

Detection, Monitoring, and Fates of Tricolored Blackbird Colonies in California in 2017

Final Report

Submitted to:
California Department of Fish and Wildlife
Wildlife Branch Nongame Wildlife Program
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September 20, 2017

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Acknowledgments

I thank the California Department of Fish and Wildlife, Nongame Wildlife Program for providing financial support for field work in 2017.

The U.S. Fish & Wildlife Service staff at Sacramento National Wildlife Refuge Complex (Mike Carpenter, Mike Derrico, Jennifer Isola) contributed substantially to the 2017 field work by informing me of settlements, assisting in efforts to monitor colonies, collecting carcasses of birds killed while flying across Maxwell Road, and assisting in all aspects of banding.

I thank the landowners, who wish to remain anonymous, in Merced and Yuba counties for conserving and allowing access to monitor the tricolored blackbird colonies on their properties, and Darren Morehead, manager of Butte Sand and Gravel, for access to his property to detect and monitor a unique colony in Sutter County.

This study was supported by State Wildlife Grant G1498076 through California Department of Fish & Wildlife Agreement no. P1480014.

Suggested citation: Meese, R.J. 2017. Detection, monitoring, and fates of Tricolored Blackbird colonies in California in 2017. Calif. Dept. of Fish and Wildlife, Wildlife Branch, Nongame Wildlife Program Report 2017-05, Sacramento, CA. 13 pp + appendix.

INTRODUCTION

The tricolored blackbird (*Agelaius tricolor*, hereafter tricolor) is a near-endemic California passerine that forms the largest breeding colonies of any North American songbird (Beedy and Hamilton 1999). Due primarily to range-wide habitat losses resulting from conversion of native habitats to agriculture and urbanization, the chronic destruction of some of the largest breeding colonies during the harvest of their grain-field nesting substrates, and autumnal shooting of birds while foraging in fields of ripening rice in mixed-species flocks with other blackbird species, the number of tricolors plummeted during the 20th Century (Neff 1937, Beedy and Hamilton 1999), leading, in December 2014, to an emergency listing as an endangered species under the California Endangered Species Act. This listing was allowed to expire at a subsequent meeting of the California Fish & Game Commission in June, 2015 but as of September, 2017 the species' status is under review for possible protection under the federal and California Endangered Species Acts.

I conducted fieldwork between March 20 and July 23, 2017 to detect, monitor, and determine the fates of the largest tricolor breeding colonies with an emphasis on the Central Valley but including visits to Wind Wolves Preserve in the Tremblor Range in southwestern Kern County, the Santa Lucia Preserve in Monterey County, and to the Panoche Valley in San Benito County. I also banded tricolors adjacent to 5 of their breeding colonies. I review this year's results, compare them to previous years, highlight significant features of the 2017 breeding season, and recommend actions that may help to stem the decline in the abundance of the species.

METHODS

The methods I used in 2017 were essentially similar to those used in previous field seasons and thus are only briefly reviewed here. See Meese (2010) for a more thorough description of the methods used to detect, monitor, and estimate the reproductive success of successful colonies.

Colony Detection

I began to survey for colonies on March 20, 2017 in the San Joaquin Valley. I searched for tricolor settlements and colonies by driving on public roads to examine previously-documented colony locations and supplemented these searches by surveying appropriate regions consisting of grain fields adjacent to dairies in the region from Kern County in the south to Merced County in the north.

Sacramento Valley colony surveys began May 12 and consisted of targeted searches of previously-documented colony locations supplemented by searches of sites that have been reported by numerous collaborators (e.g., state and federal agency personnel, biological consultants, non-governmental organization staff, birders) or entered into the Tricolored Blackbird Portal (<http://tricolor.ice.ucdavis.edu>).

Monitoring

I monitored at-risk colonies (e.g., those established in ephemeral substrates such as grain fields adjacent to dairies as well as several in stands of Eurasian weeds in pastures) weekly until mid-April, when I was asked to focus on efforts to obtain the results of the 2017 Statewide Survey conducted April 7-9 (see Meese 2017). Colonies established on grain fields are most at risk of destruction due to harvest during normal agricultural activities, and thus are monitored to assess the success of colony protection measures. In most cases, I monitored colonies by observing them from the closest public road if located on private property where permission to access had not been obtained, or by observing from immediately adjacent roads if located on public property or on private property where permission to access had been obtained.

I had access to only two silage colonies due to landowner-imposed restrictions on access. In recent years the process for conserving silage colonies has been driven by an NRCS-funded agreement that designates representatives of the Farm Bureau or the Western United Dairymen as the initial points of contact to landowners. Due to Department of Agriculture privacy policy, site location and access is not shared by NRCS unless written permission is granted by the landowner. When silage colonies were discovered, they were therefore reported to these representatives. Thus, in all cases my monitoring of these silage colonies was done from the closest point where permission to access had been obtained, or from the closest public road. In many cases, restrictions on access prevented me from making estimates of areas occupied and using these as a second means to estimate the numbers of birds present at occupied sites.

I also monitored colonies located on secure substrates (i.e. that were not on agricultural fields) that were within the geographic scope of the silage colonies of the San Joaquin Valley, and made three additional trips outside the Central Valley as follows:

- I banded birds at Wind Wolves Preserve in southwestern Kern County to continue a collaboration with Preserve staff to document the breeding of tricolored blackbirds and to assist efforts to conserve and enhance breeding opportunities for tricolors that are threatened with a rapidly-expanding population of perennial pepperweed (*Lepidium latifolium*), an introduced, invasive plant species that competes for the same habitat as the native stinging nettle (*Urtica dioica*) used by nesting birds.
- I banded birds on the Santa Lucia Preserve in Monterey County to continue a multi-year collaboration to use banding to study movements of birds to and from Monterey County.
- I made two trips to Panoche Valley in San Benito County, the first to work with Debi Shearwater to estimate the size of the Panoche Creek colony, and the second to work with Debi and Chris Hauser, Center for Natural Lands Management assistant preserve manager, to conserve and enhance the Panoche Creek colony, a recently-discovered large colony on a solar energy (Southern California Edison) mitigation site.

Estimating the Number of Breeding Birds

Visual estimates of the number of breeding birds were derived each time a colony was monitored by carefully observing a colony for from 5 to 30 minutes per visit. When possible, colonies were observed from multiple vantage points to most precisely estimate the number of birds present. Obtaining visual estimates of the number of breeding birds at some silage colonies was relatively more difficult due to restrictions on access and the relatively greater distance from my observation point to the breeding birds. This was especially true for 4 colonies on one property in Kern County (Poso 2, Poso 5, Poso 6, and Poso 7) and 2 in Merced County (Cherokee Forebay, West of Lone Tree), where access restrictions resulted in viewing distances of several hundred meters. I had permission to access only two “silage colonies”: Pond Road in Kern County and Deer Creek in Tulare County.

Estimating Reproductive Success

I estimated minimum reproductive success (RS), defined as the average number of young produced per nest, by visually estimating of the numbers of fledglings produced (Plumas Arboga, Colusa T27, Delevan T43). As one male breeds, on average, with two females (Beedy and Hamilton 1999), each two nests have three birds associated with them, so the product of the number of breeding birds multiplied by $2/3$ (0.67) provides an estimate of the number of nests constructed. The visual estimate of the number of young fledged divided by the estimate of the number of nests constructed yields an estimate of the number of young fledged per nest (RS).

Estimating the Number of Young Produced

I estimated the number of young produced at colonies by making repeated observations of young in groups (“crèches”) following fledging.

For most colonies, the number of fledged birds may often be carefully counted, especially for colonies where access has been granted, as young tricolors spend a minimum of 4 days in groups perched and calling (“food begging”) conspicuously from the tops of vegetation at the margins of colonies (Beedy and Hamilton 1999, pers. obs.). Typically, groups of fledglings will begin to leave the nesting substrate and fly up to perch high in nearby shrubs or trees within two to four days of fledging. However, crèches remain within the colony boundaries for up to two weeks or more if there are no nearby taller shrubs or trees, as is often the case in colonies in fields of triticale in the “silage belt” of the southern San Joaquin Valley.

After the young had fledged and departed from colonies in the San Joaquin Valley, I repeated these activities, and responded to reports of aggregations of tricolors, in the Sacramento Valley.

RESULTS

Locations Occupied

I surveyed for colonies throughout the San Joaquin Valley beginning on March 20, made a three-day trip to Wind Wolves Preserve on April 24-26, a 5-day trip to Santa Lucia Preserve in Monterey County from May 2-6, and surveyed in Panoche Valley, San Benito County on April 8 and banded there on April 17, 18, and 20. I began to survey Sacramento Valley locations on May 12 and ended field work on July 23. I found 36 sites occupied and confirmed breeding at 26 sites (Table 1). An additional 80 locations were surveyed and found to be unoccupied (Appendix I). I estimated the minimum reproductive success (RS) of 4 colonies (Table 1).

Table 1. Descriptions of occupied locations.

Location Name	County	Nesting Substrate	Maximum No. Birds ¹	Comments
Colusa NWR T27	Colusa	cattails	15,000	New location in 2016; recent restoration; intense Northern (or American) harrier (<i>Circus hudsonius</i>) predation; 2,500 fledglings seen, RS=0.5
Delevan NWR T43	Colusa	cattails	20,000	4,000 fledglings seen, likely 8,000 young fledged, RS=0.6
Capitol Outing Club	Colusa	cattails	500	Settlement
Norman Road	Glenn	<i>Arundo donax</i>	500	New location in 2016; reported by USFWS Staff
Pond Road	Kern	triticale	17,000	New location in 2016
Poso 2	Kern	triticale	10,000	
Poso 5	Kern	triticale	7,000	
Poso 6	Kern	triticale	15,000	
Poso 7	Kern	triticale	2,500	New location
Wind Wolves: Echo Canyon	Kern	stinging nettle	600	Locally known as Pleitito Creek
Avenue 14 Road 15	Madera	triticale	8,000	New location; destroyed by harvest.
Basalt Road	Merced	stinging nettle	1,800	Single survey
Black Rascal Creek	Merced	milk thistle	4,000	New location

Location Name	County	Nesting Substrate	Maximum No. Birds ¹	Comments
				documented by Reyn Akiona and reported to me by Steve Simmons; not directly observed
Cherokee Forebay	Merced	milk thistle, mustard	3,000	New location in 2016
Eagleton Pond	Merced	cattails	500	
East of Mission	Merced	mustard	2,000	New location; failed
Fahey South	Merced	milk thistle	12,000	New location in 2016
Marshall Levee Pond	Merced	cattails	200	
West of Lone Tree	Merced	mallow in triticale	5,000	New location
Laguna Seca	Monterey	cattails	600	Banding
Ohlone Trace Pond	Monterey	bulrush	60	Banding
Dalby East Hwy. 65 Bypass	Placer	Himalayan blackberry	500	Reported by Deren Ross
Silva Ranch Fish Ponds	Sacramento	Himalayan blackberry	6,000	New location
Panoche Creek	San Benito	cattails	7,500	New location; banding; storm-related mortality
Butte Sand and Gravel	Sutter	willows	6,000	New location in 2016; nests high in canopy, aberrant colony
Cornerstone 3	Tulare	triticale	2,000	Settlement
Deer Creek Dairy	Tulare	triticale	4,000	Nesting substrate appeared to be pure triticale
Tan Tache Wetlands, Atwell Island*	Tulare	bulrush	2,500	Single survey
Conaway Ranch	Yolo	cattails	500	
Conaway Ranch Berries	Yolo	Himalayan blackberry	3,000	Settlement; failed likely due to extended heat
Conaway Ranch North	Yolo	Himalayan blackberry	500	New location, aberrant due to multiple nesting substrates
Conaway Ranch – Willow Slough	Yolo	Himalayan blackberry	1,500	Settlement
Woodland Community College	Yolo	milk thistle, mallow.	2,500	New location

Location Name	County	Nesting Substrate	Maximum No. Birds ¹	Comments
Erle Road – Reeds Creek South	Yuba	Himalayan blackberry	800	Settlement in new location in April.
Jasper Lane	Yuba	Himalayan blackberry	3,000	Settlement
Plumas Arboga	Yuba	cattails	15,000	Banding, 8,000 fledglings, RS=0.8

¹ Maximum number of birds observed; number of breeding birds is lower in most cases. Locations surveyed once may have different numbers, as reported by other field workers.

Weather-related Effects

This field season was unique for its weather, which was chilly and wet until late April, and this weather appeared to result in a conspicuous, but unquantified, decrease in the rate of growth of Eurasian weeds preferred by the birds for nesting. This effect was most apparent in milk thistle (*Silybum marianum*), which tends to occur in patches and which was especially abundant and heavily utilized by breeding birds in Merced County in 2016 (Meese 2016). This year the milk thistle in Merced County was present but conspicuously shorter and much less frequently utilized than it was last year. Unlike last year, when strong storms in the second half of April appeared to result in high apparent mortality of nestlings and the apparent desertion of the colonies by breeding birds (Meese 2016), only the Panoche Creek colony in San Benito County appeared to suffer from high storm-related mortality and the number of breeding birds appeared to decrease by at least 50% following a strong storm on April 18 and 19. And the dire effects which were anticipated due to a storm on April 8 (the second day of the Statewide Survey) did not occur and the storm seemed to be far less intense than forecast and feared.

The cool, wet weather also appeared to be responsible for the delayed arrival of the birds to the Sacramento Valley, where many locations typically settled in the last week of May were not settled until the second week of June, with the result that the birds were not done breeding until mid-July. This allowed the breeding birds to utilize vast numbers of dragonflies (Order Odonata) for food when in most years the dragonfly hatch occurs after the young have fledged and the breeding birds have dispersed away from their colonies.

Continuing Reductions in Abundance in Southern San Joaquin Valley

The number of birds, and the number of breeding colonies, in the southern San Joaquin Valley (Kern and Tulare counties) continued the pattern of decline, with only one, relatively quite small silage colony found in Tulare County. Five colonies were established in Kern County in grain fields, 4 on a property owned by the same individual (the Poso colonies), and the other located ca. 7 miles away on Pond Road. This is the second straight year for the birds to nest at the Pond Road location, which was originally occupied in 2016 and is across Pond Road from the formerly almost continuously occupied locations at Costa's Dairy.

New Colony Locations

No fewer than 10 breeding colonies were established in new locations in 2017 (Table 1; here I report only those new breeding colony locations documented by or reported to me and this total does not include those locations reported by others during the Statewide Survey; see Meese 2017). Of these, the most unique was the Conaway Ranch North colony in Yolo County as here the nesting substrate consisted of no fewer than 4 plant species (Himalayan blackberries, cattails, tules, and willows) that were simultaneously occupied by breeding birds. It is relatively common for two plant species to be simultaneously occupied by breeding birds, but this may be the first colony I've observed where 4 plant species made up the nesting substrate.

DISCUSSION

This was my 13th year of field work with tricolored blackbirds and 2 features of the 2017 breeding season stood out: 1) the cool wet weather that appeared to result in a conspicuous reduction in nesting habitat and the absence of birds from several locations occupied in Merced County in 2016, and 2) the late arrival of birds to Sacramento Valley breeding colonies and the resulting overlap in the breeding season with the emergence of millions of dragonflies near colonies in Yuba and Colusa counties. These dragonflies were heavily utilized and appeared to be the primary food eaten by breeding birds as well as the primary food of nestlings and fledglings. The availability of this super-abundant food source led to an apparent increase in reproductive success at colonies in these counties.

The tricolored blackbird was less than a decade ago most abundant during the breeding season in the southern San Joaquin Valley (Kelsey 2008, Kyle and Kelsey 2011). Recent, rapid habitat losses are the main driver of the decline in this region and additional habitat losses put the long-term persistence of the species in jeopardy in what was until recently the core of its breeding range. As described in previous final reports (e.g., Meese 2016), the continued planting of nut trees that replace semi-natural shrublands or agricultural crops, such as alfalfa (*Medicago sativa*), that may provide insects required for breeding, make permanently unsuitable entire regions which were occupied by tens of thousands of breeding birds less than a decade ago. These effects likely account for the near-extirpation of tricolored blackbirds as a breeding species in Kings and Tulare counties (Meese 2016, 2017, this report), and in 2017 only Kern County still supported tens of thousands of breeding birds. The planting of additional large pistachio (*Pistacia vera*) orchards in the area around Pond and Gun Club Roads in Kern County will undoubtedly impact the species and may eliminate the tricolored blackbird as a breeding species in the southern San Joaquin Valley.

Relatively fewer new colony locations were documented in 2017 than in previous years, both during the Statewide Survey and during my own field work, and this may indicate that vigorous detection and monitoring efforts over the past 3 decades have identified the vast majority of sites where birds may find conditions suitable for breeding. Although the landscape features utilized by nesting birds are variable through space and time and may be especially dependent upon annual precipitation in semi-natural environments such as rangelands, the locations of at-risk breeding colonies appear to be well documented and the rate at which new colonies are

documented may decline. Future detection and monitoring efforts by trained and experienced field workers remain an essential component of tricolored blackbird conservation efforts and must include surveys of appropriate habitats where breeding birds have not previously been found as landscapes are dynamic and changes due to human-induced change or to weather may produce suitable nesting substrates where none have been found before.

Habitat restoration again played a large role in tricolored blackbird conservation efforts this year. The return of tricolors as a breeding species to Colusa National Wildlife Refuge, from where it had been absent for 30 years, again in 2017 illustrates the value and effectiveness of habitat restoration in tricolor conservation. Colusa NWR Tract 27 was a rice paddy in 2013, but only 3 years later it supported breeding by an estimated 10,000 tricolored blackbirds (Meese 2016) and a visually estimated 15,000 birds bred there this year. Although intense northern (or American) harrier predation appeared to reduce the size of this colony to 7,500 breeding birds, these produced a visually estimated 2,500 young. Habitat restoration is likely to be required to play a major role if the species is to be restored to a core portion of its range in Kern and Tulare counties.

Collaborations with landowners resulted in the conservation of all 6 “silage colonies” in Kern and Tulare counties but a large “silage colony” in Madera County was lost due to harvest of the nesting substrate while the nests were still active. The Tricolored Blackbird Working Group has identified the elimination of human-caused mortality as its number 1 conservation priority, but this source of mortality will only be eliminated when birds no longer nest on at-risk substrates. Until then, it is essential to have dedicated, experienced workers in the field when the birds gather to breed so as to detect settlements and colonies and to take steps to conserve them. Reports of planned cutbacks in funding or the total elimination of conservation programs are of great concern as these are required to detect and conserve at-risk colonies. The need for a stable funding source has never been greater and future conservation efforts may be in jeopardy if existing sources of funding are reduced or eliminated.

The recovery of the tricolored blackbird will require a vigorous, strategic conservation effort driven by accurate, current information and numerous on-the-ground actions taken by a variety of stakeholders. All previous efforts to provide for the needs of the species will be put at risk if required funding is reduced or eliminated. The elimination of human-caused mortality due to normal agricultural operations is totally dependent upon information and an existing conservation mechanism, and both the information and the conservation mechanism cease if funding ceases. For decades, it has been here, in California’s agricultural heartland, where the vast majority of tricolored blackbirds has first bred. Thus, if California’s blackbird is to persevere and continue to provide one of California’s most extraordinary wildlife spectacles, funding will be required. In the absence of funding, and in the face of severe and on-going habitat losses, the birds will very shortly disappear from that portion of its range where it was recently most numerous, and what birds that then remain will fly into a very uncertain future.

RECOMMENDATIONS

1. Identify and secure a reliable, long-term source of funding for required conservation actions.
2. Work with willing landowners in the southern San Joaquin Valley (lower-elevation locations in Kern and Tulare counties) and pay them to 1) not spray herbicides on key grain fields in order to encourage the growth of weeds preferred by nesting birds, and 2) grow insecticide-free alfalfa in fields adjacent to dairies where birds are known to have nested within the past 10 years; this is a stop-gap measure but may serve to maintain the species in a region where it is rapidly disappearing while efforts are made to provide secure nesting and foraging habitats.
3. Expand Kern NWR to include duck clubs or restored wetlands in the region around Gun Club Road and Pond Road in Kern County to provide secure wetlands in conditions preferred by nesting tricolored blackbirds. Seek and identify nearby foraging habitats, including alfalfa fields and dedicated refuge lands, which may be managed to provide relatively rich insect populations.
4. Work with willing landowners to compensate them to provide nesting substrates for breeding tricolored blackbirds.
5. Continue to recruit and encourage an “army” of volunteers to continue to feed information to dedicated researchers/field personnel and to enter records of locations and observations at locations into Portal. Excellent examples: Cheryl D. Johnson, who has reported several new colony locations in Merced County to field staff, and Debi Shearwater, San Benito County, who identified and monitored several colonies in 2015 and 2016.
6. Recruit environmental scientists, wildlife biologists and other professional field personnel from state (DWR, CDFW, CDPR) and federal (USFWS) agencies to help to monitor and report observations of tricolors.
7. Recruit additional “local experts” who are in the field frequently near their homes and who have much local, intimate knowledge of tricolored blackbirds, especially in understudied portions of their range (e.g., San Francisco Bay Area, San Diego County).

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APPENDIX I. Locations surveyed, found to be unoccupied. Location names follow those used in the Tricolored Blackbird Portal, <http://tricolor.ice.ucdavis.edu>.

Location Name	County	Comments
Acre Farms	Colusa	Habitat optimal, cattails tall, young, lush.
Delevan T45.1	Colusa	Habitat unsuitable, basin dry.
Pioneer Duck Club	Colusa	Habitat unsuitable, basin dry.
4 Mile Slough	Fresno	Habitat appears suitable.
Producer's Dairy	Fresno	Habitat appears suitable, but lacks weeds.
Producer's NW	Fresno	Habitat appears suitable.
Costa's Dairy (all 4)	Kern	Habitat appears suitable but weed-free.
Daniel Farms	Kern	Unsuitable due to construction of huge facility adjacent.
ECLA Ponds	Kern	Habitat unsuitable, water in basins but cattails decadent.
Lawrence Duck Club	Kern	Habitat unsuitable, water in basins but cattails decadent.
Poso 1	Kern	Habitat appears suitable but weed-free.
Poso 3	Kern	Habitat appears suitable.
Poso 4	Kern	Habitat appears suitable.
Semitropic Ridge	Kern	Habitat unsuitable, 100% decadent cattails.
Sherwood Avenue	Kern	Habitat unsuitable.
Avenue Road 14	Madera	Habitat appears suitable.
Milktime Dairy	Madera	Habitat appears suitable.
Road 12 Avenue 24	Madera	Habitat appears suitable.
Road 12 Avenue 24 2	Madera	Habitat appears suitable.
Road 12 Avenue 24 3	Madera	Habitat appears suitable.
A&O Sousa	Merced	Habitat appears suitable.
Amsterdam Road	Merced	Habitat appears suitable.
Childs Avenue East	Merced	Habitat unsuitable, herbicide used.
Childs Avenue West	Merced	Habitat unsuitable, herbicide used.
Combs Road	Merced	Habitat appears suitable.
Crane Ranch	Merced	Unsuitable due to nut orchards and vineyard adjacent.
Crane Ranch North	Merced	Habitat appears suitable.

Location Name	County	Comments
Dead Man Creek	Merced	Habitat absent.
Dickenson Ferry	Merced	Habitat permanently unsuitable, planted to nut trees.
El Nido	Merced	Habitat unsuitable, field planted to oats.
Fahey	Merced	Habitat unsuitable, "clean" field, no weeds.
Homen Dairy	Merced	Habitat unsuitable.
Honey Lake Duck Club	Merced	Habitat unsuitable.
Hulen Levee	Merced	Habitat appears suitable.
LeGrand Road	Merced	Habitat unsuitable, weeds too short.
Lisbon Road	Merced	Permanently unsuitable, herbicide used to kill blackberries.
Lone Tree	Merced	Habitat appears suitable.
Los Banos W.A. 42	Merced	Habitat appears suitable.
McNamara Road	Merced	Habitat appears suitable.
McNamara Road Slough	Merced	Habitat appears suitable.
Merced NWR: East Farmfield 3	Merced	Habitat unsuitable.
Merced NWR: East Farmfield 5	Merced	Habitat unsuitable.
Merced Power Plant	Merced	Habitat unsuitable, cattails too short.
Raynor Ranch Road	Merced	Habitat unsuitable, weeds too short.
Sandy Mush and 59	Merced	Habitat absent, cultivated field.
Sandy Mush and 99	Merced	Habitat absent, cultivated field.
Volta Marsh	Merced	Habitat unsuitable.
Youd Road	Merced	Habitat appears suitable.
Howsley Road	Sutter	Habitat appears suitable.
Alvin Souza Dairy	Tulare	Habitat appears suitable.
Angiola's	Tulare	Habitat appears suitable.
Cornerstone 1, 2	Tulare	Habitat appears suitable.
Cornerstone Marsh	Tulare	No habitat, removed.
Deer Creek North	Tulare	Habitat appears suitable.
East Toledo	Tulare	Habitat appears suitable.

Location Name	County	Comments
GMC (now Del Arco Dairy)	Tulare	Habitat appears suitable.
GMC South	Tulare	Habitat appears suitable.
North Toledo	Tulare	Habitat appears suitable.
Riverview 6	Tulare	Habitat appears suitable.
Riverview Dairy	Tulare	Habitat appears suitable.
Southlake	Tulare	Habitat appears suitable but "clean" field, no weeds.
TeVelde Dairy	Tulare	Habitat appears suitable.
Toledo Pit	Tulare	No nesting substrate, 1,000 WFIB nesting in weeds. 4 basins full.
Vander Eyk	Tulare	Habitat appears suitable.
Verhoeven	Tulare	Habitat appears suitable.
Verhoeven East	Tulare	Habitat appears suitable.
Voice of America	Tulare	Habitat appears suitable.
Kentucky Avenue	Yolo	Habitat unsuitable, planted to wheat.
Willow Slough	Yolo	Habitat appears suitable.
Erle Road East	Yuba	Habitat appears suitable.
Erle Road – Reeds Creek North	Yuba	Habitat appears suitable.
Plumas Arboga 2,3,4	Yuba	Habitat appears suitable.
Schuster Ranch 1	Yuba	Habitat appears to be perfect.
Schuster Ranch 2	Yuba	Habitat appears to be perfect.