

Rearing Razorback Sucker Sub-Adults at Dexter National Fish Hatchery and Technology Center

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SOW ACCOMPLISHMENT REPORT - 2005 March 15, 2006

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.

Results:

On March 24, a total of 11 RBS females (wild caught Lake Mohave) spawned 20 hours after receiving three intramuscular injections of 100 I.U. of Chorionic Gonadotropin per pound of body weight (220 I.U./kg body weight). Females had a mean total length of 609 mm and a mean weight of 2.71 kg. Average number of eggs per female was 65,231.

Eggs were inventoried and placed in Heath incubators at a water temperature of 70 F (21 C). Eggs commenced hatching at 96 hours and were completely hatched by 144 hours. Newly hatched larvae were transferred to two fiberglass holding tanks [12.0' (3.66 m) X 2.75' (0.84 m) X 2.0' (0.61 m)] and held until swim-up occurred, approximately 96 hours after hatching.

Two earthen ponds, ranging in size from 0.34 to 0.36 surface acres (0.14 to 0.15 ha) were stocked with 60,000 fry. Ponds received weekly fertilizer treatments (six treatments) to promote a plankton bloom. Fry were also given a daily supplement diet of artificial feed. Fish were cultured in these ponds for 138-140 days. A total of 52,000 fingerlings weighing 247 pounds (112 kg) were removed for a survival of 86.7%.

Following enumeration, the fingerlings were then stocked into a 0.98 surface acre (0.40 ha) lined pond for the remainder of the growing season. They were fed a daily supplemental diet of artificial feed. Fish were cultured in this pond for 52 days. The pond was drained, fish were inventoried and placed in two 40' (12.2 m) indoor fiberglass raceways for over wintering. Approximately 50,000 fingerlings weighing 452 pounds (205 kg) were harvested for a survival of 96.1%.

Fingerlings will remain inside the Fish Culture Building until April 2006, at which time they will be stocked into outdoor ponds and grown to target size of 200 mm.