

# Mammoth Spring

## National Fish Hatchery



photo: USFWS



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### Photos (top to bottom)

*Hatchery entrance sign.*

*Outdoor educational presentation to group of pre-schoolers.*

*Fish stocking.*

*Working with mussels.*

### Hatchery Facts

- Established: 1903. (32 Statute 1107).
- The hatchery is one of the oldest, built in the Ozark foothills in northeast Arkansas due to the availability of cool gravity flow water from the world's seventh largest spring and easy access to the railroad.
- Current programs involve the restoration of interjurisdictional fishes (paddlefish and sturgeon); recovery of endangered and threatened species including freshwater mussels; restoration of Gulf Coast Striped Bass populations; restoration of walleye, smallmouth bass and rainbow trout in the White River drainage; and fishery management and stocking recreational fish on national wildlife refuges.
- Physical plant includes: 36 acres, 15 production ponds, eight concrete raceways, hatching/rearing building, 3,600 gallon public aquarium, administrative offices and maintenance buildings.
- Due to the reliable high quality gravity flow water supply and a unique pond and raceway rearing system, the hatchery has the capability to produce a wide variety of fish and other aquatic species.
- The hatchery maintains the only captive spawning population of Gulf Coast striped bass in the world.
- Annual budget (FY 05): \$451,000.

### Hatchery Objectives

- Help restore depleted populations of Gulf Coast striped bass.
- Develop advanced propagation and rearing techniques for paddlefish and lake sturgeon.
- Develop spawning and rearing techniques for the endangered pallid sturgeon, ozark hellbender salamander, alligator snapping turtle.
- Produce walleye, smallmouth bass and rainbow trout for restoration stocking in the White River Basin impacted by flooding of spawning habitat due to Federal water development projects (dams) on the White River and tributaries.
- In cooperation with Arkansas State University, assist in nationwide efforts to protect and restore both endangered and non-endangered mussel populations by developing culture techniques, conducting life history investigations, and providing a refuge for imperiled mussel populations.
- Provide fish for recreational fishing programs on national wildlife refuges.
- Conduct an educational outreach program that promotes the Service mission and furthers national conservation efforts.
- Average production:
  - 2 million Gulf Coast striped bass
  - 40,000 paddlefish
  - 2,500 sturgeon
  - 400,000 walleye
  - 100,000 smallmouth bass
  - 5,000 freshwater mussels
  - Approximately 100,000 largemouth bass and/or bluegill as needed for national wildlife refuge programs.

# Mammoth Spring National Fish Hatchery

## Public Use Opportunities

- Located on a major route between several large cities and some of the nation's most popular vacation destinations, Mammoth Spring has seen visitation rise to over 90,000 per year.
- The hatchery operates an award winning 3,600-gallon, 10-tank public aquarium highlighting both native fish and reptiles, as well as species raised on the hatchery.
- The hatchery has several exhibits explaining the Service mission and hatchery activities, and the public can view the day-to-day operations of the hatchery.
- Special activities are held during National Fishing Week, Earth Day, and during several local festivals throughout the year.
- Over 100 group tours and environmental education activities are scheduled throughout the year serving schools, colleges, and other groups in Arkansas, Missouri, and surrounding states.

## Statistics

- Five-person staff.
- 5-10 volunteers and summer employees.

## Questions and Answers

*Why do we need federal hatcheries and who pays for them?*

This is a national fish hatchery which is supported by tax dollars. Fish raised on Federal hatcheries are stocked in public waters to support Federal fishery responsibilities mandated by law. These include fish for restoration where, for example, man-made dams have altered a stream's natural reproductive capability; or to restore threatened or endangered populations. Fish are also used to support recreational fishing programs in Federal and state waters.

*Where does the hatchery get its water?*

The heart of any hatchery is its water supply. This hatchery is blessed with unusually excellent water supplied by the world's seventh largest spring. Water from the spring is a constant 58 degrees with a naturally high dissolved oxygen content and a pH of about 7, making it ideal for fish culture. The hatchery uses only a small fraction of the spring's flow, eventually returning the water to Spring River.

*Where and how do you hatch the fish?*

In a pond-fish hatchery like Mammoth Spring, adult broodfish such as bass and bluegill are allowed to spawn naturally in specially prepared ponds. Other fish, such as striped bass, are spawned in tanks after being given a hormone and the eggs are then transferred to incubator jars. After hatching, the fry are collected using a small seine and transferred to rearing ponds or raceways for growout.

The rearing ponds are fertilized to encourage the growth of tiny microorganisms called zooplankton on which the young fry feed until they reach fingerling size of about one to three inches. The fish may be stocked at this point or held for rearing to a larger size. Some of the larger fish are fed specially prepared diets made on station and supplemented with forage fish such as minnows or goldfish.

Eggs of other fish such as walleye and paddlefish are collected from adult fish netted in the wild (which are then released) and brought back to the hatchery for hatching and rearing. The hatching of most species occurs in the early spring.