Species research projects are being designed to provide the necessary information to create and manage populations and habitats for all species under consideration.

**Progress to Date**
Since 2005, more than 24,000 razorback suckers and almost as many bonytails have been stocked into the Colorado River below Davis Dam. Research and monitoring are ongoing to determine the success of this program. In addition, over 23,000 razorbacks have been released into Lake Mohave to augment the existing wild population that provides brood stock for the program. In 1990, an estimated 60,000 adult razorback suckers were present in Lake Mohave. Biologists expected these fish to die off by the mid-1990s due to age-related causes. Augmentation efforts conducted over the last 15 years have begun to replace this aging population; these efforts will continue until target goals are reached.

Several large habitat creation projects have been initiated since 2006. Two sites located near Blythe, California, total more than 1,000 acres each, including 364 acres of cottonwood-willow. Another 92 acres of marsh and backwater habitats have been constructed at Imperial National Wildlife Refuge, near Yuma, Arizona, to provide habitat for fish and marsh bird species.

**Future Challenges**
Because the LCR MSCP is a 50-year program, and is likely to be extended even longer, adaptive management will be an important component to ensure appropriate adaptation to changes in water and power demands, water priorities, water availability, and other unexpected conditions. For example, quagga mussels (*Dreissena rostriformis bugensis*) have now been detected throughout the lower Colorado River and protocols are being established to mitigate their impacts while transporting fish between fish hatcheries and the river.

Conservation-area development requires the mutual commitment of the LCR MSCP and the landowner or land manager prior to the initiation of any habitat-creation project. This commitment ensures the availability of land and water at each site through the life of the program. Since the native riparian habitat being created at many sites will require active management, including irrigation, throughout the 50 years, this commitment is essential.

Research and monitoring will continue to be important components of the LCR MSCP so that potential issues are identified in time to plan and implement effective management actions.

Visit the LCR MSCP website at www.lcrmscp.gov. Contact John Swett at jswett@lc.usbr.gov, Laura Vecerina at lvecerina@lc.usbr.gov, or Terry Fulp at tfulp@lc.usbr.gov.

**Reference**

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