

Work Task E24: Cibola NWR Unit #1

FY10 Estimates	FY10 Actual	Cumulative Accomplishment Through FY10	FY11 Approved Estimate	FY12 Proposed Estimate	FY13 Proposed Estimate	FY14 Proposed Estimate
\$600,000	\$523,414.75	\$2,344,505.12	\$636,000	\$1,000,000	\$1,100,000	\$1,200,000

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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 precursor 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.

FY10 Accomplishments: Ongoing infrastructure improvements including additional drain construction and repair occurred during this fiscal year. Based on observations of variable establishment in the Crane Roost, an additional season of soil conditioning was projected for fields in the next phase of development (Hippy Fire). No tree purchases were made and no riparian tree planting occurred on the Cibola NWR Unit #1 Conservation Area for FY10. Site maintenance including irrigation, weeding, and other associated farm services were conducted on the existing planted acres using contracted services through FY10.

Monitoring. Post-development vegetation monitoring was conducted at Nature Trail, the Mass Transplanting site, and Crane Roost. A new monitoring protocol was implemented this year and included rapid plots for quick estimates of density and intensive plots for assessing density, vegetation structure and community composition. The number of plots per phase is dependent on the size of the phase being monitored. Each phase will have a proportional amount of intensive plots distributed within the phase depending on the total managed acreage. Data are currently being analyzed.

Small mammal trapping was conducted at the Nature Trail and cotton rats were documented again in 2010. Anabat bat detectors were deployed quarterly across the site in different habitat types to determine bat activity. The western red bat, western yellow

bat, California leaf-nosed bat, and Townsend's big-eared bat were all detected in 2010, although all but the red bat were detected in low numbers. Capture surveys were conducted once per month from May to September. The California leaf-nosed bat was the only LCR MSCP species captured.

General avian species were surveyed to determine breeding status at the Nature Trail and Mass Transplanting areas 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.

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. Two birds were detected and the site was surveyed five separate times.

Two yellow-billed cuckoos and one nest were found at Cibola Nature Trail on July 27. This nest later failed and no further nesting attempts were documented at the site.

Proposed FY11 Activities: The decision has been made to delay the purchase of trees for approximately 80 acres of fields available in the Hippy Fire Area until FY12. These riparian trees would then be planted in FY13.

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. Habitat, avian, small mammal, and bat monitoring will continue.

Proposed FY12 Activities: In FY13, approximately 80 acres in the northern section of the Hippy Fire Area will be planted with riparian trees. The trees will be purchased in FY12. The area has been in a cover crop since 2008, beginning with a salt-tolerant grass and converted to alfalfa in 2010. The area currently shows none of the signs of heavy soils or saline conditions that were observed in the Crane Roost. Site maintenance will increase as new acres of riparian cover-type are established, but these activities are expected to include the same services needed across the rest of the established portions of the conservation area.

Pertinent Reports: *Cibola NWR Unit #1 Conservation Area Annual Report, 2009* will be posted to the LCR MSCP website.