

Work Task E28: Yuma East Wetlands

FY15 Estimate	FY15 Actual Obligations	Cumulative Expenditures Through FY15	FY16 Approved Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate	FY19 Proposed Estimate
\$600,000	\$467,563.97	\$1,695,711.26	\$1,200,000	\$450,000	\$400,000	\$400,000

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Start Date: FY10

Expected Duration: FY55

Long-Term Goal: Habitat creation

Conservation Measures: CLRA1, WIFL1, YHCR2, LEBI1, BLRA1, YBCU1, GIFL1, GIWO1, VEFL1, BEVI1, YWAR1, and SUTA1

Location: Reach 6, Arizona, River Mile 31

Purpose: To maintain restored land cover types that benefit LCR MSCP covered species

Connections with Other Work Tasks (Past and Future): Vegetation and species monitoring are being addressed under Work Tasks F1–F4.

Project Description: In 2000, the city of Yuma and the Quechan Indian Tribe collaborated to analyze the potential of restoring the local wetlands along the Colorado River by removing overgrown non-native species. Approximately 380-acres have been restored to create a mosaic of marsh, mesquite, and cottonwood-willow. The project is located in Yuma, Arizona, on city of Yuma, Quechan Indian Tribe, and Arizona Game and Fish Department lands. In coordination with these partners and the Yuma Crossing National Heritage Area Corporation (YCNHAC), a 501(c)3 non-profit organization responsible for managing day-to-day operations, 70% of the funding will be provided under the LCR MSCP to support the long-term operation and maintenance of created habitats, infrequent but substantial capital improvements, and adaptive management actions that benefit species covered under the LCR MSCP Habitat Conservation Plan.

Yuma East Wetlands (YEW) is fully developed and has transitioned from development to maintenance and monitoring. The 380-acre conservation area, including the open water portions of the Colorado River, is classified as 183 acres of cottonwood-willow, 131 acres of honey mesquite, and 66 acres of marsh.

Annual maintenance and management: The anticipated costs and cost sharing for the annual operation and maintenance of the YEW are documented in a site-specific work plan referred to as the Yuma East Wetlands Annual Work Plan. The plan describes the scope of work, budget, and responsibilities of all parties. Funding for 70% of the annual operation and maintenance budget is provided under the LCR MSCP.

Annual operation and maintenance activities anticipated throughout the life of the program include flood irrigation of the North Channel and AHA fields, pump maintenance and repair, minor repair of infrastructure, removal of invasive and non-native plant species, and general site maintenance such as road grading.

Previous Activities: In FY13, the Quechan Indian Tribe, Arizona Game and Fish Department, city of Yuma, YCNHAC, and the Bureau of Reclamation agreed to the terms and conditions in the multi-party Land Use Agreement. The agreement was signed in late FY13 after review by the Steering Committee.

Following finalization of the Land Use Agreement, a Cooperative Agreement was developed and executed between the Bureau of Reclamation and the YCNHAC. This agreement serves as the funding mechanism to meet the LCR MSCP's commitment to support operation and maintenance activities. As established in the Land Use Agreement, the LCR MSCP Office will fund up to 70% of operation and maintenance activities, while the YCNHAC, city of Yuma, and Quechan Indian Tribe provide the remaining 30%, or 10% each.

FY15 Accomplishments:

Maintenance/restoration/management: The YEW was operated and maintained in accordance with the work identified and the cost-sharing arrangements included in the site-specific FY15 Yuma East Wetlands Annual Work Plan. However, replacement of the North Channel pump has been delayed to identify the cause of its continued failure. The delay in replacement resulted in expenditures being less than anticipated.

In FY15, accomplishments included development of a FY16 Yuma East Wetlands Annual Work Plan, development of standing operating procedures for irrigation system management, the creation of water diversion reporting tools and updates to the water accounting reporting map, preliminary planning for development of a long-term management plan for the site, and preliminary analysis on a concern about providing a reliable water source for the South Channel, which would require a substantial capital expenditure.

Monitoring: Monitoring was conducted at the YEW for vegetation, birds, small mammals, and bats.

Vegetation data were collected in FY15 using light detection and ranging (LiDAR) remote sensing techniques.

Marsh bird surveys were conducted on three occasions at the wetland portions of the site. Western least bitterns and Yuma clapper rails were detected and are presumed to be breeding at the site.

The site was surveyed for riparian birds using the LCR MSCP double sampling protocol. For the first time, yellow warblers and summer tanagers were detected breeding at the site. Southwestern willow flycatcher surveys were conducted, and no resident or breeding individuals were detected. Yellow-billed cuckoo surveys were conducted, and there were no detections of this subspecies at the site in 2015.

The YEW was mist netted for bats once per month from May to September 2015. Western yellow bats and a California leaf-nosed bat were captured. In conjunction with the bat capture surveys, the established long-term acoustic bat station was used to detect LCR MSCP covered and evaluation bat species. Western red bats, western yellow bats, California leaf-nosed bats, and Townsend's big-eared bats were detected.

Small mammal trapping was conducted in fall and spring. Yuma hispid cotton rats continue to be detected at the site and are the most common subspecies of small mammals captured.

FY16 Activities:

Maintenance/restoration/management: The YEW is expected to be operated and maintained in accordance with the work identified and the cost-sharing arrangements included in the site-specific FY16 Yuma East Wetlands Annual Work Plan.

The 20-cubic-foot-per second pump servicing the North Channel riparian area was replaced in December 2013 after it catastrophically failed. Upon inspection, it was discovered that the pump failure was attributed to cavitation and/or sedimentation from the river. In response, the pump with a loaner rated at 10 cubic feet per second in anticipation that the pump system would need to be redesigned and replaced in FY16. The loaner pump failed catastrophically in January 2016. The stakeholders are working to provide a reliable pumping system to the North Channel.

Installation of flow meters on the AHA and North Channel pumps as required in the Land Use Agreement is being delayed until the pump issues are resolved. In

the interim, discrete flow measurements are taken in the canals with a portable instrument. An Excel spreadsheet was created to simplify tracking of water usage and water accounting. A schedule for removal of a temporary drip system has been requested, which should reduce annual operating costs.

An operation and maintenance review of the site helped to identify four major items that should be addressed to improve long-term site sustainability. The first is to develop a long-term solution for the recurring failures of the North Channel pump; second is the upgrade and replacement of the AHA pump; third is securing a reliable water source for the South Channel; and fourth is the removal of drip irrigation and the two diesel-driven pumps used to operate the drip system. These items are being addressed during the development of the long-term management plan.

The stakeholders are drafting a long-term management plan for the YEW, which will guide future actions. The plan will address both the short- and long-term needs of the infrastructure to manage created habitat.

Monitoring: Vegetation data will be collected in May 2016 using LiDAR remote sensing techniques. Marsh bird surveys will be conducted in March and April. General bird surveys will be conducted from mid-April to mid-June. Single species surveys for southwestern willow flycatchers and yellow-billed cuckoos will be conducted during their respective breeding seasons. Bat acoustic monitoring will be conducted during summer.

Proposed FY17 Activities: The YEW is expected to be operated and maintained in accordance with the work identified and the cost-sharing arrangements included in the site-specific FY17 Yuma East Wetlands Annual Work Plan.

Monitoring: Information from the LiDAR vegetation data collected during FY15 and/or FY16 will be used to determine the schedule for vegetation monitoring data collection for FY17 and beyond. Marsh bird surveys will be conducted in March and April. General bird surveys will be conducted from mid-April to mid-June. Single species surveys for southwestern willow flycatchers and yellow-billed cuckoos will be conducted during their respective breeding seasons. Bat acoustic monitoring will be conducted during summer.

Pertinent Reports: N/A