

**Southwestern Riverside County Multi-Species Reserve  
Annual Report Fiscal Year 2021-2022**



**Goldfields bloom in the background**



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## **I. INTRODUCTION**

The Southwestern Riverside County Multi-Species Reserve (Reserve) was established in October 1992 as mitigation for impacts to sensitive species resulting from the creation and operation of the reservoir “Diamond Valley Lake” (DVL) near Hemet, California. To this end, the Metropolitan Water District of Southern California (MWD) developed a Multi-Species Habitat Conservation Plan (MSHCP) which included the establishment of the Reserve, provisions for research and management funding, and a Cooperative Management Agreement (CMA) between the five agencies with interest in the Reserve: MWD, Riverside County Habitat Conservation Agency (RCHCA), Riverside County Regional Park and Open-Space District (RCRPOSD), California Department of Fish and Wildlife (CDFW), and United States Fish and Wildlife Service (USFWS) (Cooperative Management Agreement, 1992).

The Reserve MSHCP covers a 20,000-acre planning area including approximately 2,400 acres of previously conserved habitat (Shipley Reserve), 6,600 acres of new conservation land, 8,600 acres dedicated to two reservoirs and water-related facilities, and 2,400 acres dedicated to recreation facilities at Diamond Valley Lake (previously “Domenigoni Valley Reservoir Project” or “Eastside Reservoir Project”) and existing Lake Skinner. The Reserve was established by combining the Shipley Reserve, lands around Lake Skinner, and lands around DVL to create a contiguous Reserve of approximately 9,000 acres. Subsequent acquisitions have added to the Reserve and increased the size of the Reserve to approximately 14,000 acres (21 square miles) (Southwestern Riverside County Multi-Species Reserve Management Plan, 2008).

## **II. MULTI-SPECIES RESERVE**

### **A. Reserve Management & Patrol**

#### **1) New Reserve Management Agreement**

Effective June 08, 2021, following an open request for proposals solicitation process, the Metropolitan Water District of Southern California and Riverside County Regional Park and Open-Space District executed a new reserve management services agreement pursuant to the CMA and MSHCP. The agreement is in effect from July 1, 2021 through June 30, 2022, with four (4) optional one-year extensions. Option Year 1 occurs between July 1, 2022 through June 30, 2023.

2) Trails

This was the first year the Skinner Trail was open to the public year-round with limited closures during significant weather events impacting public safety. Reserve staff patrol and maintain the trail regularly in collaboration with Lake Skinner Recreational Area staff. The trail is temporarily closed at the end of the Gate 102 road as the horse bridge is not safe for use and needs to be repaired or removed. A water trough was moved to this location for equestrian users.

3) Maintenance

Staffed installed about 200 feet of 3-strand wire fence, including approximately 60 feet due to vehicle damage near the Lake Skinner Recreation Area entrance and the remainder to prevent access to the reserve and illegal dumping. Repairs were made to wildlife water guzzlers, gates, and annual maintenance was conducted on Reserve equipment including tractors and attachments, trailers, the fire suppression unit, a portable water tank unit, and other handheld mechanized equipment.

4) Patrol

In order to fulfill the management objectives established in the Reserve Management Plan, the Reserve is patrolled by a full time Park Ranger employed by Parks (per SWRCMSR Service Contract). Additionally, one Open-Space Park Ranger and three Lake Skinner Recreational Area Park Rangers were cross trained on Reserve boundaries and assisted the Reserve Ranger on occasion. Routine patrols include the inspection of Reserve boundary gates and fencing, removal of unauthorized people, and visitor interactions while on trails.

The primary Reserve issue related to patrol and security the fiscal year continued to be related to the increase in single-family homes being constructed in areas west of the Reserve. As a result of these developments, Reserve staff is still seeing an increase of vehicle and mountain bike traffic along Rawson Road and Crown Valley Road, which is where people most often try to access the Reserve.

Other reoccurring issues this year include hot air balloons landing within the Reserve, fence damage due to Off-Highway Vehicles, and mountain bike trespass. Reserve staff is using ArcGIS Field Maps to track these occurrences.

## **B. Biological Surveys**

### 1) Rare Plants

Rare plant surveys were conducted in Spring 2022 by the Reserve Manager and the WRC MSHCP Biological Monitoring Program (MSHCP BMP). Several populations of Parry's spineflower (*Chorizanthe parryi*) were found; one occurrence in the North Shore Management Unit contained over one thousand individuals. Several populations of Palmer's grapplinghook (*Harpagonella palmeri*) were observed; one occurrence in the North Shore Management Unit contained over 100 plants. Munz's onion (*Allium munzii*) surveys were conducted in two plots located in the North Shore Management Unit with each containing about 45 individuals. Several populations of non-covered rare plant species including long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), chocolate lily (*Fritillaria biflora*), small flowered morning glory (*Convolvulus simulans*), and small flowered microseris (*Microseris douglasii* subsp. *platycarpha*) were also observed.



Munz's Onion (*Allium munzii*). Photo by Taylor Zigelbaum.

Consistent with previous management actions, the overall health, diameter at breast height, sign of insect pests, presence of acorns, and hybridization of the 74 Engelmann oak (*Quercus engelmannii*) adults, saplings, and seedlings in Lopez Canyon and Rawson Rift were assessed in the spring. Canopy cover of the adult trees continues to decrease, which is likely due to long term drought conditions. The MSHCP BMP resurveyed recruitment plots in October 2021, which were last surveyed in 2017. All adults and saplings found in

the 2017 survey were still alive. Leaf loss percentage increased from 50% to 80%, indicating elevated stress levels. There was a decrease in total seedlings detected which went from 48 in 2017 to 13 seedlings in 2021.



Engelmann oak seedling during survey

## 2) Avian Surveys

California gnatcatcher (*Poliophtila californica californica*) surveys were conducted during the 2022 bird nesting season by the MSHCP BMP according to USGS protocol. During the surveys they discovered five pairs, but only four nests were found, of which one nest successfully fledged within the Reserve. There were no observations of parasitism from brown-headed cowbirds (*Molothrus ater*).



California Gnatcatcher (*Poliophtila californica californica*). Photo by Masanori Abe.

Monitoring of burrowing owl (*Athene cunicularia*) was conducted in accordance with the 2008 Reserve Management Plan , including inspections of artificial burrows installed on the Reserve. Vegetation management around the artificial burrows was conducted

throughout the year. Based upon the spring site inspections the artificial burrows were not being occupied. Research on habitat suitability modelling by San Diego Zoo Wildlife Alliance related to “Burrowing Owl Conservation and Management Plan for Western Riverside County” was completed.

The MSHCP BMP/CDFW surveyed for turkey vulture (*Cathartes aura*) nests along Rawson Canyon. While turkey vultures were detected during the survey, no nests, except for a sign of recent nesting activity in a cave (white wash and strong odor), were identified.

The Reserve Manager led the National Audubon Society’s annual Christmas Bird Count of Diamond Valley Circle, which encompasses the entire Reserve and bordering properties. Six birders participated in the event and documented 108 species of birds, including all 8 avian species covered by the Reserve MSHCP.

### 3) Insects

Thirteen Quino checkerspot butterfly (*Euphydryas editha quino*) survey visits were conducted by the MSHCP BMP between January 2022 and April 2022. 54 adults and 3 larvae were observed during the presence-absence surveys. To improve understanding of genomic diversity of Quino and in combination with climate modeling, researchers Zachary MacDonald and Ken Osbourne collected 6 specimens (1 female and 5 males).

### 4) Mammals

The use of camera traps continued to be utilized to document large mammals, including mountain lions (*Felis concolor*). A total of 6 wildlife cameras were placed near natural springs, wildlife guzzlers, and known game trails. Nine sightings of mountain lions were observed between November 2021 and March 2022. Additional species regularly documented include California mule deer (*Odocoileus hemionus californicus*), bobcat (*Lynx rufus*), and coyote (*Canis latrans*).



Debra Shier and Janine Fischer of the San Diego Zoo Wildlife Alliance and UCLA conducted research Stephens' kangaroo rat (*Dipodomys stephensi*) foraging behavior and habitat use related to anthropogenic lighting and interspecific competition with Dulzura kangaroo rat (*Dipodomys simulans*). Results of the study are pending submission to the Reserve Manager.

5) Herpetofauna

Quarterly herpetofauna coverboard surveys were conducted in previously established arrays in Tusalota Hills and Rawson Canyon. Only two non-covered herpetofauna species, western skink and possibly Gilbert's skink or blind snake (lost in leaf litter), were observed, and a southwestern pond turtle was incidentally observed near Middle Creek.

6) Additional Research

During the reporting year, seven MSR Research Proposals were submitted and had been approved by the Reserve Manager, including surveys for California gnatcatcher (*Polioptila californica*), turkey vulture (*Cathartes aura*), Quino Checkerspot butterfly (*Euphydryas editha quino*), Stephens' kangaroo rat (*Dipodomys stephensi*), botany survey of WRC MSHCP-covered species, chocolate lily (*Fritillaria biflora*), and potato psyllids and nightshade. Each researcher is in the process of completing their work and will provide the Reserve Manager with published results.

**C. Vegetation Management**

1) Tusalota Creek Restoration

Reserve staff removed invasive tamarisk and propagated approximately 250 native riparian plants, which were then installed in the restoration site and placed on drip irrigation.



Pole cuttings growing in nursery

## 2) Non-native grassland

Reserve staff managed non-native grasslands in the Reserve to enhance habitat for covered species and mitigate the risk of catastrophic wildfire on the Reserve. Staff mowed approximately 500 acres of non-native grasslands across multiple management units and coordinated with CAL FIRE as part of the 10-year Vegetation Management Plan to conduct prescribed burns on 75 acres in the Lopez Canyon Management Unit and 55 acres in the West Oxley Management Unit. The low intensity prescribed burns removed the existing thatch layer with minimal harm to shrubs and trees.



Lopez Canyon prescribed burn

## 3) DVL Hills Restoration

Reserve staff continued restoring approximately 40 acres of Riversidean sage scrub (RSS) in the Diamond Valley North Hills Unit that an arsonist burned in 2019. Activities during the fiscal year included non-native vegetation removal and dispersal of of RSS species seeds that were collected from the area adjacent to the site.

#### **D. Habitat and Species Management**

1) Stephens Kangaroo Rat

Reserve staff continued mowing SKR management units. Lack of rain during the year minimized the cover of non-native annual grasses. Staff coordinated with Debra Shier and Janine Fischer on any additional mowing needs related to their SKR research.

2) Brown-headed cowbird trapping

Brown-headed cowbird trapping was conducted on the Reserve from March – September 2022. Traps were operated in three locations throughout the Reserve. 31 individuals were captured and euthanized this season compared to 173 in 2021, 61 in 2020, and 37 in 2019. The decrease in birds caught may be due to changing land-use practices around the Reserve, such as more new housing developments and less cattle occupation, which brown-headed cowbirds are often associated with.

### **III. ALAMOS SCHOOLHOUSE NATURE CENTER**

#### **A. Interpretive**

The Alamos Schoolhouse Nature Center was closed to the public due to COVID-19 pandemic through most of the year but reopened 2-3 days a week in March 2022. Bird watching, documentaries, hikes, and arts and craft activities occurred at the Schoolhouse.



Butterfly specimens in Schoolhouse

## IV. BUDGET

The annual budget approved by the Reserve Management Committee to implement the FY 2020-2021 Annual Work Plan was **\$459,256**. Expenditures to implement the management activities was **\$416,899**. Budget actuals for the fiscal year 2021-2022 expenditures by work plan element can be referenced in Appendix B.

## V. RESERVE MANAGEMENT COMMITTEE

During FY 2021/2022 the RMC hosted three management committee meetings. Excerpts of the notes from each meeting with committee approvals are provided below (RMC Minutes, 2021-2022):

### A. RMC Meeting – September 1, 2021 (Held Virtually)

#### **RMC Members Present**

Dustin McLain (Riverside County Regional Park and Open-Space District/Parks)  
Alex Marks (Metropolitan Water District of Southern California/MWD)  
Brian Shomo (Riverside County Habitat Conservation Agency/RCHCA)  
James Thiede (United States Fish and Wildlife Services/USFWS)  
Richard Kim (California Department of Fish and Wildlife/CDFW)

#### **Other Attendees**

Robert Williams (Parks), Bill Wagner (MWD), Gail Barton (Public)

1. **Approval of meeting notes** – June 28, 2021 meeting notes were presented and discussed.

**MOTION to approve the meeting notes as presented for the June meeting with amendment.**

**Motion – Richard Kim; Second – Brian Shomo; Motion approved**

### B. RMC Meeting - March 2, 2022 (Held Virtually)

#### **RMC Members Present**

Dustin McLain (Riverside County Regional Park and Open-Space District/Parks)  
Alex Marks (Metropolitan Water District of Southern California/MWD)  
Brian Shomo (Riverside County Habitat Conservation Agency/RCHCA)  
James Thiede (United States Fish and Wildlife Services/USFWS)  
Richard Kim (California Department of Fish and Wildlife/CDFW)

#### **Other Attendees**

Robert Williams (Parks), Bill Wagner (MWD), Diane Doesserich (MWD), Ryan Rodriguez (Parks), Justin Carmichael (Parks), Anthony Pierucci (Parks), Shannon

Chamberlain (Parks), Kalee Koeslag-Schellerup (Parks), Analicia Gomez (Parks), Tania Asef (MWD), Gail Barton (public).

1. **Approval of meeting notes** – September 1, 2021 meeting notes were presented and discussed.

**MOTION to approve the December meeting notes as presented**  
**Motion – Richard Kim; Second – Alex Marks; Motion approved**

### **C. RMC Meeting - June 21, 2022 (Held Virtually)**

#### **RMC Members Present**

Dustin McLain (Riverside County Regional Park and Open-Space District/Parks)  
Alex Marks (Metropolitan Water District of Southern California/MWD)  
Brian Shomo (Riverside County Habitat Conservation Agency/RCHCA)  
James Thiede (United States Fish and Wildlife Services/USFWS)  
Richard Kim (California Department of Fish and Wildlife/CDFW)

#### **Other Attendees**

Robert Williams (Parks), Kalee Koeslag-Schellerup (Parks), Ryan Rodriguez (Parks), Tania Asef (MWD), Diane Doesserich (MWD)

1. **Approval of meeting notes** – March 2, 2022 meeting notes were presented and discussed.

**MOTION to approve the March meeting notes as presented**  
**Motion – Richard Kim; Second – Dustin McLain; Motion approved**

2. **Annual Work Plan and Annual Operating Budget - Reserve Manager will present the Annual Work Plan to the Committee-** Kalee presented the proposed 2022/2023 fiscal year annual work plan and annual operating budget to the RMC. The work plan includes tasks related to General Reserve Administration, Reserve Research, Species Monitoring and Management, Vegetation Community Monitoring and Management, Reserve Interpretive Services, and Reserve Protection. Kalee stated that the annual operating budget to implement the work plan was \$499,981.

**MOTION to approve the annual work plan for fiscal year 2022-2023 at a budget of \$499,981.**

**Motion – Brian Shomo; Second – Richard Kim; Motion approved**

## REFERENCES

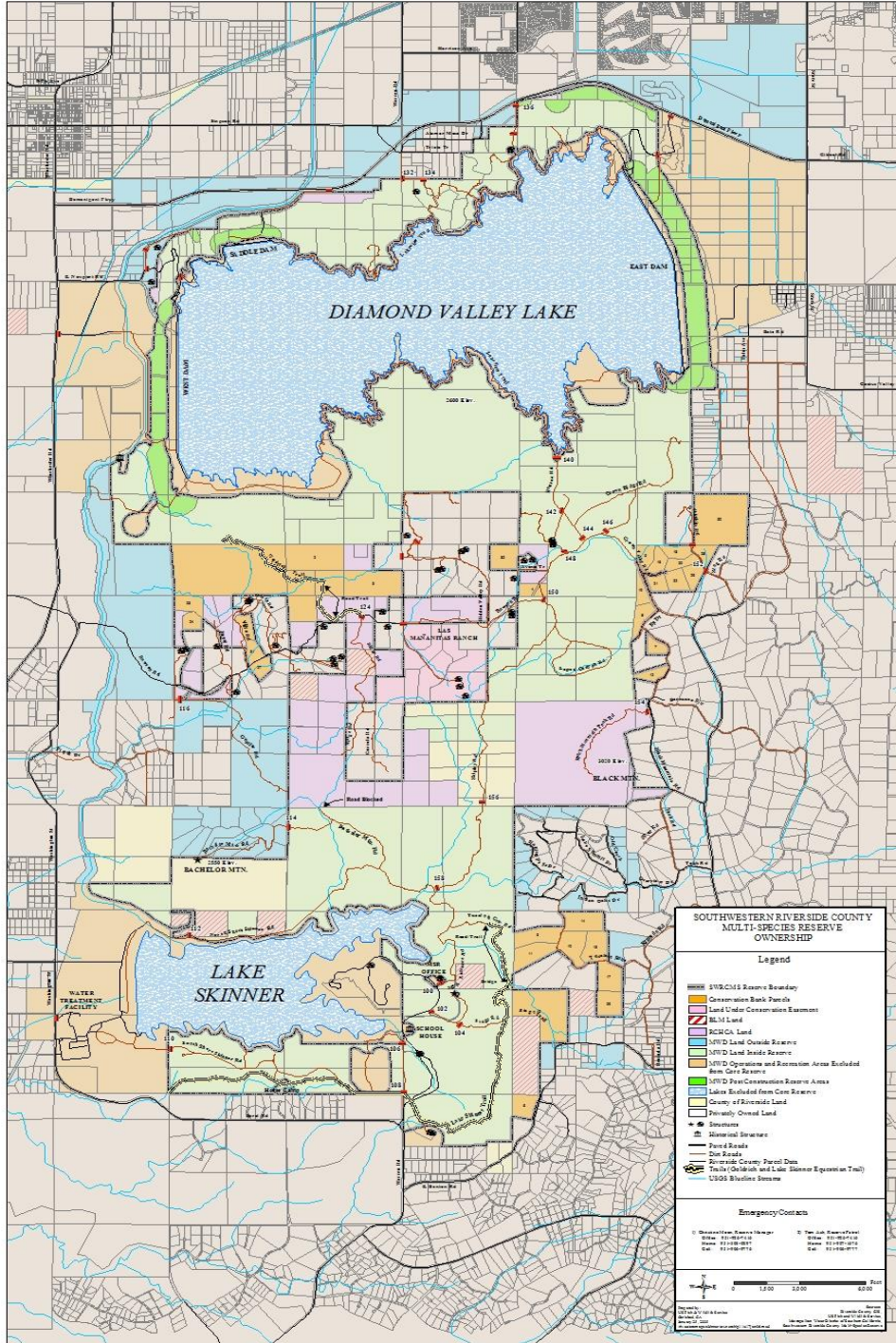
*Cooperative Management Agreement.* (1992). California Department of Fish and Wildlife, Metropolitan Water District of Southern California, Riverside County Habitat Conservation Agency, Riverside County Regional Park and Open-Space District, and U.S. Fish and Wildlife Service.

*Reserve Management Committee Minutes.* (September 1, 2021. March 2, 2022. June 21, 2022) The Reserve Management Committee.

*Southwestern Riverside County Multi-Species Reserve Management Plan.* (September 3, 2008). Moen, C.

# APPENDICES

## A. Reserve Map



**B. RivCo Parks FY 21-22 Budget Actuals**

Description	TO01 Reserve Admin	TO02 Reserve Research	TO03 Species Monitoring & Management	TO04 Vegetation Community Monitoring & Management	TO05 Interpretive Services	TO06 Habitat Enhancement & Restoration	TO07 Reserve Protection	Total Actual
<b>Total Personnel</b>	\$111,244.00	\$7,155.00	\$35,450.00	\$100,964.00	\$35,904.00	\$31,092.00	\$93,982.00	\$415,791.00
<b>Total Supplies &amp; Other</b>	-	-	-	\$388.57	-	\$88.89	\$630.88	\$1,108.34
<b>FY21-22 Total Costs</b>	\$111,244.00	\$7,155.00	\$35,450.00	\$101,352.57	\$35,904.00	\$31,180.89	\$94,612.88	\$416,899.34