

Quarterly Progress Report

April 1 – June 30, 2005

BOR Agreement 1425-03-FC-10-9910

Bill Schrader, Idaho Department of Fish and Game (IDFG)
June 30, 2005

Bureau of Reclamation implemented Ecologically Based System Operations (EBSM) on the South Fork Snake River during winter 2003-2004. IDFG began biological monitoring of Yellowstone cutthroat trout during the same time period. The 2004 data have been entered and analyzed, and the first draft of the 2004 annual progress report is in preparation. This quarterly progress report summarizes activities conducted during the second quarter of 2005.

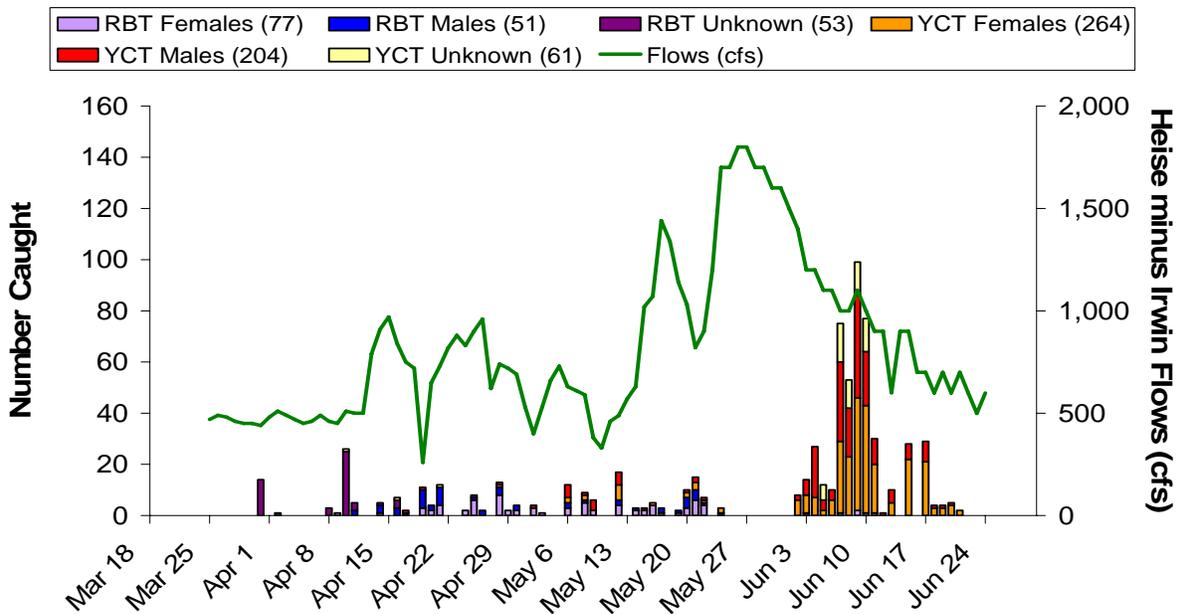
An estimated 5,000 rainbow trout were harvested in 2003 compared to 1,000 in 1996. It is likely that significantly more rainbow trout will be harvested in 2005 with our continued information and education campaign and the major regulation changes that began in 2004. During this quarter, 35 flights were completed and 1,112 anglers were interviewed for the 2005 creel survey. In addition, nine sites were electrofished in May to provide an estimate of pre-season total stock abundance. Estimates of rainbow trout harvest and exploitation will be calculated after these and future data are entered and analyzed.

Fish weirs were operated in three major spawning tributaries this spring. Weirs have been operated on Palisades, Rainey, Pine, and Burns creeks since 2001 to separate spawning cutthroat trout – which are allowed to pass – from spawning rainbow trout – which are removed. Ideally, this will provide genetic preserves for a large portion of the South Fork cutthroat trout population by excluding rainbow trout. The new Palisades Creek weir (floating Mitsubishi) was operated March 18 to June 30. A total of 301 rainbow trout were removed and 1,071 cutthroat trout were passed. This was double the 2003 catch (Figure 1). The Pine Creek weir (hard picket) was operated April 6 to June 30. A total of 40 rainbow trout were removed and 2,817 cutthroat trout were passed. This was almost ten times the 2003 catch (Figure 2). The new Rainey Creek weir (hard picket) was operated from April 7 to June 29. No rainbow trout were caught but 25 cutthroat trout were passed. This was over ten times the 2001 catch. Despite higher than average flows this spring, improved catches at all the weirs are probably due to improved weir panel designs. The Burns Creek weir was not operated this year. The Palisades Canal screen bypass trap has been operating since March 30 and will continue through July. The bypass trap samples post-spawners returning downstream, and the proportion of marked to unmarked fish will estimate the weir efficiency. All cutthroat trout trapped at the Palisades weir moving upstream were marked with an upper caudal fin punch.

In April and May - and like last year - radio telemetry transmitters (or tags) were planted in 20 rainbow trout redds selected at random in the upper South Fork above the Swan Valley bridge (Figure 3). Three orange-painted rocks were also placed around each redd to help in later identification. The purpose of the radio tags is to evaluate redd scouring from the 2005 spring freshet (15,000 cfs on June 15). Redds will be inspected, tags will be retrieved, and gravel movement will be evaluated as flows recede this fall.

Population modeling with Dr. Rob Van Kirk (Idaho State University) and Dr. Mary Conner (Utah State University) has continued at a slow pace due to summer schedules. The purpose of the modeling will be to assess the effects of various management scenarios (angler harvest, tributary management, and flow manipulation) on the likelihood of long-term cutthroat trout persistence in the South Fork. To date, informal meetings have been conducted and a modeling blueprint has been mapped. South Fork cutthroat and rainbow trout fecundity, sexual maturity, age and growth, and spawn timing data has been compiled and sent to Rob for review.

**Palisades Creek Floating Weir -
March 24 to June 24, 2003 (n = 710)**



**Palisades Creek Mitsubishi Weir -
March 18 to June 30, 2005 (n = 1,372)**

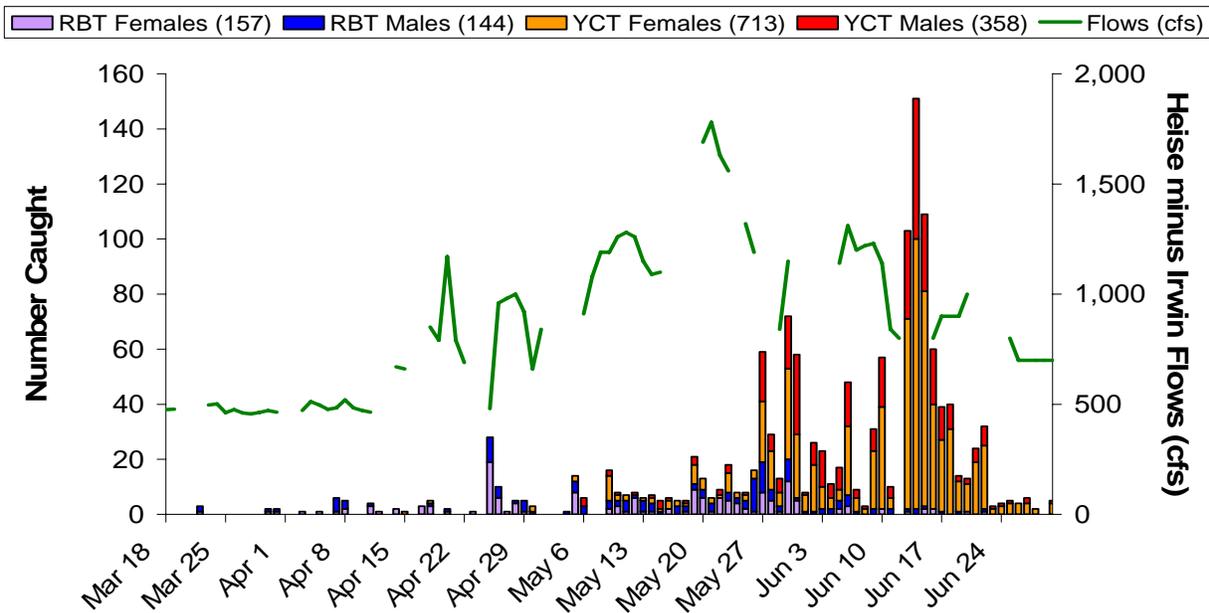
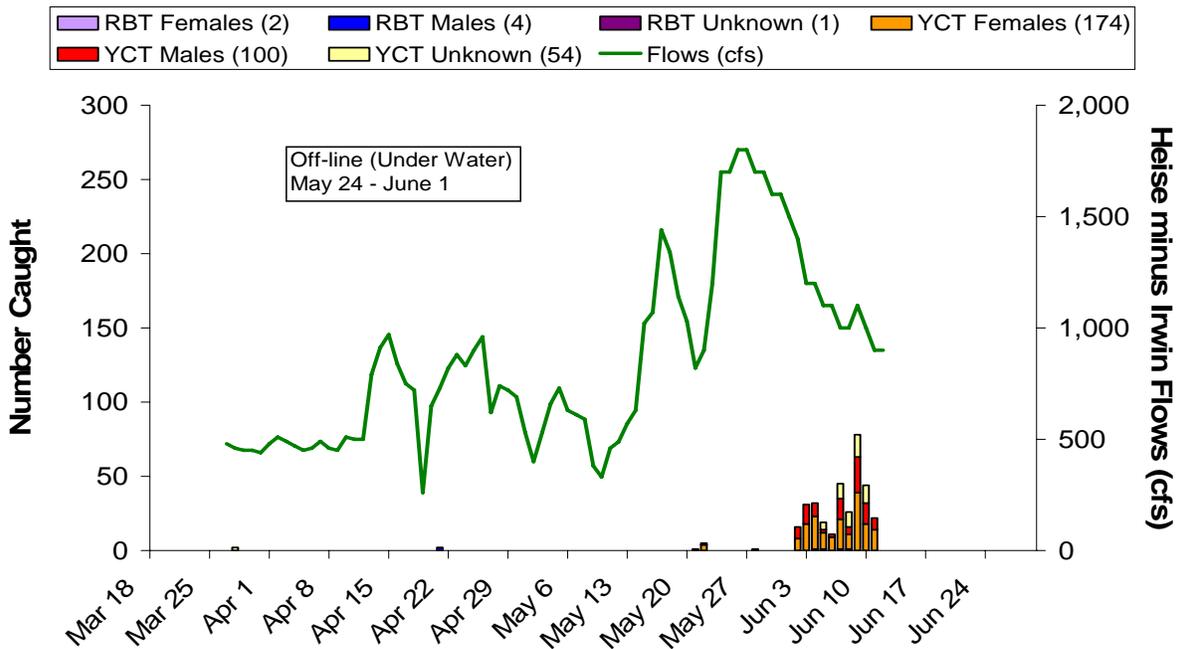


Figure 1. Number of rainbow and cutthroat trout caught at the Palisades Creek weir, South Fork Snake River, Idaho, 2003 versus 2005. Green line is approximate combined flow for all tributaries between Heise and Irwin.

Pine Creek Floating Weir - March 27 to June 12, 2003 (n = 335)



Pine Creek Picket Weir - April 6 to June 30, 2005 (n = 2,857)

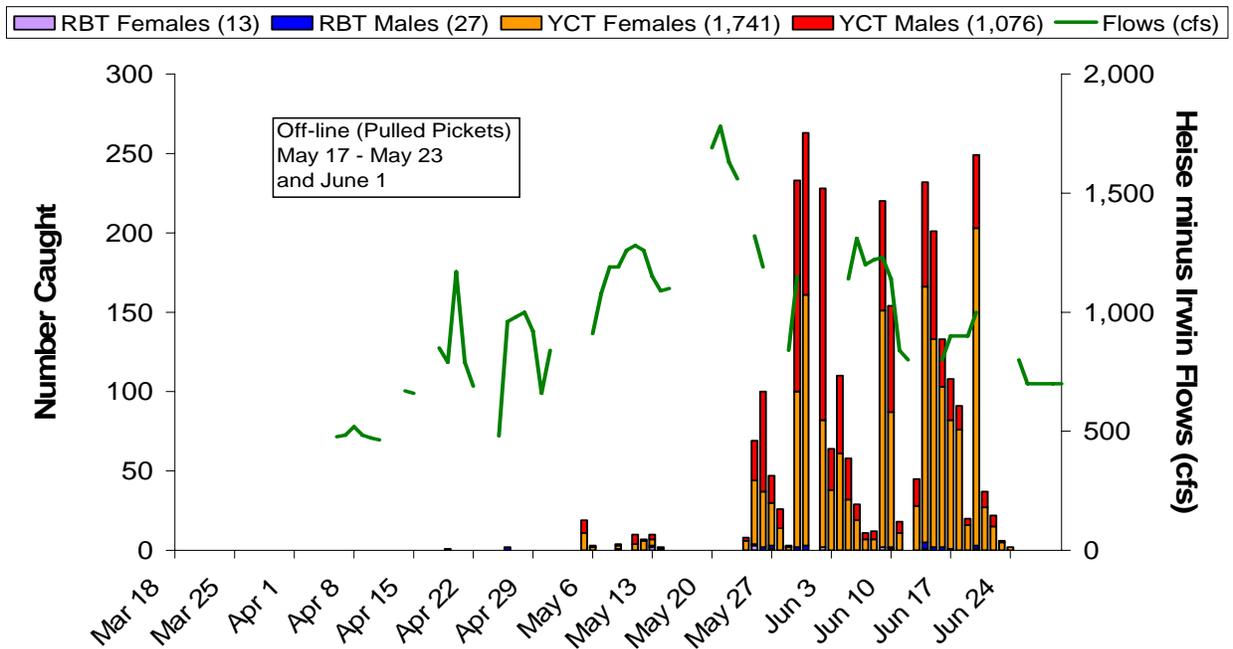


Figure 2. Number of rainbow and cutthroat trout caught at the Pine Creek weir, South Fork Snake River, Idaho, 2003 versus 2005. Green line is approximate combined flow for all tributaries between Heise and Irwin.

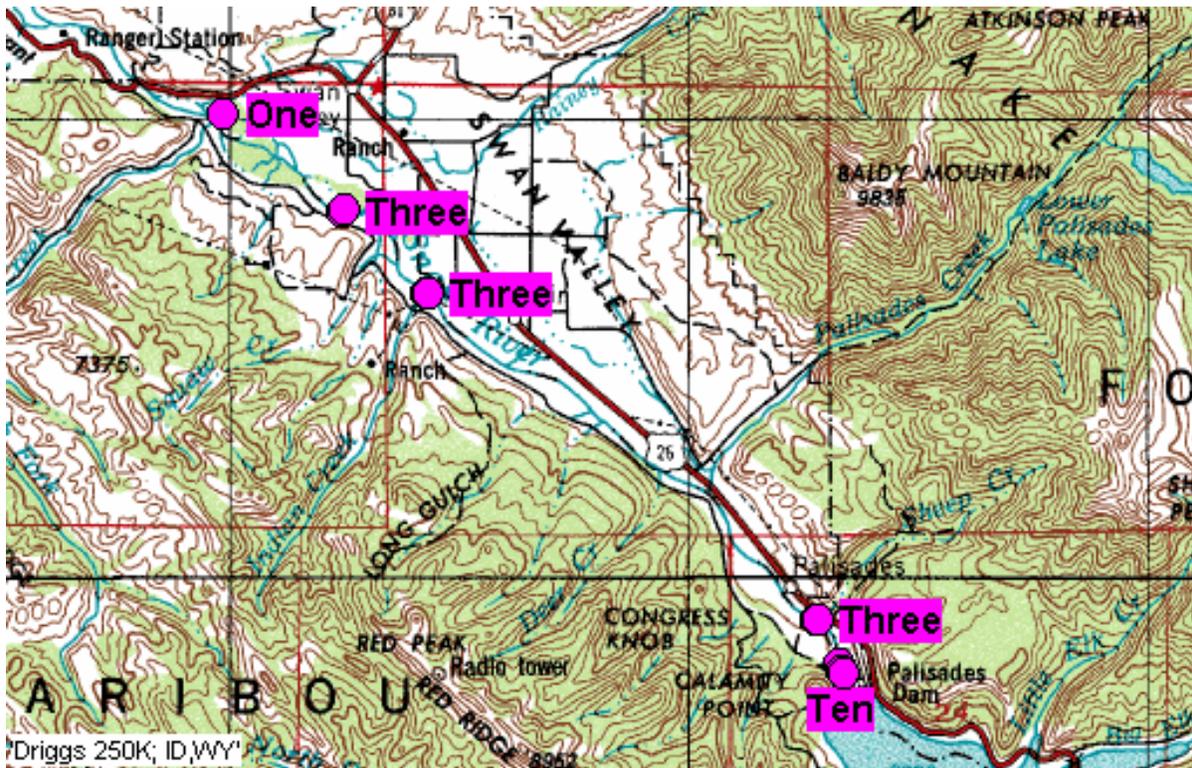
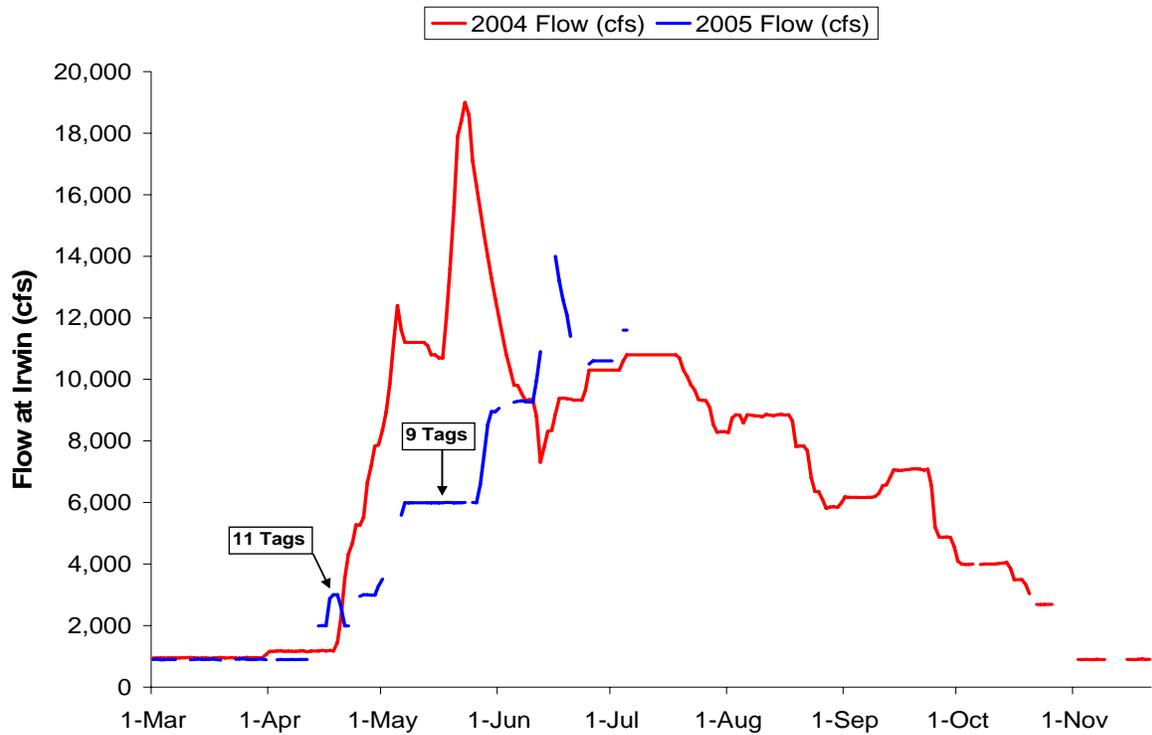


Figure 3. Timing and location of radio tags planted in 20 rainbow trout redds, upper South Fork Snake River, Idaho, 2005. Peak flows were 19,000 cfs on May 23, 2004, and 15,000 cfs on June 15, 2005.