(9) Eight hours of instruction on the Hot Springs Police Pistol Range. All instruction and firing supervision on the range is by Hot Springs Police Training Officer, Sgt. Joel Wall, who has done a wonderful job and has been most cooperative.

These instructions as outlined comprise thirty-six hours of our total classroom instruction. The rest of the classroom time is used mostly for instruction on the Inforcement Code Book and State Boating Regulations. Of course, most of the cadets are knowledgeable of most of the rules and regulations and a great deal of time is spent discussing the practical and more prudent things to do in given circumstances.

The week closes with working Lake Ouachita, usually all Saturday afternoon and evening as long as activity warrants. Then, Sunday morning the Commission Director addresses the cadets and assignments are made.

In summary, the Arkansas Game and Fish Commission initiated the Wildlife Officer Cadet School and the In-Service Training School for the purpose of giving new Wildlife Officers some formal training in the operation of the Commission before assigning them to positions in the field. The Commission is also making an effort to have all presently employed field personnel complete the schooling at Arkansas Tech to familiarize them with all phases of conservation.

RECREATIONAL OPPORTUNITIES AND ENVIRON-MENTAL ENFORCEMENT PROBLEMS ASSOCIATED WITH THE UPPER MISSISSIPPI RIVER

By HAROLD WHITE
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I have heard so many fine remarks about this Association by our good Chief, James Bailey—I had to find a way to attend. Up to now I have been impressed. I can also appreciate the remarks George Jessel said about the human brain: He said "The human brain is a wonderful thing. It starts to work the moment you are born and never stops until you stand up to speak in public." In Missouri, my beat is the Mark Twain Country, Hannibal, Missouri. When my supervisor and chief asked me to take this session, I thought of Mark Twain's comment about an impending tar and feather party. He said, that if it were not for the honor of the thing he would forego the whole affair.

It is an honor to appear before this group and I have several people to thank for my being here.—Those that had the final say on who the outstanding Missouri agent would be—To a wife that understands an agent may be in for dinner at 5 in the afternoon or any time between then and five the next morning—To a supervisor that leads, guides, teaches, directs and pushes, in order for his men to be recognized in the conversation movement.

Before getting too far into the problems of the Upper Mississippi, let me first give you the recreational potentials. There are twenty-six pools from the Alton Dam just north of St. Louis covering some 900 miles. There are 335,000 surface acres of water in these pools. It is estmiated that this area services 1 million, 650 thousand anglers annually. It is noted that commercial fishermen harvest about 10 million pounds of fish per year with a value of one million dollars. There are 6 pools in the Missouri portion of this boundary stream that cover better than 86,000 surface acres of water.

This vast water area offers tremendous recreational opportunities. The pools or lakes that were formed by these dams created many islands, sloughs, chutes, sandbars and shallow marsh areas. Levees along the river protect the fertile bottom farm land. In essence, the river has been contained by man. Water associated recreational oppor-

tunities are many and varied. Fishing by pole and line, troutline and jug-line methods offers as much if not more success per hour than any waters in the state. The famous Mississippi River Catfish is the most sought after, followed closely by the Walleye and White Bass.

Boating and waterskiing on the river continues to grow in popularity. The sandbars and islands offer fine camping areas and each year more and more persons use these areas. In the fall and winter months the river continues to attract people. Waterfowl hunting at times is excellant and the many islands provide good opportunities for the deer hunter as well as the small game and furbearer hunter, and in recent years the wild turkey has taken up residence on some of the larger islands. Most lands adjacent to the river and all but a few of the islands are owned by the United States Government and administered by the Corps of Engineers. Over the years use permits have been issued to individuals and corporations. Weekend cabins and year around homes as well as various types of business and industry have been established along the river. Several of the homes are expensive and multi-million dollar industrial complexes have been recently constructed.

The river is many things to many people.

To the fisherman, it can be the opportunity to spend a few relaxing hours, perhaps alone or in the companionship of a close friend.

Others may earn their livelihood from the fish that they catch from

the river.

The boater and camper can find areas that are away from others and enjoy the solitude that the river offers.

The waterfowler can see by that first light of dawn, that flight of mallards, with wings set, coming in over his spread of decoys.

The young lad can sit at the river's edge and pretend that he is Huck Finn and dream of the many exciting challenges that life offers.

Finn and dream of the many exciting challenges that life offers.

To others, it is a place to dispose of worn out and no longer useful items

Or a convenient place to carry our industrial and human waste away from our doorsteps and not think about the effect it might have on others further downstream.

It is an efficient and relatively inexpensive method of moving various goods and products from one point to another.

To some business-minded individuals, it offers inexpensive, federal land on which to operate a salvage yard.

The face of the river continually changes. Naturally shifting sandbars, small islands appear where there were none, others are chewed away by the ever present current and occasionally, whole islands disappear. These changes are expected and accepted. The changes that are not being accepted as readily as they once were, are the changes made by man.

More, longer and higher wing dikes. These are constructed by the Corps and are strategically placed in an effort to direct the water toward the channel and reduce silting.—We have in the lower pools, a different river. Our river at Hannibal has a sediment load of 70,000 tons per day. This same river at St. Paul has only 500 tons per day.

Dredging of the river channel is ever present and the placement of the spoil creates many unwanted features. At times this spoil is pumped from the channel and deposited in the upper end of a chute, thus blocking off any flow of water.

At other times the sopil is pumped into shallow areas along the banks. Within a few years, willow growth has been established and another step has been taken in narrowing the river.

These projects are designed to maintain and improve conditions for commercial navigation. Tonnage on the river continues to increase. More powerful towboats and longer and wider barges travel the river. In September, 1971, a total of 2,238,228 tons of cargo passed through Lock and Dam 21, North of Hannibal, Missouri. If we considered the

number of commercial towboats on the river and their crews, this number would equal that of an average size Missouri town.

Each of these boats are self-sustaining, carrying fuel, food and the necessities to keep the crew comfortable. They also are faced with the problem of disposing of waste, trash, garbage and spilled fuel from the bilges. Certainly not all of these operators throw or pump their waste material into the river, but some are definitely guilty of this. Enforcement against dumping of garbage, trash, waste and pumping of bilges is difficult. Much of this is done during the hours of darkness, moreover, it is a matter of finding time to direct your efforts toward this. Presently, we do not have any personnel assigned to the river. Each officer that is assigned to the counties along the river, has county responsibility. This affords little actual time to make a direct effort toward this type of enforcement.

Commercial navigation interest have priority over any other users. As an example, this slide shows a pleasure boater waiting to lock through at one of the navigation locks. This individual was required to wait one hour and 20 minutes so that a 16 barge tow could clear the locks. A pleasure boater can lock through in 10 minutes.

The river, even with its many problems is still one of our prized resources, every effort should be expended to preserve it for future generations.

Routine enforcement of Missouri fish and game regulations on the Mississippi River is not without problems. That imaginary line which is located in the center of the navigation channel divides the two states. This line changes as the channel changes. In some stretches of the river it may be very near the Missouri shore, in other areas, near the Illinois shore. There is a reciprocal agreement between the two states on fishing permits, which allows an individual from either state to fish both sides of the river. Frequently a person from Illinois, who is in violation, will move to the Illinois side of the river upon seeing the Missouri officer approach him. Once the person is across the channel, he cannot be brought back into Missouri without his consent. In recent years, larger and more powerful outboard motors used by many persons, particularly the commercial fisherman has added to this problem.

Coping with the individual polluter and business enterprise, as well as the cabin owner, that are located adjacent to the river is also difficult.

The state courts are not eager to take cases against these individuals since they are operating under a use permit from the federal government. It is felt by some judicial persons, that the most effective system would be to cancel the use permit and thus eliminate the problem at the source.

- ie: The cabin owner was issued a permit to construct a building on federal land. No restriction was imposed on how to dispose of the sewage and other refuse. The easy and least expensive method is to run a pipe from the cabin into the river.
- ie: The salvage yard operator was issued a permit to operate on federal land along the banks of the river. No restriction was imposed on how close to the water he can pile the scrap metal he buys. The items that have no value to him can be placed very near the water's edge. Each time the river floods, these items are washed downstream and away from the salvage yard.
- ie: The industrial plant is allowed to construct a barge loading facility. The material that is loaded on barges may be highly toxic to fish and wildlife. Occasionally, spills occur, however, up until the time fish or wildlife are affected by this spill, the Department has little authority to prosecute.

You have seen some of the problems we have on the Upper Mississippi. Because the waters form state boundaries, the states of Missouri, Iowa, Wisconsin and Minnesota established an Upper Mississippi

River Conservation Committee, including federal agencies. Their objectives are:

Firstly—to promote the preservation, development and wise utilization of the natural and recreational resources of the upper Mississippi. And

Secondly—to formulate policies, plans and programs for carrying on cooperative studies.

These efforts are intended for the benefit of fishermen, hunters, boaters, naturalists, and generally for all outdoorsmen.

The Enforcement Committee from these states set goals such as:

- 1. Identifying all enforcement agencies having a capability and responsibility to the river resource and its participating public.
- 2. Promulgation of uniform enforcement standards. Attempting to have more uniform regulations where the river forms a common boundary.
- 3. Guidelines for relaying information and transmission of evidence to the responsible agency.

The enforcement committee has held pollution symposiums along the river to help promote these objectives.

All of this is done in an effort to enhance the recreational opportunities that this great natural resource, the Mississippi River, offers.