Western Riverside County
Multiple Species Habitat Conservation Plan
Biological Monitoring Program

2016 Tricolored Blackbird (*Agelaius tricolor*)
Survey Report

22 August 2017

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NOTE TO READER:

This report is an account of survey activities conducted by the Biological Monitoring Program for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP was permitted in June 2004. Reserve assembly is ongoing and is expected to take 20 or more years to complete. The Conservation Area includes lands acquired under the terms of the MSHCP and other lands that have conservation value in the Plan Area (called public or quasi-public lands in the MSHCP). In this report, the term "Conservation Area" refers to these lands as they were understood by the Monitoring Program at the time the surveys were conducted.

The Monitoring Program monitors the status and distribution of the 146 species covered by the MSHCP within the Conservation Area to provide information to Permittees, land managers, the public, and the Wildlife Agencies [i.e., the California Department of Fish and Wildlife (CDFW, formerly California Department of Fish and Game) and the U.S. Fish and Wildlife Service]. Monitoring Program activities are guided by defined conservation objectives for each Covered Species, other information needs identified in MSHCP Section 5.3 or elsewhere in the document, and the information needs of the Permittees. A list of the lands where data collection activities were conducted in 2016 is included in Section 7.0 of the Western Riverside County Regional Conservation Authority (RCA) Annual Report to the Wildlife Agencies.

The primary author of this report was the 2016 Tricolored Blackbird Project Lead, Rose Cook. This report should be cited as:

Biological Monitoring Program. 2017. Western Riverside County MSHCP Biological Monitoring Program 2016 Tricolored Blackbird (*Agelaius tricolor*) Survey Report. Prepared for the Western Riverside County Multiple Species Habitat Conservation Plan. Riverside, CA. Available online: http://wrc-rca.org/about-rca/monitoring/monitoring-surveys/**.**

While we have made every effort to accurately represent our data and results, it should be recognized that data management and analysis are ongoing activities. Any reader wishing to make further use of the information or data provided in this report should contact the Monitoring Program to ensure that they have access to the best available or most current data.

If there are any questions about the information provided in this report, please contact the Monitoring Program Administrator. If you have questions about the MSHCP, please contact the Executive Director of the RCA. Further information on the MSHCP and the RCA can be found at www.wrc-rca.org.

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INTRODUCTION

Background

The Tricolored Blackbird (*Agelaius tricolor*) is a medium-sized member of the songbird family Icteridae and a near-California endemic, with 95% of its historic breeding range within the state (Meese et al. 2014). The species is one of 45 bird species covered by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP; "Plan") (Dudek & Associates 2003). Species-specific Core Areas designated by the Plan for the Tricolored Blackbird include Mystic Lake/San Jacinto Wildlife Area, San Jacinto River Floodplain, Collier Marsh/Lake Elsinore Grasslands, Northwest Alberhill, and Vail Lake/Wilson Valley/Eastern Temecula Creek (Fig. 1). The Plan also stipulates specific conservation objectives, among which are the continued use of, and successful reproduction in, at least 1 of these 5 Core Areas at least once every 5 years (Objective 4), and the protection of all known nesting locations on conserved lands (Objective 6). Core Areas include most historic breeding sites known at the time the MSHCP was developed.

The Tricolored Blackbird has been classified as Globally Endangered by the International Union for Conservation of Nature (IUCN) Red List since 2008 (Birdlife International 2017). Following results of a statewide survey conducted in the spring of 2014, the species was granted an emergency listing under the California Endangered Species Act; however, this protection expired in June 2015. A petition for full listing was submitted in August 2015 and the species became a candidate the following December. A federal petition for Endangered Species status is currently under review.

Tricolored Blackbirds are colonial breeding birds (Neff 1937). A single territory will include 1 male and 1–3 females, with an average sex ratio of 1:1.5 males to females (Payne 1969). Breeding occurs from March–June and can be itinerant (Hamilton 1998), whereby birds may nest multiple times during a season but in different parts of their range. Nests are built within small territories that usually occupy a few square meters within tight proximity to each other (Lack and Emlen 1939). Timing of nesting is highly synchronous and young fledge within a few days of each other, with juveniles often gathering together in flocks called crèches (Orians 1961). Only females build nests and incubate eggs but both sexes provision young (Neff 1937). Foraging is social, occurring away from the nest site (Orians 1961). In moderate to large colonies of 5000–300,000 birds or more, foraging flocks can be made up of hundreds or thousands of individuals. Adults feed on grain and insects throughout the year (Meese et al. 2014). Young up to 9 days old depend entirely on insects that are gathered from fields of native and non-native forblands and grass/forbland mixtures, irrigated pasture, lightly grazed rangeland, dry season pools, mowed alfalfa (*Medicago sativa*) fields, and various scrub vegetation associations (Meese et al. 2014). Foraging for invertebrate prey can occur up to 13 km from the nest site but is usually within 5 km (Orians 1961). However, adults feeding themselves rarely travel more than 3 km from colony sites (Hamilton and Meese 2006). Colonies often disperse after the breeding season and individuals may join mixed flocks of songbirds, primarily other species of blackbirds, European Starlings (*Sturnus vulgaris*), and Brown-headed Cowbirds (*Molothrus ater*) (Orians 1961; Payne 1969).

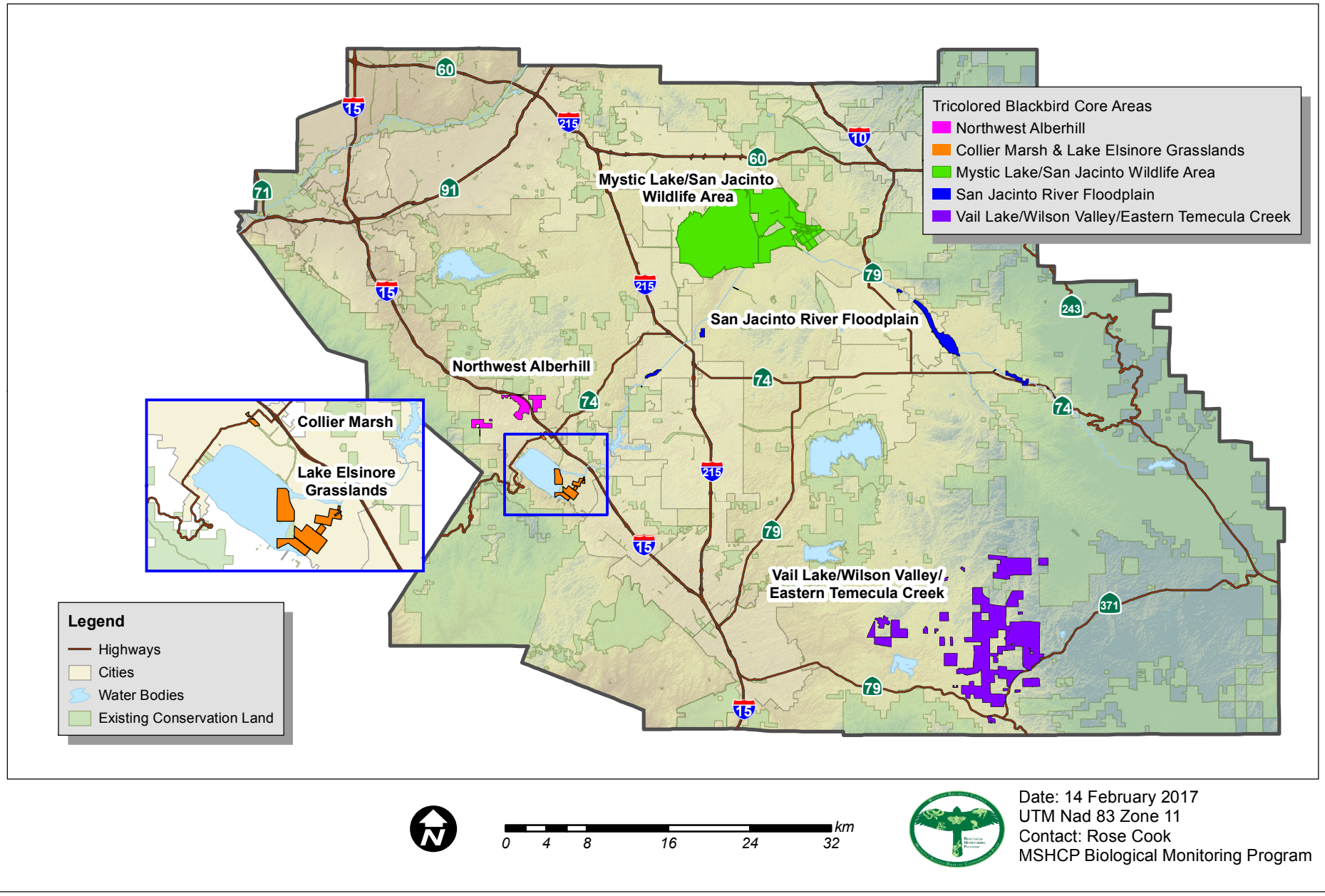

Figure 1. Western Riverside County MSHCP Plan Area and MSHCP-defined Core Areas for the Tricolored Blackbird (*Agelaius tricolor*).

The MSHCP describes primary (nesting) habitat as marshlands and freshwater bodies within the Riverside Lowlands and Foothills Bioregions of the MSHCP Plan Area. Secondary habitat includes playa and vernal pools, grasslands, agricultural land, and riparian scrub. Approximately 60% of Tricolored Blackbird colonies observed within the Plan Area over the last 3 decades nested in freshwater marsh, and 40% were in undeveloped upland and agricultural areas (Biological Monitoring Program 2011). In marshes, nests are built over water in mature stands of cattail (*Typha* spp.) or bulrush (*Scirpus* spp.). In undeveloped upland areas, nesting substrates consist primarily of spiny, protective vegetation such as milk thistle (*Silybum marianum*), bull thistle (*Cirsium vulgare*), and stinging nettle (*Urtica dioica*). Grain grown as silage for dairy cows are frequently used in agricultural areas. In Riverside County, colonies are often located at or near dairy operations that provide an abundance of water, grain for adults, and insects for young, often collected from mature (two- or three-year-old) alfalfa fields (*R. Cook, personal observation*).

Species-specific Conservation Objective 4 of the MSHCP (Dudek & Associates 2003) was met in 2011, 2014, and 2015 (Biological Monitoring Program 2016), the second, fourth, and fifth years of the current five-year monitoring period, respectively. However, we conduct annual surveys for this species due to its severe decline over the last 2 decades (Biological Monitoring Program 2011) and the need to obtain continuous data on population distribution and trend.

Goals and Objectives

1. Document the breeding-season distribution of Tricolored Blackbirds within the MSHCP Plan Area.
    a. Conduct targeted searches for breeding colonies at historic nesting sites and potential suitable habitat within the species' 5 defined Core Areas and elsewhere over a three-day period in April.

2. Assess the size of the breeding population of Tricolored Blackbirds within the MSHCP Plan Area
    a. Estimate the number of adult Tricolored Blackbirds present at occupied breeding sites.

3. Document reproductive success, defined as the successful fledging of at least one young, of Tricolored Blackbird colonies.
    a. Revisit occupied breeding sites and search for fledglings at weekly intervals.

METHODS

We conducted targeted searches for Tricolored Blackbird colonies from 11–13 April 2016, during the peak of the breeding season (Meese et al. 2014). The timing corresponded with most previous surveys for Tricolored Blackbirds in western Riverside County by the Biological Monitoring Program and other organizations. The short duration of the survey period is intended to prevent duplicate counting of birds that could occur if colony sites are abandoned by birds relocating and nesting in other areas (Hamilton 1998).

Our 2016 survey was conducted in collaboration with the annual statewide Tricolored Blackbird survey organized by Dr. Robert Meese and his colleagues (University of California, Davis) and meets their data collection standards as well as our own. We acquired all necessary permissions from MSHCP Reserve Managers to access conserved lands before surveys began. Area searches outside of conserved lands, for the purposes of the annual statewide survey, consisted of driving public roadways and scanning the landscape for birds.

We followed the protocol established by the Biological Monitoring Program in 2005, which includes visits to all known historic colony sites (Fig. 2), surveys of the species' 5 Core Areas, and other suitable breeding habitat within the species' range, time and accessibility permitted. The only historic colony site not visited was Lake Norconian due to a lack of documented occupancy since 1950 and sufficient foraging habitat.

We recorded data for all breeding colonies, and for flocks of birds unassociated with breeding colonies, during the target survey and follow-up period**.** Data included the following: survey date; name of colony site or search area; names of observers; observation start and end times; geographic coordinates (if a new location); minimum, maximum, and best estimate of abundance of adult, fledgling, and juvenile birds; method of estimation; adult sex ratio; behavior; presence of nearby stored grains; dominant surrounding land use; distance to fresh water; fresh water source; primary and secondary nesting substrate; and spatial dimensions of occupied nesting substrate. We also included miles driven (for area searches), weather variables, ambient noise, and types and numbers of predator species observed.

We assessed the temporal stage of nesting by the behavior and activity level of adult birds (i.e., whether they were vocalizing or quiet, carrying nest material or food) and whether fledglings were detected visually or by sound. Survey methods are more completely described in the *Western Riverside County MSHCP Biological Monitoring Program Tricolored Blackbird Survey Protocol*, available from the Biological Monitoring Program.

We monitored colonies to assess reproductive success by revisiting colony sites at weekly intervals during the nesting cycle. We documented the presence of fledglings detected by sight and estimated the number of juvenile birds that had left the nest.

Training

All field personnel were trained in the identification of Tricolored Blackbirds by sight and sound, and demonstrated an understanding of the field methods associated with the study. All surveyors had prior experience conducting Tricolored Blackbird surveys. All colonies detected were revisited and surveyed independently by the project lead.

Data Analysis and Management

Data analysis consisted of mapping observations of Tricolored Blackbirds in a geographic information system (GIS) and assessing their distribution and reproductive success with respect to land ownership and conservation status, the species' Core Areas, and historic colony sites.

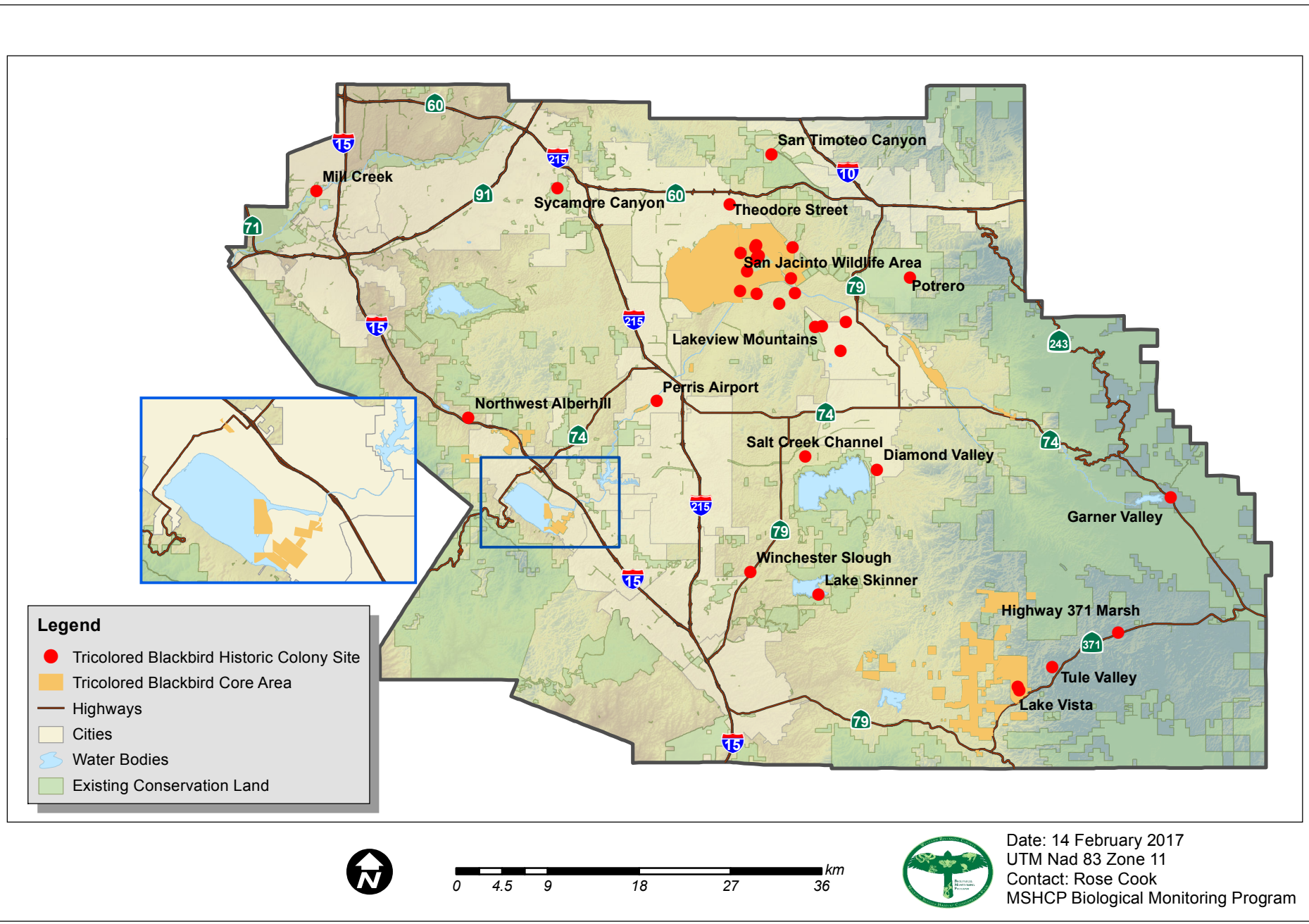

Figure 2. Tricolored Blackbird (*Agelaius tricolor*) 2016 survey locations.

All survey data are stored in the Biological Monitoring Program's central database. Paper data sheets and survey maps are retained in the program office in Riverside, CA. Data were also entered into the Tricolored Blackbird Portal, a website established under the Conservation Plan for the Tricolored Blackbird (Tricolored Blackbird Working Group 2009) and administered by the University of California Davis, Information Center for the Environment (http://tricolor.ice.ucdavis.edu/).

RESULTS

We detected 5 breeding colonies with a total of 4985 birds during the annual 3 day survey period. One of these colonies was located on conserved lands within 1 of the species' 5 Core Areas. The others were located on non-conserved lands outside of the species' Core Areas. A nonbreeding flock of 7 birds was also observed in the vicinity of Lake Hemet in the Garner Valley.

Core Areas

The largest colony observed this year, with approximately 2600 birds, occupied a site on the Davis Unit of the San Jacinto Wildlife Area within the Mystic Lake/San Jacinto Wildlife Area Core Area (Fig. 3). Nesting substrate consisted of hardstem bulrush (*Schoenoplectus acutus*) distributed in small patches over approximately 0.95 ha in 2 adjacent ponds managed for waterfowl. Monitoring continued through 24 May. Approximately 150 young fledged successfully at this site.

Other Locations

Colonies outside of conserved lands were located in the San Jacinto Valley, Domenigoni Valley, and Tule Valley areas. In the San Jacinto Valley, a colony of approximately 800 birds nested at a dairy farm in a 3.9-ha field consisting of triticale and Cheeseweed mallow (*Malva parviflora*). Vegetation height exceeded 1 m with cover of 100%. Monitoring continued through 18 May. Reproduction was successful; however, we did not obtain estimates of productivity.

Another colony of approximately 600 birds occupied a site within the Salt Creek stream channel on Riverside County Flood Control property in the Domenigoni Valley. Nesting substrate consisted of three small patches of cattail with a total area of 0.2 ha. Monitoring continued through 30 May. Approximately 600 young fledged successfully at this site.

Two colonies were located in the Tule Valley. One of them, with approximately 600 birds, occupied the Tule Valley historic colony site, a private lakeside community surrounded by open space and cattle pasture. Nesting substrate consisted of cattail and bulrush distributed in patches along the southern shore of the lake. Monitoring continued through 18 May. Approximately 700 young fledged successfully at this site. The second colony of approximately 385 birds occupied the historic Highway 371 site. Nesting substrate consisted of a 0.75-ha patch of hardstem bulrush. Monitoring continued through 27 April. Reproduction was successful; however, we did not obtain estimates of productivity.

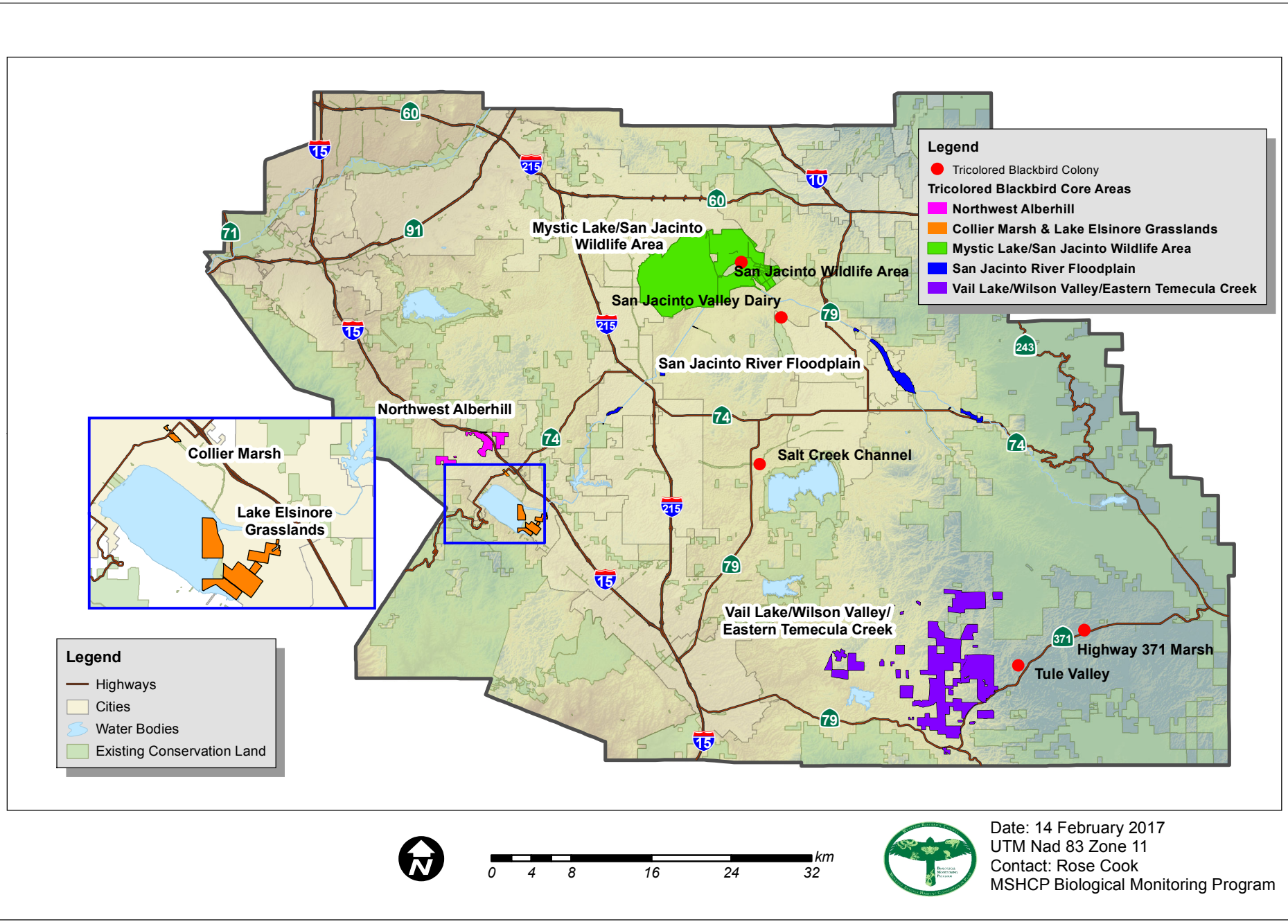

Figure 3. Locations of Tricolored Blackbird (*Agelaius tricolor*) breeding colonies in the Western Riverside County MSHCP Plan Area during the spring of 2016.

DISCUSSION

The number of Tricolored Blackbirds observed during the targeted survey exceeded that observed during the 2015 survey (Biological Monitoring Program 2016) by approximately 1,100. This apparent increase was due possibly to 1) an under-count of breeding birds at the San Jacinto Wildlife Area during the 2015 survey period (Biological Monitoring Program 2016), 2) the high level of productivity at the San Jacinto Wildlife Area in 2015 (Biological Monitoring Program 2016), or 3) a combination of these factors. Nonetheless, the population remains critically low and is still less than 40% of the size it was in 2005 (Biological Monitoring Program 2011).

Core Areas

Although the San Jacinto Wildlife Area colony was the largest observed during the targeted survey in April, only about 100 birds remained to complete a nesting cycle. The reason for this is not clear. Insufficient food supply, either for nestlings or adults or both, is the most likely explanation since the nesting substrate remained intact and there was no apparent evidence of predation. Dairies located next to the Wildlife Area provide an important source of food in the form of grain for adult Tricolored Blackbirds. Colonies usually establish within 1.0-2.0 km of one of these dairies; however, this distance was more than 3.0 km in 2016. It is possible that the greater distance combined with hot temperatures (exceeding 35°C) over multiple days during the second week of April made it impossible for birds to maintain a viable incubation temperature in the nest. We do not know if any of the birds from this colony nested later in another location; however, it is possible that some relocated to the occupied dairy site since this colony grew in size from approximately 800 on 12 April to 1200 on 22 April.

Other Locations

The distribution of Tricolored Blackbirds in 2016, both in terms of abundance and colony sites, was heavily concentrated in the San Jacinto Valley, and in the Tule and Anza Valley areas in the southeastern portion of the Plan Area. This pattern has been consistent over the past decade. The Salt Creek colony was the first new site discovered outside of the San Jacinto Valley since 2012. Nesting in the San Jacinto Valley, outside of conserved lands, usually occurs either at the San Jacinto Wastewater Treatment Plant or at one of region's dairy farms, as it did in 2016. Colonies are protected at the Treatment Plant, but protection elsewhere must be negotiated with private landowners. The Salt Creek site is owned by the Riverside County Flood Control District. Their policies prohibit disturbance to all nesting birds.

Recommendations

Future Surveys

Our results suggest that it is important to continue to survey historic breeding sites on an annual basis except where suitable habitat no longer exists. These surveys should be scheduled for the second week in April to provide data comparable with those of the annual and triennial statewide surveys. The small number of new colony sites encountered during our surveys of potentially suitable breeding habitat from 2011–2013 suggests that annual monitoring of known breeding sites should be adequate to assess population status in years when larger scale efforts are not possible. Because Tricolored

Blackbirds concentrate their breeding effort in only a few sites each year, and because occupancy may vary across sites between years, area searches are probably the most efficient method for locating new colony sites. We therefore recommend that area searches for Tricolored Blackbirds be made in conjunction with survey efforts for riparian, marsh, coastal sage scrub, and grassland bird species. These surveys generally occur during the breeding season and cover much of the habitat suitable for Tricolored Blackbirds.

More information is needed on patterns of movement and winter habitat use within the MSHCP Plan Area. Incidental observations suggest that some over-wintering occurs in the San Jacinto, Anza, and Tule Valley areas, but more data are needed. Critical to this effort will be the banding of birds and reporting of re-sightings during the year. Other data sources, such as the Cornell Laboratory of Ornithology (e.g., Christmas Bird Count data set and eBird.com website) could be useful in this regard.

Conservation and Management

Based on accumulated observations over the last 12 years by Biological Monitoring Program biologists, the distribution of Tricolored Blackbirds in western Riverside County outside the breeding season appears to be concentrated in the areas where most breeding occurs in the spring, namely the San Jacinto and Tule Valleys. Only small numbers of birds are observed sporadically in the Badlands, Lake Mathews, and Garner Valley areas. Although inconclusive, these observations suggest that the Tricolored Blackbirds that breed in Riverside County are largely resident year-round, unlike their counterparts in the Central Valley, which underscores the critical importance of conserving habitat year-round in both the San Jacinto and Tule Valleys.

Tricolored Blackbirds continue to depend heavily on managed habitats and the persistence of the local population will likely require active management. Management must aim for rapid restoration of population numbers and multiple large breeding colonies ($\geq$ 5000 birds). The Davis Unit of the San Jacinto Wildlife Area remains the most important site for the restoration of the population in Riverside County and southern California as a whole.

In previous reports, we proposed food limitation for nestling birds to be the principle factor impacting site occupancy, reproductive success, and juvenile recruitment at the Davis Unit of the San Jacinto Wildlife Area, and that management to enhance the production of caterpillars, grasshoppers, and other invertebrates during the breeding season could be a significant benefit to the population. Results of efforts to enhance breeding habitat through the production of forage crops and irrigation of natural grass/forblands (Cook 2016) are encouraging and we advocate the continuation of these efforts. The need to conserve and enhance habitat for foraging cannot be overemphasized. In addition to improvements that can be made on lands currently in conservation, we recommend that additional foraging habitat in the vicinity of the Wildlife Area, particularly the grasslands north of Mystic Lake, be considered high priority for acquisition or other forms of long-term protection and management.

The MSHCP species management activities summary (Volume II, Chapter 9) states that Reserve Managers will conserve and protect from disturbance a 100-m buffer

around any known nesting locations. All colonies should immediately be reported to Reserve Managers to help ensure this objective is met. Protection must include both nesting substrate and foraging habitat. The low rate at which we have discovered new colony sites underscores the importance of meeting this objective.

All historic colony sites within the Conservation Area should be evaluated for their value as breeding habitat (including nesting and foraging) and improvements made as soon as possible. These include the following:

- Davis Unit of the San Jacinto Wildlife Area
- Potrero Unit of the San Jacinto Wildlife Area
- Jackrabbit Trail
- Lakeview Mountains
- Lake Skinner
- Sycamore Canyon
- Mill Creek and the Santa Ana River Corridor
- Lake Vista Road in the Wilson Valley

Suitable breeding habitat includes upland and wetland habitat located within 0.5 km of a water source and 1–5 km from quality foraging habitat. Wetlands large enough to support only a few hundred to a few thousand birds could be beneficial if they lack sufficient roost or nest sites for avian predators such as Black-crowned Night-Herons (*Nycticorax nycticorax*) and Cattle Egrets (*Bubulcus ibis*), which can be destructive if their breeding colonies establish in or near those of Tricolored Blackbirds.

The value of upland nesting substrates should not be overlooked. These consist of dense stands of vegetation including native species such as California wild rose (*Rosa californicus*) and stinging nettle, and non-native species such as bull thistle, cheeseweed mallow, and wild lettuce (*Lactuca serriola*). These substrate types can support large numbers of nests in a concentrated and manageable area. Ideal locations would be within 0.5–1.0 km of large forbland or grass/forbland vegetation communities that produce an abundance of invertebrate prey and areas where stands of suitable nesting substrate already exist. Habitat should be widely distributed throughout the landscape to buffer the population as a whole from localized stochastic events such as variation in rainfall and insect production.

Between 2005 and 2014, and in 2016, the majority of the western Riverside County population nested on private property that may be vulnerable to disturbance. Where birds nest in agricultural fields, harvest often occurs before young have fledged, resulting in total reproductive failure (Cook and Toft 2005). This happened in the San Jacinto Valley in 2013. Through a program launched in 2011, landowners may be eligible for reimbursement for harvest delays to protect nesting Tricolored Blackbirds through the Tricolored Blackbird Conservation Initiative or the Declining Species Wildlife Habitat Fund of the Natural Resource Conservation Service's Environmental Quality Incentives Program (http://www.nrcs.usda.gov/wps/portal/nrcs/main/ca/programs/financial/eqip/). As of March 2015, any colonies found in agricultural fields should be reported immediately through the proper channels (Appendix).

In some cases, Tricolored Blackbird colonies utilize resources that occur on both private and conserved lands, and protection will require collaborative conservation and management. For example, the San Timoteo site is private, but colonies observed in 2008 (Kelsey 2008) and in 2010 and 2012 by the Biological Monitoring Program provisioned nestlings with insects collected primarily from surrounding grasslands, much of which are managed by the Riverside County Parks and Open Space District. Similarly, the created wetlands at the San Jacinto Wastewater Treatment Plant have provided important nesting habitat in past years (Hamilton et al. 1994; Hamilton 1997) and might again in the future; however, this will depend not only on the management of nesting habitat within the wetlands but on the use of nearby lands, some of which are within the MSHCP Criteria Area.

Core Area Definitions and Species Objectives

The Northwest Alberhill and Collier Marsh/Lake Elsinore Grasslands areas do not provide suitable or sufficient habitat for breeding in terms of both nesting and foraging habitat. We recommend that their designations as Core Areas for this species be reconsidered.

The San Jacinto River Floodplain Core Area largely lack suitable breeding habitat for Tricolored Blackbirds at the present time. The eastern arm of the Core Area is surrounded by urban development and lacks sufficient foraging habitat, a condition that is unlikely to be improved by management. Although the western arm is predominantly agricultural, suitable habitat is absent except for a section of the river and surrounding grasslands near the Perris Airport where a colony was observed during our 2005 surveys. Proper management in this area could potentially benefit the species in the future.

We propose that the boundaries of the Vail Lake/Wilson Valley/Eastern Temecula Creek Core Area be redefined. Most of the breeding activity documented in this area since surveys began in 2005 has been concentrated in the eastern side and in the adjacent Tule Valley area. The Temecula Creek area is lacking in suitable habitat; although we have not conducted surveys in the Vail Lake area due to access restrictions, it is unlikely that suitable habitat currently exists there, either.

We propose that the Potrero Unit of the San Jacinto Wildlife Area be considered for addition as a Core Area. The Potrero colony site has been occupied in most years since 2005. Recommended habitat improvements at Potrero include: rejuvenation by mowing or burning of old-growth cattails every 3–5 years on a rotational basis during the fall to stimulate new growth; removal of tamarisk and willow growth in the pond; and addition of groundwater to maintain water levels of 30–45 cm in the pond. Opportunities for establishing additional nesting substrate in other parts of this reserve could be considered as well.

We recommend that the species account of the Tricolored Blackbird in the MSHCP be modified to recognize loss of foraging habitat in the vicinity of breeding sites as a significant threat to the survival of the species, and that the stated management objectives be reconsidered as well. In particular, the prescription for managing “this species in order to maintain (once every five years) the continued use of, and successful reproduction within at least one of the identified Core Areas” (Dudek & Associates 2003)

is likely insufficient for a rapidly declining species that is dependent on patchy and unpredictable breeding habitats that are being rapidly lost throughout the Plan Area.

ACKNOWLEDGEMENTS

We thank the land managers in the MSHCP Plan Area, who in the interest of conservation and stewardship, facilitate Monitoring Program activities on the lands for which they are responsible. Funding for the Biological Monitoring Program is provided by the Western Riverside County Regional Conservation Authority and the California Department of Fish and Wildlife. Program staff who conducted surveys in 2016 included: Rose Cook, Karyn Drennan, Tara Graham, Lynn Miller, Robert Packard, Nicholas Peterson (CDFW), Esperanza Sandoval, and Ana Sawyer.

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Appendix

Tricolored Blackbird Silage Colony Response Plan 2016
Dairy Outreach for NRCS Program Offering

1. Researchers, field technicians, and volunteers survey public roads in Central Valley for Tricolored Blackbird colonies. Bob Meese, under contract with CDFW, and an Audubon field technician will be conducting surveys.

2. If a colony is located in an agricultural field, the field person should note the location, approximate colony size (# of birds), and colony acreage. Try to identify the farm's name, dairy cooperative, and creamery membership if there is visible signage at the entrance. Do not trespass.

3. Call one of the following point people AND send a joint email to all four people. Include the farm's name and dairy cooperative or creamery membership if identified, location, and estimate of colony size.

Paul Sousa, Western United Dairymen
psousawud@yahoo.com or (209)-527-6453

Noelle Cremers, California Farm Bureau
ncremers@cfbf.com or (916)-601-5357

Samantha Arthur, Audubon California
sarthur@audubon.org or (916)-737-5707 ext 115

Jesse Bahm, Natural Resource Conservation Service
jesse.bahm@ca.usda.gov or (559)-252-2191 ext 105

4. If Paul, Noelle, Samantha, and Jesse are unresponsive, contact the Western United Dairymen field rep and/or County Farm Bureau (see contact information below).

5. Depending on the dairy's membership, either Paul or Noelle will call the dairy to make the first contact. They will explain the species' protected status and the resources available through NRCS. Dairies will be encouraged to contact their local NRCS office and Jesse Bahm to enroll in the delayed harvest incentive program. Farmers should expect to be paid approximately $600/acre for harvest delay. Harvest delay is only needed on the portion of the field with Tricolored Blackbirds, including a small buffer zone.

6. If the colony is initially reported by a non-expert, then experts in the field will coordinate to confirm the Tricolored Blackbird colony.

7. If the farmer does not want to participate in the NRCS program, but birds are at risk, then Dairy Cares will outreach to appropriate creameries.

8. Jesse and Samantha will visit the enrolled site over the course of several weeks to outline the field area to be enrolled in the program and give a harvest date based on the developmental stage of the colony.

9. Jesse will visit the site at the harvest date to monitor and ensure harvest was delayed to the identified date.

10. NRCS pays compensation directly to farmers. Payment can take 2-3 weeks.

If Paul, Noelle, Samantha, or Jesse cannot be reached, then field reps from Western United Dairymen or Farm Bureau should be called.

California Farm Bureau Kern and Riverside Counties: Rachael Johnson (909) 556-2266

All Other San Joaquin Valley Counties: Andrew Genasci (209) 670-4390