

**Quarterly Progress Report**  
**July 1 – September 30, 2006**  
**BOR Agreement 1425-05-FG-10-1188**

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Bureau of Reclamation implemented Ecologically Based System Operations (EBSM) on the South Fork Snake River during winter 2003-2004. To evaluate these innovative flow operations, IDFG began biological monitoring of Yellowstone cutthroat trout during the same time period. This quarterly progress report summarizes activities conducted during the third quarter of 2006, which is the fourth quarter of this grant agreement. The agreement was modified to provide additional funding through September 2007.

The 2003 and 2004 annual progress reports were finalized and copies were sent to BOR. The 2005 annual report was also completed and is currently being reviewed by IDFG staff. Data from 2006 are being entered and analyzed. In addition, a manuscript describing the effects of hydrologic regime and its alteration on trout populations in the South Fork was prepared and submitted to a peer-reviewed fisheries journal by Dr. Rob Van Kirk and Sarra Moller, Idaho State University, and myself.

Annual population monitoring using electrofishing was completed at the Lorenzo section (lower South Fork below Heise) in September and at the Conant section (upper South Fork) in October. Preliminary analyses indicate minor improvements in cutthroat trout abundance at both sections. Unfortunately, there was also an increase in rainbow trout abundance in the upper river. A very large year class of brown trout, produced in 2005, was observed. These electrofishing data will provide the cutthroat and rainbow trout recruitment estimates needed to evaluate the 2005 freshet and will be reported next quarter. Additional assistance was provided for lower Teton River electrofishing, where cutthroat trout numbers were also improved.

The Palisades Canal screen bypass trap was operated May 2 to July 29. The bypass trap is used to estimate the Palisades Creek weir efficiency by sampling post-spawning cutthroat trout returning downstream and calculating the proportion of marked fish. All cutthroat trout captured at and released above the weir are marked. Unmarked fish returning downstream are assumed to have beaten the weir. Unfortunately, the estimated weir efficiency was 13%, which means 87% of the fish run was missed. A total of 117 cutthroat trout – 15 which were marked and 102 which were unmarked – and 18 unmarked rainbow trout were trapped. This is in contrast to 90% efficiency last year – or 10% of the run missed – based on 800 cutthroat and 82 rainbow trout trapped. For the bypass trap, fish over 249 mm are considered post-spawners returning down Palisades Creek.

Because of damage caused by high runoff this year, all the fish weirs will require significant repairs. That work is ongoing. Rotary-drum fish screens continued to be operated and maintained in two major cutthroat trout spawning tributaries, Palisades and Burns creeks. They will be shut down in November.