

## MEMORANDUM

TO: Mr. Glen Knowles, U.S. Fish and Wildlife Service, Phoenix Field Office

DATE: 6 June 2005

FROM: Grand Canyon Wildlands Council, Inc.

RE: Comments on the draft USFWS HBC Genetics Management Plan

Thank you for requesting feedback on the U.S. Fish and Wildlife Service (Service) draft humpback chub (HBC) genetics management plan. The endangered HBC (*Gila cypha*) has become a conservation umbrella species for the Colorado River. Grand Canyon Wildlands Council, Inc. has consistently required of the AMWG that a scientifically credible HBC genetics management plan be developed prior to launching numerous costly, and questionably effective, conservation actions in Grand Canyon. Such a document is needed for general and specific guidance on fish conservation, and should help the AMWG propose actions and prioritize its activities.

Towards that end, the Service's Upper Colorado River Basin Endangered Fish Recovery Program has revised its 1999 revised genetics management plan. The present plan incorporates the results of considerable time and effort in assessing HBC distribution and declining status in the Upper Basin, but not actual genetics information. Below we list our general and specific comments about this draft document, with the hope that these comments will lead to a more rigorous and credible effort

### GENERAL COMMENTS

1. We were disappointed in the low level of scientific integrity of this document. We are presented with policy and contradictory recommendations, modest reference to the scientific literature, and a bibliography restricted to HBC and conspicuously not to other endangered species' case studies that follow the successful application of genetics management planning and implementation.
2. While we appreciate the efforts expended by the Upper Colorado River Endangered Fisheries Recovery Program on this report, it was disappointing to learn how little integrated basin-wide planning has taken place. The role of the Grand Canyon HBC population in relation to Upper Basin populations appears to be much larger than the plan depicts. Most or all of the Upper Basin's HBC populations appear to be declining, some of them in unregulated reaches, and for reasons that are loosely ascribed to climate and non-native species. That not much is confidently stated about present HBC status there is alarming, as the Upper Basin program has the lead on protection of this species. Conservation of the Grand Canyon HBC population is likely to be a much larger issue than is credited in the document, because of an effective monitoring program and the use of clear scientific experiments to determine causalities. Conservation of this species is a high priority and should not be subsumed by Service turf wars.
3. After nearly three decades of concern for this species, we still do not know the genetic relatedness of the five major HBC populations. How much longer must we wait for completion and publication of believable data on the genetic constitution of this species. Will the long-promised report be scientifically

- credible? Many of this report's recommendations may need to be revisited if the results indicate high levels of inter-population differentiation. With >\$100 million expended on this fish (with indication of continuing decline), why has the Service not made an appropriately large effort to resolve this overwhelmingly critical issue?
4. We are puzzled by the recommendation on the top half of p. 5 against controlled propagation, and the several recommendations on p. 6 on establishing hatchery populations. We request that the Service more clearly explain its policies in relation to conservation actions, and provide a step-down into this plan that embraces both the Upper Basin and Grand Canyon HBC populations.
  5. We expected, but did not find, this document would reference other, similar genetics management plans and their successes and failures, reflecting upon those as case studies, and demonstrating that the author(s) are well informed of how genetics management plans have provided guidance on species conservation.
  6. We expect this plan to provide establish a plan for how the information it provides is to guide species and habitat conservation.

### **SPECIFIC COMMENTS**

P. 1, HBC Species Status: Are the upper basin HBC populations healthy or declining? All Upper Basin data in Table 1 appear to indicate declining populations.

P.3, 2<sup>nd</sup> paragr: The causality of HBC decline is weakly worded and convinces the reader that the enormous amounts of money spent on this species have failed to indicate causal relationships of environmental variables and HBC population health. Strengthen this section.

P. 3, last paragr.: HBC is the only fish species with enough remaining wild individuals to allow FWS to learn from, and on which conservation actions may be effective to protect fish in the wild. All other fish species are in serious decline or are functionally extinct in the wild. We suggest the Service consider revising and upgrading its view of the HBC as a species that may, with some attention, become a wild, self-sustaining population. In contrast, the other endangered native fish populations may exist in number that are too small to be self-sustaining.

P. 4: Please describe how the Grand Canyon HBC population fits into the overall species matrix, remembering that this document will likely guide conservation actions in Grand Canyon for the foreseeable future.

P. 4, 3<sup>rd</sup> paragr. first line: "policy with U.S. Fish and Wildlife Service and National..." typo.

P.4, 4<sup>th</sup> paragr.: We expect the Service has standard operating protocols the management of captive, endangered fish. and that

P. 5, paragr. 1: Note should be made of the on-going, large-scale experiment in Grand Canyon to suppress non-native salmonids.

P. 5, paragr. 2: Although the Service apparently has not made fast rules as to the levels a population must fall before it is brought into captivity, there must be several case studies to determine what population levels have triggered those decisions. It would be useful to learn from those case studies whether the trigger levels were sufficient to save the target species. Presumably, the Service would be consistent with its previous actions in the decision to bring endangered Colorado River fish into captivity.

P. 5, paragr. 3: “Status of Captive Propagation...”: We expected this section to include a summary of the history of captive endangered fish propagation, including both the successes and the failures, to help guide HBC propagation efforts. Also, the first criterion governing the decision to engage in captive propagation is untenable. If it is used only when all other reasonable measures have failed, it will be too late to rescue, or perhaps even find, most endangered species. Waiting too long to develop a captive breeding program means that insufficient time will be available for learning how to propagate the species, much less maintain appropriate levels of genetic diversity.

P. 5, Recommendations: The statement that “a controlled propagation program does not appear prudent” seems inconsistent with the statements on P. 6 “Alternatives for Upper Basin HBC”, Recommendation 4 “Move yoy to a refuge, i.e., a hatchery... and add yoy on an annual basis...” ), and repeated as Recommendation 3 under P. 6 “Alternatives for the Grand Canyon HBC population.”

## **CONCLUSIONS**

In summary, we urge the Service to realize: 1) the HBC is a species facing dire challenges in the Colorado River system, and there may actually be little time to develop and implement a coherent, scientifically credible conservation strategy for it; 2) many uncertainties exist about this species life history, interactions, and habitat needs, and answering these uncertainties will require a captive population that can be used for both conservation and scientific experimentation; 3) a captive propagation program is just one of numerous measures that needs to be implemented in the near term to conserve this species; and 4) the key to success in conserving this species is to act promptly and in a scientifically credible fashion to protect against both catastrophic or gradual loss of this species and its habitat. A scientifically credible genetics management plan is essential to guide this conservation effort, and that plan is needed as soon as possible.

We will be honored to review the next draft of this plan, and urge the Service to complete that draft as soon as possible.