



# GLEN CANYON DAM ADAPTIVE MANAGEMENT PROGRAM

Using science to manage river resources in Grand Canyon

## Lees Ferry Trout Fishery

The 15.5-mile stretch of clear flowing Colorado River winding through the Marble Canyon Gorge between the Glen Canyon Dam and the beginning of the Grand Canyon is commonly referred to as Lees Ferry. Since 1964 this area has hosted a recreational trout fishery that has grown in importance and reputation. For anglers, this picturesque stretch of river is a unique tail-water trout fishery of international renown. Anglers from around the world have come to Lees Ferry to fish for rainbow trout in this large, swift flowing river winding its way through the lower most segment of Glen Canyon.

Because of the reliable flows of cold water ranging from 46 to 60 degrees and the supply of food (such as aquatic insects and scuds), the Lees Ferry reach of the Colorado River has the capacity to maintain a remarkable trout fishery in the desert. The fishery itself has gone through an evolution since it was first created following the completion of the Glen Canyon Dam. During its infancy, this productive fishery produced huge rainbow trout ranging from 10 to 20 pounds. The fishery has gone through peaks and valleys, but throughout its history, it has provided some of the most sought after trout fishing opportunities in the Southwest.



*Rainbow trout at Lees Ferry*

The trout population at Lees Ferry is principally composed of rainbow trout. While small tributaries of the Colorado River in Grand Canyon National Park were stocked with brown trout and rainbow trout beginning in the 1920s and continuing until the 1960s, the main stem of the Colorado River was not amenable to supporting trout populations. The main stem of the river became more conducive for trout with the completion of Glen Canyon Dam and the establishment of reliable cold, clear water flows. By agreement with the land and water managers, the Arizona Game and Fish Department began establishment of the Lees Ferry trout fishery in 1964, initiating stocking of trout in the accessible portion of Glen Canyon between the Paria River and Glen Canyon Dam.

The Lees Ferry trout fishery has evolved into a self sustaining, naturally reproducing rainbow trout population. The fishery was maintained through stocking catchable, and later fingerling trout, from 1964 through the mid-1990s. Natural reproduction of trout became more reliable with the establishment of more reliable flows resulting from the re-operation of Glen Canyon dam, and stocking support was ceased. Reproduction of trout in the Lees Ferry reach peaks in winter and spring months.

The fishery is managed for a "blue ribbon" fishing experience by the Arizona Game and Fish Department, the wildlife management agency for the state of Arizona. The intention of "blue ribbon management" is to provide a quality fishing opportunity where anglers can catch larger than average trout, at a relatively high catch rate, in a unique recreational setting. To accomplish this, special fishing regulations are imposed between Glen Canyon Dam and the Paria River that require the use of artificial flies or lures (bait items are not allowed) and that limits the harvest of fish. Current

(over)

regulations require that fish over 12 inches in length must be immediately released alive. Anglers may retain four smaller trout per day, and may possess eight Lees Ferry trout at any one time. Regulations differ below the Paria Riffle, allowing the use of bait items and a larger daily bag limit. Below 21-mile rapid (in Grand Canyon National Park), there anglers may harvest and retain as many caught trout as they wish.

Anglers use a diversity of fishing methods at Lees Ferry. Fly fishing is practiced by many anglers visiting Lees Ferry. Fly fishers will travel by boat to gravel bars and beaches upriver from the principal access point at the boat ramp within the Glen Canyon National Recreation Area, and fish while wading along those gravel bar area. Spin fishing is not uncommon, with spin anglers fishing frequently from shoreline areas or while drifting their boats through riffles or runs in the river.

River flows can have direct and indirect effects on the trout population at Lees Ferry, and on recreation associated with the trout fishery. Several factors can influence the abundance of trout and the food supplies available to fuel their growth. River flows can directly influence the amount of food available for trout, and how it is delivered. The abundance of the organisms that make up the base of the aquatic food chain [aquatic algae and plants; chironomid midge larvae; and Gammarus] is related to the reliable minimum volume of water in the river. Fluctuations in flows can increase the numbers of food organisms that are available to trout in the "drift" by lifting them from the river bottom and delivering them in the flow. Because trout lay their eggs in "redds" or nests in the river gravels, changing flows can regulate the success of spawning and in-turn determine the numbers of trout in the river. Anglers too can be influenced by changing flows. Fly anglers often wade along gravel bars to cast to fish in deeper water. Wading anglers have to be alert to changing water levels, both for their angling tactics and to ensure their safety.

The trout fishery at Lees Ferry is one of the values associated the Glen Canyon National Recreation Area, and its maintenance is among the goals of the Adaptive Management Program. The explicit goal is to "maintain a naturally reproducing population of rainbow trout above the Paria River, to the extent practicable and consistent with the maintenance of viable populations of native fish."



*Fly fisherman casts line in river downstream of Glen Canyon Dam*