

Work Task D2: Southwestern Willow Flycatcher Presence/Absence Surveys

FY07 Estimates	FY07 Actual	Cumulative Accomplishment Through FY07	FY08 Approved Estimate	FY09 Proposed Estimate	FY10 Proposed Estimate	FY11 Proposed Estimate
\$925,000	\$915,331	\$2,548,430	\$575,000	\$690,000	\$690,000	\$700,000

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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.

Connections with Other Work Tasks (past and future): Information gathered under this work task, D3, and D4 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 the 1997 and 2001 BOs. In 2003, Reclamation entered into a 5-year contract to conduct presence/absence surveys along the LCR from the Southerly International Boundary with Mexico (SIB) 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 conduct life history and cowbird control studies at four known population areas. In 2008, a new 5-year contract was initiated.

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

FY07 Accomplishments: Presence/absence surveys were conducted at 101 sites along the LCR and its tributaries in 2007. 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 continued.

Willow flycatchers were detected on at least one occasion at 73 sites. Resident, breeding SWFLs were detected at 11 sites within the following seven study areas: Pahrnagat NWR, Mesquite, Mormon Mesa, Muddy River, Grand Canyon, Topock Marsh, and Bill Williams. No flycatcher detections were recorded at any sites south of Bill Williams after June 20, 2007.

A total of 53 adult flycatchers were captured in 2007; 30 were new captures, and 23 were banded in previous years and were recaptured at the four life history study areas and at Muddy River, Grand Canyon, and Bill Williams River. A total of 55 nestlings from 25 nests were banded; 11 previously unbanded fledglings were also banded. A total of 77 territories were recorded in these areas with 58 territories consisting of paired flycatchers and 19 consisting of unpaired individuals. Of the 96 adult flycatchers identified to individuals in 2006, 55 (57%) were located in 2007. Of the 64 banded juveniles from 2006, 9 were recaptured and identified in 2007.

Nest success was calculated for 60 SWFL nests observed at the four life history study sites, Muddy River, Grand Canyon, and Bill Williams. Twenty-seven (45%) nests were successful and fledged young, and 33 (55%) failed. Depredation was the major cause of nest failure, accounting for 35% of all failed nests and 45% of nests that failed after flycatcher eggs were laid. Brown-headed cowbird brood parasitism was observed in 10 of 55 nests (18%). Trapping occurred at three life history sites, as access and placement problems excluded Mormon Mesa. The proportion of flycatcher nests parasitized during the pre-trapping and post-trapping periods did not statistically decline at Topock Marsh or Mesquite, but a significant decline was shown at Pahrnagat NWR after 5 years with a zero parasitism rate.

Vegetation and microhabitat data were collected from occupied and non-use habitats to further define habitat characteristics. Comparison of microclimate characteristics tends to show that on average, nests were located in areas that exhibited greater soil moisture and higher relative humidity.

In 2007, a 5-year summary report was drafted for work conducted from 2003 to 2007. Survey and study results were compiled and management recommendations were discussed. The final 5-year summary report will be available in 2008.

FY08 Activities: Presence/absence SWFL surveys will be conducted at approximately 100-120 sites, in 15 study areas, along the Virgin River, Pahrnagat 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 Pahrnagat NWR, Mesquite, Mormon Mesa, and Topock Marsh. Studies include banding, nest monitoring, vegetation analysis, and microclimate analysis. The brown-headed cowbird trapping study has been completed, but post-trapping data will be collected. Reclamation has a new contract that extends through FY12. After discussions with species experts, changes to survey protocol and life history studies have been implemented in this new contract, resulting in a decrease in costs expended during the previous contract period.

Proposed FY09 Activities: Reclamation will continue to 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 SIB utilizing the 5-survey method supported by the USFWS.

Life history data will continue to be collected at four sites, including Pahranaagat NWR, Mesquite, Mormon Mesa, and Topock Marsh. Monitoring activities will concentrate on collecting demographic data including banding and nest monitoring, and habitat data including vegetation and microclimate, but at a reduced level from previous efforts. Existing brown-headed cowbird control will be discontinued and post-trap data will be collected and analyzed.

Pertinent Reports: *Southwestern Willow Flycatcher Surveys, Demography, and Ecology along the LCR and Tributaries, 2007* is posted on the LCR MSCP Web site. *Southwestern Willow Flycatcher Surveys, Demography, and Ecology along the LCR and Tributaries, 2003-2007 5-year Summary Report* is posted on the LCR MSCP Web site.