

Draft Work Plans for Research and Monitoring 2002-2006

Projects:

1. Feasibility Study to determine the efficacy of using a weir in Bright Angel Creek to capture brown trout.
2. Mechanical removal of salmonids
3. Experimental flows to disadvantage salmonids
4. Evaluation of catfish and carp removal methods in Little Colorado River.
5. Monitoring fish parasites and diseases, CRE

Project 1: Feasibility Study to determine the efficacy of using a weir in Bright Angel Creek to capture brown trout.

Objective: Evaluate the use of a temporary weir in Bright Angel Creek to remove non-native salmonids from the Colorado River Ecosystem during 2002 and 2003.

Location: Bright Angel Creek

Project Leaders: Dr. Jeffrey Cross
Grand Canyon National Park
Bill Leibfried and Helene Johnstone, SWCA Environmental Consultants

Period: November 2002 – February 2003

Performance Measures:

1. Evaluate the use of a temporary weir in Bright Angel Creek to remove non-native salmonids.
2. Remove brown trout (*Salmo trutta*) from the Creek.
3. Examine size, stage of sexual condition and diet of brown trout.
4. Examine all brown trout and native fish for presence of PIT tags.
5. Mark and release all rainbow trout (*Oncorhynchus mykiss*)
6. Prepare an annual progress report and final report.

Budget:

FY 2002-2003:	\$30,000 BOR, Contract with SWCA.
FY 2003-2006	\$562,000, National Park Service for implementation if feasible and after NEPA compliance

This project should move to the management phase (rather than evaluation) after NEPA compliance in 2003 and may include removal of all exotic species and evaluation of removal at Clear Creek and Tapeats Creek. Project may also expand to include collection and tagging of native fishes during the spring (primarily flannelmouth and bluehead suckers).

Project 2: Mechanical removal of non-native fishes (primarily salmonids) from the Colorado River near the confluence with the Little Colorado River.

Objective: Evaluate mechanical removal of non-native fishes.

Location: Colorado River near confluence of Little Colorado River (River Mile 56.2 – 65.7)

Project Leader: Dr. Steven P. Gloss
Grand Canyon Monitoring and Research Center

Period: 2002 - 2006

Performance Measures:

1. Evaluate effectiveness of mechanical removal of rainbow and brown trout by electrofishing.
2. Evaluate impact of mechanical removal on humpback chub recruitment.
3. Prepare an annual progress report and final report.

Budget:

FY 2002-2003 GCMRC Est. \$600,000-650,000 / year

Project 3: Fluctuating Flows to Disadvantage non-native fishes.

Objective: Evaluate effect of experimental flow regime on non-native salmonids recruitment.

Location: Colorado River from Glen Canyon Dam to Diamond Creek

Project Leader: Dr. Steven P. Gloss
Grand Canyon Monitoring and Research Center

Period: Experimental flows are proposed for 2003 and 2004 with ROD flows during 2005-2006 to act as experimental controls

Performance Measures:

1. Evaluate effectiveness of proposed experimental flow regime to reduce salmonids recruitment.
 - a. Full experimental design has been outlined by GCMRC in their Experimental Flow Plan (GCMRC 2002).
2. Prepare annual progress report and final report.

Budget: \$650,000/year? GCMRC- Appropriated funds to support experimental flows.

Project 4: Evaluation of catfish and carp removal methods in Little Colorado River.

Objective: Continue to evaluate new gear and methods to capture and monitor channel catfish and carp in the Little Colorado River as part of routine monitoring activities.

Location: Little Colorado River near confluence with Colorado River

Project Leaders: Arizona Game and Fish Department, U.S. Fish and Wildlife Service, other Cooperators

Period: 2002 - 2006

Performance Measures:

1. Continue to evaluate effectiveness of and test large mesh hoop nets, angling methods, and other methods to capture channel catfish and carp during routine monitoring activities.
2. Collect diet information from all exotic fishes captured in the LCR.
3. Prepare annual progress report and final report.

Budget:

FY 2002-2003 \$10-20,000 ? (BOR, AGFD)

We are seeking outside funding to support this work (BOR, CUP, AGFD-SWG)

Project 5: Monitoring fish parasites and diseases, CRE

Objective: Monitor fish parasites and diseases in the Colorado River ecosystem. Inventory parasites and diseases present in the mainstem Colorado River and larger tributaries. Examine distribution and abundance of parasites and diseases in relation to water temperature and river location.

Location: Mainstem Colorado River from Glen Canyon Dam to Lake Mead, Little Colorado River near confluence with Colorado River, other tributaries where fish can be collected.

Project Leaders: National Wildlife Health Center, Arizona Game and Fish Department, other cooperators

Period: 2002 - 2006

Performance Measures:

1. Inventory and monitor fish parasites and diseases during 2004. This will require one river trip of approximately 15 days.
2. Collect parasite and disease information from all exotic and native fish species.
3. Prepare annual progress report and final report.

Budget:

FY 2003-2004 \$100,000-150,000 ? (BOR, AGFD)