

***COLORADO PIKEMINNOW FINGERLING PRODUCTION
San Juan River
2005***

Principal Investigators – Roger L. Hamman and Manuel E. Ulibarri
Dexter National Fish Hatchery and Technology Center
U.S. Fish and Wildlife Service
P.O. Box 219
7116 Hatchery Road
Dexter, NM 88230-0219

505-734-5910 Work
505-734-6130 Fax

roger_hamman@fws.gov
manuel_ulibarri@fws.gov

***SOW COMPLETION REPORT
November 17, 2005***

Objectives:

- 1) Continue data collection on induced spawning Colorado pikeminnow (CPM) under controlled conditions.
- 2) Produce 300,000 fingerlings (50 mm TL) for stocking in the San Juan River during October and November, 2005.
- 3) Evaluate distribution methods of transporting 300,000 CPM fingerlings from Dexter NFH and TC to the San Juan River.
- 4) Maintain 400 CPM broodstock for recovery efforts.

Results:

On May 25, a total of 28 CPM females (1991 year-class) spawned 22-24 hours after receiving one intraperitoneal injection of 2.0 mg carp pituitary per pound of body weight (4.4 mg/kg body weight). Females had a mean total length of 635 mm and a mean weight of 2.63 kg. Average number of eggs per female was 73,813.

Eggs were inventoried and placed in Heath incubators at a water temperature of 70 F (21 C). Eggs commenced hatching at 90 hours and were completely hatched by 138 hours.

Newly hatched larvae were transferred to four 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. Four earthen ponds, ranging in size from 0.74 to 0.88 surface acres (0.30 to 0.36 ha), were stocked with 380,000 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 not moved during grow out period.

The young-of-the-year (YOY) CPM were cultured in the four ponds for 132-147 days. Survival in the four ponds ranged from 50.2% to 98.5%. Overall survival was 81.1% for a return of 308,270 fingerlings. All fish were used to meet production goals for 2005.

Distribution was conducted on two different trips. Hauling methods consisted of two (2) double compartment fiberglass tanks and one single compartment fiberglass tank. One double compartment tank had capacities of 325 and 375 gallons (1,230 and 1,420 liters) and the other 100 gallons (376 liters) per compartment. The single compartment tank had a capacity of 300 gallons (1,136 liters).

On October 20, personnel from Dexter and BioWest, transported and stocked 134,550 CPM averaging 2.0 inches (50 mm) and weighing 299.0 pounds (135.9 kg) to several locations on the San Juan River. Of this number, a total of 20,000 fingerlings were VIE marked. On November 3, personnel from Dexter transported and stocked the remaining 167,720 CPM averaging 2.0 inches (50 mm) and weighing 372.0 pounds (169.1 kg) to several locations on the San Juan River. All stocking efforts were coordinated with Dale Ryden of the Grand Junction CRFP Office.

Starting in FY-2006, Dexter will commence a phase II growout program to produce an additional 3,000 CPM (150 mm) for reintroduction in the San Juan River. In order to meet the target size and number, a total of 6,000 (2005 year-class) fingerlings were kept on station and will be cultured to meet this goal.

Dexter National Fish Hatchery and Technology Center is currently maintaining a total of 351 CPM broodstock; 39 (1974/1981 year-class) and 312 (1991 year-class). Since adult numbers have dropped below 400, Dexter staff is again requesting that additional CPM, preferably wild fingerlings, be collected in the near future and transferred to Dexter. Captive broodstock at Dexter is essential to the SJRIP in order to accomplish the objectives identified in the augmentation plan and to assist with the recovery efforts in the entire Colorado River basin. This will insure that a genetically diverse broodstock and refugia is maintained over the time frames identified in the augmentation plan for CPM in the San Juan River (USFWS, 2003).