

***Rearing Razorback Sucker Sub-Adults at  
Dexter National Fish Hatchery and Technology Center  
San Juan River  
2007***

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***SOW ACCOMPLISHMENT REPORT - 2007  
April 22, 2008***

**Introduction**

In September of 2004 Dexter staff responded to a request for proposals from the Bureau of Reclamation on behalf of the San Juan Recovery Implementation Program to *rear and deliver 20,000 -200+ mm razorback sucker to existing grow-out ponds located on the Navajo Indian Irrigation Project (NAPI), near Farmington , NM.* The fish would then be grown out for six months to a year in the NAPI ponds to reach the target size of 300+ mm in length before being released into the wild. The stockings would help the SJRIP meet its augmentation goals for the species in the San Juan River as described in addendum to *The Five-Year Augmentation Plan For Razorbacks Sucker In The San Juan*(Feb 2003).

Razorback sucker broodstock representing the Lake Mohave population have been maintained and cultured at Dexter since 1981. Captive propagation of razorbacks for this project began in March of 2005 and utilized indoor and outdoor facilities. Based on historical growth rates for razorback at Dexter, the production target of 20,000, 200+mm fish is achieved in a fifteen month period. The initial delivery of fish to the NAPI ponds was scheduled for June of 2006. With the adoption of single cohort fish management of the NAPI ponds in the spring/summer of 2006 the initial fish delivery was postponed till November, 2006. East and West Avocet ponds were stocked with 3,500 fish each in November, following draining, drying and refilling of the growout ponds. Two additional NAPI ponds were scheduled to be stocked in the spring of 2007 but due to longer than anticipated renovations only Hidden pond was stocked.

## **Objectives:**

The main objective of this work is to spawn razorback sucker (RBS) adults, rear 20,000 (200+mm) fish annually and deliver to existing grow-out ponds located on the Navajo Indian Irrigation Project. Additional objectives of the work include:

- 1) Improve, maintain and staff facilities at Dexter NFH&TC to rear and distribute the target number of fish.
- 2) Continue data collection on induced spawning of RBS under controlled conditions.
- 3) Continue data collection on stocking densities in Dexter ponds for optimal growth of razorback, and evaluate and adjust as necessary to meet required numbers and size.
- 4) Maintain RBS captive broodstock for recovery efforts.

## **Accomplishments for 2007 :**

### **Spawning**

On March 22, a total of 20 RBS females spawned 20-24 hours after receiving three intramuscular injections of 100 units of Chorionic Gonadotrophin per pound of body weight (220 units/kg body weight). Females had a mean total length of 506 mm and mean weight of 1.37 kg. Average number of eggs per female was 30,629.

Eggs were inventoried and placed in Heath incubators at a water temperature of 70 F (21 C). Eggs commenced hatching at 92 hours and were completely hatched by 118 hours. Newly hatched larvae were transferred to three fiberglass holding tanks [12.0' (3.66 m) X 2.75' (0.84 m) X 2.0' (0.61 m)] and held approximately 120 hours before stocking.

### **Y-O-Y Fingerling Production**

One lined pond 0.10 surface acre (0.04 ha) was stocked with 18,500 fry. This pond received weekly fertilizer treatments (seven treatments) to promote a plankton bloom. Fry were also given a daily supplement diet of artificial feed. Fish were not moved during this grow out period.

Young-of-the-year (YOY) RBS were cultured in the pond for 198 days. Survival was 94.2% for a return of 17,422. These fish have since been moved to a 0.89 surface acre (0.36 ha) lined pond for further culture to meet the target size for stocking in 2008.

## **Sub-adult Growout**

In 2006 and 2007 a total of 10,467 RBS ( 2005 YC) were stocked into NAPI the ponds. On September 4<sup>th</sup> the Dexter Fish Health Unit conducted its annual fish health sampling. Sixty fish from the lot were sampled and screened for parasite, bacterial and viral infections. All results were negative and the fish were given a clean bill of health. The remaining 7,000 fish were maintained in an .5 acre pond for growout and eventual stocking in NAPI ponds and San Juan River. The stockings were coordinated with CRFP-Grand Junction, NM FWCO- Albuquerque, Navajo Nation, and BIA representatives.

## **Distribution**

Distribution was conducted on three different trips during 2007. Hauling methods consisted of one double compartment fiberglass tank and one single compartment fiberglass tank. The double compartment tank had capacities of 325 and 375 gallons (1,230 and 1,420 liters) and the single compartment tank had a capacity of 300 gallons (1,136 liters).

On April 18, personnel from Dexter transported and stocked 1,060 RBS averaging 14.0” (356 mm) and weighing 1,400 pounds (635 kg) in the San Juan River. On June 28, Dexter staff stocked an additional 283 RBS averaging 16.0” (406 mm) and weighing 693 pounds (314 kg) in the San Juan River. All fish received a 134 Khz PIT tag prior to release. Electronic copies of the database were provided to the CRFP-Grand Junction, CO and New Mexico FWCO field office.

On May 9, Dexter personnel transported and stocked 3,467 unmarked RBS averaging 6.0” (153 mm) and weighing 289 pounds (131 kg) in Hidden Pond operated by NAPI.

## **Broodstock Maintenance**

Dexter National Fish Hatchery and Technology Center is currently maintaining a total of 1,246 RBS broodstock. These numbers appear sufficient to assist recovery efforts in the San Juan River for many years in the future.

## **Future Work – 2008**

Dexter will continue the age-1 and age-2 grow out program to produce fingerlings and sub-adults for reintroduction in the San Juan River and stocking in NAPI ponds. In order to meet the target sizes and numbers, several year-classes of fingerlings will be kept on station and will be cultured to meet these goals.

The only changes anticipated for the program are the actual NAPI ponds stocking dates which may vary from year to year based on the newly instituted single cohort fish culture management scenarios.