

Work Task E3: 'Ahakhav Tribal Preserve

FY06 Estimates	FY06 Actual	Cumulative Accomplishment Through FY06	FY07 Approved Estimate	FY08 Proposed Estimate	FY09 Proposed Estimate	FY10 Proposed Estimate
\$120,000	\$53,580	\$1,135,299	\$60,000	\$145,000	\$145,000	\$195,000

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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 the 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, the 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, planting cuttings of various sizes, etc. 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 re-vegetation projects. Maintenance and management of approximately 135 acres of riparian land cover types created since 2003 is ongoing, and an additional 120 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 on-going throughout the process.

FY06 Accomplishments: Maintenance/Restoration/Management — Previously established cottonwood-willow and mesquite land cover types totaling 154 acres (CRIT 9) were irrigated. No additional planting occurred. General maintenance of CRIT 9 included clearing canals of debris, repairing ditches and gates, and re-establishing berms between irrigated sections. To improve the movement of water across each field, small trenches were dug from the irrigation gates to the opposite side of each irrigated section.

Plans outlined in FY05 for CRIT 10 and 11 (disking, burning of debris piles, purchase and installation of irrigation infrastructure, lining of canals) were delayed until FY07, resulting in approximately half of the projected funds expended. Some saltcedar control of re-sprouts was implemented in CRIT 11. Preserve staff consulted with the local USDA Natural Resource Conservation Service (NRCS) office in Parker, Arizona, and Reclamation to re-evaluate irrigation infrastructure and planting designs in CRIT 10 and 11. Site preparations planned for CRIT 10 and 11 were delayed due to staff shortages and personnel changes at the Preserve. Firm dates for completion of these tasks have been set. 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.

Monitoring — Post-development monitoring of habitat components was conducted at the CRIT 9. Herbaceous cover was monitored in April 2006, at 22 locations. Herbaceous species present were Bermuda grass, sandbur, alfalfa, mustard, bursage, Russian thistle, crinkle mat, pygmy grass, palofox, and desert sunrise. Fixed radius plots, which measured habitat characteristic such as density, basal area, canopy cover and vertical foliage density, were measured at 62 points throughout the site. The site was classified into Anderson and Ohmart vegetation classifications in November, 2006. Forty-seven acres were classified as CW II, 28 acres as CW III, 29 acres as CW IV, 19 acres saltcedar/screwbean mesquite (SM) III, and 11 acres as honey mesquite (HM) III in CRIT 9. The remaining 17 acres within the irrigated areas were either bare ground or unclassified.

Post-development avian point counts, southwestern willow flycatcher surveys and yellow-billed cuckoo surveys were conducted at the site during the 2006 breeding season. One migratory willow flycatcher was detected at the site. No yellow-billed cuckoos were detected. A small population of vermilion flycatchers were the only LCR MSCP covered avian species detected at the site. The four most abundant species detected were the brown-headed cowbird, western kingbird, mourning dove, and Bullock's oriole.

Further information on irrigation and management are in '*Ahakhav Tribal Preserve Restoration Development Plan, 2006*' and '*Ahakhav Tribal Preserve Annual Report, 2006*'.

FY07 Activities: Maintenance/Restoration/Management — Reclamation is assisting CRIT with management plans for CRIT 9. Areas that can be kept wet between irrigations are being inter-planted with cottonwood and willow poles to create dense patches of vegetation. Small plastic pools have been buried throughout these areas to maintain a moist, humid micro-climate within

the vegetation. Vegetation adjacent to the irrigation ditches will be flooded at least once per week during the SWFL breeding season.

The lined irrigation ditches for CRIT 10 were installed in January 2007. Once irrigation infrastructure is in place, a cover crop will be planted on the 60 acre site in order to begin conditioning the sandy soils for the eventual planting of riparian vegetation. It is expected that approximately half of CRIT 10 (in areas furthest from the irrigation source) will be planted with honey mesquite seed in 2007. This will be a demonstration project to determine if drilling mesquite seed is a viable alternative to using container plants. Areas closest to the irrigation ditch will be maintained with a cover crop throughout 2007. Various mulching materials that may increase the water holding capacity of sandy soils are being investigated. For example, during the growing season of 2007, CRIT and Reclamation will be experimenting with cotton-gin waste from a nearby cotton gin for mulch. The material will be analyzed for herbicide and pesticide content as well as for the presence of weed seeds before use on a large scale.

Possible planting designs for CRIT 11 will be explored during FY07. This area spans roughly 3 tiers of elevation that could be used to simulate a natural “tiered” riparian corridor. The site will be surveyed, an excavation plan will be developed, and soil sampling will be conducted. Based on this information, a Restoration Development Plan for this project will be developed.

Monitoring — Post-development monitoring of abiotic and biotic habitat characteristics will be conducted. In recently planted or seeded areas, tree survivorship and growth will be monitored after their first or second growing season. After three growing seasons, habitat characteristics will be monitored using fixed radius plots. Microclimate data, including temperature, relative humidity and soil moisture, will be recorded at the site from April to September. The CRIT 9 site will be classified by land cover type using the Ohmart and Anderson vegetation classification system. Post-development monitoring for avian species will be conducted in 2007.

Proposed FY08 Activities: Maintenance/Restoration/Management — CRIT 9 and 10 will continue to be irrigated and maintenance activities will be implemented as needed. Additional cottonwood and willow will be planted in CRIT 10 on areas adjacent to the irrigation source. Methods of planting these areas (poles, container plants, or seed), mulch materials and/or water retention features that may be utilized have yet to be determined. Installation of irrigation infrastructure and planting of an appropriate cover crop may be implemented at CRIT 11 in FY08.

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

Pertinent Reports: *‘Ahakhav Tribal Preserve, CRIT 9 Restoration, June 2006; ‘Ahakhav Tribal Preserve Restoration Development Plan, 2006 and ‘Ahakhav Tribal Preserve Annual Report, 2006* will be posted to the LCR MSCP Web site.