

Bridging the Gap: Adaptive Management Returns Wild Razorback Sucker to the Upper Colorado River Basin

M. Tildon Jones¹, Kevin R. Bestgen², David W. Speas³, Matthew J. Breen⁴, Christian T. Smith⁵, Robert C. Schelly⁶, and Michael S. Partlow⁴

¹Upper Colorado River Endangered Fish Recovery Program, Vernal, UT, USA

²Larval Fish Laboratory, Colorado State University, Fort Collins, CO, USA

³Bureau of Reclamation, Grand Junction, CO, USA

⁴Utah Division of Wildlife Resources, Vernal, UT, USA

⁵U.S. Fish and Wildlife Service, Vernal, UT, USA

⁶National Park Service, Dinosaur, CO, USA

The Upper Colorado River Endangered Fish Recovery Program makes recommendations for river flows and manages wetland habitats in the Green and upper Colorado rivers to increase recruitment of wild-spawned Razorback Sucker, *Xyrauchen texanus*. Since 2012, experimental spring peak releases from Flaming Gorge Dam have been timed to coincide with the presence of drifting river-produced Razorback Sucker larvae that are subsequently entrained into warm, food-rich floodplain wetlands. These experiments are based on previous data on the timing of larval drift, dam release operations, and habitat availability and fish use, which led to the development of the “Larval Trigger Study Plan.” Initially, biologists inundated a single wetland, Stewart Lake, which was managed as a native fish nursery habitat. In the last 10 years, the Program has constructed four additional managed wetlands and re-operated a fifth to improve Razorback Sucker growth and recruitment. These sites share common features designed to facilitate juvenile survival including: 1) a water control structure that regulates filling and draining of the habitat; 2) screens to reduce wetland colonization by adult nonnative fishes during filling; and 3) a mechanism to add water during hot summer months to improve water quality. The resulting wetland operations have increased our knowledge of the species’ life history while producing over 9,000 wild, juvenile Razorback Sucker. In addition, forty-eight presumptive wild Bonytail, *Gila elegans*, have been produced in two of these managed wetlands. In 2020, wetland-reared Razorback Sucker larvae were first observed as age-6 adults at known spawning locations. Additional wild Razorback Sucker are needed to maintain riverine populations, therefore wetland managers continue to refine their operations, address challenges, and improve facilities in the face of increased conservation challenges from drought, climate change, and invasive species.

Contact Information: M. Tildon Jones, Upper Colorado River Endangered Fish Recovery Program, 1380 S 2350 W, Vernal, UT, USA 84078, Phone: 303-588-4074, Email: Tildon_Jones@fws.gov