

**Endangered Bird Species  
and California Bird Species of Special Concern  
within Hahamongna Watershed Park**

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on behalf of the Pasadena Audubon Society  
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**Summary:**

Hahamongna Watershed Park contains regionally-significant riparian habitat which is a critically-important breeding zone for a number of bird species, including three that are identified as vulnerable on Federal and State lists: the Least Bell's Vireo (federally endangered), the Yellow Warbler (a California bird species of special concern), and the Yellow-breasted Chat (also a California bird species of special concern). Using the eBird online database, we summarize observations of these three species within Hahamongna during the breeding seasons of recent years. The Yellow Warbler is present annually in large numbers, with observations establishing the high regional significance of Hahamongna as a breeding site. The Least Bell's Vireo and Yellow-breasted Chat have been present in low numbers during several summers, with strong breeding evidence. In addition, Hahamongna has provided winter habitat for Loggerhead Shrike, also a California bird species of special concern.

**1. Introduction**

*Over 210 bird species have been seen at Hahamongna Watershed Park in Pasadena, California, and among those, approximately 55 are local breeders. Three known or suspected breeding birds at Hahamongna are classified as federally endangered or California Bird Species of Special Concern: Least Bell's Vireo, Yellow Warbler, and Yellow-breasted Chat. Another California Bird Species of Special Concern – Loggerhead Shrike – has been present during some winters over the last 25 years. This report summarizes recent observations of these species at Hahamongna using on-site photography and sound recording, as well as sightings submitted to the eBird<sup>1</sup> online database.*

The eBird bar (abundance) charts in Figures 1 and 2 illustrate the four basic migration patterns for birds in Hahamongna: 1) summer visitors such as Yellow Warbler, present through June and July – in North America, almost always an indication of a bird on its breeding territory; 2) year-round residents such as Common Yellowthroat and Hutton's Vireo, which are also typically summer

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<sup>1</sup> eBird is a popular and powerful on-line tool developed by the Cornell Lab of Ornithology to archive and summarize bird surveys from both professional and amateur birders for locations around the world. To date, more than 100 million observations have been entered into eBird.

breeders; 3) winter visitors such as Yellow-Rumped Warbler which are non-breeders at that time of year; and 4) migrants such as Nashville Warbler seen only in spring and/or fall, and non-breeders at that time. *Multiple pairs of Yellow Warbler take advantage of the regionally-uncommon riparian habitat in Hahamongna for annual breeding. As indicated by their presence in summer, Least Bell's Vireo and Yellow-breasted Chat are also considered likely breeders in Hahamongna, although in lower number. All three species depend on riparian habitat for breeding and survival.*

In Sections 2-4, we review the observations of the three species found in Hahamongna that are officially identified for their vulnerability.



Figure 1: Bar charts for Warbler species generated (with eBird) from sightings at Hahamongna. A green line or bar indicates presence of the indicated species for the time of year in which the mark is shown. The vertical width of the green mark indicates the fraction of bird surveys that detected the species. The two Warbler species that are California Bird Species of Special Concern are highlighted in red.

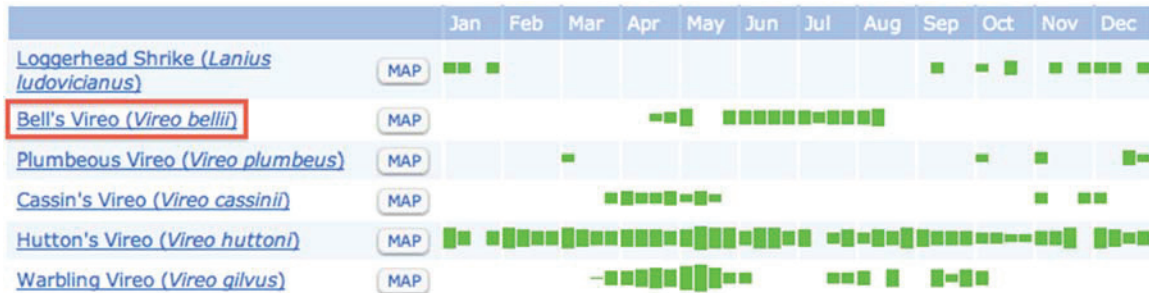


Figure 2: Similar to Figure 1, but shown for Vireo species, including the federally-endangered Bell's Vireo. (The subspecies designation “Least” Bell's Vireo does not show in the eBird chart.)

## 2. Least Bell's Vireo

The Least Bell's Vireo has been on the federal endangered species list since 1986 (e.g., U.S. Fish & Wildlife website [ecos.fws.gov](http://ecos.fws.gov)). The Least Bell's Vireo is an “obligate riparian species during the breeding season ... [that] typically inhabits cottonwood-willow forests, oak woodlands, and mule fat scrub.... Extensive breeding habitat loss and degradation and brood parasitism by the brown-headed cowbird have resulted in a range-wide decline of the Least Bell's Vireo. These factors continue to be the most serious threats to the recovery of the Least Bell's Vireo.” (Draft recovery plan for the Least Bell's Vireo, U. S. Fish and Wildlife Service, 1998.)

*Least Bell's Vireos have been present in Hahamongna during the summer breeding seasons in 2012, 2013, and 2014 (Figure 3; Table 1). The birds have been observed to cover a wide range in riparian willow forest and mule fat scrub in the southern half of the Hahamongna basin, with so far no observations in the surrounding oak woodland (Figure 4).*

Two Least Bell's Vireos – an apparent adult and juvenile traveling together, generally considered evidence of local breeding – were found in Hahamongna on July 15, 2012. Since then, Pasadena Audubon members and other local birders have intensified efforts to monitor the presence of this species in Hahamongna. Observations collected to date include visual sightings, photography, audio detections by ear, and sound recordings. Much of this information is being documented in the publically-accessible eBird.org and xeno-canto.org<sup>2</sup> databases.

<sup>2</sup> xeno-canto.org is an online database of worldwide bird vocalizations where more than 150,000 recordings of 8800+ species have been archived.



Figure 3: Photographs of Least Bell's Vireos within Hahamongna, both on Aug 2, 2012. The image at right is the only one available showing both individuals of this highly active species in the same frame.

Singing is used by adult male Least Bell's Vireos to establish and defend breeding territories (adult females do not sing; Brown 1993). Thus, the presence of singing Least Bell's Vireos is additional evidence for breeding. The audio recordings obtained in 2012, 2013, and 2014 all feature singing. The songs are complex (Figures 5-6) but are unlike those of other local birds and are thus easy to identify.

Table 1: Notable recent summer records of Least Bell's Vireo within Hahamongna.

date(s)	observer(s)	comments / field notes
2012 July 15 – August 10	7 different observers entered records into eBird	two individuals – one adult and one juvenile – present during breeding season
2012 July 15	D. Bell	birds first noticed; binocular observations and photography led this expert observer to conclude that one was an adult and the other was a juvenile, based on details of the edgings on the tertials and scapulars
2012 July 29	L. Benner	photographs; audio recordings of a singing adult male made, xeno-canto database records XC106462 and XC 106457
2012 August 2	D. Dowell	photograph of both individuals in the same frame (Figure 3 above)
2013 April 30 – July 14	14 different observers entered records into eBird	one individual, frequently singing so a presumed adult male, present during breeding season
2013 May 1, 24	L. Benner	photographs and audio recordings of a singing adult male, xeno-canto

		database records XC132023 and XC134888
2014 July 23-24	D. Dowell, L. Benner	photographs and recordings of singing adult male, xeno-canto database records XC188496, XC188497, and XC188498
2014 August 22	D. Dowell	visual observation, no vocalizations detected

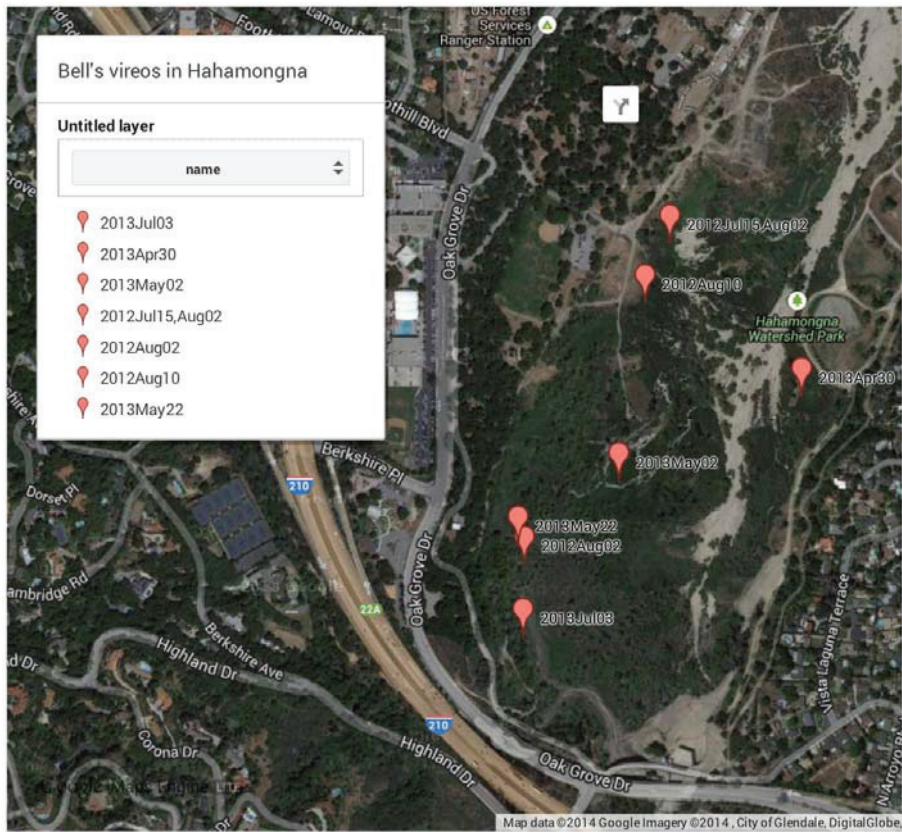
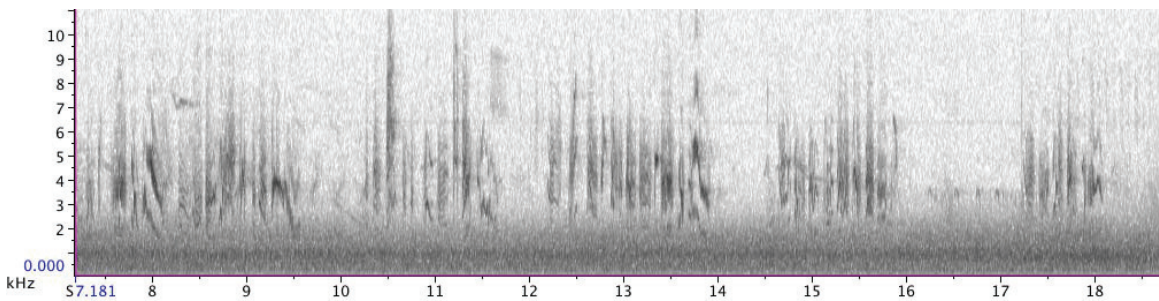


Figure 4: Map showing location of sightings of Least Bell's Vireo within Hahamongna during 2012 and 2013 breeding seasons.



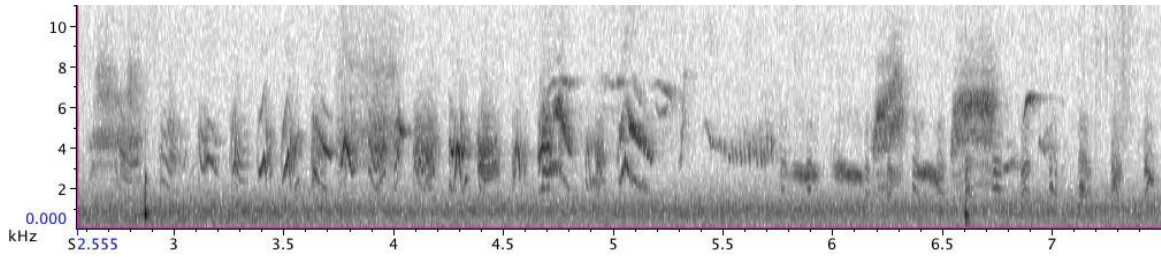


Figure 5: Audio spectrograms of an adult male Least Bell's Vireo at Hahamongna from July 29, 2012. In each spectrogram, the frequency (pitch) of the vocalizations is shown as a function of time. The highly complex pattern is characteristic of Least Bell's Vireo songs. The recordings are available on the Xeno-Canto database of worldwide bird vocalizations website at: <http://www.xeno-canto.org/106462> (top) and <http://www.xeno-canto.org/106457> (bottom).

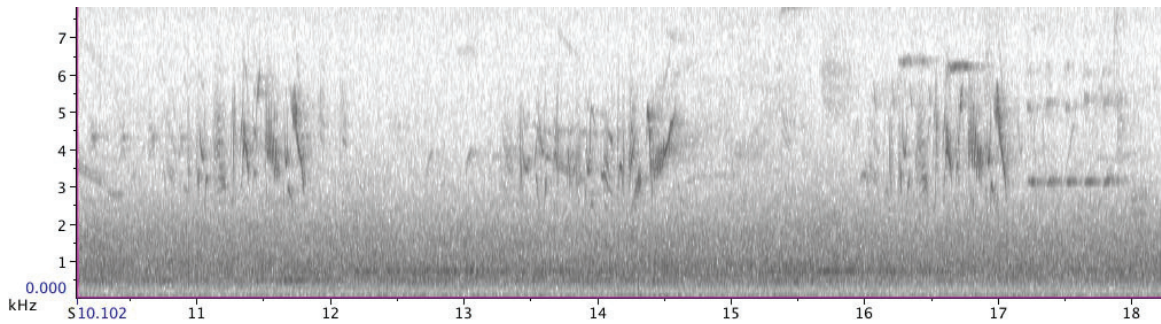
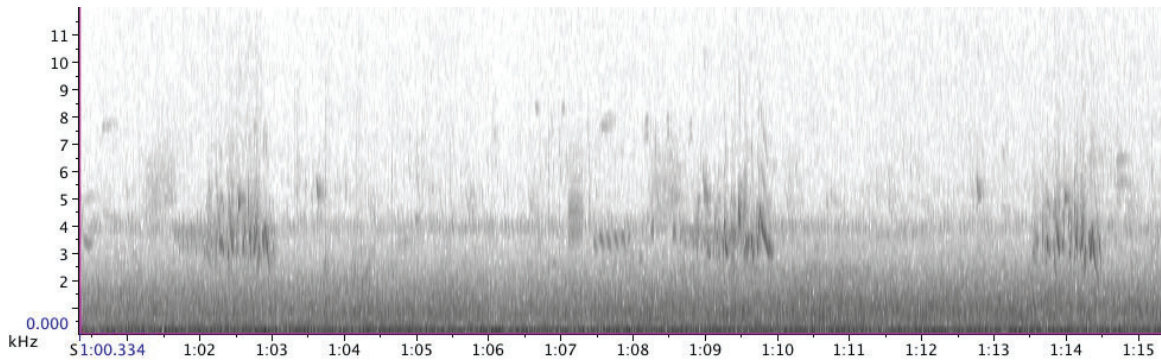


Figure 6: Audio spectrograms of an adult male Least Bell's Vireo at Hahamongna from May 1 (top; available on Xeno-Canto at <http://www.xeno-canto.org/132023>) and May 24 (bottom; available on Xeno-Canto at <http://www.xeno-canto.org/134888>), 2013.

### 3. Yellow Warbler



Figure 7: Yellow Warblers, Hahamongna Watershed Park. Left: adult (July 2011). Right: adult feeding fledgling (July 2012).

The Yellow Warbler (Figure 7) has been designated a California Bird Species of Special Concern by the California Department of Fish and Game and by Western Field Ornithologists due to overall range contraction within the state and vulnerability due to its need for specific, riparian breeding habitat (W.D. Shuford & T. Gardali, California Bird Species of Special Concern, 2008). Figure 8 and Table 2 below demonstrate that *Hahamongna Watershed Park is a key stronghold for the Yellow Warbler within the San Gabriel Valley*.

Yellow Warblers nest and forage almost exclusively within the willow forest at Hahamongna (Figures 9 and 10 below). Yellow Warblers arrive at Hahamongna in early April, nest in late spring or early summer, and then depart for wintering grounds with their young by early October. In general, Yellow Warblers exhibit a high degree of site fidelity (Shuford & Gardali, 2008), therefore the majority of Yellow Warblers (males especially) at Hahamongna return to this breeding ground year after year. Any loss of willow habitat at Hahamongna reduces the chance of survival of this local population through decreased availability of food and nesting sites, and increased threat from exposure to predators and human activities as they are pushed to marginal habitat.

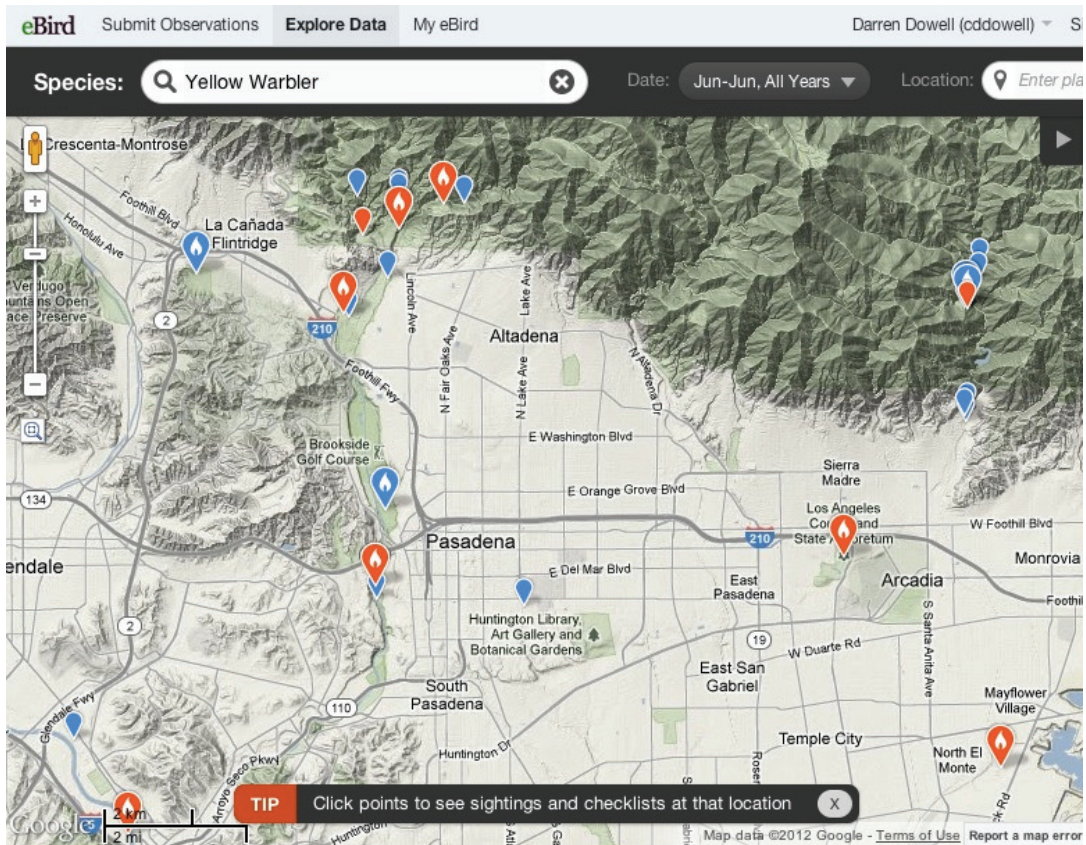


Figure 8: Distribution of Yellow Warblers in the San Gabriel Valley for the month of June (breeding season) for the past few years, generated with eBird. Red and blue symbols show locations at which Yellow Warbler has been detected. Yellow Warblers breed only in riparian areas such as the Arroyo Seco, Big Santa Anita Canyon, Los Angeles River, and Rio Hondo; they do not breed in San Gabriel Valley neighborhoods or foothill chaparral, nor (apparently) in Eaton Canyon. Among the areas shown on this map, Hahamongna has the highest count of Yellow Warbler.



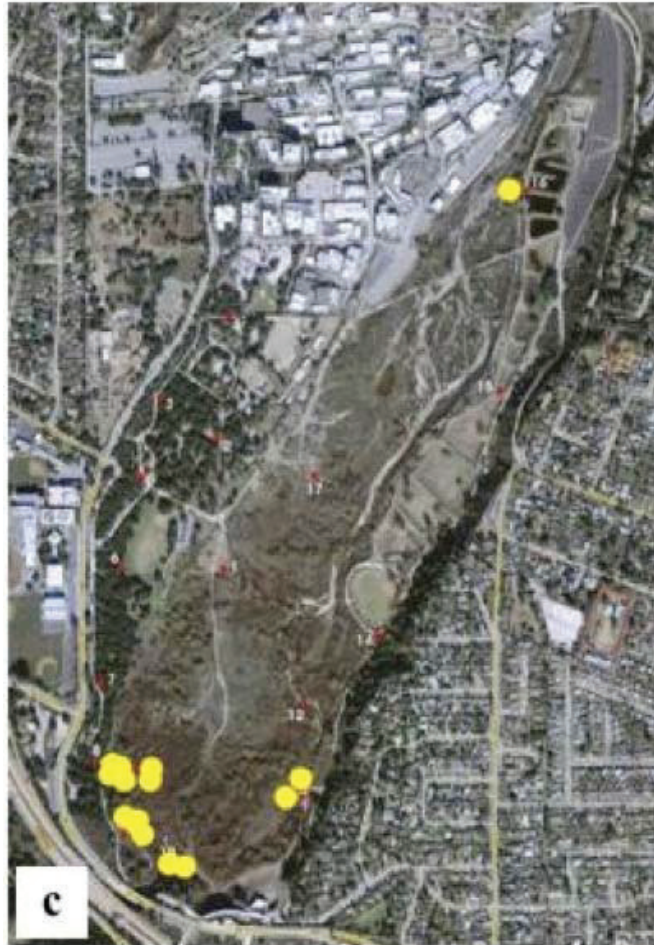


Figure 9. Yellow Warbler distribution from a survey of the Hahamongna *perimeter* in 2007 (from report by J. Feenstra). Yellow Warblers are relatively easy to survey, since the males sing a clear, unique song through the spring and summer months, and the chip calls of the females are fairly easy to detect once the spring migration period has passed. Yellow Warbler counts are shown on the map by the Yellow dots. All of the reported birds are within the willow forest at the wetter, southern end of the basin, except for one report in oak/sycamore habitat near the settling ponds at the north end.

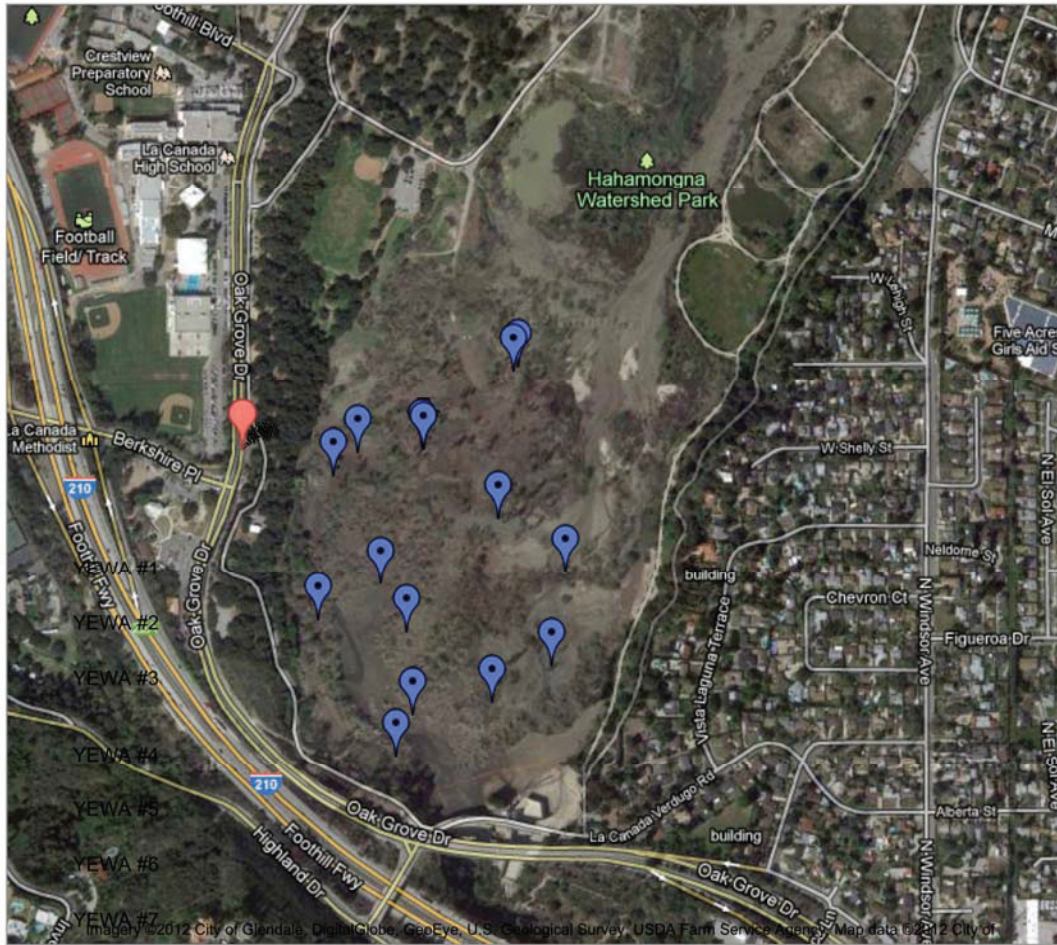


Figure 10. Yellow Warbler distribution at Hahamongna from a June 2012 survey of the willow forest (*perimeter and interior*). Blue symbols show individual detections of Yellow Warbler; 15 birds were detected, which is a typical count at Hahamongna mid-summer. In this satellite photo, it is possible to trace the boundary of the main riparian willow forest: adjoining the (darker) oak woodland at the west and east perimeter trails, extending northward to the Oak Grove parking area and southern spreading ponds, and filling in the southern region to near Devil's Gate Dam.

Table 2: Records of Yellow Warbler within Hahamongna during summer breeding season, for five most recent years.

summer	high count of Yellow Warblers detected during summer	count date	observer(s)
2014	20	June 28	D. Dowell
2013	13-15	May 4, July 26	D. Bell, D. Dowell
2012	15	June 30	D. Dowell
2011	30-32	May 20, June 4	D. Bell, D. Dowell
2010	12	August 27	D. Dowell
2009	20	June 12, 19	D. Dowell

#### 4. Yellow-Breasted Chat

The Yellow-breasted Chat (Figure 11) has been designated a California Bird Species of Special Concern by the California Department of Fish and Game and by Western Field Ornithologists due to overall range contraction within the state and vulnerability due to its need for specific, riparian breeding habitat (W.D. Shuford & T. Gardali, California Bird Species of Special Concern, 2008). Male Yellow-breasted Chats within breeding territory are vocally conspicuous, but otherwise Chats are secretive and therefore difficult to detect in surveys. However, *a potential breeding pair or two have been present in Hahamongna for several summers within the past two decades*. Table 3 below lists summer (May – August) records of Yellow-breasted Chat in Hahamongna with 2 or more Chats detected by skilled observers, extracted from the eBird database.



Figure 11: Photograph of Yellow-breasted Chat in Hahamongna (August 2014, by G. Wu).

Table 3: Recent records of *multiple* Yellow-breasted Chats within Hahamongna during summer breeding season.

summer	minimum count of Chat during summer	sighting dates	observer(s)
2014	2	June 28	D. Dowell (simultaneous audio recording)
2013	2	July 11	D. Dowell
2009	2	June 12, 14	D. Dowell, J. Feenstra
2008	3	June 27	L. Benner, J. Feenstra
2002	2	May 8, June 14	M. San Miguel
1997	2	July 5, 19	K. Garrett

#### 4. Loggerhead Shrike

The Loggerhead Shrike (Figure 12) has been designated a California Bird Species of Special Concern by the California Department of Fish and Game and by Western Field Ornithologists (W.D. Shuford & T. Gardali, California Bird Species of Special Concern, 2008). As stated in this source, “Loggerhead Shrike ... numbers have declined greatly and the species is nearing extirpation in broad areas of coastal southern California.... The threats responsible for shrike declines in California and the West are poorly understood.... Habitat loss, on breeding and wintering grounds as well as along migratory routes, is undoubtedly a major threat to the species.” The northern half of Hahamongna has the open woodland and shrubland that shrikes require. Records in eBird document at Hahamongna 2 individuals in winter 1991-1992 and single birds in winter 1992-1993, 1993-1994, 1995-1996, 2011-2012, 2012-2013. Not necessarily evident in those records, but very clear in the nearly 70 years of Pasadena/San Gabriel Valley Audubon Christmas Bird Counts is that the abundance of Loggerhead Shrike has declined to a remnant population in the San Gabriel Valley over the past few decades.



Figure 12: Photograph of Loggerhead Shrike in Hahamongna (December 2012).