

## Work Task E24: Cibola National Wildlife Refuge Unit #1

FY14 Estimate	FY14 Actual Obligations	Cumulative Expenditures Through FY14	FY15 Approved Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate
\$500,000	\$209,836.42	\$4,191,076.31	\$1,000,000	\$700,000	\$750,000	\$750,000

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**Start Date:** FY07

**Expected Duration:** FY55

**Long-Term Goal:** Habitat creation and management

**Conservation Measures:** WIFL1, WRBA2, WYBA3, YBCU1, ELOW1, GIFL1, GIWO1, VEFL1, BEVI1, YWAR1, SUTA1, and CRCR2

**Location:** Reach 4, Cibola NWR, one-half mile east of River Mile 97, Arizona

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

**Connections with Other Work Tasks (Past and Future):** This work task incorporated lands under Work Tasks E6–E8 (closed), with additional adjacent acreage at Cibola NWR Unit #1. Operation and maintenance of these work tasks will now be tracked under Work Task E24.

**Project Description:** Reclamation currently has a number of established projects at Cibola NWR Unit #1, which includes restoration research and demonstration projects that began as a precursor to the LCR MSCP. A 50-year Land Use Agreement with the USFWS to restore new areas and maintain created land covers on Cibola NWR Unit #1 has been signed.

Work Task E24 incorporates the existing projects and active agricultural land as well as substantial additional, undeveloped, adjacent acreage into a single conservation area. The land included in Cibola NWR Unit #1 (E24) encompasses approximately 950 acres and ranges in cover and use from agricultural fields, to partially improved land, to undeveloped land. The acreage in Unit #1 is targeted primarily for cottonwood-willow land cover type but will also likely include a mosaic of native habitats, including wetland and riparian-upland interface areas.

The acreage in Cibola NWR Unit #1 has been categorized into five areas:

- Area #1 (193 acres) includes active agricultural fields, existing (converted agriculture) cottonwood-willow cover type, and ongoing LCR MSCP research and demonstration projects.
- Area #2 (Hippy Fire) includes 338 acres that have been cleared as a result of the Hippy Fire. The area is planted in a cover crop until it is conditioned to improve soil salinity.
- Areas #3 (Baseline 90) and #4 (North 160) are 107 and 158 acres of undeveloped land and fallowed agricultural land, respectively. The areas will require clearing, leveling, installation of irrigation infrastructure, and soil conditioning before development for native riparian species.
- Area #5 (Crane Roost) includes 154 acres that have been planted with cottonwood, willow, and mesquite species.

**Previous Activities:** A Land Use Agreement and exhibit specific to this conservation area have been signed. Several research and development projects are underway or completed and are currently being managed as land cover types for various LCR MSCP covered species. Through FY13, 343 acres of native trees have been established within the 950-acre site.

#### **FY14 Accomplishments:**

**Maintenance/Restoration/Management:** Ongoing infrastructure improvements and repair occurred during this fiscal year. Site maintenance, including irrigation, invasive and non-native weeding, and other associated farm services, was conducted.

The operating cost of managing Cibola NWR Unit #1 was less than anticipated, and subsequent budgets have been reduced even though additional plantings are scheduled starting in FY16. The pump platform and pumps have exceeded their normal operational lifespan and will need to be replaced. No significant repairs were necessary in FY14; therefore, expenditures were significantly less than anticipated.

**Monitoring:** Vegetation monitoring continued in FY14. Plots were surveyed at the following sites: Nature Trail, Crane Roost, and Hippy Burn.

Small mammal trapping was conducted at the Cibola Nature Trail, Cottonwood Genetics fields, and north Hippy Burn areas. Cotton rats were documented at Cibola Nature Trail and the Cottonwood Genetics fields. The long-term acoustic bat station operated most of the year. Western red bats, western yellow bats,

California leaf-nosed bats, and Townsend's big-eared bats were detected during acoustic surveys. One California leaf-nosed bat and three western yellow bats were captured during mist net surveys.

General avian species were surveyed to determine their breeding status at the Cibola Nature Trail, Crane Roost, and the LCR MSCP research and demonstration fields using area search and spot mapping techniques. Four pairs of Arizona Bell's vireo were detected at the Nature Trail, and one pair of Sonoran yellow warblers was detected at Crane Roost.

Bird banding, following the MAPS protocol, was again conducted at the Cibola Nature Trail. Ten surveys were conducted between May and August, and 242 birds of 33 species were captured.

No breeding southwestern willow flycatchers were detected at the Cibola Nature Trail, and all birds were detected before June 16, when birds are considered to be residents.

Yellow-billed cuckoos were detected at the Cibola Nature Trail, Crane Roost, Cottonwood Genetics and cottonwood north fields, with most detections located at Crane Roost. Breeding was confirmed at the Nature Trail and Crane Roost.

**FY15 Activities:** No additional restoration or tree planting is scheduled for FY15. Site maintenance will continue, including regular watering and field maintenance of all the established fields within the conservation area's portion of Cibola NWR Unit #1. Water for irrigation of the trees and to simulate historical river flooding will be provided by the Cibola NWR.

A local farmer is utilized to divert and irrigate established land cover types based on site conditions and species planted. The farmer provides local knowledge of weather and farming practices, which are applied to the maintenance of the conservation area. The farmer and his employees are an onsite presence and provide early recognition of issues or concerns. The farmer is also responsible for assessing the water needs of the trees, and in coordination with the USFWS and LCR MSCP staff, delivers the water.

Maintenance activities will include grading access roads; maintaining field borders, irrigation canals, and invasive plant control, including hand removal and application of herbicides; and physically opening and closing the irrigation gates of established land cover types. The annual costs associated with operating the irrigation pumps are shared with the USFWS and are included in the annual maintenance costs.

Plants will be ordered in April 2015, in accordance with the Restoration Development and Monitoring Plan, for the planting that will take place in the spring of 2016. Approximately 85 acres will be planted with a mix of

cottonwood, willow, and other riparian shrub and grass species. The local contract farmer will continue to prepare this acreage for planting during 2016, and the activities will include planting and/or maintenance of a cover crop to assist with keeping salinity levels low and controlling invasive vegetation. Some preliminary field preparation activities for this area may take place during FY15.

**Monitoring:** Vegetation monitoring will continue. Small mammal monitoring will be conducted in the fall and spring. Bat capture surveys will be conducted from May to September. An established long-term bat monitoring station will be used to collect acoustic data. General bird surveys will be conducted from mid-April to mid-June. Single species surveys for the southwestern willow flycatcher and yellow-billed cuckoo will be conducted during their respective breeding seasons. MacNeill's sootywing surveys will be conducted in spring and summer.

### **Proposed FY16 Activities:**

**Maintenance/Restoration/Management:** As mentioned above, 85 acres of the Hippy Burn area are scheduled for field preparation and riparian planting in FY16. Land preparation will take place in the first months of 2016, with planting scheduled for March/April 2016. This area is located in the southern portion of Area #2 (Hippy Fire). The western portion of this area has historically had issues with elevated salinity, so it is estimated that approximately 18 acres will be planted with saltgrass and alkali sacaton. The remaining acreage will be planted with a mix of cottonwood and willow with small strips of baccharis throughout.

A Restoration Development and Monitoring Plan for a portion of the Hippy Burn area will be drafted for planting in FY17.

Site maintenance will continue, including regular watering and field maintenance of all the established fields within the conservation area's portion of Cibola NWR Unit #1. These tasks will continue as described above in "FY15 Activities."

**Monitoring:** Vegetation monitoring will continue. Small mammal monitoring will be conducted in the fall and spring. Bat capture surveys will be conducted from May to September. An established long-term bat monitoring station will be used to collect acoustic data. General bird surveys will be conducted from mid-April to mid-June. Single species surveys for the southwestern willow flycatcher and yellow-billed cuckoo will be conducted during their respective breeding seasons. MacNeill's sootywing surveys will be conducted in the spring and summer.

**Pertinent Reports:** The *2013 Cibola NWR Unit #1 Conservation Area Annual Report*, which summarizes any planting conducted, site management, the results of monitoring, and any recommendations for future adaptive management, will be posted on the LCR MSCP Web site once integration of the data collected throughout the calendar year is complete.