

***COLORADO PIKEMINNOW FINGERLING PRODUCTION
San Juan River
2008***

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***SOW COMPLETION REPORT
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Objectives:

- 1) Continue data collection on induced spawning Colorado pikeminnow (CPM) under controlled conditions.
- 2) Produce 3,000 age-1 fingerlings (150 mm TL) for stocking in the San Juan River during 2008.
- 3) Produce 300,000 YOY fingerlings (50 mm TL) for stocking in the San Juan River during 2008.
- 4) Evaluate distribution methods of transporting 300,000+ CPM fingerlings from Dexter NFH & TC to the San Juan River.
- 5) Maintain 400 CPM broodstock for recovery efforts.

Results:

Age-1+ Fingerling Production

On October 1, 2007, a total of 6,000 (2006 year-class) CPM were placed in a 0.10 acre (0.04 ha) lined pond. On April 1, 2008, the pond was drained and 2,057 fish were transferred to the Fish Culture Building for PIT tagging. The remaining 3,500 fish were stocked in a 0.10 acre (0.04 ha) lined pond for further culture. Overall winter survival for

this pond was 92.6%. On April 15, Dexter personnel transported and stocked 2,057 age-1+ CPM in the San Juan River. The fish weighed 310 pounds (140.6 kg) and averaged 6.7 per pound (14.74/kg). Mean total length was 209 mm (8.2”). Dexter was assisted with this stocking effort by personnel from the New Mexico Fish & Wildlife Conservation Office.

The remaining 3,500 fish (2006 year-class) were cultured an additional six months and on October 6, the pond was drained and 3,300 fish were transferred to the Fish Culture Building for PIT tagging. Survival over this period was 94.3%. On October 21, Dexter personnel transported and stocked 2,800 age-2+ CPM in the San Juan River. The fish weighed 1,065 pounds (483.1 kg) and averaged 2.63 per pound (5.79/kg). Mean total length was 299 mm (11.8”). Dexter was again assisted with this stocking effort by personnel from the New Mexico Fish & Wildlife Conservation Office. The remaining 500 age-2+ fish were stocked in a 0.10 acre (0.4 ha) lined pond and will be used as future broodstock.

Total numbers of age 1+ and age 2 Colorado pikeminnow stocked during 2008 were **4,857**. All fish had been PIT tagged prior to release in the San Juan River.

Age-1 Fingerling Production

A total of 11,000 (2007 year-class) Colorado pikeminnow were cultured inside the Fish Culture Building over the winter months. On March 31, 2008, these fish were stocked in two earthen ponds ranging in size from 0.34 acre (0.14 ha) to 0.36 acre (0.15 ha). On October 27-28, the ponds were drained and fish transferred to an outside raceway. It is estimated that 10,000+ fish remain weighing approximately 1,000 lbs (453.6 kg) and averaging 150 mm (6.0”). These fish will be available for stocking in the San Juan River in 2009.

Spawning

On May 22, 2008, a total of 30 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 692 mm and mean weight of 3.63 kg. Average number of eggs per female was 84,897.

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 120 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' (0.61m)] and held approximately 48 hours before stocking.

Y-O-Y Fingerling Production

Three earthen ponds, ranging in size from 0.74 to 0.88 surface acres (0.30 to 0.36 ha), were stocked with 150,000 fry. Two 0.25 surface acre (0.10 ha) lined ponds were stocked with 150,000 fry. All ponds received weekly fertilizer 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) CPM was cultured in the five ponds for 147-154 days. Survival in the ponds ranged from 21.1 % to 100%. Overall survival was 90.0% for a return of 270,248 fingerlings. A total of 270,248 fingerlings were used to meet production goals for 2008.

Distribution

Distribution was conducted in one trip by the Regional Distribution Unit (RDU) stationed at Inks Dam National Fish Hatchery in Burnet, Texas. On November 5, 2008 personnel from Dexter loaded 270,248 CPM averaging 2.25" (57 mm) and weighing 1,167 pounds (529.4 kg) to the San Juan River. Mike Otto and Gregory Landry from Ink Dam delivered the fish to the San Juan River on November 6. Weston Furr from the New Mexico Fish & Wildlife Conservation Office coordinated the stocking and was assisted in offloading the fish by the RDU drivers, and staff from the Navajo Fish & Wildlife Department and the Bureau of Indian Affairs. The fish were acclimatized for 24 hours at the PNM sluiceway (river mile 166.6) prior to release.

Total numbers of age 0 Colorado pikeminnow stocked during 2008 were **270,248**.

Broodstock Maintenance

Dexter National Fish Hatchery and Technology Center is currently maintaining a total of 188 (1991 year-class), 209 (2001 year-class) and 500 (2006 year-class) CPM broodstock. Dexter staff also assisted personnel from Utah Division of Wildlife in the collection of wild fingerlings near Moab on September 16-17, 2008. A total of 28 fish (20 mm TL) were transferred to Dexter; however, only two fish have survived and are being maintained indoors. Along with the 48 surviving wild fingerlings collected in 2007, Dexter has 50 fish remaining from the two collection efforts. These fingerlings will be kept separate in isolation/quarantine until they are large enough to PIT tag and then incorporate into the captive broodstock & propagation program. Dexter does not request any wild CPM fingerlings to be collected during 2009.

Future Work – 2008

Dexter will continue the age-1 and age-2 grow out program to produce an additional 3,000 CPM (150+ mm) each year for reintroduction in the San Juan River. In order to meet the target size and number, a total of 10,000 (2007 year-class) fingerlings are currently on station and will be cultured to meet this goal.

Literature Cited

U.S. Fish and Wildlife Service. 2003. An Augmentation Plan for Colorado Pikeminnow in the San Juan River – Final Report. Grand Junction, CO. 63 pp.