Work Task E9: Hart Mine Marsh

FY12 Estimate	FY12 Actual Obligations	Cumulative Expenditures Through FY12	FY13 Approved Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate	FY16 Proposed Estimate
$300,000	$414,640.69	$5,691,016.62	$750,000	$250,000	$200,000	$200,000

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Start Date: FY05

Expected Duration: FY55

Long-term Goal: Habitat creation.

Conservation Measures: CLRA1, LEBI1, and CRCR2.

Location: Reach 4, Cibola NWR, River Mile 92, Arizona.

Purpose: Create and manage marsh habitat for Yuma clapper rail, least bittern, and Colorado River cotton rat.

Connections with Other Work Tasks (past and future): Vegetation and species monitoring are being addressed under F1-F4.

Project Description: Hart Mine Marsh was a decadent marsh located on Cibola NWR that was restored and expanded to create functional habitat for covered species. This was accomplished by the installation of control structures to manage water levels, providing sources of higher quality surface water flows, making physical changes to the site's topography, and by planting and supporting native wetland and marsh vegetation. The basic approach was to remove a substantial amount of existing saltcedar from the site, deepen areas of existing open water and contour areas adjacent to those deeper areas, and manage water at the higher elevations to promote and sustain marsh cover type vegetation and wetland functions. The creation of habitat included both the establishment of native plants and management of water levels to meet performance standards for integrating emergent vegetation and open water at varying depths into a mosaic of marsh habitats.

Previous Activities: In FY08, NEPA compliance activities, cultural surveys, topographic surveys, and pre-development surveys for marsh birds and riparian obligate birds were conducted. Engineering designs were finalized, and all regulatory permitting required for construction was completed including NEPA, ESA, sections 401 and 404 of the CWA, and Section 106 of the NHPA. In FY09, the first phase of construction was completed and resulted in 92 acres of marsh. In FY10, phase 2 of construction created an additional 163 acres of marsh.

FY12 Accomplishments:

Maintenance/Restoration/Management. The majority of the activities that occurred in FY12 were for management, maintenance, and monitoring of the established marsh. Water management, including water delivery to maintain static water levels during marsh bird nesting season, were performed. Invasive and nonnative vegetation control continued. Monitoring of abiotic and biotic parameters was also conducted.

Minor construction activities occurred in FY12. These included: improving access to one of the large islands in cell 1 to permit more efficient vegetation management and, the expansion of one of the parking areas in the north east corner of cell 1. Vegetation maintenance included controlling weedy species on the islands in HMM. Up to this point, little attention was paid to the islands, mainly due to accessibility issues. Controlling invasive and nonnative species on these islands was considered extremely important to reduce nonnative seed sources throughout the marsh and to keep nonnative invaders from completely colonizing the islands within the marsh. This increase in effort was one of the reasons for increased costs for FY12, but is expected to result in long-term cost saving for site management.

Planning and procurement of materials for future infrastructure repairs and upgrades also took place in FY12. To account for the time requirements of the procurement process and to avoid potential schedule problems during the short time window when installation of the new unit 2 water supply lines would occur, the decision was made to purchase the majority of the materials and supplies needed for the infrastructure repair in FY12 for installation in winter of FY13. Although necessary to insure minimal system down-time, these purchases were the primary cause of a substantial increase in cost for the FY12 budget. Pre-purchasing of materials is expected to reduce expenditures in FY13.

Monitoring. Marshbird surveys were conducted 4 times between March and May. Two Yuma clapper rails were detected during the April 18 survey. At least one least bittern was detected during all four surveys, with a maximum of 11 detected during the April 18 survey.

FY13 Activities: The third and final phase includes major infrastructure repair and is planned for FY13. To avoid system failures during critical times for covered species breeding seasons and to maintain adequate water levels to keep vegetation at HMM alive, these steps to upgrade the infrastructure components are being made to protect the investments made by the LCR MSCP. This will involve the replacement of the leaking water delivery lines from the Unit 2 pumps and the installation of a dedicated water line for HMM. The water delivery infrastructure for the Unit 2 management area on Cibola NWR (that also supplies HMM) needs to be replaced to handle the water demands of HMM and the water volume generated by the newly installed 40 cfs pump.

Regular management and monitoring activities will continue in FY13. Water management, including the maintenance of water levels and water delivery activities on the site will continue. Invasive and nonnative vegetation control will continue. Monitoring of marsh vegetation and marshbirds will be conducted.

Proposed FY14 Activities: No major construction or repairs are planned for FY14. Activities are expected to be limited to marsh management, maintenance of access roads, invasive plant control, and monitoring. To maintain relatively static water levels for marsh birds during the nesting season and to mitigate salinity in the marsh, a combination of drainage water from the Arnett Ditch and pumped Colorado River water is used. Annual maintenance costs include electrical utility bills associated with pumping, labor to turn on the pumps and adjust water control structures, invasive and nonnative vegetation control, water quality sampling, and road grading. Monitoring of marsh vegetation and marshbirds will also continue.

Pertinent Reports: The *2012 Hart Mine Marsh Conservation Area Annual Report*, which summarizes any planting conducted, site management, results of monitoring, and any recommendations for future adaptive management will be posted after integration of data collected throughout the calendar year.