Work Task E24: Cibola NWR Unit #1

FY12 Estimate	FY12 Actual Obligations	Cumulative Expenditures Through FY12	FY13 Approved Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate	FY16 Proposed Estimate
$1,000,000	$862,441.09	$3,015,089.43	$1,100,000	$500,000	$900,000	$900,000

Contact: Darrin Miller, (702) 293-8166, dmiller@usbr.gov

Start Date: FY07

Expected Duration: FY55

Long-term Goal: Habitat creation.

Conservation Measures: WIFL1, WRBA2, WYBA3, YBCU1, ELOW1, GIFL1, GIWO1, VEFL1, BEVI1, YWAR1, SUTA1, CLNB2, PTBB2.

Location: Reach 4, Cibola National Wildlife Refuge, one-half mile east of River Mile 97, 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): This work task incorporates Cottonwood Genetics Study (E6), Mass Transplanting Demonstration (E7), and upon completion, the Seed Feasibility Study (E8) with additional adjacent acreage on Unit #1 of Cibola NWR. After completion of the research projects in FY07, operation and maintenance of these work tasks will be tracked under E24.

Project Description: Reclamation currently has a number of established projects at Unit #1, which includes restoration research and demonstration projects that began as a pre-cursor to the LCR MSCP. In 1999, the USFWS and Reclamation planted the Cibola Nature Trail and established 34 acres of cottonwood-willow and mesquite land cover type within Unit #1. In 2002, the USFWS and Reclamation planted another approximately 18 acres of cottonwood-willow in Unit #1 north of the Nature Trail. Four additional fields of approximately 20 acres each in Unit #1 are occupied by three projects that have been fully or partially funded by the LCR MSCP. These include Cottonwood Genetics Study (E6), Mass Transplanting Demonstration (E7), and Seed Feasibility Study (E8). To the east of these projects are an additional two agricultural fields. A 50-year land use agreement with the USFWS to develop and maintain land covers on Unit #1 has been signed.

Work Task E24 incorporates the aforementioned existing projects and agricultural land as well as substantial additional adjacent acreage into a single conservation area. The land included in 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 cover type development for SWFL, but will also likely include a mosaic of native habitats including riparian, wetland, and riparian-upland interface areas.

The acreage in 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. Cibola NWR has performed substantial capital improvements to this area over the past few years including clearing, laser-leveling, field construction, and irrigation and drainage infrastructure installation. The area is currently planted in a cover crop and is being 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, 154 acres) has been cleared and leveled and is currently irrigable. A portion of this area has been planted with cottonwood, willow, and mesquite species. The area will require upgrades to the irrigation system and needs further soil conditioning to continue development.

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 FY11, 270 acres of native trees have been established within the 950 acre site.

FY12 Accomplishments:

Maintenance/Restoration/Management. Ongoing infrastructure improvements including drain construction and repair occurred during this fiscal year. Site maintenance including irrigation, invasive and nonnative weeding, and other associated farm services were conducted.

The northern portion of Area #2 (Hippy Fire) is scheduled to be planted in FY13. To facilitate the planting, over 147,000 trees were purchased in FY12 and will be planted on 94 acres in the spring. The trees include a mix of cottonwood, coyote willow, Goodding's willow, and honey mesquite.

Monitoring. Vegetation monitoring plots were surveyed at full intensity at the following sites: Nature Trail (24 plots), Mass Planting (6), Crane Roost (27), and Cibola Cottonwood North (6). Seed bank samples were collected in February and May at Cibola Unit 1 Area 1 field 8 and delivered to UNLV for growout and identification (Work Task 54).

Small mammal trapping was conducted at the Nature Trail, Cottonwood Genetics fields, and the Crane's Roost southernmost field. Cotton rats were documented at Nature Trail and the Cottonwood Genetics fields. The long term bat station ran most of the year and

all LCR MSCP species were detected, but activity was low. One red bat and one yellow bat were captured at the Nature Trail; this was the first capture of the red bat at Cibola NWR. California leaf-nosed bats were also captured.

General avian species were surveyed to determine breeding status at the Nature Trail, Crane Roost, and the LCR MSCP research and demonstration fields using area search and spot mapping techniques. The Sonoran yellow warbler and Arizona bell's vireo were the only LCR MSCP covered avian species found breeding within the conservation area.

Bird banding was again conducted at the Nature Trail, following the MAPS protocol. Ten surveys were conducted between May and August. The yellow warbler was the only LCR MSCP species captured.

No breeding southwestern willow flycatchers were detected at the Cibola Nature Trail, and all birds were detected before June 16th when birds are considered to be residents. Four migratory birds were detected and the site was surveyed five separate times.

Yellow-billed cuckoos were detected at the Nature Trail, Mass Planting and Cranes Roost fields, with most detections at the Cranes Roost. Two nests were found at the Crane Roost.

Proposed FY13 Activities:

Maintenance/Restoration/Management. Planting of the northern portion of area #2 (Hippy Fire) is scheduled for the spring of 2013. The area has been in a cover crop since 2008, beginning with a salt-tolerant grass and converted to alfalfa in 2010. Overall, site maintenance will continue including regular watering and field maintenance of all the established fields within the Conservation Area's portion of Unit #1. Pre- and post-development monitoring will continue at Cibola NWR Unit #1 Conservation Area.

Monitoring. FY13 plots were surveyed at full intensity at the following sites: Nature Trail (24 plots), Mass Planting (6), Crane Roost (27), and Cibola Cottonwood North (6).

Additional seed bank samples will be collected in early 2013 and before fields are prepped for experimental planting.

Wildlife monitoring will continue at the FY12 levels, and include general bird surveys, SWFL Surveys, YBCU surveys, small mammal surveys, and bat surveys.

Proposed FY14 Activities: No additional restoration or tree planting is scheduled for FY14. Restoration will continue in FY16 after large scale planting at the Laguna Division Conservation Area is complete. Site maintenance will increase slightly as new acres of riparian cover-type are established (FY13), but these activities are expected to include the same services needed across the rest of the established portions of the Conservation Area. Water for irrigation of the trees and to simulate historical river flooding is provided by 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 on-site 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 Refuge and the LCR MSCP, delivers the water. Maintenance activities include grading access roads, maintaining field borders, irrigation canals, invasive plant control including hand removal and application of herbicides, and physically opening and closing irrigation gates of established land cover types. Annual costs associated with operating irrigation pumps are shared with the Refuge and are included in the annual maintenance costs. Vegetation monitoring will continue at above listed sites. Experimental plantings may take place at Area 1 field 8 (Work Task C54). Wildlife Monitoring will continue for the same species as FY13.

Pertinent Reports: The *2012 Cibola NWR Unit #1 Conservation Area Annual Report*, which summarizes any planting conducted, site management, results of monitoring, and any recommendations for future adaptive management will be posted after integration of data collected throughout the calendar year.