Trout Ad Hoc Group (TAHG)
Established 10/20/2015

Members – Bill Stewart (Chair), Seth Shanahan, Brian Healy, Mark Anderson, Chris Budwig, Joe Miller, Craig Ellsworth, Jessica Neuwerth, Paul Harms, Kurt Dongoske, Kerry Christensen, John Jordan, Vineetha Kartha

TAHG charge – The TAHG will evaluate the GCMRC technical review of the Lees Ferry Recreational Trout Fishery Management Recommendations per the AMWG motion on 8/27/2015, and make a recommendation to the TWG at our January 2016 meeting. The TWG will consider the recommendation and make findings to the AMWG at its February 2016 meeting.

Review:

In the December 9, 2015 “Technical review of the Lees Ferry Recreational Trout Fishery Management Recommendations” memo to the TWG chair, GCMRC submitted an updated and final review in response to comments and suggestions received from the TWG regarding points of clarifications and topics that were not included in their initial review. This final review was limited to scientific and technical matters, and for recommendations where no scientific or technical information was presented, GCMRC refrained from commenting. The Trout Ad Hoc Group (TAHG) evaluated the GCMRC technical review of the Lees Ferry Recreational Trout Fishery Management Recommendations (Recommendations) per the TWG charge.

The TAHG evaluation was conducted with the following sideboards:

1. Recommendations must be fully consistent with the “Law of the River” and DOI policy considerations.
2. Recommendations that fall under the purview of water and natural resource management agencies such as Bureau of Reclamation, National Park Service, United States Fish and Wildlife Service and Arizona Game and Fish Department will require additional evaluation with these management agencies for further consideration.
3. Recommendations that address dam operations are expected to be considered and evaluated in the ongoing Long Term Experimental and Management Plan Environmental Impact Statement.

There was uniform agreement by the TAHG membership that the GCMRC technical review is comprehensive. In addition, the TAHG respondents found GCMRC’s review either supported or was neutral / non-committal on thirteen of the fifteen individual recommendations. There was not uniform agreement on the GCMRC review conclusions on two of the recommendations: (1) Minimum Flows and (2) Stocking in the Event of a Catastrophic Fishery Failure. The TAHG concluded that while both Minimum Flows and Stocking are subjects for future discussion the Stocking issue is substantially determined by the provisions of the Park Service’s comprehensive Fishery Management Plan and the Arizona Game and Fish Department’s Fisheries Management Plan Colorado River – Lees Ferry (2015-2025).

The TAHG also identified areas where additional research is needed and where the GCMRC technical review could be expanded to provide a more comprehensive review.
Conclusions:

1. The TAHG review concluded that GCMRC review is generally comprehensive although it could be expanded in some areas.

2. Additional discussion/clarification is needed by the TWG and GCMRC on the scientific basis of the minimum flow recommendation and the need for stocking in the event of a catastrophic failure of the Lees Ferry trout fishery

3. The TWG should identify outstanding research questions that should be addressed to better inform the implementation of the Lees Ferry Recreational Trout Fishery Management Recommendations.

Recommendation:

The TAHG recommends that the TWG recommend that the AMWG accept the GCMRC technical review of the Lees Ferry Trout Fishery Management Recommendations based on the TAHG evaluating the GCMRC technical review of the Recommendations and finding the review to be comprehensive and the review to be supportive, neutral or noncommittal on the individual recommendations with two exceptions. One exception being the Minimum Flow recommendation with agreement that research should continue to evaluate the effects of lower flows and to develop scientifically based minimum flows. The other exception being Stocking In the Event of a Catastrophic Failure and the impact on the dependent economic community be included in the determination for stocking and with the understanding that stocking is substantially determined by the provisions of the Park Service Comprehensive Fishery Management Plan and the Arizona Game and Fish Department’s Fisheries Management Plan Colorado River – Lees Ferry (2015-2025).

In addition the TWG requests that the AMWG, with the acceptance of the Lees Ferry Recommendations, instruct the TWG to consider the requirements for implementation of the Recommendations including additional research that should be included in the work plan.
Trout Ad Hoc Group report to TWG
(TWG Meeting January 28, 2016)

Bill Stewart (Chair), Seth Shanahan, Brian Healy, Mark Anderson, Chris Budwig, Joe Miller, Craig Ellsworth, Jessica Neuwerth, Paul Harms, Kurt Dongoske, Kerry Christensen, John Jordan, Vineetha Kartha
1. Aquatic Food Base Enhancement through Experimental Repatriation and "Bug Flows"
2. Dam Operations
3. Minimum Flows
4. Fall and Spring High Flow Experiments (HFEs)
5. Experimental Trout Management Flows
6. Equalization Flows
7. Fishing Regulations
8. Marble Canyon Trout Fishery
9. Riparian Vegetation Restoration
10. Stocking in the Event of a Catastrophic Fishery Failure
11. Low Dissolved Oxygen Response Protocol
12. Temperature Control Device
13. Bypass Tube Electrical Generation
14. Introduce Turbidity
15. Monitoring and Measurement of Management Triggers
The Secretary’s Designee directs Grand Canyon Monitoring and Research Center (GCMRC) to conduct a technical review of the Lees Ferry Recreational Trout Fishery Management Recommendation and report its findings to the TWG, and directs the Technical Work Group (TWG) to evaluate the GCMRC review at their October 2015 meeting, and report its findings to AMWG at its February 2016 meeting.
GCMRC presented initial review (6 recommendations)

- TWG requested additional feedback on remaining 9 recommendations.
- TWG established the Trout Ad Hoc Group (TAHG)

**TAHG charge** – The TAHG will evaluate the GCMRC technical review of the Lees Ferry Recreational Trout Fishery Management Recommendations per the AMWG motion on 8/27/2015, and make a recommendation to the TWG at our January 2016 meeting. The TWG will consider the recommendation and make findings to the AMWG at its February 2016 meeting.
- TAHG met Nov 9, Dec 7, and Jan 14
- GCMRC memo to TWG (Dec. 9\textsuperscript{th}, 2015)
- Comment forms provided (summary of comments in TAHG report)
- Sideboards
  - Law of the River
  - Management agencies responsibilities
  - LTEMP EIS
- Future work plan items

**Memorandum**

To: Vineetha Kartha, GCDAMP Technical Work Group, Chair  
From: Scott VanderKooi, USGS Grand Canyon Monitoring and Research Center, Chief  
CC: Camille Touton, Department of Interior, Counselor to the Assistant Secretary for Water and Science  
    Beverly Kefferman, Bureau of Reclamation, Upper Colorado Region Environmental Resources Division Manager

Date: December 9, 2015  
Subject: Technical review of the Lees Ferry Recreational Trout Fishery Management Recommendations

The USGS Grand Canyon Monitoring and Research Center (GCMRC) has prepared this memo in response to the following motion that was passed by consensus at the Adaptive Management Work Group (AMWG) meeting held in Phoenix, Arizona on August 26-27, 2015:

The AMWG requests the Secretary's Designee direct GCMRC to conduct a technical review of the Lees Ferry Recreational Trout Fishery Management Recommendations and report its findings to the TWG, and directs the TWG to evaluate the GCMRC review at their October 2015 meeting, and report its findings to AMWG at its February 2016 meeting.

An earlier version of this memo was submitted to DOI and Reclamation on October 19, 2015 and shared with the Technical Work Group (TWG) at its October 20-21, 2015 meeting. This updated and final draft was revised in response to comments and suggestions received from stakeholders and managers regarding points of clarification and topics that were not included in our initial review. We appreciate the opportunity to review the final draft of the Lees Ferry Recreational Trout Fishery Management Recommendations and wish to thank the authors for engaging GCMRC and
1. The TAHG review concluded that GCMRC review is generally comprehensive although it could be expanded in some areas.

2. Additional discussion/clarification is needed by the TWG and GCMRC on the scientific basis of the minimum flow recommendation and the need for stocking in the event of a catastrophic failure of the Lees Ferry trout fishery.

3. The TWG should identify outstanding research questions that should be addressed to better inform any implementation of the Lees Ferry Recreational Trout Fishery Management Recommendations.
Recommendation

The TAHG recommends that the TWG recommend that the AMWG accept the GCMRC technical review of the Lees Ferry Trout Fishery Management Recommendations based on the TAHG evaluating the GCMRC technical review of the Recommendations and finding the review to be comprehensive and the review to be supportive, neutral or noncommittal on the individual recommendations with two exceptions. One exception being the Minimum Flow recommendation with agreement that research should continue to evaluate the effects of lower flows and to develop scientifically based minimum flows. The other exception being Stocking In the Event of a Catastrophic Failure and the impact on the dependent economic community be included in the determination for stocking and with the understanding that stocking is substantially determined by the provisions of the Park Service Comprehensive Fishery Management Plan and the Arizona Game and Fish Department’s Fisheries Management Plan Colorado River – Lees Ferry (2015-2025).

In addition the TWG requests that the AMWG, with the acceptance of the Lees Ferry Recommendations, instruct the TWG to consider the requirements for any implementation of the Recommendations including additional research that should be included in the work plan.