

Law Enforcement Session

Changes in Missouri Float Stream Law Enforcement

John D. Hoskins, Missouri Department of Conservation, Jefferson City, MO 65102

Abstract: The objectives of the study were: (1) evaluate Conservation Agent law enforcement activities, (2) identify trends in recreational use of the Big Piney River, Current River, and North Fork of the White River in the counties of Texas, Carter, Douglas and Ozark. From 1980 through 1985, non-fishing citations were: 39% of Big Piney River citations, 55.5% of North Fork River citations, and 80% of Current River citations. From 1983 through 1985, non-fishing citations increased from 16% to 51% of the total on the Big Piney River, from 47% to 71% on the North Fork River, and from 74% to 91.5% on the Current River. When agents were given full police authority on Department-owned lands (1981), non-fishing citations increased on Department access areas on the Big Piney and North Fork rivers. The rising popularity of tubing and associated litter has increased the littering citations by Current River agents to 91.5% of stream citations in 1985. Ninety-four percent of the canoe vendors believed patrolling of the streams and enforcement of fishing rules and the littering statute increased compliance by a majority of river users.

Proc. Annu. Conf. Southeast. Assoc. Fish and Wildl. Agencies 40:487-495

Missouri Conservation Agents (agents) in the Ozark Region share the responsibility for enforcement of the Missouri Wildlife Code on Ozark float streams.

We examined agent law enforcement activities and recreational trends on 3 float streams that contrast in size, recreational use, and management. The streams are the Big Piney River in Texas County, the Current River in Carter County, and the North Fork of the White River in Ozark and Douglas counties.

Ozark streams provide more than just fishing. Fleener (1982) found that fishing was the most popular recreational activity on the Gasconade River, but camping, floating, swimming, passive leisure, boating, picnicing, hunting, trapping, and sight-seeing were also important uses. The total recreational use of the Gasconade River increased 120% during the 3-year study. Fleener's findings suggested that this increase may have resulted from substantial use of Missouri Department of Conservation (Department) access sites. While this study does not deal specifically with the Gasconade, we can assume that what has happened there is also happening on similar Ozark streams, particularly the Big Piney River.

In 1981, the Missouri legislature passed a statute which authorized agents to enforce all state laws on lands owned, managed, or leased by the Missouri Conservation Commission. "Police powers" law enforcement is important for maintenance and safe public use of Department-owned areas.

Agents who work on the Ozark streams try to balance their efforts between fisheries law enforcement and the enforcement of laws not directly related to fishery management. Since 1980, non-fishing citations have increased on the streams.

David Foster and Tom Graham, Ozark National Scenic Riverways staff, Van Buren, Missouri, provided data and assistance with this study. Several Missouri Department of Conservation personnel gave support and served as advisers. They include: Otto Fajen, George Fleener, Robert Legler, Spence Turner, Daniel Witter, Robert B. King, W. Creed Millsaps, and Ron Glover.

Methods

Agents' activity and arrest reports for 1980 through 1985 were examined. A survey was presented to 6 agents assigned to work the study areas to gain more information on field activity specifically on streams and Department access areas.

In October 1985 a survey was presented to all canoe outfitters doing business on the study areas. This survey provided information on stream use and agent activities from sources not affiliated with the Department or any other public agency.

Description of Study Area

Big Piney River—The Big Piney River, principle tributary of the Gasconade, flows north and supports a fishery for native species. The growth rates for Big Piney black bass (*Micropterus* spp.), rock bass (*Amploplites rupestris*), and other sunfish are the fastest of the 3 streams discussed (R. E. Legler, pers. commun.).

The Big Piney is smaller than the lower Current, and it is more turbid and fertile. Turbidity is caused by high numbers of phytoplankton rather than clay. It has fewer gravel bars than either the Current or North Fork rivers.

The Big Piney is quite popular as a fishing stream, and it does not support as many canoeists as the Current or North Fork Rivers. Four canoe rentals in Texas County provide only 135 canoes for rent, and none of the outfitters rented tubes (Hoskins 1985).

The Department owns and maintains 6 access areas on the Big Piney in Texas County. These areas are readily accessible to residents of several communities. Fishing, swimming, picnicing, and passive leisure are the recreational pursuits of area users.

North Fork River—The North Fork of the White River flows south, joining Bryant Creek before entering Lake Norfolk in Ozark County. The North Fork is about the same size as the Big Piney, but clearer and it has a higher gradient.

The heaviest used portion of the North Fork is between the Hwy. 14 bridge in Douglas County and the Hwy. 160 bridge in Ozark County.

In addition to a fishery for native species, the North Fork has 10 miles in Ozark

County managed as a trophy trout area. Rainbow Spring, Missouri's fourth largest, enters the river there, providing water cold enough to support trout. This section also supports one of the few wild rainbow trout populations in Missouri open to the general public for fishing (Turner 1983).

Since 1978, special regulations have been enforced. They include a minimum length limit of 15 inches for trout, a daily limit of 3 trout, and a trout stamp requirement for anglers who possess trout.

The North Fork is one of Missouri's most popular canoeing streams. Canoe floater density is approximately 30,000 canoes per year. Agent McNair (pers. commun.) has counted increments of 100 canoes and observed only 2 or 3 canoes with fishing equipment. Canoeing and fishing are both important recreational uses of the North Fork River, but non-fishing canoeists far outnumber the fishermen during the May through September period.

Fishing is important within the trophy trout management area, where 73% of the anglers fished for trout in 1984. However, many of the fishermen fished in conjunction with a float trip and would not be considered serious trout fishermen (Turner 1983).

Turner's data on angler activity and angler opinion indicated the trout fishery is heavily used, and increasing in popularity. In 1982, 46% of the anglers rated the fishery excellent. By 1984, 60% gave it an excellent rating (S. E. Turner, pers. commun.).

Tubing is increasing on the North Fork. Canoe outfitters have 125 tubes for rent in addition to canoes. Six of the 8 outfitters indicated tube rentals increased since 1980, and 5 believed tubing on the North Fork would increase in the future (Hoskins 1985).

Current River—Current River, in Carter County, is the largest of the 3 streams considered. The water is extremely clear, and long, clean gravel bars are common. The river corridor has been owned and managed by the U.S. National Park Service as a scenic riverway since 1964. The exception is a 4-mile portion near Van Buren. Congress excluded this area from management when the Ozark National Scenic Riverways (ONSR) was created. ONSR is a large and complex river recreation area, encompassing 140 miles of land corridor along the Current and Jacks Fork rivers in southeastern Missouri (Marnell et al. 1978).

Public visitation is far greater on the Current than either the North Fork or Big Piney rivers. Total visitation remained fairly constant from 1981 to 1984 at approximately 1.8 million visitors per year.

The lower Current is popular with powercraft users as well as canoeists. Marnell et al. (1978) reported that powercraft users are mainly local residents comprised largely of johnboat users and fishermen. Even though canoe traffic on the lower Current increased dramatically since 1971, floater density remained below upper river zones. Most canoe floaters were from outside the local area. In contrast, a 1974 survey of anglers revealed that 60% were residents of local counties (Marnell et al. 1978).

An increasingly popular form of Current River recreation is tube floating. The

activity center is near Van Buren. An ONSR survey of tube vendors revealed that 93% of the rentals were from Van Buren businesses.

The lower Current River had >25,000 tube floaters in both 1984 and 1985. In Carter County, tube floats are attracting users in numbers comparable to canoeing, picnicing, and powerboating, and far exceed the number of anglers. Tom May, agent district supervisor, reports the ONSR tubing estimates are conservative, because they were from tube vendors. Many tubers use privately-owned tubes and would not be included in the ONSR survey (T. F. May, pers. commun.).

Results

Big Piney River

Two Missouri Conservation Agents reside in Texas County and share patrol duties on the Big Piney River. Agents enforce fishing regulations and the Missouri littering statute on the entire stream. Since 1981, they have also enforced other Missouri statutes on the Department-owned access areas.

Arrest report data for 1980–85 indicates that fishing violations constituted 61% of the citations issued, littering, 28%, and police power arrests, 11%.

Fishing violations accounted for 84% of total stream arrests in 1983, 60% in 1984, and 49% in 1985.

From 1983 to 1985, agents averaged 143 hours/year patrolling the 6 Department access areas. Nearly half (49%) of all Big Piney violations, 77% of the non-fishing violations, and >31% of the fishing violations were found on Department areas.

The ratio of fishing to non-fishing violations is directly related to the patrol methods used. When agents patrol by boat on the Big Piney, they usually contact more fishermen than non-fishermen. In 1985, one-third of all fishing violations were found by boat patrol, but there were no littering or other violations found. When the agents conduct stake-outs and surveillance of access areas, they contacted more non-consumptive users than fishermen.

Agents' boating hours on the Big Piney increased by 50% from 1983 to 1985, while the hours spent patrolling Department access areas did not change. During this 3-year period, arrests for non-fishing violations increased from 16% to 51% of total arrests.

North Fork River

On the North Fork River, 7 of the 8 canoe outfitters reported an increase in canoe rentals since 1980, and 5 believed canoe rentals would increase in the future. Six outfitters felt the trophy trout program had helped attract river users. The remaining 2 respondents said the trophy trout program had no effect on their business (Hoskins 1985).

North Fork Agents emphasized enforcement of the littering law and other statutes on 3 December access areas. From 1982 to 1985, "police powers" and littering arrests increased from 16% to 71% of total stream arrests.

On the Douglas County portion, agents stress police powers and littering law enforcement at Department-owned Hebron Access. Vandalism and misuse of this area have been documented over a period of several years. Over half of the police powers arrests occurred on Hebron Access. Fisheries resource enforcement demands are believed to be much greater on both Bryant and Beaver creeks, and littering and stream abuse by non-fishing recreationists on the North Fork have increased in recent years (R. C. Cook, pers. commun.).

Agents working on the Ozark county portion must enforce the trophy trout rules, handle littering violations associated with heavy canoe traffic, and judiciously apply "police powers" enforcement authority on 2 Department access areas.

From 1980 to 1985, 45% of all North Fork arrests were for fishing violations. Of these, 60% were trout fishing cases. More fishing violations were found in Ozark County because of the trophy trout area. Littering arrests were almost equal in number to fishing arrests and police powers enforcement accounted for 10% of total arrests.

Thirty-nine percent of all North Fork arrests were made on Department access areas, and 47% of these arrests were for fishing violations. One third of all non-fishing arrests were made on the accesses. Department areas on the North Fork are utilized by fishermen as well as the non-fishing public. The arrest data indicates that agents spent considerable time patrolling these areas rather than patrolling on the stream itself.

Current River

The Department has no access areas on the Current in Carter County. Consequently, agents' law enforcement activities are limited to fishing regulations and littering statute enforcement. In addition to Agents' efforts, National Park Rangers enforce the Missouri Wildlife Code and federal regulations in all but the 4-mile portion at Van Buren. Law enforcement in this area is primarily the responsibility of Missouri Conservation Agents.

In 1984, District Supervisor Tom May reported that his non-fishing contacts exceeded contacts with fishermen by a ratio of 3:2, and most contacts with non-fishing visitors were made from May through September. Most sport fishing contacts were made in May and June, and the sucker fishermen out-number black bass and rock bass fishermen in July and August (T. F. May, pers. commun.).

District Supervisor May believes littering is a major problem on Current River, although less than 5% of the stream visitors actually littered. He noted a decline in fishing in recent years, even though fishing quality may have improved. The increase in non-consumptive stream use has discouraged fishermen during the months of May through September (T. F. May, pers. commun.). In 1985, the National Park Service reported an 11% decrease in fishing on the lower Current.

In 1984 and 1985, 90% of the citations issued by Agents were for littering. From 1980 to 1985, 80% were for littering and 20% were for fishing violations.

Local court officials and commercial outfitters have supported the agents' efforts to keep the river clean. All 5 canoe rentals in the Van Buren area expressed

support for the enforcement of fishing regulations and the littering statute; in fact, 4 wanted the agents to enforce all state laws in the stream corridor (Hoskins 1985). Littering is considered a serious resource abuse because of the high volume of public use and the beauty of this stream. The average fine and court costs for littering the Current in Carter County is \$150.00 (T. F. May, pers. commun.).

ONSR Rangers contribute substantially to stream law enforcement. In 1984, Rangers made note of 693 violations on the entire riverways. Fifty-two percent of these were drug or alcohol related, 13% were littering, 9% fishing, and the remaining 26% were a variety of other violations. Chief Ranger Tom Graham commented that few fishing violations were found in Carter County (T. Graham, pers. commun.).

Discussion

Big Piney River

Agents on the Big Piney emphasized law enforcement at 6 Department access areas. Fleener (1982) reported that approximately 20% of the total visits and hours expended on the Gasconade River and Osage Fork were at 10 Department sites on the Gasconade River. Arrest data suggest Big Piney access areas are also used a great deal.

Patrolling by boat was an effective way of locating fishing violations, but littering violations were not often found by this method.

Surveillance of Department access areas was an effective way to locate fishing, littering, and other law violations. Agents may have become more efficient and more aggressive in apprehension of those who violate the law on access areas. Violations on these areas may have increased substantially. For whatever reason, agents on the Big Piney River are finding more violations that do not impact directly on the fishery resource.

Weather and stream conditions, reports of access area misuse and vandalism, and the need to monitor fishery resource harvest are some of the variables that agents consider when prioritizing their stream work.

North Fork River

Agents working the North Fork River reported non-fishing contacts exceeded contacts with fishermen 2 to 1 in 1984–85. The Department is the only public agency routinely providing a law enforcement presence on the North Fork River. Many contacts with non-fishing visitors are opportunities for good public relations. Examples include assisting capsized canoeists, providing information, and search and rescue efforts.

It is important that all police power arrests on North Fork access areas were made in 1984 and 1985. Agents did not use their police power authority here prior to 1984.

Enforcement of the fishing regulations is top priority for agents who work the North Fork River. However, the number of citations for non-fishing violations is

indicative of the high numbers of non-fishermen on this stream. Agents often find non-fishing violations while patrolling for fishing activity.

Current River

Five licensed canoe liveries in the Van Buren area have a total of 1,950 tubes for rent. All 5 vendors indicated tube rentals increased since 1980, and 3 believed that tube rentals would continue to increase in the future. In contrast, only 1 vendor reported an increase in canoe rentals since 1980. One veteran canoe outfitter explained that his customers once came for a weekend and rented canoes for 2 days. Today, many canoe 1 day and go tubing the next. He now has 400 tubes for rent along with his 205 rental canoes (Hoskins 1985).

Most of the popular tubing water is near Van Buren and it is outside the jurisdiction of the rangers. The responsibility for policing the littering, often associated with tubing, is largely in the hands of conservation agents.

May reports that canoe and tube floating account for the vast majority of river use in Carter County from May through August (pers. commun.). Agents spend a great deal of time making good "public relations" contacts with tubers, like rescuing those who get in rough water. Fortunately, tubing activity is limited to hot summer days, and so far, only a limited portion of the stream.

General Discussion

Many of today's river users live in an urban environment. Canoe enthusiasts during the 1960s tended to be more in search of a primitive recreation experience. Today's floating fraternity is characterized by a different set of values. This is not to imply that contemporary standards are unworthy—they are just different (Marnell et al. 1978).

Law enforcement duty on streams is just one aspect of an agent's job. Emphasis on stream work fluctuates from year to year and from season to season. Sport fishing and other recreational uses are heaviest from April through September. Spring rains sometimes cause high waters and reduce stream visitation. Drought during the summer may cause extremely low water levels, discouraging canoeists. This is especially true on the upper portions of the Big Piney and North Fork rivers.

Stream law enforcement time is also affected by other fishery responsibilities. For example, Ozark County Agents enforce fishing regulations on Norfolk and Bull Shoals reservoirs and, in addition, they work 44 miles of stream.

Seasonal hunting activities affect the amount of time available for stream work. For example, the spring turkey season and law enforcement patrols before the season often dominate an agent's time in April and early May.

The ease of access to a stream affects how often an agent patrols. On the Current River, it is relatively easy to launch and operate a johnboat, without assistance. An agent can patrol the entire Current River, in Carter County, by jet boat without additional assistance or a second vehicle. On the Big Piney and North Fork rivers, boat patrols are not as easy. They often require 2 men and vehicles, and

driving time to spot a vehicle at a "take out," and drive to the launch site. Under these conditions, agents do not have the flexibility in patrol planning that Current River agents enjoy.

The Fair Labor Standards Act, September 1985, has made it more difficult for agents to schedule work in pairs. It may be necessary to hire commercial outfitters to move vehicles and boat trailers while agents patrol. Assignment of jet-powered outboard motors on the Big Piney and North Fork rivers is another alternative.

Fishing is still important on streams. However, canoeing, tubing, and other recreational activities combined are enjoyed by many more visitors. The fishery resources of streams are probably better off. If every canoe transported a serious angler, fishing quality would undoubtedly be reduced. There is some indication that the quality of the fishery may actually be improving on some float streams.

Beyond the arrest data, the agents' presence on a stream must be considered as a deterrent. The actual number of arrests understates the value of stream patrols. The subjective importance of a visible law enforcement presence cannot be adequately measured. However, 94% of the outfitters believed patrolling of the streams increased compliance by a majority of river users (Hoskins 1985).

Summary

Since 1981, when police powers were authorized, non-fishing citations on Department access areas have increased on the Big Piney and North Fork rivers. On the lower Current, the growing popularity of tubing and associated littering have caused an increase in litter citations by Carter County agents. In recent years, more than 90% of Carter County stream citations were for littering. Agents detest littering and make more littering arrests annually than all other Missouri police agencies combined (Cook 1985). The efforts of rangers and conservation agents represent a substantial law enforcement presence on the lower Current River.

Eighty-two percent of the outfitters believed agents should not only enforce conservation rules, but also enforce all state laws on the entire stream corridor (Hoskins 1985). Most outfitters recognize the value of law enforcement on the float streams and believe most of their customers appreciate the work done by agents.

Recreational pressure on Ozark rivers continues to increase. Now, more than ever, we must treat the rivers with respect. The life of our rivers and the quality of our river experience depend on it.

Ozark agents will continue to be a presence on the streams. Patrol priorities vary from stream to stream; we shall assess each separately to best deal with specific resource problems. The agents appreciate Ozark streams for their unique and special values. They strive to serve the best interest of the streams, the fisheries resources, and the people who enjoy Ozark float streams.

Literature Cited

- Cook, P. D. 1985. Access use and abuse. *Missouri Conservationist* (July):46-47.
- Fleener, G. G. 1982. Recreational use of the Gasconade River. Mo. Dep. Conserv., Jefferson City. 25pp.
- Hoskins, J. D. 1985. An opinion survey of canoe liveries on 3 Ozark float streams in southern Missouri. Mo. Dep. Conserv., Jefferson City. 4pp.
- Marnell, L., Foster, D. and K. Chilman. 1978. River recreation research conducted at Ozark National Scenic Riverways, 1970-77: a summary of research projects and findings, U.S. National Park Service, Van Buren, Missouri. 100pp.
- Turner, S. E. 1983. An evaluation of a high quality trout fishery in Missouri. Mo. Dep. Conserv., Jefferson City. 29pp.