

## MANAGING FOR THE BLUE RIBBON RAINBOW TROUT FISHERY AT LEES FERRY

The recreationally-important blue-ribbon rainbow trout fishery at Lees Ferry is a key resource of the Colorado River in Glen Canyon. The tailwater portion of the Colorado River from Glen Canyon Dam to the Paria River was created by the impoundment of Lake Powell in 1964. With ideal conditions for trout (constant, cold, clear flowing river), Arizona Game & Fish Department (AGFD) stocked rainbow trout in the reach and began managing this section as a blue ribbon trout fishery. The fishery has contained a self-sustaining and naturally reproducing rainbow trout population since the mid 1990's. As a management priority to maintain this blue ribbon fishery, AGFD began a long-term monitoring program in 2000, to monitor the health of the rainbow trout and provide information on the influence of Glen Canyon Dam operations, management actions, and natural disturbances on the fishery.



Additionally, the Research Branch of Arizona Game & Fish currently conducts year-round Lees Ferry angler (creel) surveys. These surveys provide information on angler effort, angler harvest, and satisfaction of the recreational fishery, as well as how changes to the Colorado River ecosystem affect angler use.

### OBJECTIVES

Obtain a representative sample of fish within the reach, and a representation of anglers using the fishery.

### APPROACH

- Conduct electrofishing surveys three times a year (spring, summer, fall) to monitor rainbow trout population, using two- 16 foot inflatable boats with a crew of three on each boat.
- Sample 36 sites, using a stratified random design, over three nights in three sections of river.
- Perform angler (creel) surveys to monitor fishing metrics, such as impact of recreational fishing on the fishery (harvest of fish, catch rates), angler use (economic impact), and angler satisfaction.

### UPDATE AND PRELIMINARY RESULTS

Fishing conditions at Lees Ferry are generally good. While angler catch rates in the past few years are the highest recorded since we have been collecting data (1991-2013), the results of our electrofishing surveys reveal a long term decreasing trend in average size of rainbow trout. However, average length of rainbow trout has been increasing in the last four years (2010 – 2013). Anglers seem to be satisfied catching more smaller trout (10- 16" fish) as opposed to few larger trout (2- 20" fish).

Figure 1. Average total length of rainbow trout captured in the fall from 1991 – 2013 for the Lees Ferry reach of the Colorado River.

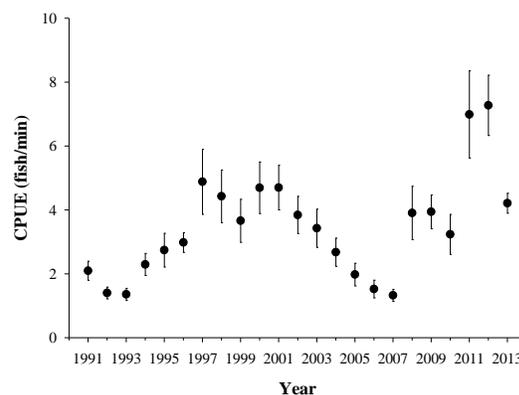


Figure 2. Average catch per unit effort (fish/min) for electrofishing rainbow trout from 1991 – 2013 for the Lees Ferry reach of the Colorado River.

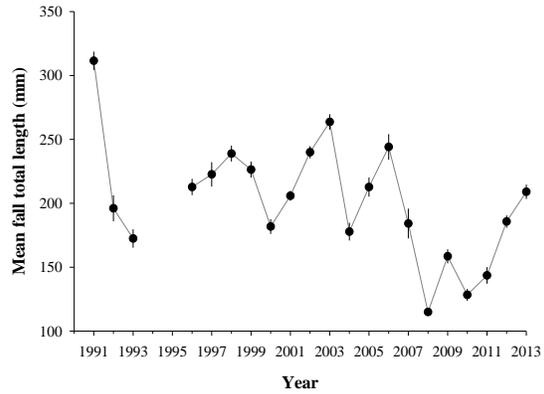
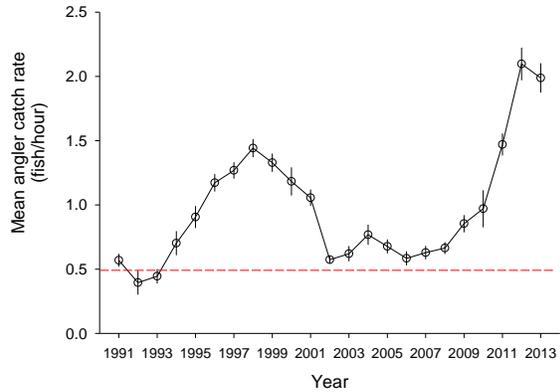


Figure 3. Average rainbow trout catch per unit effort (fish/hour) of anglers at the boat launch from 1991 – 2013 for the Lees Ferry reach of the Colorado River. The red line indicates the trigger point (0.5 fish/hour) for potential restocking of rainbow trout.



**PROJECT CONTACTS**

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**MORE INFORMATION**

Arizona Game & Fish: Wildlife Views

- Fishing Lees Ferry <https://www.youtube.com/watch?v=bhhqPKeUq9A>
- Tight Lines at Lees Ferry (link to article)

Arizona Game & Fish: Sport Fish

- Rainbow Trout [http://www.azgfd.gov/h\\_f/fish\\_rainbow\\_trout.shtml](http://www.azgfd.gov/h_f/fish_rainbow_trout.shtml)
- Brown Trout [http://www.azgfd.gov/h\\_f/fish\\_brown\\_trout.shtml](http://www.azgfd.gov/h_f/fish_brown_trout.shtml)

Collaborators:

- Grand Canyon Monitoring and Research Center (USGS) <http://www.gcmrc.gov/>
- US Fish and Wildlife Service <http://www.fws.gov/southwest/fisheries/azfwco/index.html>
- National Park Service <http://www.nps.gov/grca/naturescience/fish.htm>
- Glen Canyon Dam Adaptive Management Program <http://www.gcdamp.gov/>