

Work Task E14: Imperial Ponds Conservation Area

FY08 Approved Estimate	FY08 Actual	Cumulative Accomplishment Through FY08	FY09 Approved Estimate	FY10 Proposed Estimate	FY11 Proposed Estimate	FY12 Proposed Estimate
\$974,000	\$965,430.09	\$6,374,862.09	\$483,000	\$651,840	\$465,840	\$453,840

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Start Date: FY05

Expected Duration: FY55

Long-term Goal: Habitat Creation.

Conservation Measures: CLRA1, BONY2, RASU2, LEBI1, and BLRA1.

Location: Reach 5, Imperial NWR, River Mile 59, AZ.

Purpose: Create and manage a mosaic of native land cover types for LCR MSCP covered species.

Connections with Other Work Tasks (past and future): Work task vegetation and species monitoring is being conducted under F1, F2, F3, F4, F5, and D9.

Project Description: The Imperial Ponds Conservation Area is an integrated mosaic of native land cover types, including isolated backwaters, cottonwood/willow and marsh. It is situated within the Intensive Management Area of the Imperial National Wildlife Refuge, an area of focused management for sensitive wildlife species including native fish, marsh birds, neotropical migratory birds, and migratory waterfowl. By partnering with Imperial NWR to implement this project within an area already so rich in biodiversity, the LCR MSCP is creating a unique native landscape like no other found on the LCR.

Six ponds have been constructed to provide approximately 80 surface acres of backwater habitat for endangered razorback sucker and bonytail, as well as provide marsh habitat for western least bittern and Yuma clapper rail. The ponds provide a diversity of depths and habitat features, including rip-rap for fish cover and hummocks on which to place native wetlands plants.

Colorado River water is supplied to the ponds and other habitat areas by a new pump that uses state of the art fish screening technology developed specifically for the LCR MSCP. The screen was constructed to prevent the eggs and larvae of nonnative, predatory fish from entering into the ponds. The ponds are not interlinked; each pond is independently managed. This is a key component to successful water quality and fisheries management. When water is released from a pond, it enters a drainage ditch where native wetland and riparian vegetation has been planted.

Using material excavated from the ponds, an existing 4-acre cottonwood nursery on the refuge will be expanded by 34 acres to develop cottonwood-willow land cover for the yellow-billed cuckoo. The pond material was spread over approximately 100 acres; the acreage not used for cottonwood-willow will be managed for migratory waterfowl. Both the yellow-billed cuckoo and willow flycatchers have been sighted in the existing nursery. The additional cottonwood-willow forested area, and the waterfowl acreage, will create a vegetation mix that makes this an ideal site for attracting the threatened and endangered species the LCR MSCP is designed to protect. Field leveling and irrigation system installation for the area were completed in FY08; tree planting will occur in FY10.

A 12-acre marsh unit was created at Field 18 in the refuge's southeast corner. This field was cleared in the winter of 2007-2008, and was converted into a bulrush-dominated marsh. Because the field is adjacent to several marsh units currently occupied by California black rail, it is an ideal site for attracting this species and other species of concern.

Previous Activities: Between FY05 and FY07, extensive site development was undertaken to excavate six isolated, independently managed backwater ponds, to create habitat primarily for razorback sucker and bonytail. Extensive details regarding this development will be made available in the *Imperial Ponds Conservation Area, 2008 Annual Report* (In Press), which will be posted to the Web site once complete.

FY08 Accomplishments:

Maintenance/Restoration/Management. Over 700 native cottonwood, Goodding's willow, and coyote willow poles were harvested, soaked, and planted in the ponds' drainage ditch in February 2008. Thirteen hummocks, which were previously constructed within five of the six ponds, were planted with approximately 5,500 hardstem bulrush in June, 2008. In addition, approximately 150 cattail clumps were transplanted from nearby wetland areas, to establish emergent vegetation in Pond 1.

During FY08, the fill area of excavated earthen materials from the construction of the ponds was disked, contoured, and laser leveled. A new concrete irrigation canal was constructed, which now allows for enhanced water management of the new (future cottonwood-willow) fields. Additional turnout structures were constructed, which also enhance the adjacent cottonwood nursery, which hosts several LCR MSCP covered species, including yellow billed cuckoo, migratory willow flycatcher, and numerous bat and small mammal species. The new fields are now being managed by rotating between water grass (planted summer 2008), and rye grass (planted winter 2008) to enhance soil conditions for planting in 2010.

In FY08, clearing, surveying, final design, contouring and leveling of Field 18 were completed. Between spring and summer of 2008, the site was flooded to prevent establishment of invasive salt cedar. In June 2008, approximately 38,000 wetland plugs were established, which are now developing into a marsh habitat.

Monitoring. An interagency fishery coordination team was convened in October 2008 to oversee native fish research and monitoring actions. Four ponds were selected to receive native fish, and two ponds were set aside for water management testing. Two of the ponds received

razorback suckers from Willow Beach Hatchery in November (576 fish total), and two ponds received bonytail in December (1,600 fish total). Fishery monitoring and research was conducted mainly under contract to Dr. Paul Marsh of Arizona State University. A summary report has been posted to the LCR MSCP Web site under work task C25. More information on fishery and water quality monitoring and research for Imperial Ponds can be found under work tasks C25 and F5.

FY09 Activities:

Maintenance/Restoration/Management. During FY09, Reclamation plans to enter into a funding arrangement to assist with onsite management activities. Additionally, Reclamation will pay for electrical use associated with pumping water to program lands and backwaters. Several maintenance activities will be performed for long-term site management, including installation of a shade structure for the electrical control panels, several repairs to the concrete irrigation canal, and pond delivery pipe systems, as well as several upgrades to the system to prevent introduction of non-native fish via the drainage ditch.

Cottonwoods and willows will be procured to establish approximately 34 acres of new fields. Throughout this year, irrigation, soil, and crop management activities will be continued to enhance soil conditions for planting next year.

As part of the adaptive management focus of the program, several upgrades are proposed for one of the ponds. Available funding, budgeted for maintenance will be used to dewater one pond, inspect the conditions of hummocks, boat ramps, and perform any required maintenance. Additionally, a series of graveled spawning beds may be installed to assist with ongoing fisheries investigations. Finally, tests will be performed to evaluate the effectiveness of the drainage ditch, and the minimum pool, a pond, will be dewatered. This pond will be renovated to remove all exotic fish and will establish one native-only pond for future fish management activities to utilize.

Monitoring. Fish and water quality monitoring and research will continue as outlined in the approved research and monitoring plan (available on website). One pond will be drawn down during FY09: 1) to assess capabilities for fish reclamation/restoration, 2) to assess water management capabilities, 3) to determine needs for habitat improvements, and 4) to evaluate physical pond features. Additional information on native fish activities are discussed in Work Task F5.

FY10 Activities: For budgeting purposes, Reclamation is assuming that one additional pond will require dewatering, evaluations, maintenance, additional spawning materials, and renovations, similar to what was previously discussed under FY09 activities. It is also assumed that Reclamation will continue to fund electrical consumption, as well as ongoing fuel and labor requirements associated with management of the site.

Additional long-term maintenance needs will be undertaken at the site. Currently, this includes the installation of an electronic water monitoring system, which will collect data remotely, and transmit it to an Internet server. This kind of upgrade will allow project managers to reduce travel requirements for ongoing maintenance and free up staff resources for new projects.

Additionally, expansions of several 90-degree concrete canal turns were identified as a method to improve irrigation efficiency and are planned for FY10.

During FY10, cottonwoods and willows (which are to be purchased the prior year) will be planted according to a final planting design, based on information collected during FY09. Fish and water quality monitoring and research will continue as outlined in the approved research and monitoring plan (available on Web site). Additional information on native fish activities are discussed in Work Task F5.

Pertinent Reports: *Imperial Ponds Conservation Area, 2008 Annual Report* will be posted to the LCR MSCP Web site.