



Background

The original San Marcos National Fish Hatchery, the first warmwater hatchery west of the Mississippi River, began operations around 1900 and was located near the headwaters of the San Marcos River. During the 1960's, the U. S. Fish and Wildlife Service donated the aging hatchery to Southwest Texas State University which, in turn, donated 116 acres south of the city of San Marcos to the Service for the development of a new National Fish Hatchery and Cultural Development Center. The Center, located at the intersection of Interstate Highway 35 and McCarty Lane, was dedicated in 1976 and the name was changed in 1983 to the National Fish Hatchery and Technology Center.

Historically, the Center developed and demonstrated practical techniques for fish propagation, management, and monitoring; formulated solutions to hatchery and management problems; produced fishes to meet high priority needs; and developed strategies for monitoring, protecting, and managing high priority aquatic species, with emphasis on threatened, endangered, and inter-jurisdictional species.

Objectives/Emphasis

Collecting, maintaining, and propagating Texas wild rice, salamanders, and fishes as outlined in the Service's San Marcos/Comal/Edwards Aquifer rare, threatened, and endangered species contingency plan

Conducting research on life history, ecological requirements, genetics, and culture of Edwards Aquifer organisms

Conducting research on restocking refugium species

Collecting biological information on the region's aquatic biological resources

Troubleshooting problems at other hatcheries

Training hatchery personnel

Station Mission

The primary mission of the Center is to provide refugia for Texas wild rice, Texas blind salamanders, San Marcos salamanders, fountain darters, and, if found, San Marcos gambusia. Culture-related activities for these species are inherent to this mission. Major consideration is placed on assessment of biological issues related to the Edwards Aquifer and San Marcos and Comal springs. The Center also provides genetically diverse largemouth bass broodstock to several national fish hatcheries.

Peer Reviewed Publications

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Recent Activities

Since 1996, the San Marcos National Fish Hatchery and Technology Center has devoted nearly all its resources to refugium-related work for species listed in the San Marcos/Comal/Edwards Aquifer Rare, Threatened, and Endangered Species Contingency Plan. Center staff provided technical assistance in the development of this Contingency Plan and continue to refine it. Center staff also collect genetically diverse organisms from the wild and maintain them in refugium with the following target numbers: 950 fountain darters, 160 San Marcos salamanders, 160 Texas blind salamanders, and 160 Comal Springs salamanders, 88 Texas wild rice plants, and an unspecified number of Comal Springs riffle beetles.

Offspring from refugium organisms have been used in projects on toxicity (fountain darter, Comal Springs salamander), gas saturation (fountain darter), parasite/fish relations (fountain darter), restoration (Texas wild rice), seed banks (Texas wild rice), and backup refugium (Texas wild rice). Adults have been used for studies on genetics (fountain darter, San Marcos salamander, Texas wild rice), reproduction (fountain darter, San Marcos salamander), temperature effects (fountain darter, San Marcos salamander), food habits (fountain darter), and flow

preference (San Marcos salamander).

Other work includes: development of procedure manuals for culture of the species in refugia, developing specifications for a new salamander refugium and research building, developing specifications for a new Texas wild rice refugium and research building, fry feeding for an endangered darter surrogate, effects of a parasite on west Texas fishes of concern, development of culture techniques for the Devil's River minnow (species of concern), development of a new warmwater fish culture short course, and enhancing station habitat for monarch butterfly use.

