Work Task C15: Flannelmouth Sucker Habitat Use, Preference and Recruitment Downstream of Davis Dam

FY06 Estimates	FY06 Actual	Cumulative Accomplishment Through FY06	FY07 Approved Estimate	FY08 Proposed Estimate	FY09 Proposed Estimate	FY10 Proposed Estimate
$80,000	$98,025	$150,025	$80,000	$80,000	$80,000	$80,000

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Start Date: FY05

Expected Duration: FY11

Long-term Goal: Support flannelmouth sucker conservation

Conservation Measures: FLSU2 and FLSU3

Location: Reach 3, AZ/NV/CA

Purpose: Provide funding to support existing flannelmouth sucker (FLSU) conservation and research below Davis Dam, and to develop a management needs strategy for this species.

Connections with Other Work Tasks (past and future): Since FY06, the FLSU work is now being done under C15 and the RASU portion of the work has been included under D8.

Project Description: Conduct FLSU research efforts in Reach 3 below Davis Dam to determine habitat use, habitat preferences, and recruitment and support decisions on habitat management activities for river channel and backwater habitats in Reach 3. This support will be provided for 5 years. Once completed, research results will be used through the adaptive management process to assess main channel and backwater management needs and to develop management strategies to benefit the FLSU.

Previous Activities: Flannelmouth sucker were reintroduced into the Colorado River below Davis Dam by AGFD in 1976 by transfer of fish captured at the confluence of the Colorado and Paria rivers at Lee's Ferry, Arizona. This stock has persisted for three decades and now represents the only known population of this native species in the Colorado River downstream of Grand Canyon.

Spring field sampling was conducted in FY05; this work was combined with monitoring activities for RASU. Field work was led by Reclamation staff from the Denver Technical Service Center with support from the Lower Colorado Regional Office. Thirty-three nights of trammel netting yielded a total of 12,119 fish, including 124 FLSU. Specially designed low-profile fyke nets were tested in swift water habitats to increase FLSU captures. However, the FLSU spawning

season had passed by the time these tests were conducted. Results of this work are included in a report covering a 3-year period from 2003-2005, which is posted to the LCR MSCP Web site.

FY06 Accomplishments: Seven sampling trips were conducted from December 2005 through April 2006. Sampling consisted of trammel netting, fyke netting, seining, larval light trapping, and electrofishing. All life stages of FLSU were contacted: 6 larvae, 4 juveniles, and 350 adults. Electrofishing proved to be the most effective method for sampling adults in the main channel (263 fish). A population estimate of 2,437 adults was calculated based on trammel net and electrofishing contacts. Fyke netting proved ineffective, capturing only one adult, and will be discontinued for the remainder of the project. A synopsis of the fyke netting results will be included in the FY06 annual report.

Due to extreme water clarity in this reach of the Colorado River, Reclamation staff assessed both aerial photography and visual float counts as tools to help monitor population trends for FLSU adults. For the aerial photography work, still and video imagery were taken from the helicopter with digital camera equipment. Results from this effort were mixed, but generally poor due to problems with wind and glare. Making visual counts from boats floating along in the current was much more successful. A population estimate of 1,440 adult FLSU was attained from the float counts, and this number fell within the 95% confidence limits of the mark/recapture estimates from the trammel netting and electrofishing contacts.

Fifteen adult male flannelmouth were surgically implanted with 14-month sonic tags. These fish were followed throughout the sampling season and on a monthly basis the remainder of the year. Eleven fish were contacted on a regular basis throughout the year and provided information on movement and habitat use; this information also was useful in locating other congregations. All telemetry locations were representative of channel, near-shore, and eddy pool habitats. No tagged fish were encountered in backwaters or side channel habitats.

FY07 Activities: Continuation of sampling is planned, using larval traps, electrofishing, and trammel netting with smaller meshed nets to increase contacts with juvenile life stages. Beach seining and backpack electro-shocking will be incorporated to further assess numbers and distribution of juvenile life stages. Telemetry work will be continued using 36-month internal sonic tags. Sampling trips will be conducted throughout the year to provide more data on seasonality of habitat use. We will also begin modeling population structure and distribution to determine habitat preferences and needs, which will be incorporated into the baseline mapping of the physical habitat. Aerial photography/video work will be discontinued and a synopsis of findings will be included in the FY07 annual report.

Proposed FY08 Activities: Monitoring and research actions from FY07 will be continued, and model criteria will be developed and modified as data are compiled and analyzed. Stomach content analysis and macroinvertebrate sampling from known habitats where FLSU have been observed over the course of the study will be incorporated throughout the year.

Pertinent Reports: A draft annual report for FY06 is current under review and will be posted on Web site when available.