



# Lower Colorado River Multi-Species Conservation Program

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*Balancing Resource Use and Conservation*

## Dennis Underwood Conservation Area 2019 Annual Report



**March 2020**

Work conducted under LCR MSCP Work Task E39

# Lower Colorado River Multi-Species Conservation Program Steering Committee Members

## **Federal Participant Group**

Bureau of Reclamation  
U.S. Fish and Wildlife Service  
National Park Service  
Bureau of Land Management  
Bureau of Indian Affairs  
Western Area Power Administration

## **Arizona Participant Group**

Arizona Department of Water Resources  
Arizona Electric Power Cooperative, Inc.  
Arizona Game and Fish Department  
Arizona Power Authority  
Central Arizona Water Conservation District  
Cibola Valley Irrigation and Drainage District  
City of Bullhead City  
City of Lake Havasu City  
City of Mesa  
City of Somerton  
City of Yuma  
Electrical District No. 3, Pinal County, Arizona  
Golden Shores Water Conservation District  
Mohave County Water Authority  
Mohave Valley Irrigation and Drainage District  
Mohave Water Conservation District  
North Gila Valley Irrigation and Drainage District  
Town of Fredonia  
Town of Thatcher  
Town of Wickenburg  
Salt River Project Agricultural Improvement and Power District  
Unit "B" Irrigation and Drainage District  
Wellton-Mohawk Irrigation and Drainage District  
Yuma County Water Users' Association  
Yuma Irrigation District  
Yuma Mesa Irrigation and Drainage District

## **Other Interested Parties Participant Group**

QuadState Local Governments Authority  
Desert Wildlife Unlimited

## **California Participant Group**

California Department of Fish and Wildlife  
City of Needles  
Coachella Valley Water District  
Colorado River Board of California  
Bard Water District  
Imperial Irrigation District  
Los Angeles Department of Water and Power  
Palo Verde Irrigation District  
San Diego County Water Authority  
Southern California Edison Company  
Southern California Public Power Authority  
The Metropolitan Water District of Southern California

## **Nevada Participant Group**

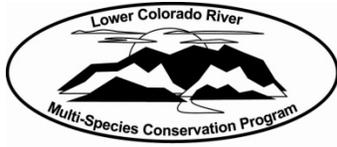
Colorado River Commission of Nevada  
Nevada Department of Wildlife  
Southern Nevada Water Authority  
Colorado River Commission Power Users  
Basic Water Company

## **Native American Participant Group**

Hualapai Tribe  
Colorado River Indian Tribes  
Chemehuevi Indian Tribe

## **Conservation Participant Group**

Ducks Unlimited  
Lower Colorado River RC&D Area, Inc.  
The Nature Conservancy



— BUREAU OF —  
RECLAMATION

# **Lower Colorado River Multi-Species Conservation Program**

## **Dennis Underwood Conservation Area 2019 Annual Report**

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**Lower Colorado River  
Multi-Species Conservation Program  
Bureau of Reclamation  
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# **ACRONYMS AND ABBREVIATIONS**

FY	fiscal year
LCR MSCP	Lower Colorado River Multi-Species Conservation Program
lidar	light detection and ranging
Metropolitan	Metropolitan Water District of Southern California
PVID	Palo Verde Irrigation District

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# 1.0 INTRODUCTION

The purpose of this annual report is to summarize all activities that have occurred at the Dennis Underwood Conservation Area from October 1, 2018, through September 30, 2019, which is Federal fiscal year (FY) 2019, and projected activities for FY20. Use of Colorado River water is presented for the calendar year, January 1 through December 31, 2019, consistent with the Colorado River Accounting and Water Use Report: Arizona, California, and Nevada (Bureau of Reclamation 2020).

## 1.1 Background

The property is owned by the Metropolitan Water District of Southern California (Metropolitan). The Metropolitan made 635 acres of active agricultural ground available for inclusion in the Lower Colorado River Multi-Species Conservation Program (LCR MSCP). The LCR MSCP secured an easement for 635 acres of land, including 575 water toll acres. Compensation for the use of the land and water was made based on the Federal appraisal. The development of this project will satisfy both the LCR MSCP Habitat Conservation Plan requirements and a portion of California Endangered Species Act Incidental Take Permit No. 2081-2005-008-06. Restoration of the site includes planting both the cottonwood-willow and honey mesquite land cover types.

Excavation occurred in 2019, creating seven swales with a maximum depth of 4 feet and a width of 100 feet. The swales may provide moist surface soil, slow-moving water, or ponded water conditions to promote insect production during the southwestern willow flycatcher (*Empidonax traillii extimus*) breeding season. Restoration of the Dennis Underwood Conservation Area includes the development of about 461 acres of cottonwood-willow and 167 acres of the honey mesquite land cover types toward the acreage goals of the LCR MSCP; the remaining 7 acres will be managed by the LCR MSCP but not developed.

# 2.0 CONSERVATION AREA INFORMATION

## 2.1 Purpose

The cottonwood-willow and honey mesquite land cover types created within the Dennis Underwood Conservation Area will be managed for southwestern willow flycatchers, yellow-billed cuckoos (*Coccyzus americanus occidentalis*), and other species covered under the LCR MSCP.

## **2.2 Location**

The Dennis Underwood Conservation Area is in Reach 4, near Palo Verde, California. It is within the historic floodplain of the lower Colorado River and adjacent to River Miles 96–99 on the California side (figure 1).

## **2.3 Landownership**

The Metropolitan owns the Dennis Underwood Conservation Area.

## **2.4 Water**

The Palo Verde Irrigation District (PVID) has an entitlement to Colorado River water for use on up to 104,500 acres of land within the PVID pursuant to a contract between the United States and the PVID dated February 7, 1933. The Metropolitan, as a landowner within the PVID, has the right to order Colorado River water from the PVID for pumping through the PVID canal system to its fields. The Metropolitan has made Colorado River water available for irrigation of the native plants through an easement with the LCR MSCP.

## **2.5 Agreements**

The Bureau of Reclamation and the Metropolitan signed an easement in 2019 to secure land and water for the Dennis Underwood Conservation Area for the remainder of the 50-year term of the LCR MSCP. The easement outlines the rights and responsibilities of each partner in the project's development and maintenance.

## **2.6 Public Use**

The landowner has the right to disallow or restrict public access when it is appropriate to do so in the interest of the LCR MSCP, public safety, or owners' operations.

## **2.7 Law Enforcement**

Law enforcement activities at the Dennis Underwood Conservation Area are performed by local law enforcement.

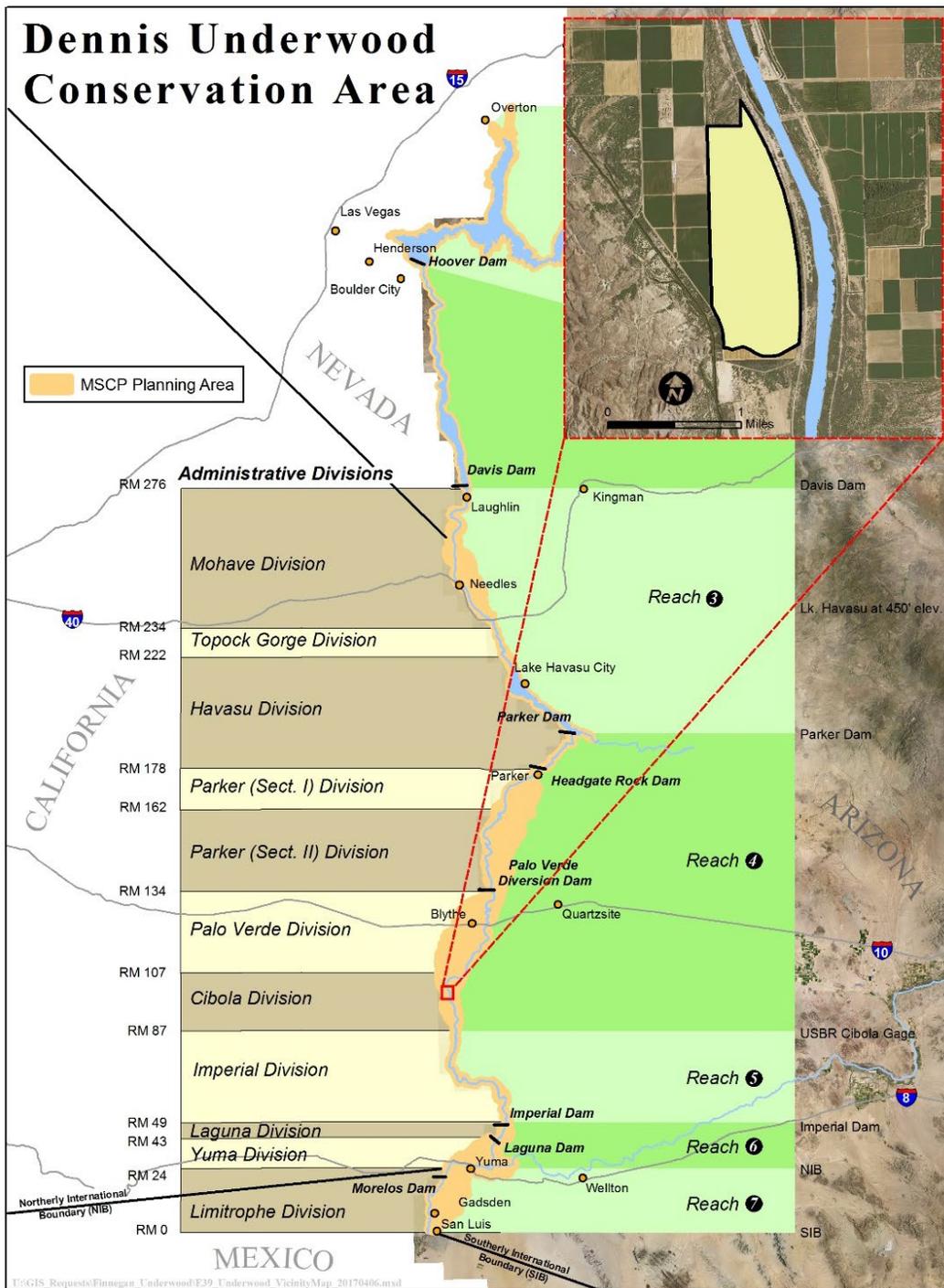


Figure 1.—Location of the Dennis Underwood Conservation Area.

## **2.8 Wildfire Management**

Federal, State, and local fire agencies, either by existing management agreements or mutual aid agreements, provide wildland fire suppression, incident dispatch, fire investigation, fuels reduction, and potential fire restrictions. The full range of suppression strategies are available to managers provided that selected options do not compromise firefighter or public safety, are cost effective, consider the benefits of suppression and the values to be protected, and are consistent with resource objectives (LCR MSCP 2010).

## **3.0 HABITAT DEVELOPMENT AND MANAGEMENT**

The Dennis Underwood Conservation Area will be developed as a mix of Fremont cottonwood-Goodding's willow (*Populus fremontii-Salix gooddingii*) and honey mesquite (*Prosopis glandulosa*) habitat (figure 2).

### **3.1 Planting**

The contract farmer prepared about 167 acres of land for planting in 2019. Land preparations included disking, cutting furrows, and running field boarders. A planting crew planted 9,334 honey mesquite about 25 feet apart within the furrows.

### **3.2 Irrigation**

Flood irrigation provides water to the plants. The contract farmer places a water order with the PVID, which provides water through the C28 Canal. During 2019, water was delivered bimonthly from April 16 through October 31, 2019, with a total of 1,036 acre feet of water being delivered to the Dennis Underwood Conservation Area.

### **3.3 Site Management**

Canal maintenance, such as patching, vegetation encroachment, and port repairs, was completed as needed.

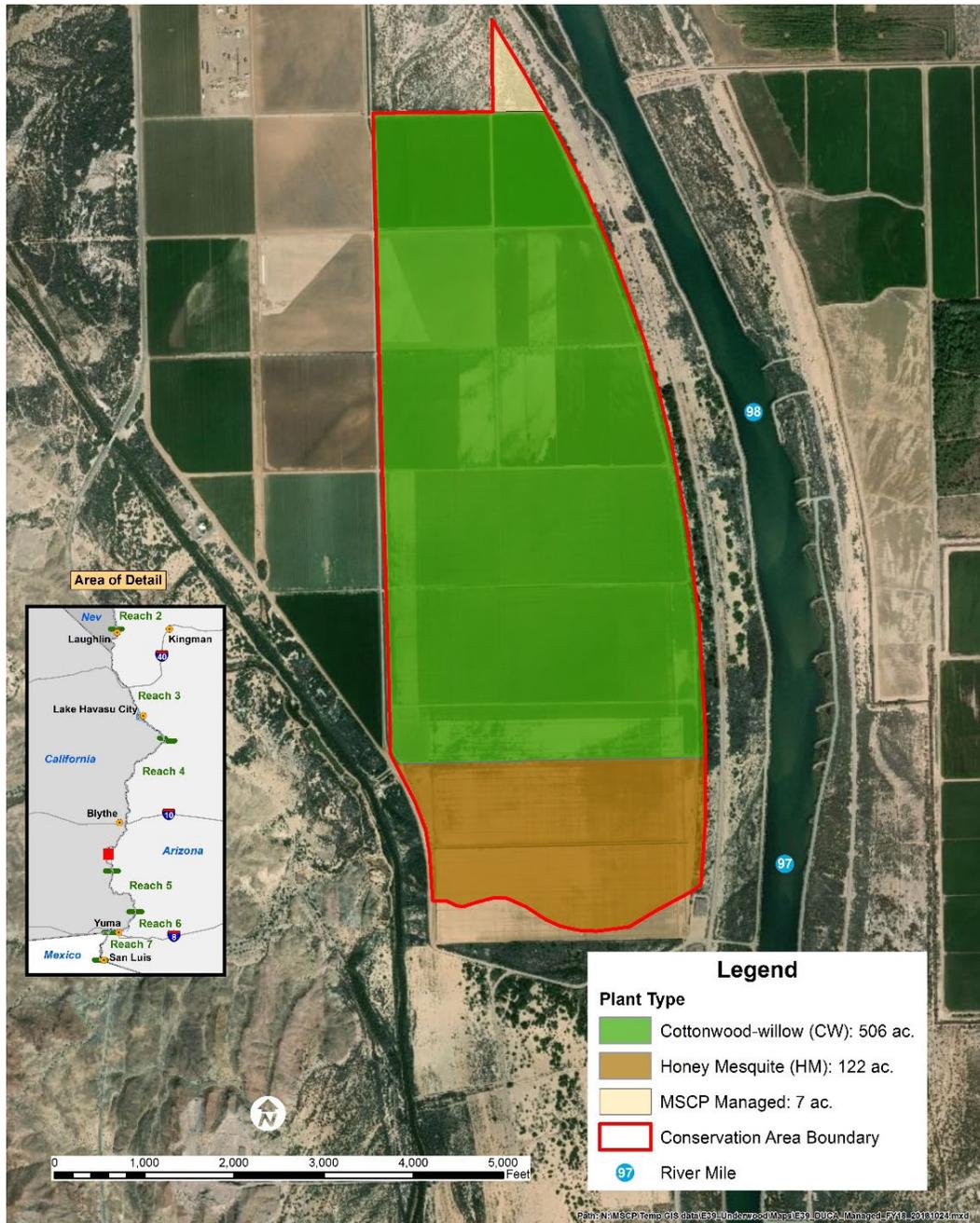


Figure 2.—Habitat land cover type at the Dennis Underwood Conservation Area.

## **4.0 MONITORING**

Compliance monitoring occurred on January 23, 2019, before construction at the Dennis Underwood Conservation Area began. Surveys were conducted to verify that no nesting migratory bird or Federally and/or State listed species were present.

### **4.1 Avian Monitoring**

No post-development monitoring for avian species occurred in FY19.

### **4.2 Small Mammal Monitoring**

No post-development monitoring for small mammals occurred in FY19.

### **4.3 MacNeill's Sootywing Skipper Monitoring**

No post-development monitoring for the MacNeill's Sootywing Skipper (*Pholisora graciellae* = *Hesperopsis graciellae* [MacNeill]) occurred in FY19.

## **5.0 HABITAT CREATION CONSERVATION MEASURE ACCOMPLISHMENT**

### **5.1 Vegetation Monitoring**

Vegetation data were collected in FY19 using light detection and ranging (lidar). Lidar measures the vegetation structure throughout the canopy and provides the ability to identify structural diversity and successional growth stages. Conservation area vegetation will be evaluated on a periodic basis using lidar to ensure the habitat is meeting species' requirements. A procedure to analyze and provide vegetation structure metrics will be developed, and results will be presented in future reports.

## 5.2 Evaluation of Conservation Area Habitat

The Final Habitat Creation Conservation Measure Accomplishment Tracking Process was finalized in October 2011 (LCR MSCP 2011). All areas within the Dennis Underwood Conservation Area were designed to benefit covered species at the landscape level.

To meet species habitat creation requirements, the Habitat Conservation Plan provides goals for habitat creation based on land cover types. These land cover types are described using the Anderson and Ohmart vegetation classification system (Anderson et al. 1976, 1984a, 1984b). In FY19, there were no species with creditable acres at the Dennis Underwood Conservation Area.

## 6.0 ADAPTIVE MANAGEMENT RECOMMENDATIONS

Adaptive management relies on the initial receipt of new information, the analysis of that information, and the incorporation of the new information into the design and/or direction of future project work (LCR MSCP 2007). Under the Adaptive Management Program, habitat creation sites will be assessed for biological effectiveness and whether they fulfill the conservation measures outlined in the Habitat Conservation Plan for 27<sup>1</sup> covered species and to determine if they potentially benefit 5 evaluation species. Post-development monitoring and species research results will be used to adaptively manage habitat creation sites after initial implementation. Once monitoring data are collected over a few years, and then analyzed for the Dennis Underwood Conservation Area, recommendations may be made through the adaptive management process for site improvements in the future.

There are no adaptive management recommendations for the Dennis Underwood Conservation Area at this time.

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<sup>1</sup> The northern Mexican gartersnake (*Thamnophis eques megalops*) was added as a covered species by an amendment to the Program Documents on March 5, 2018.

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