

## Work Task E14: Imperial Ponds Conservation Area

FY14 Estimate	FY14 Actual Obligations	Cumulative Expenditures Through FY14	FY15 Approved Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate
\$600,000	\$693,768.00	\$9,211,702.14	\$800,000	\$1,500,000	\$450,000	\$450,000

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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, 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 is being conducted under Work Tasks F1–F5 and D9.

**Project Description:** The IPCA is an integrated mosaic of native land cover types, including disconnected backwaters, cottonwood-willow, and marsh. It is situated within the Intensive Management Area of the Imperial NWR, an area of focused management for sensitive wildlife species, including native fish, marsh birds, neotropical migratory birds, and migratory waterfowl.

### Previous Activities:

**Ponds:** Six ponds have been constructed to provide approximately 80 surface acres of backwater habitat for bonytail and razorback sucker. LCR water was supplied to the ponds by a pump fitted with a wedge-wire screen system. The screen had a slot size of 0.05 mm that was designed to prevent passage of fish eggs and larvae into the ponds. An in situ evaluation of the screen was completed through the Work Task G3. The results indicated that fish eggs and larvae of multiple species were passing through the screen. In response to the results, the pump was shut off in the summer of 2009, and water was supplied to all the ponds using a single groundwater well. A water management study was initiated in May 2011 to evaluate the water quality in Pond 1 (where regular water management was continued) and Ponds 2–6 (without a managed water supply). A trends analysis from the physico-chemical profiles indicated that the temperature was

increasing over time in all six ponds; however, it appeared to be increasing at a slightly higher rate in Pond 1. The pH levels also appeared to increase over time, with differences being observed among ponds. The values of pH commonly exceeded a set standard of 9.0 in Ponds 2–6 in the summers of 2011 and 2012. The pH levels were lowest in Pond 1. DO levels did not appear to be a cause for concern in an absence of water management. Specific conductivity levels showed a gradual increase over time in all ponds.

**Riparian:** Yellow-billed cuckoo and southwestern willow flycatcher have been sighted adjacent to the conservation area in the cottonwood nursery. Field leveling and irrigation system installation for the area were completed in FY08.

Restoration and planting with native cottonwood and willow is not anticipated until FY17. In the interim, soil salinity in the fields will be reduced through irrigation of a cover crop.

**Marsh:** A 12-acre marsh unit was created at Field 18 in the southeast corner of the Imperial NWR. This field was cleared in the winter of 2007–08 and was converted into a bulrush-dominated marsh managed for rails.

#### **FY14 Accomplishments:**

**Maintenance/Restoration/Management:** A second well was installed onsite to supply water to the ponds. The new well both increased the volume of water that could be delivered to the ponds as well as provided redundancy in case one well was not operational.

*Ponds:* A renovation plan was drafted and approved. All six ponds were scheduled for renovation in FY15.

*Riparian:* Fields were irrigated to reduce salinity in the soils. Phragmites and salt cedar were removed from the riparian fields as necessary. No additional restoration or monitoring was performed on the 34 acres of the future cottonwood-willow field.

*Marsh:* Field 18 was irrigated to provide shallow, wet habitat during October 2013 and from February through September 2014. Water was not supplied to the field from November 2013 through January 2014 so that maintenance could be performed on the canal system and adjacent fields.

#### **Monitoring:**

*Ponds:* Bonytail and razorback sucker were removed from Pond 1 in preparation for the renovation efforts in FY15. Thirty bonytail were taken to the Lake Mead Fish Hatchery, and another three were put into the display tank at the Imperial NWR Headquarters. Only one of the bonytail captured had a PIT tag, the

remaining bonytail, based on their size, were assumed to be the progeny from one or more recruitment events in Pond 1. Twenty-six razorback sucker were captured; 18 had previously been PIT tagged, and 8 were untagged. All razorback sucker were stocked into the A-10 backwater in Ehrenberg, Arizona, any razorback sucker that did not have a tag received one prior to stocking.

*Marsh:* Marsh bird surveys were conducted by the USFWS at the ponds and at Field 18. Least bittern was detected in Pond 5 on two separate occasions. This is the first LCR MSCP marsh bird species detected in the ponds since 2009. Yuma clapper rails were detected in March and April, and California black rail were detected in March, April, and May in Field 18.

### **FY15 Activities:**

**Maintenance/Restoration/Management:** Onsite maintenance, utility payments, and water management for the site will continue. The last major capital improvement, replacement of portions of the concrete-lined canal for the delivery of water into the fields, has been delayed until FY16, and therefore, expenditures are expected to be less than approved.

*Ponds:* Pond 5 was pumped down and held at an elevation of 180 feet for a 2-week period in preparation for a prescribed burn of the marsh area within the pond. Renovation of all six ponds with rotenone began in December 2014 and continued through January 2015. Post-renovation monitoring is being completed under Work Task C25.

A water management plan will be drafted in FY15. The plan will identify methods to mitigate for pH and conductivity. Suggested strategies may include pumping water out of the ponds or the seasonal addition of surface water from the wells. Monitoring water physico-chemical parameters will be completed through Work Task C25.

*Riparian:* Repairs will be completed on the canals as needed. The fields will be irrigated to reduce salinity in the soils. Phragmites and salt cedar will also be removed from the riparian fields as necessary. No additional restoration or monitoring is anticipated on the 34 acres of the future cottonwood-willow field.

*Marsh:* The 12-acre marsh created in Field 18 will continue to be managed for marsh covered species.

**Monitoring:** Monitoring will continue in FY15, similar to previous efforts for fish and marsh birds. MacNeill's sootywing surveys will be conducted in the spring and summer.

## **Proposed FY16 Activities:**

**Maintenance/Restoration/Management:** Onsite maintenance, utility payments, and water management for the site will continue. The last major capital improvement, replacement of the concrete-lined canal for the delivery of water into the riparian fields and marsh complex, is scheduled for FY16, although the actual replacement would likely occur in FY17 using funds from FY16.

*Ponds:* Boat ramps and riprap shorelines will be maintained. An automated watering schedule for all six ponds will be developed and implemented.

*Riparian:* The fields will be irrigated to reduce soil salinity. A Restoration Development and Monitoring Plan for the 34 acres of cottonwood-willow will be drafted, and trees will be purchased for planting in FY17.

*Marsh:* The 12-acre marsh created in Field 18 will continue to be managed for marsh covered species.

**Monitoring:** Monitoring will continue in FY16, similar to previous efforts for fish, marsh birds, and MacNeill's sootywing.

**Pertinent Reports:** The *2013 Imperial Ponds Conservation Area Annual Report*, which summarizes any planting conducted, site management, the results of monitoring, and any recommendations for future adaptive management, will be posted on the LCR MSCP Web site once integration of the data collected throughout the calendar year is complete.