

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

FY11 Estimate	FY11 Actual Obligations	Cumulative Expenditures Through FY11	FY12 Approved Estimate	FY13 Proposed Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate
\$25,000	\$23,239.78	\$495,740.45	\$0	\$0	\$0	\$0

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**Start Date:** FY05

**Expected Duration:** FY11

**Long-term Goal:** Support flannelmouth sucker (FLSU) conservation

**Conservation Measures:** FLSU2 and FLSU3

**Location:** Reach 3, Arizona/Nevada/California

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

**Connections with Other Work Tasks (past and future):** Work conducted under this task is related to C29, C31, C53 and D8 as all FLSU and RASU captured provided tissues for aging and for genetic analyses, and the capture data are covered in the System Monitoring program. This work was the precursor to the C53 work task.

**Project Description:** 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 Davis Dam.

Under conservation measures FLSU2 and FLSU3, the LCR MSCP is conducting research in Reach 3 below Davis Dam to determine habitat use, habitat preferences, and recruitment, and to support decisions on habitat management activities for river channel and backwater habitats. Studies will continue through FY11. 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:** Spring field sampling was conducted in FY05; this work was combined with monitoring activities for RASU. Results of this work are included in a report covering a three-year period from 2003 to 2005, which is posted to the LCR MSCP website. Field sampling in FY06 resulted in the contacting of all life stages of FLSU. This produced a population

estimate of 2,437 adults. Fifteen adult male FLSU were surgically implanted with 14-month sonic tags. These fish were tracked throughout the year and were instrumental in locating additional spawning sites, as well as providing data on dispersal and habitat use.

Field sampling in FY07 focused primarily on FLSU spawning aggregations and the young fish that resulted. We captured a total of 104 adults, which generated a population estimate of 2,471 adult FLSU, similar to the 2006 estimate. Additionally, seven juveniles and 19 larvae were collected. Numerous schools of juvenile fish (25-60 mm) were visually identified; these fish numbered in the hundreds. An additional 20 adult FLSU were surgically implanted with 36-month sonic tags; 10 were females and 10 were males. One hundred and twenty-seven detections from manual tracking added additional information to our habitat use database. In FY08, telemetry work continued with tracking of about 15 active transmitters. Twenty-eight adult flannelmouth suckers were fin clipped for aging purposes and averaged 15 years of age (range 7-26). The telemetry work continued with tracking of about seven active transmitters in FY09. An additional 122 fin clips were taken from adult flannelmouth for aging and these sampled fish averaged 14 years old (range 2-24).

We also conducted sampling for all life stages of FLSU with an emphasis on early life stages. These sampling trips focused on the downstream distribution, locations, and habitats used by aggregations of young-of-year FLSU. Sampling methods consisted of small mesh trammel nets, boat electrofishing, beach seining, larval lights, and dip nets. This effort resulted in the capture of 123 adults, two juveniles (148 mm and 200 mm), and hundreds of young-of-year (14-62 mm). More than a dozen rearing areas for larvae and early juveniles were located in backwaters and slack water habitats from river mile 272 (near Laughlin) to river mile 251 (near Needles).

Habitat mapping was completed from Davis Dam to the California state line; this base map will be used to show relative distribution of various life stages throughout this reach. FY10 was the final field year, and we conducted sampling for all life stages of FLSU. Collection efforts utilizing seines for YOY relative abundance were extended from river mile 251 to river mile 232 in Topock Gorge, with collection of YOY found as far South as Mohave Wash (RM 232). Two juvenile flannelmouth suckers (166 and 285 mm) were collected in trammel nets at the Big Bend boat ramp. These juveniles represent the eighth and ninth juveniles collected since 2006. We collected 228 adults with trammel nets and boat electrofishing. The population at this time is estimated to be at 1,476 adults. Telemetry work continued on a limited basis consisting mostly of submersible ultrasonic receiver detections for the few fish that still had active tags.

**FY11 Accomplishments:** A final report assimilating the data for the five-year study was prepared, along with a management needs strategy that assesses main channel and backwater habitats for the benefit of FLSU.

**FY12 Activities:** Closed in FY11.

**Proposed FY13 Activities:** Closed in FY11.

**Pertinent Reports:** Annual reports titled, *Investigations of Flannelmouth Sucker Habitat Use, Preference and Recruitment Downstream of Davis Dam*, for 2007, 2008, and 2009, along with the 2006-2010 final report, are available on the LCR MSCP website.