

**COLORADO PIKEMINNOW STOCKING**  
**U.S. Fish and Wildlife Service - Colorado River Fishery Project**  
**Grand Junction, Colorado**  
**Principal Investigators: Dale Ryden and Chuck McAda**  
**11 February 2005**

A total of 281,219 Colorado pikeminnow were stocked into the San Juan River in 2004. Personnel from the Mumma Native Species Hatchery (CDOW - Alamosa, CO) stocked 1,219 age-2 Colorado pikeminnow en-masse at RM 180.2 on 9 June 2004. The on 21 and 28 October, 280,000 age-0 Colorado pikeminnow were stocked into numerous low-velocity habitats from RM 188.35-148.5. The USFWS (Grand Junction, CO) stocked 250,000 of these fish, while crews from BIO/WEST placed 30,000 of these fish into holding pens and allowed them to acclimate before releasing them into the river. The 281,219 Colorado pikeminnow stocked in 2004 represent a shortfall of 18,781 fish (6.26%) from the annual target number of 300,000 specified in the.

Numbers of annual Colorado pikeminnow recaptures in the San Juan River are currently too low to do any kind of a reliable mark-recapture population estimate. Therefore, survival to adulthood was estimated for Colorado pikeminnow stocked from 2002-2004, using actual numbers of fish stocked and applying the estimated survival curves presented in the Colorado pikeminnow augmentation plan. It was calculated that in 2009 (the first year in which fish stocked in 2002 would reach adulthood – age-7+) an estimated 308 adult Colorado pikeminnow should be present in the San Juan River as a result of the 2002-2004 stockings. In the Colorado pikeminnow augmentation plan, it was estimated that if the target number of 300,000 age-0 fish could have been stocked in each of the last three years (2002-2004), then an estimated 344 adult Colorado pikeminnow would have been present in the San Juan River in 2009 as a result of those stockings. So, the difference, according to the survival curve estimates is approximately 36 adult fish in 2009. If the target number of 300,000 age-0 Colorado pikeminnow can be stocked in each of the next five years (2005-2009), then it should still be possible to reach the target goal of  $\geq 800$  adult fish in the San Juan River (specified in the Colorado Pikeminnow Recovery Goals document). It would just occur one year later than anticipated (i.e., in 2012, instead of in 2011). These calculations all assume that the survival curves used in the Colorado pikeminnow augmentation plan are correct and that year to year survival occurs at a constant rate.

Flows on 21 October 2004 (694 CFS at the Farmington USGS gage, 471 CFS at the Shiprock USGS gage) made finding appropriate low-velocity habitats in which to stock age-0 Colorado pikeminnow difficult. As a consequence, most of the age-0 fish stocked on that date were stocked along low-velocity shorelines. On 28 October 2004, flows had come up just enough (821 CFS at the Farmington USGS gage, 818 CFS at the Shiprock USGS gage) to allow many more low-velocity habitats to be accessible and fish were stocked in many more backwaters, embayments, etc. on that date than was the case the previous week.

Total CPUE for Colorado pikeminnow, riverwide (RM 180.0-2.9), on the fall 2004 Sub-Adult And Adult Large-Bodied Fish Community Monitoring Trip was over twice as high (2004 CPUE = 1.78 fish/hour of electrofishing) as in any previous year (1996 was next closest at 0.78 fish/hour of electrofishing).

Data from five different studies performed in 2004 revealed that Colorado pikeminnow in a wide range of size-classes (range = 59-547 mm TL) were being recaptured throughout the San Juan River. This points to survival of fish from numerous years' stockings. In addition, some range expansion may be occurring among stocked Colorado pikeminnow. During mid-July 2004, sampling crews from the Southern Ute Indian tribe and the USBOR (Durango, CO) collected five Colorado pikeminnow (range = 226-250 mm TL) in the lower few miles of the Animas River. These five fish were all age-2 fish that had been stocked on 9 June 2004 at RM 180.2 (~0.3 RM's downstream of the Animas River confluence). Whether or not stocked Colorado pikeminnow will populate the Animas River long-term remains to be seen.

Unfortunately, some stocked Colorado pikeminnow are also being lost into the Hogback Canal (and probably other canals as well). Sampling crews from the University of New Mexico collected eight Colorado pikeminnow (range = 150-315 mm SL) in the Hogback Canal during their October 2004 sampling. These fish were returned alive to the mainstem San Juan River. Another source of loss of stocked Colorado pikeminnow was also verified by UDWR (Moab, UT) sampling crews, when they collected a 416 mm TL channel catfish that had consumed a stocked Colorado pikeminnow (~210 mm TL, with a PIT tag).