

Work Task E1: Beal Lake Riparian and Marsh

Partners:	U.S. Fish and Wildlife Service
Contact:	Barbara Raulston, LC-8453
Purpose:	Establish and demonstrate restoration techniques (using areas covered by material from dredging of Beal Lake) with native riparian and marsh vegetation to create habitat for southwestern willow flycatchers, yellow-billed cuckoos, black rails and other LCR MSCP species of concern. Restoration techniques being evaluated include; hydroseeding, broadcast seeding, poles, potted plants, contouring for wetland/marsh creation.
Conservation Measures:	CLRA-R, WIFL1-R, WRBA2-R, WYBA-3-R, CRCR2-R, YHCR2-R, LEBI1-R, BLRA1-R, YBCU1-R, ELOW1-R, GIFL1-R, GIWO1-R, VEFL1-R, BEVI1-R, YWAR1-R, SUTA1-R and MNSW2-R
Long-term Goal(s):	Each field has been laser-leveled and can be flooded independently. This allows a wide range of restoration research tasks to be conducted and monitored. The information obtained from the seeding, planting, and flooding at this site will be directly applicable to other restoration projects. Upon completion, the habitat acreage expected to be established at the site is approximately 100 acres of cottonwood and willow, 12 acres of mesquite, and 5-20 acres of marsh.
Location:	Adjacent to Beal Lake and Topock Marsh on Havasu National Wildlife Refuge.
FY2006 Estimate:	\$200,000 includes Reclamation staff costs, fuel, irrigation contract services including labor for

planting and maintenance/irrigation, and development of 5-20 acre wetland.

FY2007 Estimate: \$150,000 for continued research, development, and monitoring.

FY2008 Estimate: \$150,000 for continued research, development, and monitoring. In FY2009, the project will be reevaluated for continued funding under the LCR MSCP either as research or as habitat acreage credit.

Project Description: Beal Lake is located on Havasu National Wildlife Refuge in Needles, California, within the historic floodplain of the LCR. Beal Lake was approximately 225 acres of shallow, low quality aquatic habitat that was dredged to deepen it beginning in 2001. Dredge material was distributed over adjacent areas, to be planted at a later date with native vegetation. When completed, the riparian portion of the project will include over 100 acres of cottonwood, willow, and mesquite habitat. It will also include a 5-20 acre experimental site to determine methods for creating and managing habitat for black rails.

Riparian/Marsh. Establish and restore native riparian species on lands adjacent to the lake. Due to the size of the project, the riparian component has been separated into two phases. Clearing, root plowing, leveling, and installation of an irrigation system for Phases I and II have been completed.

Phase I (56 acres) of the project resulted in cottonwood, willow, and mesquite along with some naturally established arrow-weed and saltcedar.

Phase II (50 acres) is partially planted with cottonwood, willow, and mesquite; the remaining acres have a cover crop in place and will be planted in 2005. A portion of field in Phase I and II will be used to develop, maintain and manage habitat for

black rails. This will provide needed information on water management (maintaining a stable 1” depth) required for this species.

The irrigable fields are being used to evaluate various riparian establishment techniques such as hydroseeding, hand seeding, poles, and potted plants. Reclamation is monitoring the fields and tracking the watering use and requirements, which should provide guidance on future riparian establishment and management procedures. A study plan is available.