

## Work Task E7: Mass Transplanting Demonstration

FY07 Estimates	FY07 Actual	Cumulative Accomplishment Through FY07	FY08 Approved Estimate*	FY09 Proposed Estimate	FY10 Proposed Estimate	FY11 Proposed Estimate
\$15,000	\$5,516	\$324,825	\$15,000	\$0	\$0	\$0

\*Costs for operation and maintenance are now captured under Work Task E24.

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**Start Date:** FY05

**Expected Duration:** Closed in FY07

**Long-term Goal:** Restoration research.

**Conservation Measures:** WIFL1, WRBA2, WYBA3, CRCR2, YHCR2, LEBI1, BLRA1, YBCU1, ELOW1, GIFL1, GIWO1, VEFL1, BEVI1, YWAR1, and SUTA1,

**Location:** Reach 4, Cibola NWR, one-half mile east of River Mile 97, AZ.

**Purpose:** This project evaluates mass transplanting techniques for cottonwood and willow using commercially available mechanized transplanting equipment. To meet the requirement to create 5,940 acres of cottonwood-willow land cover type habitat, a significant number of native trees will need to be established each year. Mass transplanting is an approach used successfully by commercial growers. If mass transplanting of native species proves effective, it is expected to provide a useful cost-effective tool in the creation of future habitat.

**Connections with Other Work Tasks (past and future):** Beginning in FY08, operation and maintenance costs for this work task will be included in Cibola NWR Unit 1 (E24).

**Project Description:** Reclamation has entered into a 5-year land use agreement with the USFWS to conduct restoration research in Unit 1 at Cibola NWR. This work task demonstrates automated mass transplanting techniques using native riparian species. The intent is to investigate the feasibility and effectiveness of using this technique for creation of land cover types in existing agricultural fields. The cost benefit of this method will be evaluated along with its effectiveness and appropriateness in the creation of native habitat to meet LCR MSCP goals. The technique involves mechanized, rapid, dense planting of up to 4,500 seedlings per acre to inhibit growth of nonnative plant species and to achieve dense growth of native tree species. Up to 36 acres of cottonwood-willow land cover type may be created as a result of the demonstration.

**Previous Activities:** A simplified acquisition was generated, and contractors competed in the demonstration of mass transplanting of cottonwood and willow. The contract required the utilization of commercially available equipment and was awarded to two contractors. Each

contractor was provided with an agricultural field and required to provide their approach to mass transplanting cottonwood and willow trees. The intent was to demonstrate and compare the respective techniques. Each technique was evaluated for the effectiveness of creating quality land cover at a reasonable cost (currently, mass transplanting methods are being utilized in the agriculture industry to produce high quality fruits and vegetables at a reasonable cost). Additional information about the mass transplanting demonstration that was completed in FY05 can be found on the LCR MSCP Web site.

**FY07 Accomplishments:** The cottonwood and willow trees for the mass transplanting demonstration are now 2 and 3 years old and appear quite healthy. Volunteer *Baccharis* and grasses have begun to move into the area forming an understory of vegetation. Significant growth has occurred in all the trees, which now can provide another site for plant material collection for other restoration sites. Collections of plant material by the contractor will take place in November and December for plantings in the spring of 2008.

In anticipation of this site becoming part of E24, post-development avian and bat monitoring were conducted. During acoustic bat surveys, 5 call minutes from the California leaf-nosed bat were recorded. No other LCR MSCP species was identified utilizing the site.

Activities have scaled back on this project, leaving the contract farmer's only task to irrigate and manage weeds. As a result of reduced activities, general operations and maintenance will be included in the E24 work plan

**FY08 Activities:** Operation and maintenance of the site will be included under E24, thereby closing Work Task E7.

**Pertinent Reports:** The final report, *Work Task E7: Mass Transplanting Demonstration, Final Report, Cibola National Wildlife Refuge: 2005 & 2006* has been posted to the LCR MSCP Web site.