

Work Task D3: Southwestern Willow Flycatcher Habitat Monitoring

FY08 Estimates	FY08 Actual	Cumulative Accomplishment Through FY08	FY09 Approved Estimate	FY10 Proposed Estimate	FY11 Proposed Estimate	FY12 Proposed Estimate
\$90,000	\$81,286.79	\$387,964.79	\$90,000	\$90,000	\$95,000	\$95,000

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Start Date: FY05

Expected Duration: Five years after implementation of all water transfers covered under the SIA BO. As of FY09, all water transfers have not been implemented.

Long-term Goal: Monitor the effects of reduced flows and the associated reduction in groundwater table, specifically associated with the SIA, on southwestern willow flycatcher breeding habitat between Parker and Imperial dams.

Conservation Measures: MRM1, MRM2 (WIFL)

Location: Reaches 4 and 5, CA and AZ.

Purpose: Continue to monitor SWFL habitat condition 5 years after implementation of all water transfers covered under the SIA.

Connections with Other Work Tasks (past and future): This work task, in conjunction with surveys conducted under D2, will provide information necessary for the Existing Habitat Maintenance (H1). Data collected may also be used in future habitat creation projects listed under Section E.

Project Description: In 2005, Reclamation began monitoring 372 acres of SWFL breeding habitat to document changes in habitat conditions specifically attributable to covered SIA activities, and will continue to do so until 5 years after implementation of all water transfers covered under the SIA.

Previous Activities: In 2001, Reclamation received a BO on the SIA for the change in point of diversion of up to 400,000 acre-feet of water between Imperial and Parker dams. This work is being implemented through the LCR MSCP. Reduced river flows, created by the change in the point of diversion, may affect SWFL breeding habitat located between these two dams.

In 2004, Reclamation identified 372 acres of SWFL habitat between Parker and Imperial dams to monitor for the SIA BO requirements. In each identified site, three to five temperature/humidity data loggers and one groundwater observation well were installed. Soil moisture measurements were collected at each data logger location during each flycatcher survey period. Vegetation data were also collected after the surveys were completed.

FY08 Accomplishments: The previously identified 372 acres of SWFL breeding habitat at 11 sites, along with two control sites, were monitored between Parker and Imperial dams by collecting and analyzing microclimate data, groundwater monitoring, and vegetation monitoring, using similar protocols to those in place for the life history studies. Daily, weekly, and seasonal cycles in groundwater levels were apparent. Water levels drop during afternoon hours when evapotranspiration is high and on weekends when water releases from Parker Dam decline. Seasonal cycle in groundwater levels mirrors the seasonal fluctuations in river flow. Analysis of groundwater data indicates a strong correlation between piezometer water levels and releases from Parker Dam. Data did not show strong correlations between piezometer water level and soil moisture within the habitat monitoring sites. There is data to suggest that river operations, in addition to regional climatic conditions, influence soil moisture.

FY09 Activities: The 372 acres of SWFL breeding habitat between Parker and Imperial dams will be monitored by collecting and analyzing microclimate data, groundwater monitoring, and vegetation monitoring utilizing similar protocols as those in place for the life history studies. Data will be analyzed and results will be provided in the 2009 annual SWFL report.

Proposed FY10 Activities: The 372 acres of SWFL breeding habitat between Parker and Imperial dams will be monitored by collecting and analyzing microclimate data, groundwater monitoring, and vegetation monitoring utilizing similar protocols as those in place for the life history studies. Data will be analyzed and results will be included in an annual report. An evaluation of the complete 5-year database will be conducted.

Pertinent Reports: *Southwestern Willow Flycatcher Surveys, Demography, and Ecology along the LCR and Tributaries, 2008* is posted to the LCR MSCP Web site. *Southwestern Willow Flycatcher Surveys, Demography, and Ecology along the LCR and Tributaries, 2003-2007 5-year Summary* is posted to the LCR MSCP Web site.