Fate of Stocked Trout: Survival, Movement, Best Stocking Practices, and Angler Satisfaction.

The Arizona Game and Fish Department raises 3 million trout each year to be stocked into water bodies throughout the state. Angler Satisfaction is the number one priority of the Department's Trout Stocking Program. Satisfaction with the angling experience is based on many variables from fish species, angler catch rates, beautiful scenery, or just the good company of fishing partners. Since the Arizona Game and Fish Department can't pick your friends we aim to make sure that you have the best chance at catching trout as possible. Angling catch rates (number of fish caught per hour) may depend on the number of fish stocked into streams and lakes, fish survival rates, and fish movement in and out of fishable waters. The Department's Research Branch is conducting an extensive study of our trout stocking practices, the fate of trout once stocked, and overall satisfaction of the anglers that catch them.

Radio tagged rainbow trout.

Questions and Objectives

1) How many of our trout are being caught by anglers?

We are examining stocked trout mortality caused by angler harvest. Through a series of angler (creel) surveys we are determining how many trout are harvested by anglers each year. Angler creel surveys also provide us with a way to keep in touch with Arizona anglers and measure their satisfaction.

2) How many of our trout are lost to natural mortality (ex. birds, raccoons, otters)?

Trout may be removed from streams by anglers, but they may also be removed by natural factors such as by a variety of predators or death due to stocking stress. Over the next few years we will be placing trout into experimental holding pens in streams. These holding pens will be closed to anglers and will allow us to find out how many of our fish are being taken from streams by predatory birds and mammals.

3) Where do the trout go?

Trout may move into and out of fishable waters once they are stocked into streams and lakes, and this movement may make them more or less available to anglers. We are examining movement of stocked rainbow and Apache trout by radio telemetry techniques. We surgically implant small radio transmitter tags into a small percentage of stocked trout. Once trout have been tagged, we are able to use a specialized receiver, programed to pick up each fishes unique radio frequency, to give us information about its location. This information is invaluable to inform researchers where the fish are, how far the fish has moved from the stocking location, and what type of habitat the fish is using. For more information about what to do if you catch one of these research fish please visit, What to do if you catch a tagged fish. [JG1]

4) Do more fish equal more satisfied anglers?

We are experimentally examining if we can increase angler satisfaction and angler catch rates by increasing the density of trout stocked into streams. Angler use, overall fish catch, and catch rates are being examined by an extensive angler (creel) survey. We will be closely tracking the relationship of various angler statistics and satisfaction of Arizona anglers. Information gained from these analyses will be used to help Regional Managers make sound decisions that lead to HAPPY ANGLERS!

This project is being conducted at six cold-water streams in Arizona; near Payson (East Verde River, Tonto Creek, and Canyon Creek) and in the White Mountains (Little Colorado River, East Fork of the Black River, and Silver Creek). This project is scheduled to take 4 years, with completion in 2016.

Project Contacts

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