

*Standard Operating Procedures for the Stocking of Razorback Sucker from Uvalde  
National Fish Hatchery in the San Juan River  
Fall 2009 - Spring 2010*

Prepared by  
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### Introduction

The San Juan River Basin Recovery Implementation Program's (SJ RIP) approved augmentation plan for razorback sucker calls for the annual stocking of 11,400 individuals  $\geq 300$  mm (Ryden 2003). Due to inconsistencies in meeting annual targets from 2003-2006, the SJ RIP's Biology Committee recommended that funding be provided to Uvalde National Fish Hatchery (Uvalde) for producing razorback sucker to meet the Program's goals. The first large-scale stocking of razorback sucker reared at Uvalde was scheduled for 2008. However, due to the facility testing positive for Largemouth Bass Virus no fish were stocked in 2008. All contaminated sources at Uvalde were subsequently destroyed and the hatchery completed two negative viral tests (July 2008 and July 2009). Razorback sucker originally scheduled for stocking into the San Juan River in 2008 were held over and have attained sizes ranging from 300 – 500 mm (mean = 420 mm) total length (Karin Eldridge personal communication).

Recent analysis of razorback sucker capture data indicated that size of fish and season of stocking are key components to post stocking survival (Bestgen 2009). Furthermore, this report suggested creating a stocking design "to answer relevant questions about effects of fish size [and] season of stocking". In response to this analysis the SJ RIP Biology Committee decided to take advantage of this unique opportunity to evaluate the relative success of stocking razorback sucker  $\geq 400$ mm and to help answer questions concerning seasonal effects on post stocking survivorship. This document outlines the Standard Operating Procedures (SOP) that will be followed for the stocking of these fish in 2009 and 2010.

### Multi-Seasonal Stockings at Designated Locations

An equal number of razorback sucker will be stocked at two designated locations in each of three seasons: Fall, Winter, and Spring. As agreed upon by the Biology Committee, the upstream-most site is a location near the Animas River confluence in Farmington, NM at river mile (RM) 180. The second locality, RM 158.4, was chosen for its proximity to previously suspected razorback sucker spawning bars (Bliesner and LaMarra 2007) and is just downstream of the Hogback Diversion structure near Waterflow, NM. For each seasonal stocking Uvalde NFH must transport 4,000 large razorback sucker. Due to hauling capacity limitations of the Regional Distribution Unit only 2,000 fish can be hauled in a single

trip; with the two trips made per season occurring within the same week. The first shipment of fish will be stocked at the Hogback Diversion site while the second shipment will be stocked at the Animas River confluence site.

#### Fish Processing, Transportation, and Stocking

Uvalde NFH is responsible for weighing (WT) all razorback sucker to the nearest 10 grams or tenth of a pound, measuring total length (TL) to the nearest mm, and implanting a Passive Integrated Transponder (PIT) tag into the body cavity. The fish are monitored for post handling mortalities and PIT tag retention for approximately two weeks after processing. Information will be compiled into a database and submitted to the SJRIP Program Office as part of the annual augmentation reports. Prior to loading and transport, San Juan River water temperatures will be relayed to Uvalde NFH by New Mexico Fish and Wildlife Conservation Office staff and fish transport water temperatures adjusted accordingly. On-site tempering will continue until there is a less than 2° Celsius difference and fish will be stocked directly into the San Juan River. Razorback sucker stocked under this SOP will not be held in enclosures prior to release.

#### Monitoring and Data Integration

Evaluation of stockings will be conducted through other projects, primarily Nonnative Removal and Long Term Sub-adult and Adult Large-Bodied Fish Monitoring. Recapture data collected during the performance of these, or any other SJRIP activity (i.e. collection in the Nenahnezad fish ladder), will be submitted to the SJRIP Program Office for data integration annually. Subsequent analysis of these data will be used to understand what influences temporal (season at stocking) and physical (size at stocking) variations might have on long term post stocking survival. As an important element of the adaptive management approach any new information gleaned from these stockings will be considered in future stocking protocol decisions.

#### Literature cited:

- Bestgen, K. R., K. A. Zelasko, and G. C. White. 2009. Survival of hatchery-reared razorback sucker *Xyrauchen texanus* stocked in the San Juan River Basin, New Mexico, Colorado, and Utah: Final Report. San Juan River Basin Recovery Implementation Program, U.S. Fish and Wildlife Service, Albuquerque, NM.
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- Ryden, D. W. 2003. An augmentation plan for razorback sucker in the San Juan River: An addendum to the five-year augmentation plan for razorback sucker in the San Juan River (Ryden 1997). U.S. Fish and Wildlife Service, Grand Junction, CO. 32 pp.