

Work Task E27: Laguna Division Conservation Area

FY15 Estimate	FY15 Actual Obligations	Cumulative Expenditures Through FY15	FY16 Approved Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate	FY19 Proposed Estimate
\$3,000,000	\$1,759,859.79	\$26,254,555.45	\$900,000	\$200,000	\$200,000	\$100,000

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Start Date: FY10

Expected Duration: FY55

Long-Term Goal: Habitat creation and management

Conservation Measures: WIFL1, YHCR2, YBCU1, ELOW1, GIFL1, GIWO1, VEFL1, BEVI1, YWAR1, and SUTA1

Location: Reach 6, Federal lands, River Miles 43–49, California and 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): Vegetation and species monitoring are being addressed under Work Tasks F1–F4 and F7.

Project Description: The Laguna Division, River Miles 43–49, was identified as having the potential for large-scale riparian and marsh restoration and enhancement. In 2007, the Laguna Division Planning Group was formed to identify potential restoration projects within the division.

The Laguna Division Planning Group consists of representatives from the following organizations:

- Arizona Game and Fish Department
- Arizona Department of Water Resources
- California Department of Fish and Wildlife
- Pacific Institute
- U.S. Fish and Wildlife Service
- Bureau of Land Management
- Bureau of Reclamation (Reclamation)

The undeveloped ground, which was shaped to become the Laguna Division Conservation Area (LDCA), was a relatively wide, undeveloped area with a series of low linear depressions, which are remnants of former river meanders. This project was designed to create marsh and riparian land cover types by shaping and

contouring multiple meandering channels. These land cover types would be maintained with a maximum base flow of 100 cubic feet per second (cfs) from the Gila Gravity Canal sluicing gates. Open water areas have been created in the form of linear excavations aligned with historic river meanders east of lands identified as future stockpiling areas for dredged silt removed from the river (Laguna settling basin). To minimize earthwork, cuts and fills follow the existing topography where feasible. Adjacent terraces are graded to allow flooding and promote the establishment of native riparian species. Water control structures have been designed to manage water levels. Native vegetation will receive water by raising and lowering the water surface.

A final design was presented and approved as a new start project by the LCR MSCP Steering Committee in October 2009 with the passing of Resolution 10-002. The final environmental assessment was prepared for the LDCA in February 2011. A Finding of No Significant Impact was determined, which allowed earthwork to commence.

Operation of the LDCA is coordinated through Reclamation's Water Operations Group. The LDCA has been used to store excess flows through this coordinated effort. When excess flows are anticipated, the water control structures at the LDCA can be adjusted in order to accommodate a portion of the excess flow. These flows can be returned back to the Colorado River.

Annual maintenance and management: The LDCA was designed and constructed to minimize annual operation and maintenance costs. Water is diverted at Imperial Dam and delivered by gravity to an inlet structure in Cell 1. Approximately 100 cfs flows through the site 24 hours a day, 7 days a week. There are no pumps used at the LDCA. Annually, the intake structure is closed and inspected. The inspection includes both normal maintenance, a review of the cathodic protection system, and pressure washing of the structure. The water control structures are serviced and inspected twice a year. Water delivery into and out of the LDCA are logged and can be accessed remotely. The annual costs for operation and maintenance of the LDCA include road grading.

Previous Activities:

Maintenance/restoration/management: Inlet modifications to the point of diversion at the Gila Gravity Canal sluicing gates were made to allow for up to a 100-cfs flow capacity. The diversion pipe system has been engineered to allow for maximum management flexibility, including diverting the entire flow to the Mittry Lake Wildlife Area, the LDCA, or the historic river channel. Approximately 4,000 feet of 48-inch high-density polyethylene pipe was installed in 2011–12.

Clearing and contouring of Reach 1 (over 500 acres) began in the fall of 2011 and was completed in 2012. The newly created topography of Reach 1 was verified by using light detection and ranging (LiDAR) remote sensing techniques, which was used to create contour mapping.

Clearing and contouring activities in Reach 2 began in the summer of 2012 and were completed in April 2014 (over 500 acres). Approximately 50,000 cubic yards of soil were moved per shift in order to contour the site according to the grading plan. In all, approximately 3,400,000 cubic yards of earthen material were excavated.

Over 800,000 marsh plants were planted on approximately 150 acres in Reach 1 during August and September 2013. Riparian and mesquite planting of Reach 1 commenced in February 2014 and finished in April 2014. Marsh planting of Reach 2 took place in May 2014. Over 1 million trees and plants were planted in the spring of 2014.

Monitoring: The land adjacent to the LDCA has been surveyed for many years by the Arizona Game and Fish Department for marsh birds, including Yuma clapper rails, California black rails, and western least bitterns, all of which are LCR MSCP covered species. All three of these species are present within the adjacent wetland/marsh area during breeding seasons. Surveying of marsh birds continued until work began at the site. To allow for the completion of construction and planting, no monitoring activities occurred during FY13–14.

FY15 Accomplishments: Obligations in FY15 were less than approved because the obligations for leasing heavy equipment to be used in 2015 were made in FY14.

Maintenance/restoration/management: Gates were constructed at the entrances to the LDCA to control motorized vehicle access and provide a public parking area. The LCR MSCP Office worked with the Bureau of Land Management and Arizona Game and Fish Department to establish access regulations and provide law enforcement and fire suppression support. Informational kiosks describing the LCR MSCP mission, the LDCA, and access regulations were installed at the entrance of the site.

Riparian and mesquite planting of Reach 2 commenced in February 2015 and finished in April 2015. Supplemental planting in Reach 1 was also conducted in spring 2015. A mix of approximately 1 million cottonwood, willow, and other riparian species, and approximately 15,000 mesquite trees, were planted in Reach 2. Cleared and contoured ground within the project footprint was maintained to prevent regrowth of non-native and invasive species. Herbicide application and hand-pulling methods were used to eradicate invasive vegetation. Once native species were planted, herbicide application was suspended throughout the entire site.

Monitoring: Marsh bird survey points were established and surveys conducted on three occasions at the wetland portions of the site. Western least bitterns were detected in March. Yuma clapper rails and California black rails were not detected.

Vegetation data were collected in FY15 using LiDAR remote sensing techniques.

FY16 Activities: A Land Use Agreement, between the Arizona Game and Fish Commission and Reclamation, has been drafted and defines the roles and responsibilities of both parties and clarifies public access.

Maintenance/restoration/management: Post and cable fencing will be installed along the perimeter of Reach 1 in order to protect native vegetation from damage by motorized vehicles. Control of invasive plant species for Reach 1 has been discontinued; however, control of invasive and non-native plant species for Reach 2 will continue. Water control infrastructure will be maintained throughout the year via regular inspections and preventive maintenance.

A final construction report was prepared to document the entire chronology of the project from design to construction completion.

Monitoring: Monitoring for marsh birds will continue in suitable habitat. Riparian habitat planted in 2014 and 2015 may be surveyed if it becomes suitable for LCR MSCP covered species.

Vegetation data will be collected in May 2016 using LiDAR remote sensing techniques.

Proposed FY17 Activities:

Maintenance/restoration/management: Access, law enforcement, and fire suppression for the LDCA will be regulated by the Bureau of Land Management. Control of invasive plant species is not anticipated. Water control infrastructure will be maintained throughout the year via regular inspections and preventive maintenance.

Monitoring: Monitoring for marsh birds will continue in suitable habitat. Riparian habitat planted in 2014 and 2015 may be surveyed if it becomes suitable for LCR MSCP species.

Information from 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.

Pertinent Reports: N/A