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From: Scott P. Harris [<mailto:SPHARRIS@dfg.ca.gov>]

Sent: Wednesday, April 27, 2011 5:06 PM

To: Deal, Wanda Civ USAF AFMC 95 ABW/EM

Subject: Mohave tui chub introduction concept into Piute Ponds

Hi Wanda,

One of DFG's fisheries biologist, Steve Parmenter heard about the Piute Ponds meeting last week from Judy Hohman. Steve is DFG Region 6's point person for recovery of the endangered Mohave tui chub (MTC). Steve works with Judy Hohman/USFWS quite a bit regarding desert fishes, especially MTC. She has drafted a proposed EA to analyze and guide the establishment of a number of MTC recovery populations. The document is currently under internal review by the Service. Judy briefed Steve on last Friday's Piute Ponds meeting and they are interested in the Piute Ponds as a potential establishment of a new MTC population. She suggests this is a critical moment if the Department wants to provide input to the planning effort being undertaken by EAFB so Steve sent me the following input to forward to you for the group's consideration in the management plan process. I paraphrased Steve's email to me for your information:

"Mohave tui chub are endemic in the lowland reaches of the Mojave River, where it was the only fish species historically present. No fishes are native to Amargosa Creek and Rosamond Lake basin, although MTC hypothetically may have had access to the drainage in Pluvial times. Nevertheless, habitats free from introduced cyprinid fishes (true minnows) are needed to host MTC populations to secure the species from potential extinction due to historical habitat loss and future stochastic events. Piute ponds seems a logical place to develop a new population due to its proximity to the original range of MTC and absence of the primary cause of MTC extirpation, introduced arroyo chubs. MTC are small mouthed omnivores adapted to catching or filtering small food items from the water column and digesting vegetable matter. They have no shearing jaw teeth and therefore are gape-limited predators. They prefer standing or slow moving water, and are weak swimmers compared to other similar sized fishes.

I toured Piute Ponds with Bob Woods and Dan Reinke a couple years ago. No R5 representative was able to attend, but I believe my visit was coordinated with Scott Harris. At the time the water was a brilliant opaque green, reportedly infested with African clawed frogs, and no dissolved oxygen data were available. I harbored doubts about the suitability of the habitat for MTC because of the turbidity, inferred oxygen depletion potential, and presence of an exotic predator. I recommended reassessment after the sanitation district upgrade to tertiary treatment. It appears that time is now. Reduced nutrient loading in the ponds would be expected to improve water clarity and dissolved oxygen for tui chubs, while possibly altering the conditions which currently are favorable to clawed frogs. Water control improvements might provide an opportunity to rotationally dry habitats, eliminating the frogs. Finally, it may also be possible the highly fecund MTC can tolerate predation by frogs.

In considering whether the establishment of MTC, consideration should be given to potential effects on native biota. MTC may have poor potential to spread upstream into perennial waters due to water velocity and other factors, but I have not seen the headwater. MTC are probably

very compatible with shorebird and waterfowl resources that are of great interest to stakeholders, although more deep water areas would be desirable for the fish.

If MTC introduction is attempted further coordination would be needed with FWS and CDFG regarding incidental take during a wide variety of operations and maintenance activities. I would like to see us pursue the feasibility of MTC in Piute ponds even in the face of potential legal complexities regarding incidental take.

If R5 would like to pursue MTC for Piute ponds, I suggest we reply affirmatively to Wanda Deal. Our input could be as simple as "DFG recommends a joint assessment of the potential to introduce MTC into Piute Ponds, control African clawed frogs, and to develop water control infrastructure to aid in those purposes." I would be willing to be the contact person."

Wanda, if Steve's recommendation is something that EAFB wants to pursue further in the management plan at some point please contact him to discuss further. I spoke with staff in my Region 5 fisheries division and was recommended to forward Steve's conceptual proposal to you but with the understanding that R5 cannot commit fishery staff resources at this time to facilitate any action. Steve's contact information is:

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Thanks Wanda.

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