

## Work Task E5: Cibola Valley Conservation Area

FY11 Estimate	FY11 Actual Obligations	Cumulative Expenditures Through FY11	FY12 Approved Estimate	FY13 Proposed Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate
\$1,100,000	\$451,820.04	\$9,817,043.22	\$650,000	\$650,000	\$700,000	\$1,100,000

**Contact:** Bill Singleton, (702) 293-8159, [wsingleton@usbr.gov](mailto:wsingleton@usbr.gov)

**Start Date:** FY05

**Expected Duration:** FY55

**Long-term Goal:** Habitat creation.

**Conservation Measures:** WIFL1, WRBA2, WYBA3, YBCU1, ELOW1, GIFL1, GIWO1, VEFL1, BEVI1, YWAR1, SUTA1, MNSW2, CLMB2, PTBB2.

**Location:** Reach 4, AGFD, river miles 99-104, Arizona.

**Purpose:** Create and manage a mosaic of native land cover types for LCR MSCP covered species.

**Connections with Other Work Tasks (past and future):** Vegetation and species monitoring are being addressed under F1-F4, and F6. Insect populations may be investigated as described in C5.

**Project Description:** In 2007, Reclamation secured 1,309 acres of land serviced by the Cibola Valley Irrigation and Drainage District and established the Cibola Valley Conservation Area (CVCA). The Arizona Game and Fish Department (AGFD) acquired the CVCA in September 2007 through a multi-organizational agreement involving the AGFD, Reclamation, the Mohave County Water Authority, The Conservation Fund, and the Hopi Tribe. Through these agreements, AGFD acquired CVCA fee title and water entitlements and agreed to manage the site.

Cibola Valley Conservation Area is located in southwestern La Paz County, Arizona, about 15 miles south of Blythe, California. The valley encompasses the land inside an engineered bend of the lower Colorado River and a remnant oxbow on the west side of the river (Palo Verde Oxbow). It is currently farmed for cotton and alfalfa. The area is bordered to the south by Cibola NWR and on the east by unimproved land under the jurisdiction of the Bureau of Land Management. The river forms the north and west boundaries, except for the Palo Verde Oxbow, from river miles 98.8 to 104.9.

Agricultural areas have irrigation systems in place that are conducive for water management of riparian species. Checks, which are small borders placed within a given field, allow for flooding

of only a portion of a field. This provides additional flexibility to create and maintain saturated soil areas for covered species.

**Previous Activities:** Through FY10, 618 acres of cottonwood-willow, honey mesquite, and buffer-stabilized ground have been established in phases 1-5 and are being managed for LCR MSCP covered species. Phase 4 actually consists of two locations; one site (58 acres) is located north of Phase 3. The other site consisting of 187 acres is located west of Phases 1 and 2. Approximately 80 acres of this site was planted with a mix of native seeds and irrigated in an effort to eliminate blowing dust and stabilize the ground. This seed mixture consisted of quailbush, needle grama, curly mesquite grass, desert bluebells, and desert Indian wheat. A sprinkler system was rented for four months to provide irrigation water for initial plant germination.

#### **FY11 Accomplishments:**

**Maintenance/Restoration/Management.** Phase 6, consisting of 89 acres, was planted in March 2011 in accordance with the restoration development plan. This planting effort established approximately 14,000 honey mesquite trees planted in furrows approximately 2-feet deep with a 20-foot separation between the rows. This wide furrow spacing saves irrigation water and provides adequate room for mechanical disking of invasive salt cedar and volunteer cotton, which grows between the planted furrows. The fields are still flood irrigated; however the water only travels in the furrows, saving as much as 2/3 of the water applied to a level field.

Field crews continued to control morning-glory, volunteer cotton, and salt cedar as necessary, with hand tools, throughout all the phases. This method of using crews proved to be an effective method of controlling invasive plants as they germinate. The crews remove invasive plants from the fields in the late spring or early summer.

Mechanical disking occurred between the mesquite-planted furrows in Phases 4, 5 and 6. The invasive grasses/weeds and volunteer cotton created a dense presence. This disking practice between the furrows may occur annually.

Vegetation growing near concrete-lined canals was mechanically cleared several times to keep the tree roots from damaging or blocking the irrigation canals. Chemical spraying is also used to control plants and invasives from growing along the canals.

Pole cutting in the nursery was undertaken during the winter months by the LCR MSCP and the Quechan Tribe. Collection of poles from a LCR MSCP Conservation Area by other entities involved in restoration of the lower Colorado River requires submitting a written request and receiving approval from the LCR MSCP.

The Cibola Valley Irrigation and Drainage District hosts monthly meetings with its water users. The LCR MSCP is represented at each meeting. All topics are discussed ranging from irrigation issues, to maintenance, to upcoming events and activities.

A small portion of Phase 5, honey mesquite, appears to have suffered mortality over the last winter. Based on laboratory results, the cause appears to be a canker caused by a fungus. An

aerial application of a fungicide was applied to control the fungus. During the late summer, aphids (mesquite psyllids) were detected on younger mesquites in Phase 6. These insects were eating the green leaves on the younger mesquites, causing significant stressors to the trees. An insecticide called "Intruder" was applied with positive results.

**Monitoring.** Vegetation monitoring for FY2011 was conducted between September and December 2010. Average tree heights were 10.9m in Phase 1, 6.8m in Phase 2, 9.5m in Phase 3, 1.9 in Phase 4 East, 2.2 in Phase 4 West, and 1.9 in Phase 5. Average canopy closure was 89.9% in Phase 1, 66.4% in Phase 2, 83.0% in Phase 3, 5.4% in Phase 4 East, 16.7% in Phase 4 West, and 0.7% in Phase 5. In April 2011, the mesquite trees in CVCA5 check 1, showed signs of stress. LCR MSCP biologists collected mesquite density data in check 1 at the existing vegetation rapid plots to assess if there had been significant loss of trees since October of 2010 when last years' monitoring was conducted. Although there was a decline in number of mesquite trees over the 5 month period there was no significant difference between mean density of mesquite in October 2010 and April 2011.

Nine yellow-billed cuckoo\_nests were found at CVCA between July and August 2011. Of these, five nests fledged a total of 13 young. All 13 fledglings from CVCA were banded with USFWS numbered bands and color bands.

Southwestern willow flycatchers were detected at CVCA. Phase 1 had 12 detections all before June 9<sup>th</sup>. Phase 2 had 29 detections all before June 1. Breeding was not detected, therefore all are presumed as migrants. As part of our MAPS operations, we banded one flycatcher on May 25<sup>th</sup>.

General bird surveys were conducted at CVCA Phase 1 through 5 from 15 April to 15 June 2011. Covered species detected were 7 pairs of yellow warblers and 2 pairs of summer tanagers.

Bat acoustic driving transects were conducted at CVCA in May, July, and September. No covered species were detected during acoustic surveys. A long-term acoustic station was deployed in March of 2011. Data are currently being analyzed for the station. Capture surveys were conducted once per month from May to September.

Colorado River cotton rats were located at CVCA phases 1, 2, and 3 during 2011.

MacNeill's sootywings largely disappeared from CVCA during 2011. Restoration plots containing the butterfly's host plant, *Atriplex lentiformis*, were sampled six times during 2011 on 27 April, 19 May, 23 June, 20 July, 24 August, and 14 September. A total of 11 sootywings were observed, mostly at Phases 4-West and 4-East. For comparison, approximately 1,430 sootywings were counted on eight dates at the same CVCA plots during 2010.

#### **FY12 Activities:**

**Maintenance/Restoration/Management.** Planting and field preparation operations will cease until 2015, when Phase 7 will be planted with riparian trees. The intent of this planting delay is to determine if additional irrigation water might become available. However, normal irrigation and maintenance activities will continue.

**Monitoring.** Monitoring activities conducted in 2011 will continue in 2012. Locations of surveys will be adjusted based on the growth and development of the planted phases.

**Proposed FY13 Activities:** Irrigation and on-site maintenance will continue on Phase 1-7. No additional planting or site development is scheduled until 2015. Monitoring activities will continue in FY13. Locations of surveys will be adjusted based on the growth and development of the planted phases.

**Pertinent Reports:** N/A