



January 5, 2018

Kirk LaGory, Expanded Non-native Aquatic Species Management Plan
Argonne National Laboratory
9700 S. Cass Ave. – EVS/240
Argonne, IL 60439

RE: Environmental Assessment for an Expanded Non-native Aquatic Species Management Plan

Dear Mr. LaGory:

We are writing to provide comments on the National Park Service's (NPS) Environmental Assessment (EA) for an Expanded Non-native Aquatic Species Management Plan in Grand Canyon National Park and Glen Canyon National Recreation Area below Glen Canyon Dam. Since 1964, with the completion of the Glen Canyon Dam, the Lees Ferry tailwater has hosted a recreational trout fishery that has grown in importance and reputation locally, regionally, nationally, and internationally. Anglers from around the world travel to Lees Ferry to fish for high quality rainbow trout in the large, clear, swift-flowing Colorado River as it winds its way through the lower, scenic segment of Glen Canyon. This blue ribbon recreational sport fishery has also become a financial and economic mainstay for the small community of Marble Canyon and Coconino County, supporting fishing guide services, hotels, restaurants, fishing and outdoor recreation equipment and supplies, and visitor services.

Our comments are aimed at maintaining and enhancing a blue-ribbon rainbow trout fishery at Lees Ferry that does not adversely affect the native aquatic community in Grand Canyon National Park.

1. In September 2017, based on a unanimous recommendation from the Glen Canyon Dam Adaptive Management Work Group, the NPS, the US Geological Survey, and the Arizona Game and Fish Department (AZGFD) conducted a Brown Trout Workshop specifically to inform the scope and direction of brown trout control and management in the Colorado River below Glen Canyon Dam. The final workshop report has been delayed until January 2018 and is not available to help inform our comments on the appropriate scope of the EA. As such, scoping comments on the EA should be extended until the workshop report is finalized and available to stakeholders and the public for review.
2. A central element of the NPS's Proposed Action includes "long-term intensive and repeated electrofishing and trapping of all age-classes of harmful non-natives, and site-specific use in the Glen Canyon reach to target brown trout.....". This action would have a significant adverse

impact on the quality of the Lee Ferry trout fishery, the welfare of the local community, and the regional economic benefits tied to the fishery. This action is unacceptable for the following reasons:

- a. While electrofishing has been effective for managing trout in small streams like Bright Angel Creek, there is no evidence that it will be effective for controlling brown trout in the mainstem of the Colorado River. Intense, repeated and long term mainstem electrofishing throughout the Colorado River basin has been largely ineffective at managing or controlling nonnative fish (Mueller, 2005; Zelasko, et al. 2016).
- b. Many more rainbow trout would be shocked for each brown trout captured. The focus of mechanical removal would be on shoreline areas that are also prime fishing areas. In addition to direct rainbow trout mortality, there is ample scientific literature showing that the behavior of salmonids that are subjected to electrofishing is negatively affected which would impact angler catch rates and satisfaction (Fredricks, et al 2012, Mesa and Schreck, 1989; Snyder, 2003).
- c. The collateral damage to the Lees Ferry rainbow trout fishery from mechanical removal and the negative public perception it creates will significantly harm an already distressed economic community that has been impacted by dam operations. The cumulative effects of long term, intensive mechanical removal along with NPS/Bureau of Reclamation (BOR) opposition to actions that would benefit the trout fishery (e.g. stocking and spring high flow experiments) will significantly damage visitor use and have deleterious socioeconomic and environmental justice effects on the local community.
- d. Native American tribes have long objected to mechanical removal efforts below Glen Canyon Dam as an affront to their religious and spiritual beliefs. As such, it is inappropriate for the NPS to propose mechanical removal as a primary strategy for managing brown trout.
- e. The cost for implementing long term intensive and repeated electrofishing would be very high and put a major drain on Department of Interior (DOI) agencies budgets which could be used to address other priorities.
- f. In 2017, the Secretary of the Interior issued Secretary Orders 3347 and 3356 with the purpose of advancing conservation stewardship and increasing outdoor recreation opportunities, including hunting and fishing, and improving the management of game species and their habitat. Long-term intensive and repeated electrofishing and trapping will negatively impact catch rates and potential population abundance of the rainbow trout fishery and violate the spirit and intent of the Secretary's Orders.
- g. As a public trust fishery on a navigable water in the State of Arizona and further protected through the Colorado River Storage Project Act and the Fish and Wildlife Coordination Act, any potential negative impact to the rainbow trout fishery caused by long-term intensive and repeated electrofishing and trapping must be mitigated as part of the proposed action. Failure to address and mitigate these impacts creates a substantial liability to the National Park Service. Compensation would be needed for the economic impacts and lost opportunities, even over a small amount of time.

We believe that an Environmental Impact Statement (not just an EA) will be needed to fully evaluate the impacts of long term intensive mechanical removal in Glen Canyon.

3. Rather than pursuing an unacceptable intensive mechanical removal effort, we recommend that the NPS pursue other more cost-effective and less damaging strategies such as a brown trout bounty program or making changes in Glen Canyon dam operations to disadvantage brown trout spawning or recruitment.
4. The actions outlined in the EA along with actions included in the Long Term Experimental Management Plan (LTEMP) and Comprehensive Fisheries Management Plan (CFMP) will not achieve the Purpose and Need for the Project. A goal of the EA is “to allow the NPS to prevent, control, minimize or eradicate potentially harmful non-native aquatic species, or the risk associated with their presence or expansion, in the action area.” This goal can only be accomplished by working with BOR to address the most likely root causes of the recent increases in the brown trout numbers in Glen Canyon e.g., rising warmer water temperature, sequential fall HFE’s. Actions to address the root causes, which are not addressed in the EA, may include shifting the emphasis of high flow experiments from the fall to the spring, implementing a temperature control device to regulate the temperature of water releases from Glen Canyon Dam, and/or testing the use of “trout management flows” to reduce brown trout spawning and/or recruitment. To address these actions NPS and BOR should work together as co-leads for this EA (as they did on the LTEMP EIS).
5. We do not believe it is appropriate to introduce the endangered Colorado pikeminnow (CPM) or humpback chub (HBC) into the upper slough at river mile -12 as a means for controlling warm water nonnative fishes (e.g., green sunfish). In general, due to the cold water immediately below in Glen Canyon Dam, Glen Canyon is unsuitable habitat for recovery of CPM or HBC. Assurance would need to be provided that the introduction of HBC or CPM which may escape from the slough into Glen Canyon would not interfere with recreational fishing. We are also concerned that the introduction of HBC or CPM could limit the implementation of other nonnative action that would result in “take” of HBC or CPM (e.g., chemical treatment of the slough).
6. The Arizona Game and Fish Department (AZGFD) is the management agency with primary statutory responsibility for resident fish and wildlife in the State of Arizona. AZGFD’s authorities includes jurisdiction over fish, both native and non-native, residing in the Colorado River below Glen Canyon Dam. In September 2015, AZGFD approved its *Fisheries Management Plan, Colorado River-Lees Ferry 2015-2025* (Plan). The goal of the Plan, which we fully support, is to maintain and enhance a blue ribbon rainbow trout fishery at Lees Ferry that does not adversely affect the native aquatic community in Grand Canyon National Park. The EA should clearly state that any proposed actions will only be carried out in coordination with and upon concurrence from the AZGFD.

In summary, the NPS proposed long term intensive mechanical removal action threatens rather than advances the goals of the NPS CFMP and the AZGFD Plan which is to manage a “for a quality recreational rainbow trout fishery within Glen Canyon National Recreation Area (NPS 2013 and AZFGD 2015).” Brown trout are not new to the Grand Canyon Nation Park. They were stocked by NPS in 1923 and their

numbers have fluctuated over recent years in areas where juvenile and vulnerable endangered species live. It is worth noting that the increase in juvenile brown trout in Glen Canyon that were observed on 2015 and 2016 has slowed in 2017.

We look forward to your response to our comments. We also would welcome the opportunity to work with NPS to develop an alternative that will effectively manage brown trout and other nonnatives while maintaining a quality Lee Ferry recreational fishery.

Lees Ferry anglers, guides, and businesses are fully united in their support of these comments on the scope of the EA (see attached).

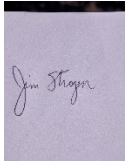
Thank you.

Trout Unlimited and Fly Fishers International
Glen Canyon Dam Adaptive Management Program Recreational Fishing Representatives



John Jordan

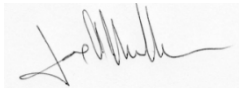
John Hamill



Jim Strogon



Bill Persons



Joe Miller

Attachment 1. Supporting comment letter.

cc Acting Secretary's Designee, GCD AMP
 Superintendent, Grand Canyon National Park

Superintendent, Glen Canyon National Recreation Area
Regional Director, Upper Colorado River Region, Bureau of Reclamation
Director, Arizona Game and Fish Department
Senator Jeff Flake
Senator John McCain
Congressman Tom O'Halloran
Congressman Paul Gosar

Referenced Cited:

Fredricks, K.T., J.R. Meinertz, R.D. Ambrose, L.M. Jackan, J.K. Wise and M.P. Gaikowski. 2012. Feeding Response of Sport Fish after Electrical Immobilization, Chemical Sedation, or Both. *North American Journal of Fisheries Management* 32:679–686, 2012

Mesa, M.G. and C.B. Schreck. 1989. Electrofishing mark-recapture and depletion methodologies evoke behavioral and physiological changes in cutthroat trout. *Trans, if the American Fisheries Society*. 118:644-658.

Mueller, G. A. 2005. Predatory fish removal and native fish recovery in the Colorado River mainstem: what have we learned? *Fisheries* 30(9):10–19.

Snyder, D. E. 2003. Invited overview: conclusions from a review of electrofishing and its harmful effects on fish. *Reviews in fish biology and fisheries* 13(4):445–453.

Zelasko, K. A., K. R. Bestgen, J. A. Hawkins, and G. C. White. 2016. Evaluation of a Long-Term Predator Removal Program: Abundance and Population Dynamics of Invasive Northern Pike in the Yampa River, Colorado. *Transactions of the American Fisheries Society* 145(6):1153–1170.

Attachment 1.

Non-native Aquatic Species Management Plan
Argonne January 5, 2018
Kirk LaGory, Expanded National Laboratory
9700 S. Cass Ave. – EVS/240
Argonne, IL 60439

RE: Environmental Assessment for an Expanded Non-native Aquatic Species Management Plan

Dear Mr. LaGory:

We the undersigned are writing to provide comments on the National Park Service's (NPS) Environmental Assessment (EA) for an Expanded Non-native Aquatic Species Management Plan in Grand Canyon National Park and Glen Canyon National Recreation Area below Glen Canyon Dam. Since 1964, with the completion of the Glen Canyon Dam, the Lees Ferry tailwater has hosted a recreational trout fishery that has grown in importance and reputation locally, regionally, nationally, and internationally. This blue ribbon recreational sport fishery has also become a financial and economic mainstay for the small community of Marble Canyon and Coconino County, supporting fishing guide services, hotels, restaurants, fishing and outdoor recreation equipment and supplies, and visitor services.

Our comments are aimed at maintaining and enhancing a blue-ribbon rainbow trout fishery at Lees Ferry that does not adversely affect the native aquatic community in Grand Canyon National Park.

1. A central element of the NPS's Proposed Action includes "long-term intensive and repeated electrofishing and trapping of all age-classes of harmful non-natives, and site-specific use in the Glen Canyon reach to target brown trout.....". This action would have a significant adverse impact on the quality of the Lee Ferry trout fishery, the welfare of the local community, and the regional economic benefits tied to the fishery. This action is unacceptable for the following reasons:

- a. While electrofishing has been effective for managing trout in small streams like Bright Angel Creek, there is no evidence that it will be effective for controlling brown trout in the mainstem of the Colorado River.
- b. Many more rainbow trout would be shocked for each brown trout captured. The focus of mechanical removal would be on shoreline areas that are also prime fishing areas. In addition to direct rainbow trout mortality, the behavior of salmonids that are subjected to electrofishing is negatively affected which would impact angler catch rates and satisfaction.
- c. The collateral damage to the Lees Ferry rainbow trout fishery from mechanical removal and the negative public perception it creates will significantly harm an already distressed economic community that has been impacted by dam operations.
- d. In 2017, the Secretary of the Interior issued Secretary Orders 3347 and 3356 with the purpose of increasing outdoor recreation opportunities, including hunting and fishing, and improving the management of game species and their habitat. Long-term intensive and repeated electrofishing and trapping will negatively impact catch rates and potential population abundance of the rainbow trout fishery and violates the spirit and intent of the Secretary's Orders.

We believe that an Environmental Impact Statement (not just an EA) will be needed to fully evaluate the impacts of long term intensive mechanical removal in Glen Canyon.

2. Rather than pursuing an unacceptable intensive mechanical removal effort, we recommend that the NPS pursue other more cost-effective and less damaging strategies such as a brown trout bounty program or making changes in Glen Canyon dam operations to disadvantage brown trout spawning or recruitment.

3. The actions outlined in the EA will not achieve the Purpose and Need for the Project. A goal of the EA is “to allow the NPS to prevent, control, minimize or eradicate potentially harmful non-native aquatic species, or the risk associated with their presence or expansion, in the action area.” This goal can only be accomplished by working with Bureau of Reclamation (BOR) to address the most likely root causes of the recent increases in the brown trout numbers in Glen Canyon e.g., rising warmer water temperature, sequential fall HFE’s. Actions to address the root causes, which are not addressed in the EA, may include shifting the emphasis of high flow experiments from the fall to the spring, implementing a temperature control device to regulate the temperature of water releases from Glen Canyon Dam, and/or testing the use of “trout management flows” to reduce brown trout spawning and/or recruitment. To address these actions NPS and BOR should work together as co-leads for this EA.

4. The Arizona Game and Fish Department (AGFD) is the management agency with primary statutory responsibility for resident fish and wildlife in the State of Arizona. In September 2015, AZGFD approved its *Fisheries Management Plan, Colorado River-Lees Ferry 2015-2025* (Plan). The EA should clearly state that any proposed actions will only be carried out in coordination with and upon concurrence from the AZGFD.

In summary, the NPS proposed intensive, long term mechanical removal action threatens rather than advances the goals of the NPS CFMP and the AZGFD Plan which is to manage a “for a quality recreational rainbow trout fishery within Glen Canyon National Recreation Area (NPS 2013 and AZFGD 2015).” We look forward to your response to our comments.

Conservation/Sportsmen organization

- Arizona Sportsmen for Wildlife Conservation
- Arizona Wildlife Federation
- AZ State Council of Trout Unlimited
- Anglers United
- AZ Backcountry Hunters & Anglers
- AZ BASS Nation
- AZ Big Game Super Raffle
- AZ Deer Association
- AZ Desert Bighorn Sheep Society
- Arizona Flycasters Club
- AZ Houndsmen
- AZ Outdoor Sports, Inc.
- AZ Shooting Sports Educational Foundation
- Christian Hunters of America
- Coconino Sportsmen
- Desert Flycasters Club
- Friends of Luna Lake
- Northern Arizona Flycasters
- Gila Trout TU Chapter
- Grand Canyon TU
- Mohave Sportsman Club
- Old Pueblo TU Chapter
- Outdoor Experience 4 All

- Payson Flycasters Club
- San Pedro Fly Fishing Club
- Southwest Wildlife Foundation
- SRT Outdoors
- Sun City Grand Fishing Club
- Sun Lakes Flycasters

- Zane Grey TU Chapter
- The Bass Federation
- Theodore Roosevelt Conservation Partnership
- Xtreme Predator Callers
- White Mountain Lakes Foundation

Fishing Guides

- Terry Gunn
- Jeff English
- Skip Dixon
- Natalie Jensen
- Tyson Warren
- Dale Gauthier
- Jimmy Daniels
- Scott Keller
- Mike Roth
- Mike Hawes
- Dave Trimble
- Dave Foster
- Mick Lovett

Businesses

- Lees Ferry Anglers
- Cliff Dwellers Lodge
- Lees Ferry Boat Rentals
- Marble Canyon Lodge
- Vermilion Cliffs Lodge
- Northern Arizona Guide Service
- Lees Ferry on the Fly