

Work Task E3: ‘Ahakhav Tribal Preserve

FY07 Estimates	FY07 Actual	Cumulative Accomplishment Through FY07	FY08 Approved Estimate	FY09 Proposed Estimate	FY010 Proposed Estimate	FY11 Proposed Estimate*
\$60,000	\$94,431	\$1,229,730	\$145,000	\$145,000	\$145,000	\$145,000

*These estimates, which reflect continued management, will be revised to reflect decisions made in FY09.

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Start Date: FY04

Expected Duration: FY09 Decision Point

Long-term Goal: Restoration research.

Conservation Measures: CLRA, WIFL1, WRBA2, WYBA-3, CRCR2, YHCR2, LEBI1, BLRA1, YBCU1, ELOW1, GIFL1, GIWO1, VEFL1, BEVI1, YWAR1, SUTA1, and MNSW2.

Location: Reach 4, Colorado River Indian Tribes, river miles 173-174, AZ.

Purpose: This demonstration project is designed to test planting, maintenance, and irrigation methods on fallow agricultural fields while developing more than 200 acres of cottonwood, willow, and mesquite.

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

Project Description: In September 2004, Reclamation finalized a 5-year agreement with CRIT to conduct habitat restoration at the ‘Ahakhav Tribal Preserve (Preserve), located just south of Parker, Arizona. This agreement expires in FY09 at which point a decision will be made to continue restoration activities, manage created land cover types for the 50-year term of the LCR MSCP, or discontinue funding.

In 1995, CRIT established the Preserve to protect fish, wildlife, and plants in the riparian areas along the river. Reclamation began assisting the Preserve with restoration activities in 2003, prior to implementation of the LCR MSCP. A variety of methods and techniques such as seeding and planting cuttings of various sizes are being used to create approximately 200 acres of cottonwood-willow and mesquite land cover types on out-of-production agricultural areas dominated by tumbleweed and sparse saltcedar. All work is done in an effort to evaluate efficient and cost-effective methods for various revegetation projects. Maintenance and management of approximately 154 acres of riparian land cover types created since 2003 is ongoing, and an additional 88 acres of restoration are planned.

Previous Activities: Work began in 2003 by restoring CRIT 9 (154 acres) with native riparian plant species including cottonwood, willow, and mesquite. This involved site preparation (clearing, root-ripping, leveling), soil testing, installation of irrigation infrastructure, and planting. Monitoring of irrigation and maintenance of planted areas has been ongoing throughout the process.

FY07 Accomplishments:

Maintenance/Restoration/Management: Previously established cottonwood-willow and mesquite land cover types totaling 154 acres (CRIT 9) were irrigated with an average of 13 af/ac of water. Water retention features were installed and additional cottonwood, Goodding's willow, and coyote willow were planted around them. Planting also occurred adjacent to irrigation valves within gaps of previously planted areas. General maintenance of CRIT 9 included clearing canals of debris, repairing ditches and gates, and re-establishing berms between irrigated sections.

CRIT 10 (58 ac) was cleared of all debris and leveled in preparation for development. A 2000-ft irrigation ditch with three gates and 20 ports on each side was completed. A weir box and pump platform were installed adjacent to the main canal to pump water into the ditch for irrigation. A draft development or study plan for CRIT 10 is in preparation.

A topographical survey was conducted on CRIT 10 and CRIT 11 (30 acres) in March. In September, a malfunction in a gate on the main canal occurred, spilling water across the agricultural fields and through CRIT 11 before flowing into the backwater below CRIT 11. This washed out an area approximately 1 acre in size, and in places, more than 7 feet deep and 35 feet wide. This area may be incorporated into design plans for CRIT 11, taking advantage of the 1-acre area that is now 7 feet closer to the water table.

Reclamation and CRIT are in discussions regarding a future 50-year land use agreement. This agreement will solidify which areas on the Preserve will be included in the LCR MSCP, roles and responsibilities of each partner, and management plans for all created habitat.

Habitat Monitoring: Overstory cottonwood-willow tree density averaged 146 trees/ac. Overstory trees averaged 43 feet tall and 6.7 inches DBH. Average canopy cover was 55%. Average shrub density was 24 shrubs/acre within the cottonwood-willow stands. In the mesquite dominated habitat, average canopy cover was 90%, shrub density was 20 per acre, and tree density was 161 per acre. Mesquite trees averaged 22 ft in height. Depending on plot location, shrubs consisted of coyote willow, screwbean mesquite, honey mesquite, and *Baccharis* spp.

Avian Monitoring: In 2007, a double sampling area search protocol was used to monitor avian species. Rapid area search surveys and intensive territory mapping surveys were conducted at the site to estimate abundance and detection ratios. Total bird density detected was approximately 71 birds/acre, comprising 23 species. Two LCR MSCP covered species, the summer tanager and the vermilion flycatcher, were detected at very low densities. No willow flycatchers were detected using playback surveys. One yellow-billed cuckoo was detected during June, but none were detected in follow-up visits.

Bats Monitoring: During two nights of mist netting, 26 bats, comprising 7-8 species, were captured, including California *Myotis*, cave *Myotis*, Brazilian free-tailed bat, California leaf-nosed bat, Yuma *Myotis*, pallid bat, and western yellow bat.

FY08 Activities:

Maintenance/Restoration/Management: Reclamation is assisting CRIT with management plans for CRIT 9. Recently replanted vegetation immediately adjacent to the irrigation ditches will be flooded approximately once per week during the SWFL breeding season to determine if a moist, humid microclimate is possible at this site.

Once irrigation testing occurs in CRIT 10, a cover crop of alfalfa will be planted to stabilize the group prior to riparian vegetation or conducting a research project. Drafting and posting of the CRIT 10 development plan in FY08 will describe both the development and monitoring techniques to be used on CRIT 10. Reclamation will continue to work with CRIT to finalize a Land and Water Use Agreement in 2008.

Monitoring: Pre-development monitoring will be implemented in CRIT 11. Post-development monitoring of abiotic and biotic habitat characteristics will continue in CRIT 9. The created land cover types will be classified by using the Ohmart and Anderson vegetation classification system. Post-development monitoring for avian species will be conducted in 2008.

Proposed FY09 Activities:

Maintenance/Restoration/Management: CRIT 9 and 10 will continue to be irrigated and maintenance activities will be implemented as needed.

Options for restoration of CRIT 11 are being evaluated, but would not be implemented until a restoration development and monitoring plan has been drafted and development of CRIT 10 is complete. Topography at CRIT 11 could be used to simulate a natural tiered riparian corridor. Installation of irrigation infrastructure and planting of an appropriate cover crop maybe implemented at CRIT 11 in FY08. CRIT 11 may be planted with appropriate vegetation, based on soil sampling and irrigation capabilities determined through site preparation and planning.

Monitoring: Post-development monitoring of habitat characteristics and avian use will continue for CRIT 9 and 10. Data will be obtained, analyzed, and utilized to make on-site management decisions.

For CRIT 9, before or in FY09, a determination will be made between the CRIT and the MSCP to determine the long-term commitments of each party. This agreement is anticipated to take the form of a land use agreement. Concurrently, future actions and commitments for CRIT 10 and 11 will also be re-evaluated.

Pertinent Reports: ‘Ahakhav Tribal Preserve, CRIT 9 Restoration, June 2006; ‘Ahakhav Tribal Preserve Restoration Development and Monitoring Plan, 2006; and ‘Ahakhav Tribal Preserve Re-vegetation Research and Development Project: Annual Report, 2006 and 2007 will be posted to the LCR MSCP Web site.