

Briefing Paper
South River Science Team
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2005 South River and Upper South Fork Shenandoah River Angler Survey

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In its work plan, the South River Science Team (SRST) identified the need to quantify use, effort, catch, and harvest of fish in South River. This was accomplished through an interview-driven angler survey during the 2005 fishing season. Such a survey had never been conducted on South River, so the need to attain baseline information regarding aquatic recreation was imperative. This study captured user attitude toward fishing, knowledge of the consumption advisory, as well as estimated important angling data for fisheries management purposes.

A stratified “roving” survey was picked to obtain the information we sought. The primary reason for choosing a roving survey over an “access point” survey was that only a few developed canoe/boat/kayak launch points were available in the area we were interested in covering. Two survey clerks in kayaks intercepted anglers when floating from point to point. River users were asked a series of questions, given a fish consumption advisory card, and thanked. All fish caught and kept were identified and measured. The survey itself was split into several strata. Days of the week, river sections, and time of day (morning, mid-day, and evening) were randomly selected using non-uniform probabilities to ensure statistical validity. To expand the empirical data, we used a Statistical Analysis System (SAS) program, designed by fisheries consultant Steve Malvestuto.

The survey covered the area from Constitution Park in Waynesboro to Island Ford on the South Fork Shenandoah in Rockingham County. It ranged 34 river miles and was divided into 7 sampling units, ranging from 4.2 to 5.8 miles in length. The survey began on April 23, 2005 and was concluded on October 15, with an average of 14 days sampled each month, including weekdays and weekends.

One of the main objectives of this study was to ascertain impact of the fish consumption advisory that has been imposed on South River (downstream of the Dupont footbridge) since 1977. When asked if they keep their catch, 18% responded affirmatively. Seventy-seven percent said they released what they caught, and 5% do both. When asked if they ate fish, 81% said no. However, 100% of those who kept fish shared them with family or friends.

Seventy-six percent of the fishing public knew about the consumption advisory, but when asked whether they knew what the advisory was about, 50% answered incorrectly (Figure 6). Only 39% knew what the advisory stated, while 11% did not respond.

Asked how they knew about the advisory, 50% got their information off of signs posted along the river, 23% by word of mouth, 11% by newspaper, and 16% by other means.

Other sources for information about the advisory include fishing regulations, websites, or television. Zero information about the advisory came from radio broadcasts.

For those that released their catch, 82% stated that they ethically practiced catch-and-release fishing, while 8% stated it was from the advisory warnings, 8% said their catch was too small, and 2% stated other reasons.

What did anglers like about fishing South River? Over half, 51%, liked the fact that it was close to home. This was followed by quality of fishing (16%). Eight percent fished for the scenery, 15% liked all of the above, and 10% liked it for other reasons. Asked what they disliked about angling in South River, 55% stated pollution and 40% stated other unspecified reasons. Only 3% stated that fishing quality was poor and 2% answered that it was too crowded.

Approximately 24,371 fishing trips were estimated for 2005, with an average of 1.54 hours expended per trip. The total number of fishing hours for the entire survey period was 37,558 hours. The average fisherman was a generalist, fishing for anything. The most sought after species was smallmouth bass, followed by trout. Our results show that smallmouth bass were creel more heavily than any other species. Although 69% of the smallmouth bass were released, our expanded data shows that 11,498 were removed from the river. Most of the creel bass were between 8 and 10 inches long, with 16% taken between 12 and 14 inches long. Sunfish were second to smallmouth bass in terms of number of fish caught (22,458), but 99% of those were released. Despite the volume of trout stocked at Grottoes and Waynesboro, only 3,558 brown and rainbow trout were caught during the study, and 63% of those were released. Trout are the only fish family not affected by the consumption advisory in South River. It was estimated that almost \$192,000 was spent by anglers in South River and upper South Fork Shenandoah River in 2005. Almost all of the expenditures for gas, bait, food, lodging, and equipment was spent within a 20 mile radius of Waynesboro and Harrisonburg.

South River and upper South Fork Shenandoah River attract many other types of recreational users other than anglers. The survey team documented 40 recreational parties and 324 individuals during the study time frame. When asked what sort of activities they were involved with, 30% said swimming. This was followed by identical percentages (21%) of people who were kayaking and tubing. Fourteen percent of polled recreationists were wildlife watching, 7% were canoeing, and 7% were involved in other activities. The rivers were primarily visited by people living in Harrisonburg, Waynesboro, Grottoes, and Rockingham County. Most users were attracted by the scenery and the fact that it is close to their homes. Over 50% said that they did not care for pollution problems, including litter. A total of \$2,415 was spent locally on non-angling recreation in 2005.