

Work Task D2: Southwestern Willow Flycatcher Presence/Absence Surveys

FY05 Estimate	FY05 Actual	Cumulative Accomplishment Through FY05	FY06 Approved Estimate	FY07 Proposed Estimate	FY08 Proposed Estimate	FY09 Proposed Estimate
\$785,000	\$784,594	\$784,594	\$880,000	\$925,000	\$950,000	\$950,000

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Start Date: FY05 **Expected Duration:** FY55

Long-term Goal: System monitoring for southwestern willow flycatcher.

Conservation Measures: AMM1, AMM2, AMM3, AMM5, AMM6, MRM1, MRM2, MRM4, and WIFL2

Location: Reaches 1-7 along the LCR, the Virgin River between the Virgin River Gorge and Lake Mead, NPS lands in the Grand Canyon below Separation Canyon, and Pahranaagat NWR. Life history study sites are located at: (1) Pahranaagat NWR in east-central Nevada; (2) along the Virgin River at Mesquite, Nevada; (3) along the Virgin River, near Mormon Mesa, Nevada; and (4) Topock Marsh, Havasu NWR, Arizona.

Purpose: Monitor SWFL life history along the LCR; and conduct demography studies in four study areas to understand life requisites, habitat characteristics, and population trends.

Connections with other Work Tasks (past and future): This Work Task was previously included in the Draft FY05 Work Tasks as Southwestern Willow Flycatcher Presence/Absence Surveys (D3). Information gathered under this Work Task, C19, D3, and D4 all provide data on SWFL population numbers and demographics along the LCR. Information provided from C1 will be used in connection with this Work Task for future analysis of brown-headed cowbird trapping.

Project Description: Reclamation has been conducting extensive SWFL surveys and studies along the LCR since 1996, in accordance with previous BO. In 2003, Reclamation entered into a five-year contract to conduct presence/absence surveys along the LCR from the Southerly International Boundary to Separation Canyon in the Grand Canyon (excluding Hualapai tribal lands), including the lower Virgin River, lower Bill Williams River, and lower Gila River; and to conduct life history and cowbird control studies at four known population areas.

Previous Activities: The SWFL presence/absence surveys and life history studies have been conducted along the LCR since 1996.

FY05 Accomplishments: Presence/absence surveys were conducted at 101 sites along the Lower Colorado River and its tributaries in 2005. Life history studies were conducted at four sites, including Pahranaagat NWR, Nevada; Mesquite, Nevada; Mormon Mesa, Nevada; and

Topock Marsh, Arizona. Studies included banding, nest monitoring, extensive vegetation analysis, and microclimate analysis. Brown-headed cowbird trapping studies were also continuing at all life history sites.

Willow flycatchers were detected on at least one occasion at 61 sites. Resident, breeding SWFL were detected at 15 sites, none south of Parker Dam. Individuals were banded at the four life history sites and along the LCR below Parker Dam, when possible. In 2004, 104 SWFL adults were identified through color bands. Forty-two were detected again in 2005; 37 adults returned to the same site and five were detected at other sites within the study area. Only 5 percent of the juveniles banded in 2004 were recaptured in 2005.

Nest success was calculated on 81 SWFL nests observed at the four life history study sites. Thirty-six percent were successful. Depredation was the major cause of nest failure, accounting for 64 percent of all failed nests and 73 percent of nests that failed after flycatcher eggs were laid. Brown-headed cowbird brood parasitism was observed in 32 percent of the nests monitored. Trapping occurred at the four life history sites. The proportion of flycatcher nests parasitized during the pre-trapping and post-trapping periods did not statistically decline. Vegetation and microhabitat data were collected from occupied and non-use habitats to further define habitat characteristics.

FY06 Activities: Presence/absence SWFL surveys are being conducted at approximately 100-120 sites, in 15 study areas, along the Virgin River, Pahranaagat NWR, Grand Canyon below Separation Canyon (excluding Hualapai tribal lands), and the LCR to the Southerly International Boundary. Life history studies are being conducted at Pahranaagat NWR, Nevada; Mesquite, Nevada; Mormon Mesa, Nevada; and Topock Marsh, Arizona. Studies include banding, nest monitoring, extensive vegetation analysis, and microclimate analysis. The brown-headed cowbird trapping study is also continuing at all life history sites, except for Mormon Mesa. A road closure made trap placement prohibitive. Change in funding between FY05 and FY06 is specifically related to contract costs.

Proposed FY07 Activities: Conduct presence/absence SWFL surveys along the Virgin River, Pahranaagat NWR, Grand Canyon below Separation Canyon (excluding Hualapai tribal lands), and the LCR to the Southerly International Boundary. Presence/absence surveys will be conducted at approximately 100-120 sites in 15 study areas. Conduct extensive life history studies at Pahranaagat NWR, Nevada; Mesquite, Nevada; Mormon Mesa, Nevada; and Topock Marsh, Arizona. Studies include banding, nest monitoring, extensive vegetation analysis, and microclimate analysis (including temperature and relative humidity within the habitat). Continue the brown-headed cowbird trapping study at life history sites. The current contract extends through 2007. At that time, Reclamation will re-evaluate the level of effort needed for future studies and surveys. Costs will be adjusted accordingly.

Pertinent Reports: *Southwestern Willow Flycatcher Surveys, Demography, and Ecology along the LCR and Tributaries, 2005* posted to LCR MSCP website.