

Work Task E27: Laguna Division Conservation Area

FY14 Estimate	FY14 Actual Obligations	Cumulative Expenditures Through FY14	FY15 Approved Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate
\$8,600,000	\$6,081,471.60	\$22,825,960.27	\$3,000,000	\$900,000	\$650,000	\$650,000

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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, BEVII, 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 F1-4 and F7.

Project Description: The Laguna Division, River Miles 43–49, was identified as having 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 intent was to identify potential restoration projects and combine resources to ensure any actions taken in the area would not affect other potential restoration projects or ongoing river operations.

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

The LDCA is a relatively wide, undeveloped area with a series of low linear depressions, which are remnants of former river meanders. The intent of this

project is to create marsh and riparian land cover types by shaping and contouring multiple meandering channels. These land cover types will be maintained with a maximum base flow of 100 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. Upland vegetation will receive water through flooding.

To support the concept described above, inlet modifications to the point of diversion at the Gila Gravity Canal sluicing gates will be made to allow for up to 100-cfs capacity. The diversion pipe system has been engineered to allow for maximum management flexibility, including diverting the entire flow to Mittry Lake Wildlife Area, the LDCA, or the historic river channel. The Water Accounting Agreement will be used to support the LDCA.

In coordination with the Laguna Planning Group, several conceptual designs were created with the intent of determining the technical feasibility of implementing a large-scale restoration project. In addition, a team was established to determine the availability of water to create and support the new habitat. The combination of technical feasibility, water availability, and cost effectiveness was used to determine how the project would be implemented.

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.

Previous Activities:

Construction and Management: Procurement and delivery of approximately 4,000 feet of 48-inch high-density polyethylene pipe was completed in early 2011. Fusion and installation of the pipeline began in the summer of 2011 and finished in the summer 2012.

Clearing of Reach 1 began in the fall 2011. Clearing and contouring of Reach 1 (over 500 acres) was completed in 2012. The newly created topography of Reach 1 was verified by utilizing LiDAR, an optical remote sensing technology, flown in late summer, which was used to create contour mapping. This mapping was used to verify the original design drawings. Clearing and contouring of Reach 2 began in the summer of 2012.

Six groundwater monitoring wells have been installed in Reach 1 and will be instrumented with data loggers to collect groundwater elevations and salinity throughout the lifetime of the project. Modeling to forecast groundwater and surface water interactions once diversions began and 100 cfs was delivered to the site have been completed.

Several months of meetings were scheduled with representatives from multiple offices within Reclamation to design and approve construction drawings. A water control structure, which allows the delivery of water into Mittry Lake from Reach 1, was constructed. Construction of two water control structures, located at the southern end of Reach 1, was completed in the spring of 2013. The water intake structure was relocated from the Gila Canal storage basin to one of the Gila sluiceway gates, and construction began in the spring of 2013 and was completed in the summer of 2013.

Test flooding of Reach 1 occurred in the summer of 2013, to verify groundwater elevations in preparation for marsh planting. During test flooding, the site was evaluated for habitat viability, and planting plan changes were made as necessary to ensure the highest rate of survivability.

Planting and Maintenance: Over 800,000 marsh plants were planted on approximately 150 acres in Reach 1 during August and September 2013. Over 1 million cottonwood, willow, and other riparian species were ordered in 2013 for planting of Reach 1 in 2014. 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.

Monitoring: The land adjacent to the LDCA has been surveyed for many years by the AGFD for marsh birds, including Yuma clapper rail, California black rail, and least bittern, which are LCR MSCP covered species. All three of these species are present within the adjacent wetland/marsh area during the breeding season. 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.

FY14 Accomplishments:

Construction and Management: Clearing and contouring activities in Reach 2, which 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 and backfilled. A water control structure, located at the southern end of Reach 2, was completed in early 2014.

Upon completion of this final water control structure, the entire LDCA became fully operational and could be controlled remotely or onsite. Remote monitoring and gate operations have been established through a secure online site. A camera was installed at the staff gauge at one water control structure in order to verify water elevations visually.

Cracks that developed in the water control structures due to concrete curing were identified and repaired in January 2014.

Planting and Maintenance: Riparian and mesquite planting of Reach 1 commenced in February 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. Cleared and contoured ground, as well as planted areas within the LDCA, were maintained to prevent the regrowth of non-native and invasive species.

Monitoring: No monitoring of species was conducted during FY2014. Once vegetation has been established, monitoring will commence.

FY15 Activities:

Construction and Management: Gates were constructed at the entrances to the LDCA in order to control motorized vehicle access. LDCA Project Managers will work with the BLM and AGFD to control access and provide law enforcement support.

Planting and Maintenance: Final riparian and mesquite plantings in Reach 2 are scheduled for the spring of 2015. Certain areas in Reach 1 that experienced lower survival rates due to excessive salt accumulation and other factors, such as wave action, will be replanted.

Monitoring: Monitoring activities are scheduled to begin in the spring of 2015 once all planting has been completed. Suitable habitat has developed in some areas for marsh birds and will be surveyed beginning in the spring of 2015.

Proposed FY16 Activities:

Management: Access and law enforcement for the LDCA will be regulated by the BLM in accordance with the approved access plan.

Maintenance: Control of invasive and non-native species is expected to continue through 2018. Site maintenance, irrigation, and replanting are expected to continue for the first 3–5 years (FY13–18) of plant establishment.

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

Pertinent Reports: N/A