focused survey (survey areas include a 500-foot buffer); N/A: Not Applicable (no suitable habitat and/or outside known range);

Source: BonTerra 2002, 2003, 2005, 2007, 2009, 2011, 2013, and 2015.

As required by the regulatory permits, annual focused (pre-clearing) surveys for the State- and federally listed Endangered unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) and federally listed Threatened Santa Ana sucker (*Catostomus santaanae*) are conducted in those SBC reaches with appropriate habitat. None of the 11 SBC reaches surveyed for this Report support potentially suitable habitat for the unarmored threespine stickleback or Santa Ana sucker (BonTerra 2002).

Habitat assessments were conducted in 2002 for the federally listed Endangered arroyo toad (*Anaxyrus californicus*) and federally listed Threatened California red-legged frog (*Rana draytonii*) at those LACFCD SBC reaches within the known range of the species. These surveys found no suitable habitat for the California red-legged frog at any of the SBC reaches and concluded that no further surveys for the species were required (BonTerra 2002). Potential habitat for the arroyo toad was identified at some SBC reaches in the Santa Clara River Watershed, but not the Malibu Creek or Dominguez Channel Watersheds. Therefore, no

surveys for the California red-legged frog or arroyo toad have been conducted at any of the SBC reaches addressed in this Report.

Focused surveys for the southwestern willow flycatcher (*Empidonax traillii extimus*) and least Bell's vireo (*Vireo bellii pusillus*), which are both State- and federally listed Endangered Species, have been conducted at those SBC reaches in the Malibu Creek and Dominguez Channel Watersheds that contain potentially suitable habitat for these two bird species (see Table 4). Focused surveys were conducted in 2002, 2003, 2005, 2007, 2009, 2011, 2013, and 2015 at Reaches 27 and 28. A territorial male least Bell's vireo was present in Reach 27 (Wilmington Drain) in 2007, 2011, and 2013, but a breeding pair has not yet been detected at this SBC reach. Reach 34 (Medea Creek [PD T1278 u. 2]) was included in the 2002 focused surveys, but development of adjacent properties eliminated upland habitats necessary for least Bell's vireo breeding at this narrow SBC reach. Therefore, focused surveys were discontinued at Reach 34 after the 2002 breeding season. Focused surveys were conducted for these two bird species in 2009 at Reaches 37 (Medea Creek/Cheseboro Creek Inlet) and 38 (Lindero Main Channel Outlet), but the results were negative and indicated further surveys for these two bird species were not warranted at these two SBC reaches due to insufficient amounts of suitable habitat. The most recently completed 2015 focused survey report for these two species prepared for the LACFCD's SBC maintenance program is included as Appendix C.

## 3.4 SUMMER SEASON BIRD SURVEYS

In conjunction with the plant surveys discussed above, summer season surveys for birds were conducted at each of the 11 SBC reaches. These surveys focused on detecting and identifying all the birds using the habitats in these 11 SBC reaches (Table 5). These surveys were conducted by BonTerra Psomas Senior Biologist/Ornithologist Brian E. Daniels on July 12 and 16, 2013. Since these surveys were performed after the spring migration season, most of the bird species recorded can be assumed to be breeding or potentially breeding in or near the SBC reach in which they were observed.

**TABLE 5**
**RESULTS OF SUMMER SEASON BIRD SURVEYS**

| SPECIES | Reach Numbers | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 26 | 27 | 28 | 29 | 32 | 33 | 34 | 35 | 36 | 37 | 38 |
| mallard (*Anas platyrhynchos*) | - | - | - | - | - | 2 | 1 | 1 | - | 4 | - |
| snowy egret (*Egretta thula*) | 1 | - | - | - | - | - | - | - | - | - | - |
| black-crowned night-heron (*Nycticorax nycticorax*) | - | - | - | - | - | 1 | - | - | - | - | |
| Cooper's hawk (*Accipiter cooperii*) | - | - | - | 2 | - | - | - | - | - | 1 | - |
| red-shouldered hawk (*Buteo lineatus*) | - | 1 | 1 | - | - | - | - | - | - | - | - |
| killdeer (*Charadrius vociferous*) | - | - | - | - | - | - | 1 | - | - | 1 | - |
| mourning dove (*Zenaida macroura*) | - | - | 2 | - | - | - | 2 | - | - | 1 | - |
| black-chinned hummingbird (*Archilochus alexandri*) | - | - | - | - | 1 | - | - | - | - | - | - |
| Anna's hummingbird (*Calypte anna*) | - | - | 1 | - | - | - | 1 | - | - | - | - |
| Allen's/rufous hummingbird (*Selasphorus sasin* or *rufus*) | - | - | 2 | - | - | - | 1 | - | - | - | - |
| acorn woodpecker (*Melanerpes formicivorus*) | - | - | - | - | - | - | - | - | - | 1 | - |
| Nuttall's woodpecker (*Picoides nuttallii*) | - | - | 1 | - | - | - | 1 | - | - | 1 | - |
| black phoebe (*Sayornis nigricans*) | - | - | - | - | - | 1 | 1 | 1 | 1 | - | - |

## TABLE 5
## RESULTS OF SUMMER SEASON BIRD SURVEYS

| SPECIES | Reach Numbers | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **26** | **27** | **28** | **29** | **32** | **33** | **34** | **35** | **36** | **37** | **38** |
| ash-throated flycatcher (*Myiarchus cinerascens*) | - | - | - | - | - | - | 1 | - | - | - | 1 |
| Cassin's kingbird (*Tyrannus vociferans*) | - | - | - | - | - | - | 1 | - | - | - | - |
| western scrub-jay (*Aphelocoma californica*) | - | - | 3 | - | - | - | - | - | - | - | 1 |
| American crow (*Corvus brachyrhynchos*) | 1 | - | - | - | - | 2 | 1 | - | - | - | - |
| northern rough-winged swallow (*Stelgidopteryx serripennis*) | - | - | - | - | - | - | - | - | 1 | - | - |
| barn swallow (*Hirundo rustica*) | - | 2 | - | - | - | - | - | - | - | - | - |
| oak titmouse (*Baeolophus inornatus*) [2] | - | - | - | - | 2 | - | 2 | - | 2 | 1 | 1 |
| bushtit (*Psaltriparus minimus*) | - | 10 | - | - | - | - | - | - | - | - | - |
| white-breasted nuthatch (*Sitta carolinensis*) | - | - | 1 | - | - | - | 1 | - | 1 | - | 1 |
| house wren (*Troglodytes aedon*) | - | - | - | - | - | - | - | - | - | - | 2 |
| Bewick's wren (*Thryomanes bewickii*) | - | - | 1 | - | - | - | 3 | - | 3 | - | - |
| California thrasher (*Toxostoma redivivum*) | - | - | - | - | 1 | - | - | - | - | - | - |
| northern mockingbird (*Mimus polyglottos*) | - | 1 | - | - | - | - | 2 | - | - | - | - |
| common yellowthroat (*Geothlypis trichas*) | - | - | 2 | 1 | 3 | - | - | - | - | - | 1 |
| yellow warbler (*Setophaga petechia*) [a] | - | - | - | - | - | - | 1 | - | - | - | - |
| spotted towhee (*Pipilo maculatus*) | - | - | 4 | - | - | 1 | 3 | - | - | - | 1 |
| California towhee (*Melozone crissalis*) [b] | - | 1 | 1 | - | 1 | - | - | - | 2 | - | - |
| song sparrow (*Melospiza melodia*) | - | 1 | 2 | 1 | 1 | - | 1 | - | - | - | 2 |
| black-headed grosbeak (*Pheucticus melanocephalus*) [b] | - | - | 2 | - | - | - | - | - | - | - | - |
| hooded oriole (*Icterus cucullatus*) | - | 2 | - | - | - | - | - | - | - | - | 1 |
| Bullock's oriole (*Icterus bullockii*) | - | 2 | 2 | - | - | - | - | - | - | - | - |
| house finch (*Haemorhous mexicanus*) | 2 | 4 | 5 | 2 | - | 2 | 1 | - | 1 | - | 1 |
| lesser goldfinch (*Spinus psaltria*) | 2 | 2 | 6 | - | 1 | 3 | - | - | 1 | - | - |
| American goldfinch (*Spinus tristis*) | - | 1 | - | - | - | - | - | - | - | - | - |
| house sparrow (*Passer domesticus*)[c] | 1 | - | - | - | - | - | - | - | - | - | - |
| scaly-breasted munia (*Lonchura punctulata*)[c] | - | 2 | - | - | - | - | - | - | - | - | - |
| **TOTAL SPECIES** | **5** | **12** | **16** | **4** | **7** | **7** | **18** | **2** | **8** | **7** | **10** |
| **TOTAL INDIVIDUALS** | **7** | **29** | **36** | **6** | **10** | **12** | **25** | **2** | **12** | **10** | **12** |

[a] Listed as a California Bird Species of Special Concern (Shuford and Gardali 2008)
[b] On the Los Angeles County Bird Watchlist (Los Angeles County Sensitive Bird Species Working Group 2009)[c] Introduced non-native species with established breeding population in California.

The presence of water in SBC reaches, especially during the summer, can be an important component of high quality habitat for birds. Surface water was present during the survey at all SBC reaches in this Report except for Reaches 27 (Wilmington Drain), 32 (Stokes Canyon Channel), and 36 (Cheseboro Main Channel Inlet). Surface water would typically be present at Reach 27 during the summer, but this SBC reach was drained for implementation of the City of Los Angeles Department of Public Works' Proposition O project. Because of its larger size (see Table 1), Reach 27 often supports a variety of water birds (e.g., ducks and egrets, among others) when surface water is present. The other SBC reaches in this Report are generally too small, with or without surface water, to support concentrations of water birds.

The highest species totals were recorded at Reaches 28 (Triunfo Creek) and 34 (Medea Creek [PD T1005] Main Channel Outlet) with 36 and 25 species, respectively. Reach 27 (Wilmington Drain) was third highest with 12 species, but this total would have been higher, probably much higher, if not for implementation of the City of Los Angeles Department of Public Works' Proposition O project. Although not detected during this survey, Reach 27 supported a solitary (unpaired) male least Bell's vireo in 2013 (see Table 4). Focused surveys consisted of multiple surveys conducted throughout the breeding season that employed methods intended to find each individual of the species; other species recorded are incidental to the purpose of those surveys. The summer season bird surveys were one-day surveys that employed methods intended to measure the diversity and abundance of all species that use the SBC reach.

**TABLE 6**
**SUMMER BIRD DIVERSITY AND ABUNDANCE AT THE ELEVEN SOFT-BOTTOM CHANNEL REACHES (RANKED HIGH TO LOW FOR BIRD DENSITY)**

| Reach Number | Reach Name | Area (acres) | Total Bird Species/ Species Diversity (species per acre) | Total Bird Abundance/ Bird Density (birds per acre) |
|---|---|---|---|---|
| 36 | Cheseboro Main Channel Inlet | 0.08 | 8/100.0 | 12/150.0 |
| 34 | Medea Creek (PD T1005) Main Channel Outlet | 0.19 | 18/94.7 | 25/131.6 |
| 38 | Lindero Main Channel Outlet | 0.19 | 10/52.6 | 12/63.2 |
| 37 | Medea Creek/Cheseboro Creek Inlet | 0.47 | 7/14.9 | 10/21.3 |
| 26 | Tributary to Dominguez Channel Project No. 74 | 0.35 | 5/14.3 | 7/20.0 |
| 33 | Medea Creek (PD T1378 u.2) | 0.69 | 7/10.1 | 12/17.4 |
| 28 | Triunfo Creek (PD T2200) | 2.30 | 16/7.0 | 36/15.7 |
| 35 | Medea Creek Main Channel Inlet – under Route 101 | 0.14 | 2/14.3 | 2/14.3 |
| 32 | Stokes Canyon Channel (PD T043) | 1.40 | 7/5.0 | 10/7.1 |
| 29 | Las Virgenes Creek (PD T1684) Main Channel Inlet | 1.16 | 4/3.4 | 6/5.2 |
| 27 | Wilmington Drain | 7.87 | 12/1.5 | 29/3.7 |

Table 6 above ranks the 11 channel reaches of this Report from high to low based on bird density derived from the one-day summer season bird surveys. The highest density scores are generally associated with the small channel reaches (less than one acre) that abut natural open spaces such as Reaches 34 (Medea Creek), 38 (Lindero Main Channel Outlet), and 37 (Medea Creek/Cheseboro Creek Inlet). Reach 36 (Cheseboro Main Channel Inlet) is situated adjacent to an urban park in a residential area of Agoura Hills. The largest SBC reach, Reach 27 (Wilmington Drain), had the lowest diversity, but this was largely attributable to the Proposition O project implemented by the City of Los Angeles Department of Public Works. For this survey, large areas of Reach 27 were cleared of vegetation and identified as unvegetated wash. In the future, these areas are expected to support native riparian vegetation that would support a diverse assemblage of avian species.

## 3.4 MIGRATORY BIRD SURVEYS

Migratory bird surveys were performed before and after the LACFCD's annual fall maintenance activities at Reach 26 (Project 74) in the Dominguez Channel Watershed and at Reach 28 (Triunfo Creek) in the Malibu Creek Watershed. "Migratory birds" refer to those species that regularly migrate to and from distant areas where they nest and spend the winter. In North America, about 75 percent of breeding birds migrate, with the rest remaining year-round in the same general area (Sibley 2001). Peak migration periods in North America occur during the spring (April–May) and fall (September–October) seasons, but many bird migrations take place throughout the year, especially in warmer regions such as Southern California. Depending on the species, migrations occur at night (nocturnal) or during the day (diurnal) and are subject to a variety of environmental influences, particularly weather.

The migratory bird surveys were conducted by BonTerra Psomas Senior Biologist/Ornithologist Brian Daniels and BonTerra Psomas Biologist Sarah Thomas. Reach 28 was selected since it is the largest of the nine SBC reaches in the Malibu Creek Watershed. Wilmington Drain (Reach 27) is the largest SBC reach in the Dominguez Channel Watershed, but was not selected due to on-going construction activities for the City of Los Angeles Department of Public Work's Proposition O project. That left only Reach 26 for the migratory bird surveys in the Dominguez Channel Watershed. Reach 27, however, was included as a reference site for the migratory bird surveys conducted for the Los Angeles River Watershed Feasibility Study and those 2010 survey results are included in Table 7 with Reaches 26 and 28.

The survey results for all three SBC reaches show relatively few species that are confidently identified as "transients" (a term used for migratory birds being at a location for a relatively short stay during migration). The western wood-pewee (*Contopus sordidulus*), warbling vireo (*Vireo gilvus*), Wilson's warbler (*Cardellina pusilla*), and western tanager (*Piranga ludoviciana*) are clearly transients because these four species neither winter nor summer at these three SBC reaches. In migration, willows and other trees provide valuable foraging habitat for these four species. As shown by the vegetation maps (see Appendix A), willows dominate all three SBC reaches in the willow riparian vegetation type. Clearing activities at these three SBC reaches are generally limited to areas mapped as the ruderal vegetation type although some understory vegetation in the willow riparian areas such as lower branches of willows on or adjacent to the low flow channel are being removed.

The surveys detected seven migrant species that only winter at these SBC reaches: northern pintail (*Anas acuta*), belted kingfisher (*Ceryle alcyon*), ruby-crowned kinglet (*Regulus calendula*), hermit thrush (*Catharus guttatus*), yellow-rumped warbler (*Setophaga coronata*), Lincoln's sparrow (*Melospiza lincolnii*), and white-crowned sparrow (*Zonotrichia leucophrys*). Two of these seven species, the yellow-rumped warbler and white-crowned sparrow, are among the most abundant winter visitors to the region. One migratory species, the house wren (*Troglodytes aedon*), breeds at Reach 28, but only winters or is a transient at Reaches 26 and 27.

# TABLE 7
# MIGRATORY BIRD SURVEYS

| Species | Reach 28 | | | Reach 26 | | | | Reach 27 | |
|---|---|---|---|---|---|---|---|---|---|
| | 9/25/20013 | 10/3/2013 | 10/25/2013 | 9/9/2014 | 9/15/2014 | 10/14/2014 | 10/22/2014 | 9/21/2010 | 12/1/2010 |
| Canada goose (*Branta canadensis*) | | | 1 | | | | | | |
| gadwall (*Anas strepera*) | | | | | | | | | 8 |
| mallard (*Anas platyrhynchos*) | | | | | | | | 12 | 90 |
| northern pintail (*Anas acuta*) | | | | | | | | | 1 |
| California quail (*Callipepla californica*) | 6 | | 1 | | | | | | |
| great blue heron (*Ardea herodias*) | 2 | | 1 | | | | | 1 | 3 |
| great egret (*Ardea alba*) | | 1 | | | | | | | 3 |
| snowy egret (*Egretta thula*) | | | | | | 1 | | 1 | 10 |
| green heron (*Butorides virescens*) | | 1 | | | | | | | 4 |
| black-crowned night-heron (*Nycticorax nycticorax*) | | | | 1 | | | | | |
| Cooper's hawk (*Accipiter cooperii*) | | | | | 1 | | | | |
| red-shouldered hawk (*Buteo lineatus*) | 1 | 1 | 1 | | | | | 1 | 1 |
| red-tailed hawk (*Buteo jamaicensis*) | | 1 | | | | | | | |
| American coot (*Fulica americana*) | | | | | | | | 1 | |
| western gull (*Larus occidentalis*) | | | | | 2 | | | | |
| rock pigeon (*Columba livia*)* | | | | | | | | 15 | 11 |
| band-tailed pigeon (*Patagioenas fasciata*) | 1 | | 9 | | | | | | |
| Eurasian collared-dove (*Streptopelia decaocto*)* | | | | | | | 1 | | |
| mourning dove (*Zenaida macroura*) | 3 | 5 | 1 | | 1 | | | 2 | 1 |
| Anna's hummingbird (*Calypte anna*) | 4 | 2 | 3 | 1 | 2 | | 2 | 3 | 4 |
| Allen's hummingbird (*Selasphorus sasin*) | | 1 | | | | | | | |
| Allen's/rufous hummingbird (*Selasphorus sasin* or *rufus*) | | | | 2 | | | | 1 | 1 |
| belted kingfisher (*Ceryle alcyon*) | | | | | | | | | 1 |
| acorn woodpecker (*Melanerpes formicivorus*) | 3 | 6 | 6 | | | | | | |
| Nuttall's woodpecker (*Picoides nuttallii*) | 1 | 2 | 1 | | | | | | |
| downy woodpecker (*Picoides pubescens*) | 2 | 1 | 1 | | | | | | |
| northern flicker (*Colaptes auratus*) | | 2 | 2 | | | | | | |
| American kestrel (*Falco sparverius*) | | | | | | | | | 2 |
| red-crowned parrot (*Amazona viridigenalis*)* | | | | | | | | | |
| Nanday parakeet (*Aratinga nenday*) ** | 12 | 17 | | | | | | | |
| western wood-pewee (*Contopus sordidulus*) | | 1 | | | | | | | |
| Pacific-slope flycatcher (*Empidonax difficilis*) | 1 | 1 | | | | | | | |
| black phoebe (*Sayornis nigricans*) | 3 | 2 | - | - | 1 | 1 | 2 | 3 | 6 |

# TABLE 7
# MIGRATORY BIRD SURVEYS

| Species | Reach 28 | | | Reach 26 | | | | Reach 27 | |
|---|---|---|---|---|---|---|---|---|---|
| | 9/25/20013 | 10/3/2013 | 10/25/2013 | 9/9/2014 | 9/15/2014 | 10/14/2014 | 10/22/2014 | 9/21/2010 | 12/1/2010 |
| Hutton's vireo (*Vireo huttoni*) | 1 | - | - | - | - | - | - | - | - |
| warbling vireo (*Vireo gilvus*) | - | 1 | - | - | - | - | - | - | - |
| western scrub-jay (*Aphelocoma californica*) | 4 | 4 | 1 | - | 1 | - | - | - | - |
| American crow (*Corvus brachyrhynchos*) | - | - | - | - | 1 | - | - | 4 | - |
| common raven (*Corvus corax*) | 2 | 7 | 4 | - | - | - | - | 4 | 4 |
| oak titmouse (*Baeolophus inornatus*) | 1 | 7 | 10 | - | - | - | - | - | - |
| bushtit (*Psaltriparus minimus*) | 10 | 9 | 20 | - | 3 | 10 | 4 | - | 10 |
| white-breasted nuthatch (*Sitta carolinensis*) | - | - | 1 | - | - | - | - | - | - |
| canyon wren (*Catherpes mexicanus*) | - | - | 1 | - | - | - | - | - | - |
| house wren (*Troglodytes aedon*) | 2 | 2 | - | - | - | - | - | - | 2 |
| Bewick's wren (*Thryomanes bewickii*) | 2 | 1 | 1 | - | - | - | - | - | - |
| ruby-crowned kinglet (*Regulus calendula*) | - | 1 | 2 | - | - | - | - | - | 3 |
| wrentit (*Chamaea fasciata*) | 1 | 1 | 1 | - | - | - | - | - | - |
| hermit thrush (*Catharus guttatus*) | - | - | 1 | - | - | - | - | - | - |
| California thrasher (*Toxostoma redivivum*) | - | 1 | - | - | - | - | - | - | - |
| northern mockingbird (*Mimus polyglottos*) | - | - | 1 | - | 1 | - | - | - | - |
| European starling (*Sturnus vulgaris*)* | 3 | 6 | 10 | - | - | - | - | - | - |
| orange-crowned warbler (*Oreothlypis celata*) | 2 | - | - | - | 1 | - | - | 3 | 2 |
| common yellowthroat (*Geothlypis trichas*) | 1 | 2 | 2 | - | 1 | 1 | - | 22 | 11 |
| yellow warbler (*Setophaga petechial*) | - | - | - | - | - | - | - | 1 | - |
| yellow-rumped warbler (*Setophaga coronata*) | - | 2 | 20 | - | - | 3 | 1 | - | 25 |
| Townsend's warbler (*Setophaga townsendi*) | - | - | - | - | - | - | 1 | - | 1 |
| Wilson's warbler (*Cardellina pusilla*) | - | - | - | - | - | - | - | 1 | 1 |
| spotted towhee (*Pipilo maculatus*) | 4 | 4 | 3 | - | - | - | - | - | - |
| California towhee (*Melozone crissalis*) | 2 | 1 | - | - | - | - | - | 1 | 2 |
| chipping sparrow (*Spizella passerina*) | - | - | 1 | - | - | - | - | - | - |
| song sparrow (*Melospiza melodia*) | 4 | 2 | - | - | - | - | - | 5 | 2 |
| Lincoln's sparrow (*Melospiza lincolnii*) | - | - | - | - | - | - | - | - | 4 |
| white-crowned sparrow (*Zonotrichia leucophrys*) | - | 2 | 3 | - | - | - | - | - | 3 |
| dark-eyed junco (*Junco hyemalis*) | 1 | 2 | 10[1] | - | - | - | - | - | - |
| western tanager (*Piranga ludoviciana*) | - | - | - | 1 | - | - | - | 2 | - |
| blue grosbeak (*Passerina caerulea*) | - | - | - | - | - | - | - | 2 | - |
| hooded oriole (*Icterus cucullatus*) | - | - | - | - | 1 | - | - | - | - |

# TABLE 7
# MIGRATORY BIRD SURVEYS

| Species | Reach 28 | | | Reach 26 | | | | Reach 27 | |
|---|---|---|---|---|---|---|---|---|---|
| | **9/25/20013** | **10/3/2013** | **10/25/2013** | **9/9/2014** | **9/15/2014** | **10/14/2014** | **10/22/2014** | **9/21/2010** | **12/1/2010** |
| house finch (*Haemorhous mexicanus*) | 6 | 7 | 5 | 2 | 4 | 2 | - | 13 | 12 |
| lesser goldfinch (*Spinus psaltria*) | 3 | 2 | 1 | - | - | - | 2 | 5 | - |
| American goldfinch (*Spinus tristis*) | - | - | - | - | - | - | - | - | 1 |
| house sparrow (*Passer domesticus*)* | - | - | - | - | - | - | - | 2 | - |
| scaly-breasted munia (*Ponchura punctulata*)* | - | - | - | - | - | - | - | 35 | 5 |
| **TOTAL SPECIES** | **29** | **35** | **31** | **5** | **13** | **6** | **7** | **23** | **31** |
| **TOTAL BIRD ABUNDANCE/BIRD DENSITY (bird per acre)** | **88/38.3** | **108/50.0** | **125/54.3** | **7/20.0** | **20/57.1** | **6/17.1** | **13/37.1** | **164/20.8** | **265/33.7** |

* Introduced Species – Non-native species that have received recognition by the California Bird Records Committee (CBRC) as having established breeding populations in California
** Exotic species

[1] One gray-headed junco (*Junco hyemalis caniceps*), a rare subspecies in southern California, was observed during the survey among the flock of ten Oregon juncos (*Junco hyemalis thurberi*), which is the common subspecies wintering in the region

## 3.5 VEGETATION TRANSECTS

BonTerra Psomas Biologists quantitatively assessed the percent cover of the vegetation within each of the SBC reaches. The quantification was accomplished by selecting transect locations that were correlated to the maps that depicted Manning's or hydraulic roughness coefficient values (*n* values) developed by hydrologists for the reaches. Transects were conducted before and after the LACFCD's annual fall season maintenance activities. Each transect was conducted perpendicular to the flow of water (i.e., across the width of each reach). Global Positioning System (GPS) points were taken at both the beginning and ending locations for each transect. The starting point of each transect was generally located at the top of the bank to the right when facing upstream.

The point-intercept method was used to collect data at one-foot intervals along each transect. Except for sites with high diversity of plant species, the results of the line-intercept method do not differ significantly from the point-intercept method. Since the point-intercept method is less time-consuming and since flood-control channels generally support relatively low diversity, the line-intercept method was selected as the most appropriate method for the vegetation transects. Table 8 below lists each reach and the distance of each transect. Data included identification and documentation of each plant species and the ground cover that occurred at one-foot intervals along each transect. Data workbooks are included as Appendix D. Non-native grass species were generally compiled together into one non-native grass category. Tree sizes were identified as mature, medium shrub, or seedling. Data does not include trees and other plants rooted on upper banks outside the drainage (i.e., the tree canopy of a tree rooted outside the channel was not included)[1]. Photographs were also taken from the starting and ending points of each transect or transect segment.

**TABLE 8**
**VEGETATION ANALYSIS TRANSECTS**

| Reach No. | Transect No. | Transect Length (ft) | Reach No. | Transect No. | Transect Length (ft) |
|---|---|---|---|---|---|
| 26 | 1 | 80 | 34 | 1 | 20 |
| | 2 | 80 | | 2 | 20 |
| | 3 | 200 | 35 | 1 | 70 |
| | 4 | 90 | | 2 | 70 |
| 28 | 1 | 165 | 36 | 1 | 65 |
| | 2 | 168 | | 2 | 65 |
| 29 | 1 | 40 | 37 | 1 | 100 |
| | 2 | 40 | | 2 | 100 |
| 32 | 1 | 27 | | 3 | 100 |
| | 2 | 27 | 38 | 1 | 50 |
| | 3 | 27 | | 2 | 50 |
| | 4 | 27 | | | |
| 33 | 1 | 32 | | | |
| | 2 | 32 | | | |
| | 3 | 32 | | | |
| | 4 | 32 | | | |

ft: feet
Note: No transect data was collected for Reach 27 due to construction of the Proposition O project.

[1] Note that this differs from the methods used to map vegetation types of some of the SBC reaches in the Los Angeles River Watershed, as tree canopies of trees rooted outside the banks of the channel were used to determine the vegetation type.

### 3.5.1 PRE- AND POST-CLEARING VEGETATION TRANSECTS

Except for Reach 27, which was under construction for the City of Los Angeles Department of Public Works Proposition O project, transect data was collected at each of the SBC reaches in this Report by BonTerra Psomas Biologists Brian Daniels and Jennifer Pareti and Leatherman BioConsulting Botanist Sandra Leatherman. Transects were completed on August 6, 8, 12, and 22, 2013, prior to the beginning of the LACFCD's annual maintenance activities. Pre-clearing vegetation transects are shown below in Table 9.

Post-vegetation clearing transect data were also collected (using the same method as for the pre-clearing transects) after completion of maintenance activities on October 22, and December 9, and 22, 2013, by Ms. Pareti and Ms. Leatherman. These transects were conducted at the same locations as the pre-clearing vegetation transects. Because vegetation clearing occurred for different SBC reaches on different dates, a variable but generally small amount of vegetative re-growth occurred before post-clearing transect data collection was performed. If vegetation clearing did not occur, no post-clearing transect data was collected. Of the ten SBC reaches at which pre-vegetation clearing transects were performed, vegetation clearing did not occur at five transect locations: all four Reach 33 transects and one of the three Reach 37 transects. The total averages presented below in Table 9 do not include the pre-clearing data collected for these five transects.

Table 9 shows the results of the pre- and post-clearing transects of percent cover of native vegetation, non-native vegetation, and unvegetated areas for 10 of the 11 SBC reaches in this Report. Data in Table 9 also summarize the net changes in percent cover between pre- and post-clearing transects to measure the effect of vegetation clearing on percent cover relative to native vegetation, non-native vegetation, and unvegetated areas. The combined totals of 22 pre- and post-clearing vegetation transects on Table 9 for the SBC reaches show an average net loss of 12.1 percent cover and 32.8 percent cover for native and non-native vegetation, respectively, and an average net gain of 31.5 percent cover for unvegetated areas following the 2013 clearing activities conducted by the LACFCD.

## TABLE 9
## TOTAL VEGETATED AND UNVEGETATED PERCENT COVER

| Reach | Transect | Pre-Vegetation Clearing | | | Post-Vegetation Clearing | | | Vegetation Clearing Effect on Percent Cover (Post-Clearing minus Pre-Clearing) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | % Native | % Non-native | % Unvegetated | % Native | % Non-native | % Unvegetated | % Native | % Non-native | % Unvegetated |
| 26 | 1 | 27.5 | 63.0 | 32.5 | 20.0 | 35.0 | 63.8 | -7.5 | -28.0 | 31.3 |
| | 2 | 32.5 | 97.5 | 2.5 | 30.0 | 65.0 | 21.3 | -2.5 | -32.5 | 18.8 |
| | 3 | 42.5 | 83.0 | 0.0 | 31.5 | 64.5 | 4.0 | -11.0 | -18.5 | 4.0 |
| | 4 | 32.2 | 95.6 | 0.0 | 6.7 | 43.3 | 52.2 | -25.5 | -52.3 | 52.2 |
| 28 | 1 | 43.0 | 28.5 | 30.9 | 53.3 | 1.2 | 45.5 | 10.3 | -27.3 | 17.0 |
| | 2 | 64.3 | 31.0 | 13.1 | 65.5 | 0.6 | 33.9 | 1.2 | -30.4 | 2.9 |
| 29 | 1 | 2.5 | 25.0 | 72.5 | 15.0 | 7.5 | 77.5 | 12.5 | -17.5 | 5.0 |
| | 2 | 57.5 | 10.0 | 40.0 | 40.0 | 0.0 | 60.0 | -17.5 | -10.0 | 20.0 |
| 32 | 1 | 74.1 | 33.3 | 22.2 | 11.1 | 0.0 | 88.9 | 63.0 | -33.3 | 66.7 |
| | 2 | 14.8 | 22.2 | 63.0 | 0.0 | 25.9 | 74.1 | -14.8 | -3.7 | 11.1 |
| | 3 | 11.1 | 92.6 | 7.4 | 3.7 | 3.7 | 92.6 | -7.4 | -88.9 | 85.2 |
| | 4 | 3.7 | 92.6 | 7.4 | 0.0 | 0.0 | 100.0 | -3.7 | -92.6 | 92.6 |
| 33 | 1 | 75.0 | 21.9 | 15.6 | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2 | 56.3 | 25.0 | 40.6 | N/A | N/A | N/A | N/A | N/A | N/A |
| | 3 | 100.0 | 0.0 | 0.0 | N/A | N/A | N/A | N/A | N/A | N/A |
| | 4 | 96.9 | 0.0 | 3.1 | N/A | N/A | N/A | N/A | N/A | N/A |
| 34 | 1 | 100.0 | 40.0 | 0.0 | 95.0 | 0.0 | 5.0 | -5.0 | -40.0 | 5.0 |
| | 2 | 100.0 | 95.0 | 0.0 | 100.0 | 50.0 | 0.0 | 0.0 | -45.0 | 0.0 |
| 35 | 1 | 47.1 | 41.4 | 32.9 | 1.4 | 2.9 | 95.7 | -45.7 | -40.0 | 62.8 |
| | 2 | 71.4 | 50.0 | 0.0 | 20.0 | 22.9 | 57.1 | -51.4 | -27.1 | 57.1 |
| 36 | 1 | 100.0 | 43.1 | 0.0 | 87.7 | 12.3 | 0.0 | -12.3 | -30.8 | 12.3 |
| | 2 | 86.2 | 24.6 | 3.1 | 96.9 | 3.1 | 0.0 | 10.7 | -21.5 | -3.1 |
| 37 | 1 | 81.0 | 27.0 | 16.0 | 25.0 | 4.0 | 75.0 | -56.0 | -23.0 | 59.0 |
| | 2 | 82.0 | 29.0 | 18.0 | 46.0 | 1.0 | 53.0 | -36.0 | -28.0 | 35.0 |
| | 3 | 92.0 | 57.0 | 3.0 | N/A | N/A | N/A | N/A | N/A | N/A |
| 38 | 1 | 70.0 | 38.0 | 20.0 | 12.0 | 12.0 | 76.0 | -58.0 | -26.0 | 56.0 |
| | 2 | 100.0 | 44.0 | 0.0 | 90.0 | 38.0 | 10.0 | -10.0 | -6.0 | 1.0 |
| **Average** | | **56.5** | **50.3** | **17.3** | **38.7** | **17.9** | **49.3** | **-12.1** | **-32.8** | **31.5** |

N/A: not applicable.
Note: N/A indicates that a post-clearing survey was not completed because vegetation at this transect location had not been cleared. As a result, the pre-vegetation clearing data for those five transects (i.e., all four Reach 33 transects and one of the three Reach 37 transects) are excluded and are not used in the calculation of overall averages.

# SECTION 4.0 CALIFORNIA RAPID ASSESSMENT METHOD ANALYSIS

## 4.1 METHODS/INTRODUCTION

The California Rapid Assessment Method (CRAM) is a wetland monitoring tool that is designed to quickly evaluate the overall condition of a wetland and identify stressors that affect its condition. CRAM scores result from the evaluation of four equally weighted attributes: (1) buffer and landscape context; (2) hydrology; (3) physical structure; and (4) biotic structure (CWMW 2013). A summary of the ten metrics and six sub-metrics that comprise these attributes is provided in Table 10.

**TABLE 10**
**SUMMARY OF CALIFORNIA RAPID ASSESSMENT METHOD ATTRIBUTES AND METRICS**

| Attribute | Metric | | Description |
|---|---|---|---|
| Buffer and Landscape Context | Aquatic Area Abundance | | Measures connectivity along the riparian corridor for wildlife movement; non-buffer land types are identified 500 meters upstream and downstream of the Assessment Area |
| | Buffer Condition | | Combination of the three sub-metric scores described below |
| | Sub-metrics | Percentage of Assessment Area with Buffer | Measures percentage of the Assessment Area perimeter that contains land cover types that provide a buffer |
| | | Average Buffer Width | Measures the average width of identified buffer land types around the Assessment Area |
| | | Buffer Condition | Qualitatively evaluates buffer condition |
| Hydrology | Water Source | | Qualitatively evaluates impacts to the extent, duration, and frequency of saturated or ponded conditions |
| | Hydroperiod/Channel Stability | | Qualitatively evaluates channel equilibrium, degradation, or aggradation |
| | Hydrologic Connectivity | | Measures the entrenchment of the channel to determine the ability for water to inundate adjacent upland areas. |
| Physical Structure | Structural Patch Richness | | Measures the diversity of physical riparian features that may potentially provide habitat for aquatic species (e.g., vegetated islands, pools, and riffles, among others). |
| | Topographic Complexity | | Qualitatively evaluates the variety of elevations (i.e., micro-topographic heterogeneity) |
| Biotic Structure | Plant Community | | Average of the three sub-metric scores described below |
| | Sub-metrics | Number of Plant Layers | Identifies number of plant strata |
| | | Number of Co-dominant Species | Identifies the number of co-dominant plant species based on visual estimation |
| | | Percent Invasive Species | Measures the percent of invasive plant species among the co-dominant species identified above |
| | Horizontal Interspersion | | Qualitatively evaluates the variety and distribution of plant associations |
| | Vertical Biotic Structure | | Identifies the number and distribution of plant strata |

In 2006, the U.S. Environmental Protection Agency recommended a framework for comprehensive wetland monitoring to help States meet the requirements described in the Clean Water Act. This framework consists of the following three-tiered approach (USEPA 2006):

- Level 1 Assessments: map-based inventories of wetland resources;
- Level 2 Assessments: evaluation of general wetland condition using relatively simple field indicators; and
- Level 3 Assessments: collection of quantitative data about selected functions or beneficial uses of wetlands.

CRAM is designed as a Level 2 assessment tool that provides scientifically defensible, standardized data on the trends and conditions of wetlands in addition to stressors that affect wetlands (CWMW 2013). The ten metrics (and six sub-metrics) used in CRAM evaluations are derived from Level 3 studies that are designed to show relationships between the ecological functions of the wetlands and anthropogenic stress. Stein et al. (2009) tested the validity of the CRAM approach by correlating CRAM scores to existing monitoring and assessment data on avian diversity, benthic macroinvertebrate indices, and plant community composition. The results of this analysis indicated that rapid assessment methods, including CRAM, can provide a meaningful and reliable tool for assessing wetland conditions.

Each of the CRAM metrics is given a score of A (12 points), B (9 points), C (6 points), or D (3 points). CRAM scores for each of the 4 attributes range from 25 to 100. The 4 attribute scores are then averaged to determine the final CRAM score for a site. The final score is a relative measurement to indicate how an individual site compares to the best achievable conditions. For context, personnel associated with the Southern California Coastal Water Research Project (SCCWRP 2010) performed CRAM evaluations throughout the San Gabriel River Watershed. The highest score in that report was 91, recorded in areas of the upper San Gabriel River Watershed, while the lowest score was 35, recorded in the channelized main stem of the river.

BonTerra Psomas Regulatory Specialist Ecologist David Hughes visited each of the 11 SBC reaches in this Report to perform the CRAM evaluation on August 16, 20, 23, and 29, 2013. Prior to visiting each channel reach, one or more Assessment Areas (AA) were identified on aerial photographs, consistent with CRAM guidelines. The AA is the CRAM study area for each channel reach; the number of AAs is dependent on the size of the area to be assessed and the variability of conditions. Generally, the minimum length of an AA is 100 meters; however, Reach 36 was less than 100 meters in total length, so the AA was shortened to encompass the entire reach.

Field investigation at each of these channel reaches consisted of performing channel measurements, visually estimating conditions, and identifying features on standardized checklists to determine scores for the following metrics and sub-metrics: buffer condition, hydroperiod/channel stability, hydrologic connectivity, structural patch richness, topographic complexity, number of plant layers, number of do-dominant species, percent invasive species, horizontal interspersion, and vertical biotic structure. The following metrics were initially analyzed in the office via aerial photo analysis with results confirmed or adjusted in the field: landscape connectivity, percent of AA with buffer, average buffer width, and water source.

As noted above, CRAM scores can range from a minimum score of 25 to a maximum score of 100. This range of scores can be split into 5 equal ranges that allow categorization of ecological functioning as summarized below in Table 11. This categorization is not described in the CRAM User's Manual, but it is provided herein for the purpose of broadly categorizing each reach.

**TABLE 11**
**FUNCTIONAL RATING**

| CRAM Score | Functional Rating |
|---|---|
| 85.0–100.0 | Very High |
| 70.0–84.9 | High |
| 55.0–69.9 | Moderate |
| 40.0–54.9 | Low |
| 25.0–39.9 | Very Low |

## 4.2 RESULTS

A total of 13 AAs were established in the various channel reaches. Generally, the number of AAs utilized was dependent on the length of the channel reach and the uniformity of the conditions (i.e., channels with heterogeneous conditions had more AAs). Of the 11 reaches surveyed for this Report, 6 scored in the "moderate" range (Reaches 27, 28, 34, 36, 37, and 38) and 5 scored in the "low" range (Reaches 26, 29, 32, 33, and 35). A summary of the results of the CRAM evaluation is provided in Table 12. The CRAM datasheets for each AA are provided in Appendix E. A summary of field conditions that determined the CRAM scores for each attribute is provided below.

**TABLE 12**
**SUMMARY OF CALIFORNIA RAPID ASSESSMENT METHOD**
**ATTRIBUTE SCORES**

| Channel Reach No. | Number of Assessment Areas | CRAM Attributes | | | | | Functional Rating |
|---|---|---|---|---|---|---|---|
| | | Buffer and Landscape Context | Hydrology | Physical Structure | Biotic Structure | Final Score[a] | |
| 26[b] | 2 | 39.4 | 75.0 | 37.5 | 56.3 | 52.1 | Low |
| 27 | 1 | 75.0 | 66.7 | 50.0 | 44.4 | 59.0 | Moderate |
| 28 | 1 | 73.3 | 58.3 | 75.0 | 66.7 | 68.3 | Moderate |
| 29 | 1 | 66.5 | 41.7 | 25.0 | 33.3 | 41.6 | Low |
| 32[b] | 2 | 73.7 | 58.3 | 37.5 | 40.3 | 52.5 | Low |
| 33 | 1 | 50.0 | 50.0 | 25.0 | 44.4 | 42.4 | Low |
| 34 | 1 | 47.9 | 83.3 | 50.0 | 55.6 | 59.2 | Moderate |
| 35 | 1 | 67.7 | 33.3 | 37.5 | 41.7 | 45.0 | Low |
| 36 | 1 | 25.0 | 83.3 | 50.0 | 63.9 | 55.6 | Moderate |
| 37 | 1 | 52.8 | 75.0 | 62.5 | 66.7 | 64.2 | Moderate |
| 38 | 1 | 55.8 | 83.3 | 37.5 | 63.9 | 60.1 | Moderate |

[a] Final score is calculated as the average of the four attribute scores.
[b] More than one Assessment Area was utilized for these channel reaches. The final score reflects the average score of the Assessment Areas.

### 4.2.1 BUFFER AND LANDSCAPE CONTEXT ATTRIBUTE

The surrounding landscapes in which the various reaches are found differ markedly, which is reflected in the wide variety of CRAM scores for this attribute. Scores for the Aquatic Area Abundance metric (previously Landscape Connectivity) were generally a D or an A (Reach 33 received a B score). Reaches that received a D were affected by the reach entering an underground or concrete channel that restricted the ability of wildlife to migrate through the

area. The Percentage of the AA with a Buffer metric also received highly variable scores. Seven reaches received a score of A or B while the remaining four reaches received a C or D. Buffer widths were generally poor, as eight reaches received a D score. Most reaches were bordered by residential or commercial development on at least one side that resulted in low scores (Reach 32 received an A for the Buffer Width metric in the upstream portion of the reach and a D in the downstream portion). Scores for Buffer Condition metric were less variable with seven SBC reaches receiving a score of B or C. Buffers usually consisted of an intermediate mixture of native and non-native vegetation with limited human visitation. One exception was Reach 34, where the buffer (while very narrow) was dominated by native vegetation. Overall, scores for the Buffer and Landscape Context attribute varied widely, with Reach 36 receiving a minimum score of 25 and Reach 32 receiving a very high score of almost 80.

### 4.2.2 HYDROLOGY ATTRIBUTE

Scores within the Hydrology attribute ranged much less than the Buffer and Landscape Context attribute described above. Nine reaches received a score of C for the Water Source metric, as the watershed for these reaches is highly or moderately urbanized. The other two reaches (29 and 36) received a B score as their watersheds appeared to be less than 20 percent developed. Many of the reaches were affected by mild to moderate degradation (overall loss of sediment) and received a B score. Reaches 29 and 35 received a D score, as these reaches were artificially hardened. Surprisingly five of the reaches received a score of A for the Hydrologic Connectivity metric. Because the SBCs that the County maintains are part of the flood-control system, these reaches typically receive a low Hydrologic Connectivity score as they are highly entrenched to minimize the opportunity for water to overflow the banks. However, many of the reaches in this Report (e.g., 34, 36, 37, and 38) are in a semi-natural state. These reaches, along with Reach 26, received A scores. The remaining reaches received scores of C or D (except Reach 27, which received a B score). Overall, scores for this attribute range from 33.3 for Reach 35 to 83.3 for Reach 36.

### 4.2.3 PHYSICAL STRUCTURE ATTRIBUTE

The Structural Patch Richness and Topographic Complexity metrics that comprise this attribute generally received scores of C or D. These channels in their natural state are ephemeral, many of these channels are highly modified, and ones that are in a more natural state have had their natural stream dynamics (e.g., sediment deposition) altered. These factors generally discourage development of structural patches, and few of the structural patches that are described in the CRAM manual were observed. The only reaches that did not receive a minimum score are Reaches 28 and 37 (these reaches received a C score). Similarly, because these are slightly modified channels, these reaches received generally low scores for Topographic Complexity. Secondary benches along the stream banks generally were not present, and when they were, they lacked the micro-topography that encourages habitation by invertebrate wildlife. One exception was Reach 28, which received an A due to the heterogeneity of the banks. Overall, scores for this attribute range from 25.0 for Reaches 29 and 33 up to 75.0 for Reach 28.

### 4.2.4 BIOTIC STRUCTURE ATTRIBUTE

Similar to many of the attributes described above, scores in the Biotic Structure attribute also varied significantly. Scores for the Number of Plant Layers tended to be rather high with most reaches receiving an A or B. Scores related to the Number of Co-dominant Species and Number of Co-dominant Invasive Species tended to be in the moderate range (B or C). Scores for the Horizontal Interspersion/Plant Zonation metric were generally low (C or D) due to a mostly uniform coverage of vegetation. While scores of the Number of Plant Layers are fairly high, these layers generally have limited overlap. Therefore, scores for the Vertical Biotic

Structure metric are moderately low with six of the reaches receiving scores of C or D and five receiving a score of B. Overall, scores for this attribute range from 41.6 for Reach 29 to 68.3 for Reach 28.

### 4.2.5 STRESSORS

Several stressors are associated with each of the reaches in this Report. A summary of these stressors is provided below in Table 13. The most common stressors include the presence of development in the general vicinity of the reaches (both residential and industrial), unnatural inflows, point-source discharges (storm water outlets into the channels), and the location of the reaches in and immediately adjacent to engineered channels. Other stressors are associated with the maintenance activities in the reaches such as vegetation management, removal of woody debris, and treatment of non-native plants. Trash was an issue at several reaches as well.

**TABLE 13**
**SUMMARY OF STRESSORS ASSOCIATED WITH EACH REACH**

| Stressors | Reaches | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **26** | **27** | **28** | **29** | **32** | **33** | **34** | **35** | **36** | **37** | **38** |
| ***Buffer and Landscape Context Attribute*** | | | | | | | | | | | |
| Urban Residential | x | x | x | x | x | x | x | x | x | x | x |
| Industrial/Commercial | x | - | - | - | - | x | - | x | - | x | x |
| Transportation Corridor | - | - | - | - | - | - | - | x | - | - | - |
| Ranching | - | - | - | - | x | - | - | - | x | - | - |
| Sports Fields/Parks | - | - | - | - | - | - | x | - | x | - | - |
| ***Hydrology Attribute*** | | | | | | | | | | | |
| Point-Source discharge | - | - | - | x | x | - | - | - | - | - | - |
| Unnatural Inflows | x | x | - | - | - | - | - | x | - | - | - |
| Drop Structures | - | - | - | - | x | - | - | - | - | - | - |
| Engineered Channel | x | x | x | x | x | x | - | x | - | x | - |
| Excessive Sediment or Organic Debris | - | - | - | - | - | x | - | - | - | - | - |
| ***Physical Structure Attribute*** | | | | | | | | | | | |
| Vegetation Management | x | x | x | x | x | x | x | x | x | x | x |
| Trash | x | x | - | x | - | - | - | x | x | - | - |
| ***Biotic Structure Attribute*** | | | | | | | | | | | |
| Removal of Woody Debris | x | - | - | - | - | - | - | - | x | - | - |
| Treatment of Non-Native plants | x | - | - | - | - | - | - | - | - | - | - |

## SECTION 5.0 RECOMMENDATIONS

In order to provide the LACFCD with recommendations for allowing additional vegetation in those SBC reaches identified by the hydraulic analysis as having sufficient flood-control capacity to allow such vegetation, BonTerra Psomas developed biological value rankings for all 11 SBC reaches in this Report. The biological value rankings are a synthesis of results from all biological surveys conducted for this Report, including the CRAM analysis. The results are presented below in Tables 14 and 15. Note that Table 16, as it did in the biological technical assessment reports for the Los Angeles and San Gabriel River Watersheds, shows a strong correlation between higher CRAM scores and higher Biological Value scores.

## TABLE 14
## SUMMARY OF BIOLOGICAL VALUES

| Reach Number | Native Vegetation Types[a] | Special Status Plants | Special Status Wildlife[b] | Summer (Breeding) Birds[c] | Transects - Native Vegetation[d] | CRAM Results[e] | Final Score |
|---|---|---|---|---|---|---|---|
| **26** | 1.0 | – | – | – | 0.5 | – | 1.5 |
| **27** | 1.0 | – | 1.0 | 0.5 | 1.0* | 0.5 | 4.0 |
| **28** | 1.0 | – | – | 0.5 | 1.0 | 0.5 | 3.0 |
| **29** | 1.0 | – | – | – | 0.5 | – | 1.5 |
| **32** | 1.0 | – | – | 0.5 | 0.5 | – | 2.0 |
| **33** | 1.0 | – | – | – | 1.0 | – | 2.0 |
| **34** | 1.0 | – | – | 0.5 | 1.0 | 0.5 | 3.0 |
| **35** | 1.0 | – | – | – | 1.0 | – | 2.0 |
| **36** | 1.0 | – | – | 0.5 | 1.0 | 0.5 | 3.0 |
| **37** | 1.0 | – | – | 0.5 | 1.0 | 0.5 | 3.0 |
| **38** | 1.0 | – | – | 0.5 | 1.0 | 0.5 | 3.0 |

[a] A score of 1 was assigned if a native vegetation type was present in the reach; the score was reduced by one-half if the native vegetation type was identified as disturbed (see Table 2).

[b] A score of 1 was assigned if a Threatened or Endangered species was located in the reach during focused surveys (see Table 4); if a reach has potential for a Threatened and Endangered species from another taxonomic group, an additional half-point was assigned to this column score.

[c] A score of 1 was assigned to this column if a California Bird Species of Special Concern was located in the reach during the summer breeding bird surveys (see Table 5); an additional half-point was assigned to this column score if one or more species on the Los Angeles County Bird Watchlist was present during the summer breeding bird surveys (see Table 5).

[d] A score of 1 was assigned if the pre-clearing transects produced greater than 50% native vegetation on average for the reach; a half-point was assigned to this column score if the native vegetation averaged more than 25% but less than 50% for the reach. Note that transects were not conducted at Reach 27 due to on-going construction activities for the City of Los Angeles Department of Public Work's Proposition O project, but a score of 1.0 was assigned to this SBC reach based on expected results after construction.

[e] A score of 1 was assigned to those SBC reaches with high CRAM functional ratings, a score of one-half for SBC reaches with moderate CRAM functional rating, and no score for SBC reaches with a low CRAM functional rating.

## TABLE 15
## BIOLOGICAL VALUE SCORES RANKED HIGH TO LOW

| Reach Number | Native Vegetation Types | Special Status Plants | Special Status Wildlife | Summer (Breeding) Birds | Transects Native Vegetation | CRAM Results | Final Score[a] |
|---|---|---|---|---|---|---|---|
| **27** | 1.0 | – | 1.0 | 0.5 | 1.0 | 0.5 | 4.0 |
| **28** | 1.0 | – | – | 0.5 | 1.0 | 0.5 | 3.0 |
| **37** | 1.0 | – | – | 0.5 | 1.0 | 0.5 | 3.0 |
| **38** | 1.0 | – | – | 0.5 | 1.0 | 0.5 | 3.0 |
| **34** | 1.0 | – | – | 0.5 | 1.0 | 0.5 | 3.0 |
| **36** | 1.0 | – | – | 0.5 | 1.0 | 0.5 | 3.0 |
| **32** | 1.0 | – | – | 0.5 | 0.5 | – | 2.0 |
| **35** | 1.0 | – | – | – | 1.0 | – | 2.0 |
| **33** | 1.0 | – | – | – | 1.0 | – | 2.0 |
| **26** | 1.0 | – | – | – | 0.5 | – | 1.5 |
| **29** | 1.0 | – | – | – | 0.5 | – | 1.5 |

[a] Final scores of equal value were sorted from high to low based on their final CRAM score (see Table 14).

As noted in the Hydraulic Analysis Technical Assessment Report prepared for the LACFCD, 6 of the 11 SBC reaches (i.e., Reaches 26, 28, 34, 36, 37, and 38) were found to lack sufficient hydraulic capacity to support additional vegetation. No recommendations for additional vegetation were therefore made for these six SBC reaches. The hydraulic deficiencies of Wilmington Drain (Reach 27) have been addressed through implementation of the Proposition O project by the City of Los Angeles Department of Public Works. The LACFCD requested that BonTerra Psomas develop recommendations for additional vegetation for the remaining four SBC Reaches (29, 32, 33, and 35). The recommendations for these SBC Reaches, following review by LACFCD channel maintenance personnel, are provided below.

**REACH 29 (Las Virgenes Creek)**

Within the herbaceous vegetation on the left bank, plant two (2) valley oaks (*Quercus lobata*) and five (5) blue elderberry (*Sambucus nigra*) at edge of right-of-way (about 100 to 125 feet away from concrete levee).

**REACH 32 (Stokes Canyon)**

The structure of the channel precludes permanent vegetation on the invert or banks immediately next to the ageing wire and pipe revetment structure. The right bank (or north bank) is cleared and used for maintenance activities. The left bank (or south bank) has some vegetation (e.g., young oaks) growing in a couple of locations. These areas could support more vegetation. Plant at least 20 young coast live oaks (*Quercus agrifolia*) on the south bank between the bridge and the most upstream end of the Reach.

**REACH 33 (Medea Creek)**

No additional vegetation is recommended in the upstream portion of this Reach above Thousand Oaks Blvd. It is recommended that the cattails downstream of Thousand Oaks Blvd to be allowed to naturally expand throughout this downstream area. As this natural expansion may cause overgrowth over time, the vegetation at this location may need to be trimmed back every so often.

**REACH 35 (Medea Creek – Main Channel Inlet)**

Although this very small channel reach has capacity, the vegetation that had been present on banks was removed by an unknown entity some years ago for a bridge repair project. The vegetation consisted of oak and native chaparral shrubs. If feasible, it is recommended that a few blue elderberry and a few mule fat shrubs are planted on the both channel banks to provide additional habitat value in the area.

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# APPENDIX A

# VEGETATION MAP


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# Vegetation Types – Reach 26

Appendix A-1

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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Aerial Source: LAR-IAC 2011

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# Vegetation Types – Reach 27a

Appendix A-2

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

(Rev: 5-01-2015 LEW) R:\Projects\CoLADPW (DPW)\J211\Graphics\AppA_Veg_Map_20150501.pdf


# Vegetation Types – Reach 27b

Appendix A-3

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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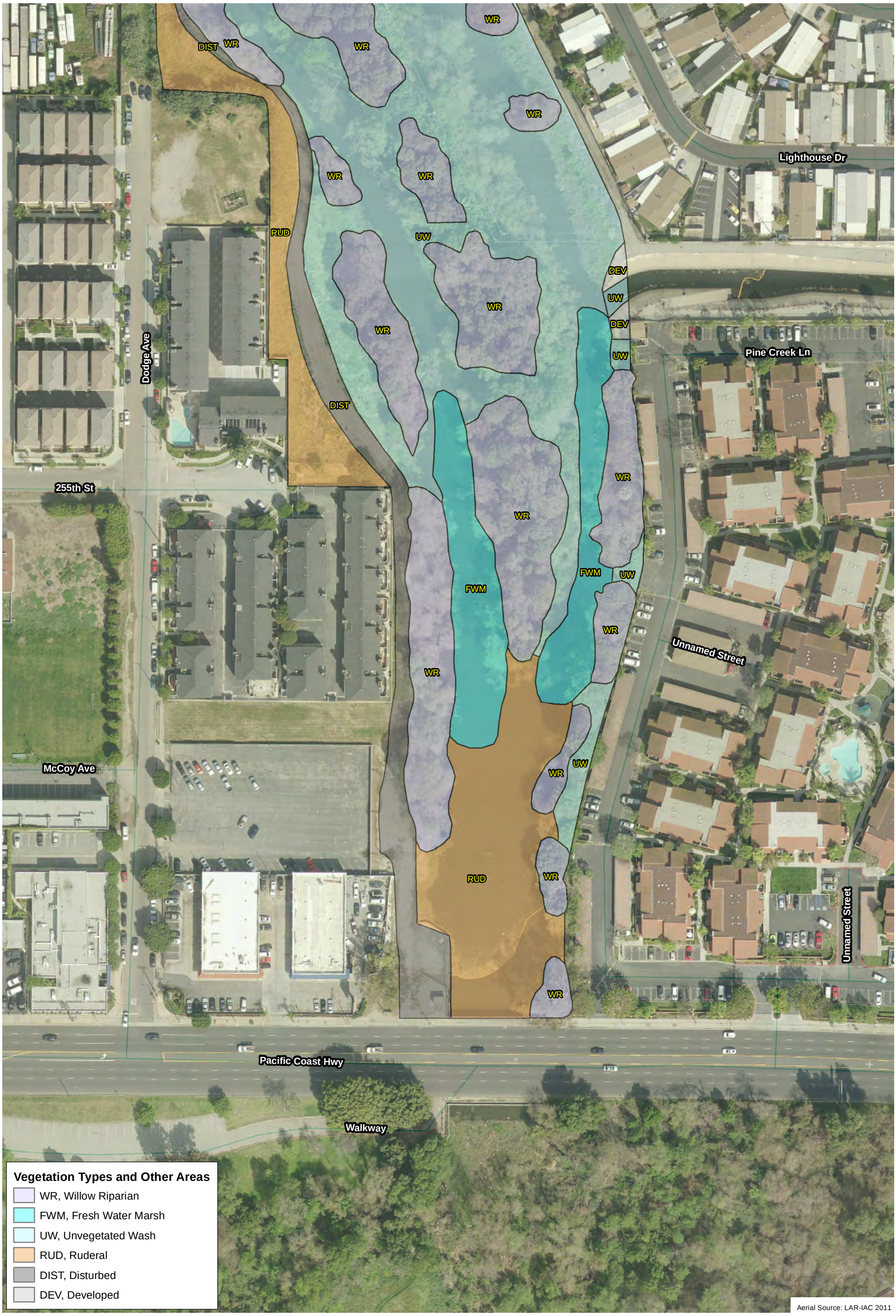


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# Vegetation Types – Reach 27c

Appendix A-4

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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# Vegetation Types – Reach 28

Appendix A-5

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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# Vegetation Types – Reach 29

Appendix A-6

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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# Vegetation Types – Reach 32a

Appendix A-7

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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# Vegetation Types – Reach 32b

Appendix A-8

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

Benterra PSOMAS

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# Vegetation Types – Reach 32c

Appendix A-9

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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# Vegetation Types – Reach 33

Appendix A-10

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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# Vegetation Types – Reach 34

Appendix A-11

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

Benterra PSOMAS

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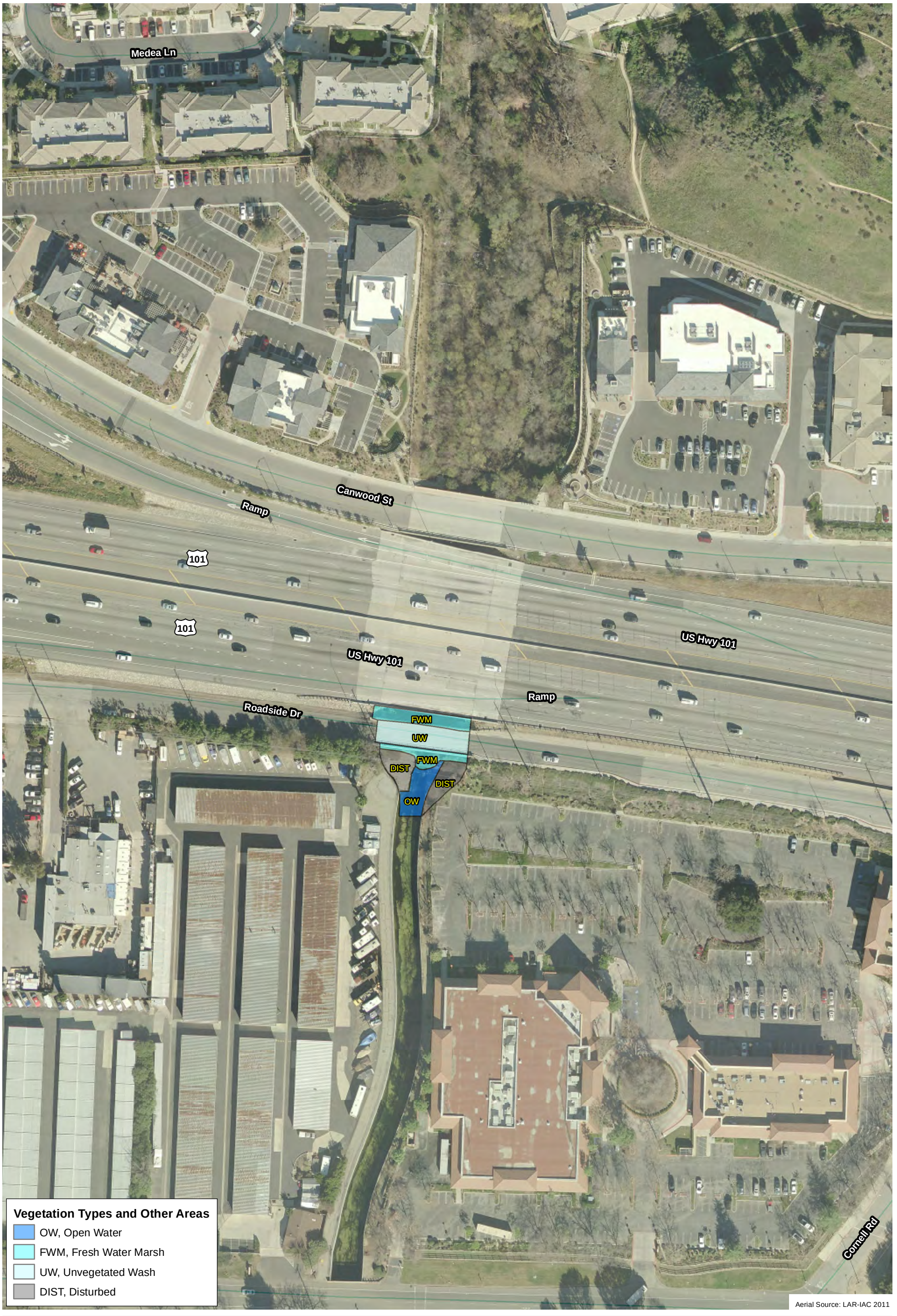


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# Vegetation Types – Reach 35

Appendix A-12

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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# Vegetation Types - Reach 36

Appendix A-13

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

PSOMAS

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# Vegetation Types – Reach 37

Appendix A-14

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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# Vegetation Types – Reach 38

Appendix A-15

*Malibu Creek and Dominguez Channel Watersheds Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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# APPENDIX B

# FOCUSED PLANT SURVEY REPORT

BonTerra PSOMAS

Balancing the Natural and Built Environment

January 31, 2014

Jemellee Cruz
Flood Maintenance Division
Department of Public Works
County of Los Angeles
900 South Fremont Ave., 2nd Floor Annex
Alhambra, California 91803

**VIA U.S. MAIL AND EMAIL**
**jcruz@dpw.lacounty.gov**

Subject: Results of Focused Surveys for Special Status Plant Species in 11 Soft-bottom Channel Reaches in the Dominguez Channel and Malibu Creek Watersheds, Los Angeles County, California

Dear Ms. Cruz:

This Letter Report presents the findings of focused surveys for special status plant species conducted in 11 Soft-bottom Flood Control Channel Reaches of the Dominguez Channel and Malibu Creek Watersheds in Los Angeles County (Exhibits 1, 2a to 2f, and 3a to 3n). All 11 channel reaches are maintained by the Los Angeles County Flood Control District (LACFCD). These focused surveys were performed for the LACFCD's Feasibility Study of the Dominguez Channel and Malibu Creek Watersheds. Table 1 below lists the number, length, and name of each channel reach, and their locations in a Thomas Guide.

**TABLE 1**
**CHANNEL REACH INFORMATION/11 SOFT-BOTTOM CHANNEL REACHES**

| Reach No. | Reach Name | Reach Length (feet) | Clearing Width (feet) | Area (acres) | Thomas Guide Location |
|---|---|---|---|---|---|
| Dominguez Channel Watershed | | | | | |
| 26 | Tributary to Dominguez Channel Project No. 74 | 900 | 17 | 0.35 | 734-B7 |
| 27 | Wilmington Drain, tributary to Harbor Lake | 500 | 147 | 7.87 | 794-B4 to B5 |
| | | 2,450 | 110 | | |
| Malibu Creek Watershed | | | | | |
| 28 | Triunfo Creek | 474 | 211.57 | 2.30 | 587-H3 |
| 29 | Las Virgenes Creek | 371 | 136.2 | 1.16 | 558-H3 |
| 32 | Stokes Canyon Channel, tributary to Las Virgenes Creek | 2,255 | 27 | 1.40 | 588-J4 to H4 |
| 33 | Medea Creek (PD T1378) | 946 | 32 | 0.69 | 558-A4 |
| 34 | Medea Creek (PD T1005) Main Channel Outlet | 405 | 20 | 0.19 | 558-A5 |
| 35 | Medea Creek under Route 101 | 85 | 70 | 0.14 | 558-A6 |
| 36 | Cheseboro Main Channel Inlet, tributary to Medea Creek | 56 | 60 | 0.08 | 558-C6 |
| 37 | Medea Creek, downstream of Agoura Road | 170 | 120 | 0.47 | 558-A6 |
| 38 | Lindero Creek | 187 | 45 | 0.19 | 558-A6 |

225 South Lake Avenue
Suite 1000
Pasadena, CA 91101

Tel 626.351.2000
Fax 626.351.2030
www.Psomas.com

## METHODS

Botanical surveys were floristic in nature and consistent with the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009). A literature search was conducted to identify special status plants and habitats known to occur in the vicinity of the 11 channel reaches. Sources reviewed include the Inglewood, Torrance, and Long Beach quadrangles for Dominguez Channel Watershed and the Calabasas, Canoga Park, Malibu Beach, Point Dume, and Thousand Oaks quadrangles for Malibu Creek Watershed in the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2013) and the CDFW's California Natural Diversity Database (CNDDB) (CDFW 2013a). All of the species from these electronic database searches and their status are listed in Table 3.

Reference populations were monitored for annual and difficult-to-detect target species to ensure that the scheduled surveys were comprehensive and conducted during the appropriate blooming period for these species, as shown in Table 2. Reference populations of CNPS List 3 and 4 species, and perennial species that are readily observable were not monitored. Known reference populations of San Fernando Valley spineflower (*Chorizanthe parryi var. fernandina*), Agoura Hills dudleya (*Dudleya cynisa ssp. agourensis*), and southern tarplant (*Centromadia parryi ssp. australis*) were monitored to confirm their flowering status and to verify that project surveys were conducted during the appropriate blooming period for these species. Based on the reference survey results, these focused surveys were conducted during a time frame when the target plant species were observable.

**TABLE 2**
**SPECIAL STATUS PLANT SPECIES REFERENCE POPULATIONS**

| Date Checked | Species | Status | General Location |
|---|---|---|---|
| April 10, 2013 | *Chorizanthe parryi* var. *Fernandina* San Fernando Valley spineflower | Flowering | Las Virgenes Canyon |
| May 2, 2013 | *Centromadia parryi* ssp. *Australis* southern tarplant | Flowering | Seal Beach |
| May 28, 2013 | *Dudleya cymosa ssp. agourensis* Agoura Hills dudleya | Flowering | Agoura |

According to the California Department of Water Resources, the Los Angeles Airport Weather Reporting Station received 6.92 inches of precipitation form October 2012 through September 2013, which is about 54 percent of the normal average (California Department of Water Resources 2014). Additionally, Oxnard Weather Reporting Station received 5.18 inches of precipitation (October 2012 to September 2013) which is 36 percent of the normal average (California Department of Water Resources 2014). The 2013 survey season (spring 2013 through summer 2013) was below an average year with regard to rainfall, therefore increasing the importance to reference populations to show survey validity.

## TABLE 3

## SPECIAL STATUS PLANT SPECIES KNOWN FROM THE VICINITY OF THE 11 CHANNEL REACHES AND THEIR STATUS

| Species | Status | | | Potential to Occur in Surveyed Reach |
|---|---|---|---|---|
| | USFWS | CDFW | CRPR | |
| **Dominguez Channel Watershed** | | | | |
| *Aphanisma blitoides* aphanisma | - | - | 1B.2 | No potential to occur in surveyed reaches. |
| *Astragalus tener var. titi* coastal dunes milk-vetch | FE | SE | 1B.1 | No potential to occur in surveyed reaches. |
| *Atriplex coulteri* Coulter's saltbush | - | - | 1B.2 | No potential to occur in surveyed reaches. |
| *Atriplex pacifica* South Coast saltscale | - | - | 1B.2 | No potential to occur in surveyed reaches. |
| *Atriplex parishii* Parish's brittlescale | - | - | 1B.1 | No potential to occur in surveyed reaches. |
| *Atriplex serenana car. davidsonii* Davidson's saltscale | - | - | 1B.2 | No potential to occur in surveyed reaches. |
| *Camissoniopsis lewisii* Lewis' evening primrose | - | - | 3 | No potential to occur in surveyed reaches. |
| *Centromadia parryi ssp. australis* southern tarplant | - | - | 1B.1 | Known from Reach 27. Potential to occur in Reach 26 and 27. Not observed during focused plant survey. |
| *Cholophyron [Cordylanthus] maritimum ssp. maritimum* salt marsh bird's beak | FE | SE | 1B.2 | No potential to occur in surveyed reaches. |
| *Lasthenia glabrata ssp. coulteri* Coulter's goldfields | - | - | 1B.1 | No potential to occur in surveyed reaches. |
| *Nama stenocarpum* Mud nama | - | - | 2B.2 | No potential to occur in surveyed reaches. |
| *Navarretia fossalis* Spreading navarretia | FT | - | 1B.1 | No potential to occur in surveyed reaches. |
| *Navarretia prostrata* Prostrate vernal pool navarretia | - | - | 1B.1 | No potential to occur in surveyed reaches. |
| *Nemcaulis denudate var. denudata* Coast woolly-heads | - | - | 1B.2 | No potential to occur in surveyed reaches. |
| *Orcuttia californica* California Orcutt Grass | FE | SE | 1B.1 | No potential to occur in surveyed reaches. |
| *Pentachaeta lyonii* Lyon's pentachaeta | FE | SE | 1B.1 | No potential to occur in surveyed reaches. |
| *Phacelia stellaris* Brand's star phacelia | FC | - | 1B.1 | No potential to occur in surveyed reaches. |
| *Suada esteroa* estuary seablite | - | - | 1B.2 | No potential to occur in surveyed reaches. |
| *Symphyotrichum defoliatum* San Bernadino aster | - | - | 1B.2 | Historically known from area. Not observed in surveyed reaches during focused plant survey. |

## TABLE 3

## SPECIAL STATUS PLANT SPECIES KNOWN FROM THE VICINITY OF THE 11 CHANNEL REACHES AND THEIR STATUS

| Species | Status | | | Potential to Occur in Surveyed Reach |
|---|---|---|---|---|
| | USFWS | CDFW | CRPR | |
| **Malibu Creek Watershed** | | | | |
| *Astagalus brauntonii* Braunton's milk vetch | FE | - | 1B.1 | Not observed in surveyed reaches during focused plant survey. |
| *Atriplex coulteri* Coulter's saltbush | - | - | 1B.2 | Not observed in surveyed reaches during focused plant survey. |
| *Atriplex parishii* Parish's brittlescale | - | - | 1B.1 | Not observed in surveyed reaches during focused plant survey. |
| *Atriplex serenana car. davidsonii* Davidson's saltscale | - | - | 1B.2 | Not observed in surveyed reaches during focused plant survey. |
| *Baccharis malibuensis* Malibu Baccharis | - | - | 1B.1 | Known from adjacent to Reach 32. Not observed in surveyed reaches during focused plant survey. |
| *California macrophylia* Round leaved filaree | - | - | 1B.1 | Not observed in surveyed reaches during focused plant survey. |
| *Calochortus clavatus var. gracilis* Slender mariposa lily | - | - | 1B.2 | Not observed in surveyed reaches during focused plant survey. |
| *Calochortus plummerae* Plummer's mariposa lily | - | - | 4.2 | Not observed in surveyed reaches during focused plant survey. |
| *Camissoniopsis lewisii* Lewis' evening primrose | - | - | 3 | No potential to occur in surveyed reaches. |
| *Centromadia parryi ssp. australis* Southern tarplant | - | - | 1B.1 | Not observed during focused plant survey. |
| *Cholophyron [Cordylanthus] maritimum ssp. maritimum* salt marsh bird's beak | FE | SE | 1B.2 | No potential to occur in surveyed reaches. |
| *Chorizanthe parryi var. fernandina* San Fernando Valley spineflower | FC | SE | 1B.1 | No potential to occur in surveyed reaches. Not observed in surveyed reaches during focused plant survey. |
| *Chorizanthe parryi var. parryi* Parry's spineflower | - | - | 1B.1 | No potential to occur in surveyed reaches. |
| *Deinandra minthornii* Santa Susana tarplant | - | SR | 1B.2 | No potential to occur in surveyed reaches. |
| *Delphinium parryi ssp. blochmaniae* dune larkspur | - | - | 1B.2 | No potential to occur in surveyed reaches. |
| *Didymodon norrisii* Norris beard moss | - | - | 2B.2 | No potential to occur in surveyed reaches. |
| *Dudleya blochmaniae ssp. blochmaniae* Blochman's dudleya | - | - | 1B.1 | No potential to occur in surveyed reaches. |
| *Dudleya cymosa ssp. agourensis* Agoura Hills dudleya | FT | - | 1B.2 | No potential to occur in surveyed reaches. Not observed during focused plant survey. |

## TABLE 3

## SPECIAL STATUS PLANT SPECIES KNOWN FROM THE VICINITY OF THE 11 CHANNEL REACHES AND THEIR STATUS

| Species | Status | | | Potential to Occur in Surveyed Reach |
|---|---|---|---|---|
| | USFWS | CDFW | CRPR | |
| *Dudleya cymosa ssp. marcescens* Macescent dudleya | FT | SR | 1B.2 | No potential to occur in surveyed reaches. |
| *Dudleya cymosa ssp. ovatifolia* Santa Monica dudleya | FT | - | 1B.2 | No potential to occur in surveyed reaches. |
| *Dudleya multicaulis* Many stemmed dudleya | - | - | 1B.2 | No potential to occur in surveyed reaches. |
| *Dudleya parva* Conejo dudleya | FT | - | 1B.2 | No potential to occur in surveyed reaches. |
| *Eriogonum crocatum* Conejo buckwheat | - | SR | 1B.2 | No potential to occur in surveyed reaches. |
| *Isocoma menziesii var. decumbens* Decumbent goldenbush | - | - | 1B.2 | Not observed in surveyed reaches during focused plant survey. |
| *Lasthenia glabrata ssp. coulteri* Coulter's goldfields | - | - | 1B.1 | Not observed in surveyed reaches during focused plant survey. |
| *Monardella hypoleuca ssp. hypoleuca* White veined monardella | - | - | 1B.3 | No potential to occur in surveyed reaches. |
| *Nama stenocarpum* Mud nama | - | - | 2B.2 | No potential to occur in surveyed reaches. |
| *Navarretia fossalis* Spreading navarretia | FT | - | 1B.1 | No potential to occur in surveyed reaches. |
| *Navarretia prostrata* Prostrate vernal pool navarretia | - | - | 1B.1 | No potential to occur in surveyed reaches. |
| *Nolina cismontana* Chaparral nolina | - | - | 1B.2 | Not observed in surveyed reaches during focused plant survey. |
| *Orcuttia californica* California Orcutt grass | FE | SE | 1B.1 | No potential to occur in surveyed reaches. |
| *Pentachaeta lyonii* Lyons pentachaeta | FE | SE | 1B.1 | No potential to occur in surveyed reaches. |
| *Phacelia ramosissima var. austrolitoralis* south coast branching phacelia | - | - | 3.2 | No potential to occur in surveyed reaches. |
| *Suada esteroa* estuary seablite | - | - | 1B.2 | No potential to occur in surveyed reaches. |
| *Symphyotrichum defoliatum* San Bernardino aster | - | - | 1B.2 | Not observed in surveyed reaches during focused plant survey. |
| *Thelypteris puberula var. sonorensis* Sonoran maiden fern | - | - | 2B.2 | No potential to occur in surveyed reaches. |

**TABLE 3**

**SPECIAL STATUS PLANT SPECIES KNOWN FROM THE VICINITY OF THE 11 CHANNEL REACHES AND THEIR STATUS**

| Species | Status | | | Potential to Occur in Surveyed Reach |
|---|---|---|---|---|
| | USFWS | CDFW | CRPR | |
| *Tortula Californica* California Screw moss | - | - | 1B.2 | Not observed in surveyed reaches during focused plant survey. |

**LEGEND:**

**Federal (USFWS)**

| | |
|---|---|
| FE | Endangered |
| FT | Threatened |
| FC | Candidate |

**State (CDFW)**

| | |
|---|---|
| SE | Endangered |
| ST | Threatened |
| SR | Rare |

**California Rare Plant Rank (CRPR)**

1A Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2A Plants Presumed Extirpated in California, But More Common Elsewhere
2B Plants Rare, Threatened, or Endangered in California But More Common Elsewhere
3 Plants of About Which We Need More Information – A Review List
4 Plants of Limited Distribution – A Watch List

**CRPR Threat Code Extensions**

None Plants lacking any threat information
.1 Seriously Endangered in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 Fairly Endangered in California (20–80% of occurrences threatened; moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known)

The focused plant surveys were conducted by BonTerra Consulting Biologists Jennifer Pareti (JP) and Brian Daniels (BD); and Consulting Senior Botanist Sandy Leatherman of Leatherman BioServices (SL). The focused plant survey dates and personnel are listed below in Table 4.

**TABLE 4**
**SURVEY DATES AND PERSONNEL**

| Reach No. | Survey 1 | | Survey 2 | | Survey 3 | |
|---|---|---|---|---|---|---|
| | Dates | Personnel | Dates | Personnel | Dates | Personnel |
| 26 | April 17, 2013 | JP, BD, SL | June 5, 2013 | JP, SL | August 22, 2013 | JP, SL |
| 27 | April 17, 2013 | JP, BD, SL | June 5, 2013 | JP, SL | N/A | N/A |
| 28 | April 10, 2013 | JP, SL | May 28, 2013 | JP, SL | August 8, 2013 | JP, SL |
| 29 | April 10, 2013 | JP, SL | May 28, 2013 | JP, SL | August 6, 2013 | JP, SL |
| 32 | April 10, 2013 | JP, SL | May 22, 2013 | JP, SL | August 8, 2013 | JP, SL |
| 33 | April 8, 2013 | JP, SL | May 22, 2013 | JP, SL | August 6, 2013 | JP, SL |
| 34 | April 8, 2013 | JP, SL | May 22, 2013 | JP, SL | August 6, 2013 | JP, SL |
| 35 | April 8, 2013 | JP, SL | May 22, 2013 | JP, SL | August 8, 2013 | JP, SL |
| 36 | April 8, 2013 | JP, SL | May 28, 2013 | JP, SL | August 6, 2013 | JP, SL |
| 37 | April 8, 2013 | JP, SL | May 28, 2013 | JP, SL | August 12, 2013 | JP, SL |
| 38 | April 8, 2013 | JP, SL | May 28, 2013 | JP, SL | August 12, 2013 | JP, SL |

A systematic survey was conducted in all areas of suitable special status plant habitat within the survey area for each of the 11 channel reaches. The survey area included habitats on the

earthen bottom of each channel reach but also the adjacent channel banks within the designated clearance area (Table 1). Late summer surveys (Survey 3), were conducted concomitantly with pre-clearance vegetation transects. All plant species observed were recorded in field notes. Plant species were identified in the field or collected for later identification. Plants were identified to the taxonomic level necessary to determine whether or not they are a special status species. Plants were identified using taxonomic keys, descriptions, and illustrations in Baldwin et al. (2011), Hickman (1993), and Munz (1974). Taxonomy and nomenclature follows Baldwin et al. (2011), Hickman (1993), and current scientific journals for scientific and common names. All voucher specimens collected were deposited in the herbarium at Rancho Santa Ana Botanic Gardens in Claremont, California by Ms. Leatherman in December 2013. Taxonomy and nomenclature follows Hickman (1993), the CNPS (2010), and current scientific journals for scientific and common names.

## SITE DESCRIPTION

Vegetation types and other areas mapped in the 11 channel reaches consist of annual grassland, California buckwheat scrub, coyote brush scrub, coastal sage scrub, willow riparian, willow riparian/ornamental, western sycamore, open water, fresh water marsh, unvegetated wash, ruderal, ornamental, boulders, disturbed, and developed. The vegetation was mapped in the drainages, but not the overhanging canopy. The special status plant species known to occur in the study area vicinity and their potential to occur on the project sites are listed in Table 3 above. The potential for occurrence was determined based upon the suitability of the habitat present in each of the 11 channel reaches. The results of the survey are listed below.

## SURVEY RESULTS

An early spring and late spring survey was conducted at each of the 11 channel reaches, with a late summer survey occurring concurrent with the pre-clearance vegetation transects. These surveys focused on the species listed above in Table 3 with potential to occur in the 11 channel reaches. No special status species were observed at any of the 11 channel reaches during the surveys.

Although reference populations and regional rainfall amounts were monitored to ensure the scientific adequacy of these focused surveys, there is always a minimal potential for false negative survey results, as species could possibly be present on a site but may not be detectable at the time of the survey.

Russian knapweed (*Acroptilon repens*) was observed in Reach 26. Russian knapweed is a noxious weed that is not native to California. Care should be taken when clearing the vegetation within Reach 26 to decrease the spread of seeds from this species.

If you have any comments or questions, please call Marc Blain or Brian Daniels at (626) 351-2000.

Sincerely,

BONTERRA PSOMAS

Marc T. Blain
Associate, Biological Resources Manager

Brian Daniels
Senior Project Manager

Enclosures: Exhibit 1 – Regional Location
Exhibits 2A to 2F – Local Vicinity
Exhibits 3A to 3M – Project Location
Attachment A – Plant Compendium

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# Regional Location

Exhibit 1

*Malibu and Dominguez Channels Feasibility Study*

N W E S

10 5 0 10 Miles

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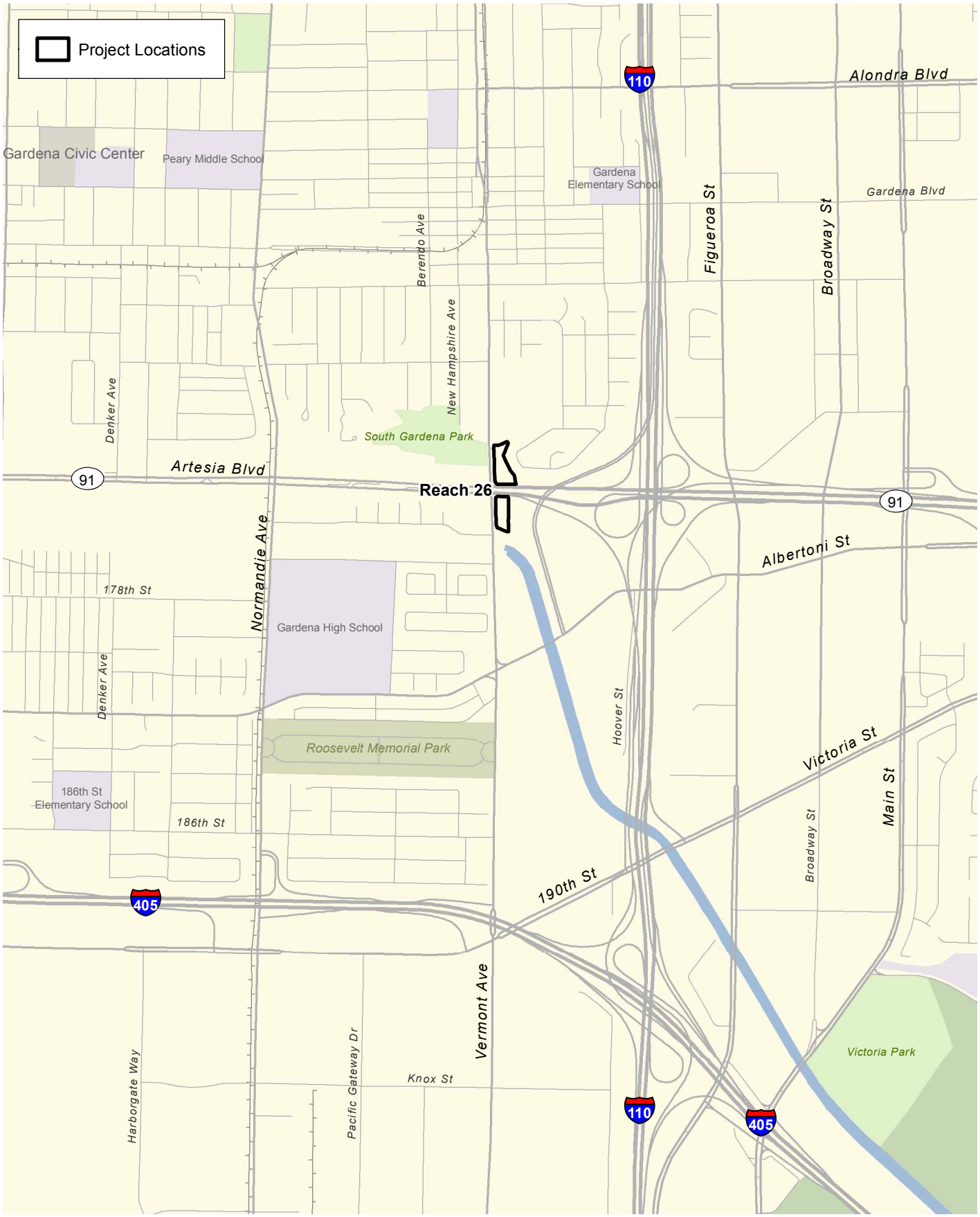


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# Local Vicinity

Exhibit 2a

*Malibu and Dominguez Channels Feasibility Study*

N W E S

1,500 750 0 1,500 Feet

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# Local Vicinity

**Exhibit 2b**

*Malibu and Dominguez Channels Feasibility Study*

N W E S

1,500 750 0 1,500 Feet

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# Local Vicinity

Exhibit 2c

*Malibu and Dominguez Channels Feasibility Study*

N
W E
S

1,500 750 0 1,500

Feet

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# Local Vicinity

Exhibit 2d

*Malibu and Dominguez Channels Feasibility Study*

N
W E
S

1,500 750 0 1,500

Feet

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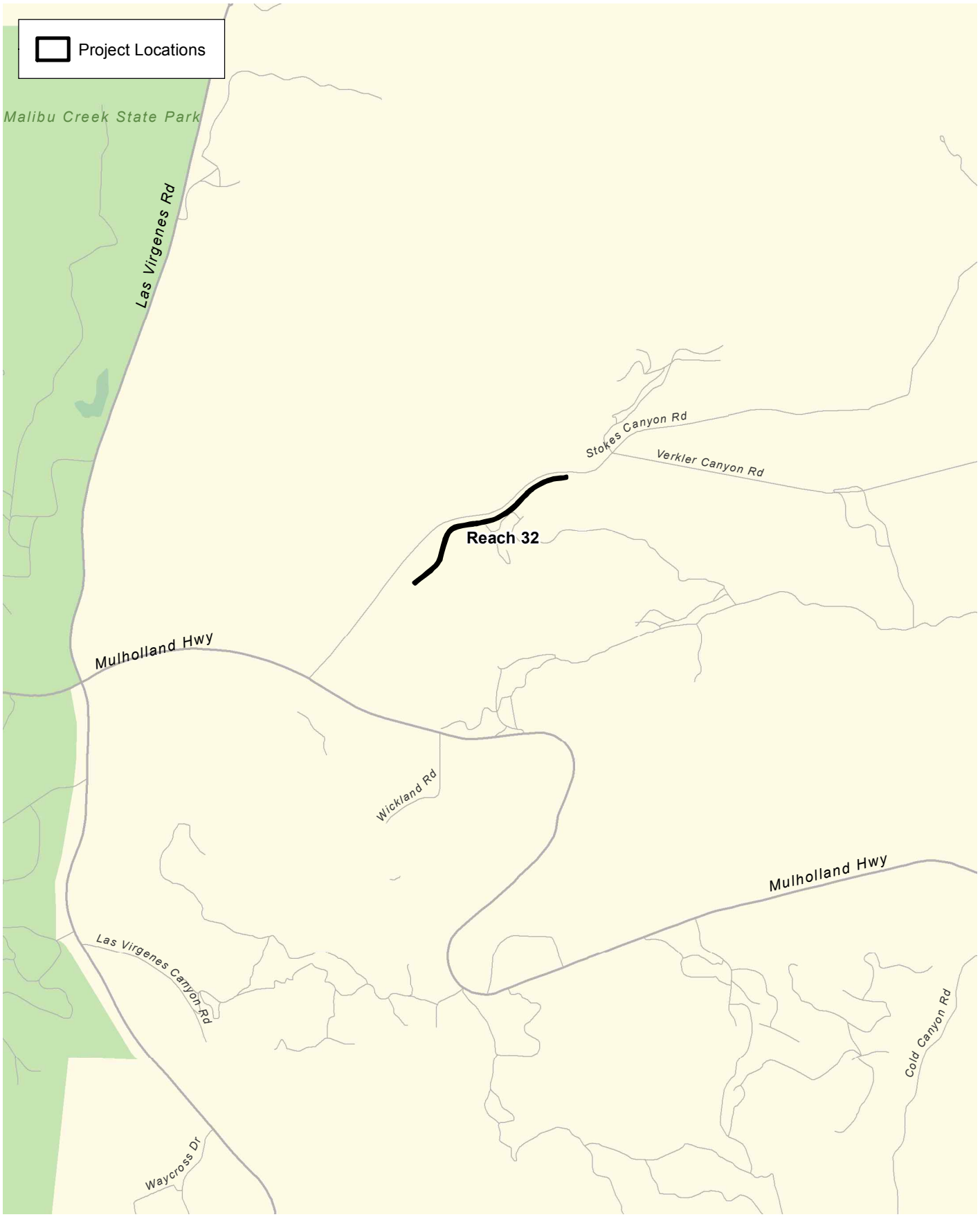


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# Local Vicinity

Exhibit 2e

*Malibu and Dominguez Channels Feasibility Study*

N
W E
S

1,500 750 0 1,500

Feet

BonTerra PSOMAS

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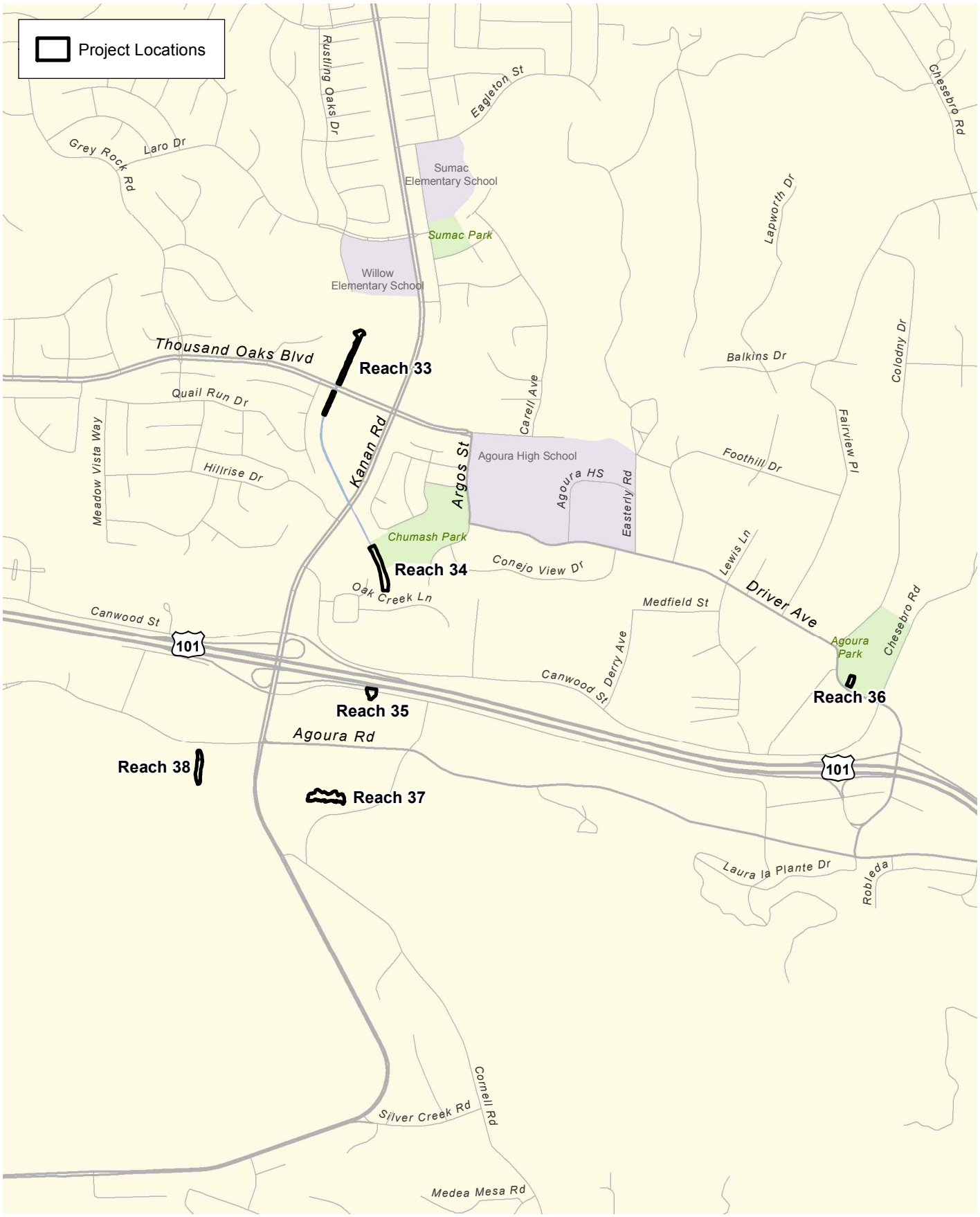


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# Local Vicinity

Exhibit 2f

*Malibu and Dominguez Channels Feasibility Study*

N W E S

1,500 750 0 1,500 Feet

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Aerial Source: LAR-IAC 2014

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# Project Location – Reach 26

Exhibit 3a

*Malibu and Dominguez Channels Feasibility Study*

N W E S

100 50 0 100 Feet

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# Project Location – Reach 27

**Exhibit 3b**

*Malibu and Dominguez Channels Feasibility Study*

N W E S

100 50 0 100 Feet

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Aerial Source: LAR-IAC 2014

# Project Location – Reach 27

Exhibit 3c

*Malibu and Dominguez Channels Feasibility Study*

N W E S

100 50 0 100 Feet

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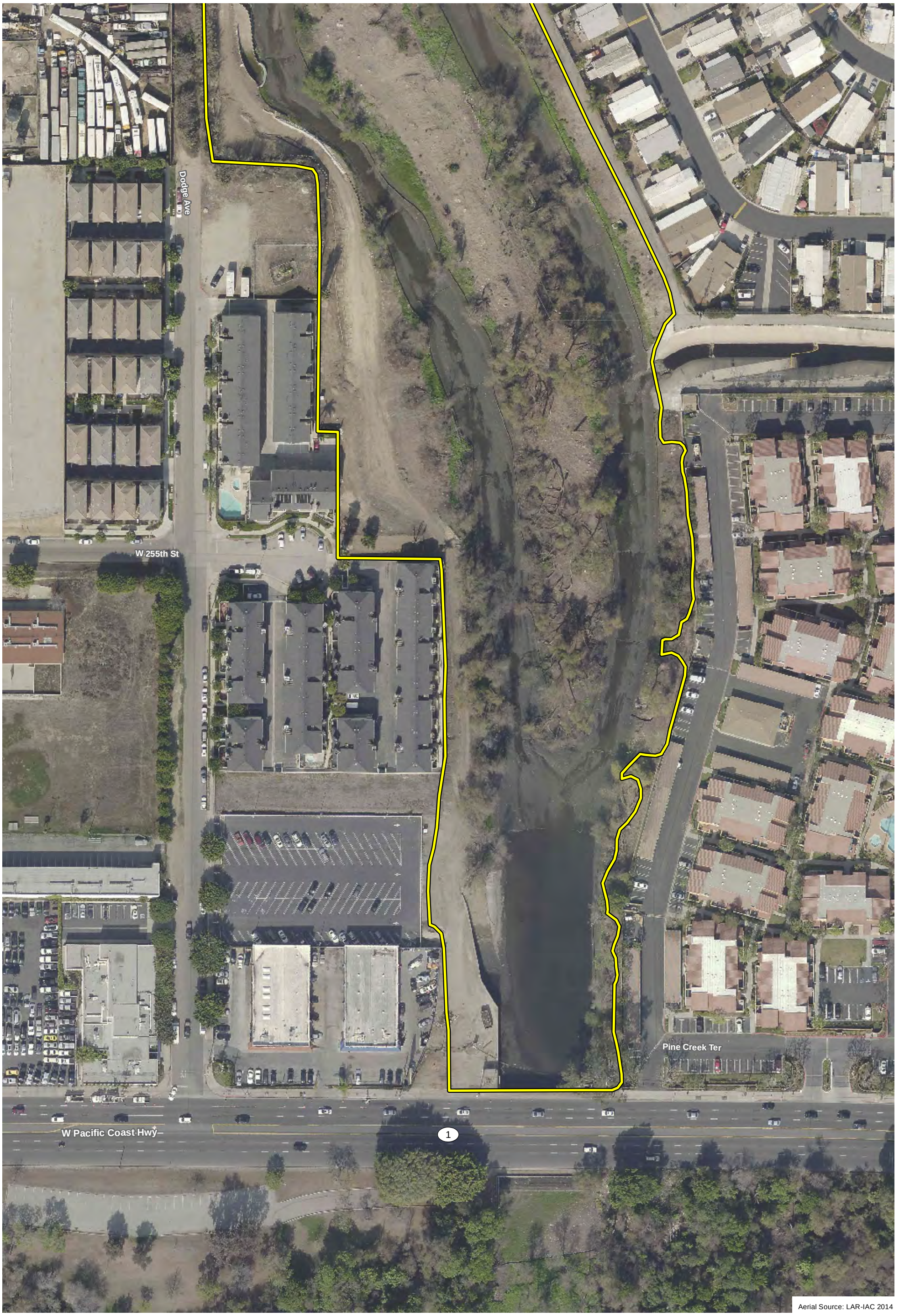


# Project Location – Reach 27

Exhibit 3d

*Malibu and Dominguez Channels Feasibility Study*

N
W E
S

100 50 0 100
Feet

BonTerra PSOMAS

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Aerial Source: LAR-IAC 2014

# Project Location – Reach 28

Exhibit 3e

*Malibu and Dominguez Channels Feasibility Study*

N
W E
S

100 50 0 100
Feet

BonTerra PSOMAS

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Aerial Source: LAR-IAC 2014

# Project Location – Reach 29

Exhibit 3f

*Malibu and Dominguez Channels Feasibility Study*

N
W E
S

100 50 0 100
Feet

Bonterra PSOMAS

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Aerial Source: LAR-IAC 2014

# Project Location – Reach 32

Exhibit 3g

*Malibu and Dominguez Channels Feasibility Study*

N
W E
S

100 50 0 100

Feet

BonTerra PSOMAS

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Aerial Source: LAR-IAC 2014

# Project Location – Reach 32

Exhibit 3h

*Malibu and Dominguez Channels Feasibility Study*

N
W E
S

100 50 0 100
Feet

Benterra PSOMAS

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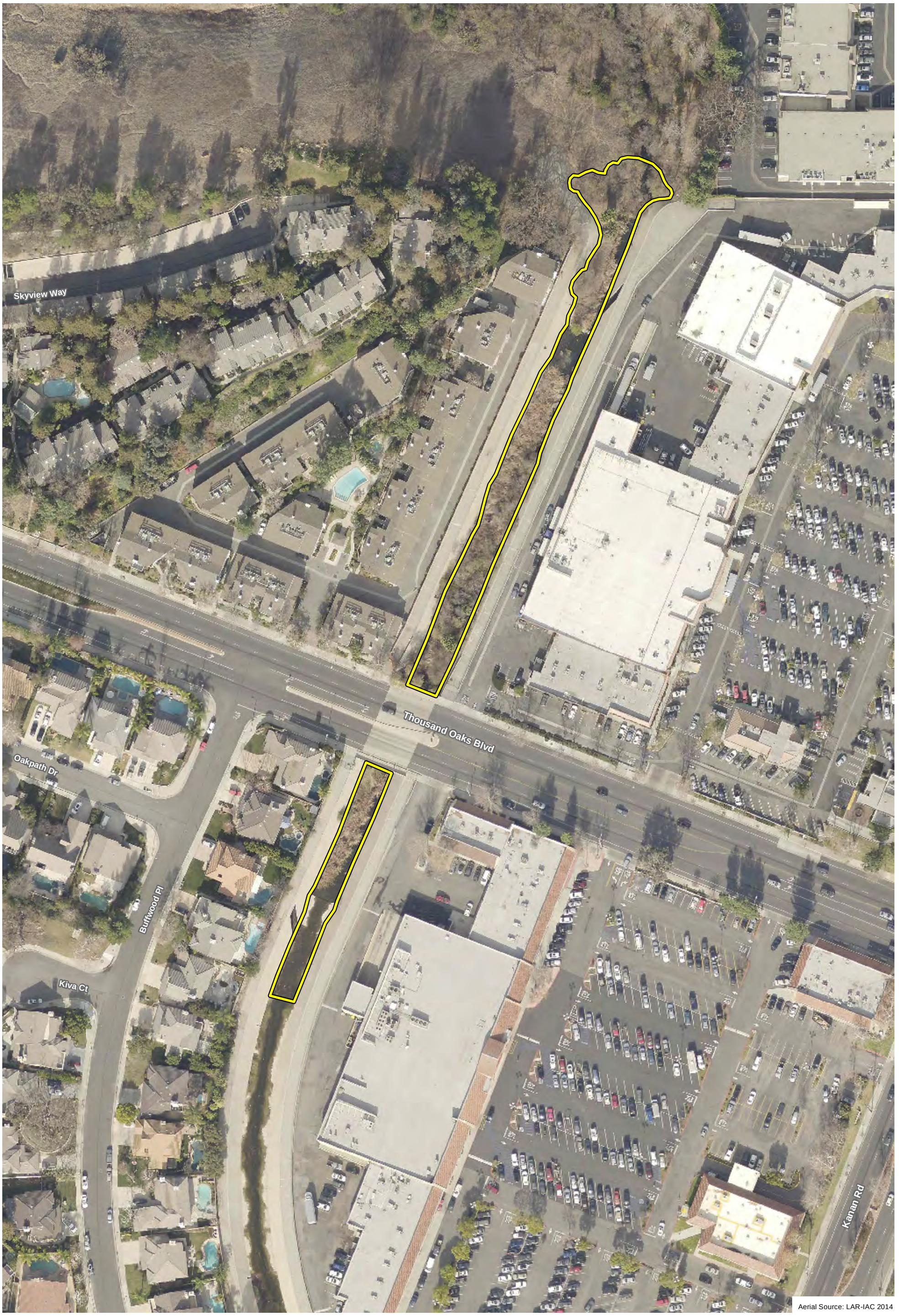


Aerial Source: LAR-IAC 2014

# Project Location – Reach 33

Exhibit 3i

*Malibu and Dominguez Channels Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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Aerial Source: LAR-IAC 2014

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# Project Location – Reach 34

Exhibit 3j

*Malibu and Dominguez Channels Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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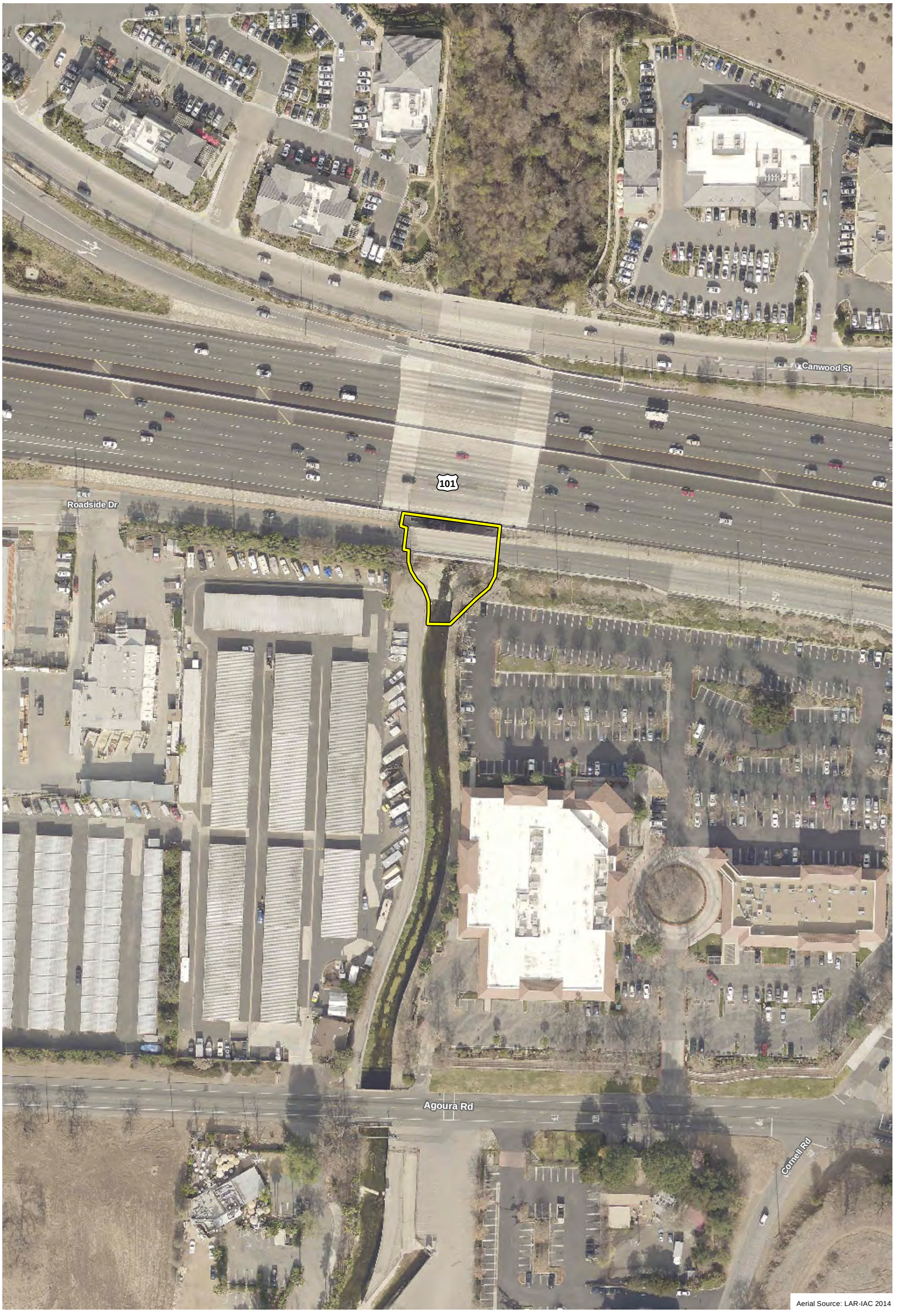


Aerial Source: LAR-IAC 2014

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# Project Location – Reach 35

Exhibit 3k

*Malibu and Dominguez Channels Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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Aerial Source: LAR-IAC 2014

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# Project Location – Reach 36

Exhibit 3l

*Malibu and Dominguez Channels Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

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Aerial Source: LAR-IAC 2014

# Project Location – Reach 37

Exhibit 3m

*Malibu and Dominguez Channels Feasibility Study*

N
W E
S

100 50 0 100
Feet

BonTerra PSOMAS

(Rev: 03-28-2016 LEW) R:\Projects\CoLADPW (DPW)\J211\Graphics\PlantReport\Ex3_ProjectLocation.pdf

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Aerial Source: LAR-IAC 2014

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# Project Location – Reach 38

Exhibit 3n

*Malibu and Dominguez Channels Feasibility Study*

N W E S

100 50 0 100 Feet

BonTerra PSOMAS

(Rev: 03-28-2016 LEW) R:\Projects\CoLADPW (DPW)\J211\Graphics\PlantReport\Ex3_ProjectLocation.pdf

# ATTACHMENT A

# PLANT COMPENDIUM

| Species | | 26 | 27 | 28 | 29 | 32 | 33 | 34 | 35 | 36 | 37 | 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EUDICOTS** | | x | x | x | x | x | x | x | x | x | x | x |
| | | | | | | | | | | | | |
| *ADOXACEAE* – MUSKROOT FAMILY | | | | x | | x | | | | | | |
| *Sambucus nigra* ssp. *caerulea* [*S. mexicana*] | blue elderberry | | | x | | x | | | | | | |
| | | | | | | | | | | | | |
| *AIZOACEAE* – FIG-MARIGOLD FAMILY | | | x | | | | | | | | | |
| *Carpobrotus edulis** | freeway iceplant | | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *AMARANTHACEAE* - AMARANTH FAMILY | | | x | | | | | | | | | |
| *Amaranthus blitoides* | procumbent pigweed | | x | | | | | | | | | |
| *Atriplex suberecta** | sprawling saltbush | | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *ANACARDIACEAE* – SUMAC FAMILY | | **x** | **x** | **x** | | | | | | | **x** | |
| *Schinus molle** | Peruvian pepper tree | | x | x | | | | | | | | |
| *Schinus terebinthifolius** | Brazilian pepper tree | x | x | | | | | | | | | |
| *Toxicodendron diversilobum* | western poison oak | | | | | | | | | | x | |
| | | | | | | | | | | | | |
| *APIACEAE* – CARROT FAMILY | | x | x | x | | x | | | | | x | x |
| *Apium graveolens** | common celery | | | | | x | | | | | | x |
| *Conium maculatum** | poison hemlock | | x | | | | | | | | | x |
| *Foeniculum vulgare** | sweet fennel | x | x | x | | | | | | | x | x |
| | | | | | | | | | | | | |
| *APOCYNACEAE* – DOGBANE FAMILY | | | | | | | x | | | x | x | x |
| *Asclepias fascicularis* | narrow-leaf milkweed | | | | | | | | | | x | x |
| *Nerium oleander** | common oleander | | | | | | x | | | | | |
| *Vinca major** | greater periwinkle | | | | | | | | | x | | |
| | | | | | | | | | | | | |
| *ARALIACEAE* – GINSENG FAMILY | | x | | | | | | | | | | |
| *Hedera helix** | English ivy | x | | | | | | | | | | |
| | | | | | | | | | | | | |
| *ASTERACEAE* – SUNFLOWER FAMILY | | x | x | x | x | x | x | x | x | x | x | x |
| *Acroptilon repens** | Russian knapweed | x | | | | | | | | | | |
| *Ambrosia psilostachya* | western ragweed | x | | x | | x | x | | | x | x | x |
| *Artemisia douglasiana* | mugwort | | | x | | x | | | | x | x | x |
| *Baccharis pilularis* ssp. *consanguinea* [*B. pilularis*] | coyote brush | | x | | | x | x | x | | | | x |
| *Baccharis salicifolia* ssp. *salicifolia* [*B. salicifolia*] | mule fat | | x | x | | x | | x | x | | x | x |
| *Bidens frondosa* | sticktight | | x | | | | | | | | | |
| *Carduus pycnocephalus* ssp. *pycnocephalus** | Italian thistle | | | x | | x | x | x | | x | x | x |
| *Centaurea benedicta* [*Cnicus benedictus*]* | blessed thistle | | | | | x | | | | | | |
| *Centaurea melitensis** | tocalote, Malta star-thistle | | x | x | | x | | | | | | |
| *Centaurea solstitialis** | yellow star-thistle | | | x | | | | | | | | x |
| *Cirsium vulgare** | bull thistle | | | x | | x | | x | | x | x | x |
| *Corethrogyne filaginifolia*[*Lessingia f.*] | California-aster | | | | | x | | | | | | |
| *Cotula coronopifolia** | brass-buttons | | x | | | | | | | | | |
| *Erigeron canadensis* [*Conyza c.*] | common horseweed | x | x | | x | | | | x | | x | x |
| *Eriophyllum confertiflorum* | golden-yarrow | | | x | | x | | | | | | |
| *Glebionis coronaria* [*Chrysanthemum coronarium*]* | garland daisy | x | x | | | | | | | | | |
| *Helminthotheca echioides* [*Picris e.*]* | bristly ox-tongue | x | x | x | | | x | x | | | | |
| *Heterotheca grandiflora* | telegraph weed | | x | x | | x | | | | | | x |
| *Lactuca serriola** | prickly lettuce | x | x | | | x | | | x | | | |
| *Logfia gallica* [*Filago g.*]* | daggerleaf cottonrose | | | | | x | | | | | | |
| *Malacothrix saxatilis* var. *saxatilis* | cliff malacothrix | | | | | x | | | | | | |
| *Matricaria discoidea* [*Chamomilla suaveolens*]* | pineapple weed | | | | | | | | | | x | x |
| *Pseudognaphalium californicum* [*Gnaphalium c.*] | California everlasting | | | x | | x | | | | | | |
| *Pseudognaphalium luteoalbum* [*Gnaphalium l.*]* | weedy cudweed | | | | | x | | | | | x | |
| *Senecio vulgaris** | common groundsel | | | | x | | | | | | | |
| *Silybum marianum** | milk thistle | | x | x | | x | | | | | | |
| *Sonchus asper* ssp. *asper** | prickly sow thistle | | | | | | | | | | | |
| *Sonchus oleraceus** | common sow thistle | x | x | x | x | x | x | x | x | x | x | |
| *Taraxacum officinale** | common dandelion | x | | | | | | | | | | |
| *Tragopogon porrifolius** | purple salsify | | x | | | | | | | | | |
| *Xanthium strumarium* | cocklebur | | | | x | | | | | | x | |
| | | | | | | | | | | | | |
| *BIGNONIACEAE* – BIGNONIA FAMILY | | | | | x | x | x | | | | | |
| *Heliotropium curassavicum* var. *oculatum* | salt heliotrope, alkali heliotrope | | | | x | x | x | | | | | x |
| | | | | | | | | | | | | |
| *BORAGINACEAE* – BORAGE FAMILY | | | | x | | | | | | x | | |

| Species | | 26 | 27 | 28 | 29 | 32 | 33 | 34 | 35 | 36 | 37 | 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Amsinckia menziesii* [*Amsinckia m.* var. *m.*] | common fiddleneck, small-flowered fiddleneck | | | | | | | | | | x | |
| *Phacelia cicutaria* | caterpillar phacelia | | | x | | | | | | x | | |
| | | | | | | | | | | | | |
| *BRASSICACEAE* – MUSTARD FAMILY | | x | x | x | | x | x | x | x | x | x | x |
| *Brassica nigra** | black mustard | | | | | x | | x | | | x | x |
| *Brassica rapa** | field mustard | | | | | | | | | | | |
| *Capsella bursa-pastoris** | shepherd's purse | | | | | | | x | | | | |
| *Hirschfeldia incana** | shortpod mustard | x | x | x | | x | | x | x | x | x | x |
| *Lepidium latifolium** | broad-leaved peppergrass | | x | x | | | x | x | x | x | x | x |
| *Nasturtium officinale* [*Rorippa nasturtium-aquaticum*]* | water cress | | | | | | | | x | | x | x |
| *Raphanus sativus** | radish | x | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *CAPRIFOLIACEAE* – HONEYSUCKLE FAMILY | | | | | | | | | | | x | |
| *Lonicera subspicata* var. *denudata* | southern honeysuckle | | | | | | | | | | x | |
| | | | | | | | | | | | | |
| *CASUARINACEAE* – SHE-OAK FAMILY | | | | | | | x | | | | | |
| *Casuarina equisetifolia** | Australian pine | | | | | | x | | | | | |
| | | | | | | | | | | | | |
| *CHENOPODIACEAE* – GOOSEFOOT FAMILY | | x | x | | | | | | x | | | |
| *Chenopodium album** | lamb's quarters | | x | | | | | | | | | |
| *Salsola tragus** | Russian thistle | x | x | | | | | | x | | | |
| | | | | | | | | | | | | |
| *CONVOLVULACEAE* – MORNING-GLORY FAMILY | | x | x | | | | | | | | | |
| *Convolvulus arvensis** | bindweed | x | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *CUCURBITACEAE* – GOURD FAMILY | | | | x | | | | | | | | |
| *Marah macrocarpus* | wild cucumber, chilicothe | | | x | | | | | | | | |
| | | | | | | | | | | | | |
| *EUPHORBIACEAE* – SPURGE FAMILY | | x | x | x | | | | x | | | | x |
| *Chamaesyce albomarginata* [*Euphorbia a.*] | rattlesnake weed | | x | | | | | | | | | |
| *Croton setigerus* [*Eremocarpus s.*] | doveweed, turkey mullein | | | x | | | | | | | | |
| *Euphorbia peplus** | petty spurge | | | x | | | | x | | | | x |
| *Ricinus communis** | castor bean | x | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *FABACEAE* – LEGUME FAMILY | | | x | x | x | x | x | | | x | x | x |
| *Acmispon americanus* [*Lotus purshianus*] | American lotus | | | | | x | | | | | | x |
| *Acmispon glaber* var. *glaber* [*Lotus scoparius* var. *scoparius*] | coastal deerweed | | | | | x | | | | | | |
| *Lupinus bicolor* | miniature lupine | | | | | x | | | | | x | |
| *Lupinus microcarpus* var. *microcarpus* | chick lupine | | | | | x | | | | | | |
| *Lupinus truncatus* | truncate lupine, collar lupine | | | | | x | | | | | | |
| *Medicago polymorpha** | California burclover | | x | | | x | | | | | | |
| *Melilotus alba** | white sweetclover | | | | | | x | | | | x | x |
| *Melilotus indica** | sourclover | | x | x | x | x | | | | x | x | x |
| *Vicia sp.** | vetch | | | | | x | | | | | x | |
| | | | | | | | | | | | | |
| *FAGACEAE* – OAK/BEECH FAMILY | | | | x | | | x | x | | | x | x |
| *Quercus agrifolia* | coast live oak | | | x | | | x | x | | | x | |
| *Quercus lobata* | valley oak | | | | | | x | | | | x | x |
| | | | | | | | | | | | | |
| *FRANKENIACEAE* – FRANKENIA FAMILY | | | | | | | | | | | | |
| *Frankenia salina* | alkali heath | | | | | | | | | | | |
| | | | | | | | | | | | | |
| *GERANIACEAE* – GERANIUM FAMILY | | | | x | | x | | x | | | | x |
| *Erodium botrys** | long-beaked filaree | | | x | | | | | | | | |
| *Erodium cicutarium** | red-stemmed filaree | | | x | | x | | | | | x | x |
| *Geranium dissectum* | cutleaf geranium | | | | | | | x | | | | |
| | | | | | | | | | | | | |
| *JUGLANDACEAE* – WALNUT FAMILY | | | | | | | | | | x | | |
| *Juglans californica* | Southern California black walnut | | | | | | | | | x | | |
| *Juglans regia** | English walnut | | | | | | | | | x | | |
| | | | | | | | | | | | | |
| *LAMIACEAE* – MINT FAMILY | | | | x | | x | | x | | | x | x |
| *Marrubium vulgare** | common horehound | | | x | | x | | x | | | x | x |
| *Stachys albens* | white hedge-nettle | | | | | | | | | | | x |
| *Stachys rigida ssp. rigida* | rigid hedge-nettle | | | | | | | | | | x | |
| | | | | | | | | | | | | |

| Species | | 26 | 27 | 28 | 29 | 32 | 33 | 34 | 35 | 36 | 37 | 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *MALVACEAE* – MALLOW FAMILY | | x | x | | | x | | | | | | |
| *Malva parviflora** | cheeseweed | **x** | **x** | | | **x** | | | | | | |
| *Malvella leprosa* | alkali mallow | | **x** | | | | | | | | | |
| | | | | | | | | | | | | |
| *MONTIACEAE* – MONTIA FAMILY | | | | | | x | | | | | | |
| *Claytonia perfoliata* ssp. *perfoliata* | common miner's-lettuce | | | | | x | | | | | | |
| | | | | | | | | | | | | |
| *MORACEAE* – FIG FAMILY | | **x** | | | | | **x** | | | | **x** | |
| *Ficus carica** | edible fig | **x** | | | | | **x** | | | | **x** | |
| | | | | | | | | | | | | |
| *MYRSINACEAE* – MYRSINE FAMILY | | | | x | | | | | | x | | |
| *Anagallis arvensis** | scarlet pimpernel | | | x | | | | | | x | | |
| | | | | | | | | | | | | |
| *MYRTACEAE* – MYRTLE FAMILY | | | x | | | | | | | | | |
| *Eucalyptus* sp.* | gum | | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *OLEACEAE* – OLIVE FAMILY | | x | x | x | | x | x | x | x | | | |
| *Fraxinus* sp.* | ash tree | x | x | x | | x | x | x | x | | | |
| *Ligustrum sp.** | privit | | x | | | | | | | | | |
| *Olea europaea** | olive | | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *ONAGRACEAE* – EVENING-PRIMROSE FAMILY | | x | x | | | x | x | | | | | x |
| *Camissoniopsis bistorta* [*Camissonia b.*] | California sun cup | | | | | x | | | | | | |
| *Clarkia unguiculata* | elegant clarkia | | | | | x check species w Sandy | | | | | | |
| *Epilobium ciliatum* | willow-herb | x | | | | | x | | | | | x |
| *Ludwigia peploides** | yellow waterweed | x | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *OXALIDACEAE* – WOOD-SORREL FAMILY | | x | | | | | | | | | | |
| *Oxalis corniculata** | yellow sorrel | x | | | | | | | | | | |
| | | | | | | | | | | | | |
| *PAPAVERACEAE* – POPPY FAMILY | | | | x | | | | | | | | |
| *Eschscholzia californica* | California poppy | | | x | | | | | | | | |
| | | | | | | | | | | | | |
| *PHRYMACEAE* – LOPSEED FAMILY | | | | x | | | | | | | | |
| *Mimulus aurantiacus* | bush monkeyflower | | | x | | | | | | | | |
| | | | | | | | | | | | | |
| *PLANTAGINACEAE* – PLANTAIN FAMILY | | x | | | | x | x | x | | | | x |
| *Plantago lanceolata** | English plantain | x | | | | x | | | | | | x |
| *Plantago major** | common plantain | | | | | x | | x | | | | x |
| *Veronica anagallis-aquatica** | water speedwell | | | | | | x | x | | | | x |
| | | | | | | | | | | | | |
| *PLATANACEAE* – SYCAMORE FAMILY | | | | x | | | x | x | | | x | |
| *Platanus racemosa* | western sycamore | | | x | | | x | x | | | x | |
| | | | | | | | | | | | | |
| *POLYGONACEAE* – BUCKWHEAT FAMILY | | | x | | | x | | | | | | x |
| *Persicaria lapathifolia* [*Polygonum lapathifolium*] | willow weed | | x | | | x | | | | | | x |
| *Rumex salicifolius* | willow dock | | x | | | x | | | | | | x |
| *Rumex* sp. | dock | | | | | | | | | | | |
| | | | | | | | | | | | | |
| *RHAMNACEAE* – BUCKTHORN FAMILY | | | | | | x | | | | | x | |
| *Frangula californica* [*Rhamnus californica*] | California coffee berry | | | | | x | | | | | x | |
| | | | | | | | | | | | | |
| *ROSACEAE* – ROSE FAMILY | | x | | | x | | | x | x | x | | |
| *Heteromeles arbutifolia* | toyon, Christmas berry | | | | | | | | | | x | |
| *Prunus persica* | peach | x | | | | | | | | | | |
| *Rosa californica* | California rose | | | | x | | | | x | x | | |
| *Rubus ursinus* | California blackberry | | | | | | | x | | x | | |
| | | | | | | | | | | | | |
| *RUBIACEAE* – MADDER FAMILY | | | x | x | | x | | | | | x | |
| *Galium aparine* | goose grass | | x | x | | | | | | | x | |
| *Galium angustifolium* | narrowly leaved bedstraw | | x | | | x | | | | | | |
| | | | | | | | | | | | | |
| *RUTACEAE* – ORANGE FAMILY | | | x | | | | | | | | | |
| *Citrus sp.** | Citrus tree | | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *SALICACEAE* – WILLOW FAMILY | | | x | x | | x | x | x | | x | x | x |
| *Populus fremontii* ssp. *fremontii* | Fremont cottonwood | | | | | x | | | | | | |
| *Salix exigua* | narrow-leaved willow | | | | | | x | | | | | |

| Species | | 26 | 27 | 28 | 29 | 32 | 33 | 34 | 35 | 36 | 37 | 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Salix gooddingii* | Goodding's black willow | x | x | | | | | x | | | | |
| *Salix laevigata* | red willow | | | x | | | x | | | x | | x |
| *Salix laevigata x Salix lasiolepis* | hybrid red-arroyo willow | | | | | | | | | | x | |
| *Salix lasiolepis* | arroyo willow | | x | x | | x | x | x | | x | x | x |
| | | | | | | | | | | | | |
| *SAPINDACEAE* – SOAP BERRY FAMILY | | | x | | | | | | | | | |
| *Cupaniopsis anacardioides* | Carrotwood | | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *SIMAROUBACEAE* – QUASSIA FAMILY | | x | x | | | | | | | | | |
| *Ailanthus altissima** | tree of heaven | x | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *SOLANACEAE* – NIGHTSHADE FAMILY | | x | x | x | | | x | x | x | x | x | |
| *Datura stramonium** | jimson weed | | | x | | | | x | | x | x | |
| *Nicotiana glauca** | tree tobacco | | | x | | | | | x | | | |
| *Solanum americanum* | small flowered nightshade | | x | | | | | | | | | |
| *Solanum douglasii* | Douglas' nightshade | | x | | | | x | | | | | |
| *Solanum maxima* | golden chalice vine | x | | | | | | | | | | |
| | | | | | | | | | | | | |
| *TAMARICACEAE* – TAMARISK FAMILY | | | | x | | | | x | | | | |
| *Tamarix ramosissima** | saltcedar | | | x | | | | x | | | | |
| | | | | | | | | | | | | |
| *TROPAEOLACEAE* – NASTURTIUM FAMILY | | x | x | | | | | | | | | |
| *Tropaeolum majus** | garden nasturtium | x | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *URTICACEAE* – NETTLE FAMILY | | | x | | | | | | | | | |
| *Urtica dioica* ssp. *holosericea* | hoary nettle | | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *VERBENACEAE* – VERVAIN FAMILY | | | | | | x | | | | | | x |
| *Verbena lasiostachys* var. *lasiostachys* | western verbena | | | | | x | | | | | | x |
| | | | | | | | | | | | | |
| *VITACEAE* – GRAPE FAMILY | | | x | x | | | x | | | | | |
| *Parthenocissus quinquefolia** | Virginia creeper | | | x | | | | | | | | |
| *Parthenocissus tricuspidata** | Boston ivy | | | | | | x | | | | | |
| *Vitis girdiana* | desert wild grape | | x | | | | | | | | | |
| | | | | | | | | | | | | |
| ***MONOCOTYLEDONES* – MONOCOTS** | | | x | x | x | | x | x | x | x | x | x |
| | | | | | | | | | | | | |
| *ARECACEAE* – PALM FAMILY | | x | x | | | x | x | x | | | x | x |
| *Phoenix canariensis** | Canary Island palm | | x | | | | | | | | | |
| *Washingtonia* sp.* | fan palm | x | x | | | x | x | x | | | x | x |
| | | | | | | | | | | | | |
| *ALISMATACEAE* – WATER-PLANTAIN FAMILY | | | x | | | | | | | | | |
| *Alisma lanceolatum ?* | water plantain | | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *CYPERACEAE* – SEDGE FAMILY | | x | x | x | x | | x | | | | x | |
| *Cyperus sp.* | umbrella-sedge | x | x | | | | | | | | | |
| *Schoenoplectus americanus* [*Scirpus a.*] | Olney's bulrush | x | x | x | | | x | | | | x | |
| *Schoenoplectus sp. [Scirpus sp.]* | bulrush | | | | x | | | | | | | |
| | | | | | | | | | | | | |
| *IRIDACEAE* – IRIS FAMILY | | | x | | | | | | | | | |
| *Iris pseudacorus* | water iris | | x | | | | | | | | | |
| | | | | | | | | | | | | |
| *POACEAE* – GRASS FAMILY | | x | x | x | x | x | x | x | x | x | x | x |
| *Avena* sp.* | oat | x | x | | | x | | | | | | |
| *Avena fatua** | wild oat | | | x | | | | | | | | |
| *Brachypodium distachyon** | purple false brome | x | | | | | | | | | | |
| *Bromus arizonicus* | Arizona chess | | | | | | | | | | | |
| *Bromus diandrus** | ripgut grass | x | x | x | x | x | x | | | x | x | x |
| *Bromus hordeaceus** | soft chess | | | x | | x | | | | | | |
| *Bromus madritensis* ssp. *rubens** | red brome | x | x | x | x | x | | x | | x | x | x |
| *Cynodon dactylon** | bermuda grass | x | x | | | x | x | x | | | | |
| *Echinochloa crus-galli** | barnyard grass | x | x | | | | | | | | x | x |
| *Elymus condensatus* [*Leymus c.*] | giant wild rye | x | x | | | | | | | | | x |
| *Elymus glaucus* | blue wild-rye | | | | | | | | | | x | |
| *Elymus triticoides* [*Leymus t.*] | beardless wild rye | | | | | x | | | | | | x |
| *Festuca myuros* [*Vulpia m.* var. *myuros*]* | rattail fescue | | | | | x | | | | | | |
| *Festuca perennis* [*Lolium perenne, L. multiflorum*]* | perennial ryegrass | x | x | | | x | | | | | x | x |
| *Hordeum murinum* var. *leporinum** | hare barley | x | x | | | x | | | | | x | |

| Species | | 26 | 27 | 28 | 29 | 32 | 33 | 34 | 35 | 36 | 37 | 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Melica imperfecta* | little California melic grass | | | | | x | | | | | | |
| *Polypogon monspeliensis** | annual beard grass | | | | | x | x | x | | | x | x |
| *Stipa sp.* [*Nassella sp.*] | needlegrass | | | | | | | | | | | x |
| *Stipa miliacea* [*Piptatherum miliacea*]* | smilo grass | x | x | x | | x | x | x | x | x | x | x |
| | | | | | | | | | | | | |
| *THEMIDACEAE* – BRODIAEA FAMILY | | | | | | x | | | | | | |
| *Bloomeria crocea* | common goldenstar | | | | | x | | | | | | |
| | | | | | | | | | | | | |
| *TYPHACEAE* – CATTAIL FAMILY | | | x | x | x | x | x | x | x | | x | x |
| *Typha* sp. | cattail | | x | x | x | x | x | x | x | | x | x |

# APPENDIX C

# SBC FOCUSED SURVEY REPORT

# 2013 Focused Survey Results

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

Prepared for

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September 17, 2013

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# EXECUTIVE SUMMARY

Focused surveys for Threatened and Endangered (T/E) species are conducted on a regular basis at selected soft-bottom channel reaches maintained by the Los Angeles County Flood Control District (LACFCD). Annual biological monitoring and periodic habitat assessments of all LACFCD soft-bottom channel reaches are completed to update and revise, when necessary, the particular channel reaches and species for which surveys are recommended. The following summary includes 3 Endangered animal species for which focused surveys were conducted at 22 channel reaches in 2013 and includes a maintenance overview with respect to these species. The 2013 survey results are also summarized below in Table ES-1.

## AMPHIBIANS

### ARROYO TOAD

Focused surveys for the arroyo toad (*Anaxyrus californicus*) were conducted at the following 11 channel reaches in 2013: Castaic Creek Reaches 86, 87, and 97 and Reach 104 in the Castaic Creek Watershed; San Francisquito Canyon Reach 105; the northern part of the South Fork Santa Clara River Reach 75 (i.e., from Magic Mountain Parkway upstream to the Via Princessa Bridge) and the South Fork Santa Clara River Reach 79; Reach 80 at the confluence of the Santa Clara and South Fork Santa Clara Rivers; and Santa Clara River Reaches 71, 82, and 109. These channel reaches may provide suitable breeding habitat during the spring season for the arroyo toad when water is present. Portions of these channel reaches also provide potentially suitable aestivating and foraging habitat. These surveys followed the U.S. Fish and Wildlife Service (USFWS) protocol for this species. Since the protocol does not require handling of the species, a Section 10(a)(1)(A) permit (Scientific Permit) for "take" under the Endangered Species Act is not necessary for performance of these surveys. Although not detected during the 2013 surveys, previous focused surveys have detected the arroyo toad at Reaches 71 and 82 (BonTerra Consulting 2003) and these two channel reaches are considered to be occupied (USFWS 2004). No arroyo toads were observed during the 2013 focused surveys.

The arroyo toad is not typically active during the time period when the soft-bottom channel maintenance occurs (September to November), with the exception of a limited number of juveniles, which stay near the active channel, and increased activity of some adults after storms (Ramirez 2003). Therefore, even if arroyo toads were present, the maintenance activity would not be expected to impact the arroyo toad's foraging or breeding activities. The arroyo toad would not be expected to aestivate in the maintenance area because the area that is maintained has compacted soil; therefore, the maintenance activities would not be expected to affect aestivation of this species.

## BIRDS

### LEAST BELL'S VIREO AND SOUTHWESTERN WILLOW FLYCATCHER

Focused surveys for the least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) were conducted in 2013 at a total of 21 channel reaches where they have potential to occur: 4 channel reaches in the Los Angeles River/San Pedro Bay/Santa Monica Bay areas (Reaches 12, 14, 27, and 28); 4 channel reaches in the San Gabriel River (Reaches 39, 40b, 43a, and 43b); and 13 channel reaches in the Santa Clara River and Castaic Creek Drainages (Reaches 71, 75, 79, 80, 82, 87, 97, 103, 104, 105, 106, 109, and 110). Surveys followed the USFWS protocol for both species. The southwestern willow flycatcher was not present during the 2013 focused surveys and there were also negative

survey results in 2011, 2009, 2007, 2005, 2003, and 2002. The least Bell's vireo was present during the 2013 surveys with a total of 13 territories at 5 channel reaches. Table ES-1 below presents a summary of the 2013 survey results for southwestern willow flycatcher and least Bell's vireo.

**TABLE ES-1**
**SUMMARY OF 2013 RESULTS OF FOCUSED BIRD SURVEYS FOR THE LACFCD SOFT-BOTTOM CHANNELS**

| Reach Number | Reach Name | Focused Surveys for Arroyo Toad | Focused Surveys for Least Bell's Vireo | Focused Surveys for Southwestern Willow Flycatcher |
|---|---|---|---|---|
| **Los Angeles River Watershed/San Pedro Bay** | | | | |
| **12** | Haines Canyon Main Channel Outlet | N/A | Negative | Negative |
| **14** | May Channel (Main Channel Outlet into Pacoima Canyon) | N/A | 2 territories (1 pair/1 solitary male) | Negative |
| **27** | Wilmington Drain | N/A | 1 territory (solitary male) | Negative |
| **Malibu Creek Watershed/Santa Monica Bay** | | | | |
| **28** | Triunfo Creek (PD T2200) | N/A | Negative | Negative |
| **San Gabriel River Watershed** | | | | |
| **39** | Beatty Channel Outlet at San Gabriel River (25+99.00+50') | N/A | 2 territories (1 pair/1 solitary male) | Negative |
| **40b** | San Gabriel River – Santa Monica (I-10) Freeway to Thienes Ave | N/A | 5 territories (4 pairs) | 1 Migrant |
| **43a** | San Gabriel River – Upper | N/A | 3 territories (2 pairs/1 solitary male) | Negative |
| **43b** | San Gabriel River – Lower | N/A | Negative | Negative |
| **Santa Clara River Watershed** | | | | |
| **71** | Santa Clara River Main Channel (PD 1946) | Negative | Negative | Negative |
| **75** | South Fork-Santa Clara River (PDs 725, 916, 1041, 1300) | Negative | Negative | Negative |
| **79** | South Fork – Santa Clara River (Valencia Blvd Bridge Stabilizer) | Negative | Negative | Negative |
| **80** | South Fork – Santa Clara River (PDs 1947 and 1946) | Negative | Migrant male | Negative |
| **82** | Santa Clara River Main Channel (PD 2278) | Negative | Negative | 1 Migrant |
| **86** | Violin Canyon Main Channel Outlet | Negative | N/A | N/A |
| **87** | Castaic – The Old Road Drain (CDR 525.021D) Outlet | Negative | Negative | Negative |
| **97** | Castaic Creek – The Old Road (PD 1982) | Negative | Negative | Negative |
| **103** | Bouquet Canyon Channel (PD 2225) | N/A | Negative | Negative |
| **104** | Castaic Creek (PD 2441 Units 1 and 2) | Negative | Negative | Negative |

**TABLE ES-1**
**SUMMARY OF 2013 RESULTS OF FOCUSED BIRD SURVEYS FOR THE LACFCD SOFT-BOTTOM CHANNELS**

| Reach Number | Reach Name | Focused Surveys for Arroyo Toad | Focused Surveys for Least Bell's Vireo | Focused Surveys for Southwestern Willow Flycatcher |
|---|---|---|---|---|
| **105** | San Francisquito Canyon Channel (PD 2456) | Negative | Negative | 3 Migrants |
| **106** | Castaic Drain Outlet (RMD Channel) | N/A | Negative | Negative |
| **109** | Santa Clara River – South Bank West of McBean Pkwy (MTD 1510) | Negative | Negative | 1 Migrant |
| **110** | Hasley Canyon Channel (PD 2262) | N/A | Negative | Negative |
| N/A = Not applicable; no potential habitat for the species; therefore no survey conducted. | | | | |

The 2013 survey results for least Bell's vireo are shown below in Table ES-2 with the previous survey results for this species under the LACFCD soft-bottom channel maintenance program. Although migrant or transitory least Bell's vireos have been detected at other channel reaches in these focused surveys, only these six channel reaches have supported least Bell's vireo territories.

Both the least Bell's vireo and southwestern willow flycatcher are migratory species that are only present in Southern California from about March through early September. As required by the permits (see U.S. Army Corps of Engineers Nationwide Permit 31 dated September 30, 2010, with Informal USFWS Section 7 Consultation), in order to avoid and/or minimize potential impacts on these species, all channel maintenance clearing work occurs outside this time period (March 15–September 15); additionally, seasonally occupied habitat is identified and protected by flagging and clearing activities are monitored by a qualified biologist.

**TABLE ES-2**
**SUMMARY OF LEAST BELL'S VIREO SURVEY RESULTS SINCE 2002 FOR THE SOFT-BOTTOM CHANNEL MAINTENANCE PROGRAM**

| Reach Number | Reach Name | 2013 | 2011 | 2009 | 2007 | 2005 | 2003 | 2002 |
|---|---|---|---|---|---|---|---|---|
| **Los Angeles River Watershed/San Pedro Bay** | | | | | | | | |
| **14** | May Channel (Main Channel Outlet into Pacoima Canyon) | 2 territories (1 pair/ 1 solitary male) | 3 territories (3 pairs) | 2 territories (2 solitary males) | Negative | 1 territory (1 pair) | Negative | Negative |
| **27** | Wilmington Drain | 1 territory (solitary male) | 1 territory (solitary male) | Negative | 1 territory (solitary male) | Negative | Negative | Negative |
| **San Gabriel River Watershed** | | | | | | | | |
| **39** | Beatty Channel Outlet at San Gabriel River (25+99.00+50') | 2 territories (2 pairs) | 3 territories (3 pairs) | 4 territories (3 pairs/ 1 solitary male) | 2 territories (2 pairs) | 1 territory (1 pair) | Negative | No Survey |

## TABLE ES-2
## SUMMARY OF LEAST BELL'S VIREO SURVEY RESULTS SINCE 2002 FOR THE SOFT-BOTTOM CHANNEL MAINTENANCE PROGRAM

| Reach Number | Reach Name | 2013 | 2011 | 2009 | 2007 | 2005 | 2003 | 2002 |
|---|---|---|---|---|---|---|---|---|
| **40b** | San Gabriel River-Santa Monica (I-10) Freeway to Thienes Ave | 5 territories (4 pairs/ 1 solitary male) | 4 territories (4 pairs) | 2 territories (1 pair/ 1 solitary male) | 3 territories (3 solitary males) | Negative | Negative | 2 territories (1 pair/ 1 solitary male) |
| **43a** | San Gabriel River-Upper | 3 territories (2 pairs/ 1 solitary male) | 4 territories (2 pairs/ 2 solitary males) | 4 territories (3 pairs/ 1 solitary male) | 1 territory (1 pair) | 1 territory (1 pair) | 1 territory (solitary male) | 1 territory (1 pair) |
| **43b** | San Gabriel River-Lower | Negative | Negative | 1 territory (solitary male) | Negative | Negative | Negative | 1 territory (1 pair) |
| | **Total Territories** | **13** | **15** | **13** | **7** | **3** | **1** | **4** |

# SECTION 1.0 INTRODUCTION

In 2002, focused surveys and habitat assessments were conducted at 54 soft-bottom channel reaches that included 53 of the original channel reaches plus 1 new channel reach identified as Reach 101 (Violin Canyon – PD 2312). All 53 original channel reaches have continued to be maintained by the LACFCD under the required regulatory permits, but Reach 101 and other new channel reaches added since that time have yet to be permitted. The purpose of the 2002 surveys was to provide baseline information on the occurrence or potential occurrence of Threatened or Endangered plant and wildlife species for permitted and non-permitted channel reaches. This information is updated annually during pre- and post-clearing surveys of all permitted and non-permitted soft-bottom channel reaches managed by the LACFCD.

## 1.1 ENVIRONMENTAL SETTING

### 1.1.1 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 sources of streams that drain to 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 (LACFCD 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, particularly 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, which 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 (LACFCD 2007). There are now over 400 miles of concrete-lined tributaries that feed into the main channel (LACFCD 2007). 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) are the Sepulveda Flood Control Basin through the Glendale Narrows and south of Willow Street in Long Beach (LACFCD 2007). Reclaimed water enters the Los Angeles River at the Sepulveda Basin where the 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 also 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 (LACFCD 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 the Long Beach Harbor.

The Santa Clara River is unique because it is the only major non-channelized 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 (LACFCD 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 (LACFCD 2007).

The Malibu Creek Watershed is a system of independent streams that drains 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 (LACFCD 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 Harbor Freeway (Interstate [I] 110) to the east, and the Baldwin Hills to the south. All together, the Ballona Creek Watershed drains approximately 130 square miles of the Los Angeles Basin. Creeks or drainages of this watershed include Centinela Creek, Sepulveda Channel, and Benedict Canyon Channel. These drainages pass through the communities of Beverly Hills, Culver City, Inglewood, Los Angeles, and West Hollywood (LACDPW 2007).

The Dominguez Channel 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 communities of Hawthorne, Torrance, Gardena, Carson, and Wilmington drain into the Dominguez Channel. Over 40 percent of this watershed consists of industrial, commercial, and transportation land uses.

The Antelope Valley Watershed is a system of independent streams that drains 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; LACFCD 2007). Because the valley lacks defined natural channels outside the foothills, it is subject to unpredictable sheet flow patterns (LACFCD 2007). 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 (LACFCD 2007). None of the channel reaches discussed in this report are located in the Antelope Valley Watershed.

### 1.1.2 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 development or ownership change, but several more have been added to the list. As of 2013, the LACFCD manages 108 channel reaches (Nos. 1 through 117[1]) that are located in 7 identified watersheds of Los Angeles County:

- Los Angeles River/San Pedro Bay – 25 channel reaches[2]
- Dominguez Channel – 3 channel reaches
- Malibu Creek – 9 channel reaches
- San Gabriel River – 9 channel reaches (not splitting Reaches 40 and 43 and including Reach 116, Los Cerritos Channel)
- Santa Clara River – 59 channel reaches
- Ballona Creek – 1 channel reach
- Antelope Valley – 1 channel reach

In 1997, the 95 soft-bottom flood-control channel reaches encompassed 885.58 acres and 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 Consulting 1999). The acreages noted above have not been updated since that time and are presented to indicate the large amount of habitat under LACFCD jurisdiction.

**Survey Areas**

Of the 94 maintained channel reaches within the boundaries of the LACFCD, 22 reaches have been determined to contain potential habitat for Threatened or Endangered amphibian (arroyo toad) and/or bird (southwestern willow flycatcher and least Bell's vireo) species. These channel reaches are the subject of the focused survey effort and are described below.

***Los Angeles River Watershed/San Pedro Bay***

Reach 12 – Haines Canyon Main Channel Outlet

Reach 12, Haines Canyon Main Channel Outlet, is located within the Tujunga Wash approximately one mile northwest of the intersection of Mount Gleason Avenue and Foothill Boulevard, in the community of Sunland, City of Los Angeles (Exhibit 1). Reach 12 is approximately 437 feet in total length, extending approximately 791 feet downstream of

[1] Numbers for channel reaches that have been developed or had their ownership transferred are no longer in use.

[2] Although it had been previously included in the regulatory permits, it was recently determined during the Los Angeles River Watershed Feasibility Study that the Sheep Corral Channel (Reach 17) flood-control facility was owned and maintained by the City of Glendale and not the LACFCD.

Wentworth Street to approximately 1,228 feet downstream. It is found in Section 11 on the U.S. Geological Survey (USGS) Sunland 7.5-minute quadrangle map at Township 2 North and Range 14 West.

Reach 14 – May Channel (Main Channel Outlet into Pacoima Canyon)

Reach 14, May Channel (Main Channel Outlet into Pacoima Canyon), is located within the Pacoima Wash, approximately 1.25 miles east of the intersection of the Foothill Freeway (I-210) and Hubbard Street in the City of Los Angeles (Exhibit 2). Reach 14 is 690 feet in total length extending from 3,038 feet downstream of Hubbard Street to approximately 3,728 feet downstream of the confluence of Hubbard Street with Pacoima Canyon. It is found in Section 25 on the USGS San Fernando 7.5-minute quadrangle at Township 3 North and 15 Range West.

Reach 27 – Wilmington Drain

Reach 27, Wilmington Drain, is located within the San Pedro Bay Watershed in unincorporated Los Angeles County and within the Wilmington community of the City of Los Angeles (Exhibit 3). The limits of Reach 27 are the Harbor (I-110) Freeway to Pacific Coast Highway. Reach 27 is approximately 3,584 feet in total length. The reach is found in Section 25 of the USGS Torrance 7.5-minute quadrangle map at Township 4 South and Range 14 West.

***Malibu Creek Watershed/Santa Monica Bay***

Reach 28 –Triunfo Creek (PD T2200)

Reach 28, Triunfo Creek (PD T2200), is located within the Malibu Creek Watershed in unincorporated Los Angeles County, approximately 0.1 mile east of the Mulholland Highway and Troutdale Drive intersection (Exhibit 4). The limits of Reach 28 are approximately 384 feet upstream of Mulholland Highway to the downstream edge of Mulholland Highway. Reach 28 is approximately 474 feet in total length. The reach is found in Section 4 of the USGS Point Dume 7.5-minute quadrangle map at Township 1 South and Range 18 West.

***San Gabriel River Watershed***

Reach 39 – Beatty Channel Outlet at San Gabriel River

Reach 39, Beatty Channel Outlet at San Gabriel River (25+99.00±50'), is located within the San Gabriel River Watershed, approximately 0.8 mile north of the Foothill Boulevard and Irwindale Avenue intersection in the City of Azusa (Exhibit 5). The limits of Reach 39 are approximately 2,323 feet downstream of Todd Avenue to approximately 2,415 feet downstream of Todd Avenue. Reach 39 is 145 feet in total length. The reach is found in Section 28 of the USGS Azusa 7.5-minute quadrangle map at Township 1 North and Range 10 West.

Reach 40b – San Gabriel River – Santa Monica (I-10) Freeway to Thienes Avenue

Reach 40b, San Gabriel River-Santa Monica (I-10) Freeway to Thienes Avenue, is located within the San Gabriel River Watershed in the San Gabriel Valley area (Exhibit 6). The limits of Reach 40b are the Santa Monica (I-10) Freeway (upstream) and Thienes Avenue (downstream). Reach 40b has a total length of approximately 10,800 feet. The reach is found in Sections 23, 26, and 34 of the USGS Baldwin Park 7.5-minute quadrangle map at Township 1 South and Range 11 West.


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# Reach 12 – Haines Canyon Main Channel Outlet

Exhibit 1

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

BonTerra CONSULTING

(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex1_PL.pdf


# Reach 14 – May Channel (Main Channel Outlet into Pacoima Canyon)

Exhibit 2

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

0.5 0.25 0 0.5 Miles

BonTerra CONSULTING

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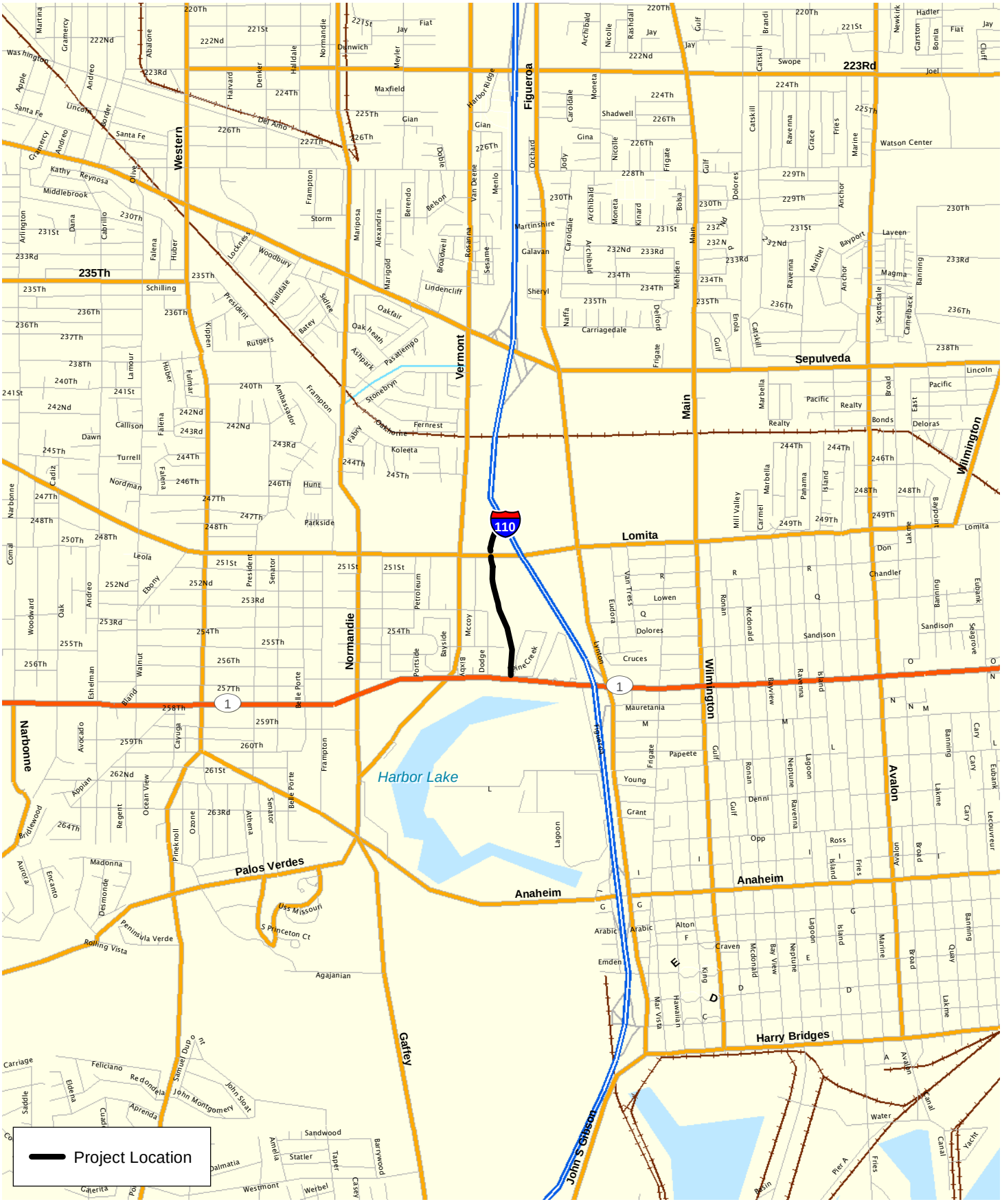


# Reach 27 – Wilmington Drain

Exhibit 3

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

BonTerra CONSULTING

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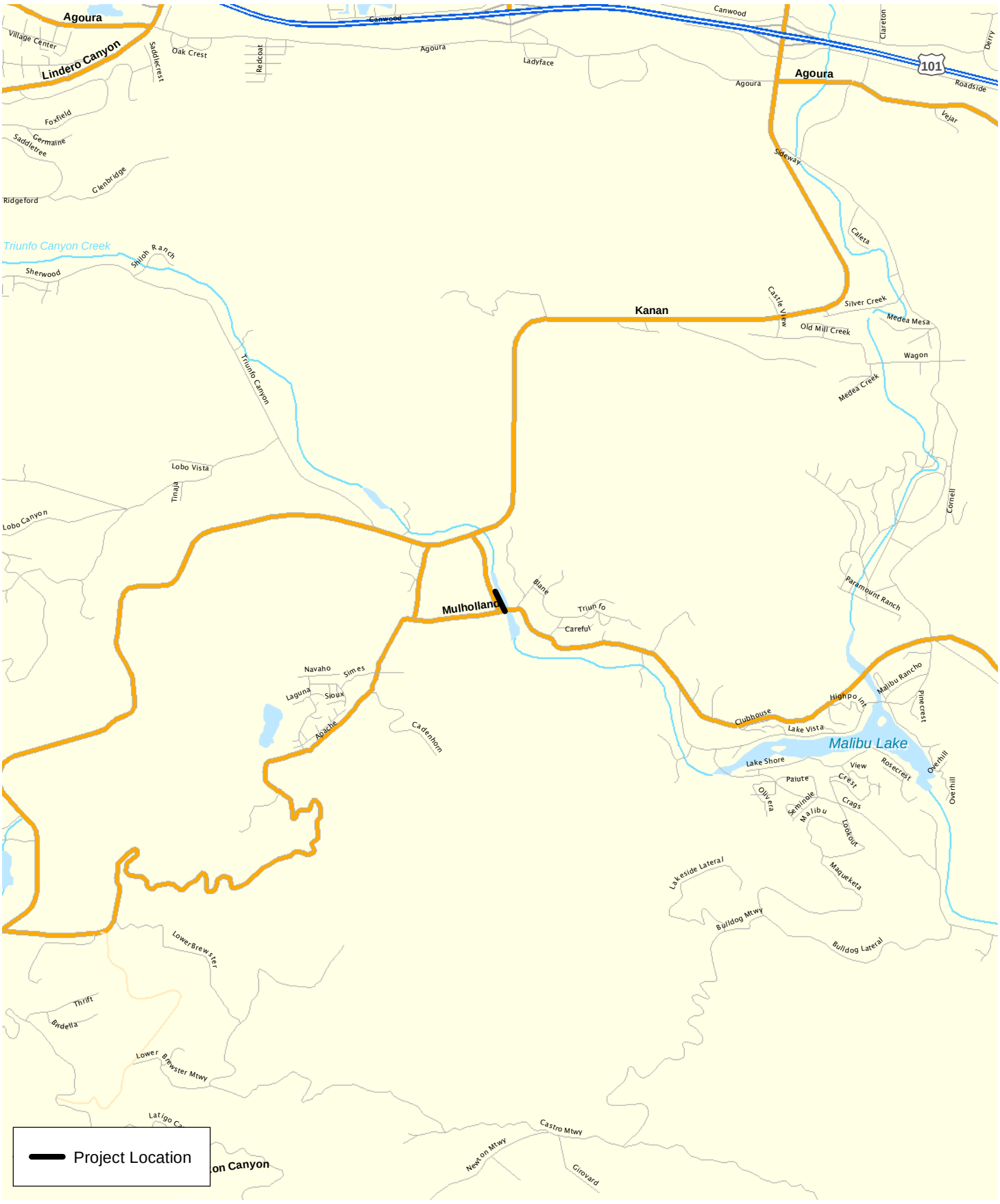


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# Reach 28 – Triunfo Creek (PD T2200)

Exhibit 4

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

0.5 0.25 0 0.5 Miles

BonTerra CONSULTING

(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex4_PL.pdf


# Reach 39 – Beatty Channel Outlet at San Gabriel River (25+99.00+50')

Exhibit 5

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

0.5 0.25 0 0.5 Miles

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(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex5_PL.pdf

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# Reach 40b – San Gabriel River – Santa Monica (I-10) Freeway to Thienes Avenue

Exhibit 6

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

1 0.5 0 1 Miles

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Reach 43a – San Gabriel River – Upper

Reach 43a, San Gabriel River – Upper, is located within the San Gabriel River Watershed, in the San Gabriel Valley area (Exhibit 7). The limits of Reach 43a are between Whittier Narrows Dam and San Gabriel River Parkway. Reach 43a has a total length of approximately 3,450 feet. The reach is found in Sections 5 and 8 of the USGS Whittier 7.5-minute quadrangle map at Township 2 South and Range 11 West.

Reach 43b – San Gabriel River – Lower

Reach 43b, San Gabriel River – Lower, is located within the San Gabriel River Watershed, in the San Gabriel Valley area (Exhibit 8). The limits of Reach 43b are San Gabriel River Parkway (upstream) and Beverly Boulevard (downstream). Reach 43b has a total length of approximately 3,050 feet. The reach is found in Sections 7 and 8 of the USGS Whittier 7.5-minute quadrangle map at Township 2 South and Range 11 West.

***Santa Clara River Watershed***

Reach 71 – Santa Clara River Main Channel (PD 1946)

Reach 71, Santa Clara River Main Channel (PD 1946), is located within the Santa Clara River-South Fork Watershed in the City of Santa Clarita (Exhibit 9). The limits of Reach 71 are approximately 276 feet upstream of McBean Parkway (at the confluence with the South Fork of the Santa Clara River) to the downstream edge of McBean Parkway. Reach 71 is 346 feet in total length. The reach is found in Section 16 of the USGS Newhall 7.5-minute quadrangle map at Township 4 North and Range 16 West.

Reach 75 – South Fork – Santa Clara River (PDs 725, 916, 1041, 1300)

Reach 75, South Fork – Santa Clara River (PDs 725, 916, 1041, 1300), is located within the Santa Clara River – South Fork Watershed in the City of Santa Clarita (Exhibit 10). The limits of Reach 75 are approximately 255 feet downstream of Lyons Avenue to the downstream edge of Magic Mountain Parkway. Reach 75 is 13,965 feet in total length. The reach is found in Sections 22, 27, and 34 of the USGS Newhall 7.5-minute quadrangle map at Township 4 North and Range 16 West.

Reach 79 – South Fork – Santa Clara River (Valencia Boulevard Bridge Stabilizer)

Reach 79, South Fork – Santa Clara River (Valencia Boulevard Bridge Stabilizer), is located within the Santa Clara River – South Fork Watershed (Exhibit 11). The limits of Reach 79 are the downstream edge of Valencia Boulevard to approximately 167 feet downstream of Valencia Boulevard. Reach 79 is 167 feet in total length. The reach is found in Sections 5 and 7 of the USGS Newhall 7.5-minute quadrangle map at Township 2 South and Range 11 West.

Reach 80 – South Fork-Santa Clara River (PDs 1947 and 1946)

Reach 80, South Fork – Santa Clara River (PDs 1947 and 1946), is located within the Santa Clara River – South Fork Watershed (Exhibit 12). The limits of Reach 80 are approximately 3,080 feet upstream of McBean Parkway to approximately 276 feet upstream of McBean Parkway and the confluence with Santa Clara River. Reach 80 is 2,804 feet in total length. The reach is found in Sections 15 and 16 of the USGS Newhall 7.5-minute quadrangle map at Township 4 North and Range 16 West.


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# Reach 43a – San Gabriel River – Upper

Exhibit 7

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

0.5 0.25 0 0.5 Miles

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# Reach 43b – San Gabriel River – Lower

Exhibit 8

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

0.5 0.25 0 0.5

Miles

BonTerra CONSULTING

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# Reach 71 – Santa Clara River Main Channel (PD 1946)

Exhibit 9

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

0.5 0.25 0 0.5 Miles

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(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex9_PL.pdf


# Reach 75 – South Fork – Santa Clara River (PDs 725, 916, 1041, 1300)

Exhibit 10

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

0.5 0.25 0 0.5 Miles

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# Reach 79 – South Fork – Santa Clara River (Valencia Boulevard Bridge Stabilizer)

Exhibit 11

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

0.5 0.25 0 0.5

Miles

BonTerra CONSULTING

(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex11_PL.pdf


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# Reach 80 – South Fork – Santa Clara River (PDs 1947 and 1946)

Exhibit 12

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

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(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex12_PL.pdf

Reach 82 – Santa Clara River Main Channel (PD 2278)

Reach 82, Santa Clara River Main Channel (PD 2278), is located within the Santa Clara River Watershed, approximately 0.75 mile east of the I-5 and Magic Mountain Parkway intersection in the City of Santa Clarita (Exhibit 13). The upstream limits of Reach 82 are approximately 740 feet southeast of the intersection of Hopkins Avenue and Rockefeller Avenue to just south of the intersection of Hopkins Avenue and Rockefeller Avenue. Reach 82 is 865 feet in total length. The reach is found in Section 16 of the USGS Newhall 7.5-minute quadrangle map at Township 4 North and Range 16 West.

Reach 86 – Violin Canyon Main Channel Outlet

Reach 86, Violin Canyon Main Channel Outlet, is located within the Castaic Creek Watershed in the community of Castaic in unincorporated Los Angeles County, approximately 0.5 mile southeast of the I-5 and Lake Hughes Road intersection (Exhibit 14). The limits of Reach 86 are approximately 1,021 feet downstream of Ridge Route Road to the confluence with Castaic Creek. Reach 86 is 946 feet in total length. The reach is found in Sections 23 and 24 of the USGS Newhall 7.5-minute quadrangle map at Township 5 North and Range 17 West.

Reach 87 – Castaic – Old Road Drain (CDR 525.021D) Outlet

Reach 87, Castaic – Old Road Drain (CDR 525.021D) Outlet, is located within the Castaic Creek Watershed, approximately one mile northwest of the I-5 and Henry Mayo Drive (State Route 126) in the Castaic Junction Community of unincorporated Los Angeles County (Exhibit 15). The limits of Reach 87 are approximately 610 feet downstream of the intersection of Hasley Canyon Road and Old Road to the confluence with Castaic Creek. Reach 87 is 240 feet in total length. The reach is found in Section 12 of the USGS Newhall 7.5-minute quadrangle map at Township 4 North and Range 17 West.

Reach 97 – Castaic Creek – The Old Road (PD 1982)

Reach 97, Castaic Creek – The Old Road (PD 1982), is located within the Castaic Creek Watershed in the Castaic Junction Community of unincorporated Los Angeles County (Exhibit 16). The limits of Reach 97 are approximately 300 feet downstream to 2,300 feet downstream of The Old Road. Reach 97 is 2,000 feet in total length. The reach is found in Section 12 of the USGS Newhall 7.5-minute quadrangle map at Township 4 North and Range 17 West.

Reach 103 – Bouquet Canyon Channel (PD 2225)

Reach 103, Bouquet Canyon Channel (PD 2225), is located within the Santa Clara River Watershed (Exhibit 17). The limits of Reach 103 are approximately 173 feet downstream of the centerline of Newhall Ranch Road (beginning of Grouted Stone Toe) to the Metropolitan Water District Fee Right-of-Way on the right bank and the embankment turn at the Santa Clara River on the left bank. Reach 103 is 1,824 feet in total length. The reach is found in Section 16 of the USGS Newhall 7.5-minute quadrangle map at Township 4 North and Range 16 West.

Reach 104 – Castaic Creek (PD 2441 – Units 1 and 2)

Reach 104 – Castaic Creek (PD 2441 – Units 1 and 2), is located within the Castaic Creek Watershed. The limits of Reach 104 are approximately 669 feet upstream of the Muirfield Lane Centerline to 478 feet downstream of the Turnberry Lane Centerline (Exhibit 18). Reach 104 is 2,186 feet in total length. The reach is found in Section 12 of the USGS Newhall 7.5-minute quadrangle map at Township 4 North and Range 17 West.


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# Reach 82 – Santa Clara River Main Channel (PD 2278)

Exhibit 13

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

0.5 0.25 0 0.5

Miles

BonTerra CONSULTING

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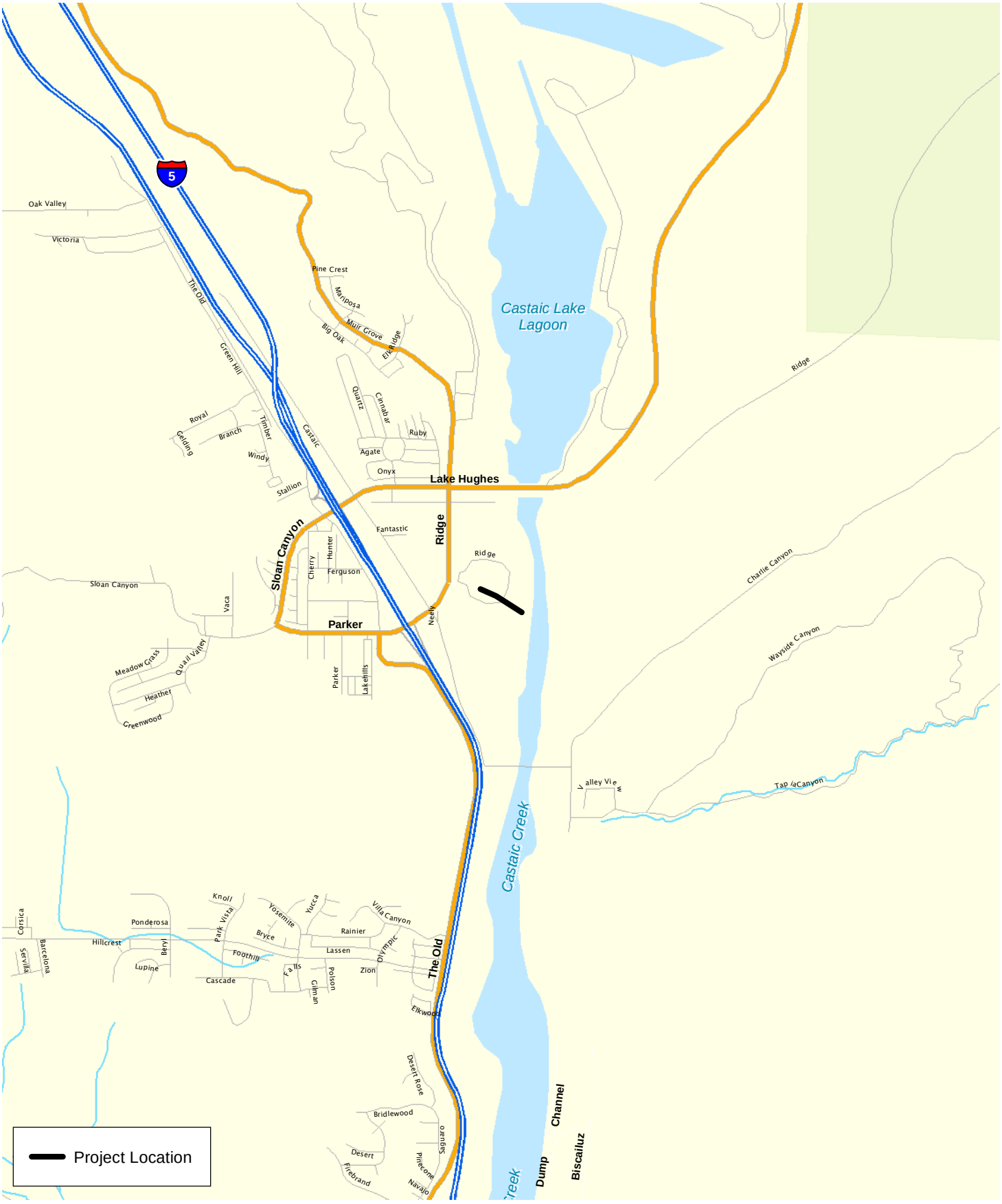


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# Reach 86 – Violin Canyon Main Channel Outlet

Exhibit 14

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

0.5 0.25 0 0.5 Miles

BonTerra CONSULTING

(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex14_PL.pdf


# Reach 87 – Castaic Creek – The Old Road Drain (CDR 525.021D) Outlet

Exhibit 15

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

0.5 0.25 0 0.5 Miles

BonTerra CONSULTING

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# Reach 97 – Castaic Creek – The Old Road (PD 1982)

Exhibit 16

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

0.5 0.25 0 0.5 Miles

BonTerra CONSULTING

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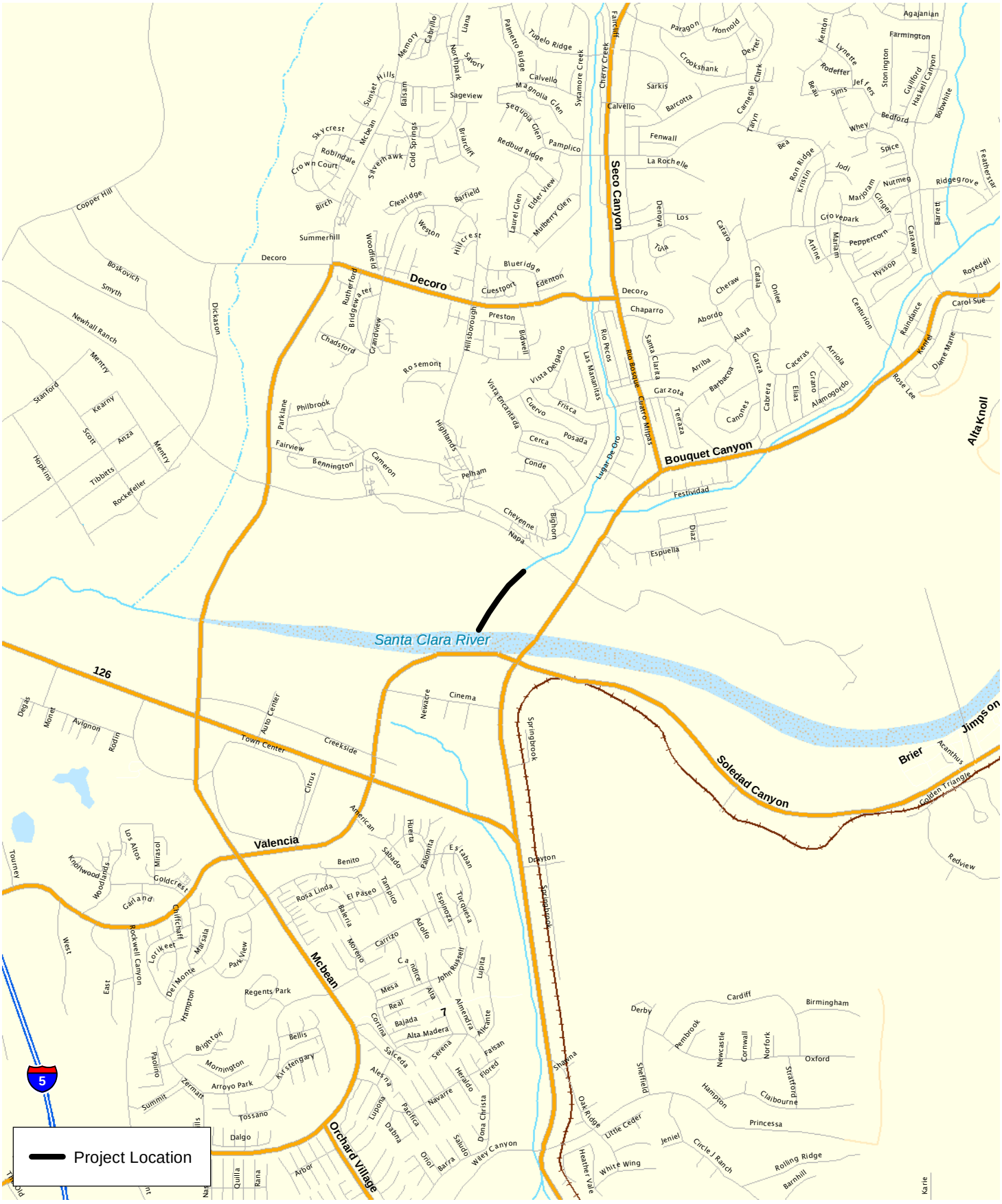


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# Reach 103 – Bouquet Canyon Channel (PD 2225)

Exhibit 17

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

0.5 0.25 0 0.5 Miles

BonTerra CONSULTING

(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex17_PL.pdf


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# Reach 104 – Castaic Creek (PD 2441 Units 1 and 2)

Exhibit 18

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

0.5 0.25 0 0.5

Miles

BonTerra CONSULTING

(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex18_PL.pdf

Reach 105 – San Francisquito Canyon Channel (PD 2456)

Reach 105, San Francisquito Canyon Channel (PD 2456), is located within the Santa Clara River Watershed in unincorporated Los Angeles County (Exhibit 19). The limits of Reach 105 are approximately 417 feet upstream of the Decoro Drive Centerline to 416 feet downstream of the Decoro Drive Centerline. Reach 105 is 833 feet in total length. The reach is found in Section 9 of the USGS Newhall 7.5-minute quadrangle map at Township 4 North and Range 16 West.

Reach 106 – Castaic Drain Outlet (RMD[3] Channel)

Reach 106, Castaic Drain Outlet (RMD Channel), is located within the Santa Clara River Watershed. The limits of Reach 106 are approximately the toe of grouted riprap apron to approximately 147 feet downstream of grouted riprap apron (Exhibit 20). Reach 106 is 147 feet in total length. The reach is found in Section 25 of the USGS Newhall 7.5-minute quadrangle map at Township 5 North and Range 17 West.

Reach 109 – Santa Clara River – South Bank West of McBean Parkway (MTD 1510)

Reach 109, Santa Clara River – South Bank West of McBean Parkway (MTD 1510), is an outlet located on the south bank (concrete levee) just west or downstream of McBean Parkway (Exhibit 21). The limits of Reach 109 are from the outlet, approximately 300 feet downstream of the McBean Parkway centerline to approximately 371 feet downstream of the McBean Parkway centerline (Exhibit 21). The reach is found in Section 16 of the USGS Newhall 7.5-minute quadrangle map at Township 4 North and Range 16 West.

Reach 110 – Hasley Canyon Channel (PD 2262)

Reach 110, Hasley Canyon Channel (PD 2262), is located within the Santa Clara River Watershed (Exhibit 22). It is a narrow channel of about ½ mile long with a relatively steep gradient. The reach is found in Sections 2 and 11 of the USGS Val Verde 7.5-minute quadrangle map at Township 4 North and Range 17 West.

## 1.2 PROPOSED PROJECT

### 1.2.1 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 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).

[3] The Los Angeles County Department of Public Works' Road Maintenance Division (RMD) is responsible for maintenance at this soft-bottom channel reach.


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# Reach 105 – San Francisquito Canyon Channel (PD 2456)

Exhibit 19

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

0.5 0.25 0 0.5 Miles

BonTerra CONSULTING

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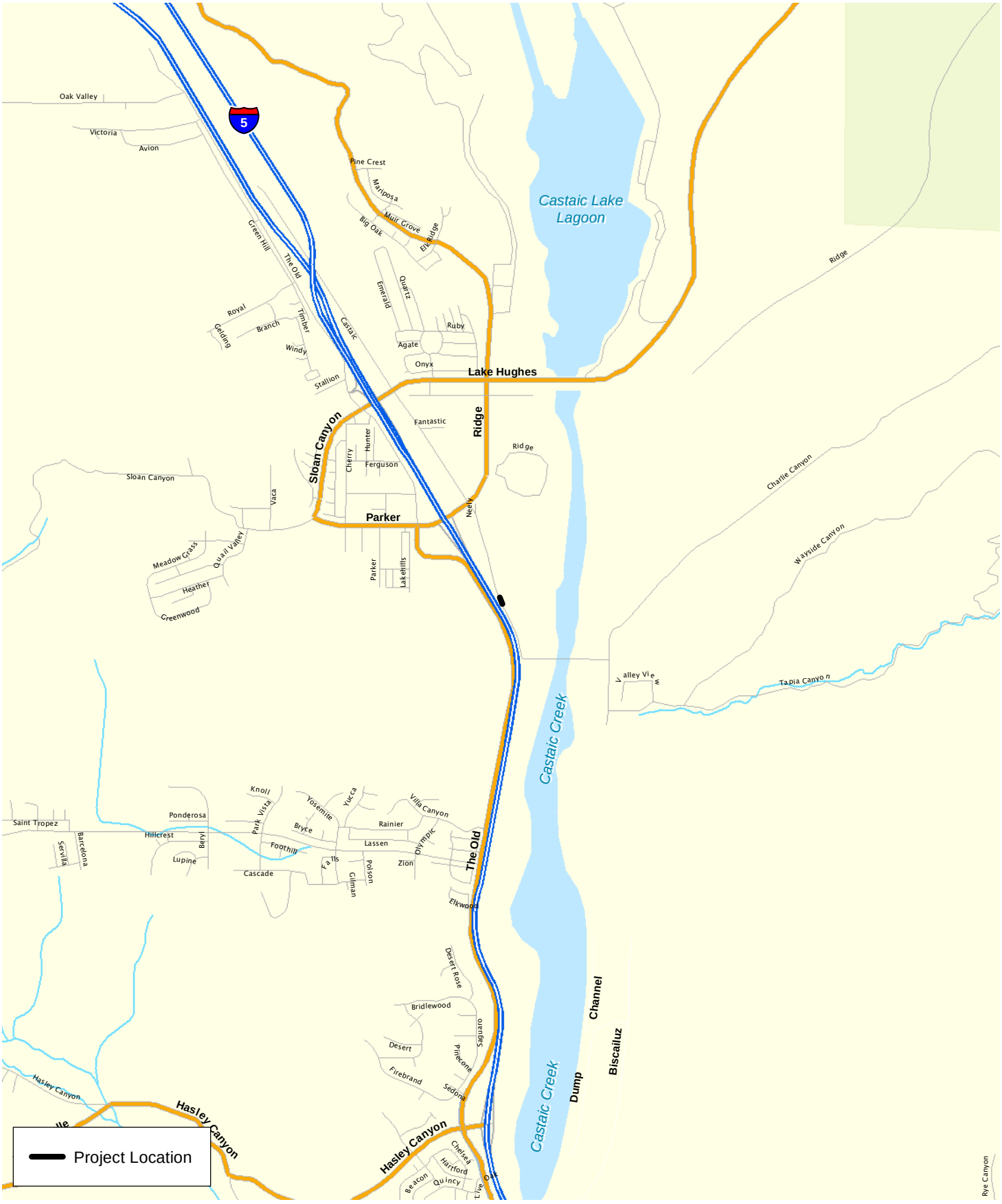


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# Reach 106 – Castaic Drain Outlet (RMD Channel)

Exhibit 20

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

0.5 0.25 0 0.5 Miles

BonTerra CONSULTING

(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex20_PL.pdf


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# Reach 109 – Santa Clara River – South Bank West of McBean Pkwy (MTD 1510)

Exhibit 21

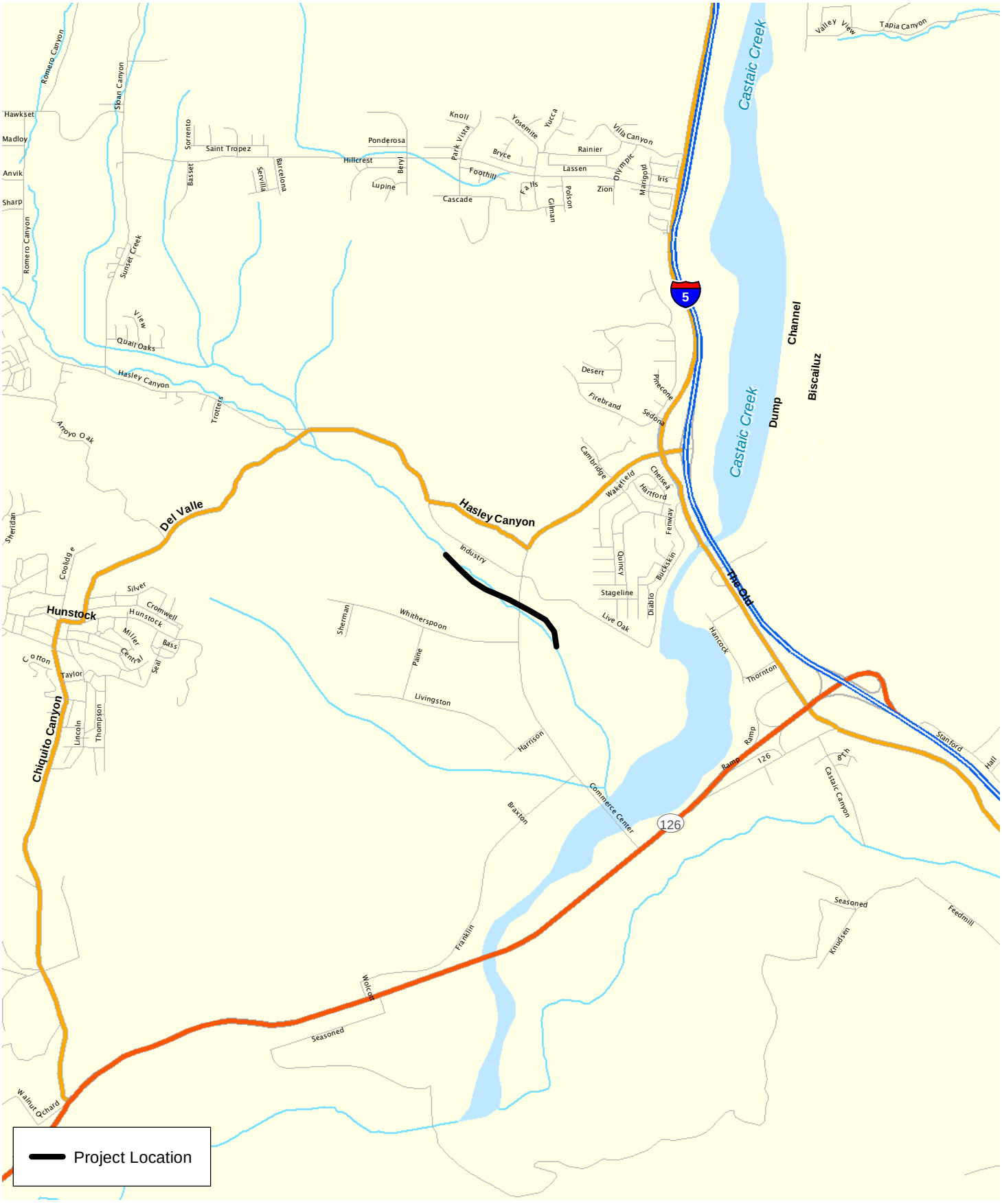
*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

0.5 0.25 0 0.5 Miles

BonTerra CONSULTING

(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex21_PL.pdf




# Reach 110 – Hasley Canyon Channel (PD 2262)

Exhibit 22

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

0.5 0.25 0 0.5

Miles

BonTerra CONSULTING

(Rev: 9-05-2013 MMD) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex22_PL.pdf

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The County formerly maintained channels clear of any vegetation, as required under the *Code of Federal Regulations* (33 CFR 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 to occur 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.

### 1.2.2 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 more densely, 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 (LACFCD 1996). A loss of carrying capacity in the channels could cause flood flows to escape the channel systems and impact adjacent properties (LACFCD 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 annual vegetation clearing in channels and minor grading to retrain channel flows consistent with the clearing limits established by the permitted maintenance plan (BonTerra Consulting 1999). This ongoing program is necessary to maintain the design capacities of the channels and to ensure the proper functioning of these 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 clearing of vegetation 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 Consulting 1999).

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

The channel clearing activities are performed under an existing Maintenance Plan approved by the Los Angeles Regional Water Quality Control Board (RWQCB) and USACE and modified by the CDFW under the existing Streambed Alteration Agreement between CDFW and the LACFCD. BonTerra Consulting 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, the USFWS, the Los Angeles RWQCB, and the CDFW.

## 1.3 SPECIAL STATUS SPECIES BACKGROUND

In order to comply fully with the regulatory permits issued to the LACDPW, 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 the federally listed Threatened Santa Ana sucker (*Catostomus santaanae*). Results of these fish surveys were included with previous survey efforts in 2002 and 2003 (BonTerra Consulting 2002, 2003), but have since been reported separately to the LACDPW. This report provides the results of surveys for the arroyo toad (*Anaxyrus californicus*), least Bell's vireo (*Vireo bellii pusillus*), and southwestern willow flycatcher (*Empidonax traillii extimus*).

### 1.3.1 ARROYO TOAD

The arroyo toad was listed as a federally Endangered species by the USFWS on January 17, 1995 (CDFW 2013) and is a California Species of Special Concern (CDFW 2011). At the time of listing, the arroyo toad was one of two subspecies of the southwestern toad (*Bufo microscaphus*), but subsequent genetic studies (Gergus 1998) resulted in the separation of arroyo toad (*B. californicus*) from the Arizona toad (*B. microscaphus*). Recent research (Frost et al. 2006) placed both species in the genus *Anaxyrus*.

This is a rather uniformly warty and stocky toad with a light-colored stripe across the head that includes the eyelids. The parotid glands are oval-shaped, widely separated, and pale toward the front. The underside of the arroyo toad is usually buff-colored and unspotted, and the cranial crests are absent or weak. The typical size (snout to vent length) range of reproductive adult toads is 2 to 2.6 inches for males and 2.6 to 3.1 inches for females (Sweet 1992, 1993). Tadpoles reach an average maximum length of 1.3 inches (maximum of 1.6 inches) and are black at hatching. Soon after hatching, the tadpoles develop a tan-colored dorsum with crossbars on the tail and an opaque, white abdomen (venter) before metamorphosing (Sweet 1992).

Early descriptions of the habitat requirements for the arroyo toad are based on detailed life history studies conducted over a period of years by Sweet (1992, 1993). Much of that work was conducted in the Los Padres National Forest in Santa Barbara County. Subsequent to this work, additional studies of populations in other portions of the range have resulted in a somewhat broader habitat description (e.g., Griffin et al. 1999; Ramirez 1999, 2000, 2001, 2002a, 2002b, 2002c). It can generally be said that the arroyo toad frequents third order washes, streams, and arroyos in semiarid parts of the southwest. Stream substrates range from sands to small cobble, with sandy banks supporting mule fat (*Baccharis salicifolia*), willows (*Salix* spp.), cottonwoods (*Populus* spp.), and/or sycamores (*Platanus racemosa*). The arroyo toad breeds both within streams and in small backwater pools that form along the stream margins, usually in relatively shallow water (about four inches) with sand or gravel substrate.

Arroyo toads are primarily nocturnal, except during the breeding season when they are sometimes active during daylight hours. These toads will move extensively in upland habitats, at least seasonally. Adult males will sometimes travel 1.2 to 1.9 miles along a stream course, often becoming more sedentary once reaching a large size (Sweet 1992). Females are more sedentary, typically maintaining an area of movement less than 330 feet in diameter (Sweet 1992). Adults mostly feed on ants, particularly nocturnal ants such as trail-forming tree

ants (*Liometopum occidentale*), but will also consume other invertebrates (Sweet 1992). Tadpoles are substrate gleaners, feeding on detritus and microbial mats from just beneath the surface layer of fine sediments or within the interstices of gravel deposits (Sweet 1992).

On February 7, 2001, the USFWS published a final rule designating 182,360 acres of land in California including parts of Monterey, Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties as critical habitat for the arroyo toad (USFWS 2005a). Following the designation of critical habitat, several lawsuits were filed challenging various aspects of the designation. In response to these lawsuits, the critical habitat designation was vacated and the USFWS was instructed by the court to re-evaluate its previous position.

On April 28, 2004, the USFWS published a final rule designating 11,695 acres of critical habitat for the arroyo toad in portions of Santa Barbara, Ventura, Los Angeles, San Bernardino, and Riverside Counties (USFWS 2005a). Further lawsuits were filed that successfully challenged this final rule and resulted in another proposed rule for revised critical habitat that was published in the *Federal Register* on October 13, 2009 (USFWS 2009). The revised critical habitat final rule was released on February 9, 2011 (USFWS 2011).

Four Castaic Creek channel reaches (Reaches 86, 87, 97, and 104) are located in Unit 6, Subunit B, of this final critical habitat revision (USFWS 2011). Another surveyed channel reach (Reach 110) is located just upstream of Unit 6, Subunit B of this final critical habitat (USFWS 2011). One surveyed channel reach (Reach 82) previously located within proposed critical habitat (USFWS 2005a), is now located about 1,000 feet upstream of Unit 6, Subunit B of this final critical habitat (USFWS 2011). No other channel reaches managed by the LACFCD are located in this final critical habitat.

### 1.3.2 LEAST BELL'S VIREO

The least Bell's vireo was formerly a common, even locally abundant summer resident of Southern California's lowland riparian woodlands (Grinnell and Miller 1986). The substantial population decline of this avian species over the latter half of the twentieth century is attributable to the loss and degradation of riparian habitats and, perhaps more importantly, brood parasitism by the brown-headed cowbird (*Molothrus ater*). The least Bell's vireo was listed by the California Department of Fish and Game (CDFG)[4] as State Endangered on October 2, 1980, and by the USFWS as federally Endangered on May 2, 1986 (USFWS 1986).

The Bell's vireo is a neotropical migrant that breeds in central and southwestern North America from northern Mexico to Southern California, Nevada, and Utah, east to Louisiana, and north to North Dakota, Wisconsin, and Indiana in the central U.S. (AOU 1998). The winter range of this vireo, although not well known, is believed to be the west coast of Central America from southern Sonora south to northwest Nicaragua, including the cape region of Baja California, Mexico (Brown 1993). Of the four Bell's vireo subspecies, only two breed in California: the least Bell's vireo and the Arizona Bell's vireo (*V. b. arizonae*), which occurs in the Colorado River Valley (Garrett and Dunn 1981; Rosenberg et al. 1991). Though the least Bell's vireo was formerly considered a common breeder in riparian habitats throughout the Central Valley and other low elevation river systems in California and Baja California, Mexico (Franzreb 1989), it had been eliminated from much of its historical range by the time of its listing in 1986 (Franzreb 1989; Brown 1993). Recovery efforts since its listing have included habitat protection; removal of exotic species (particularly giant reed); and trapping programs for the brown-headed cowbird (USFWS 2006). The least Bell's vireo population has increased tenfold from

[4] Although the California Department of Fish and Game (CDFG) changed its name to the California Department of Fish and Wildlife (CDFW) effective January 1, 2013, "CDFG" is still used throughout this document for all documents published or database searches completed before January 1, 2013.

291 territories in the early 1980s to an estimated 2,968 territories 20 years later (USFWS 2006). After a decade or more of absence in Los Angeles County, the least Bell's vireo returned by the mid-1980s with a pair reported from Whittier Narrows in 1985 and 1986 (Long 1993). Least Bell's vireo numbers have continued to increase since that time, and it is now known to occur at several other locations in Los Angeles County such as the San Fernando (Van Norman) Dam; the San Gabriel River at Fish Canyon and Van Tassel Canyon; the Sepulveda Basin Wildlife Area; and the Castaic Lagoon Recreation Area (CDFG 2009). The two largest populations in the county are at Hansen Dam in the northeastern corner of the San Fernando Valley where 44 least Bell's vireo territories were present in 2009 (Griffith Wildlife Biology 2009) and on the Santa Clara River from the I-5 Freeway downstream to the Las Brisas Bridge where 56 least Bell's vireo territories were present in 2007 (Bloom Biological, Inc. 2007).

Least Bell's vireos breed primarily in riparian habitats dominated by willows with dense understory vegetation. Shrubs such as mule fat and California rose (*Rosa californica*) are often a component of the understory (Goldwasser 1981). The least Bell's vireo is often found in areas that include trees such as willow, sycamore, or cottonwood, particularly where the canopy is within or immediately adjacent to an understory layer of vegetation (Salata 1983). The least Bell's vireo generally nests in early successional stages of riparian habitats, with vireo nest sites frequently located in willows that are between four and ten years of age (RECON 1988; Franzreb 1989). The most critical factor in habitat structure is the presence of a dense understory shrub layer from approximately two feet to ten feet above ground level (Goldwasser 1981; Salata 1983; Franzreb 1989).

On February 2, 1994, the USFWS published a final critical habitat for the least Bell's vireo designating approximately 37,560 acres of land in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego Counties, California (USFWS 1994b). Designated critical habitat in Los Angeles County is located only in the Santa Clara River from the Golden State (I-5) Freeway west to the Ventura County line. The surveyed soft-bottom channel reaches are all located outside the critical habitat for this species.

### 1.3.3 SOUTHWESTERN WILLOW FLYCATCHER

The southwestern willow flycatcher was formerly a common summer resident of southern California's lowland riparian woodlands and up into mountain canyons (Garrett and Dunn 1981). By the 1970s, the southwestern willow flycatcher was considered to be absent as a breeder in Southern California (McCaskie 1975). The virtual extirpation of this species as a breeder in Southern California has been attributed to the loss and degradation of riparian habitats and brood parasitism by the brown-headed cowbird. All willow flycatchers breeding in California—which include the subspecies *E. t. brewsteri* and *E. t. adastus* in addition to the southwestern willow flycatcher—were listed by the CDFG as State Endangered on January 2, 1991. The USFWS listed the southwestern willow flycatcher as federally Endangered on February 7, 1995 (USFWS 1993).

The willow flycatcher is a neotropical migrant that breeds in the west from northern Baja California, Mexico to central British Columbia, Canada and generally east through the northern half of the United States to the Atlantic coast (AOU 1998). The willow flycatcher winters in Central America from Nayarit, Mexico (Pacific coast) and Honduras (Gulf of Mexico coast) to Panama and also to northern Colombia and northwest Venezuela (Sedgwick 2000). Depending on the authority, there are four or five recognized subspecies of willow flycatcher (Sedgwick 2000). The breeding range of the southwestern willow flycatcher includes Southern California, Arizona, New Mexico, western Texas, and extreme southern parts of Nevada and Utah (USFWS 1993).

The California population of southwestern willow flycatchers breeds along the coast north of Baja California to the Santa Ynez River, Santa Barbara County, and north in the interior to about Independence, Inyo County (Unitt 1987). Besides the Colorado River, there are five drainages in California that support major breeding populations of southwestern willow flycatcher: the South Fork of the Kern River in Kern County; the Santa Margarita River on Camp Pendleton and the San Luis Rey River in San Diego County; the Santa Ana River in Riverside and San Bernardino Counties; and the Owen's River in Inyo and Mono Counties (Durst et al. 2007). In the 1970s, the southwestern willow flycatcher was believed to have been extirpated from coastal Southern California (Remsen 1978), but small numbers were found during the late 1970s and early 1980s in San Diego County (Unitt 1984). An early population estimate for the southwestern willow flycatcher in California was 70 pairs (USFWS 1993). More recent population estimates are higher—such as 200 territories in 2004 and 190 territories in 2006 (Durst et al. 2005; Durst et al. 2007)—and are more likely the result of increased survey effort rather than a population increase (Durst et al. 2007).

The southwestern willow flycatcher breeds in willow-dominated riparian habitats that are similar to least Bell's vireo nesting habitats. The southwestern willow flycatcher differs from least Bell's vireo in that it shows a stronger dependency on willow thickets for all its requirements (Grinnell and Miller 1986). In addition, the southwestern willow flycatcher appears to have a preference for sites with surface water in the vicinity, such as along streams, on the margins of a pond or lake, and at wet mountain meadows (Grinnell and Miller 1986; Flett and Sanders 1987; Harris et al. 1987); in Arizona, the southwestern willow flycatcher invariably nests near surface water (Phillips et al. 1964). Recently, the southwestern willow flycatcher has adapted to introduced vegetation present in riparian vegetation types, such as tamarisk (*Tamarix* sp.) and Russian olive (*Elaeagnus angustifolia*) (USFWS 1993).

The willow flycatcher is a common migrant in the interior of California and is a rare to uncommon migrant along the coastal slope, with most birds moving through Southern California between May 15 and June 20 during the spring season (Garrett and Dunn 1981; Unitt 1987). The spring southwestern willow flycatcher migration is earlier than that of the northern subspecies (Unitt 1987; USFWS 1993). As a result, surveys for nesting southwestern willow flycatcher are complicated by the presence of more abundant subspecies migrating through its range during its breeding season.

On October 19, 2005, the USFWS published a Final Rule designating critical habitat for the southwestern willow flycatcher (USFWS 2005). This final rule designated 120,824 acres in Arizona, California, Nevada, New Mexico, and Utah as critical habitat. Of that, 17,212 acres were designated as Critical habitat in Kern, Santa Barbara, San Bernardino, and San Diego Counties, California. Following lawsuits, the USFWS recently issued a revised Final Rule on January 3, 2013. This Final Rule designates critical habitat that covers 2,090 stream miles in California, Nevada, Utah, Colorado, Arizona, and New Mexico (USFWS 2013). This Final Rule uses a slightly different methodology to designate critical habitat. For example, it includes areas that are considered essential for the recovery of the species even if they were not occupied at the time of the species' listing. These new stream segments include Castaic Creek (3.0 miles), Little Tujunga (1.4 miles), Big Tujunga (3.0 miles), and the San Gabriel River (8.8 miles) (USFWS 2013). Three Castaic Creek channel reaches (Reaches 87, 97, and 104), four Santa Clara River channel reaches (Reaches 71, 80, 82, and 109), and one San Gabriel River channel reach (Reach 39) are located within this proposed revised critical habitat.

# SECTION 2.0 SURVEY METHODOLOGIES

For each species surveyed, the surveys were conducted according to USFWS protocols. The biologists conducted the surveys at the most appropriate time of day to ensure maximum opportunity to observe the species.

## 2.1 SPECIAL STATUS AMPHIBIAN SPECIES

### 2.1.1 ARROYO TOAD

The initial studies conducted in 2002 included a background literature review and habitat assessment for each of the soft-bottom channel reaches that represented suitable arroyo toad breeding and/or upland habitat. The literature review included the documentation of relevant literature regarding the presence of the arroyo toad within and/or adjacent to each reach, including areas both upstream and downstream. This included review of *Federal Register* listings, protocols, and species data provided by the USFWS, the CDFW's California Natural Diversity Database (CNDDB); consultation with qualified experts familiar with the distribution and natural history of the arroyo toad; and review of unpublished biological resource letter reports and assessments conducted within the region.

Focused surveys for the arroyo toad were conducted at 11 channel reaches in 2013: Castaic Creek Reaches 86, 87, and 97, and Reach 104 in the Castaic Creek Watershed; San Francisquito Canyon Channel Reach 105; the northern part of the South Fork Santa Clara River Reach 75 (i.e., from Magic Mountain Parkway upstream to the Via Princessa Bridge) and the South Fork Santa Clara River Reach 79; Reach 80 at the confluence of the Santa Clara and South Fork Santa Clara Rivers; and Santa Clara River Reaches 71, 82, and 109.

The surveys followed the guidelines presented in the USFWS' *Survey Protocol for the Arroyo Toad* (1999b). Each channel reach was surveyed on foot to characterize aquatic (breeding) and upland habitat (refugia) types and to document any characteristic sign (clutches, larvae, juveniles, adults). Also, in accordance with the USFWS protocol, areas within 0.6 mile of documented arroyo toad sites (previously documented by the presence of eggs, larvae, juveniles, or adults) that have suitable habitat were presumed to have arroyo toads (USFWS 1999b). In addition to following the guidelines outlined above, all field surveys adhered to recommended equipment decontamination procedures outlined in Appendix B of the California red-legged frog survey guidelines (USFWS 2005b).

Six surveys following USFWS recommended protocol were conducted at each of the channel reaches. These surveys included both a diurnal and nocturnal component. The initial (diurnal) surveys included walking each reach in an effort to assess and document the suitability of breeding and upland habitat for the arroyo toad. These initial surveys also focused on locating any areas of inundation that may have represented suitable breeding pools (egg clutches and/or tadpoles). These surveys identified portions within each reach with the highest probability to support the arroyo toad. Following the initial surveys, areas identified during the daytime surveys were visited again at night in order to detect active toads. The same routes were covered repeatedly throughout the evening to ensure that no individuals went undetected. Survey data is presented in Table 1. A list of all wildlife species encountered during these surveys is included in Appendix C.

**TABLE 1**
**ARROYO TOAD SURVEY DATA**

| Survey Number | Survey Date | Reaches Surveyed | Surveying Biologists | Survey Conditions | | | |
|---|---|---|---|---|---|---|---|
| | | | | Temperature (°F) | Relative Humidity (%) | Wind (mph) | Moon Phase |
| 1a | 3/26/2013 | 86, 87, 97, 104 | Sam Stewart Jonas Winbolt | 50–77 | 30–80 | 0–10 | Waxing gibbous |
| 1b | 3/27/2013 | 75, 79, 80, 105 | Sam Stewart Jonas Winbolt | 50–74 | 45–82 | 0–7 | Full |
| 1c | 3/28/2013 | 71, 82, 109 | Sam Stewart Jason Mintzer | 50–72 | 54–84 | 0–5 | Waning gibbous |
| 2a | 4/2/2013 | 86, 87, 97, 104 | Sam Stewart Jason Mintzer | 51–66 | 30–90 | 0–5 | Waning crescent |
| 2b | 4/3/2013 | 75, 79, 80, 105 | Sam Stewart Sarah Thomas | 55–74 | 39–71 | 0–7 | Waning crescent |
| 2c | 4/4/2013 | 71, 82, 109 | Sam Stewart Jason Mintzer | 60–80 | 30–72 | 0–6 | Waning crescent |
| 3a | 4/15/2013 | 86, 87, 97, 104 | Sam Stewart Jason Mintzer | 58–81 | 30–71 | 0–7 | Waxing crescent |
| 3b | 4/17/2013 | 71, 82, 109 | Sam Stewart Jason Mintzer | 50–69 | 10–20 | 0–9 | Waxing crescent |
| 3c | 4/18/2013 | 75, 79, 80, 105 | Sam Stewart Jason Mintzer | 50–76 | 10–40 | 0–4 | Waxing crescent |
| 4a | 5/1/2013 | 86, 87, 97, 104 | Sam Stewart Jason Mintzer | 60–88 | 10–15 | 0–11 | 3rd quarter |
| 4b | 5/2/2013 | 75, 79, 80, 105 | Sam Stewart Jason Mintzer | 57–86 | 10–14 | 0–15 | Waning crescent |
| 4c | 5/3/2013 | 71, 82, 109 | Sam Stewart Jason Mintzer | 57–97 | 10–40 | 0–8 | Waning crescent |
| 5a | 5/16/2013 | 71, 82, 109 | Sam Stewart Jason Mintzer | 57–75 | 60–80 | 0–7 | Waxing crescent |
| 5b | 5/23/2013 | 86, 87, 97, 104 | Sam Stewart Jason Mintzer | 54–73 | 45–60 | 0–13 | Waxing gibbous |
| 5c | 5/28/2013 | 75, 79, 80, 105 | Sam Stewart Jonas Winbolt | 68–80 | 35–45 | 0–15 | Waning gibbous |
| 6a | 6/18/2013 | 86, 87, 97, 104 | Sam Stewart Jason Mintzer | 64–88 | 35–65 | 0–5 | Waxing gibbous |
| 6b | 6/19/2013 | 75, 79, 80, 105 | Sam Stewart Jason Mintzer | 66–88 | 12–25 | 0–10 | Waxing gibbous |
| 6c | 6/20/2013 | 71, 82, 109 | Sam Stewart Jason Mintzer | 75–88 | 20–38 | 0–8 | Waxing gibbous |

°F: degrees Fahrenheit; mph: miles per hour.

## 2.2 SPECIAL STATUS BIRD SPECIES

The initial literature review in 2002 included all relevant and available documentation on the presence of the least Bell's vireo and southwestern willow flycatcher in Los Angeles County. This included review of *Federal Register* listings, protocols, and species data provided by the USFWS; review of the CDFW's CNDDB; consultation with qualified experts familiar with the distribution and natural history of the least Bell's vireo and southwestern willow flycatcher; and review of unpublished biological resource letter reports and assessments.

Based on the results of prior BonTerra Consulting surveys (2011 focused surveys and annual monitoring surveys) of the channel reaches, the 2013 focused surveys for the least Bell's vireo and southwestern willow flycatcher were conducted at a total of 21 channel reaches where they have potential to occur: 3 channel reaches in the Los Angeles River/San Pedro Bay Area (Reaches 12, 14, and 27); 1 channel reach in the Malibu Creek Watershed (Reach 28); 4 channel reaches in the San Gabriel River (Reaches 39, 40b, 43a, and 43b); and 13 channel reaches in the Santa Clara River and Castaic Creek drainages (Reaches 71, 75, 79, 80, 82, 87, 97, 103, 104, 105, 106, 109, and 110). The channel reaches were surveyed by BonTerra Consulting Biologists Brian Daniels (USFWS Recovery Permit No. 821401-4), Lindsay Messett, Amber Oneal Heredia (USFWS Recovery Permit No. 148554-2), and Steve Morris as well as Consulting Biologist James Pike (USFWS Recovery Permit No. 832946-4). Surveys followed the USFWS protocol for both species; surveys for southwestern willow flycatcher were conducted by permitted individuals.

The USFWS survey protocol for southwestern willow flycatcher was updated in June 2010 (Sogge et al. 2010). The changes affected the timing of surveys, but not the number of surveys or the method of conducting each survey. A minimum of five surveys must be performed for the southwestern willow flycatcher to determine absence of that species from a project site. The five surveys must be performed within three specified time periods at least five days apart. The first survey must be conducted between May 15 and May 31; two surveys are required in the second survey window from June 1 to June 24; and two surveys need to be conducted between June 25 and July 17. The survey protocol for least Bell's vireo remains the same with a minimum of eight surveys being conducted at least ten days apart between April 10 and July 31. Surveys for the least Bell's vireo and southwestern willow flycatcher can be performed simultaneously because of their similar habitat requirements.

The survey area consisted of all riparian habitats in each reach. The riparian habitat was systematically surveyed by walking slowly and methodically along two transects (downstream then upstream or the reverse) with some variance depending on streambed width. Recorded vocalizations of southwestern willow flycatcher were used to elicit a response from any potentially territorial southwestern willow flycatcher; recorded vocalizations of least Bell's vireo were not used according to the protocol for this species. If no southwestern willow flycatchers were detected after the initial playing of the vocalization, the recording was usually replayed at least once. Any observations of willow flycatcher (all subspecies) and least Bell's vireo, including any pertinent behavior, were recorded and their locations mapped in the field. It should be noted that all subspecies of the willow flycatcher breeding in California are listed as State Endangered species; however, only breeding locations are protected.

The surveys were conducted under optimal weather conditions and during the early morning hours when bird activity is at its peak. Numbers were recorded for all bird species detected during the surveys, including notable observations of any special status species or other birds such as the brown-headed cowbird. Survey data is presented in Table 2. Daily tallies of all bird species recorded during these surveys are included in Appendix B.

## TABLE 2
## SPECIAL STATUS BIRD SURVEY DATA

| Reaches Surveyed | Survey Dates | Surveying Biologist |
|---|---|---|
| **12, 14, 39** | 4/10/2013 | Steve Morris |
| | 4/20/2013 | |
| | 4/30/2013 | |
| | 5/10/13 | |
| | 5/23/2013 | Brian Daniels |
| | 6/10/2013 | |
| | 6/17/2013 | |
| | 6/25/2013 | |
| | 7/5/2013 | |
| **27, 28** | 4/15/2013 | Steve Morris |
| | 4/25/2013 | |
| | 5/5/2013 | |
| | 5/15/2013 | |
| | 5/29/2013 | Brian Daniels |
| | 6/12/2013 | |
| | 6/21/2013 | |
| | 6/28/2013 | |
| | 7/11/2013 | |
| **40b, 43a** | 4/10/2013 | James Pike |
| | 4/20/2013 | |
| | 5/1/2013 | |
| | 5/11/2013 | |
| | 5/22/2013 | |
| | 6/1/2013 | |
| | 6/14/2013 | |
| | 6/28/2013 | |
| | 7/12/2013 | |
| **71, 75, 79, 80** | 4/11/2013 | James Pike |
| | 4/21/2013 | |
| | 5/3/2013 | |
| | 5/12/2013 | |
| | 5/23/2013 | |
| | 6/2/2013 | |
| | 6/16/2013 | |
| | 6/30/2013 | |
| | 7/13/2013 | |
| **82, 105, 109** | 4/10/2013 | Lindsay Messett |
| | 4/23/2013 | |
| | 5/3/2013 | |
| | 5/13/2013 | |
| | 5/24/2013 | Brian Daniels |
| | 6/11/2013 | |
| | 6/18/2013 | |
| | 6/26/2013 | |
| | 7/9/2013 | |

## TABLE 2
## SPECIAL STATUS BIRD SURVEY DATA

| Reaches Surveyed | Survey Dates | Surveying Biologist |
|---|---|---|
| **103, 110** | 4/11/2013 | Lindsay Messett |
| | 4/24/2013 | |
| | 5/7/2013 | |
| | 5/17/2013 | |
| | 5/30/2013 | Brian Daniels |
| | 6/13/2013 | |
| | 6/20/2013 | |
| | 6/27/2013 | |
| | 7/10/2013 | |
| **87, 97 104, 106** | 4/16/2013 | Lindsay Messett |
| | 4/29/2013 | |
| | 5/9/2013 | |
| | 5/22/2013 | Amber Oneal Heredia |
| | 6/7/2013 | |
| | 6/18/2013 | |
| | 7/2/2013 | |
| | 7/12/2013 | |

# SECTION 3.0 SURVEY RESULTS

The following section presents the results of the 2013 focused surveys conducted within the survey areas described above in Section 1.1.2. No arroyo toads were observed during these surveys. Least Bell's vireo territories were established in Reaches 14, 27, 39, 40b, and 43a these surveys (see Table ES-1). A migrant male least Bell's vireo was observed on only one survey date (April 11, 2013) in Reach 80. Migrant willow flycatchers were observed in four channel reaches (Reaches 40b, 82, 105, and 109), but no southwestern willow flycatcher territories were established during these 2013 surveys. The details of these observations are provided below and grouped by watershed, including Los Angeles River Watershed/San Pedro Bay and the Santa Clara River Watershed. Table ES-1 in the Executive Summary at the beginning of the report summarizes the 2013 survey results. Los Angeles River Watershed/San Pedro Bay

### 3.1.1 REACH 14 – MAY CHANNEL (MAIN CHANNEL OUTLET INTO PACOIMA CANYON)

**Least Bell's Vireo**

Two least Bell's vireo territories were established in Reach 14 during these surveys (Exhibits 23 and 24). The solitary (unpaired) male (shown as LBV1 on Exhibits 23 and 24) occupied both the main channel outlet on the west side of Pacoima Wash as well as the northernmost drainage on the east side of Pacoima Wash from April 10 to May 23, but not thereafter. This solitary male interacted with a silent LBV, presumed to be a female, on May 23, but appeared to remain unpaired on that date. It is unknown what happened to this male since he was no longer present in the survey area after May 23. The pair (shown as LBV2 on Exhibit 23) constructed a nest in the willows of the southernmost drainage on east side of Pacoima Wash and was observed brooding and feeding fledglings on June 25 (Exhibit A-1). At least two fledglings were present in this territory on July 5.

### 3.1.2 REACH 27 – WILMINGTON DRAIN

**Least Bell's Vireo**

One least Bell's vireo territory was established in Reach 27 during these surveys. This territory consisted of a singing male that was first detected on April 25. On April 25, this male wandered upstream and downstream of Lomita Boulevard, but thereafter remained upstream of Lomita Boulevard. This solitary male least Bell's vireo stayed unpaired and remained on territory through at least July 11 (see Exhibits 25 and 26).

## 3.2 SAN GABRIEL RIVER AREA

### 3.2.1 REACH 39 – BEATTY CHANNEL OUTLET AT SAN GABRIEL RIVER (25+99.00+50')

**Least Bell's Vireo**

Two least Bell's vireo territories were established in Reach 39 during these surveys (Exhibits 27 and 28). The territory in the southern part of the survey area next to the pedestrian bridge was paired with a female from April 10 to at least April 30 (shown as LBV1 on Exhibits 27 and 28). This pair occupied the willow clump at the west end of the pedestrian bridge that has supported nesting least Bell's vireo since 2007. The least Bell's vireo territory in the northeastern part of survey area (shown as LBV2 on Exhibits 27 and 28) was solitary (unpaired) from April 10 to May 10, but was found to be paired during the May 23 survey. The pair was observed nest building on May 23; the female was color banded with a combination that showed it was banded


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# Reach 14 Least Bell's Vireo Locations (Aerial)

Exhibit 23

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

300 150 0 300

Feet

BonTerra CONSULTING

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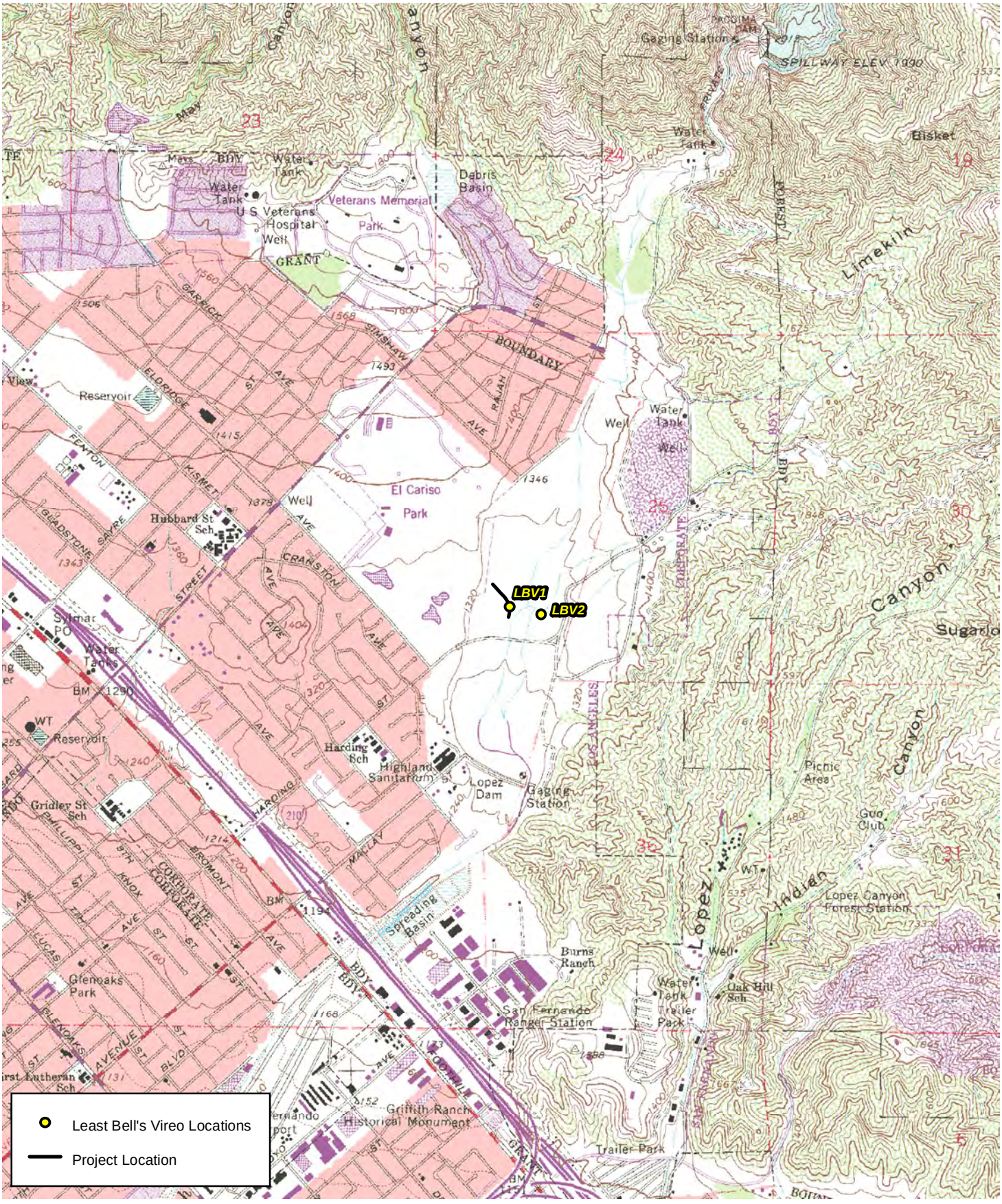


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# Reach 14 Least Bell's Vireo Locations (USGS Quad)

Exhibit 24

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

2,000 1,000 0 2,000 Feet

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# Reach 27 Least Bell's Vireo Location (Aerial)

Exhibit 25

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

400 200 0 400

Feet

BonTerra CONSULTING

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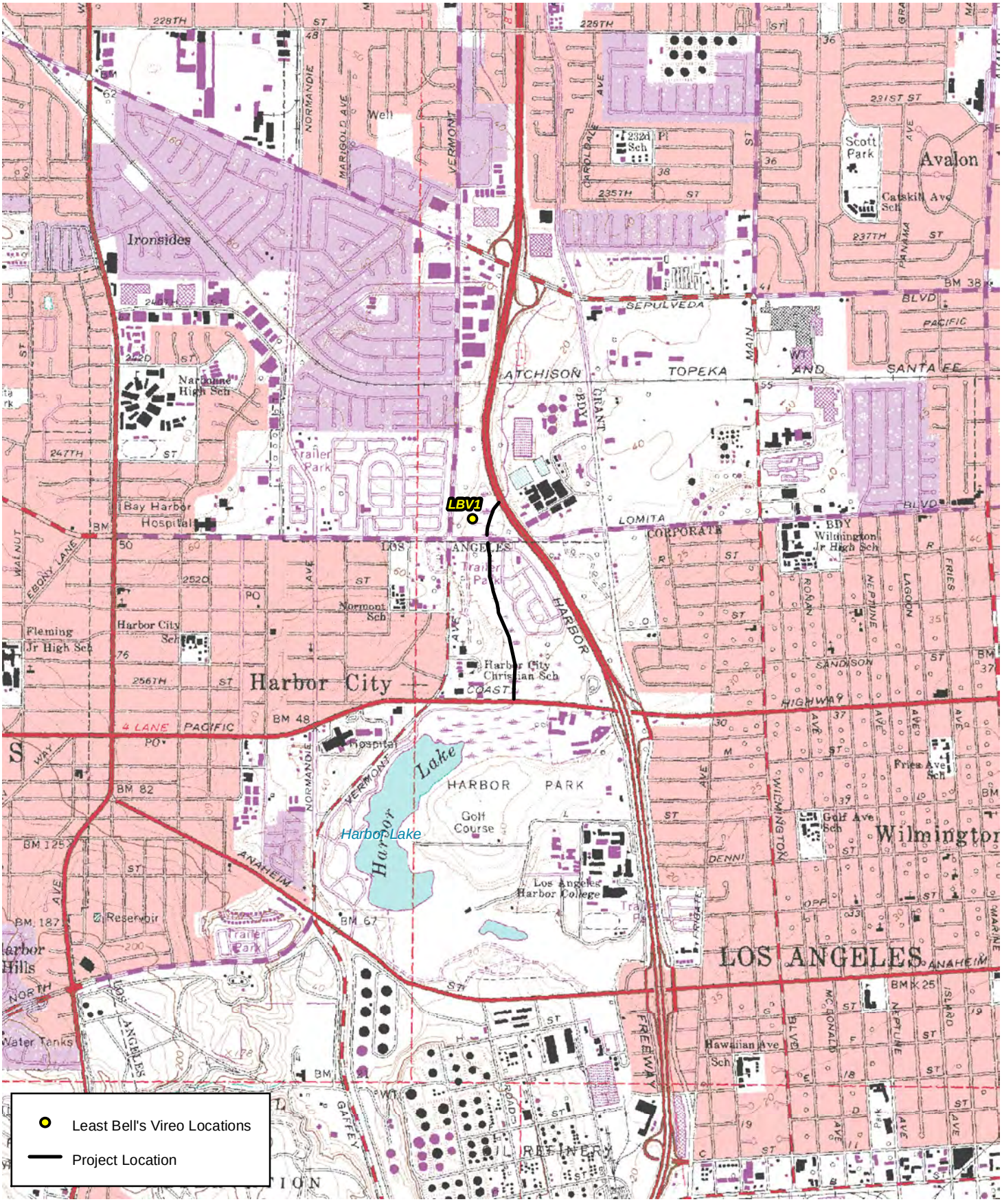


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# Reach 27 Least Bell's Vireo Location (USGS Quad)

**Exhibit 26**

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

BonTerra CONSULTING

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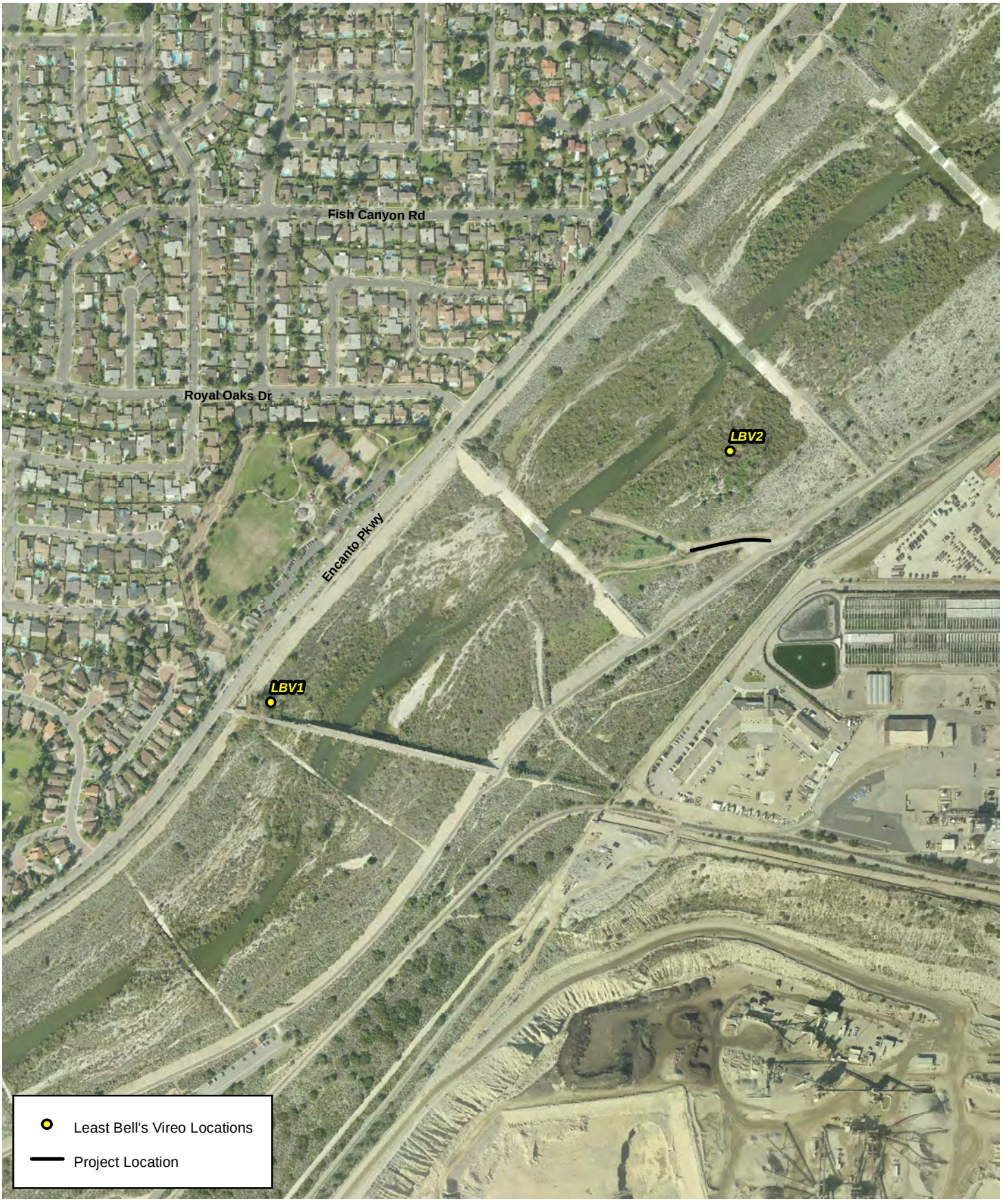


# Reach 39 Least Bell's Vireo Locations (Aerial)

# Exhibit 27

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

500 250 0 500

Feet

BonTerra CONSULTING

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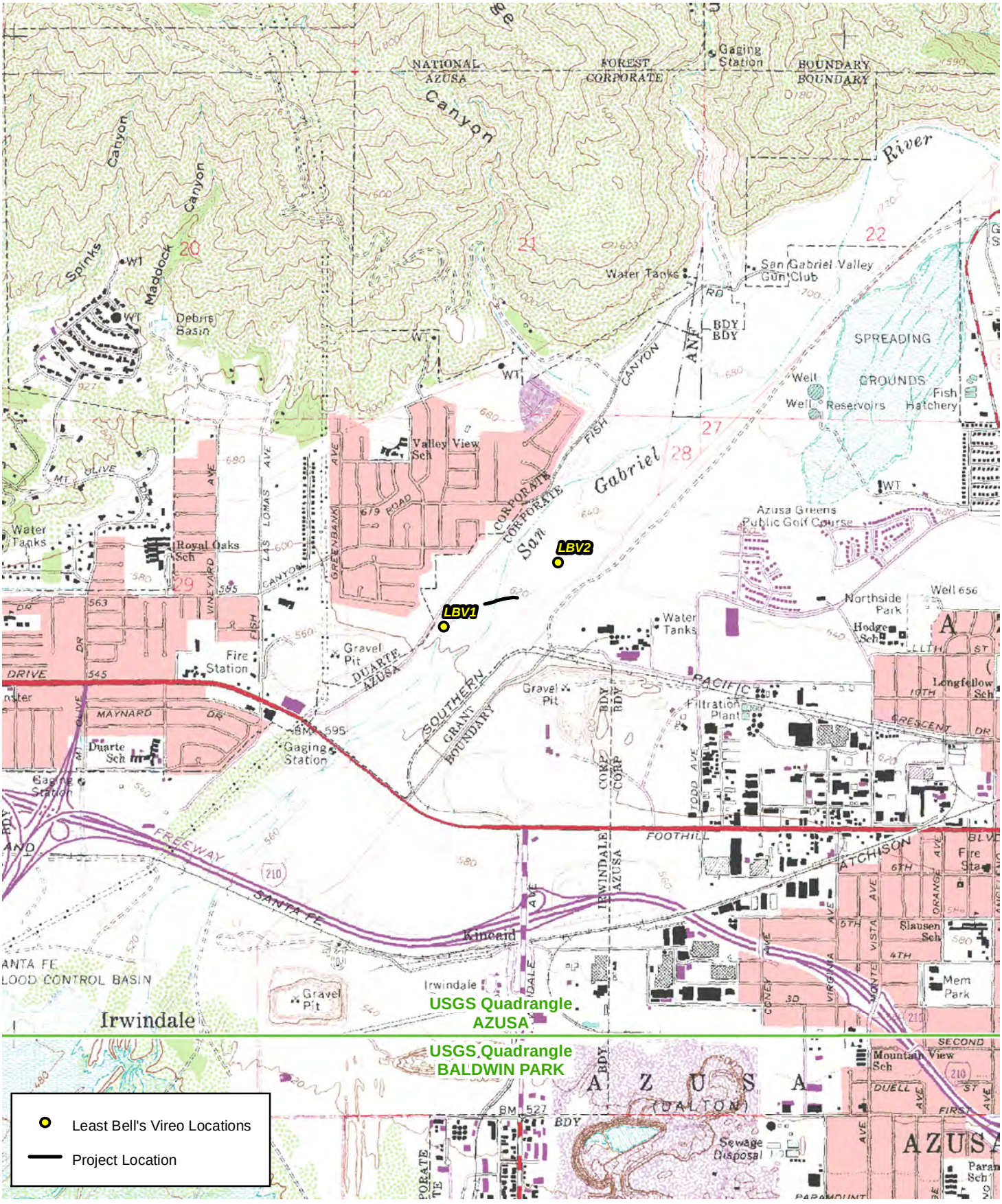


# Reach 39 Least Bell's Vireo Locations (USGS Quad)

Exhibit 28

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

2,000 1,000 0 2,000 Feet

BonTerra CONSULTING

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on its wintering grounds in October 2012 near San Jose del Cabo at the southern tip of the Baja California peninsula (Exhibit A-1). The pair at the pedestrian bridge was not detected on May 10 or thereafter. On May 23, a singing male presumed to be the male from the pedestrian bridge pair was at the Beatty channel outlet and engaged in counter-singing with the male least Bell's vireo with color banded female. Only the male with the color-banded female was detected on the June 10 survey, but presumably the same male least Bell's vireo was present at the Beatty channel outlet and again engaged in counter-singing with the paired male during the June 17 survey. Only the male least Bell's vireo (LBV2) was detected during the June 25 and July 5 surveys; the outcome of nesting for this pair was not determined.

### 3.2.2 REACH 40B – SAN GABRIEL RIVER – SANTA MONICA (I-10) FREEWAY TO THIENES AVENUE

**Least Bell's Vireo**

Five least Bell's vireo territories were established in Reach 40b during these surveys (Exhibits 29 and 30). The first least Bell's vireo territory (LBV1) consisted of a pair first detected on April 10. This pair had a nest in a narrow-leaved willow that produced four fledglings on June 14. The second least Bell's vireo territory (LBV2) was a pair that was first detected on April 10 and which fledged three young from a nest in narrow-leaved willow in early May. This pair built a second nest in narrow-leaved willow that contained three eggs on July 12. The third territory (LBV3) consisted of a pair that was first detected on April 10 and which built a nest in narrow-leaved willow that produced four fledglings in early May. They built a second nest in mule fat that produced four more fledglings in late June. The least Bell's vireo territory (LBV4) just upstream of the first drop structure on Exhibits 29 and 30 was a solitary male that was first detected on April 10 and stayed unpaired through the season. The fifth least Bell's vireo territory (LBV5) consisted of a pair with the male first detected on April 20 and the female on May 1. The nesting outcome of this pair was not determined. Two transient male least Bell's vireos were also detected during these surveys. One transient or wandering male was detected singing on April 20 opposite the end of Thienes Avenue at the confluence of San Jose Creek and the San Gabriel River (11S 0405196 3766823). Presumably this same male was detected in the same general area on May 1, but not again. The second transient male was detected on June 28 upstream of the least Bell's vireo pair (LBV5) closest to the second drop structure upstream from confluence with San Jose Creek.

**Southwestern Willow Flycatcher**

A migrant willow flycatcher was observed in a dry narrow-leaved willow "island" (11S 0406416, 3767690) on June 1. This willow flycatcher was unresponsive to playback of pre-recorded vocalizations.

### 3.2.3 REACH 43A – SAN GABRIEL RIVER – UPPER

**Least Bell's Vireo**

Three least Bell's vireo territories were established in Reach 43a during these surveys (Exhibits 31 and 32). The first least Bell's vireo territory (LBV1) consisted of a male first detected on April 10 and a female first detected on May 1. This pair produced two nests, both in mule fat, that each had three eggs. Both nests, however, were depredated. The second least Bell's vireo territory (LBV2) consisted of a male first detected on April 10 followed by the female on April 20; one fledgling was present on May 22 with this pair. The third least Bell's vireo territory (LBV3) consisted of a solitary male that was first detected on April 10 and which stayed unpaired through the season. One transient or wandering male was detected singing on May 22 (11S 0402050, 3764336), but not thereafter.


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# Reach 40b Least Bell's Vireo Locations (Aerial)

**Exhibit 29**

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

600 300 0 600

Feet

BonTerra CONSULTING

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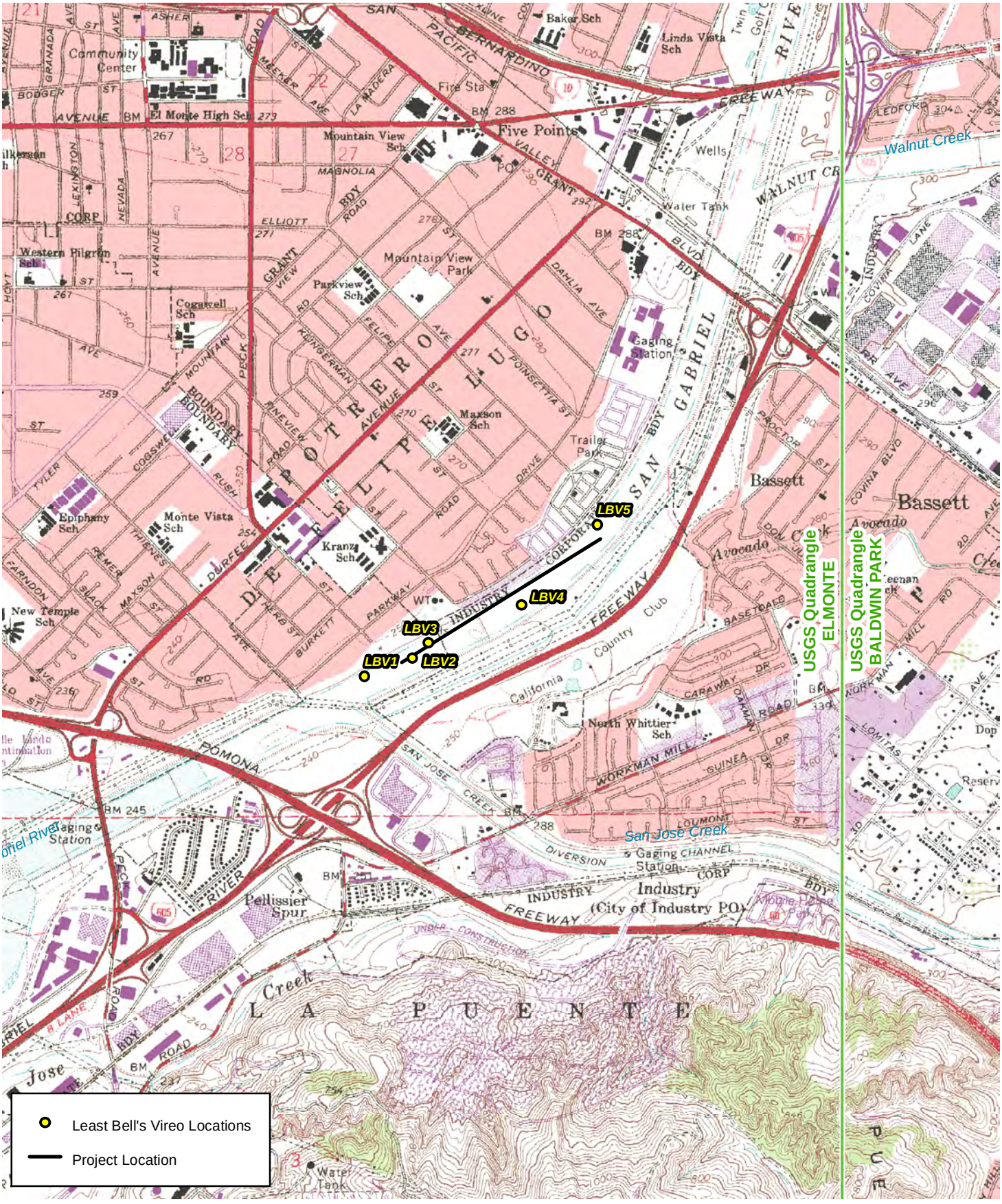


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# Reach 40b Least Bell's Vireo Locations (USGS Quad)

**Exhibit 30**

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N
W E
S

2,000 1,000 0 2,000

Feet

BonTerra CONSULTING

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# Reach 43a Least Bell's Vireo Locations (Aerial)

Exhibit 31

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

400 200 0 400

Feet

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# Reach 43a Least Bell's Vireo Locations (USGS Quad)

Exhibit 32

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

2,000 1,000 0 2,000 Feet

BonTerra CONSULTING

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## 3.3 SANTA CLARA RIVER AREA

### 3.3.1 REACH 80 – SOUTH FORK – SANTA CLARA RIVER (PDS 1947 AND 1946)

**Least Bell's Vireo**

One singing male least Bell's vireo was present on April 11 (Exhibits 33 and 34). This migrant stayed for just a few minutes before leaving the survey area. It was on the north bench of the channel in habitat that consisted of patchy tree tobacco (*Nicotiana glauca*), scalebroom (*Lepidospartum squamatum*), and Great Basin sagebrush (*Artemisia tridentata*).

### 3.3.2 REACH 82 – SANTA CLARA RIVER MAIN CHANNEL (PD 2278)

**Southwestern Willow Flycatcher**

A migrant willow flycatcher was observed west of the Reach 82 (11S 355509, 3810832) on June 18. It was foraging low in young willows growing in standing water associated with a side outlet. This bird sang and called occasionally, but was unresponsive to playback of pre-recorded vocalizations.

### 3.3.3 REACH 105 – SAN FRANCISQUITO CHANNEL (PD 2456)

**Southwestern Willow Flycatcher**

Two migrant willow flycatchers were together and singing upstream of the Decoro Drive bridge and west of the Reach 105 flood-control structures on the left bank (east bank) of the channel (11S 356731, 3812706) on June 18. A very late migrant was present at the left bank side outlet upstream of the Decoro Drive Bridge (11S 356898, 3812686) on June 26. This bird was silent and unresponsive to playback of pre-recorded vocalizations. It left the riparian habitat and foraged in the ornamental trees of the adjacent residential homes. After approximately one hour, it returned to the willow riparian habitat next to the water at the same side outlet where it was initially observed. Mr. Daniels returned early the next morning, June 27, but was not able to find this willow flycatcher. No willow flycatcher was found on July 9. Photos of this bird (see Exhibit A-2) were shared with other observers with expertise on the species, but could not be identified to subspecies. Therefore, this bird is best considered to be a very late migrant of unknown subspecies.

### 3.3.4 REACH 109 – SANTA CLARA RIVER – SOUTH BANK WEST OF MCBEAN PARKWAY (MTD 1510)

**Southwestern Willow Flycatcher**

One migrant willow flycatcher was observed west of Reach 109 (11S 356079, 3810302) on June 18. It was calling and foraging in mule fat next to the bike trail on the south bank of the Santa Clara River. It moved north into the river and out of view. Playback of pre-recorded vocalizations brought the bird back into view. It was silent and within a minute or two continued south across the bike trail and open field into an ornamental sycamore in the adjacent apartment complex.


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# Reach 80 Least Bell's Vireo Location (Aerial)

Exhibit 33

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

350 175 0 350

Feet

BonTerra CONSULTING

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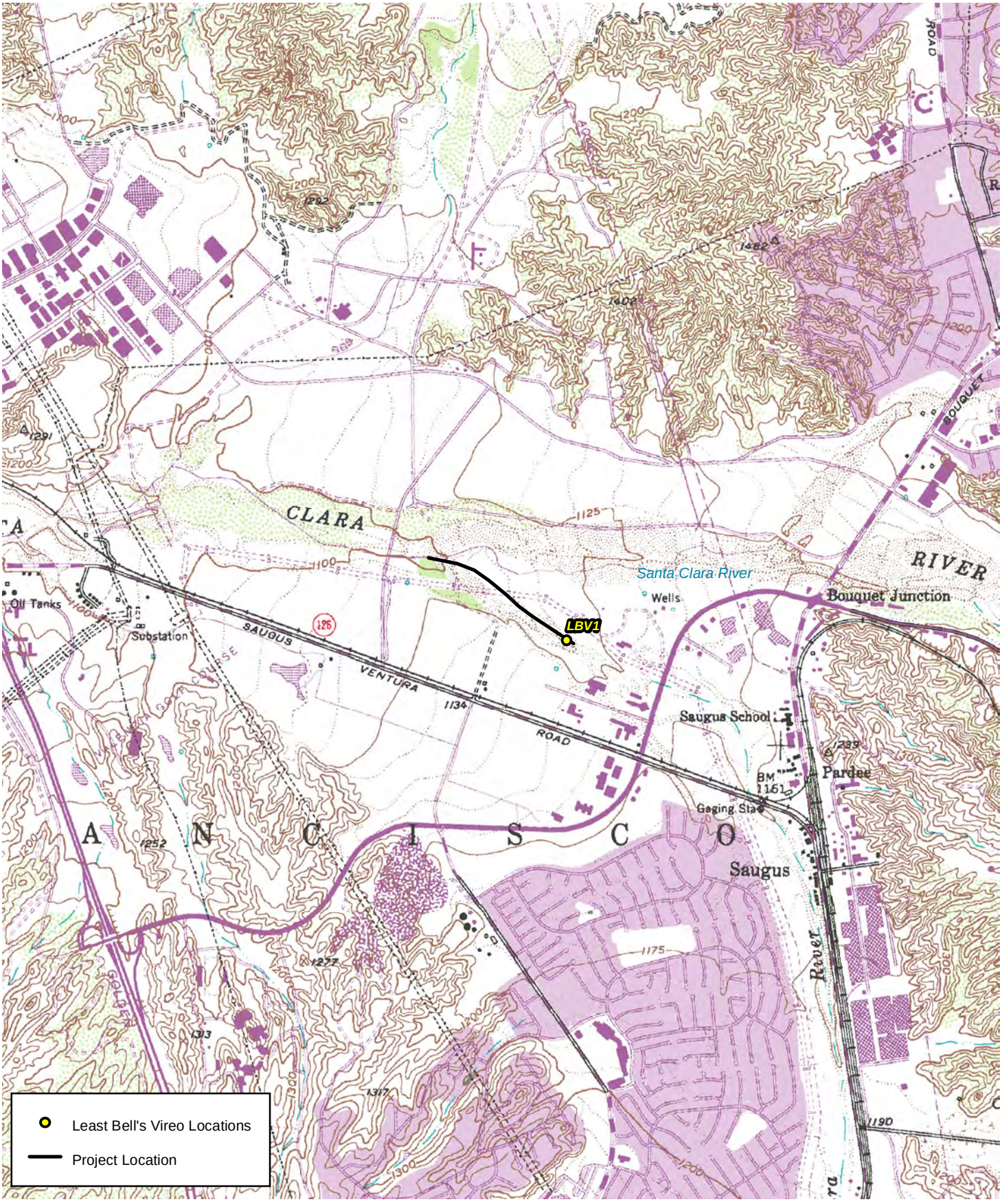


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# Reach 80 Least Bell's Vireo Location (USGS Quad)

Exhibit 34

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

N W E S

2,000 1,000 0 2,000 Feet

BonTerra CONSULTING

(Rev: 9-05-2013 CJS) R:\PAS\Projects\CoLADPW\J228\Graphics\2013 Focused Survey Results\Ex34_LBV_USGS.pdf

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[5] Although the California Department of Fish and Game (CDFG) changed its name to the California Department of Fish and Wildlife (CDFW) effective January 1, 2013, "CDFG" is still used throughout this document for all documents published or database searches completed before January 1, 2013.

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# APPENDIX A

# PHOTO-DOCUMENTATION EXHIBITS

**June 25, 2013.** View of female least Bell's vireo on nest at Reach 14.

**May 23, 2013.** View of color-banded least Bell's vireo at Reach 39.

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## Site Photographs

Exhibit A-1

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

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**June 26, 2013.** View of very late migrant willow flycatcher at Reach 105.

**June 26, 2013.** View of very late migrant willow flycatcher at Reach 105.

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## Site Photographs

Exhibit A-2

*2013 Focused Survey Results for the Los Angeles County Soft-Bottom Channels*

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# APPENDIX B

# BIRD COMPENDIA

# APPENDIX B

## BIRD COMPENDIA TABLE OF CONTENTS

**Reach** **Page**

# REACH 12
# HAINES CANYON MAIN CHANNEL OUTLET

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 30-Apr | 10-May | 23-May | 10-Jun | 17-Jun | 25-Jun | 5-Jul |
| Mallard (*Anas platyrhynchos)* | 1 | 2 | 3 | | 2 | 2 | | | 3 |
| California Quail (*Callipepla californica*) | 1 | 4 | 2 | 6 | 1 | 1 | 1 | | 10 |
| Great Blue Heron (*Ardea herodias*) | 1 | | | | 1 | | 1 | | 1 |
| Great Egret (*Ardea alba*) | 1 | | | | | | | | |
| Green Heron (*Butorides virescens*) | | 1 | | 2 | | | | | |
| Black-crowned Night-Heron (*Nycticorax nycticorax*) | | | | | 1 | | | | |
| Cooper's Hawk (*Accipiter cooperii*) | | | | | | | 1 | | |
| Red-tailed Hawk (*Buteo jamaicensis*) | | | | | 1 | | | | |
| Rock Pigeon (*Columba livia*)* | | | 2 | | | | | | |
| Eurasian Collared-Dove (*Streptopelia decaocto*)* | 2 | | | | | | | | |
| Mourning Dove (*Zenaida macroura*) | | 8 | 4 | 2 | | 3 | 3 | 4 | 5 |
| Black-chinned Hummingbird (*Archilochus alexandri*) | | 1 | | | | 1 | | 1 | 2 |
| Anna's Hummingbird (*Calypte anna*) | 2 | 3 | 4 | 4 | 1 | 1 | | 3 | 3 |
| Costa's Hummingbird (*Calypte costae*) | | 1 | | 2 | | | | | |
| Allen's Hummingbird (*Selasphorus sasin*) | 1 | 1 | 4 | 2 | | 1 | | 1 | |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | | 1 | 1 | 2 | 2 | 7 | 4 | 8 | 10 |
| Belted Kingfisher (*Ceryle alcyon*) | | 1 | | | | | | | |
| Nuttall's Woodpecker (*Picoides nuttallii*) | | | | 1 | | | 1 | 1 | 1 |
| Downy Woodpecker (*Picoides pubescens*) | | | | | | | 1 | | 1 |
| Black Phoebe (*Sayornis nigricans*) | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 |
| Say's Phoebe (*Sayornis saya*) | 1 | | | | | | | | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | | | | | 1 | 2 | 1 | | 1 |
| Cassin's Kingbird (*Tyrannus vociferans*) | 2 | | 1 | | | | 2 | 2 | 2 |
| Western Kingbird (*Tyrannus verticalis*) | | | | | | | | | 1 |
| Warbling Vireo (*Vireo gilvus*) | | | | 2 | 3 | | | | |

## REACH 12
## HAINES CANYON MAIN CHANNEL OUTLET

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 30-Apr | 10-May | 23-May | 10-Jun | 17-Jun | 25-Jun | 5-Jul |
| Western Scrub-Jay (*Aphelocoma insularis*) | | 1 | 1 | 1 | 1 | 1 | 1 | | 1 |
| American Crow (*Corvus brachyrhynchos*) | 2 | 3 | 5 | 3 | 2 | | 2 | 6 | 5 |
| Common Raven (*Corvus corax*) | | 1 | 2 | 1 | 3 | | | | 2 |
| Violet-green Swallow (*Tachycineta thalassina*) | | | | 4 | | | | | |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 1 | | 4 | 1 | 5 | 4 | 13 | 12 | 1 |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | | | | | | | | 2 | |
| Barn Swallow (*Hirundo rustica*) | | | | 1 | | | | | |
| Bushtit (*Psaltriparus minimus*) | | 5 | 3 | | | | | | |
| Red-breasted Nuthatch (*Sitta canadensis*) | | | 1 | | | | | | |
| Bewick's Wren (*Thryomanes bewickii*) | 3 | 2 | 2 | 2 | | 4 | | 2 | 1 |
| Blue-gray gnatcatcher (*Polioptila caerulea*) | | 1 | | | | | | | |
| Ruby-crowned Kinglet (*Regulus calendula*) | 1 | 2 | | | | | | | |
| Western Bluebird (*Sialia mexicana*) | 3 | 3 | 1 | | | | | | |
| Swainson's Thrush (*Catharus ustulatus*) | | | | | 2 | | | | |
| American Robin (*Turdus migratorius*) | | | 1 | | | | | | |
| Northern Mockingbird (*Mimus polyglottos*) | 1 | 1 | 2 | 1 | 1 | | | 3 | 5 |
| European Starling (*Sturnus vulgaris*)* | 1 | 1 | 1 | | | | 2 | 1 | |
| Cedar Waxwing (*Bombycilla cedrorum*) | | | 5 | 10 | | | | | |
| Phainopepla (*Phainopepla nitens*) | | | | | | 1 | 1 | 1 | |
| Orange-crowned Warbler (*Oreothlypis celata*) | 1 | | | | | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | 3 | 3 | 1 | 1 | 6 | 3 | 4 | 3 | 4 |
| Yellow Warbler (*Setophaga petechia*) | | 1 | 2 | 8 | 5 | 4 | 4 | 4 | 5 |
| Yellow-rumped Warbler (*Setophaga coronata*) | 12 | 12 | | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | | 1 | 2 | 6 | 2 | | | | |
| Spotted Towhee (*Pipilo maculates*) | 1 | | | | | 2 | | | |

## REACH 12
## HAINES CANYON MAIN CHANNEL OUTLET

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **10-Apr** | **20-Apr** | **30-Apr** | **10-May** | **23-May** | **10-Jun** | **17-Jun** | **25-Jun** | **5-Jul** |
| California Towhee (*Melozone crissalis*) | | | 2 | 2 | 1 | 2 | 1 | 2 | |
| Song Sparrow (*Melospiza lincolnii*) | 5 | 1 | 2 | 3 | 8 | 6 | 4 | 7 | 3 |
| Lincoln's sparrow (*Melospiza lincolnii*) | | 1 | | | | | | | |
| White-crowned Sparrow (*Zonotrichia leucophrys*) | 11 | | | | | | | | |
| Western Tanager (*Piranga ludoviciana*) | | | 12 | 1 | 3 | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | | | 1 | 2 | 1 | | | | |
| Blue Grosbeak (*Passerina caerulea*) | | | | | | | | 1 | 1 |
| Lazuli Bunting (*Passerina amoena*) | | | 1 | 1 | | | | | |
| Red-winged Blackbird (*Ageaius phoeniceus*) | 3 | 3 | 2 | 1 | | | | | |
| Brewer's Blackbird (*Euphagus cyanocephalus*) | | | | 1 | | | | | |
| Great-tailed Grackle (*Quiscalus mexicanus*) | | | 2 | | | | | | |
| Hooded Oriole (*Icterus cucullatus*) | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 3 | 3 |
| Bullock's Oriole (*Icterus bullockii*) | | 1 | 1 | 3 | 1 | 4 | 3 | 2 | |
| House Finch (*Haemorhous mexicanus*) | 6 | 6 | 11 | 9 | 8 | 4 | 10 | 8 | 8 |
| Lesser Goldfinch (*Spinus psaltria*) | 4 | 7 | 3 | 12 | 8 | 5 | 4 | 3 | 1 |
| American Goldfinch (*Spinus tristis*) | | 1 | | 2 | | | | | 1 |
| House Sparrow (*Passer domesticus*)* | | 1 | | | | 5 | | 2 | 1 |

* Introduced non-native species with established breeding population in California

# REACH 14
# MAY CHANNEL
# (MAIN CHANNEL OUTLET INTO PACOIMA CANYON)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 30-Apr | 10-May | 23-May | 10-Jun | 17-Jun | 25-Jun | 5-Jul |
| Canada Goose (*Branta canadensis*) | 2 | | | | | | | | |
| Mallard (*Anas platyrhynchos)* | | | 1 | 3 | 1 | | | | |
| California Quail (*Callipepla californica*) | | | | 2 | | 5 | | 10 | 10 |
| Cooper's Hawk (*Accipiter cooperii*) | 1 | | | 1 | | | | | |
| Red-shouldered Hawk (*Buteo lineatus*) | 1 | 1 | | | | | 1 | 1 | |
| Killdeer (*Charadrius vociferous*) | | | | | 2 | | | | |
| Rock Pigeon (*Columba livia*)* | | 3 | | | | | | | |
| Eurasian Collared-Dove (*Streptopelia decaocto*)* | | | 2 | | | | | | |
| Mourning Dove (*Zenaida macroura*) | 6 | 6 | 2 | 6 | | 1 | 1 | | 4 |
| Lesser Nighthawk (*Chordeiles acutipennis*) | | | 1 | 1 | | | | | |
| White-throated Swift (*Aeronautes saxatalis*) | | 1 | | | | | | | |
| Black-chinned Hummingbird (*Archilochus alexandri*) | 1 | 1 | | | 3 | 1 | | 1 | |
| Anna's Hummingbird (*Calypte anna*) | 5 | 3 | 3 | 4 | 1 | | 2 | 1 | 2 |
| Costa's Hummingbird (*Calypte costae*) | 1 | | | 1 | | | | | |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | 1 | 2 | 1 | 1 | | 1 | 2 | 1 | 1 |
| Nuttall's Woodpecker (*Picoides nuttallii*) | 1 | | 1 | | | 1 | 2 | | |
| Peregrine Falcon (*Falco peregrines*) | | | | | | | | 1 | |
| Hammond's flycatcher (*Empidonax hammondii*) | 1 | | | | | | | | |
| Black Phoebe (*Sayornis nigricans*) | | | | | 1 | | | | 1 |
| Say's Phoebe (*Sayornis saya*) | 1 | 1 | 1 | 2 | | 1 | | | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | 1 | 1 | | 2 | 1 | | | | |
| Cassin's Kingbird (*Tyrannus vociferans*) | | 2 | 2 | | | 1 | 1 | 2 | |
| Western Kingbird (*Tyrannus verticalis*) | 1 | 2 | 2 | 2 | | 1 | | | |
| Bell's Vireo (*Vireo bellii*) | 2 | 3 | 3 | 3 | 4 | 1 | | 1 | 1 |

# REACH 14
# MAY CHANNEL
# (MAIN CHANNEL OUTLET INTO PACOIMA CANYON)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 30-Apr | 10-May | 23-May | 10-Jun | 17-Jun | 25-Jun | 5-Jul |
| Warbling Vireo (*Vireo gilvus*) | | | | 3 | | | | | |
| American Crow (*Corvus brachyrhynchos*) | 3 | 3 | 2 | 6 | 4 | 6 | 5 | 2 | 2 |
| Common Raven (*Corvus corax*) | 4 | 1 | 6 | 2 | 3 | 6 | 1 | 5 | 4 |
| Violet-green Swallow (*Tachycineta thalassina*) | 1 | | | | | | | | |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 5 | 1 | | | 2 | 2 | 4 | 6 | |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | 15 | 2 | 5 | 12 | 6 | 3 | 8 | | 4 |
| Barn Swallow (*Hirundo rustica*) | | | | | | 1 | | | |
| Bushtit (*Psaltriparus minimus*) | 2 | 7 | 9 | 14 | | 2 | | | |
| White-breasted Nuthatch (*Sitta carolinensis*) | | | | | | | | 1 | |
| Bewick's Wren (*Thryomanes bewickii*) | 3 | 2 | 3 | 3 | 3 | 4 | 2 | 2 | 2 |
| Wrentit (*Chamaea fasciata*) | 2 | 2 | 1 | | 1 | | 1 | | 1 |
| Swainson's Thrush (*Catharus ustulatus*) | | | | 1 | 2 | | | | |
| American Robin (*Turdus migratorius*) | | | | | | 1 | 1 | 1 | |
| California Thrasher (*Toxostoma redivivum*) | | 1 | | | 2 | | 1 | 1 | 1 |
| Northern Mockingbird (*Mimus polyglottos*) | | 1 | | | | 1 | | | |
| European Starling (*Sturnus vulgaris*)* | 4 | | | | | | | | |
| Cedar Waxwing (*Bombycilla cedrorum*) | | | 6 | 5 | | | | | |
| Nashville Warbler (*Oreothlypis ruficapilla*) | | | 1 | | | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | 3 | | | 3 | | | | | |
| Yellow Warbler (*Setophaga petechia*) | | 1 | 2 | 3 | | | | | |
| Yellow-rumped Warbler (*Setophaga coronata*) | 16 | 2 | | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | | 1 | | 4 | 1 | | | | |
| Spotted Towhee (*Pipilo maculates*) | 2 | 3 | 3 | 4 | 2 | 5 | 3 | | 2 |
| California Towhee (*Melozone crissalis*) | 8 | 9 | 8 | 10 | 3 | 5 | 3 | | 4 |

## REACH 14
## MAY CHANNEL
## (MAIN CHANNEL OUTLET INTO PACOIMA CANYON)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 30-Apr | 10-May | 23-May | 10-Jun | 17-Jun | 25-Jun | 5-Jul |
| Savannah sparrow (*Passerculus sandwichensis*) | 1 | | | | | | | | |
| Song Sparrow (*Melospiza lincolnii*) | 3 | 7 | 5 | 7 | 6 | 10 | 2 | 1 | |
| White-crowned Sparrow (*Zonotrichia leucophrys*) | 15 | 2 | | | | | | | |
| Western Tanager (*Piranga ludoviciana*) | | | 2 | | | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| Blue Grosbeak (*Passerina caerulea*) | | | 1 | 1 | | 1 | | | 1 |
| Lazuli Bunting (*Passerina amoena*) | 2 | | 2 | | | | | | |
| Western Meadowlark (*Sturnella neglecta*) | 4 | | | | | | | | |
| Brewer's Blackbird (*Euphagus cyanocephalus*) | | | 2 | | | | | | |
| Brown-headed Cowbird (*Molothrus ater*) | 1 | 1 | | 2 | | | | | |
| Hooded Oriole (*Icterus cucullatus*) | | | | | | | | 1 | |
| Bullock's Oriole (*Icterus bullockii*) | 2 | | | 1 | | | | | |
| House Finch (*Haemorhous mexicanus*) | 18 | 11 | 18 | 21 | 25 | 12 | 20 | | |
| Lesser Goldfinch (*Spinus psaltria*) | 16 | 9 | 7 | 17 | 8 | 4 | 5 | 4 | 3 |
| American Goldfinch (*Spinus tristis*) | 5 | 12 | 6 | 12 | 1 | 6 | | 1 | 2 |
| House Sparrow (*Passer domesticus*)* | | | | | | | | 16 | 2 |

* Introduced non-native species with established breeding population in California

## REACH 27
## WILMINGTON DRAIN

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 15-Apr | 25-Apr | 5-May | 15-May | 29-May | 12-Jun | 21-Jun | 28-Jun | 11-Jul |
| Mallard (*Anas platyrhynchos)* | | 2 | 3 | | 2 | | | | |
| Great Blue Heron (*Ardea herodias*) | | 1 | 1 | | | | | | |
| Great Egret (*Ardea alba*) | 2 | | 1 | | | 1 | | | |
| Snowy Egret (*Egretta thula*) | | 1 | 1 | 1 | | 6 | | 1 | |
| Green Heron (*Butorides virescens*) | | | | | | 1 | | | |
| Red-shouldered Hawk (*Buteo lineatus*) | | 2 | | 1 | 1 | | | | |
| Western Gull (*Larus occidentalis*) | 3 | | | | | 1 | | 1 | |
| Rock Pigeon (*Columba livia*)* | | | 20 | 3 | 2 | 2 | | | 30 |
| Eurasian Collared-Dove (*Streptopelia decaocto*)* | | 1 | 3 | 1 | | 1 | 3 | 3 | |
| Mourning Dove (*Zenaida macroura*) | 5 | 7 | | | 1 | 2 | 4 | 3 | 1 |
| Vaux's Swift (*Chaetura vauxi*) | | 8 | | | | | | | |
| Anna's Hummingbird (*Calypte anna*) | | 2 | 2 | 4 | | | 1 | | |
| Allen's Hummingbird (*Selasphorus sasin*) | 3 | 3 | 1 | 2 | | | | 1 | |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | | 2 | 2 | 1 | 3 | 1 | 1 | 1 | |
| Belted Kingfisher (*Ceryle alcyon*) | | | | | | | | | |
| Downy Woodpecker (*Picoides pubescens)* | 1 | 1 | | 2 | 1 | 2 | 1 | | |
| Western Wood-Pewee (*Contopus sordidulus*) | | | | | | | | | |
| Pacific-slope flycatcher (*Empidonax difficilis*) | | 1 | | | 1 | | | | |
| Black Phoebe (*Sayornis nigricans*) | 3 | 4 | 2 | 3 | 4 | 2 | 2 | 3 | 1 |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | | 2 | | | | | | | |
| Western Kingbird (*Tyrannus verticalis*) | | 1 | | | | | | | |
| Bell's Vireo (*Vireo bellii*) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Warbling Vireo (*Vireo gilvus*) | | 3 | | 4 | | | | | |
| Western Scrub-Jay (*Aphelocoma insularis*) | | 1 | | | | | | | |
| American Crow (*Corvus brachyrhynchos*) | 1 | 7 | 4 | 6 | | 10 | 1 | 2 | |

## REACH 27
## WILMINGTON DRAIN

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 15-Apr | 25-Apr | 5-May | 15-May | 29-May | 12-Jun | 21-Jun | 28-Jun | 11-Jul |
| Common Raven (*Corvus corax*) | | 1 | 2 | 2 | 1 | | | 1 | |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | | 4 | 4 | 2 | 4 | 2 | 2 | 1 | |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | | 6 | | | | | | | |
| Barn Swallow (*Hirundo rustica*) | | 3 | | | 7 | 10 | 2 | 6 | 6 |
| Bushtit (*Psaltriparus minimus*) | 2 | 1 | 15 | 18 | 15 | 15 | 10 | 10 | |
| Northern Mockingbird (*Mimus polyglottos*) | | 4 | 2 | 2 | 1 | 2 | 1 | 3 | 2 |
| European Starling (*Sturnus vulgaris*)* | 1 | 2 | | 5 | 3 | 5 | 2 | 2 | |
| Cedar Waxwing (*Bombycilla cedrorum*) | 12 | 25 | 4 | | | | | | |
| Orange-crowned Warbler (*Oreothlypis celata*) | 1 | 2 | 1 | 5 | 1 | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | 1 | | 5 | 3 | 9 | 4 | 2 | | |
| Palm Warbler (*Dendroica palmarum*) | | 1 | | | | | | | |
| Yellow Warbler (*Setophaga petechia*) | 2 | 4 | 9 | 6 | 6 | 6 | 6 | 3 | 4 |
| Yellow-rumped Warbler (*Setophaga coronata*) | 8 | 9 | | | | | | | |
| Black-throated Gray Warbler (*Setophaga nigrescens*) | | 1 | | | | | | | |
| Townsend's Warbler (*Setophaga townsendi*) | | 1 | 2 | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | 4 | 3 | 5 | 4 | | | | | |
| California Towhee (*Melozone crissalis*) | | 6 | 6 | 4 | 5 | 4 | 3 | | 6 |
| Song Sparrow (*Melospiza lincolnii*) | 2 | 6 | 9 | 7 | 3 | 4 | | 5 | |
| White-crowned Sparrow (*Zonotrichia leucophrys*) | 2 | | | | | | | | |
| Western Tanager (*Piranga ludoviciana*) | | 9 | 8 | 3 | | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | 1 | 2 | 1 | | | | | | |
| Lazuli Bunting (*Passerina amoena*) | | 4 | 1 | | | | | | |
| Red-winged Blackbird (*Ageaius phoeniceus*) | 1 | 2 | 2 | | | | | | |
| Brown-headed Cowbird (*Molothrus ater*) | 1 | 5 | 6 | 4 | | | | | |
| Hooded Oriole (*Icterus cucullatus*) | 4 | 6 | 6 | 2 | 3 | 5 | 4 | 4 | 3 |

## REACH 27
## WILMINGTON DRAIN

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **15-Apr** | **25-Apr** | **5-May** | **15-May** | **29-May** | **12-Jun** | **21-Jun** | **28-Jun** | **11-Jul** |
| Bullock's Oriole (*Icterus bullockii*) | 2 | 3 | 3 | 1 | 1 | 1 | 2 | | 1 |
| House Finch (*Haemorhous mexicanus*) | 2 | 25 | 18 | 22 | 25 | 12 | 50 | 20 | 10 |
| Lesser Goldfinch (*Spinus psaltria*) | 2 | 9 | 8 | 10 | 2 | | 6 | | 2 |
| American Goldfinch (*Spinus tristis*) | | | | 2 | 3 | 1 | | | |
| House Sparrow (*Passer domesticus*)* | | 1 | 2 | 1 | 2 | 3 | | | 2 |
| Nutmeg Mannikin (*Lonchura punctulata*)** | | | | | 2 | 6 | 2 | 6 | 5 |

* Introduced non-native species with established breeding population in California
** Exotic or escaped non-native species that may or many not be breeding in California

## REACH 28
## TRIUNFO CREEK (PD T2200)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 15-Apr | 25-Apr | 5-May | 15-May | 29-May | 12-Jun | 21-Jun | 28-Jun | 11-Jul |
| Mallard (*Anas platyrhynchos)* | 2 | 4 | 1 | 1 | | | | | |
| California Quail (*Callipepla californica*) | 1 | | | | | | | 10 | 5 |
| Common Peafowl (*Pavo cristatus*)** | 2 | 9 | 6 | 2 | 5 | 4 | 1 | 3 | 2 |
| Great Blue Heron (*Ardea herodias*) | 1 | 1 | | | 1 | | | | 1 |
| Snowy Egret (*Egretta thula*) | | 1 | | | | | | | |
| Green Heron (*Butorides virescens*) | 1 | | | | | | | | |
| Black-crowned Night-Heron (*Nycticorax nycticorax*) | | | | | | | | 1 | |
| Red-shouldered Hawk (*Buteo lineatus*) | | 1 | | | 1 | 2 | 2 | 3 | 2 |
| Band-tailed Pigeon (*Patagioenas fasciata*) | | 1 | | | 5 | | 1 | 1 | |
| Mourning Dove (*Zenaida macroura*) | | | 1 | | | | | 1 | 3 |
| Western screech owl (*Megascops kennicottii*) | | | | | 1 | | | | |
| Black-chinned Hummingbird (*Archilochus alexandri* ) | | | | | 1 | | | | |
| Anna's Hummingbird (*Calypte anna*) | 2 | 2 | 1 | 1 | | | | 3 | |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | 1 | | | | | | | | |
| Acorn Woodpecker (*Melanerpes formicivorus*) | | 3 | 4 | 3 | 7 | 3 | 5 | 6 | 4 |
| Nuttall's Woodpecker (*Picoides nuttallii*) | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 1 |
| Downy Woodpecker (*Picoides pubescens)* | | | | 1 | | | | | |
| Northern Flicker (*Colaptes auratus*) | 1 | | | 1 | 2 | 1 | 1 | 4 | 1 |
| Red-crowned Parrot (*Amazona viridigenalis*)* | 5 | | | | | | | | |
| Black-hooded Parkeet (*Nandayus nenday*)** | | | 4 | 22 | 2 | 1 | 2 | 17 | 5 |
| Pacific-slope Flycatcher (*Empidonax difficilis*) | 1 | 1 | 2 | 3 | 2 | 4 | 2 | 1 | 1 |
| Black Phoebe (*Sayornis nigricans*) | 1 | 1 | | | 2 | 1 | 4 | 2 | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | | | 2 | 2 | 3 | 2 | 1 | 2 | 1 |
| Cassin's Kingbird (*Tyrannus vociferans*) | | 2 | | | | | 1 | | |
| Warbling Vireo (*Vireo gilvus*) | | | | | 1 | | | | |

## REACH 28
## TRIUNFO CREEK (PD T2200)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 15-Apr | 25-Apr | 5-May | 15-May | 29-May | 12-Jun | 21-Jun | 28-Jun | 11-Jul |
| Western Scrub-Jay (*Aphelocoma insularis*) | | 1 | 2 | 1 | 4 | | 2 | 5 | |
| American Crow (*Corvus brachyrhynchos*) | 2 | 12 | 7 | 11 | 12 | 17 | 10 | 7 | 19 |
| Common Raven (*Corvus corax*) | 1 | 1 | | | | | | | |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 1 | 1 | | 2 | 1 | | | | |
| Oak Titmouse (*Baeolophus inornatus*) | 2 | 2 | | | 3 | 2 | 4 | 3 | 2 |
| Bushtit (*Psaltriparus minimus*) | | | 5 | | | | 2 | | |
| White-breasted Nuthatch (*Sitta carolinensis*) | 1 | 2 | | | 2 | 3 | 3 | 2 | 2 |
| House Wren (*Troglodytes aedon*) | 6 | 8 | 9 | 9 | 6 | 7 | 2 | | |
| Blue-gray gnatcatcher (*Polioptila caerulea*) | | 1 | | 1 | | | | | |
| Wrentit (*Chamaea fasciata*) | 2 | | 1 | | 1 | 1 | 1 | 2 | |
| Western Bluebird (*Sialia mexicana*) | | | | 1 | 1 | 1 | | | |
| Swainson's Thrush (*Catharus ustulatus*) | | | | | | 1 | | | |
| European Starling (*Sturnus vulgaris*)* | | 5 | 6 | 2 | 8 | | 2 | 3 | 2 |
| Orange-crowned Warbler (*Oreothlypis celata*) | 1 | | 1 | 3 | 2 | 1 | 1 | | |
| Yellow Warbler (*Setophaga petechia*) | 1 | 1 | 1 | | 1 | | 2 | | |
| Yellow-rumped Warbler (*Setophaga coronata*) | 1 | | | | | | | | |
| Spotted Towhee (*Pipilo maculates*) | 3 | | 3 | 3 | 6 | 5 | 4 | 5 | 1 |
| Rufous-crowned Sparrow (*Aimophila ruficeps*) | | | | | | | 1 | | |
| California Towhee (*Melozone crissalis*) | 2 | 1 | 1 | 4 | 1 | | 2 | 1 | 1 |
| Song Sparrow (*Melospiza lincolnii*) | 2 | 2 | | 2 | 6 | 1 | 6 | 6 | 4 |
| Dark-eyed Junco (*Junco hyemalis*) | | | | | | | 2 | | |
| Western Tanager (*Piranga ludoviciana*) | | 1 | 1 | | 2 | 1 | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | | 3 | | | 1 | 3 | 2 | 1 | 3 |
| Red-winged Blackbird (*Ageaius phoeniceus*) | | 1 | 1 | | | | | | 1 |
| Brown-headed Cowbird (*Molothrus ater*) | 1 | 2 | | 1 | 2 | 3 | 1 | | 1 |

## REACH 28
## TRIUNFO CREEK (PD T2200)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **15-Apr** | **25-Apr** | **5-May** | **15-May** | **29-May** | **12-Jun** | **21-Jun** | **28-Jun** | **11-Jul** |
| Hooded Oriole (*Icterus cucullatus*) | 1 | | 3 | | 1 | 3 | 2 | 1 | |
| Bullock's Oriole (*Icterus bullockii*) | 1 | 2 | | 1 | 2 | 6 | 5 | 1 | |
| House Finch (*Haemorhous mexicanus*) | 4 | 5 | 5 | 14 | 20 | 17 | 12 | 15 | 18 |
| Lesser Goldfinch (*Spinus psaltria*) | 1 | 8 | 12 | 9 | 6 | 7 | 2 | 5 | 4 |

* Introduced non-native species with established breeding population in California
** Exotic or escaped non-native species that may or many not be breeding in California

## REACH 39
## BEATTY CHANNEL OUTLET AT SAN GABRIEL RIVER
## 25+99.00+50'

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 30-Apr | 10-May | 23-May | 10-Jun | 17-Jun | 25-Jun | 5-Jul |
| Mallard (*Anas platyrhynchos)* | 1 | | | | | | | | |
| California Quail (*Callipepla californica*) | 5 | 3 | 4 | 2 | | | 4 | | 10 |
| Great Egret (*Ardea alba*) | | | | | | 1 | | | |
| Turkey Vulture (*Cathartes aura*) | 4 | | 1 | 2 | | 2 | 2 | | 1 |
| Cooper's Hawk (*Accipiter cooperii*) | | | | | 1 | 1 | 1 | | |
| Red-tailed Hawk (*Buteo jamaicensis*) | 2 | | | | | | 2 | | |
| Red-shouldered Hawk (*Buteo lineatus*) | | | | 1 | | | | | 1 |
| Killdeer (*Charadrius vociferous*) | 2 | 1 | | 1 | | | | | |
| Greater Yellowlegs (*Tringa melanoleuca*) | 1 | | | | | | | | |
| Rock Pigeon (*Columba livia*)* | 3 | | | 20 | 2 | | 20 | | |
| Band-tailed Pigeon (*Patagioenas fasciata*) | | | | | | | | | |
| Mourning Dove (*Zenaida macroura*) | 3 | 3 | 2 | 8 | 5 | 3 | 4 | 3 | 18 |
| Yellow-chevroned Parakeet (*Brotogeris chiriri*)** | | | | | | 7 | | | |
| Red-crowned Parrot (*Amazona viridigenalis*)* | | | | | | | 2 | 2 | 2 |
| Lesser Nighthawk (*Chordeiles acutipennis*) | | | | 1 | | | | | |
| Vaux's Swift (*Chaetura vauxi*) | | | | 3 | | | | | |
| White-throated Swift (*Aeronautes saxatalis*) | 1 | 1 | | 2 | | 2 | 2 | | |
| Black-chinned Hummingbird (*Archilochus alexandri*) | | | | 1 | 1 | 1 | 1 | | |
| Anna's Hummingbird (*Calypte anna*) | 6 | 9 | 4 | 3 | 3 | 1 | 2 | | 1 |
| Costa's Hummingbird (*Calypte costae*) | | | 2 | | | | 1 | | |
| Allen's Hummingbird (*Selasphorus sasin*) | 1 | 1 | | | 1 | | 1 | | |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | | 1 | | 2 | 1 | | 2 | | |
| Acorn Woodpecker (*Melanerpes formicivorus*) | | | | 1 | 1 | 1 | 1 | | |
| Nuttall's Woodpecker (*Picoides nuttallii*) | | 1 | 1 | 2 | 1 | | | 1 | 1 |

## REACH 39
## BEATTY CHANNEL OUTLET AT SAN GABRIEL RIVER
## 25+99.00+50'

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 30-Apr | 10-May | 23-May | 10-Jun | 17-Jun | 25-Jun | 5-Jul |
| Downy Woodpecker (*Picoides pubescens)* | | 1 | | | | | | | |
| Parakeet Sp. (*Psittacidae sp.*)** | | 2 | | | | | | | |
| Parrot Sp. (*Psittacidae sp*)** | | 2 | | | | | | | |
| Black Phoebe (*Sayornis nigricans*) | | 4 | 3 | 2 | 2 | 1 | 4 | | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | | 1 | | | | | | 1 | |
| Cassin's Kingbird (*Tyrannus vociferans*) | | | | | | | | 2 | |
| Western Kingbird (*Tyrannus verticalis*) | | | 1 | 1 | | | | | |
| Bell's Vireo (*Vireo bellii*) | 3 | 2 | 3 | 1 | 3 | 1 | 2 | 1 | |
| Hutton's Vireo (*Vireo huttoni*) | | | | | 1 | | | | |
| Warbling Vireo (*Vireo gilvus*) | | | | | 2 | | | | |
| Western Scrub-Jay (*Aphelocoma insularis*) | 1 | 2 | 3 | | 1 | | 2 | 3 | 1 |
| American Crow (*Corvus brachyrhynchos*) | | 4 | | 6 | | 3 | | 1 | 4 |
| Common Raven (*Corvus corax*) | 2 | 1 | 1 | 2 | 3 | 3 | 3 | | 1 |
| Red-whiskered Bulbul (*Pycnonotus jocosus*)** | | | | | | | 1 | | |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 4 | 1 | 2 | 5 | 4 | 2 | 6 | | 6 |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | 1 | 8 | 4 | 21 | 2 | 25 | 5 | 10 | 5 |
| Barn Swallow (*Hirundo rustica*) | | 1 | | | | | | | |
| Bushtit (*Psaltriparus minimus*) | 6 | | 23 | 6 | | 10 | 2 | | |
| Red-breasted Nuthatch (*Sitta canadensis*) | | 1 | | | | | | | |
| House Wren (*Troglodytes aedon*) | | 1 | | 1 | 1 | | | | |
| Bewick's Wren (*Thryomanes bewickii*) | 3 | 3 | 4 | 2 | 5 | 6 | 3 | 1 | 1 |
| Blue-gray gnatcatcher (*Polioptila caerulea*) | | 2 | | | | | | | |
| Wrentit (*Chamaea fasciata*) | 4 | 4 | 2 | 2 | 5 | 4 | 10 | 4 | 5 |
| Swainson's Thrush (*Catharus ustulatus*) | | | | | 1 | | | | |

## REACH 39
## BEATTY CHANNEL OUTLET AT SAN GABRIEL RIVER
## 25+99.00+50'

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 30-Apr | 10-May | 23-May | 10-Jun | 17-Jun | 25-Jun | 5-Jul |
| Northern Mockingbird (*Mimus polyglottos*) | 5 | 5 | 5 | 6 | 3 | 11 | 8 | 6 | 5 |
| California Thrasher (*Toxostoma redivivum*) | 1 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| European Starling (*Sturnus vulgaris*)* | | | | 2 | | | | | |
| Cedar Waxwing (*Bombycilla cedrorum*) | | | 7 | 5 | | | | | |
| Phainopepla (*Phainopepla nitens*) | | 1 | | 3 | 8 | 5 | 4 | 2 | 2 |
| Common Yellowthroat (*Geothlypis trichas*) | 7 | 11 | 3 | 7 | 6 | 5 | 4 | 2 | 3 |
| Yellow Warbler (*Setophaga petechia*) | 1 | 2 | 2 | 2 | | 2 | 1 | | 1 |
| Yellow-rumped Warbler (*Setophaga coronata*) | 1 | | | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | | | | 3 | 1 | | | | |
| Yellow-breasted Chat (*Icteria virens*) | | 1 | 2 | | 3 | 2 | 3 | | 1 |
| Spotted Towhee (*Pipilo maculates*) | 6 | 4 | 4 | 6 | 8 | 5 | 8 | 5 | |
| California Towhee (*Melozone crissalis*) | 9 | 10 | 10 | 12 | 7 | 6 | 4 | 3 | 5 |
| Song Sparrow (*Melospiza lincolnii*) | 8 | 16 | 15 | 15 | 20 | 1 | 2 | | 5 |
| Lincoln's sparrow (*Melospiza lincolnii*) | | 1 | | | | | | | |
| Western Tanager (*Piranga ludoviciana*) | | 1 | | 1 | | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | | 4 | 4 | 5 | 1 | 2 | 2 | 2 | 1 |
| Blue Grosbeak (*Passerina caerulea*) | | | | | 1 | | | | |
| Lazuli Bunting (*Passerina amoena*) | | | 1 | | | | | | |
| Red-winged Blackbird (*Ageaius phoeniceus*) | 1 | | | | 1 | | | | |
| Brown-headed Cowbird (*Molothrus ater*) | | 6 | 4 | 4 | 3 | 1 | 4 | | 1 |
| Hooded Oriole (*Icterus cucullatus*) | | 1 | | 1 | | | | 1 | |
| Bullock's Oriole (*Icterus bullockii*) | | 1 | | | | | 1 | | |
| Purple Finch (*Haemorhous purpureus*) | 1 | | 2 | 2 | 1 | | 2 | | |
| House Finch (*Haemorhous mexicanus*) | 16 | 5 | 22 | 20 | 5 | 20 | 30 | 26 | 16 |

## REACH 39
## BEATTY CHANNEL OUTLET AT SAN GABRIEL RIVER
## 25+99.00+50'

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 30-Apr | 10-May | 23-May | 10-Jun | 17-Jun | 25-Jun | 5-Jul |
| Lesser Goldfinch (*Spinus psaltria*) | 11 | 6 | 14 | 11 | 5 | 3 | 4 | 2 | |
| Lawrence's Goldfinch (*Spinus lawrencei*) | 2 | | | | | | | | |
| American Goldfinch (*Spinus tristis*) | 2 | | 2 | 2 | 4 | 5 | 5 | | |
| Nutmeg Mannikin (*Lonchura punctulata*)** | | | | | | 1 | 3 | | 8 |
| Orange Bishop (*Euplectes franciscanus*)** | | 2 | | | 1 | | 2 | | |

* Introduced non-native species with established breeding population in California
** Exotic or escaped non-native species that may or many not be breeding in California

## REACH 40B
## SAN GABRIEL RIVER – I-10 FREEWAY TO THIENES AVENUE

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 1-May | 11-May | 22-May | 1-Jun | 14-Jun | 28-Jun | 12-Jul |
| Canada Goose (*Branta canadensis*) | 1 | | | | | | | | |
| Mallard (*Anas platyrhynchos*) | 2 | | 3 | 8 | 10 | 4 | 6 | | 1 |
| Pied-billed Grebe (*Podilymbus podiceps*) | 3 | 3 | | 3 | 4 | 2 | 5 | 3 | 1 |
| Double-crested Cormorant (*Phalacrocorax auritus*) | 4 | | | 4 | 1 | 1 | 3 | 1 | 1 |
| Great Blue Heron (*Ardea herodias*) | 1 | 2 | | 1 | | 2 | | 1 | 1 |
| Great Egret (*Ardea alba*) | | 1 | | 1 | | | | 1 | |
| Snowy Egret (*Egretta thula*) | | | | | 1 | | 3 | 3 | |
| Green Heron (*Butorides virescens*) | | | | | 2 | | 1 | 1 | 1 |
| Black-crowned Night-Heron (*Nycticorax nycticorax*) | | | | | | | 1 | 1 | 1 |
| Turkey Vulture (*Cathartes aura*) | 1 | 1 | | 1 | | 1 | | | 1 |
| Cooper's Hawk (*Accipiter cooperii*) | | 1 | | | | | | | |
| Red-tailed Hawk (*Buteo jamaicensis*) | 1 | 1 | | | | 1 | | | |
| Common Gallinule (*Gallinula galeata*) | 2 | | 1 | 1 | | | 10 | 4 | 4 |
| American Coot (*Fulica americana*) | 5 | 5 | 3 | 2 | 4 | 5 | 5 | 2 | 2 |
| Killdeer (*Charadrius vociferous*) | | 4 | 4 | 1 | 2 | 3 | 2 | 4 | 1 |
| Black-necked Stilt (*Himantopus mexicanus*) | | 2 | | 2 | 10 | 3 | | | |
| American Avocet (*Recurvirostra americana*) | | | | | 2 | | | | |
| Spotted Sandpiper (*Actitis macularius*) | | | | | | | | 1 | 2 |
| Greater Yellowlegs (*Tringa melanoleuca*) | | | | | 1 | | | | |
| California Gull (*Larus californicus*) | 25 | | | | | | | | |
| Caspian Tern (*Hydroprogne caspia*) | | | | | 2 | | 1 | 1 | |
| Rock Pigeon (*Columba livia*)* | | 3 | | | | | 3 | | |
| Eurasian Collared-Dove (*Streptopelia decaocto*)* | 2 | 1 | 1 | 1 | 6 | 2 | 5 | 3 | 4 |
| Mourning Dove (*Zenaida macroura*) | 2 | 3 | 3 | | 5 | 3 | 6 | 7 | 9 |
| White-throated Swift (*Aeronautes saxatalis*) | | | | | | | | 3 | |

## REACH 40B
## SAN GABRIEL RIVER – I-10 FREEWAY TO THIENES AVENUE

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 1-May | 11-May | 22-May | 1-Jun | 14-Jun | 28-Jun | 12-Jul |
| Anna's Hummingbird (*Calypte anna*) | 3 | 3 | 3 | 3 | 1 | 1 | 2 | 2 | 3 |
| Allen's Hummingbird (*Selasphorus sasin*) | | 1 | | | | | | | |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | 3 | 1 | 4 | 1 | 2 | 2 | 1 | 3 | 1 |
| Nuttall's Woodpecker (*Picoides nuttallii*) | | | | | 1 | | | | |
| Downy Woodpecker (*Picoides pubescens)* | | | | | | | 1 | 1 | |
| American Kestrel (*Falco sparverius*) | 1 | | | 1 | 1 | 2 | 1 | | 1 |
| Yellow-chevroned Parakeet (*Brotogeris chiriri*)** | | | | | 6 | | 6 | | |
| Red-crowned Parrot (*Amazona viridigenalis*)* | | | | | | | 6 | | |
| Willow Flycatcher (*Empidonax traillii*) | | | | | | 1 | | | |
| Black Phoebe (*Sayornis nigricans*) | 5 | 6 | 4 | 6 | 4 | 3 | 5 | 8 | 5 |
| Say's Phoebe (*Sayornis saya*) | | | | | | | 1 | | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | | | | 1 | | 1 | | | |
| Cassin's Kingbird (*Tyrannus vociferans*) | 2 | | | 2 | | 1 | 3 | 3 | 1 |
| Western Kingbird (*Tyrannus verticalis*) | 4 | 1 | | | | | | | |
| Bell's Vireo (*Vireo bellii*) | 7 | 6 | 6 | 8 | 5 | 5 | 5 | 6 | 4 |
| Warbling Vireo (*Vireo gilvus*) | | | | 14 | | | | | |
| Western Scrub-Jay (*Aphelocoma insularis*) | | | | 1 | | 1 | 1 | 3 | 1 |
| American Crow (*Corvus brachyrhynchos*) | | 1 | 1 | | | | 4 | | 8 |
| Common Raven (*Corvus corax*) | 1 | | 1 | 4 | | 4 | 1 | 1 | 1 |
| Tree Swallow (*Tachycineta bicolor*) | | | | | | | | 2 | |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 3 | 6 | 4 | 4 | 4 | 18 | 10 | 28 | 5 |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | 5 | 3 | 3 | 8 | 20 | 25 | 30 | 10 | 5 |
| Barn Swallow (*Hirundo rustica*) | 6 | 5 | 4 | 5 | 2 | 3 | 5 | 10 | 4 |
| Bushtit (*Psaltriparus minimus*) | 20 | 12 | 26 | 24 | 18 | 12 | 20 | 20 | 25 |
| Bewick's Wren (*Thryomanes bewickii*) | | | | | | | | | 1 |

## REACH 40B
## SAN GABRIEL RIVER – I-10 FREEWAY TO THIENES AVENUE

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 1-May | 11-May | 22-May | 1-Jun | 14-Jun | 28-Jun | 12-Jul |
| Blue-gray gnatcatcher (*Polioptila caerulea*) | 1 | | | | | | | | |
| Swainson's Thrush (*Catharus ustulatus*) | | | 2 | | | | | | |
| American Robin (*Turdus migratorius*) | 1 | | | 1 | | | | | |
| Northern Mockingbird (*Mimus polyglottos*) | 9 | 7 | 6 | 7 | 4 | 6 | 6 | 8 | 9 |
| European Starling (*Sturnus vulgaris*)* | 5 | 12 | 5 | 3 | 5 | 13 | 10 | 14 | 15 |
| American Pipit (*Anthus rubescens*) | 8 | | | | | | | | |
| Cedar Waxwing (*Bombycilla cedrorum*) | | 12 | | | | | | | |
| Orange-crowned Warbler (*Oreothlypis celata*) | 2 | 1 | 1 | | | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | 18 | 15 | 11 | 16 | 12 | 13 | 14 | 10 | 4 |
| MacGillivray's Warbler (*Geothlypis tolmiei*) | | | | 1 | | | | | |
| Yellow Warbler (*Setophaga petechia*) | 5 | 11 | 17 | 12 | 12 | 12 | 13 | 14 | 9 |
| Yellow-rumped Warbler (*Setophaga coronata*) | 14 | 3 | | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | 1 | | 6 | 4 | | | | | |
| Yellow-breasted Chat (*Icteria virens*) | | | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| California Towhee (*Melozone crissalis*) | 5 | 9 | 9 | 7 | 7 | 6 | 5 | 3 | 3 |
| Song Sparrow (*Melospiza lincolnii*) | 20 | 18 | 23 | 26 | 20 | 18 | 13 | 7 | 3 |
| White-crowned Sparrow (*Zonotrichia leucophrys*) | 2 | | | | | | | | |
| Western Tanager (*Piranga ludoviciana*) | | | 1 | 3 | | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | 2 | 3 | 3 | 1 | 1 | | 1 | | |
| Blue Grosbeak (*Passerina caerulea*) | | | | | 1 | | 2 | 1 | 2 |
| Red-winged Blackbird (*Ageaius phoeniceus*) | 6 | | 12 | 2 | 5 | 1 | 8 | | |
| Great-tailed Grackle (*Quiscalus mexicanus*) | 12 | 10 | 15 | 13 | 15 | 15 | 15 | 13 | 10 |
| Brown-headed Cowbird (*Molothrus ater*) | | 6 | 2 | 1 | 1 | 2 | | | |
| Hooded Oriole (*Icterus cucullatus*) | 1 | | 2 | 2 | 1 | | 3 | 1 | 4 |
| Bullock's Oriole (*Icterus bullockii*) | 3 | 4 | 5 | 4 | 4 | 2 | 6 | 3 | 3 |

## REACH 40B
## SAN GABRIEL RIVER – I-10 FREEWAY TO THIENES AVENUE

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 1-May | 11-May | 22-May | 1-Jun | 14-Jun | 28-Jun | 12-Jul |
| House Finch (*Haemorhous mexicanus*) | 14 | 14 | 22 | 24 | 12 | 16 | 30 | 18 | 55 |
| Lesser Goldfinch (*Spinus psaltria*) | 12 | 12 | 8 | 10 | 6 | 5 | 3 | 10 | 5 |
| American Goldfinch (*Spinus tristis*) | 10 | | 6 | | 2 | 2 | 4 | 1 | 5 |
| House Sparrow (*Passer domesticus*)* | 20 | 15 | 12 | 18 | 18 | 25 | 30 | 25 | 65 |
| Nutmeg Mannikin (*Lonchura punctulata*)** | | | | | | | 1 | | |
| Orange Bishop (*Euplectes franciscanus*)** | | | | | | | | | 2 |

* Introduced non-native species with established breeding population in California
** Exotic or escaped non-native species that may or many not be breeding in California

## REACH 43A
## SAN GABRIEL RIVER – UPPER

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 22-Apr | 1-May | 11-May | 22-May | 1-Jun | 14-Jun | 28-Jun | 12-Jul |
| Canada Goose (*Branta canadensis*) | | | 2 | | | | | | |
| Mallard (*Anas platyrhynchos)* | | 5 | 2 | | | 1 | 3 | | |
| Cinnamon Teal (*Anas cyanoptera*) | | 1 | | | | | | | |
| Pied-billed Grebe (*Podilymbus podiceps*) | | | | 1 | | | | | |
| Double-crested Cormorant (*Phalacrocorax auritus*) | | 1 | | | | | | | |
| Great Blue Heron (*Ardea herodias*) | 1 | 1 | 1 | | 1 | | 2 | | 2 |
| Great Egret (*Ardea alba*) | | 1 | | | | | 1 | | |
| Snowy Egret (*Egretta thula*) | | 1 | | | | | | 1 | |
| Green Heron (*Butorides virescens*) | | | | | | | | | |
| Black-crowned Night-Heron (*Nycticorax nycticorax*) | | | | | | 1 | | | 1 |
| Sharp-shinned Hawk (*Accipiter striatus*) | 2 | | | | | | | | |
| Cooper's Hawk (*Accipiter cooperii*) | 1 | 1 | | | | | | 2 | |
| Red-shouldered Hawk (*Buteo lineatus*) | | 1 | | | 1 | | | 1 | |
| Red-tailed Hawk (*Buteo jamaicensis*) | 1 | | 1 | | | | | | |
| Common Gallinule (*Gallinula galeata*) | | | 1 | | 1 | | | | |
| American Coot (*Fulica americana*) | | 1 | | | | | | | |
| California Gull (*Larus californicus*) | | | 1 | | | | | | |
| Caspian Tern (*Hydroprogne caspia*) | | | | | | | | | 2 |
| Forster's Tern (*Sterna forsteri*) | | | | | | | | | |
| Rock Pigeon (*Columba livia*)* | | | 5 | | 4 | | | 1 | 1 |
| Eurasian Collared-Dove (*Streptopelia decaocta*) | | | | 1 | | | | | |
| Mourning Dove (*Zenaida macroura*) | 1 | 2 | 2 | 2 | 5 | 5 | 5 | | |
| White-throated Swift (*Aeronautes saxatalis*) | 3 | 3 | | | 1 | | | | |
| Black-chinned Hummingbird (*Archilochus alexandri*) | | 2 | | 1 | | | | 1 | |
| Anna's Hummingbird (*Calypte anna*) | 2 | 4 | 3 | 3 | 1 | 1 | 2 | 1 | 2 |
| Allen's Hummingbird (*Selasphorus sasin*) | | 1 | 1 | | | | | | |

## REACH 43A
## SAN GABRIEL RIVER – UPPER

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 22-Apr | 1-May | 11-May | 22-May | 1-Jun | 14-Jun | 28-Jun | 12-Jul |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | 3 | | 3 | 1 | | 3 | 3 | 3 | |
| Nuttall's Woodpecker (*Picoides nuttallii*) | | 2 | | 1 | 1 | | | 2 | 1 |
| Downy Woodpecker (*Picoides pubescens)* | 1 | | 2 | 1 | | 2 | 2 | 1 | |
| Yellow-chevroned Parakeet (*Brotogeris chiriri*)** | | | | 5 | | | | | |
| Black Phoebe (*Sayornis nigricans*) | 4 | | 2 | 4 | 4 | 1 | 1 | 3 | 4 |
| Say's Phoebe (*Sayornis saya*) | | 1 | | | | | | | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | | | 1 | | 1 | 1 | | | |
| Cassin's Kingbird (*Tyrannus vociferans*) | | | | | | | | | 1 |
| Western Kingbird (*Tyrannus verticalis*) | | 1 | | | | | | | |
| Bell's Vireo (*Vireo bellii*) | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 2 | 1 |
| Hutton's Vireo (*Vireo huttoni*) | | | | | | | | 1 | |
| Warbling Vireo (*Vireo gilvus*) | 1 | 3 | | 2 | 1 | | | | |
| American Crow (*Corvus brachyrhynchos*) | | 2 | | | | | 2 | 1 | 2 |
| Common Raven (*Corvus corax*) | 1 | | | 2 | 1 | | | | |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 1 | 1 | 2 | | | 5 | 3 | 1 | |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | 30 | 3 | 5 | 12 | 4 | 10 | 20 | 3 | 5 |
| Barn Swallow (*Hirundo rustica*) | 1 | 5 | | 4 | | 3 | 5 | | 3 |
| Bushtit (*Psaltriparus minimus*) | 14 | 10 | 20 | 22 | 20 | 18 | 20 | 25 | 25 |
| House Wren (*Troglodytes aedon*) | 2 | 1 | | 2 | | | 2 | | |
| Bewick's Wren (*Thryomanes bewickii*) | | 2 | 2 | 1 | | | 1 | 1 | |
| Swainson's Thrush (*Catharus ustulatus*) | | | 1 | 3 | 3 | 3 | 1 | 1 | 1 |
| American Robin (*Turdus migratorius*) | 1 | 2 | 1 | | | 1 | | 1 | |
| Northern Mockingbird (*Mimus polyglottos*) | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 |
| European Starling (*Sturnus vulgaris*)* | | | | | 2 | 45 | 1 | | |
| Cedar Waxwing (*Bombycilla cedrorum*) | | | 15 | 6 | | | | | |
| Orange-crowned Warbler (*Oreothlypis celata*) | 2 | 2 | 2 | 1 | 3 | 2 | | | |

## REACH 43A
## SAN GABRIEL RIVER – UPPER

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 22-Apr | 1-May | 11-May | 22-May | 1-Jun | 14-Jun | 28-Jun | 12-Jul |
| Common Yellowthroat (*Geothlypis trichas*) | 22 | 15 | 19 | 10 | 10 | 12 | 4 | 3 | 3 |
| Yellow Warbler (*Setophaga petechia*) | 15 | 16 | 21 | 17 | 16 | 21 | 16 | 18 | 17 |
| Yellow-rumped Warbler (*Setophaga coronata*) | 15 | 3 | | | | | | | |
| Black-throated Gray Warbler (*Setophaga nigrescens*) | 2 | | | | | | | | |
| Townsend's Warbler (*Setophaga townsendi*) | | | | 1 | | | | | |
| Yellow-breasted Chat (*Icteria virens*) | 1 | 2 | 2 | 1 | 2 | 2 | 3 | 3 | 1 |
| Spotted Towhee (*Pipilo maculates*) | 6 | 6 | 8 | 11 | 8 | 6 | 6 | 4 | 3 |
| California Towhee (*Melozone crissalis*) | 2 | 7 | 5 | 4 | 5 | 2 | 5 | | 3 |
| Song Sparrow (*Melospiza lincolnii*) | 18 | 18 | 30 | 21 | 16 | 14 | 4 | 3 | |
| Northern Cardinal (*Cardinalis cardinalis*)* | | | | | 1 | | | 1 | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | 2 | 3 | 4 | 3 | 3 | 2 | 2 | 2 | 2 |
| Blue Grosbeak (*Passerina caerulea*) | | | 2 | 2 | 1 | | 1 | | 1 |
| Lazuli Bunting (*Passerina amoena*) | | | 2 | | | | | | |
| Red-winged Blackbird (*Ageaius phoeniceus*) | | | | | | 6 | | 1 | 1 |
| Brown-headed Cowbird (*Molothrus ater*) | 4 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 6 |
| Hooded Oriole (*Icterus cucullatus*) | | | | 1 | 4 | 1 | 1 | 2 | 2 |
| Bullock's Oriole (*Icterus bullockii*) | 1 | 2 | 1 | 1 | 2 | 3 | 1 | 2 | |
| House Finch (*Haemorhous mexicanus*) | 12 | 14 | 16 | 22 | 14 | 25 | 60 | 25 | 40 |
| Lesser Goldfinch (*Spinus psaltria*) | 14 | 16 | 12 | 16 | 20 | 25 | 25 | 18 | 6 |
| American Goldfinch (*Spinus tristis*) | 6 | 5 | 5 | 1 | 5 | 10 | 1 | 2 | 15 |
| Nutmeg Mannikin (*Lonchura punctulata*)** | | | | | | | 3 | | 1 |

* Introduced non-native species with established breeding population in California
** Exotic or escaped non-native species that may or many not be breeding in California

## REACH 43B
## SAN GABRIEL RIVER – LOWER

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 1-May | 11-May | 22-May | 1-Jun | 14-Jun | 28-Jun | 12-Jul |
| Mallard (*Anas platyrhynchos)* | 1 | 4 | 25 | 4 | 2 | 1 | 3 | 2 | 3 |
| Double-crested Cormorant (*Phalacrocorax auritus*) | 1 | | | | | | 1 | | |
| Great Blue Heron (*Ardea herodias*) | 2 | 2 | | 1 | | | | | 1 |
| Great Egret (*Ardea alba*) | | | 1 | 1 | | | | | 2 |
| Snowy Egret (*Egretta thula*) | | | 1 | | 1 | | | 2 | 2 |
| Black-crowned Night-Heron (*Nycticorax nycticorax*) | | | | 3 | | | | 1 | |
| Cooper's Hawk (*Accipiter cooperii*) | | 1 | 1 | | | | | | |
| Red-tailed Hawk (*Buteo jamaicensis*) | 1 | | 2 | | 1 | | | | |
| Common Gallinule (*Gallinula galeata*) | | | 50 | | | | | | |
| Killdeer (*Charadrius vociferous*) | 3 | 1 | | 1 | | 3 | | | |
| Spotted Sandpiper (*Actitis macularius*) | 1 | | | | | | | | |
| Western Gull (*Larus occidentalis*) | 1 | | | | 6 | | 2 | 5 | 2 |
| Rock Pigeon (*Columba livia*)* | 5 | 5 | 2 | 3 | | 3 | 6 | | 2 |
| Eurasian Collared-Dove (*Streptopelia decaocto*) | 5 | 4 | 1 | 5 | 4 | 1 | 3 | 3 | 6 |
| Mourning Dove (*Zenaida macroura*) | 4 | 3 | 3 | 1 | 3 | 3 | 5 | 2 | 12 |
| White-throated Swift (*Aeronautes saxatalis*) | 4 | 2 | | 5 | | | | | |
| Anna's Hummingbird (*Calypte anna*) | 3 | 3 | 1 | 1 | 2 | 1 | 1 | 2 | 2 |
| Allen's Hummingbird (*Selasphorus sasin*) | 2 | | | | | | 1 | | |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | | 4 | 1 | | 1 | 5 | 7 | 5 | 10 |
| Nuttall's Woodpecker (*Picoides nuttallii*) | 1 | | 1 | 2 | | | | | |
| Downy Woodpecker (*Picoides pubescens)* | | | 1 | | | 1 | | | |
| American Kestrel (*Falco sparverius*) | | | | 1 | | | | | |
| Black Phoebe (*Sayornis nigricans*) | 6 | 2 | 6 | 4 | 5 | 3 | 3 | 4 | 4 |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | 1 | 1 | | | 1 | | | | |
| Cassin's Kingbird (*Tyrannus vociferans*) | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 |

## REACH 43B
## SAN GABRIEL RIVER – LOWER

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 20-Apr | 1-May | 11-May | 22-May | 1-Jun | 14-Jun | 28-Jun | 12-Jul |
| Western Kingbird (*Tyrannus verticalis*) | 1 | | | | | | 1 | | |
| Cassin's Vireo (*Vireo cassinii*) | | 1 | | 1 | | | | | |
| Warbling Vireo (*Vireo gilvus*) | | 1 | | | 1 | | | | |
| Western Scrub-Jay (*Aphelocoma insularis*) | | | 1 | | | | | | |
| American Crow (*Corvus brachyrhynchos*) | | | 2 | | | | 1 | 2 | 5 |
| Common Raven (*Corvus corax*) | 2 | | | | 1 | | 1 | 2 | |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 2 | 3 | 1 | | 2 | 4 | 5 | | 1 |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | 30 | 8 | 30 | 15 | 15 | 40 | 35 | 20 | 25 |
| Barn Swallow (*Hirundo rustica*) | 1 | 4 | 4 | 3 | 1 | 8 | 10 | 1 | 3 |
| Bushtit (*Psaltriparus minimus*) | 12 | 10 | 12 | 20 | 16 | 12 | 10 | 12 | 15 |
| Northern Mockingbird (*Mimus polyglottos*) | 8 | 6 | 6 | 8 | 7 | 82 | 6 | 6 | 7 |
| European Starling (*Sturnus vulgaris*)* | 16 | 22 | 5 | 6 | 3 | 8 | | 5 | 1 |
| Cedar Waxwing (*Bombycilla cedrorum*) | 3 | 2 | | | | | | | |
| Orange-crowned Warbler (*Oreothlypis celata*) | 1 | | 1 | | | | | | |
| Nashville Warbler (*Vermivora ruficapilla*) | 1 | 2 | | | | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | 14 | 5 | 7 | 6 | 2 | 4 | 4 | 1 | 1 |
| Yellow Warbler (*Setophaga petechia*) | 3 | 8 | 10 | 11 | 8 | 8 | 9 | 9 | 4 |
| Yellow-rumped Warbler (*Setophaga coronata*) | 13 | 3 | | | | | | | |
| Black-throated Gray Warbler (*Setophaga nigrescens*) | 1 | 3 | | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | | 1 | 1 | | | | | | |
| Spotted Towhee (*Pipilo maculates*) | | | 1 | | | 1 | | | |
| California Towhee (*Melozone crissalis*) | 6 | 4 | 8 | 3 | 7 | 3 | 3 | 4 | 2 |
| Song Sparrow (*Melospiza lincolnii*) | 12 | 9 | 10 | 13 | 16 | 8 | 5 | 4 | 1 |
| Lincoln's Sparrow (*Melospiza lincolnii*) | 1 | | | | | | | | |
| White-crowned Sparrow (*Zonotrichia leucophrys*) | 5 | | | | | | | | |

## REACH 43B
## SAN GABRIEL RIVER – LOWER

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **10-Apr** | **20-Apr** | **1-May** | **11-May** | **22-May** | **1-Jun** | **14-Jun** | **28-Jun** | **12-Jul** |
| Blue Grosbeak (*Passerina caerulea*) | | 2 | 2 | 1 | | 1 | 2 | 4 | 2 |
| Red-winged Blackbird (*Ageaius phoeniceus*) | 5 | 5 | | | 3 | | 8 | 20 | 14 |
| Brewer's Blackbird (*Euphagus cyanocephalus*) | | 3 | | | | | | | |
| Great-tailed Grackle (*Quiscalus mexicanus*) | 4 | | | | | | | | |
| Brown-headed Cowbird (*Molothrus ater*) | 6 | 12 | 3 | 2 | 3 | 6 | 2 | 1 | 2 |
| Hooded Oriole (*Icterus cucullatus*) | 6 | 2 | 4 | 3 | 1 | 1 | 1 | 2 | 4 |
| Bullock's Oriole (*Icterus bullockii*) | 1 | 1 | | | | | 2 | 2 | |
| House Finch (*Haemorhous mexicanus*) | 14 | 12 | 12 | 16 | 13 | 10 | 12 | 4 | 8 |
| Lesser Goldfinch (*Spinus psaltria*) | 4 | 5 | 6 | 2 | 4 | 8 | 3 | 6 | 4 |
| American Goldfinch (*Spinus tristis*) | 5 | | | | 1 | | | | |
| House Sparrow (*Passer domesticus*)* | 5 | 4 | 10 | 8 | 12 | 4 | 5 | 10 | 5 |
| Nutmeg Mannikin (*Lonchura punctulata*)** | | | 1 | | | | 1 | 1 | 1 |

* Introduced non-native species with established breeding population in California
** Exotic or escaped non-native species that may or many not be breeding in California

## REACH 71, 79, AND 80
## SANTA CLARA RIVER MAIN CHANNEL (PD 1946)
## SOUTH FORK – SANTA CLARA RIVER (VALENCIA BLVD. BRIDGE STABILIZER)
## SOUTH FORK – SANTA CLARA RIVER (PD's 1947 & 1946)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 11-Apr | 21-Apr | 3-May | 12-May | 23-May | 2-Jun | 16-Jun | 30-Jun | 13-Jul |
| Canada Goose (*Branta canadensis*) | | 1 | 4 | | | | | | |
| Mallard (*Anas platyrhynchos)* | | | 1 | | | | | | |
| California Quail (*Callipepla californica*) | 8 | 12 | 6 | 3 | 5 | | 6 | 5 | 2 |
| Red-tailed Hawk (*Buteo jamaicensis*) | | | | 1 | 1 | 1 | | | |
| Killdeer (*Charadrius vociferous*) | | 2 | 1 | 2 | | 1 | | | |
| Western Gull (*Larus occidentalis*) | | 1 | | | | | | | |
| Mourning Dove (*Zenaida macroura*) | 4 | 15 | 10 | 2 | 6 | 6 | 19 | 6 | 15 |
| Anna's Hummingbird (*Calypte anna*) | 2 | 2 | 2 | 2 | 4 | 6 | 4 | 4 | 4 |
| Costa's Hummingbird (*Calypte costae*) | | | | | | 1 | | | 1 |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | 1 | 1 | | | | | | | 2 |
| Nuttall's Woodpecker (*Picoides nuttallii*) | 4 | 2 | 3 | 3 | 2 | 1 | 1 | 3 | 1 |
| Downy Woodpecker (*Picoides pubescens)* | | | | 1 | | | 1 | | 1 |
| Black Phoebe (*Sayornis nigricans*) | | | | | 1 | | 2 | 1 | 3 |
| Say's Phoebe (*Sayornis saya*) | 2 | | 2 | 2 | 3 | | 1 | 1 | 1 |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | 1 | 4 | 2 | 3 | 3 | 2 | | 2 | 3 |
| Cassin's Kingbird (*Tyrannus vociferans*) | 2 | 2 | 3 | 4 | 5 | 6 | 6 | 4 | 3 |
| Western Kingbird (*Tyrannus verticalis*) | 2 | 1 | 1 | 2 | | 2 | 1 | 1 | |
| Loggerhead Shrike (*Lanius ludovicianus*) | | 1 | | | | | | | |
| Bell's Vireo (*Vireo bellii*) | 1 | | | | | | | | |
| Warbling Vireo (*Vireo gilvus*) | | | | | 1 | | | | |
| Western Scrub-Jay (*Aphelocoma insularis*) | 5 | 3 | 4 | 6 | 5 | 8 | 9 | 5 | 4 |
| American Crow (*Corvus brachyrhynchos*) | | | 2 | 1 | | 2 | 35 | 10 | 4 |
| Common Raven (*Corvus corax*) | 10 | 12 | 16 | 8 | 6 | 3 | 4 | 10 | 3 |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 2 | 3 | 2 | 3 | 2 | 4 | 2 | | 2 |

## REACH 71, 79, AND 80
## SANTA CLARA RIVER MAIN CHANNEL (PD 1946)
## SOUTH FORK – SANTA CLARA RIVER (VALENCIA BLVD. BRIDGE STABILIZER)
## SOUTH FORK – SANTA CLARA RIVER (PD's 1947 & 1946)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 11-Apr | 21-Apr | 3-May | 12-May | 23-May | 2-Jun | 16-Jun | 30-Jun | 13-Jul |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | | | | 3 | 25 | 12 | 10 | 10 | |
| Barn Swallow (*Hirundo rustica*) | 1 | 1 | | | 1 | | | | |
| Oak Titmouse (*Baeolophus inornatus*) | | 1 | 2 | | | | 2 | | 3 |
| Bushtit (*Psaltriparus minimus*) | 8 | 8 | 8 | 25 | 18 | | 10 | 18 | 12 |
| Bewick's Wren (*Thryomanes bewickii*) | 8 | 13 | 9 | 11 | 13 | 7 | 6 | 6 | 3 |
| Wrentit (*Chamaea fasciata*) | 1 | | | | | | | | |
| Western Bluebird (*Sialia mexicana*) | | | | 2 | | | | 2 | |
| American Robin (*Turdus migratorius*) | 1 | | | | | | | 1 | |
| Northern Mockingbird (*Mimus polyglottos*) | | 3 | | 4 | 1 | 3 | 1 | 4 | 2 |
| California Thrasher (*Toxostoma redivivum*) | 4 | 6 | | 1 | 2 | 2 | 2 | | 2 |
| European Starling (*Sturnus vulgaris*)* | 2 | 5 | 10 | 7 | 8 | | 3 | | |
| American Pipit (*Anthus rubescens*) | | 1 | | | | | | | |
| Cedar Waxwing (*Bombycilla cedrorum*) | | | 5 | 3 | 2 | | | | |
| Phainopepla (*Phainopepla nitens*) | | | | 1 | | | 1 | | |
| Orange-crowned Warbler (*Oreothlypis celata*) | 4 | 1 | | | | | | | |
| MacGillivray's Warbler (*Geothlypis tolmiei*) | | 1 | | | | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | | 1 | | | | | | | |
| Yellow Warbler (*Setophaga petechia*) | 2 | 1 | 2 | 2 | 3 | 2 | 1 | 2 | |
| Yellow-rumped Warbler (*Setophaga coronata*) | 14 | 6 | 2 | | | | | | |
| Black-throated Gray Warbler (*Setophaga nigrescens*) | 1 | | | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | 1 | 2 | 4 | | 1 | | | | |
| Spotted Towhee (*Pipilo maculates*) | 1 | 3 | 3 | 2 | 1 | 2 | 2 | 2 | |
| California Towhee (*Melozone crissalis*) | 6 | 8 | 7 | 7 | 9 | 6 | 4 | 4 | 1 |
| Song Sparrow (*Melospiza lincolnii*) | 4 | | 1 | 2 | 3 | 1 | | 1 | |

## REACH 71, 79, AND 80
## SANTA CLARA RIVER MAIN CHANNEL (PD 1946)
## SOUTH FORK – SANTA CLARA RIVER (VALENCIA BLVD. BRIDGE STABILIZER)
## SOUTH FORK – SANTA CLARA RIVER (PD's 1947 & 1946)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 11-Apr | 21-Apr | 3-May | 12-May | 23-May | 2-Jun | 16-Jun | 30-Jun | 13-Jul |
| Lincoln's sparrow (*Melospiza lincolnii*) | 2 | | | | | | | | |
| White-crowned Sparrow (*Zonotrichia leucophrys*) | 12 | 5 | | | | | | | |
| Western Tanager (*Piranga ludoviciana*) | | | 2 | | 4 | 1 | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | 1 | 4 | 2 | 2 | 2 | 1 | | | |
| Blue Grosbeak (*Passerina caerulea*) | | | | | | | | 1 | |
| Brewer's Blackbird (*Euphagus cyanocephalus*) | 1 | 1 | | 3 | 5 | 3 | | 10 | |
| Great-tailed Grackle (*Quiscalus mexicanus*) | | | | | | | | 2 | |
| Brown-headed Cowbird (*Molothrus ater*) | | 1 | | | | | | | |
| Hooded Oriole (*Icterus cucullatus*) | | | | | 1 | | 1 | | |
| Bullock's Oriole (*Icterus bullockii*) | 3 | | 1 | 1 | | 2 | 1 | | |
| House Finch (*Haemorhous mexicanus*) | 23 | 18 | 16 | 24 | 26 | 16 | 28 | 18 | 12 |
| Lesser Goldfinch (*Spinus psaltria*) | 5 | 3 | 2 | 4 | 3 | 2 | 3 | 5 | 2 |
| Lawrence's Goldfinch (*Spinus lawrencei*) | | | 1 | | | | 1 | | |
| House Sparrow (*Passer domesticus*)* | | | | | | | 2 | | |

* Introduced non-native species with established breeding population in California

## REACH 75
## SOUTH FORK – SCR (PD's725, 916, 1041 ,& 1300)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 11-Apr | 21-Apr | 3-May | 12-May | 23-May | 2-Jun | 16-Jun | 30-Jun | 13-Jul |
| Mallard (*Anas platyrhynchos)* | 2 | | | | | | | | |
| California Quail (*Callipepla californica*) | 3 | 2 | 6 | 5 | 10 | 6 | 3 | | |
| Double-crested cormorant (*Phalacrocorax auritus*) | 1 | | | | | | | | |
| Cooper's Hawk (*Accipiter cooperii*) | 1 | | 1 | | | | 1 | | |
| Red-shouldered Hawk (*Buteo lineatus*) | | | 1 | | | | 1 | | 1 |
| Rock Pigeon (*Columba livia*)* | 40 | | | 2 | | | | 1 | |
| Mourning Dove (*Zenaida macroura*) | 3 | 3 | 4 | 4 | 3 | 6 | 12 | | 8 |
| Greater Roadrunner (*Geococcyx californianus*) | 1 | | | | | | | | |
| White-throated Swift (*Aeronautes saxatalis*) | 4 | 10 | 10 | 4 | 5 | 8 | 4 | 5 | |
| Black-chinned Hummingbird (*Archilochus alexandri*) | 1 | 1 | | | | 3 | 1 | 1 | 1 |
| Anna's Hummingbird (*Calypte anna*) | 3 | 3 | 2 | 3 | 4 | 6 | 5 | 5 | 7 |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 2 |
| Nuttall's Woodpecker (*Picoides nuttallii*) | 1 | 2 | 2 | 1 | 2 | 3 | 1 | | 1 |
| Downy Woodpecker (*Picoides pubescens)* | 2 | | | | | | 1 | | |
| American Kestrel (*Falco sparverius*) | 1 | 1 | | | | | 1 | | |
| Western Wood-Pewee (*Contopus sordidulus*) | | | | | 1 | | | | |
| Black Phoebe (*Sayornis nigricans*) | 6 | 2 | 3 | 3 | 4 | 8 | 4 | 4 | 7 |
| Say's Phoebe (*Sayornis saya*) | 1 | | | 2 | | | | | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | | | | | | 1 | | | |
| Cassin's Kingbird (*Tyrannus vociferans*) | 6 | 5 | 6 | 3 | 5 | 5 | 7 | 4 | 3 |
| Western Kingbird (*Tyrannus verticalis*) | 2 | 1 | | | 1 | 1 | | | |
| Warbling Vireo (*Vireo gilvus*) | | 2 | 4 | | | 1 | | | |
| Western Scrub-Jay (*Aphelocoma insularis*) | 6 | 3 | 4 | 2 | 4 | 6 | 5 | 8 | 6 |
| American Crow (*Corvus brachyrhynchos*) | 2 | 1 | | | 1 | 4 | 2 | 1 | |

## REACH 75
## SOUTH FORK – SCR (PD's725, 916, 1041 ,& 1300)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 11-Apr | 21-Apr | 3-May | 12-May | 23-May | 2-Jun | 16-Jun | 30-Jun | 13-Jul |
| Common Raven (*Corvus corax*) | 12 | 4 | 3 | 4 | 4 | 10 | 3 | 3 | 5 |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 10 | 2 | 8 | 3 | 2 | 3 | 4 | 2 | 1 |
| Barn Swallow (*Hirundo rustica*) | | 2 | | | | | | | |
| Oak Titmouse (*Baeolophus inornatus*) | | | 3 | | 1 | 4 | 6 | 2 | |
| Bushtit (*Psaltriparus minimus*) | 12 | 12 | 10 | 20 | 14 | 22 | 12 | 24 | 15 |
| Bewick's Wren (*Thryomanes bewickii*) | 7 | 11 | 9 | 11 | 8 | 11 | 6 | 5 | 2 |
| Wrentit (*Chamaea fasciata*) | 2 | 1 | 1 | | 1 | 1 | 1 | 1 | |
| Western Bluebird (*Sialia mexicana*) | 1 | | 3 | 1 | 1 | 2 | 1 | 3 | |
| California Thrasher (*Toxostoma redivivum*) | 6 | 6 | 4 | 2 | 4 | 2 | 2 | 6 | 1 |
| Northern Mockingbird (*Mimus polyglottos*) | 3 | 4 | 3 | 5 | 5 | 7 | 5 | 6 | 4 |
| American Pipit (*Anthus rubescens*) | 1 | | | | | | | | |
| Orange-crowned Warbler (*Oreothlypis celata*) | | 3 | | | | | | | |
| Cedar Waxwing (*Bombycilla cedrorum*) | | | 3 | | | | | | |
| Nashville Warbler (*Oreothlypis ruficapilla*) | | 2 | | | | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | | | | | | 1 | | | |
| Yellow Warbler (*Setophaga petechia*) | | | 1 | | 2 | | 1 | | |
| Yellow-rumped Warbler (*Setophaga coronata*) | 13 | 13 | 1 | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | | 2 | 2 | | 1 | | | | |
| Black-throated Gray Warbler (*Setophaga nigrescens*) | 1 | 2 | | | | | | | |
| Spotted Towhee (*Pipilo maculates*) | | | 3 | 2 | | | 2 | 2 | |
| California Towhee (*Melozone crissalis*) | 8 | 8 | 7 | 6 | 7 | 6 | 5 | 6 | 3 |
| Lark Sparrow (*Chondestes grammacus*) | | | | | | | | 1 | |
| Song Sparrow (*Melospiza lincolnii*) | 2 | 3 | 5 | 3 | 3 | 5 | 2 | 3 | 4 |
| White-crowned Sparrow (*Zonotrichia leucophrys*) | 8 | 1 | | | | | | | |

## REACH 75
## SOUTH FORK – SCR (PD's725, 916, 1041 ,& 1300)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 11-Apr | 21-Apr | 3-May | 12-May | 23-May | 2-Jun | 16-Jun | 30-Jun | 13-Jul |
| Western Tanager (*Piranga ludoviciana*) | | 1 | 9 | 6 | 6 | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | | 4 | 1 | 1 | 1 | 4 | 2 | 1 | |
| Blue Grosbeak (*Passerina caerulea*) | | | | | | 1 | 1 | 1 | 1 |
| Lazuli Bunting (*Passerina amoena*) | | | 1 | | | | | | |
| Brown-headed Cowbird (*Molothrus ater*) | 1 | | | | 1 | | | | |
| Hooded Oriole (*Icterus cucullatus*) | 2 | 2 | 2 | 2 | | 1 | | 1 | 3 |
| Bullock's Oriole (*Icterus bullockii*) | 3 | 6 | 5 | 2 | 4 | 6 | 6 | 2 | 2 |
| House Finch (*Haemorhous mexicanus*) | 14 | 18 | 18 | 25 | 28 | 22 | 60 | 16 | 20 |
| Pine Siskin (*Carduelis pinus*) | | 3 | | | | | | | |
| Lesser Goldfinch (*Spinus psaltria*) | 5 | | 5 | 4 | 3 | 6 | 8 | 1 | 2 |
| American Goldfinch (*Spinus tristis*) | 50 | 20 | 2 | | | | | | |
| House Sparrow (*Passer domesticus*)* | 5 | 4 | 8 | 6 | 6 | 6 | 5 | 3 | 5 |

* Introduced non-native species with established breeding population in California

## REACHES 82 AND 109
## SANTA CLARA RIVER MAIN CHANNEL (PD 2278)
## AND
## SANTA CLARA RIVER – SOUTH BANK WEST OF MCBRAN PKWY (MTD 1510)

| Species | Survey Dates - 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 23-Apr | 3-May | 13-May | 24-May | 11-Jun | 18-Jun | 26-Jun | 9-Jul |
| Mallard (*Anas platyrhynchos)* | | | | | 2 | | 1 | | |
| California Quail (*Callipepla californica*) | 13 | | | 14 | 5 | 2 | 20 | 5 | |
| Great Blue Heron (*Ardea herodias*) | | | | | | 1 | | | |
| Cooper's Hawk (*Accipiter cooperii*) | | | 1 | | | 1 | 1 | | |
| Red-shouldered Hawk (*Buteo lineatus*) | 2 | | 1 | | 2 | 2 | 1 | 2 | 2 |
| Rock Pigeon (*Columba livia*)* | | | | | | | | | |
| Mourning Dove (*Zenaida macroura*) | 2 | | 4 | 6 | | 3 | 7 | 1 | |
| Greater Roadrunner (*Geococcyx californianus*) | | | | | | | | | 1 |
| Black-chinned Hummingbird (*Archilochus alexandri*) | | | | | | 1 | | | |
| Anna's Hummingbird (*Calypte anna*) | 3 | 2 | 6 | 8 | 1 | 1 | 3 | 3 | 3 |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | | | | | | | 1 | | 2 |
| Nuttall's Woodpecker (*Picoides nuttallii*) | 6 | | 4 | 4 | 6 | 5 | 5 | 8 | 5 |
| Downy Woodpecker (*Picoides pubescens)* | | | | | 1 | | 1 | 2 | 3 |
| Hairy Woodpecker (*Picoides villosus*) | | | | | 1 | | 2 | 1 | |
| Northern Flicker (*Colaptes auratus*) | | 1 | | | | | | | |
| Western Wood-Pewee (*Contopus sordidulus*) | | | 4 | | 1 | | | | |
| Willow Flycatcher (*Empidonax traillii*) | | | | | | | 2 | | |
| Black Phoebe (*Sayornis nigricans*) | 2 | 2 | 2 | 3 | 4 | 4 | 3 | 5 | 2 |
| Say's Phoebe (*Sayornis saya*) | | | | | 1 | | 1 | 1 | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | 1 | 2 | 3 | 5 | 5 | 6 | 8 | 7 | 7 |
| Cassin's Vireo (*Vireo cassinii*) | 1 | | | | | | | | |
| Warbling Vireo (*Vireo gilvus*) | | | | 1 | 2 | | | | |
| Western Scrub-Jay (*Aphelocoma insularis*) | 4 | | 2 | 6 | 9 | 9 | 6 | 4 | 2 |

## REACHES 82 AND 109
## SANTA CLARA RIVER MAIN CHANNEL (PD 2278)
## AND
## SANTA CLARA RIVER – SOUTH BANK WEST OF MCBRAN PKWY (MTD 1510)

| Species | Survey Dates - 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 23-Apr | 3-May | 13-May | 24-May | 11-Jun | 18-Jun | 26-Jun | 9-Jul |
| American Crow (*Corvus brachyrhynchos*) | | | | | 4 | 7 | 3 | 8 | 5 |
| Common Raven (*Corvus corax*) | 4 | 2 | 5 | 5 | 11 | 8 | 8 | 8 | 5 |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | | | | 2 | 2 | 8 | 4 | 2 | |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | | | | | 2 | 4 | 5 | 6 | |
| Barn Swallow (*Hirundo rustica*) | | | 4 | | | | | | |
| Oak Titmouse (*Baeolophus inornatus*) | | | | 2 | 3 | 3 | 3 | 7 | 1 |
| Bushtit (*Psaltriparus minimus*) | 10 | 6 | 15 | 26 | 15 | | 8 | | 10 |
| White-breasted Nuthatch (*Sitta carolinensis*) | | | | | | | | | 1 |
| House Wren (*Troglodytes aedon*) | 3 | | | | 3 | | | 2 | 1 |
| Bewick's Wren (*Thryomanes bewickii*) | 3 | | 10 | 6 | 8 | 7 | 10 | 15 | 9 |
| Wrentit (*Chamaea fasciata*) | | | | | | | 4 | 2 | |
| Swainson's Thrush (*Catharus ustulatus*) | | | | | 1 | | | | |
| American Robin (*Turdus migratorius*) | | | 1 | | 1 | 1 | 3 | | 1 |
| California Thrasher (*Toxostoma redivivum*) | | | | | 4 | 2 | 10 | 4 | 7 |
| Northern Mockingbird (*Mimus polyglottos*) | | 1 | 2 | 2 | 5 | 1 | 3 | 1 | |
| European Starling (*Sturnus vulgaris*)* | | | | | | | 2 | 1 | |
| Phainopepla (*Phainopepla nitens*) | | | | 2 | 1 | | 1 | | 1 |
| Orange-crowned Warbler (*Oreothlypis celata*) | | | 1 | | | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | | | 2 | | 7 | 6 | 10 | | 4 |
| Yellow Warbler (*Setophaga petechia*) | 1 | | 1 | 2 | 16 | 6 | 6 | 6 | 1 |
| Yellow-rumped Warbler (*Setophaga coronata*) | 15 | | | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | | | 2 | 2 | 1 | | | | |
| Spotted Towhee (*Pipilo maculates*) | 3 | 2 | 6 | 4 | 13 | 10 | 19 | 13 | 8 |
| California Towhee (*Melozone crissalis*) | 4 | 2 | 4 | 5 | 4 | 6 | 1 | 1 | 1 |

## REACHES 82 AND 109
## SANTA CLARA RIVER MAIN CHANNEL (PD 2278)
## AND
## SANTA CLARA RIVER – SOUTH BANK WEST OF MCBRAN PKWY (MTD 1510)

| Species | Survey Dates - 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 23-Apr | 3-May | 13-May | 24-May | 11-Jun | 18-Jun | 26-Jun | 9-Jul |
| Song Sparrow (*Melospiza lincolnii*) | | 1 | 10 | 8 | 25 | 6 | 6 | 4 | 7 |
| White-crowned Sparrow (*Zonotrichia leucophrys*) | 5 | | | | | | | | |
| Western Tanager (*Piranga ludoviciana*) | | | | 1 | 1 | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | 1 | | 2 | 2 | 10 | 13 | 6 | 8 | 6 |
| Blue Grosbeak (*Passerina caerulea*) | | | | | | | 1 | | |
| Hooded Oriole (*Icterus cucullatus*) | | | | | | 1 | | | |
| Bullock's Oriole (*Icterus bullockii*) | 2 | | 4 | | | | 2 | | |
| House Finch (*Haemorhous mexicanus*) | 6 | | 8 | 15 | 12 | 22 | 32 | 30 | 65 |
| Lesser Goldfinch (*Spinus psaltria*) | 4 | 6 | 10 | 14 | 6 | 7 | 3 | 5 | 8 |
| American Goldfinch (*Spinus tristis*) | | | | | | | 1 | | |
| Nutmeg Mannikin (*Lonchura punctulata*)** | | | | | | | | 1 | |

* Introduced non-native species with established breeding population in California
** Exotic or escaped non-native species that may or many not be breeding in California

## REACHES 87 AND 97
## CASTAIC – OLD ROAD DRAIN (CDR 525.012D) OUTLET
## AND
## CASTAIC CREEK – THE OLD ROAD 2

| Species | Survey Dates – 2013 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 16-Apr | 29-Apr | 9-May | 22-May | 7-Jun | 18-Jun | 2-Jul | 12-Jul |
| Canada Goose (*Branta canadensis*) | | 2 | | | | | | |
| California Quail (*Callipepla californica*) | 6 | 6 | 5 | | | 1 | 2 | |
| Cooper's Hawk (*Accipiter cooperii*) | | | | | 1 | | | |
| Red-shouldered Hawk (*Buteo lineatus*) | 1 | 1 | 1 | | | | | |
| Killdeer (*Charadrius vociferous*) | | | 2 | | | | | |
| Mourning Dove (*Zenaida macroura*) | | 2 | 4 | | 2 | 2 | 3 | 3 |
| Anna's Hummingbird (*Calypte anna*) | 2 | 4 | 4 | 2 | 4 | 3 | 2 | 3 |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | | | | 1 | | | 2 | |
| Acorn Woodpecker (*Melanerpes formicivorus*) | | | 1 | | | | | |
| Nuttall's Woodpecker (*Picoides nuttallii*) | | | 2 | 1 | 3 | 2 | | 3 |
| Western Wood-Pewee (*Contopus sordidulus*) | | | 2 | | | | | |
| Black Phoebe (*Sayornis nigricans*) | | | | 1 | 1 | | 2 | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | | 1 | 3 | 1 | 1 | 4 | | |
| Warbling Vireo (*Vireo gilvus*) | | | | 1 | | | | |
| Western Scrub-Jay (*Aphelocoma insularis*) | | 2 | 2 | 4 | 4 | 7 | 7 | 2 |
| American Crow (*Corvus brachyrhynchos*) | | | | 3 | 8 | 8 | 2 | |
| Common Raven (*Corvus corax*) | 2 | 2 | 4 | 4 | | 2 | 1 | 1 |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 2 | 5 | 2 | 4 | 10 | 1 | | |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | 5 | | | 7 | | | | |
| Barn Swallow (*Hirundo rustica*) | | 2 | | | | | | |
| Oak Titmouse (*Baeolophus inornatus*) | | 1 | 1 | | | | | |
| Bushtit (*Psaltriparus minimus*) | 8 | 10 | 10 | | | | | |
| Bewick's Wren (*Thryomanes bewickii*) | | 2 | 4 | 4 | | 2 | 1 | 3 |
| California Thrasher (*Toxostoma redivivum*) | | | | 2 | | | | |

## REACHES 87 AND 97
## CASTAIC – OLD ROAD DRAIN (CDR 525.012D) OUTLET
## AND
## CASTAIC CREEK – THE OLD ROAD 2

| Species | Survey Dates – 2013 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 16-Apr | 29-Apr | 9-May | 22-May | 7-Jun | 18-Jun | 2-Jul | 12-Jul |
| Northern Mockingbird (*Mimus polyglottos*) | | | 1 | | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | 1 | | | | 1 | 3 | 3 | 1 |
| Yellow Warbler (*Dendroica petechia*) | | | | 2 | | | | |
| Yellow-rumped Warbler (*Setophaga coronata*) | 3 | | 1 | | | | | |
| Spotted Towhee (*Pipilo maculates*) | 2 | | 2 | | 3 | 1 | | 2 |
| California Towhee (*Melozone crissalis*) | | 2 | 6 | | 4 | 2 | 1 | |
| Song Sparrow (*Melospiza lincolnii*) | 3 | 1 | | 2 | 1 | 2 | 1 | |
| White-crowned Sparrow (*Zonotrichia leucophrys*) | 2 | | | | | | | |
| Western Tanager (*Piranga ludoviciana*) | | | 2 | | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | | 1 | 1 | 2 | 1 | 1 | | |
| Red-winged Blackbird (*Ageaius phoeniceus*) | | 2 | | | | | | |
| House Finch (*Haemorhous mexicanus*) | | 4 | 10 | 2 | 12 | | 7 | 13 |
| Lesser Goldfinch (*Spinus psaltria*) | | | 5 | 6 | 1 | | 2 | 2 |
| American Goldfinch (*Spinus tristis*) | | | 5 | | | | | |
| House Sparrow (*Passer domesticus*)* | | | | 1 | | | | |

* Introduced non-native species with established breeding population in California

## REACH 103
## BOUQUET CANYON CHANNEL (PD 2225)

| Species | Survey Dates – 2013 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 11-Apr | 24-Apr | 7-May | 30-May | 13-Jun | 20-Jun | 27-Jun | 10-Jul |
| Mallard (*Anas platyrhynchos)* | | 2 | | | 2 | 2 | 2 | |
| California Quail (*Callipepla californica*) | | 8 | 10 | | | | | |
| Red-tailed Hawk (*Buteo jamaicensis*) | | 2 | | | | | | |
| Red-shouldered Hawk (*Buteo lineatus*) | 1 | | | | | | | |
| Cooper's Hawk (*Accipiter cooperii*) | | | | | 1 | | 1 | |
| Rock Pigeon (*Columba livia*)* | | | | | 1 | | | |
| Mourning Dove (*Zenaida macroura*) | | | 2 | 2 | 3 | | 2 | 1 |
| White-throated Swift (*Aeronautes saxatalis*) | | 3 | | | | | | |
| Anna's Hummingbird (*Calypte anna*) | 4 | 4 | 2 | 1 | 3 | 2 | 3 | 2 |
| Costa's Hummingbird (*Calypte costae*) | | | | | | 2 | | |
| Allen's Hummingbird (*Selasphorus sasin*) | 2 | 2 | 2 | 1 | | | | |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | | | | 3 | 1 | 1 | 2 | 1 |
| Nuttall's Woodpecker (*Picoides nuttallii*) | | 2 | 1 | 1 | 1 | 1 | | 1 |
| Black Phoebe (*Sayornis nigricans*) | | 1 | 2 | 1 | 1 | 1 | 3 | |
| Say's Phoebe (*Sayornis saya*) | | | | | 1 | | | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | 1 | 1 | 2 | | 1 | | | |
| Cassin's Kingbird (*Tyrannus vociferans*) | | | | | | | 1 | |
| Warbling Vireo (*Vireo gilvus*) | | | 1 | | | | | |
| Killdeer (*Charadrius vociferous*) | | | | | 1 | | | |
| American Robin (*Turdus migratorius*) | | | 1 | | | | | |
| Western Scrub-Jay (*Aphelocoma insularis*) | | 1 | | | 1 | | | 2 |
| American Crow (*Corvus brachyrhynchos*) | | | | 2 | | 4 | 3 | 3 |
| Common Raven (*Corvus corax*) | 5 | 2 | 2 | 8 | 4 | 2 | 8 | 6 |
| Violet-green Swallow (*Tachycineta thalassina*) | | | | | | | | 1 |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 2 | 2 | 4 | 2 | 2 | | 2 | 5 |

## REACH 103
## BOUQUET CANYON CHANNEL (PD 2225)

| Species | Survey Dates – 2013 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 11-Apr | 24-Apr | 7-May | 30-May | 13-Jun | 20-Jun | 27-Jun | 10-Jul |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | 4 | | | | 2 | 3 | 2 | |
| Barn Swallow (*Hirundo rustica*) | | | | | | | | 1 |
| Oak Titmouse (*Baeolophus inornatus*) | | | | | | | | 2 |
| Bushtit (*Psaltriparus minimus*) | | 15 | 10 | 15 | 2 | | | |
| Bewick's Wren (*Thryomanes bewickii*) | | 6 | 6 | 1 | 2 | 1 | 1 | 5 |
| Common Yellowthroat (*Geothlypis trichas*) | 2 | | | 2 | 4 | 3 | 3 | 3 |
| Yellow Warbler (*Dendroica petechia*) | | | | 1 | 2 | | 1 | |
| Yellow-rumped Warbler (*Setophaga coronata*) | 5 | | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | | | 3 | | | | | |
| Spotted Towhee (*Pipilo maculates*) | 3 | 2 | 6 | 3 | 1 | 1 | | 2 |
| California Towhee (*Melozone crissalis*) | | 2 | 6 | 1 | 1 | 1 | 2 | 1 |
| Song Sparrow (*Melospiza lincolnii*) | 10 | 10 | 6 | 8 | 10 | 8 | 9 | 5 |
| White-crowned Sparrow (*Zonotrichia leucophrys*) | 3 | | | | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | 1 | | 3 | 3 | 2 | 1 | 1 | |
| Blue Grosbeak (*Passerina caerulea*) | | | | | | 1 | | 1 |
| Brewer's Blackbird (*Euphagus cyanocephalus*) | | | | | 1 | | | |
| Bullock's Oriole (*Icterus bullockii*) | 2 | | | | | | | |
| House Finch (*Haemorhous mexicanus*) | 10 | 10 | 5 | 6 | 11 | 8 | 15 | 13 |
| Lesser Goldfinch (*Spinus psaltria*) | 12 | 10 | 6 | 1 | 2 | | 3 | 1 |
| Lawrence's Goldfinch (*Spinus lawrencei*) | | 2 | | | | | | |
| House Sparrow (*Passer domesticus*)* | 2 | | 2 | | | 1 | | |

* Introduced non-native species with established breeding population in California

## REACH 104
## CASTAIC CREEK (PD 2441 UNITS 1 AND 2)

| Species | Survey Dates – 2013 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 16-Apr | 29-Apr | 9-May | 22-May | 7-Jun | 18-Jun | 2-Jun | 12-Jul |
| California Quail (*Callipepla californica*) | | | 3 | 3 | | | 8 | |
| Cooper's Hawk (*Accipiter cooperii*) | | | 1 | | | | | |
| Greater Roadrunner (*Geococcyx californianus*) | | | | | 1 | | | |
| Mourning Dove (*Zenaida macroura*) | | | | 1 | | 3 | | 3 |
| Anna's Hummingbird (*Calypte anna*) | | | 2 | 7 | 4 | 2 | 2 | 3 |
| Allen's Hummingbird (*Selasphorus sasin*) | | | 1 | | | | | |
| Nuttall's Woodpecker (*Picoides nuttallii*) | | | 1 | 3 | 2 | 2 | 2 | 6 |
| Black Phoebe (*Sayornis nigricans*) | | 1 | | | | | | 2 |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | | 1 | 1 | 3 | 2 | 3 | 4 | 6 |
| Western Kingbird (*Tyrannus verticalis*) | | | | 2 | 2 | | | |
| Western Scrub-Jay (*Aphelocoma insularis*) | | | | 6 | 3 | 1 | 7 | 4 |
| American Crow (*Corvus brachyrhynchos*) | | | | 1 | 1 | | 3 | |
| Common Raven (*Corvus corax*) | 2 | 1 | 2 | 3 | | | | 2 |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | | | | 3 | 1 | 4 | | |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | | | | | | 1 | | |
| Oak Titmouse (*Baeolophus inornatus*) | | | | 1 | 1 | 2 | | 2 |
| Bushtit (*Psaltriparus minimus*) | 5 | | | 8 | 1 | | 9 | |
| House Wren (*Troglodytes aedon*) | | | 2 | 1 | 1 | | | |
| Bewick's Wren (*Thryomanes bewickii*) | | 2 | | 7 | 6 | 3 | 6 | 4 |
| Western Bluebird (*Sialia mexicana*) | | | | | | | | |
| American Robin (*Turdus migratorius*) | | 1 | | | | | | |
| Wrentit (*Chamaea fasciata*) | | | | | | | | 1 |
| California Thrasher (*Toxostoma redivivum*) | | | 1 | 2 | 1 | | | |
| European Starling (*Sturnus vulgaris*)* | | | 5 | | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | | | | | 3 | | | |

## REACH 104
## CASTAIC CREEK (PD 2441 UNITS 1 AND 2)

| Species | Survey Dates – 2013 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 16-Apr | 29-Apr | 9-May | 22-May | 7-Jun | 18-Jun | 2-Jun | 12-Jul |
| Wilson's Warbler (*Wilsonia pusilla*) | | | 2 | | | | | |
| Spotted Towhee (*Pipilo maculates*) | 1 | | 4 | 8 | 6 | 3 | 3 | 2 |
| California Towhee (*Melozone crissalis*) | 1 | | | 2 | 1 | 1 | | |
| Song Sparrow (*Melospiza lincolnii*) | | | 2 | 1 | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | | 1 | | 1 | 1 | | 1 | 2 |
| Blue Grosbeak (*Passerina caerulea*) | | | | 1 | | | | |
| Brown-headed Cowbird (*Molothrus ater*) | | | | | 1 | | | |
| Bullock's Oriole (*Icterus bullockii*) | | | | | 1 | | | |
| House Finch (*Haemorhous mexicanus*) | | 2 | 8 | 1 | 7 | 2 | 3 | 9 |
| Lesser Goldfinch (*Spinus psaltria*) | 4 | 2 | 6 | 3 | | | 2 | |

* Introduced non-native species with established breeding population in California

## REACH 105
## SAN FRANCISQUITO CANYON CHANNEL (PD 2456)

| Species | Survey Dates – 2013 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 23-Apr | 3-May | 24-May | 11-Jun | 18-Jun | 26-Jun | 9-Jul |
| California Quail (*Callipepla californica*) | 5 | 2 | 6 | | 2 | 2 | 3 | 3 |
| Turkey Vulture (*Cathartes aura*) | | | 2 | | | | | |
| Red-tailed Hawk (*Buteo jamaicensis*) | | | | 1 | | | | |
| Red-shouldered Hawk (*Buteo lineatus*) | | | | | 1 | | 1 | |
| Cooper's Hawk (*Accipiter cooperii*) | 1 | | | | | | | |
| Killdeer (*Charadrius vociferous*) | | | | 1 | | | | |
| Mourning Dove (*Zenaida macroura*) | 2 | | 4 | 3 | 4 | 5 | 2 | |
| Greater Roadrunner (*Geococcyx californianus*) | | | | | 1 | | | |
| Black-chinned Hummingbird (*Archilochus alexandri*) | | | | | | | 1 | |
| Anna's Hummingbird (*Calypte anna*) | 2 | 2 | 2 | 1 | | 2 | 3 | 4 |
| Costa's Hummingbird (*Calypte costae*) | | | | | | | 1 | |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | | | | 2 | | 1 | 1 | 3 |
| Nuttall's Woodpecker (*Picoides nuttallii*) | 1 | | | | 1 | 1 | 1 | 1 |
| Downy Woodpecker (*Picoides pubescens)* | | | | | | | 1 | |
| American Kestrel (*Falco sparverius*) | | | | 1 | | | | |
| Willow Flycatcher (*Empidonax traillii*) | | | | | | 2 | 1 | |
| Black Phoebe (*Sayornis nigricans*) | 1 | 2 | 2 | 1 | | 1 | 1 | 1 |
| Say's Phoebe (*Sayornis saya*) | | 1 | | | | | | |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | | | | 1 | | | | 2 |
| Cassin's Kingbird (*Tyrannus vociferans*) | | | | | | | 1 | |
| Western Scrub-Jay (*Aphelocoma insularis*) | 1 | 1 | 2 | 2 | | 2 | 1 | 3 |
| American Crow (*Corvus brachyrhynchos*) | 2 | | | 2 | | 2 | 1 | 1 |
| Common Raven (*Corvus corax*) | 1 | 1 | 2 | 1 | 2 | 1 | | 2 |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | 2 | | | 2 | 6 | 4 | | |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | 4 | 3 | 3 | 2 | | 5 | 2 | 2 |

## REACH 105
## SAN FRANCISQUITO CANYON CHANNEL (PD 2456)

| Species | Survey Dates – 2013 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 10-Apr | 23-Apr | 3-May | 24-May | 11-Jun | 18-Jun | 26-Jun | 9-Jul |
| Oak Titmouse (*Baeolophus inornatus*) | | | | | | 1 | | |
| Bushtit (*Psaltriparus minimus*) | 6 | 2 | 5 | | | | 10 | |
| Bewick's Wren (*Thryomanes bewickii*) | | | | 3 | 2 | | 2 | 3 |
| Wrentit (*Chamaea fasciata*) | 1 | | 1 | | | | | |
| Western Bluebird (*Sialia mexicana*) | 2 | | | | | | | |
| California Thrasher (*Toxostoma redivivum*) | | | 2 | 1 | | 1 | 2 | 5 |
| Northern Mockingbird (*Mimus polyglottos*) | | | | 1 | | | | |
| Phainopepla (*Phainopepla nitens*) | | | | 1 | | | | |
| European Starling (*Sturnus vulgaris*)* | | | | | | 2 | | |
| Common Yellowthroat (*Geothlypis trichas*) | | | | | 3 | 1 | 1 | 2 |
| Yellow Warbler (*Setophaga petechia*) | | | | | 1 | | | |
| Yellow-rumped Warbler (*Setophaga coronata*) | 10 | | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | | | 1 | | | | | |
| Spotted Towhee (*Pipilo maculates*) | | | | | 2 | | | 1 |
| California Towhee (*Melozone crissalis*) | 2 | | 2 | 2 | 2 | | 2 | 2 |
| Song Sparrow (*Melospiza lincolnii*) | | 1 | | | | | 2 | 1 |
| White-crowned Sparrow (*Zonotrichia leucophrys*) | 3 | | | | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | | | | | | | 1 | |
| Blue Grosbeak (*Passerina caerulea*) | | | | | | | 1 | 2 |
| Red-winged Blackbird (*Ageaius phoeniceus*) | | | | | | 1 | | |
| House Finch (*Haemorhous mexicanus*) | 5 | 5 | | 11 | 7 | 10 | 1 | 13 |
| Lesser Goldfinch (*Spinus psaltria*) | 4 | 4 | 8 | 1 | 2 | 3 | 4 | 2 |

## REACH 106
## CASTAIC DRAIN OUTLET (RMD CHANNELS)

| Species | Survey Dates – 2013 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 16-Apr | 29-Apr | 9-May | 22-May | 7-Jun | 18-Jun | 2-Jul | 12-Jul |
| Mallard (*Anas platyrhynchos)* | 2 | 2 | | | | | | |
| California Quail (*Callipepla californica*) | | | | | | | 1 | |
| Killdeer (*Charadrius vociferous*) | | 2 | | 1 | | | | |
| Rock Pigeon (*Columba livia*)* | | | | 15 | | | 1 | |
| Eurasian Collared-Dove (*Streptopelia decaocto*)* | | 2 | | 1 | | | | |
| Mourning Dove (*Zenaida macroura*) | 1 | 1 | | | | | | |
| Anna's Hummingbird (*Calypte anna*) | | 2 | 1 | 2 | 3 | | 1 | |
| Western Wood-Pewee (*Contopus sordidulus*) | | | | 2 | | | | |
| Black Phoebe (*Sayornis nigricans*) | | 3 | 3 | 5 | 2 | 1 | 1 | |
| Western Kingbird (*Tyrannus verticalis*) | | | | | 2 | 6 | 4 | 4 |
| Warbling Vireo (*Vireo gilvus*) | | | | 1 | | | | |
| Western Scrub-Jay (*Aphelocoma insularis*) | | 4 | | | 1 | 2 | | |
| American Crow (*Corvus brachyrhynchos*) | | | 1 | | 2 | | | |
| Common Raven (*Corvus corax*) | 2 | 2 | | | | 1 | 1 | |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | | | 1 | | | | 1 | 2 |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | | 4 | | | | | | |
| Barn Swallow (*Hirundo rustica*) | | | 3 | 1 | 2 | 1 | | |
| House Wren (*Troglodytes aedon*) | | | 1 | | | | | |
| American Robin (*Turdus migratorius*) | | | | | | | | 1 |
| California Thrasher (*Toxostoma redivivum*) | | | 1 | | | | | |
| Northern Mockingbird (*Mimus polyglottos*) | | | | | | | | 1 |
| European Starling (*Sturnus vulgaris*)* | | | | 4 | | | | |
| Common Yellowthroat (*Geothlypis trichas*) | | | 1 | | 1 | 1 | 1 | |
| Yellow Warbler (*Setophaga petechia*) | | 1 | | 1 | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | | 1 | | | | | | |

## REACH 106
## CASTAIC DRAIN OUTLET (RMD CHANNELS)

| Species | Survey Dates – 2013 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 16-Apr | 29-Apr | 9-May | 22-May | 7-Jun | 18-Jun | 2-Jul | 12-Jul |
| California Towhee (*Melozone crissalis*) | | | | 4 | | | | |
| Song Sparrow (*Melospiza lincolnii*) | 2 | 2 | 4 | 4 | 3 | 1 | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | | | 1 | | | 1 | | |
| Blue Grosbeak (*Passerina caerulea*) | | | | | | | | 1 |
| Red-winged Blackbird (*Ageaius phoeniceus*) | 4 | 10 | | 10 | | | 1 | |
| Brewer's Blackbird (*Euphagus cyanocephalus*) | | | | | | | 1 | |
| Great-tailed Grackle (*Quiscalus mexicanus*) | | | | 4 | | | | |
| Bullock's Oriole (*Icterus bullockii*) | | | | 2 | | | | |
| House Finch (*Haemorhous mexicanus*) | 4 | 7 | 4 | 10 | 2 | 3 | 3 | 6 |
| Lesser Goldfinch (*Spinus psaltria*) | 5 | | 2 | | 1 | | | |

* Introduced non-native species with established breeding population in California

## REACH 110
## HASLEY CANYON CHANNEL (PD 2262)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 11-Apr | 24-Apr | 7-May | 17-May | 30-May | 13-Jun | 20-Jun | 27-Jun | 10-Jul |
| California Quail (*Callipepla californica*) | | 14 | 2 | 2 | | | 2 | 1 | 5 |
| Great Egret (*Ardea alba*) | | | | | | | | | 1 |
| Red-tailed Hawk (*Buteo jamaicensis*) | | 1 | | | | | | | |
| Killdeer (*Charadrius vociferous*) | | 2 | | | | 1 | | 4 | |
| Western Gull (*Larus occidentalis*) | | | | | | | | | 1 |
| Rock Pigeon (*Columba livia*)* | | | | | | | | | 25 |
| Mourning Dove (*Zenaida macroura*) | | | 1 | 5 | | 1 | 3 | | |
| Barn Owl (*Tyto alba*) | | | | | | 1 | | | |
| Anna's Hummingbird (*Calypte anna*) | 1 | 3 | 1 | | 2 | | | 4 | 2 |
| Costa's Hummingbird (*Calypte costae*) | | | | | | 1 | 1 | | |
| Allen's Hummingbird (*Selasphorus sasin*) | | | | 3 | | | | 2 | |
| Allen's/Rufous Hummingbird (*Selasphorus* sp.) | | | | | 1 | 1 | 1 | | |
| Nuttall's Woodpecker (*Picoides nuttallii*) | | | | | | | | 1 | |
| Western Wood-Pewee (*Contopus sordidulus*) | | | | | 2 | | | | |
| Black Phoebe (*Sayornis nigricans*) | | | | | 1 | 1 | | | 1 |
| Say's Phoebe (*Sayornis saya*) | | 1 | | | | 1 | | 1 | 1 |
| Ash-throated Flycatcher (*Myiarchus cinerascens*) | | | | | | | 1 | | |
| Cassin's Kingbird (*Tyrannus vociferans*) | | | | | | | | 2 | 2 |
| Western Scrub-Jay (*Aphelocoma insularis*) | | 2 | | | 3 | | 1 | | 1 |
| American Crow (*Corvus brachyrhynchos*) | | | 1 | 2 | 2 | | 1 | 2 | 4 |
| Common Raven (*Corvus corax*) | 1 | 4 | 1 | 4 | 4 | 6 | 4 | 2 | 3 |
| Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) | | | 4 | 4 | | | 2 | 2 | |
| Cliff Swallow (*Petrochelidon pyrrhonota*) | | | | | 2 | | 10 | 1 | |
| Bushtit (*Psaltriparus minimus*) | 1 | 15 | | | 12 | | 15 | | 6 |
| White-breasted Nuthatch (*Sitta carolinensis*) | | | | | 1 | | | | |

## REACH 110
## HASLEY CANYON CHANNEL (PD 2262)

| Species | Survey Dates – 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 11-Apr | 24-Apr | 7-May | 17-May | 30-May | 13-Jun | 20-Jun | 27-Jun | 10-Jul |
| Bewick's Wren (*Thryomanes bewickii*) | | 6 | 1 | 4 | 5 | 3 | 4 | 1 | 2 |
| Western Bluebird (*Sialia mexicana*) | | | | | | | | 1 | |
| American Robin (*Turdus migratorius*) | | | | | | | | 2 | |
| Wrentit (*Chamaea fasciata*) | | | | | 1 | 2 | 1 | 3 | 1 |
| California Thrasher (*Toxostoma redivivum*) | | | | | 1 | 1 | 1 | 3 | 1 |
| Northern Mockingbird (*Mimus polyglottos*) | | | | | 1 | | 1 | 3 | 2 |
| Common Yellowthroat (*Geothlypis trichas*) | | | | | | 1 | | | |
| Yellow Warbler (*Setophaga petechia*) | | | | | 2 | | | | |
| Yellow-rumped Warbler (*Setophaga coronata*) | 1 | 5 | | | | | | | |
| Wilson's Warbler (*Wilsonia pusilla*) | | | | 1 | | | | | |
| Townsend's Warbler (*Setophaga townsendi*) | | | 1 | | | | | | |
| Spotted Towhee (*Pipilo maculates*) | | 6 | 1 | 3 | 8 | 3 | 2 | 1 | 3 |
| Rufous-crowned Sparrow (*Aimophila ruficeps*) | | | | | | 1 | | | |
| California Towhee (*Melozone crissalis*) | | 6 | 1 | 6 | 6 | 4 | 4 | 5 | 4 |
| Lark Sparrow (*Chondestes grammacus*) | | | | | | | | 1 | 3 |
| Song Sparrow (*Melospiza lincolnii*) | 1 | 4 | 1 | 3 | 4 | 2 | 1 | | |
| Western Tanager (*Piranga ludoviciana*) | | | | | 6 | | | | |
| Black-headed Grosbeak (*Pheucticus melanocephalus*) | | 2 | | | | 3 | 4 | 2 | 1 |
| Blue Grosbeak (*Passerina caerulea*) | | | | | 1 | 1 | 1 | 4 | 2 |
| Hooded Oriole (*Icterus cucullatus*) | | | | | | | | | 1 |
| Bullock's Oriole (*Icterus bullockii*) | 1 | | | | | | | 1 | |
| House Finch (*Haemorhous mexicanus*) | 1 | 15 | 1 | | 10 | 14 | 13 | 15 | 15 |
| Lesser Goldfinch (*Spinus psaltria*) | | | 1 | 6 | 1 | 2 | | 3 | 4 |

* Introduced non-native species with established breeding population in California

# APPENDIX C

# WILDLIFE COMPENDIA
# (ARROYO TOAD SURVEYS)

# TABLE 2
# WILDLIFE COMPENDIA (ARROYO TOAD SURVEYS)

| Scientific Name | Common Name | Status | | Channel Reach |
|---|---|---|---|---|
| | | USFWS | CDFG | |
| **Fish** | | | | |
| CYPRINIDAE – MINNOWS | | | | |
| *Gila orcutti* | arroyo chub | - | SSC | Reaches 79, 109 |
| *Rhinichthys osailolus* | Santa Ana speckled dace | - | SSC | Reaches 79, 109 |
| *Catostomus santaanae*[2] | Santa Ana sucker | - | - | Reaches 79, 109 |
| GASTEROSTERIDAE - STICKLEBACKS | | | | |
| *Gasterosteus aculeatus* | unarmored threespine stickleback | E | E, FP | Reach 109 |
| **Amphibians** | | | | |
| BUFONIDAE – TRUE TOADS | | | | |
| *Anaxyrus boreas* | western toad | - | - | All Reaches |
| HYLIDAE – TREEFROGS | | | | |
| *Pseudacris hypochondriaca* | Baja California treefrog | - | - | Reaches 71, 79, 80, 82, 87, 105, 109 |
| RANIDAE – TRUE FROGS | | | | |
| *Lithobates catesbeiana** | American bullfrog | - | - | Reach 109 |
| PIPIDAE – TONGUELESS FROGS | | | | |
| *Xenopus laevis** | African clawed frog | - | - | Reaches 79, 82, 87, 105, 109 |

**Federal Designations**
FE Listed by the federal government as an Endangered species
S Listed by the U.S. Forest Service as "Sensitive"

**State Designations**
SE Listed by the state government as an Endangered species
SSC Species of Special Concern
FP Fully Protected

* Introduced species.

# APPENDIX D

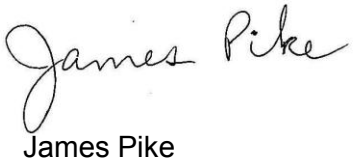
# SURVEYOR CERTIFICATE STATEMENT

**APPENDIX D**
**SURVEYOR CERTIFICATION STATEMENT**

We certify that the information in this survey report and enclosed exhibits fully and accurately present our work.

Brian Daniels
Senior Biologist
(TE-821401-4)

Amber Oneal Heredia
Senior Biologist
(TE-148554-2)



James Pike
Consulting Biologist
(TE-832946-4)

# APPENDIX E

# CALIFORNIA NATURAL DIVERSITY DATABASE (CNDDB) FIELD SURVEY FORMS

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 05/22/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Vireo bellii pusillus*

**Common Name:** least Bell's vireo

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 7 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Jim Pike
**Address:** 18744 Beach Bld, #E
Huntington Beach, CA, 92648
**E-mail Address:** jpike44@earthlink.net
**Phone:** (714) 968-7977

***Plant Information***

Phenology: _____% vegetative _____% flowering _____% fruiting

***Animal Information***

| 6 | 1 | | | |
|---|---|---|---|---|
| # adults | # juveniles | # larvae | # egg masses | # unknown |

☐ wintering ☑ breeding ☑ nesting ☐ rookery ☐ burrow site ☐ other

***Location Description* (please attach map AND/OR fill out your choice of coordinates, below)**

Multi-strata riparian vegetation bordering the streambed

County: Los Angeles Landowner / Mgr.: Department of Public Works
Quad Name: _____ Elevation: _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin 60 CSx
**DATUM:** NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 3 meters meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 0402103 3764482

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Territorial singing by three male vireos throughout the survey season. A fourth male was only present on one survey. One pair eventually observed with at least one fledgling. Two nests of another pair were found in mulefat, but both were depredated.

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Bordered by industrial and a golf course.

Visible disturbances:

Threats: Invasive vegetation and paintball games

Comments: Relatively good quality habitat for riparian species, but xeric conditions an issue this season.

***Determination:*** *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☑ Other: Bird expert and professional vireo biologist

***Photographs:*** *(check one or more)* Slide Print Digital

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes☐ no☐

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/14/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Vireo bellii pusillus*

**Common Name:** least Bell's vireo

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 26 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ ☐ no ☑ unk.
Yes, Occ. #

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Jim Pike
**Address:** 18744 Beach Blvd, #E
Huntington Beach, CA, 92648
**E-mail Address:** jpike44@earthlink.net
**Phone:** (714) 968-7977

***Plant Information***

Phenology: _____% vegetative _____% flowering _____% fruiting

***Animal Information***

| 11 | 15 | | | | |
|---|---|---|---|---|---|
| # adults | # juveniles | # larvae | # egg masses | # unknown | |

☐ wintering ☑ breeding ☑ nesting ☐ rookery ☐ burrow site ☐ other

***Location Description*** ***(please attach map AND/OR fill out your choice of coordinates, below)***

Tall black willows and islands of narrow-leaved willow bordering the San Gabriel River

County: Los Angeles Landowner / Mgr.: Department of Public Works
Quad Name: _____ Elevation: _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin 60CSx
**DATUM:** NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 3 meters meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 0405626 3767122

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Five territorial males throughout the season. Two additional males present only on one or two surveys. Three nests found in narrow-leaved willow (with a fourth nesting effort almost certainly in the same plant species), and another nest in mulefat. Three of the four nests that were discovered were successful, producing a minimum of 15 young. An additional very late nest had three white eggs on the last of the proscribed surveys on July 12, and its outcome is unknown at this time.

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☑ Fair ☐ Poor

Immediate AND surrounding land use: Urban and horse stables

Visible disturbances: Homeless encampments

Threats: Brown-headed cowbirds and fluctuating water levels

Comments: Narrow-leaved willow islands provide high-quality vireo habitat, but the threat posed by a burgeoning homeless population is enormous.

***Determination:*** *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☑ Other: Bird expert and professional vireo biologist

***Photographs:*** *(check one or more)* Slide Print Digital

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 05/23/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Vireo bellii pusillus*

**Common Name:** least Bell's vireo

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 3 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Brian E. Daniels
**Address:** 225 South Lake Avenue, Suite 1000
Pasadena, CA. 91101
**E-mail Address:** bdaniels@bonterraconsulting.com
**Phone:** (626) 351-2000

**Plant Information**

Phenology: _____% vegetative _____% flowering _____% fruiting

**Animal Information**

3 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☑ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

**Location Description** ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Los Angeles Landowner / Mgr.: Los Angeles County/ Army Corps of Engineers
Quad Name: Asuza Elevation: 609 ft.
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
**DATUM:** NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 413549, 3778307 and 414080, 3778597

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Two territorial males and at least 1 female present during the survey season. The color-banded female was nest building with the male on this date, but the outcome of the nesting was not determined. Note that this color-banded female was banded on October 27, 2012, at San Jose del Cabo, Baja California.

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Mix of open space, residential to west, and quarry operations to east and north.

Visible disturbances: Homeless encampments at willow clumps, one of which burned during the survey season - complete loss of several willows.

Threats: Nothing imminent (other than the homeless).

Comments: The side drainage on east side (Beatty Channel - Reach 39) is maintained by the County of LA Department of Pubic Works. Annual clearing of vegetation occurs in compliance with regulatory permits. Homeless activity has been an issue for years.

***Determination:*** *(check one or more, and fill in blanks)*
- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes☐ no☐

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/21/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Vireo bellii pusillus*

**Common Name:** least Bell's vireo

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Brian E. Daniels
**Address:** 225 South Lake Avenue, Suite 1000
Pasadena, CA. 91101
**E-mail Address:** bdaniels@bonterraconsulting.com
**Phone:** (626) 351-2000

**Plant Information**

Phenology: _____% vegetative _____% flowering _____% fruiting

**Animal Information**

1 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☑ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

**Location Description** ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Los Angeles Landowner / Mgr.: Los Angeles County
Quad Name: Torrance Elevation: 15 ft.
T____ R____ Sec ____, ____ ¼ of ____¼, Meridian: H☐ M☐ S☐
T____ R____ Sec ____, ____ ¼ of ____¼, Meridian: H☐ M☐ S☐
Source of Coordinates (GPS, topo. map & type): GoogleEarth
GPS Make & Model _____
**DATUM:** NAD27 ☐ NAD83 ☐ WGS84 ☐
Horizontal Accuracy _____ meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 380620 3740573

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

One territorial male was present in the willow riparian habitats of Wilmington Drain upstream of Lomita Blvd. This bird was found during focused least Bell's vireo surveys on the late date of May 29 and remained on territory as a bachelor to at least July 11.

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☑ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: mix of residential and commercial; downstream across PCH is Ken Malloy Regional Park

Visible disturbances: The drainage has long history of use by homeless, but these encampments were cleared prior to surveys in March 2011.

Threats: Nothing imminent

Comments: Wilmington Drain (Reach 27) from the I-110 Fwy to PCH is maintained by the County of LA Department of Pubic Works. Annual clearing of vegetation occurs in compliance with regulatory permits.

***Determination:*** *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/17/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Vireo bellii pusillus*

**Common Name:** least Bell's vireo

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 5 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Brian E. Daniels
**Address:** 225 South Lake Avenue, Suite 1000
Pasadena, CA. 91101
**E-mail Address:** bdaniels@bonterraconsulting.com
**Phone:** (626) 351-2000

**Plant Information**

Phenology: _____% vegetative _____% flowering _____% fruiting

**Animal Information**

3 # adults | 2 # juveniles | _____ # larvae | _____ # egg masses | _____ # unknown

☐ wintering ☑ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

**Location Description** ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Los Angeles Landowner / Mgr.: Los Angeles County
Quad Name: San Fernando Elevation: 1,300 ft.
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐
Source of Coordinates (GPS, topo. map & type): GoogleEarth
GPS Make & Model _____
**DATUM:** NAD27 ☐ NAD83 ☐ WGS84 ☐
Horizontal Accuracy _____ meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 370290, 3797539 and 370436, 3797504

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Two territorial males with just one paired during survey season. This pair fledged at least two young.

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: mix of open space, residential, and golf course

Visible disturbances: Relatively high use levels of wash by humans for various activities; more limited in basin

Threats: Nothing imminent

Comments: High levels of disturbance especially upstream of Maclay Street including illegal dumping, off-road motorcycles, etc. The side drainage on west side of Pacoima Wash is May Channel Outlet (Channel Reach 13) that is maintained by the County of LA Department of Pubic Works. Annual clearing of vegetation occurs in compliance with regulatory permits.

***Determination:*** *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes☐ no☐

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 05/23/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Icteria virens*

**Common Name:** Yellow-breasted Chat

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 2 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Brian E. Daniels
**Address:** 225 South Lake Avenue, Suite 1000
Pasadena, CA. 91101
**E-mail Address:** bdaniels@bonterraconsulting.com
**Phone:** (626) 351-2000

***Plant Information***

Phenology: _____% vegetative _____% flowering _____% fruiting

***Animal Information***

2 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☑ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

***Location Description*** ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Los Angeles Landowner / Mgr.: Los Angeles County/ Army Corps of Engineers
Quad Name: Asuza Elevation: 609 ft.
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
**DATUM:** NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 414066 3778621

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Two territorial males during these surveys. Survey area extends from pedestrian bridge (opposite Encanto Park) upstream to second drop structure. Habitat is southern willow scrub with mule fat being dominant in most areas.

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Mix of open space, residential to west, and quarry operations to east and north.

Visible disturbances: Homeless encampments at willow clumps, one of which burned during the survey season - complete loss of several willows.

Threats: Nothing imminent (other than the homeless).

Comments: The side drainage on east side (Beatty Channel - Reach 39) is maintained by the County of LA Department of Pubic Works. Annual clearing of vegetation occurs in compliance with regulatory permits. Homeless activity has been an issue here for years.

***Determination:*** *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/14/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Icteria virens*

**Common Name:** Yellow-breasted Chat

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 3 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Jim Pike
**Address:** 18744 Beach Blvd, #E
Huntington Beach, CA, 92648
**E-mail Address:** jpike44@earthlink.net
**Phone:** (714) 968-7977

***Plant Information***

Phenology: _____% vegetative _____% flowering _____% fruiting

***Animal Information***

3 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☑ breeding ☑ nesting ☐ rookery ☐ burrow site ☐ other

***Location Description* (please attach map *AND/OR* fill out your choice of coordinates, below)**

Multi-strata riparian vegetation bordering the streambed

County: Los Angeles Landowner / Mgr.: Department of Public Works

Quad Name: _____ Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin 60CSx

**DATUM:** NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 3 meters meters/feet

**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐

**Coordinates:** 11S 0402134 3764453

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Territorial singing throughout the series of surveys that were conducted

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Bordered by industrial and a golf course

Visible disturbances:

Threats: Invasive vegetation and paintball games

Comments: Relatively good quality habitat for riparian species

***Determination:*** *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☑ Other: Bird expert and professional vireo biologist

***Photographs:*** *(check one or more)* Slide Print Digital

Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes☐ no☐

DFG/BDB/1747 Rev. 6/16/09

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/01/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Icteria virens*

**Common Name:** Yellow-breasted Chat

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 2 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Jim Pike
**Address:** 18744 Beach Blvd, #E
Huntington Beach, CA, 92648
**E-mail Address:** jpike44@earthlink.net
**Phone:** (714) 968-7977

***Plant Information***

Phenology: _____% vegetative _____% flowering _____% fruiting

***Animal Information***

3 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☑ breeding ☑ nesting ☐ rookery ☐ burrow site ☐ other

***Location Description*** ***(please attach map AND/OR fill out your choice of coordinates, below)***

Islands of narrow-leaved willow bordering the streambed

County: Los Angeles Landowner / Mgr.: Department of Public Works
Quad Name: _____ Elevation: _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin 60CSx
**DATUM:** NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 3 meters meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 0405681 3767137

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Territorial singing throughout the series of surveys that were conducted

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Bordered by urban and stables

Visible disturbances: Homeless encampments

Threats: Lack of water flow in the river

Comments:

***Determination:*** *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☑ Other: Bird expert and professional vireo biologist

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes ☐ no ☐

DFG/BDB/1747 Rev. 6/16/09

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/10/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Setophaga petechia*

**Common Name:** Yellow Warbler

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 2 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Brian E. Daniels
**Address:** 225 South Lake Avenue, Suite 1000
Pasadena, CA. 91101
**E-mail Address:** bdaniels@bonterraconsulting.com
**Phone:** (626) 351-2000

***Plant Information***

Phenology: _____% vegetative _____% flowering _____% fruiting

***Animal Information***

2 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☑ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

***Location Description*** ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Los Angeles Landowner / Mgr.: Los Angeles County/ Army Corps of Engineers
Quad Name: Asuza Elevation: 609 ft.
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
**DATUM:** NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 413536, 3778304

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

One breeding pair during focused surveys for least Bell's vireo. Survey area extends from pedestrian bridge (opposite Encanto Park) upstream to second drop structure. Habitat is southern willow scrub with mule fat being dominant in most areas. The yellow warbler territory was at willow clump over a pond at side outlet at western base of the pedestrian bridge.

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Mix of open space, residential to west, and quarry operations to east and north.

Visible disturbances: Homeless encampments at willow clumps, one of which burned during the survey season - complete loss of several willows.

Threats: Nothing imminent (other than the homeless).

Comments: The side drainage on east side (Beatty Channel - Reach 39) is maintained by the County of LA Department of Pubic Works. Annual clearing of vegetation occurs in compliance with regulatory permits. Homeless activity has been an issue for years.

***Determination:*** *(check one or more, and fill in blanks)*
- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes☐ no☐

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/11/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Setophaga petechia*

**Common Name:** Yellow Warbler

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 6 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Brian E. Daniels
**Address:** 225 South Lake Avenue, Suite 1000
Pasadena, CA. 91101
**E-mail Address:** bdaniels@bonterraconsulting.com
**Phone:** (626) 351-2000

***Plant Information***

Phenology: _____% vegetative _____% flowering _____% fruiting

***Animal Information***

6 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☑ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

***Location Description*** ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Los Angeles Landowner / Mgr.: Los Angeles County
Quad Name: Newhall Elevation: 1,091 ft.
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
**DATUM:** NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 378348 3792716

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

At least 6 territorial males in Santa Clara River west (downstream) of McBean Pkwy bridge present during focused surveys for least Bell's vireo. Survey area is the confluence of San Francisquito Wash and Santa Clara River. Habitats include young southern willow scrub to old growth riparian forest dominated by stands of cottonwoods. Surface water present throughout surveys.

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Mix of commercial, residential, and light industrial.

Visible disturbances: none

Threats: none

Comments: These surveys are for flood control facilities managed by the County of LA Department of Pubic Works. Maintenance activities are limited to toe of concrete levee at confluence with San Francisquito Wash and are governed by regulatory permits including biological opinion for unarmored threespine stickleback and arroyo toad.

***Determination:*** *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes☐ no☐

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/14/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Setophaga petechia*

**Common Name:** Yellow Warbler

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 9 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Jim Pike
**Address:** 18744 Beach Blvd, #E
Huntington Beach, CA, 92648
**E-mail Address:** jpike44@earthlink.net
**Phone:** (714) 968-7977

**Plant Information**

Phenology: _____% vegetative _____% flowering _____% fruiting

**Animal Information**

| # adults | # juveniles | # larvae | # egg masses | # unknown |
|---|---|---|---|---|
| 9 | | | | |

☐ wintering ☑ breeding ☑ nesting ☐ rookery ☐ burrow site ☐ other

**Location Description** ***(please attach map AND/OR fill out your choice of coordinates, below)***

Tall black willows bordering the streambed

County: Los Angeles Landowner / Mgr.: Department of Public Works
Quad Name: _____ Elevation: _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin 60CSx
**DATUM:** NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 3 meters meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 0402314 3764521

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Territorial singing throughout the series of surveys that were conducted

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Bordered by industrial and urban

Visible disturbances:

Threats: Lack of water flow in the river

Comments:

***Determination:*** *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☑ Other: Bird expert and professional vireo biologist

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes☐ no☐

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/28/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Setophaga petechia*

**Common Name:** Yellow Warbler

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 17 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Jim Pike
**Address:** 18744 Beach Blvd, #E
Huntington Beach, CA, 92648
**E-mail Address:** jpike44@earthlink.net
**Phone:** (714) 968-7977

***Plant Information***

Phenology: _____% vegetative _____% flowering _____% fruiting

***Animal Information***

17 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☑ breeding ☑ nesting ☐ rookery ☐ burrow site ☐ other

***Location Description* (please attach map AND/OR fill out your choice of coordinates, below)**

Multi-strata riparian vegetation bordering the streambed

County: Los Angeles Landowner / Mgr.: Department of Public Works

Quad Name: _____ Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin 60CSx

**DATUM:** NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 3 meters meters/feet

**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐

**Coordinates:** 11S 0402230 3764524

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Territorial singing throughout the series of surveys that were conducted

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Bordered by industrial and a golf course

Visible disturbances:

Threats: Invasive vegetation and paintball games

Comments: Relatively good quality habitat for riparian species

***Determination:*** *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☑ Other: Bird expert and professional vireo biologist

***Photographs:*** *(check one or more)* Slide Print Digital

- Plant / animal ☐ ☐ ☐
- Habitat ☐ ☐ ☐
- Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes☐ no☐

DFG/BDB/1747 Rev. 6/16/09

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/14/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Setophaga petechia*

**Common Name:** Yellow Warbler

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 12 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Jim Pike
**Address:** 18744 Beach Blvd, #E
Huntington Beach, CA, 92648
**E-mail Address:** jpike44@earthlink.net
**Phone:** (714) 968-7977

**Plant Information**

Phenology: _____% vegetative _____% flowering _____% fruiting

**Animal Information**

| # adults | # juveniles | # larvae | # egg masses | # unknown |
|---|---|---|---|---|
| 12 | | | | |

☐ wintering ☑ breeding ☑ nesting ☐ rookery ☐ burrow site ☐ other

**Location Description** ***(please attach map AND/OR fill out your choice of coordinates, below)***

Tall black willows and islands of narrow-leaved willow bordering the San Gabriel River

County: Los Angeles Landowner / Mgr.: Department of Public Works
Quad Name: _____ Elevation: _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin 60CSx
**DATUM:** NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 3 meters meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 0405470 3767041

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Territorial singing throughout the survey season

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☑ Fair ☐ Poor

Immediate AND surrounding land use: Urban and horse stables

Visible disturbances: Homeless encampments

Threats: Brown-headed cowbirds and lack of water flow in the river

Comments:

***Determination:*** *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☑ Other: Bird expert and professional vireo biologist

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes ☐ no ☐

DFG/BDB/1747 Rev. 6/16/09

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/21/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Setophaga petechia*

**Common Name:** Yellow Warbler

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 7 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Brian E. Daniels
**Address:** 225 South Lake Avenue, Suite 1000
Pasadena, CA. 91101
**E-mail Address:** bdaniels@bonterraconsulting.com
**Phone:** (626) 351-2000

***Plant Information***

Phenology: _____% vegetative _____% flowering _____% fruiting

***Animal Information***

| 6 | 1 | | | | |
|---|---|---|---|---|---|
| # adults | # juveniles | # larvae | # egg masses | # unknown | |
| ☐ wintering | ☑ breeding | ☐ nesting | ☐ rookery | ☐ burrow site | ☐ other |

***Location Description*** ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Los Angeles Landowner / Mgr.: Los Angeles County
Quad Name: Torrance Elevation: 22 ft.
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
**DATUM:** NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 380700 3740618

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Three breeding pairs present during least Bell's vireo surveys of willow riparian habitats of Wilmington Drain from Pacific Coast Highway upstream to I-110 Freeway. One begging fledgling observed in one territory upstream of Lomita Blvd.

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Mix of residential and commercial (small amount of industrial - oil property); Regional Park south of PCH.

Visible disturbances: Proposition O activities began during the course of these surveys that involved removal of exotic plant species.

Threats: Removal of exotic plants followed by plantings of native should benefit this species.

Comments: Wilmington Drain (Reach 27) from the I-110 Fwy to PCH is maintained by the County of LA Department of Public Works. Annual clearing of vegetation occurs in compliance with regulatory permits.

***Determination:*** *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

***Photographs:*** *(check one or more)* Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
*California Natural Diversity Database*
*Department of Fish and Game*
*1807 13th Street, Suite 202*
*Sacramento, CA 95811*
*Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov*

**Date of Field Work (mm/dd/yyyy):** 06/17/2013

*For Office Use Only*
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

# California Native Species Field Survey Form

Send Form

**Scientific Name:** *Setophaga petechia*

**Common Name:** Yellow Warbler

**Species Found?** ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 4 Subsequent Visit? ☑ yes ☐ no

**Is this an existing NDDB occurrence?** _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

**Reporter:** Brian E. Daniels
**Address:** 225 South Lake Avenue, Suite 1000
Pasadena, CA. 91101
**E-mail Address:** bdaniels@bonterraconsulting.com
**Phone:** (626) 351-2000

***Plant Information***

Phenology: _____% vegetative _____% flowering _____% fruiting

***Animal Information***

4 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☑ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

***Location Description*** ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Los Angeles Landowner / Mgr.: Los Angeles County
Quad Name: Sunland Elevation: 2,1254 ft.
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
**DATUM:** NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
**Coordinate System:** UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐
**Coordinates:** 11S 378348 3792716

***Habitat Description (plants & animals)*** *plant communities, dominants, associates, substrates/soils, aspects/slope:*
***Animal Behavior*** *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Two breeding pairs present during least Bell's vireo surveys of riparian habitat at mouth of Haines Channel Outlet in Tujunga Wash. Both pairs nested successfully as one fledgling was observed. The survey area is about 200 feet from outlet of concrete channel and is dominated by tall trees including willows, cottonwoods, eucalyptus and several other ornamental trees.

Please fill out separate form for other rare taxa seen at this site.

***Site Information*** Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Residential, alluvial sage scrub habitats of Tujunga Wash, and golf course at downstream end of survey area.

Visible disturbances: human traffic

Threats: nothing imminent

Comments: this is Channel Reach 12 that is maintained by the County of LA Department of Public Works. Annual clearing of vegetation occurs in compliance with regulatory permits.

***Determination:*** *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

***Photographs:*** *(check one or more)*

| | Slide | Print | Digital |
|---|---|---|---|
| Plant / animal | ☐ | ☐ | ☐ |
| Habitat | ☐ | ☐ | ☐ |
| Diagnostic feature | ☐ | ☐ | ☐ |

May we obtain duplicates at our expense? yes ☐ no ☐

# APPENDIX F

# WILLOW FLYCATCHER SURVEY AND DETECTION FORMS

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft-Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Sunland Elevation: 353 (meters)

Creek, River, or Lake Name: Haines Canyon Main Channel Outlet (Reach 12)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* X *No* ____

Survey Coordinates: Start: E 378432 N 3792715 UTM Datum: WGS84 (See instructions)

Stop: E 378233 N 3792737 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Survey # 1** Observer(s): B. Daniels | Date: 05/23/13 Start: 0545 Stop: 0645 Total hrs: 1.0 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 2** Observer(s): B. Daniels | Date: 06/10/13 Start: 0600 Stop: 0650 Total hrs: 0.8 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 3** Observer(s): B. Daniels | Date: 06/17/13 Start: 0545 Stop: 0635 Total hrs: 0.8 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 4** Observer(s): B. Daniels | Date: 06/25/13 Start: 0550 Stop: 0640 Total hrs: 0.8 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 5** Observer(s): B. Daniels | Date: 07/5/13 Start: 0600 Stop: 0645 Total hrs: 4.2 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |

| Overall Site Summary | Total Adult Residents | Total Pairs | Total Territories | Total Nests | Were any WIFLs color-banded? Yes ____ No ____ |
|---|---|---|---|---|---|
| Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total survey hrs: 4.2 | 0 | 0 | 0 | 0 | If yes, report color combination(s) in the comments section on back of form and report to USFWS. |

Reporting Individual: Brian E. Daniels Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE821401-4 State Wildlife Agency Permit #: SC-4535

***Submit** form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.*

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Brian E. Daniels — Phone #: 626-351-2000

Affiliation: BonTerra Consulting — E-mail: bdaniels@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft-Bottom Channels — Date report Completed: 2013

Was this site surveyed in a previous year? Yes x No ____ Unknown ____

Did you verify that this site name is consistent with that used in previous yrs? Yes X No ____ Not Applicable ____

If name is different, what name(s) was used in the past? ____

If site was surveyed last year, did you survey the same general area this year? Yes X No ____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County X State ____ Tribal ____ Private ____

Name of Management Entity or Owner (e.g., Tonto National Forest): LA County Department of Public Works (Flood Maintenance Division)

Length of area surveyed: 0.2 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

X Native broadleaf plants (entirely or almost entirely, > 90% native)

____ Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Salix sp., Populus fremontii*

Average height of canopy (Do not include a range): 6 m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

The survey area for this channel reach consists of a dense strip of willow woodland upstream of the Mulholland Highway and more scrubby willows with mule fat scrub downstream of the bridge.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
|---|---|---|---|---|---|---|
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Attach additional sheets if necessary

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft-Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Sunland Elevation: 400 (meters)

Creek, River, or Lake Name: May Channel Outlet into Pacoima Canyon (Reach 14)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** ***Yes*** X ***No*** ____

Survey Coordinates: Start: E 370215 N 3797657 UTM Datum: WGS84 (See instructions)

Stop: E 370286 N 3797496 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Survey # 1** | Date: 05/23/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0700 | | | | | | 0 | | | |
| | Stop: 0820 | | | | | | | | | |
| | Total hrs: 1.3 | | | | | | | | | |
| **Survey # 2** | Date: 06/10/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0705 | | | | | | 0 | | | |
| | Stop: 0845 | | | | | | | | | |
| | Total hrs: 0.7 | | | | | | | | | |
| **Survey # 3** | Date: 06/17/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0650 | | | | | | 0 | | | |
| | Stop: 0800 | | | | | | | | | |
| | Total hrs: 1.2 | | | | | | | | | |
| **Survey # 4** | Date: 06/25/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0655 | | | | | | 0 | | | |
| | Stop: 0820 | | | | | | | | | |
| | Total hrs: 1.4 | | | | | | | | | |
| **Survey # 5** | Date: 07/5/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0700 | | | | | | 0 | | | |
| | Stop: 0830 | | | | | | | | | |
| | Total hrs: 1.5 | | | | | | | | | |
| Overall Site Summary<br>Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings.<br>Be careful not to double count individuals.<br>Total survey hrs: 6.1 | | Total Adult Residents: 0 | Total Pairs: 0 | Total Territories: 0 | Total Nests: 0 | Were any WIFLs color-banded? Yes ____ No ____<br>If yes, report color combination(s) in the comments section on back of form and report to USFWS. | | | | |

Reporting Individual: Brian E. Daniels Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE821401-4 State Wildlife Agency Permit #: SC-4535

***Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.***

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Brian E. Daniels  Phone #: 626-351-2000

Affiliation: BonTerra Consulting  E-mail: bdaniels@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft-Bottom Channels  Date report Completed: 2013

Was this site surveyed in a previous year? Yes x  No ____  Unknown ____

Did you verify that this site name is consistent with that used in previous yrs? Yes X  No ____  Not Applicable ____

If name is different, what name(s) was used in the past? ____

If site was surveyed last year, did you survey the same general area this year? Yes X  No ____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X  No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County X  State ____ Tribal ____ Private ____

Name of Management Entity or Owner (e.g., Tonto National Forest): LA County Department of Public Works (Flood Maintenance Division)

Length of area surveyed: 0.2 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

____ Native broadleaf plants (entirely or almost entirely, > 90% native)

X Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Salix sp., Baccharis salicifolia*

Average height of canopy (Do not include a range): 5 m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

The survey area for this channel reach includes a strip of disturbed willow scrub on the west bank of Pacoima Wash. In the vicinity of this side drainage, Pacoima Wash supports only alluvial sage scrub habitats. Two unnamed side outlets opposite this channel reach support willow riparian and are also included in the survey area for this channel reach.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
|---|---|---|---|---|---|---|
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Attach additional sheets if necessary

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft-Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Torrance Elevation: 8 (meters)

Creek, River, or Lake Name: Wilmington Drain (Reach 27)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* X *No* ____

Survey Coordinates: Start: E 380800 N 3739755 UTM Datum: WGS84 (See instructions)

Stop: E 380667 N 3740748 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Survey # 1** | Date: 05/29/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0915 | | | | | | 0 | | | |
| | Stop: 1100 | | | | | | | | | |
| | Total hrs: 1.75 | | | | | | | | | |
| **Survey # 2** | Date: 06/12/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0820 | | | | | | 0 | | | |
| | Stop: 1000 | | | | | | | | | |
| | Total hrs: 1.7 | | | | | | | | | |
| **Survey # 3** | Date: 06/21/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0810 | | | | | | 0 | | | |
| | Stop: 0930 | | | | | | | | | |
| | Total hrs: 1.3 | | | | | | | | | |
| **Survey # 4** | Date: 06/28/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0830 | | | | | | 0 | | | |
| | Stop: 1000 | | | | | | | | | |
| | Total hrs: 1.5 | | | | | | | | | |
| **Survey # 5** | Date: 07/11/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0530 | | | | | | 0 | | | |
| | Stop: 0645 | | | | | | | | | |
| | Total hrs: 1.25 | | | | | | | | | |

| Overall Site Summary | Total Adult Residents | Total Pairs | Total Territories | Total Nests | Were any WIFLs color-banded? Yes ____ No ____ |
|---|---|---|---|---|---|
| Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. | 0 | 0 | 0 | 0 | If yes, report color combination(s) in the comments section on back of form and report to USFWS. |
| Total survey hrs: 7.5 | | | | | |

Reporting Individual: Brian E. Daniels Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE821401-4 State Wildlife Agency Permit #: SC-4535

***Submit** form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.*

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Brian E. Daniels | Phone #: 626-351-2000

Affiliation: BonTerra Consulting | E-mail: bdaniels@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft-Bottom Channels | Date report Completed: 2013

Was this site surveyed in a previous year? Yes x No ____ Unknown ____

Did you verify that this site name is consistent with that used in previous yrs? Yes X No ____ Not Applicable ____

If name is different, what name(s) was used in the past? ____

If site was surveyed last year, did you survey the same general area this year? Yes X No ____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County X State ____ Tribal ____ Private ____

Name of Management Entity or Owner (e.g., Tonto National Forest) LA County Department of Public Works (Flood Maintenance Division)

Length of area surveyed: 1.0 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

X Native broadleaf plants (entirely or almost entirely, > 90% native)

____ Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Salix sp., Baccharis salicifolia*

Average height of canopy (Do not include a range): 10 m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

Non-native vegetation was being removed from Wilmington Drain during these surveys. This activity was funded and permitted through the City of LA's Proposition "O" Clean Water Project.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
|---|---|---|---|---|---|---|
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Attach additional sheets if necessary

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft-Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Point Dume Elevation: 353 (meters)

Creek, River, or Lake Name: Triunfo Creek Channel (Reach 28)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** ***Yes*** X ***No*** ____

Survey Coordinates: Start: E 335965 N 3776074 UTM Datum: WGS84 (See instructions)

Stop: E 335802 N 3776450 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Survey # 1** Observer(s): B. Daniels | Date: 05/29/13 Start: 0610 Stop: 0715 Total hrs: 1.1 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 2** Observer(s): B. Daniels | Date: 06/12/13 Start: 0545 Stop: 0630 Total hrs: 0.75 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 3** Observer(s): B. Daniels | Date: 06/21/13 Start: 0600 Stop: 0700 Total hrs: 1.0 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 4** Observer(s): B. Daniels | Date: 06/28/13 Start: 0600 Stop: 0700 Total hrs: 1.0 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 5** Observer(s): B. Daniels | Date: 07/11/13 Start: 0830 Stop: 0930 Total hrs: 1.0 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |

| Overall Site Summary | Total Adult Residents | Total Pairs | Total Territories | Total Nests |
|---|---|---|---|---|
| Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. | 0 | 0 | 0 | 0 |
| Total survey hrs: 4.85 | | | | |

Were any WIFLs color-banded? Yes ____ No ____

If yes, report color combination(s) in the comments section on back of form and report to USFWS.

Reporting Individual: Brian E. Daniels Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE821401-4 State Wildlife Agency Permit #: SC-4535

***Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.***

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Brian E. Daniels — Phone #: 626-351-2000

Affiliation: BonTerra Consulting — E-mail: bdaniels@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft-Bottom Channels — Date report Completed: 2013

Was this site surveyed in a previous year? Yes x No ____ Unknown ____

Did you verify that this site name is consistent with that ~~used~~ in previous yrs? Yes X No ____ Not Applicable ____

If name is different, what name(s) was used in the past? ____

If site was surveyed last year, did you survey the same general area this year? Yes X No ____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County X State ____ Tribal ____ Private ____

Name of Management Entity or Owner (e.g., Tonto National Forest): LA County Department of Public Works (Flood Maintenance Division)

Length of area surveyed: 0.4 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

X Native broadleaf plants (entirely or almost entirely, > 90% native)

____ Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Salix sp., Baccharis salicifolia*

Average height of canopy (Do not include a range): 6 m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

The survey area for this channel reach consists of a dense strip of willow woodland upstream of the Mulholland Highway and more scrubby willows with mule fat scrub downstream of the bridge.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
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Attach additional sheets if necessary

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft-Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Azusa Elevation: 195 (meters)

Creek, River, or Lake Name: Beatty Channel Outlet into San Gabriel River (Reach 39)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* X *No* ____

Survey Coordinates: Start: E 413530 N 3778309 UTM Datum: WGS84 (See instructions)

Stop: E 414168 N 3778620 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Survey # 1** | Date: 05/23/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0910 | | | | | | 0 | | | |
| | Stop: 1230 | | | | | | | | | |
| | Total hrs: 3.3 | | | | | | | | | |
| **Survey # 2** | Date: 06/10/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0920 | | | | | | 0 | | | |
| | Stop: 1130 | | | | | | | | | |
| | Total hrs: 2.2 | | | | | | | | | |
| **Survey # 3** | Date: 06/17/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0840 | | | | | | 0 | | | |
| | Stop: 1100 | | | | | | | | | |
| | Total hrs: 2.3 | | | | | | | | | |
| **Survey # 4** | Date: 06/25/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0900 | | | | | | 0 | | | |
| | Stop: 1045 | | | | | | | | | |
| | Total hrs: 1.75 | | | | | | | | | |
| **Survey # 5** | Date: 07/5/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): B. Daniels | Start: 0915 | | | | | | 0 | | | |
| | Stop: 1100 | | | | | | | | | |
| | Total hrs: 1.75 | | | | | | | | | |

| Overall Site Summary | Total Adult Residents | Total Pairs | Total Territories | Total Nests |
|---|---|---|---|---|
| Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. | 0 | 0 | 0 | 0 |
| Total survey hrs: 11.3 | | | | |

Were any WIFLs color-banded? Yes ____ No ____

If yes, report color combination(s) in the comments section on back of form and report to USFWS.

Reporting Individual: Brian E. Daniels Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE821401-4 State Wildlife Agency Permit #: SC-4535

***Submit** form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.*

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Brian E. Daniels — Phone #: 626-351-2000

Affiliation: BonTerra Consulting — E-mail: bdaniels@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft-Bottom Channels — Date report Completed: 2013

Was this site surveyed in a previous year? Yes x No ___ Unknown ___

Did you verify that this site name is consistent with that used in previous yrs? Yes X No ___ Not Applicable ___

If name is different, what name(s) was used in the past? ___

If site was surveyed last year, did you survey the same general area this year? Yes X No ___ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X No ___ If no, summarize below.

Management Authority for Survey Area: Federal ___ Municipal/County X State ___ Tribal ___ Private ___

Name of Management Entity or Owner (e.g., Tonto National Forest): LA County Department of Public Works (Flood Maintenance Division)

Length of area surveyed: 0.7 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

X — Native broadleaf plants (entirely or almost entirely, > 90% native)

___ Mixed native and exotic plants (mostly native, 50 - 90% native)

___ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

___ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Salix sp., Baccharis salicifolia*

Average height of canopy (Do not include a range): 2 m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

The survey area for this side channel outlet into the San Gabriel River consists primarily of mule fat scrub. There is also some alluvial sage scrub and basically three small patches of willow scrub in the survey area.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
|---|---|---|---|---|---|---|
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Attach additional sheets if necessary

# Appendix 1. Willow Flycatcher Survey and Detection Form

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (http://www.fws.gov/southwest/es/arizona/) for the most up-to-date version.

**Willow Flycatcher (WIFL) Survey and Detection Form (revised April 2010)**

Site Name Reaches 406/43a/43b State CA County Los Angeles
USGS Quad Name Baldwin Park; Whittier Elevation _____ (meters)
Creek, River, Wetland, or Lake Name San Gabriel River
*Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?* *Yes*___ *No*___

Survey Coordinates: Start: E 0401220 N 3762839 UTM Datum NAD83 (See instructions)
Stop: E 0406552 N 3767887 UTM Zone 11
If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.
*** Fill in additional site information on back of this page ****

| Survey # / Observer(s) (Full Name) | Date (m/d/y) Survey time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N. If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | # Birds | Sex | UTM E | UTM N |
| Survey # 1<br>Observer(s)<br>Jim Pike | Date 5/22<br>Start 6:20<br>Stop 10:45<br>Total hrs 4.5 | 0 | 0 | 0 | N | | | | | |
| Survey # 2<br>Observer(s)<br>Jim Pike | Date 6/1<br>Start 6:15<br>Stop 10:40<br>Total hrs 4.5 | 0 | 0 | 0 | N | | | | | |
| Survey # 3<br>Observer(s)<br>Jim Pike | Date 6/14<br>Start 5:50<br>Stop 10:20<br>Total hrs 4.5 | 0 | 0 | 0 | N | | | | | |
| Survey # 4<br>Observer(s)<br>Jim Pike | Date 6/28<br>Start 5:45<br>Stop 10:15<br>Total hrs 4.5 | 0 | 0 | 0 | N | | | | | |
| Survey # 5<br>Observer(s)<br>Jim Pike | Date 7/12<br>Start 6:10<br>Stop 10:10<br>Total hrs 4 | 0 | 0 | 0 | N | | | | | |

| Overall Site Summary<br>Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings.<br>Be careful not to double count individuals.<br>Total Survey Hrs | Total Adult Residents | Total Pairs | Total Territories | Total Nests | Were any Willow Flycatchers color-banded? Yes___ No X<br>If yes, report color combination(s) in the comments section on back of form and report to USFWS. |
|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | |

Reporting Individual Jim Pike Date Report Completed 7/29/13
US Fish and Wildlife Service Permit # TE 832946-4 State Wildlife Agency Permit # SC-9788
***Submit** form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.*

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual Jim Pike Phone # 714-968-7977
Affiliation subcontracting biologist for Bonterra E-mail jpike44@earthlink.net
Site Name Reaches 406 43a, 43b Date Report Completed 7/29/13
Was this site surveyed in a previous year? Yes X No ___ Unknown ___
Did you verify that this site name is consistent with that used in previous years? Yes X No ___ Not Applicable ___
If site name is different, what name(s) was used in the past? ___
If site was surveyed last year, did you survey the same general area this year? Yes ___ No ___ If no, summarize below.
Did you survey the same general area during each visit to this site this year? Yes X No ___ If no, summarize below.

Management Authority for Survey Area: Federal___ Municipal/County X State___ Tribal___ Private___
Name of Management Entity or Owner (e.g., Tonto National Forest) Los Angeles Dept of Public Works

Length of area surveyed: 4.34 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

___ Native broadleaf plants (entirely or almost entirely, > 90% native)

X Mixed native and exotic plants (mostly native, 50 - 90% native)

___ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

___ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific names.
Salix gooddingii, Salix exigua, Baccharis salicifolia

Average height of canopy (Do not include a range): 13 (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections; 2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests; 3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
|---|---|---|---|---|---|---|
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Attach additional sheets if necessary

# Appendix 1. Willow Flycatcher Survey and Detection Form

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (http://www.fws.gov/southwest/es/arizona/) for the most up-to-date version.

**Willow Flycatcher (WIFL) Survey and Detection Form (revised April 2010)**

Site Name Reaches 71/75/79/80 State CA County Los Angeles
USGS Quad Name Newhall Elevation _____ (meters)
Creek, River, Wetland, or Lake Name Santa Clara River
*Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?* *Yes*___ *No*___

Survey Coordinates: Start: E 0356081 N 3810291 UTM Datum NAD 83 (See instructions)
Stop: E 0358349 N 3807296 UTM Zone 11
If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.
*** Fill in additional site information on back of this page ****

| Survey # / Observer(s) (Full Name) | Date (m/d/y) Survey time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N. If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | # Birds | Sex | UTM E | UTM N |
| Survey # 1<br>Observer(s)<br>Jim Pike | Date 5/23<br>Start 6:05<br>Stop 9:35<br>Total hrs 3.5 | 0 | 0 | 0 | N | | | | | |
| Survey # 2<br>Observer(s)<br>Jim Pike | Date 6/2<br>Start 6:10<br>Stop 9:45<br>Total hrs 3.5 | 0 | 0 | 0 | N | | | | | |
| Survey # 3<br>Observer(s)<br>Jim Pike | Date 6/16<br>Start 6:05<br>Stop 9:40<br>Total hrs 3.5 | 0 | 0 | 0 | N | | | | | |
| Survey # 4<br>Observer(s)<br>Jim Pike | Date 6/30<br>Start 5:50<br>Stop 9:00<br>Total hrs 3.2 | 0 | 0 | 0 | N | | | | | |
| Survey # 5<br>Observer(s)<br>Jim Pike | Date 7/13<br>Start 6:20<br>Stop 9:35<br>Total hrs 3.25 | 0 | 0 | 0 | N | | | | | |

| Overall Site Summary<br>Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings.<br>Be careful not to double count individuals.<br>Total Survey Hrs | Total Adult Residents | Total Pairs | Total Territories | Total Nests | Were any Willow Flycatchers color-banded? Yes___ No X<br>If yes, report color combination(s) in the comments section on back of form and report to USFWS. |
|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | |

Reporting Individual Jim Pike Date Report Completed 7/29/13
US Fish and Wildlife Service Permit # TE 832946-4 State Wildlife Agency Permit # SC-9788

***Submit** form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.*

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual Jim Pike Phone # 714-968-7977
Affiliation subcontracting biologist for Bonterra E-mail jpike44@earthlink.net
Site Name Reaches 71/75/79/80 Date Report Completed 7/29/13
Was this site surveyed in a previous year? Yes X No ___ Unknown ___
Did you verify that this site name is consistent with that used in previous years? Yes X No ___ Not Applicable ___
If site name is different, what name(s) was used in the past? ___
If site was surveyed last year, did you survey the same general area this year? Yes ___ No ___ If no, summarize below.
Did you survey the same general area during each visit to this site this year? Yes X No ___ If no, summarize below.

Management Authority for Survey Area: Federal ___ Municipal/County X State ___ Tribal ___ Private ___
Name of Management Entity or Owner (e.g., Tonto National Forest) Los Angeles Dept of Public Works

Length of area surveyed: 3.46 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

X Native broadleaf plants (entirely or almost entirely, > 90% native)

___ Mixed native and exotic plants (mostly native, 50 - 90% native)

___ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

___ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific names.
Populus fremontii; Salix laevigata

Average height of canopy (Do not include a range): 14 (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections; 2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests; 3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
|---|---|---|---|---|---|---|
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Attach additional sheets if necessary

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft-Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Newhall Elevation: 336 (meters)

Creek, River, or Lake Name: Santa Clara River Main Channel (Reach 82) and Santa Clara River - South Bank West of McBean Pkwy (Reach 109)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* X *No* ____

Survey Coordinates: Start: E 356404 N 3810290 UTM Datum: WGS84 (See instructions)

Stop: E 355493 N 3810815 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Survey # 1** Observer(s): B. Daniels | Date: 05/24/13 Start: 0600 Stop: 0925 Total hrs: 3.4 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 0 | | | |
| **Survey # 2** Observer(s): B. Daniels | Date: 06/11/13 Start: 0600 Stop: 0845 Total hrs: 2.75 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 0 | | | |
| **Survey # 3** Observer(s): B. Daniels | Date: 06/18/13 Start: 0530 Stop: 0915 Total hrs: 3.75 | 2 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 1 | unk | 356079 | 3810302 |
| | | | | | | | 1 | male | 355509 | 3810832 |
| **Survey # 4** Observer(s): B. Daniels | Date: 06/26/13 Start: 0600 Stop: 0900 Total hrs: 3.0 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 0 | | | |
| **Survey # 5** Observer(s): B. Daniels | Date: 07/9/13 Start: 0710 Stop: 0945 Total hrs: 2.6 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 0 | | | |

| Overall Site Summary | Total Adult Residents | Total Pairs | Total Territories | Total Nests |
|---|---|---|---|---|
| Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. | | | | |
| Total survey hrs: 15.5 | 0 | 0 | 0 | 0 |

Were any WIFLs color-banded? Yes ____ No X

If yes, report color combination(s) in the comments section on back of form and report to USFWS.

Reporting Individual: Brian E. Daniels Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE821401-4 State Wildlife Agency Permit #: SC-4535

***Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.***

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Brian E. Daniels — Phone #: 626-351-2000

Affiliation: BonTerra Consulting — E-mail: bdaniels@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft-Bottom Channels — Date report Completed: 2013

Was this site surveyed in a previous year? Yes x No ____ Unknown ____

Did you verify that this site name is consistent with that used in previous yrs? Yes X No ____ Not Applicable ____

If name is different, what name(s) was used in the past? ____

If site was surveyed last year, did you survey the same general area this year? Yes X No ____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County X State ____ Tribal ____ Private ____

Name of Management Entity or Owner (e.g., Tonto National Forest): LA County Department of Public Works (Flood Maintenance Division)

Length of area surveyed: 1.1 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

X Native broadleaf plants (entirely or almost entirely, > 90% native)

____ Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Salix sp., Baccharis salicifolia, Populus fremontii*

Average height of canopy (Do not include a range): 8 m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

Main channel of the Santa Clara River downstream (west) of McBean Parkway in Santa Clarita. This is at the confluence with San Francisquito Creek. Some relatively old riparian forest is present along north side of channel that is dominated by cottonwoods. The rest of the channel contains relatively young riparian habitats dominated by willows.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
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Attach additional sheets if necessary

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Newhall Elevation: 323 (meters)

Creek, River, or Lake Name: Castaic Creek (Reach # 87/97)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* X *No* ____

Survey Coordinates: Start: E 351348 N 3812994 UTM . Datum: NAD83 (See instructions)

Stop: E 351684 N 3812307 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | # Birds | Sex | UTM E | UTM N |
| **Survey # 1** Observer(s): A. Heredia | Date: 05/22/13 Start: 0820 Stop: 0920 Total hrs: 1.0 | 0 | 0 | 0 | N | | 0 | | | |
| **Survey # 2** Observer(s): A. Heredia | Date: 06/07/13 Start: 0820 Stop: 0950 Total hrs: 1.5 | 0 | 0 | 0 | N | | 0 | | | |
| **Survey # 3** Observer(s): A. Heredia | Date: 06/18/13 Start: 0630 Stop: 0800 Total hrs: 1.5 | 0 | 0 | 0 | N | | 0 | | | |
| **Survey # 4** Observer(s): A. Heredia | Date: 07/02/13 Start: 0630 Stop: 0800 Total hrs: 1.5 | 0 | 0 | 0 | N | | 0 | | | |
| **Survey # 5** Observer(s): A. Heredia | Date: 07/12/13 Start: 0745 Stop: 0950 Total hrs: 2.1 | 0 | 0 | 0 | N | | 0 | | | |

| Overall Site Summary | Total Adult Residents | Total Pairs | Total Territories | Total Nests | |
|---|---|---|---|---|---|
| Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total survey hrs: 7.6 | 0 | 0 | 0 | 0 | Were any WIFLs color-banded? Yes ____ No ____ If yes, report color combination(s) in the comments section on back of form and report to USFWS. |

Reporting Individual: Amber Oneal Heredia Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE148554-2 State Wildlife Agency Permit #: SC-6761

***Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.***

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Amber Oneal Heredia — Phone #: 714-444-9199

Affiliation: BonTerra Consulting — E-mail: aheredia@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft Bottom Channels — Date report Completed: 2013

Was this site surveyed in a previous year? Yes x No ____ Unknown ____

Did you verify that this site name is consistent with that used in previous yrs? Yes X No ____ Not Applicable ____

If name is different, what name(s) was used in the past? ____

If site was surveyed last year, did you survey the same general area this year? Yes X No ____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County X State ____ Tribal ____ Private ____

Name of Management Entity or Owner (e.g., Tonto National Forest): LA County Department of Public Works (Hired by Flood Maintenance Division)

Length of area surveyed: Reach 87/97 (0.80 km) (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

____ Native broadleaf plants (entirely or almost entirely, > 90% native)

X Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Salix lasiolepis, Populus fremontii, Tamarix sp.*

Average height of canopy (Do not include a range): 15m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

There is good cottonwood-willow riparian forest at this location; however, the amount of Tamarisk in this reach has increased substantially since the last surveys in 2011.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
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Attach additional sheets if necessary

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft-Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Newhall Elevation: 353 (meters)

Creek, River, or Lake Name: Bouquet Canyon Channel (Reach 103)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* X *No* ____

Survey Coordinates: Start: E 358459 N 3810685 UTM Datum: WGS84 (See instructions)

Stop: E 358161 N 3810426 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | # Birds | Sex | UTM E | UTM N |
| **Survey # 1** Observer(s): B. Daniels | Date: 05/30/13 Start: 0800 Stop: 0900 Total hrs: 1.0 | 0 | 0 | 0 | N | | 0 | | | |
| **Survey # 2** Observer(s): B. Daniels | Date: 06/13/13 Start: 0745 Stop: 0900 Total hrs: 1.3 | 0 | 0 | 0 | N | | 0 | | | |
| **Survey # 3** Observer(s): B. Daniels | Date: 06/20/13 Start: 0730 Stop: 0830 Total hrs: 1.0 | 0 | 0 | 0 | N | | 0 | | | |
| **Survey # 4** Observer(s): B. Daniels | Date: 06/27/13 Start: 0810 Stop: 0915 Total hrs: 1.1 | 0 | 0 | 0 | N | | 0 | | | |
| **Survey # 5** Observer(s): B. Daniels | Date: 07/10/13 Start: 0700 Stop: 0800 Total hrs: 1.0 | 0 | 0 | 0 | N | | 0 | | | |

| Overall Site Summary | Total Adult Residents | Total Pairs | Total Territories | Total Nests | Were any WIFLs color-banded? Yes ____ No ____ |
|---|---|---|---|---|---|
| Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total survey hrs: 5.4 | 0 | 0 | 0 | 0 | If yes, report color combination(s) in the comments section on back of form and report to USFWS. |

Reporting Individual: Brian E. Daniels Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE821401-4 State Wildlife Agency Permit #: SC-4535

***Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.***

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Brian E. Daniels — Phone #: 626-351-2000

Affiliation: BonTerra Consulting — E-mail: bdaniels@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft-Bottom Channels — Date report Completed: 2013

Was this site surveyed in a previous year? Yes x No ____ Unknown ____

Did you verify that this site name is consistent with that used in previous yrs? Yes X No ____ Not Applicable ____

If name is different, what name(s) was used in the past? ____

If site was surveyed last year, did you survey the same general area this year? Yes X No ____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County X State ____ Tribal ____ Private ____

Name of Management Entity or Owner (e.g., Tonto National Forest): LA County Department of Public Works (Flood Maintenance Division)

Length of area surveyed: 0.4 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

____ Native broadleaf plants (entirely or almost entirely, > 90% native)

X Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Salix sp., Baccharis salicifolia, Populus fremontii*

Average height of canopy (Do not include a range): 10 m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

A dense grove of willows and cottonwoods follows the active channel that is at the foot of the levee on the right (west) bank. Otherwise the channel contains scattered mule fat and invasives such as arundo donax.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
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Attach additional sheets if necessary

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Newhall Elevation: 315 (meters)

Creek, River, or Lake Name: Castaic Creek (Reach # 104)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* X *No* ____

Survey Coordinates: Start: E 351547 N 3812915 UTM Datum: NAD83 (See instructions)

Stop: E 351791 N 3812352 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Survey # 1** | Date: 05/22/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): A. Heredia | Start: 0650 | | | | | | 0 | | | |
| | Stop: 0820 | | | | | | | | | |
| | Total hrs: 1.5 | | | | | | | | | |
| **Survey # 2** | Date: 06/07/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): A. Heredia | Start: 0720 | | | | | | 0 | | | |
| | Stop: 0820 | | | | | | | | | |
| | Total hrs: 1.0 | | | | | | | | | |
| **Survey # 3** | Date: 06/18/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): A. Heredia | Start: 0900 | | | | | | 0 | | | |
| | Stop: 0945 | | | | | | | | | |
| | Total hrs: 0.8 | | | | | | | | | |
| **Survey # 4** | Date: 07/02/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): A. Heredia | Start: 0800 | | | | | | 0 | | | |
| | Stop: 0840 | | | | | | | | | |
| | Total hrs: 0.7 | | | | | | | | | |
| **Survey # 5** | Date: 07/12/13 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| Observer(s): A. Heredia | Start: 0645 | | | | | | 0 | | | |
| | Stop: 0745 | | | | | | | | | |
| | Total hrs: 1.0 | | | | | | | | | |
| Overall Site Summary<br>Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings.<br>Be careful not to double count individuals.<br>Total survey hrs: 5 | | Total Adult Residents | Total Pairs | Total Territories | Total Nests | Were any WIFLs color-banded? Yes ____ No ____<br>If yes, report color combination(s) in the comments section on back of form and report to USFWS. | | | | |
| | | 0 | 0 | 0 | 0 | | | | | |

Reporting Individual: Amber Oneal Heredia Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE148554-2 State Wildlife Agency Permit #: SC-6761

***Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.***

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Amber Oneal Heredia — Phone #: 714-444-9199

Affiliation: BonTerra Consulting — E-mail: aheredia@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft Bottom Channels — Date report Completed: 2013

Was this site surveyed in a previous year? Yes x No ____ Unknown ____

Did you verify that this site name is consistent with that used in previous yrs? Yes X No ____ Not Applicable ____

If name is different, what name(s) was used in the past? ____

If site was surveyed last year, did you survey the same general area this year? Yes X No ____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County X State ____ Tribal ____ Private ____

Name of Management Entity or Owner (e.g., Tonto National Forest): LA County Department of Public Works (Hired by Flood Maintenance Division)

Length of area surveyed: Reach 104 (0.52 km) (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

____ Native broadleaf plants (entirely or almost entirely, > 90% native)

X Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Salix lasiolepis, Tamarix sp., Populus fremontii*

Average height of canopy (Do not include a range): 15 m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

Habitat at this location is primarily alluvial sage scrub with scattered mule fat and a few patches of large willows and cottonwoods near the outflow of a drain.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
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Attach additional sheets if necessary

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft-Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Newhall Elevation: 352 (meters)

Creek, River, or Lake Name: San Francisquito Channel (Reach 105)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* X *No* ____

Survey Coordinates: Start: E 356915 N 3812709 UTM Datum: WGS84 (See instructions)

Stop: E 356841 N 3812286 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Survey # 1** Observer(s): B. Daniels | Date: 05/24/13 Start: 0930 Stop: 1010 Total hrs: 0.7 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 0 | | | |
| **Survey # 2** Observer(s): B. Daniels | Date: 06/11/13 Start: 0855 Stop: 0945 Total hrs: 0.8 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 0 | | | |
| **Survey # 3** Observer(s): B. Daniels | Date: 06/18/13 Start: 0920 Stop: 1015 Total hrs: 0.9 | 2 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 2 | males | 356731 | 3812706 |
| **Survey # 4** Observer(s): B. Daniels | Date: 06/26/13 Start: 0905 Stop: 1115 Total hrs: 2.2 | 1 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 1 | unk | 356898 | 3812686 |
| **Survey # 5** Observer(s): B. Daniels | Date: 07/9/13 Start: 0600 Stop: 0700 Total hrs: 1.0 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 0 | | | |

| Overall Site Summary | Total Adult Residents | Total Pairs | Total Territories | Total Nests | Were any WIFLs color-banded? Yes ____ No ____ |
|---|---|---|---|---|---|
| Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total survey hrs: 5.6 | 0 | 0 | 0 | 0 | If yes, report color combination(s) in the comments section on back of form and report to USFWS. |

Reporting Individual: Brian E. Daniels Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE821401-4 State Wildlife Agency Permit #: SC-4535

***Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.***

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Brian E. Daniels — Phone #: 626-351-2000

Affiliation: BonTerra Consulting — E-mail: bdaniels@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft-Bottom Channels — Date report Completed: 2013

Was this site surveyed in a previous year? Yes x No ____ Unknown ____

Did you verify that this site name is consistent with that used in previous yrs? Yes X No ____ Not Applicable ____

If name is different, what name(s) was used in the past? ____

If site was surveyed last year, did you survey the same general area this year? Yes X No ____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County X State ____ Tribal ____ Private ____

Name of Management Entity or Owner (e.g., Tonto National Forest): LA County Department of Public Works (Flood Maintenance Division)

Length of area surveyed: 0.4 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

X Native broadleaf plants (entirely or almost entirely, > 90% native)

____ Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Baccharis salicifolia, Salix sp., Populus fremontii*

Average height of canopy (Do not include a range): 2 m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

Except for two side outlets with water, this channel is dry and dominated by mule fat. Willows dominate the outlets; couple dry patches of willows and cottonwoods on west side of channel.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
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Attach additional sheets if necessary

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Newhall Elevation: 351 (meters)

Creek, River, or Lake Name: Castaic Creek (Reach # 106)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* X *No* ____

Survey Coordinates: Start: E 351666 N 3817198 UTM Datum: NAD83 (See instructions)

Stop: E 351781 N 3816785 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Survey # 1** Observer(s): A. Heredia | Date: 05/22/13 Start: 0920 Stop: 1015 Total hrs: 0.9 | 1 | 0 | 0 | N | Visually observed individual foraging. Individual was silent, no vocalizations. Not observed on any follow-up surveys, presumed to be a migrant. | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 1 | | 351721 | 3817090 |
| **Survey # 2** Observer(s): A. Heredia | Date: 06/07/13 Start: 0620 Stop: 0720 Total hrs: 1.0 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 0 | | | |
| **Survey # 3** Observer(s): A. Heredia | Date: 06/18/13 Start: 0800 Stop: 0900 Total hrs: 1.0 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 0 | | | |
| **Survey # 4** Observer(s): A. Heredia | Date: 07/02/13 Start: 0840 Stop: 0910 Total hrs: 0.5 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 0 | | | |
| **Survey # 5** Observer(s): A. Heredia | Date: 07/12/13 Start: 0950 Stop: 1020 Total hrs: 0.5 | 0 | 0 | 0 | N | | # Birds | Sex | UTM E | UTM N |
| | | | | | | | 0 | | | |

| Overall Site Summary | Total Adult Residents | Total Pairs | Total Territories | Total Nests |
|---|---|---|---|---|
| Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. | | | | |
| Total survey hrs: 3.9 | 0 | 0 | 0 | 0 |

Were any WIFLs color-banded? Yes ____ No ____

If yes, report color combination(s) in the comments section on back of form and report to USFWS.

Reporting Individual: Amber Oneal Heredia Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE148554-2 State Wildlife Agency Permit #: SC-6761

***Submit** form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.*

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Amber Oneal Heredia — Phone #: 714-444-9199

Affiliation: BonTerra Consulting — E-mail: aheredia@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft Bottom Channels — Date report Completed: 2013

Was this site surveyed in a previous year? Yes x No ____ Unknown ____

Did you verify that this site name is consistent with that used in previous yrs? Yes X No ____ Not Applicable ____

If name is different, what name(s) was used in the past? ____

If site was surveyed last year, did you survey the same general area this year? Yes X No ____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County X State ____ Tribal ____ Private ____

Name of Management Entity or Owner (e.g., Tonto National Forest): LA County Department of Public Works (Hired by Flood Maintenance Division)

Length of area surveyed: Reach 106 (0.43 km) (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

____ Native broadleaf plants (entirely or almost entirely, > 90% native)

X Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Salix lasiolepis, Tamarix sp., Baccharis salicifolia*

Average height of canopy (Do not include a range): 12 m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

Habitat at this location is somewhat degraded. Although there is a willow canopy, the understory is lacking, there is trash along the reach, and it is heavily invaded by Tamarisk. The drainage is limited to a channel between the Interstate-5 and the Castaic Sports Complex.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
|---|---|---|---|---|---|---|
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Attach additional sheets if necessary

# Willow Flycatcher (WIFL) Survey and Detection Form (revised April, 2010)

Site Name: LA County Department of Public Works Soft-Bottom Channels State: CA County: Los Angeles

USGS Quad Name: Newhall and Val Verde Elevation: 361 (meters)

Creek, River, or Lake Name: Hasley Canyon Channel (Reach 110)

***Is copy of USGS map marked with survey area and WIFL sightings attached (as required)?*** *Yes* ~~X~~ *No* ____

Survey Coordinates: Start: E 349511 N 3813766 UTM Datum: WGS84 (See instructions)

Stop: E 350785 N 3812746 UTM Zone: 11

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

*****Fill in additional site information on back of this page*****

| Survey # Observer(s) (Full Name) | Date (m/d/y) Survey Time | Number of Adult WIFLs | Estimated Number of Pairs | Estimated Number of Territories | Nest(s) Found? Y or N If Yes, number of nests | Comments (e.g., bird behavior; evidence of pairs or breeding;-potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator. | GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Survey # 1** Observer(s): B. Daniels | Date: 05/30/13 Start: 0610 Stop: 0745 Total hrs: 1.6 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 2** Observer(s): B. Daniels | Date: 06/13/13 Start: 0550 Stop: 0730 Total hrs: 1.7 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 3** Observer(s): B. Daniels | Date: 06/20/13 Start: 0545 Stop: 0715 Total hrs: 1.5 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 4** Observer(s): B. Daniels | Date: 06/27/13 Start: 0545 Stop: 0700 Total hrs: 1.25 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |
| **Survey # 5** Observer(s): B. Daniels | Date: 07/10/13 Start: 0545 Stop: 0645 Total hrs: 1.0 | 0 | 0 | 0 | N | | # Birds: 0 | Sex | UTM E | UTM N |

| Overall Site Summary | Total Adult Residents | Total Pairs | Total Territories | Total Nests | Were any WIFLs color-banded? Yes ____ No ____ |
|---|---|---|---|---|---|
| Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total survey hrs: 7.1 | 0 | 0 | 0 | 0 | If yes, report color combination(s) in the comments section on back of form and report to USFWS. |

Reporting Individual: Brian E. Daniels Date Report Completed: 2013

US Fish & Wildlife Service Permit #: TE821401-4 State Wildlife Agency Permit #: SC-4535

***Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.***

***Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.***

Reporting Individual: Brian E. Daniels — Phone #: 626-351-2000

Affiliation: BonTerra Consulting — E-mail: bdaniels@bonterraconsulting.com

Site Name: LA County Department of Public Works Soft-Bottom Channels — Date report Completed: 2013

Was this site surveyed in a previous year? Yes x No ____ Unknown ____

Did you verify that this site name is consistent with that used in previous yrs? Yes X No ____ Not Applicable ____

If name is different, what name(s) was used in the past? ____

If site was surveyed last year, did you survey the same general area this year? Yes X No ____ If no, summarize below.

Did you survey the same general area during each visit to this site this year? Yes X No ____ If no, summarize below.

Management Authority for Survey Area: Federal ____ Municipal/County X State ____ Tribal ____ Private ____

Name of Management Entity or Owner (e.g., Tonto National Forest): LA County Department of Public Works (Flood Maintenance Division)

Length of area surveyed: 1.75 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

X — Native broadleaf plants (entirely or almost entirely, > 90% native)

____ Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
*Salix sp., Baccharis salicifolia, Populus fremontii*

Average height of canopy (Do not include a range): 5 m (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections;
2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests;
3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

A fairly narrow and dry channel that transitions from dense woodland downstream to sparse shrubs at its upstream terminus.

Territory Summary Table. Provide the following information for each verified territory at your site.

| Territory Number | All Dates Detected | UTM E | UTM N | Pair Confirmed? Y or N | Nest Found? Y or N | Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior) |
|---|---|---|---|---|---|---|
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Attach additional sheets if necessary

# APPENDIX G

# LEAST BELL'S VIREO SURVEY DATA SUMMARY SHEETS

# LEAST BELL'S VIREO SURVEY DATA SUMMARY

| Site Information | |
|---|---|
| Project Title: | Soft-bottom Channel Reach 12 |
| Landowner: | Los Angeles County Department of Public Works |

| Survey Information | | | |
|---|---|---|---|
| Surveyors: | Steve Morris, Brian Daniels | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3792715 | Northing: | 3792737 | WGS84 |
| Easting: | 378432 | Easting: | 378233 | WGS84 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 0.2 | 9 | 7.8 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 0 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 0 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 0 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

| Site Information | |
|---|---|
| Project Title: | Soft-bottom Channel Reach 14 |
| Landowner: | Los Angeles County Department of Public Works |

| Survey Information | | | |
|---|---|---|---|
| Surveyors: | Steve Morris, Brian Daniels | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3797657 | Northing: | 3797496 | WGS84 |
| Easting: | 370286 | Easting: | 370286 | WGS84 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 0.2 | 9 | 13 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 1 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 1 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 2 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
| 1 | 3797539 | 370290 | unpaired |
| 2 | 3797504 | 370436 | paired/2+ fledglings |
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

| Site Information | |
|---|---|
| Project Title: | Soft-bottom Channel Reach 27 |
| Landowner: | Los Angeles County Department of Public Works |

| Survey Information | | | |
|---|---|---|---|
| Surveyors: | Steve Morris, Brian Daniels | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3739755 | Northing: | 3740748 | WGS84 |
| Easting: | 380800 | Easting: | 380667 | WGS84 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 1.0 | 9 | 15 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 0 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 1 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 1 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
| 1 | 3740573 | 380620 | unpaired |
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

| Site Information | |
|---|---|
| Project Title: | Soft-bottom Channel Reach 28 |
| Landowner: | Los Angeles County Department of Public Works |

| Survey Information | | | |
|---|---|---|---|
| Surveyors: | Steve Morris, Brian Daniels | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3776074 | Northing: | 3776450 | WGS84 |
| Easting: | 335965 | Easting: | 335802 | WGS84 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 0.4 | 9 | 9.3 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 0 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 0 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 0 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

| Site Information | |
|---|---|
| Project Title: | Soft-bottom Channel Reach 39 |
| Landowner: | Los Angeles County Department of Public Works |

| Survey Information | | | |
|---|---|---|---|
| Surveyors: | Steve Morris, Brian Daniels | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3778309 | Northing: | 3778620 | WGS84 |
| Easting: | 413530 | Easting: | 414168 | WGS84 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 0.7 | 9 | 17 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 2 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 0 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 2 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
| 1 | 3778307 | 413549 | paired/failed |
| 2 | 3778597 | 414080 | paired/unknown outcome |
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

(Reaches 40b, 43a, 43b)

## Site Information

| | |
|---|---|
| Project Title: | Los Angeles County Soft Bottom Channel Surveys |
| Landowner: | Los Angeles Dept of Public Works |

## Survey Information

| | | | |
|---|---|---|---|
| Surveyors: | Jim Pike | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3762839 | Northing: | 3767887 | NAD 83 |
| Easting: | 0401220 | Easting: | 0406552 | " " |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 4.34 | 9 | 40.5 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 6 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 2 | The total number of resident males not confirmed as paired. |
| "Non-territorial" Transient: | 3 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 11 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
| LBV 1 | 3764482 | 0402103 | Two nests depradated |
| LBV 2 | 3764665 | 0402273 | Female and 1 fledgling |
| LBV 3 | 3764811 | 0402384 | Unpaired |
| LBV 4 | 3767041 | 0405403 | Fledged 4 |
| LBV 5 | 3767122 | 0405626 | 3 fledglings, second nest with eg |
| LBV 6 | 3767194 | 0405700 | 8 fledglings from 2 nests |
| LBV 7 | 3767363 | 0406132 | Unpaired |
| LBV 8 | 3767732 | 0406487 | Paired |
| | | | |
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Reach 43a

Reach 40b

# LEAST BELL'S VIREO SURVEY DATA SUMMARY

(Reaches 71, 75, 79, 80)

## Site Information

| | |
|---|---|
| Project Title: | Los Angeles County Soft Bottom Channel Surveys |
| Landowner: | Los Angeles Dept of Public Works |

## Survey Information

| | | | |
|---|---|---|---|
| Surveyors: | Jim Pike | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3810291 | Northing: | 3807296 | NAD 83 |
| Easting: | 0356081 | Easting: | 0358349 | " " |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 3.46 | 9 | 31.5 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | | The total number of resident males not confirmed as paired. |
| "Non-territorial" Transient: | 1 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

| Site Information | |
|---|---|
| Project Title: | Soft-bottom Channel Reaches 82 and 109 |
| Landowner: | Los Angeles County Department of Public Works |

| Survey Information | | | |
|---|---|---|---|
| Surveyors: | Steve Morris, Brian Daniels | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3810290 | Northing: | 3810815 | WGS84 |
| Easting: | 356404 | Easting: | 355493 | WGS84 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 1.1 | 9 | 15.5 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 0 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 0 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 0 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
| | | | unpaired |
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

| Site Information | | | |
|---|---|---|---|
| Project Title: | LA County Department of Public Works Soft Bottom Channels, Reach 87/97 | | |
| Landowner: | LA County Department of Public Works | | |
| **Survey Information** | | | |
| Surveyors: | Lindsay Messett, Amber Oneal Heredia | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3812994 | Northing: | 3812307 | NAD83 |
| Easting: | 351348 | Easting: | 351684 | NAD83 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 0.80 km | 8 | 13.6 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 0 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 0 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 0 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

| Site Information | |
|---|---|
| Project Title: | Soft-bottom Channel Reach 103 |
| Landowner: | Los Angeles County Department of Public Works |

| Survey Information | | | |
|---|---|---|---|
| Surveyors: | Steve Morris, Brian Daniels | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3810685 | Northing: | 3810426 | WGS84 |
| Easting: | 358459 | Easting: | 358161 | WGS84 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 0.4 | 9 | 5.4 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 0 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 0 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 0 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
| | | | unpaired |
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

| Site Information | | | |
|---|---|---|---|
| Project Title: | LA County Department of Public Works Soft Bottom Channels, Reach 104 | | |
| Landowner: | LA County Department of Public Works | | |
| **Survey Information** | | | |
| Surveyors: | Lindsay Messett, Amber Oneal Heredia | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3812915 | Northing: | 3812352 | NAD83 |
| Easting: | 351547 | Easting: | 351791 | NAD83 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 0.52 km | 8 | 8.0 |

**Least Bell's Vireo Detection Information**

Number of males that were:

| | | |
|---|---|---|
| Paired: | 0 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 0 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 0 | The sum of the three categories above. |

**Coordinates for LBVI Territories (continue on second sheet if necessary)**

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

## Site Information

| | |
|---|---|
| Project Title: | Soft-bottom Channel Reach 105 |
| Landowner: | Los Angeles County Department of Public Works |

## Survey Information

| | | | |
|---|---|---|---|
| Surveyors: | Steve Morris, Brian Daniels | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3812709 | Northing: | 3812286 | WGS84 |
| Easting: | 356915 | Easting: | 356841 | WGS84 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 0.4 | 9 | 5.6 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 0 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 0 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 0 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
| | | | unpaired |
| | | | |
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

| Site Information | |
|---|---|
| Project Title: | LA County Department of Public Works Soft Bottom Channels, Reach 106 |
| Landowner: | LA County Department of Public Works |

| Survey Information | | | |
|---|---|---|---|
| Surveyors: | Lindsay Messett, Amber Oneal Heredia | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3817198 | Northing: | 3816785 | NAD83 |
| Easting: | 351666 | Easting: | 351781 | NAD83 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 0.43 km | 8 | 8.4 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 0 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 0 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 0 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
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# LEAST BELL'S VIREO SURVEY DATA SUMMARY

| Site Information | |
|---|---|
| Project Title: | Soft-bottom Channel Reach 110 |
| Landowner: | Los Angeles County Department of Public Works |

| Survey Information | | | |
|---|---|---|---|
| Surveyors: | Steve Morris, Brian Daniels | Year: | 2013 |

| Survey Begin Coordinates | | Survey End Coordinates | | Datum |
|---|---|---|---|---|
| Northing: | 3813766 | Northing: | 3812746 | WGS84 |
| Easting: | 349511 | Easting: | 350785 | WGS84 |

| Survey Length (Km) | Total Number of Surveys | Total Number of Survey Hours |
|---|---|---|
| 1.75 | 9 | 7.1 |

## Least Bell's Vireo Detection Information

Number of males that were:

| | | |
|---|---|---|
| Paired: | 0 | Based on observation of female, nest, young, or nesting behavior (nest-building, food carrying). |
| Undetermined Status: | 0 | The total number of resident males not confirmed as paired. |
| Transient: | 0 | Only detected once despite repeated surveys, or were not detected at the same location for more than 2 weeks. |
| Total number of males: | 0 | The sum of the three categories above. |

## Coordinates for LBVI Territories (continue on second sheet if necessary)

| Territory ID | Northing | Easting | Status/Comments (e.g. paired) |
|---|---|---|---|
| | | | unpaired |
| | | | |
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# APPENDIX D

# DATA WORKBOOKS

| PLANT SPECIES | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Transect 26-1 (80 feet) | | Transect 26-1 (80 feet) | | Transect 26-2 (80 feet) | | Transect 26-2 (80 feet) | | Transect 26-3 (200 feet) | | Transect 26-3 (200 feet) | | Transect 26-4 (90 feet) | | Transect 26-4 (90 feet) | |
| | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage |
| **Native** | | | | | | | | | | | | | | | | |
| *Bidens frondosa* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| *Conyza canadensis* | 2 | 4.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | 3 | 6.0% | | 0.0% |
| *Leymus triticoides* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 3 | 6.0% | | 0.0% | | 0.0% | | 0.0% |
| *Ludwigia peploides* | 7 | 14.0% | | 0.0% | 23 | 46.0% | 3 | 6.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Salix goodingii* | | 0.0% | | 0.0% | 26 | 52.0% | 22 | 44.0% | 84 | 168.0% | 65 | 130.0% | 29 | 58.0% | 6 | 12.0% |
| *Scirpus (tall)* | 22 | 44.0% | 16 | 32.0% | | 0.0% | 6 | 12.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Solanum (sm one)* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| **Non-native** | | | | | | | | | | | | | | | | |
| *Ailanthus altissima* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| *Avena* sp. | 2 | 4.0% | | 0.0% | 4 | 8.0% | | 0.0% | 18 | 36.0% | | 0.0% | 23 | 46.0% | | 0.0% |
| *Bromus diandrus* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 13 | 26.0% | | 0.0% | 6 | 12.0% | | 0.0% |
| *Bromus madritensis* ssp. *rubens* | 1 | 2.0% | | 0.0% | 10 | 20.0% | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Centaurea repens* | 7 | 14.0% | | 0.0% | 18 | 36.0% | 5 | 10.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Chrysanthemum coronarium* | 24 | 48.0% | | 0.0% | 10 | 20.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Cynodon dactylon* | | 0.0% | 5 | 10.0% | | 0.0% | | 0.0% | 29 | 58.0% | | 0.0% | | 0.0% | | 0.0% |
| *Cyperus involucratus* (umbrella) | 3 | 6.0% | | 0.0% | | 0.0% | 1 | 2.0% | 2 | 4.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Ehrharta erecta* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 20 | 40.0% | | 0.0% |
| *Foeniculum vulgare* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Fraxinus* sp. (NN) | | 0.0% | | 0.0% | 28 | 56.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Fraxinus* sp. | | 0.0% | | 0.0% | | 0.0% | 30 | 60.0% | 122 | 244.0% | 148 | 296.0% | 57 | 114.0% | 9 | 18.0% |
| *Hedera helix* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 3 | 6.0% | | 0.0% |
| *Lolium perenne* | 15 | 30.0% | | 0.0% | 10 | 20.0% | | 0.0% | 28 | 56.0% | | 0.0% | 5 | 10.0% | | 0.0% |
| *Ludwigia s (NN)* | | 0.0% | 18 | 36.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Melilotus albus* | 4 | 8.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *NNG* | | 0.0% | | 0.0% | | 0.0% | 15 | 30.0% | | 0.0% | 82 | 164.0% | | 0.0% | 30 | 60.0% |
| *Picris echioides* | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% | | 0.0% | | 0.0% | 9 | 18.0% | | 0.0% |
| *Plantago lanceolata* | 4 | 8.0% | 1 | 2.0% | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | 4 | 8.0% | | 0.0% |
| *Raphanus sativus* | 4 | 8.0% | 5 | 10.0% | 1 | 2.0% | 4 | 8.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Ricinus communis* | 6 | 12.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Smilo* | 12 | 24.0% | | 0.0% | 8 | 16.0% | | 0.0% | 33 | 66.0% | | 0.0% | 7 | 14.0% | | 0.0% |
| *Sonchus oleraceus* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Washingtonia* sp. | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| Passion vine | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% | | 0.0% | | 0.0% |
| *Privet* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 11 | 22.0% | | 0.0% | | 0.0% | | 0.0% |
| **ABSOLUTE COVERAGE** | | | | | | | | | | | | | | | | |
| **Total Abs. Native Species Coverage** | | 62.0% | | 32.0% | | 100.0% | | 62.0% | | 174.0% | | 130.0% | | 72.0% | | 12.0% |
| **Total Abs. Non-Native Species Coverage** | | 148.0% | | 58.0% | | 120.0% | | 100.0% | | 458.0% | | 460.0% | | 218.0% | | 78.0% |
| **Total Absolute Coverage (All)** | | 230.0% | | 90.0% | | 284.0% | | 172.0% | | 694.0% | | 590.0% | | 354.0% | | 90.0% |
| **CLASS COVERAGE** | | | | | | | | | | | | | | | | |
| **Native** | 3 | 6.0% | 1 | 2.0% | | 0.0% | 11 | 22.0% | 34 | 68.0% | 37 | 74.0% | 4 | 8.0% | 4 | 8.0% |
| **Non-Native** | 32 | 64.0% | 13 | 26.0% | 52 | 104.0% | 39 | 78.0% | 115 | 230.0% | 129 | 258.0% | 61 | 122.0% | 37 | 74.0% |
| **Both** | 19 | 38.0% | 15 | 30.0% | 26 | 52.0% | 13 | 26.0% | 51 | 102.0% | 26 | 52.0% | 25 | 50.0% | 2 | 4.0% |
| **No Plant** | 26 | 52.0% | 51 | 102.0% | 2 | 4.0% | 17 | 34.0% | | 0.0% | 8 | 16.0% | | 0.0% | 47 | 94.0% |
| **CHECK** | | 160.0% | | 160.0% | | 160.0% | | 160.0% | | 400.0% | | 400.0% | | 180.0% | | 180.0% |
| **SUMMARY** | | | | | | | | | | | | | | | | |
| **Total Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Non-Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Unvegetated** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **GROUND COVER** | | | | | | | | | | | | | | | | |
| Bare Soil | 22 | 44.0% | 59 | 118.0% | 12 | 24.0% | 34 | 68.0% | 2 | 4.0% | 38 | 76.0% | 4 | 8.0% | 48 | 96.0% |
| Rock/Cobble | 3 | 6.0% | 2 | 4.0% | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% |
| Leaf Litter | 52 | 104.0% | 28 | 56.0% | 57 | 114.0% | 34 | 68.0% | 154 | 308.0% | 146 | 292.0% | 79 | 158.0% | 27 | 54.0% |
| Coarse Woody Debris | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 3 | 6.0% | | 0.0% | | 0.0% | | 0.0% |
| Open Water | 3 | 6.0% | | 0.0% | 11 | 22.0% | 12 | 24.0% | 11 | 22.0% | 14 | 28.0% | 7 | 14.0% | 14 | 28.0% |
| Other litter | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 30 | 60.0% | | 0.0% | | 0.0% | | 0.0% |
| Trash | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% |
| **CHECK** | 80 | 160.0% | 89 | 178.0% | 80 | 160.0% | 80 | 160.0% | 200 | 400.0% | 200 | 400.0% | 90 | 180.0% | 89 | 178.0% |

| PLANT SPECIES | Pre-clearing Transect 28-1 (165 feet) | | Post-clearing Transect 28-1 (165 feet) | | Pre-clearing Transect 28-2 (168 feet) | | Post-clearing Transect 28-2 (168 feet) | |
|---|---|---|---|---|---|---|---|---|
| | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage |
| **Native** | | | | | | | | |
| *Ambrosia psilostachya* | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% |
| *Artemesia douglasiana* | 13 | 26.0% | 6 | 12.0% | | 0.0% | 3 | 6.0% |
| *Baccharis salicifolia* | 49 | 98.0% | 50 | 100.0% | | 0.0% | | 0.0% |
| *Platanus racemosa* | 11 | 22.0% | 31 | 62.0% | | 0.0% | | 0.0% |
| *Salix (red)* | 38 | 76.0% | | 0.0% | | 0.0% | | 0.0% |
| *Salix lasiolepis* | | 0.0% | | 0.0% | 107 | 214.0% | 110 | 220.0% |
| *Scirpus (tall)* | 31 | 62.0% | 32 | 64.0% | | 0.0% | | 0.0% |
| **Non-native** | | | | | | | | |
| *Avena* sp. | | 0.0% | | 0.0% | 5 | 10.0% | | 0.0% |
| *Bromus diandrus* | 2 | 4.0% | 2 | 4.0% | 2 | 4.0% | | 0.0% |
| *Bromus madritensis* ssp. *rubens* | 6 | 12.0% | | 0.0% | 9 | 18.0% | | 0.0% |
| *Carduus pycnocephalus* | 3 | 6.0% | | 0.0% | 4 | 8.0% | | 0.0% |
| *Centaurea melitensis* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% |
| *Centaurea solstitialis* | 10 | 20.0% | | 0.0% | 3 | 6.0% | | 0.0% |
| *Erodium botrys* | 4 | 8.0% | | 0.0% | | 0.0% | | 0.0% |
| *Euphorbia peploides* | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Foeniculum vulgare* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% |
| *Hirschfeldia incana* | 5 | 10.0% | | 0.0% | 10 | 20.0% | | 0.0% |
| *Lepidium latifolium* | | 0.0% | | 0.0% | 20 | 40.0% | | 0.0% |
| *Non-native grasses* | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% |
| *Opuntia ficus-indica* | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| *Plantago major* | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Polypogon monspeliensis* | | 0.0% | | 0.0% | 3 | 6.0% | | 0.0% |
| Smilo grass | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Vulpia myuros* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% |
| **ABSOLUTE COVERAGE** | | | | | | | | |
| **Total Abs. Native Species Coverage** | | 284.0% | | 238.0% | | 214.0% | | 226.0% |
| **Total Abs. Non-Native Species Coverage** | | 22.0% | | 0.0% | | 76.0% | | 2.0% |
| **Total Absolute Coverage (All)** | | 350.0% | | 242.0% | | 336.0% | | 228.0% |
| **CLASS COVERAGE** | | | | | | | | |
| **Native** | 67 | 134.0% | 88 | 176.0% | 93 | 186.0% | 110 | 220.0% |
| **Non-Native** | 43 | 86.0% | 2 | 4.0% | 38 | 76.0% | 1 | 2.0% |
| **Both** | 4 | 8.0% | | 0.0% | 14 | 28.0% | | 0.0% |
| **No Plant** | 51 | 102.0% | 75 | 150.0% | 22 | 44.0% | 57 | 114.0% |
| **CHECK** | | 330.0% | | 330.0% | | 334.0% | | 336.0% |
| **SUMMARY** | | | | | | | | |
| **Total Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Non-Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Unvegetated** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **GROUND COVER** | | | | | | | | |
| Bare Soil | 5 | 10.0% | 5 | 10.0% | 5 | 10.0% | 6 | 12.0% |
| Rock/Cobble | 10 | 20.0% | 3 | 6.0% | 6 | 12.0% | 1 | 2.0% |
| Leaf Litter | 142 | 284.0% | 146 | 292.0% | 92 | 184.0% | 123 | 246.0% |
| Coarse Woody Debris | | 0.0% | | 0.0% | 21 | 42.0% | 3 | 6.0% |
| Open Water | | 0.0% | | 0.0% | 16 | 32.0% | 4 | 8.0% |
| Seedlings | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| Seedlings/Bare Soil | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| Riprap un-grouted | | 0.0% | | 0.0% | | 0.0% | 25 | 50.0% |
| Riprap grouted | 8 | 16.0% | 11 | 22.0% | 22 | 44.0% | 6 | 12.0% |
| Other litter | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **CHECK** | 165 | 330.0% | 165 | 330.0% | 162 | 324.0% | 168 | 336.0% |

| PLANT SPECIES | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | |
|---|---|---|---|---|---|---|---|---|
| | Transect 29-1 (40 feet) | | Transect 29-1 (40 feet) | | Transect 29-2 (40 feet) | | Transect 29-2 (40 feet) | |
| | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage |
| **Native** | | | | | | | | |
| *Cyperus eragrostis* | | 0.0% | | 0.0% | 7 | 14.0% | | 0.0% |
| *Lemma* sp. | | 0.0% | 6 | 12.0% | | 0.0% | | 0.0% |
| *Rosa californica* | | 0.0% | | 0.0% | 9 | 18.0% | 10 | 20.0% |
| *Salix laevigata* | | 0.0% | | 0.0% | 16 | 32.0% | 16 | 32.0% |
| *Typha* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% |
| **Non-native** | | | | | | | | |
| *Hirschfeldia incana* | 7 | 14.0% | | 0.0% | 3 | 6.0% | | 0.0% |
| *Polypogon monspeliensis* | 5 | 10.0% | 3 | 6.0% | 1 | 2.0% | | 0.0% |
| **ABSOLUTE COVERAGE** | | | | | | | | |
| **Total Abs. Native Species Coverage** | | 2.0% | | 12.0% | | 64.0% | | 52.0% |
| **Total Abs. Non-Native Species Coverage** | | 24.0% | | 6.0% | | 8.0% | | 0.0% |
| **Total Absolute Coverage (All)** | | 26.0% | | 18.0% | | 72.0% | | 52.0% |
| **CLASS COVERAGE** | | | | | | | | |
| **Native** | 1 | 2.0% | 6 | 12.0% | 20 | 40.0% | 16 | 32.0% |
| **Non-Native** | 10 | 20.0% | 3 | 6.0% | 1 | 2.0% | | 0.0% |
| **Both** | | 0.0% | | 0.0% | 3 | 6.0% | | 0.0% |
| **No Plant** | 29 | 58.0% | 31 | 62.0% | 16 | 32.0% | 24 | 48.0% |
| **CHECK** | | 80.0% | | 80.0% | | 80.0% | | 80.0% |
| **SUMMARY** | | | | | | | | |
| **Total Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Non-Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Unvegetated** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **GROUND COVER** | | | | | | | | |
| Bare Soil | 38 | 76.0% | 27 | 54.0% | 21 | 42.0% | 22 | 44.0% |
| Rock/Cobble | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| Leaf Litter | | 0.0% | 4 | 8.0% | 18 | 36.0% | 16 | 32.0% |
| Coarse Woody Debris | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| Concrete | | 0.0% | | 0.0% | | 0.0% | 2 | 4.0% |
| Open Water | 2 | 4.0% | 9 | 18.0% | | 0.0% | | 0.0% |
| Seedlings | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| Seedlings/Bare Soil | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| Riprap grouted | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| Other litter | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **CHECK** | 40 | 80.0% | 40 | 80.0% | 40 | 80.0% | 40 | 80.0% |

| PLANT SPECIES | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Transect 32-1 (27 feet) | | Transect 32-1 (27 feet) | | Transect 32-2 (27 feet) | | Transect 32-2 (27 feet) | | Transect 32-3 (27 feet) | | Transect 32-3 (27 feet) | | Transect 32-4 (27 feet) | | Transect 32-4 (27 feet) | |
| | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage |
| **Native** | | | | | | | | | | | | | | | | |
| *Epilobium ciliatum* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Heliotropium curassavicum* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Populus fremontii* | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Typha* sp. (mowed) | | 0.0% | 3 | 6.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Typha* sp. (slender?) | 20 | 40.0% | | 0.0% | 3 | 6.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Non-native** | | | | | | | | | | | | | | | | |
| *Ambrosia psilostachya* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 3 | 6.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Apium graveolens* | 9 | 18.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Avena* sp. | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% |
| *Bromus diandrus* | | 0.0% | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% | | 0.0% | 13 | 26.0% | | 0.0% |
| *Bromus hordeaceus* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 11 | 22.0% | | 0.0% | | 0.0% | | 0.0% |
| *Bromus madritensis* ssp. *rubens* | | 0.0% | | 0.0% | 2 | 4.0% | 1 | 2.0% | 14 | 28.0% | | 0.0% | 16 | 32.0% | | 0.0% |
| *Cynodon dactylon* | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Eragrostis* sp. | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Melilotus albus* | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | 8 | 16.0% | | 0.0% | | 0.0% | | 0.0% |
| *Melilotus* sp. | | 0.0% | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Mimulus aurantiacus* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% |
| *NNG (?) slid* | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Polypogon monspeliensis* | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% |
| *Vulpia myuros* | | 0.0% | | 0.0% | 1 | 2.0% | 1 | 2.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% |
| **ABSOLUTE COVERAGE** | | | | | | | | | | | | | | | | |
| **Total Abs. Native Species Coverage** | | 44.0% | | 6.0% | | 8.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Abs. Non-Native Species Coverage** | | 0.0% | | 0.0% | | 8.0% | | 6.0% | | 2.0% | | 4.0% | | 0.0% | | 0.0% |
| **Total Absolute Coverage (All)** | | 62.0% | | 6.0% | | 22.0% | | 16.0% | | 76.0% | | 4.0% | | 60.0% | | 0.0% |
| **CLASS COVERAGE** | | | | | | | | | | | | | | | | |
| **Native** | 12 | 24.0% | 3 | 6.0% | 4 | 8.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% |
| **Non-Native** | 1 | 2.0% | | 0.0% | 6 | 12.0% | 7 | 14.0% | 22 | 44.0% | 1 | 2.0% | 24 | 48.0% | | 0.0% |
| **Both** | 8 | 16.0% | | 0.0% | | 0.0% | | 0.0% | 3 | 6.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| **No Plant** | 6 | 12.0% | 24 | 48.0% | 17 | 34.0% | 20 | 40.0% | 2 | 4.0% | 25 | 50.0% | 2 | 4.0% | 27 | 54.0% |
| **CHECK** | | 54.0% | | 54.0% | | 54.0% | | 54.0% | | 54.0% | | 54.0% | | 54.0% | | 54.0% |
| **SUMMARY** | | | | | | | | | | | | | | | | |
| **Total Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Non-Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Unvegetated** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **GROUND COVER** | | | | | | | | | | | | | | | | |
| Bare Soil | 6 | 12.0% | 10 | 20.0% | | 0.0% | 1 | 2.0% | 4 | 8.0% | 11 | 22.0% | | 0.0% | 5 | 10.0% |
| Bare Soil/sand | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| Rock/Cobble | | 0.0% | | 0.0% | | 0.0% | 16 | 32.0% | | 0.0% | | 0.0% | 5 | 10.0% | 3 | 6.0% |
| Leaf Litter | 21 | 42.0% | 17 | 34.0% | 7 | 14.0% | 8 | 16.0% | 23 | 46.0% | 16 | 32.0% | 22 | 44.0% | 19 | 38.0% |
| Coarse Woody Debris | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| Open Water | | 0.0% | | 0.0% | 2 | 4.0% | 2 | 4.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| Boulder | | 0.0% | | 0.0% | 16 | 32.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **CHECK** | 27 | 54.0% | 27 | 54.0% | 27 | 54.0% | 27 | 54.0% | 27 | 54.0% | 27 | 54.0% | 27 | 54.0% | 27 | 54.0% |

| PLANT SPECIES | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Transect 33-1 (32 feet) | | Transect 33-1 (32 feet) | | Transect 33-2 (32 feet) | | Transect 33-2 (32 feet) | | Transect 33-3 (32 feet) | | Transect 33-3 (32 feet) | | Transect 33-4 (32 feet) | | Transect 33-4 (32 feet) | |
| | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage |
| **Native** | | | | | | | | | | | | | | | | |
| *Baccharis pilularis* | | 0.0% | | 0.0% | 11 | 22.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Salix laevigata* | 15 | 30.0% | | 0.0% | | 0.0% | | 0.0% | 27 | 54.0% | | 0.0% | | 0.0% | | 0.0% |
| *Salix lasiolepis* | 9 | 18.0% | | 0.0% | | 0.0% | | 0.0% | 12 | 24.0% | | 0.0% | | 0.0% | | 0.0% |
| *Scirpus* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 24 | 48.0% | | 0.0% |
| *Typha* | | 0.0% | | 0.0% | 7 | 14.0% | | 0.0% | 4 | 8.0% | | 0.0% | 9 | 18.0% | | 0.0% |
| **Non-native** | | | | | | | | | | | | | | | | |
| Avena sp. | 4 | 8.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Bromus diandrus* | 2 | 4.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Lepidium* | | 0.0% | | 0.0% | 8 | 16.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Smilo* | 3 | 6.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **ABSOLUTE COVERAGE** | | | | | | | | | | | | | | | | |
| **Total Abs. Native Species Coverage** | | 48.0% | | 0.0% | | 36.0% | | 0.0% | | 86.0% | | 0.0% | | 66.0% | | 0.0% |
| **Total Abs. Non-Native Species Coverage** | | 6.0% | | 0.0% | | 16.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Absolute Coverage (All)** | | 66.0% | | 0.0% | | 52.0% | | 0.0% | | 86.0% | | 0.0% | | 66.0% | | 0.0% |
| **CLASS COVERAGE** | | | | | | | | | | | | | | | | |
| **Native** | 20 | 40.0% | | 0.0% | 11 | 22.0% | | 0.0% | 32 | 64.0% | | 0.0% | 31 | 62.0% | | 0.0% |
| **Non-Native** | 3 | 6.0% | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Both** | 4 | 8.0% | | 0.0% | 7 | 14.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **No Plant** | 5 | 10.0% | | 0.0% | 13 | 26.0% | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| **CHECK** | | 64.0% | | 0.0% | | 64.0% | | 0.0% | | 64.0% | | 0.0% | | 64.0% | | 0.0% |
| **SUMMARY** | | | | | | | | | | | | | | | | |
| **Total Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Non-Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Unvegetated** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **GROUND COVER** | | | | | | | | | | | | | | | | |
| Bare Soil | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| Leaf Litter | 12 | 24.0% | | 0.0% | 15 | 30.0% | | 0.0% | 12 | 24.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| Open Water | 19 | 38.0% | | 0.0% | 17 | 34.0% | | 0.0% | 20 | 40.0% | | 0.0% | 30 | 60.0% | | 0.0% |
| **CHECK** | 32 | 64.0% | 0 | 0.0% | 32 | 64.0% | 0 | 0.0% | 32 | 64.0% | 0 | 0.0% | 32 | 64.0% | 0 | 0.0% |

**TRANSECT 33 NOT CLEARED AT TIME OF DATA ENTRY- NO POST CLEARANCE DATA**

| PLANT SPECIES | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | |
|---|---|---|---|---|---|---|---|---|
| | Transect 34-1 (20 feet) | | Transect 34-1 (20 feet) | | Transect 34-2 (20 feet) | | Transect 34-2 (20 feet) | |
| | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage |
| **Native** | | | | | | | | |
| *Rorippa nasturtium-aquaticum* | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Salix laevigata* | 8 | 16.0% | 8 | 16.0% | | 0.0% | | 0.0% |
| *Salix lasiolepis* | 17 | 34.0% | 17 | 34.0% | 20 | 40.0% | 20 | 40.0% |
| *Typha* sp. | | 0.0% | | 0.0% | 4 | 8.0% | 3 | 6.0% |
| **Non-native** | | | | | | | | |
| *Cynodon dactylon* | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| *Cyperus* sp. | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% |
| *Lepidium latifolium* | 8 | 16.0% | | 0.0% | 17 | 34.0% | 7 | 14.0% |
| *Lepidium* sp. | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% |
| *Picris echioides* | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| Smilo grass | | 0.0% | | 0.0% | 3 | 6.0% | 3 | 6.0% |
| **ABSOLUTE COVERAGE** | | | | | | | | |
| **Total Abs. Native Species Coverage** | | 50.0% | | 50.0% | | 50.0% | | 46.0% |
| **Total Abs. Non-Native Species Coverage** | | 18.0% | | 2.0% | | 46.0% | | 20.0% |
| **Total Absolute Coverage (All)** | | 68.0% | | 52.0% | | 96.0% | | 66.0% |
| **CLASS COVERAGE** | | | | | | | | |
| **Native** | 12 | 24.0% | 19 | 38.0% | 1 | 2.0% | 10 | 20.0% |
| **Non-Native** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Both** | 8 | 16.0% | 1 | 2.0% | 19 | 38.0% | 10 | 20.0% |
| **No Plant** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **CHECK** | | 40.0% | | 40.0% | | 40.0% | | 40.0% |
| **SUMMARY** | | | | | | | | |
| **Total Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Non-Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Unvegetated** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **GROUND COVER** | | | | | | | | |
| Bare Soil | 1 | 2.0% | 3 | 6.0% | 1 | 2.0% | | 0.0% |
| Leaf Litter | 8 | 16.0% | 4 | 8.0% | 15 | 30.0% | 13 | 26.0% |
| Open Water | 11 | 22.0% | 13 | 26.0% | 4 | 8.0% | 7 | 14.0% |
| **CHECK** | 20 | 40.0% | 20 | 40.0% | 20 | 40.0% | 20 | 40.0% |

| PLANT SPECIES | Pre-clearing Transect 35-1 (70 feet) | | Post-clearing Transect 35-1 (70 feet) | | Pre-clearing Transect 35-2 (70 feet) | | Post-clearing Transect 35-2 (70 feet) | |
|---|---|---|---|---|---|---|---|---|
| | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage |
| **Native** | | | | | | | | |
| *Baccharis pilularis* | | 0.0% | | 0.0% | 5 | 10.0% | 5 | 10.0% |
| *Rorippa nasturtium-aquaticum* | 1 | 2.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Rosa californica* | | 0.0% | | 0.0% | 8 | 16.0% | 4 | 8.0% |
| *Salix laevigata* | 12 | 24.0% | | 0.0% | | 0.0% | | 0.0% |
| *Salix lasiolepis* | 5 | 10.0% | | 0.0% | 14 | 28.0% | | 0.0% |
| *Typha* | 26 | 52.0% | 1 | 2.0% | 23 | 46.0% | 4 | 8.0% |
| **Non-native** | | | | | | | | |
| *Ailanthus altissima* | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Avena* sp. | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| *Bromus diandrus* | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Bromus madritensis* ssp. *rubens* | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| *Camascysis sp.* | 2 | 4.0% | | 0.0% | | 0.0% | | 0.0% |
| *Centaurea melitensis* | | 0.0% | | 0.0% | 10 | 20.0% | 9 | 18.0% |
| *Lepidium latifolium* | 28 | 56.0% | 2 | 4.0% | 16 | 32.0% | 4 | 8.0% |
| *Melilotus albus* | | 0.0% | | 0.0% | 19 | 38.0% | | 0.0% |
| *Nicotiana glauca* | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| *NNG* | | 0.0% | | 0.0% | | 0.0% | 4 | 8.0% |
| *Picris* | | 0.0% | | 0.0% | 7 | 14.0% | | 0.0% |
| *Polypogon monspeliensis* | | 0.0% | | 0.0% | 4 | 8.0% | | 0.0% |
| Smilo grass | 28 | 56.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| *Sonchus oleraceus* | | 0.0% | | 0.0% | 6 | 12.0% | | 0.0% |
| *Veronica* | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| Willow herb | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% |
| **ABSOLUTE COVERAGE** | | | | | | | | |
| **Total Abs. Native Species Coverage** | | 88.0% | | 2.0% | | 102.0% | | 26.0% |
| **Total Abs. Non-Native Species Coverage** | | 114.0% | | 4.0% | | 116.0% | | 16.0% |
| **Total Absolute Coverage (All)** | | 206.0% | | 6.0% | | 246.0% | | 60.0% |
| **CLASS COVERAGE** | | | | | | | | |
| **Native** | 18 | 36.0% | 1 | 2.0% | 35 | 70.0% | 14 | 28.0% |
| **Non-Native** | 14 | 28.0% | 2 | 4.0% | 20 | 40.0% | 16 | 32.0% |
| **Both** | 15 | 30.0% | | 0.0% | 15 | 30.0% | | 0.0% |
| **No Plant** | 23 | 46.0% | 67 | 134.0% | | 0.0% | 40 | 80.0% |
| **CHECK** | | 140.0% | | 140.0% | | 140.0% | | 140.0% |
| **SUMMARY** | | | | | | | | |
| **Total Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Non-Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Unvegetated** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **GROUND COVER** | | | | | | | | |
| Bare Soil | | 0.0% | 6 | 12.0% | 2 | 4.0% | 5 | 10.0% |
| Rock/Cobble | 5 | 10.0% | 6 | 12.0% | | 0.0% | | 0.0% |
| Leaf Litter | 15 | 30.0% | 2 | 4.0% | 39 | 78.0% | 32 | 64.0% |
| Coarse Woody Debris | | 0.0% | | 0.0% | 6 | 12.0% | 7 | 14.0% |
| Open Water | 17 | 34.0% | 18 | 36.0% | 15 | 30.0% | 11 | 22.0% |
| Riprap grouted | 33 | 66.0% | 38 | 76.0% | 8 | 16.0% | 15 | 30.0% |
| **CHECK** | 70 | 140.0% | 70 | 140.0% | 70 | 140.0% | 70 | 140.0% |

| PLANT SPECIES | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | |
|---|---|---|---|---|---|---|---|---|
| | Transect 36-1 (65 feet) | | Transect 36-1 (65 feet) | | Transect 36-2 (65 feet) | | Transect 36-2 (65 feet) | |
| | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage |
| **Native** | | | | | | | | |
| *Artemisia douglasiana* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% |
| *Salix laevigata* | | 0.0% | | 0.0% | 20 | 40.0% | 20 | 40.0% |
| *Salix lasiolepis* | 65 | 130.0% | 65 | 130.0% | 36 | 72.0% | 45 | 90.0% |
| **Non-native** | | | | | | | | |
| *Bromus diandrus* | | 0.0% | | 0.0% | 6 | 12.0% | | 0.0% |
| *Bromus madritensis* ssp. *rubens* | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Juglans (nn species- european)* | 13 | 26.0% | 8 | 16.0% | | 0.0% | 1 | 2.0% |
| Smilo grass | 3 | 6.0% | | 0.0% | 10 | 20.0% | | 0.0% |
| Turfgrass fescue | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% |
| *Vinca (nn)* | 13 | 26.0% | | 0.0% | | 0.0% | | 0.0% |
| **ABSOLUTE COVERAGE** | | | | | | | | |
| **Total Abs. Native Species Coverage** | | 132.0% | | 130.0% | | 112.0% | | 130.0% |
| **Total Abs. Non-Native Species Coverage** | | 58.0% | | 16.0% | | 20.0% | | 4.0% |
| **Total Absolute Coverage (All)** | | 190.0% | | 146.0% | | 146.0% | | 134.0% |
| **CLASS COVERAGE** | | | | | | | | |
| **Native** | 36 | 72.0% | 57 | 114.0% | 47 | 94.0% | 63 | 126.0% |
| **Non-Native** | | 0.0% | | 0.0% | 7 | 14.0% | | 0.0% |
| **Both** | 29 | 58.0% | 8 | 16.0% | 9 | 18.0% | 2 | 4.0% |
| **No Plant** | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| **CHECK** | | 130.0% | | 130.0% | | 130.0% | | 130.0% |
| **SUMMARY** | | | | | | | | |
| **Total Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Non-Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Unvegetated** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **GROUND COVER** | | | | | | | | |
| Bare Soil | | 0.0% | 3 | 6.0% | 11 | 22.0% | 3 | 6.0% |
| Leaf Litter | 62 | 124.0% | 54 | 108.0% | 52 | 104.0% | 62 | 124.0% |
| Coarse Woody Debris (root) | 3 | 6.0% | | 0.0% | | 0.0% | | 0.0% |
| Coarse Woody Debris | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| Asphalt | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| **CHECK** | 65 | 130.0% | 57 | 114.0% | 65 | 130.0% | 65 | 130.0% |

| PLANT SPECIES | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | | Pre-clearing | | Post-clearing | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Transect 37-1 (100 feet) | | Transect 37-1 (100 feet) | | Transect 37-2 (100 feet) | | Transect 37-2 (100 feet) | | Transect 37-3 (100 feet) | | Transect 37-3 (100 feet) | |
| | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage |
| **Native** | | | | | | | | | | | | |
| *Cyperus (native)* | 10 | 20.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Leymus triticoides* | 23 | 46.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Lonicera subspicata* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| *Platanus racemosa* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 10 | 20.0% | | 0.0% |
| *Quercus agrifolia* | | 0.0% | | 0.0% | | 0.0% | 8 | 16.0% | | 0.0% | | 0.0% |
| *Quercus lobata* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 43 | 86.0% | | 0.0% |
| *Rorippa nasturtium-aquaticum* | 5 | 10.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Salix laevigata* | 35 | 70.0% | | 0.0% | 51 | 102.0% | 38 | 76.0% | 50 | 100.0% | | 0.0% |
| *Salix lasiolepis* | 22 | 44.0% | 25 | 50.0% | 8 | 16.0% | | 0.0% | 14 | 28.0% | | 0.0% |
| *Salix lasiolepis x w/ed* | | 0.0% | | 0.0% | 19 | 38.0% | | 0.0% | | 0.0% | | 0.0% |
| *Typha sp.* | | 0.0% | | 0.0% | 7 | 14.0% | | 0.0% | | 0.0% | | 0.0% |
| **Non-native** | | | | | | | | | | | | |
| *Ambrosia psilostachya* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 5 | 10.0% | | 0.0% |
| Avena sp. | 4 | 8.0% | | 0.0% | 1 | 2.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Bromus diandrus* | 16 | 32.0% | | 0.0% | 15 | 30.0% | | 0.0% | 35 | 70.0% | | 0.0% |
| *Bromus madritensis* ssp. *rubens* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Carduus pycnocephalus* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% | 3 | 6.0% | | 0.0% |
| *Fig- edible* | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 15 | 30.0% | | 0.0% |
| *Lema* | 9 | 18.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| *Lepidium latifolium* | 1 | 2.0% | | 0.0% | 13 | 26.0% | | 0.0% | | 0.0% | | 0.0% |
| NNG | | 0.0% | 4 | 8.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| Smilo grass | 1 | 2.0% | | 0.0% | 1 | 2.0% | 1 | 2.0% | 24 | 48.0% | | 0.0% |
| **ABSOLUTE COVERAGE** | | | | | | | | | | | | |
| **Total Abs. Native Species Coverage** | | 190.0% | | 50.0% | | 170.0% | | 92.0% | | 238.0% | | 0.0% |
| **Total Abs. Non-Native Species Coverage** | | 22.0% | | 8.0% | | 28.0% | | 2.0% | | 78.0% | | 0.0% |
| **Total Absolute Coverage (All)** | | 256.0% | | 58.0% | | 230.0% | | 94.0% | | 404.0% | | 0.0% |
| **CLASS COVERAGE** | | | | | | | | | | | | |
| **Native** | 57 | 114.0% | 21 | 42.0% | 53 | 106.0% | 46 | 92.0% | 40 | 80.0% | | 0.0% |
| **Non-Native** | 3 | 6.0% | | 0.0% | | 0.0% | 1 | 2.0% | 5 | 10.0% | | 0.0% |
| **Both** | 24 | 48.0% | 4 | 8.0% | 29 | 58.0% | | 0.0% | 52 | 104.0% | | 0.0% |
| **No Plant** | 16 | 32.0% | 75 | 150.0% | 18 | 36.0% | 53 | 106.0% | 3 | 6.0% | | 0.0% |
| **CHECK** | | 200.0% | | 200.0% | | 200.0% | | 200.0% | | 200.0% | | 0.0% |
| **SUMMARY** | | | | | | | | | | | | |
| **Total Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Non-Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Unvegetated** | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **GROUND COVER** | | | | | | | | | | | | |
| Bare Soil | 6 | 12.0% | 23 | 46.0% | 2 | 4.0% | 22 | 44.0% | 1 | 2.0% | | 0.0% |
| Rock/Cobble | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| Leaf Litter | 60 | 120.0% | 25 | 50.0% | 45 | 90.0% | 42 | 84.0% | 76 | 152.0% | | 0.0% |
| Coarse Woody Debris | 3 | 6.0% | | 0.0% | 11 | 22.0% | 3 | 6.0% | 4 | 8.0% | | 0.0% |
| Open Water | 24 | 48.0% | 47 | 94.0% | 4 | 8.0% | 12 | 24.0% | 16 | 32.0% | | 0.0% |
| Riprap grouted | 7 | 14.0% | 5 | 10.0% | 37 | 74.0% | 21 | 42.0% | | 0.0% | | 0.0% |
| Wattle | | 0.0% | | 0.0% | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| **CHECK** | 100 | 200.0% | 100 | 200.0% | 100 | 200.0% | 100 | 200.0% | 100 | 200.0% | 0 | 0.0% |

37-3 Not cleared at time of data entry

| PLANT SPECIES | Pre-clearing Transect 38-1 (50 feet) | | Post-clearing Transect 38-1 (50 feet) | | Pre-clearing Transect 38-2 (50 feet) | | Post-clearing Transect 38-2 (50 feet) | |
|---|---|---|---|---|---|---|---|---|
| | Hits | Coverage | Hits | Coverage | Hits | Coverage | Hits | Coverage |
| **Native** | | | | | | | | |
| *Distichlis spicata* | 3 | 6.0% | | 0.0% | | 0.0% | | 0.0% |
| *Heliotropium curassavicum* | 4 | 8.0% | | 0.0% | | 0.0% | | 0.0% |
| *NG* | | 0.0% | | 0.0% | 0 | 0.0% | 7 | 14.0% |
| *Rumex salicifolius* | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Salix laevigata* | | 0.0% | | 0.0% | 36 | 72.0% | 12 | 24.0% |
| *Salix lasiolepis* | | 0.0% | | 0.0% | 13 | 26.0% | 31 | 62.0% |
| *Stachys albens* | 4 | 8.0% | | 0.0% | | 0.0% | | 0.0% |
| *Typha latifolia(?)* | 26 | 52.0% | | 0.0% | | 0.0% | | 0.0% |
| *Typha* sp. | 26 | 52.0% | 6 | 12.0% | 3 | 6.0% | | 0.0% |
| **Non-native** | | | | | | | | |
| *Ambrosia psilostachya* | 5 | 10.0% | | 0.0% | | 0.0% | | 0.0% |
| *Artemisia douglasiana* | | 0.0% | | 0.0% | 3 | 6.0% | 2 | 4.0% |
| Avena sp. | | 0.0% | | 0.0% | 2 | 4.0% | | 0.0% |
| *Cheno triang (?)* | 7 | 14.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Echinochloa* | | 0.0% | | 0.0% | 1 | 2.0% | | 0.0% |
| *Foeniculum vulgare* | 2 | 4.0% | | 0.0% | | 0.0% | | 0.0% |
| *Lepidium latifolium* | 5 | 10.0% | 4 | 8.0% | 9 | 18.0% | 4 | 8.0% |
| *Lolium perenne* | 3 | 6.0% | | 0.0% | | 0.0% | | 0.0% |
| *NNG* | | 0.0% | 2 | 4.0% | | 0.0% | 4 | 8.0% |
| *Polypogon monspeliensis* | 2 | 4.0% | | 0.0% | | 0.0% | | 0.0% |
| Smilo grass | | 0.0% | | 0.0% | 9 | 18.0% | 4 | 8.0% |
| *Spurge* | 1 | 2.0% | | 0.0% | | 0.0% | | 0.0% |
| **ABSOLUTE COVERAGE** | | | | | | | | |
| **Total Abs. Native Species Coverage** | | 126.0% | | 12.0% | | 106.0% | | 100.0% |
| **Total Abs. Non-Native Species Coverage** | | 22.0% | | 12.0% | | 36.0% | | 24.0% |
| **Total Absolute Coverage (All)** | | 176.0% | | 24.0% | | 156.0% | | 128.0% |
| **CLASS COVERAGE** | | | | | | | | |
| **Native** | 21 | 42.0% | 6 | 12.0% | 28 | 56.0% | 26 | 52.0% |
| **Non-Native** | 5 | 10.0% | 6 | 12.0% | | 0.0% | | 0.0% |
| **Both** | 14 | 28.0% | | 0.0% | 22 | 44.0% | 19 | 38.0% |
| **No Plant** | 10 | 20.0% | 38 | 76.0% | | 0.0% | 5 | 10.0% |
| **CHECK** | | 100.0% | | 100.0% | | 100.0% | | 100.0% |
| **SUMMARY** | | | | | | | | |
| **Total Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Non-Native Class Coverage** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **Total Unvegetated** | | 0.0% | | 0.0% | | 0.0% | | 0.0% |
| **GROUND COVER** | | | | | | | | |
| Bare Soil | | 0.0% | 1 | 2.0% | | 0.0% | | 0.0% |
| Leaf Litter | 15 | 30.0% | 15 | 30.0% | 32 | 64.0% | 32 | 64.0% |
| Open Water | 22 | 44.0% | 21 | 42.0% | 18 | 36.0% | 18 | 36.0% |
| Riprap - grouted | | 0.0% | 13 | 26.0% | | 0.0% | | 0.0% |
| Riprap | 13 | 26.0% | | 0.0% | | 0.0% | | 0.0% |
| **CHECK** | 50 | 100.0% | 50 | 100.0% | 50 | 100.0% | 50 | 100.0% |

# APPENDIX E

# CRAM DATASHEETS

**TABLE E-1**
**SUMMARY OF CRAM SCORES**

| | Reach No. | 26 | 26 | 26 avg | 27 | 28 | 29 | 32 | 32 | 32 avg | 33 | 34 | 35 | 36 | 37 | 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Wetland Class** | **riverine** | **riverine** | **riverine** | **riverine** | **riverine** | **riverine** | **riverine** | **riverine** | **riverine** | **riverine** | **riverine** | **riverine** | **riverine** | **riverine** | **riverine** |
| | **Wetland Subclass** | **confined** | **confined** | **confined** | **confined** | **confined** | **confined** | **confined** | **confined** | **confined** | **confined** | **confined** | **confined** | **confined** | **non-confined** | **non-confined** |
| **Attribute** | **Metric** | | | | | | | | | | | | | | | |
| Buffer and Landscape Context | Aquatic Area Abundance | D (3) | D (3) | | A (12) | A (12) | A (12) | A (12) | A (12) | | B (9) | D (3) | A (12) | D (3) | D (3) | D (3) |
| | Buffer Condition (sub-metrics below) | | | | | | | | | | | | | | | |
| | Percentage of Assessment Area Perimeter with Buffer | A (12) | B (9) | | A (12) | B (9) | B (9) | C (6) | D (3) | | D (3) | A (12) | D (3) | D (3) | A (12) | A (12) |
| | Average Buffer Width | D (3) | D (3) | | D (3) | D (3) | D (3) | A (12) | D (3) | | D (3) | D (3) | D (3) | D (3) | B (9) | A (12) |
| | Buffer Condition | B (9) | C (6) | | C (6) | C (6) | D (3) | C (6) | C (6) | | D (3) | A (12) | C (6) | D (3) | B (9) | B (9) |
| | **Attribute Score** | **43.1** | **35.8** | **39.4** | **75.0** | **73.3** | **66.5** | **79.7** | **67.7** | **73.7** | **50.0** | **47.9** | **67.7** | **25.0** | **52.8** | **55.8** |
| Hydrology | Water Source | C (6) | C (6) | | C (6) | C (6) | B (9) | C (6) | C (6) | | C (6) | C (6) | C (6) | B (9) | C (6) | C (6) |
| | Hydroperiod/Channel Stability | B (9) | B (9) | | B (9) | B (9) | D (3) | B (9) | B (9) | | C (6) | A (12) | D (3) | B (9) | B (9) | A (12) |
| | Hydrologic Connectivity | A (12) | A (12) | | B (9) | C (6) | D (3) | C (6) | C (6) | | C (6) | A (12) | D (3) | A (12) | A (12) | A (12) |
| | **Attribute Score** | **75.0** | **75.0** | **75.0** | **66.7** | **58.3** | **41.7** | **58.3** | **58.3** | **58.3** | **50.0** | **83.3** | **33.3** | **83.3** | **75.0** | **83.3** |
| Physical Structure | Structural Patch Richness | D (3) | D (3) | | D (3) | C (6) | D (3) | D (3) | D (3) | | D (3) | D (3) | D (3) | D (3) | C (6) | D (3) |
| | Topographic Complexity | C (6) | C (6) | | B (9) | A (12) | D (3) | C (6) | C (6) | | D (3) | B (9) | C (6) | B (9) | B (9) | C (6) |
| | **Attribute Score** | **37.5** | **37.5** | **37.5** | **50.0** | **75.0** | **25.0** | **37.5** | **37.5** | **37.5** | **25.0** | **50.0** | **37.5** | **50.0** | **62.5** | **37.5** |
| Biotic Structure | Plant Community (sub-metrics below) | | | | | | | | | | | | | | | |
| | Number of Plant Layers | A (12) | A (12) | | B (9) | B (9) | C (6) | A (12) | B (9) | | A (12) | A (12) | A (12) | A (12) | A (12) | A (12) |
| | Number of Co-dominant Species | B (9) | A (12) | | A (12) | C (6) | D (3) | A (12) | C (6) | | C (6) | C (6) | C (6) | C (6) | B (9) | C (6) |
| | Percent of Co-dominant Species Known to be Invasive | D (3) | D (3) | | B (9) | A (12) | B (9) | C (6) | C (6) | | A (12) | C (6) | B (9) | C (6) | C (6) | C (6) |
| | Horizontal Interspersion/Plant Zonation | C (6) | C (6) | | D (3) | C (6) | D (3) | D (3) | D (3) | | D (3) | D (3) | D (3) | C (6) | C (6) | C (6) |
| | Vertical Biotic Structure | C (6) | C (6) | | D (3) | B (9) | D (3) | D (3) | D (3) | | D (3) | B (9) | D (3) | B (9) | B (9) | B (9) |
| | **Attribute Score** | **54.2** | **58.3** | **56.3** | **44.4** | **66.7** | **33.3** | **44.4** | **36.1** | **40.3** | **44.4** | **55.6** | **41.7** | **63.9** | **66.7** | **63.9** |
| | ***Overall AA Score*** | **52.4** | **51.6** | **52.1** | **59.0** | **68.3** | **41.6** | **55.0** | **49.9** | **52.5** | **42.4** | **59.2** | **45.0** | **55.6** | **64.2** | **60.1** |