FY 2014 Reprogramming Request

Lees Ferry Minimum Flow Study

By the International Federation of Fly Fishers (IFFF)

December 11, 2013

In 2012 and 2013, Reclamation decided to implement minimum low flows from Glen Canyon Dam in the range of 5000 to 7000 cfs. In both years, the IFFF expressed concerns that low flow at or below 5000 cfs could adversely impact the aquatic food base by dewatering key riffle areas that account for a large amount of aquatic productivity in the reach. The size of these riffle areas are sensitive to and can be significantly reduced by relatively small change in flows. In addition, low minimum flows reduce water velocity which may impact invertebrate drift (or lack thereof) that is an important component to trout health. This fall, fishing guides observed a very rapid decline in overall fish condition as soon as the flows were reduced to 5000 cfs. According to GCMRC staff, there is little data available on the possible impacts of a 5000 cfs minimum flow below the dam. We are concerned that minimum flows at or below 5000 cfs will become a common occurrence in the future as part of low water year water delivery plans (like this water year) or sediment conservation flows prior to fall or spring HFE's.

We request that the TWG recommend that GCMRC implement a study in FY 2014 to determine the minimum flows needed to protect the aquatic food base and the Lee Ferry trout fishery. The first step in this effort would involve mapping the river channel at representative riffle areas and other critical food base "hot spots" to determine the relationship between river flow and surface area of the river. Our understanding is that while there are a variety of transects in the Lees Ferry reach, few are located in riffle areas or other food base hot spots.

We believe this work could be accomplished within the existing channel mapping capabilities at GCMRC/NAU. Some minor reprogramming would be required to initiate the Lee Ferry channel mapping in FY 2014.

Channel mapping alone will not provide all the data need to establish a biologically based minimum flow for the Lees Ferry reach. Therefore, we also recommend that the relationship between minimum flows and aquatic productivity should be assessed as part of a carefully considered long term experimental plan (i.e., the LTEMP).

The Lee Ferry fishery has been doing well for the past several years and the rainbow trout are generally robust and in excellent condition. In the past, the condition of the fishery has deteriorated rapidly for reasons that are not clearly understood. We believe that establishing a biologically based minimum flow for Lee Ferry will allow for more informed decisions related to operation of Glen Canyon Dam and help maintain a quality trout fishery below the dam.

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