Tomorrow's Fishing in Idaho

By
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Fisheries Biologist

In this day and age when there is so much controversy and difference of opinion on taxation, foreign policy, price supports, use of natural resources and practically any issue which is discussed, I believe I can make one statement in which everyone would agree. In line with our theme—Water —Our Destiny—, I believe I can say that if we don't have any water we won't have any fish, and I trust no one will disagree with me.

However, fish are not the only things which depend on water. Actually, in the arid and semi-arid Rocky Mountain West, the whole economy is geared to water. When we speak of water conservation, we must at the same time speak of land conservation, for our water supply is as dependent on good land management as fish are dependent on water.

I'm certain that the relationship of land to water will receive considerable attention at this meeting and I need not discuss it here. Rather I prefer to spend the time alloted to me to discuss the effects which the demands of a growing population and a growing economy have upon our water resources which directly influence our fishing.

With a growing population and economy the tendency will be towards more emphasis on *exploitation* and less on *conservation.* Yet, it will be more vital than ever that we use our natural resources wisely.

We are told there is a growing need for electrical power. Power generally means the construction of dams which often destroy suitable habitat for our fish populations. The salmon and steelhead migrating to Idaho to spawn are being faced with an increasing number of obstacles to their upstream movement. The successful return of young salmon and steelhead to the ocean presents even a greater problem. While a good deal of work and experimenting is being done, unfortunately our knowledge of how to pass anadromous fish over dams and return the young migrants to the ocean is still very, very limited. We are hopeful that the answers, if indeed there are answers, will be found before more and more of these spawning runs are reduced or completely annihilated.

"Our economy is geared to water, and our water supply is dependent on good land management"

The demand for timber, wool and beef production, when unwisely handled, sometimes results in the destruction of watersheds—with silt loaded, heavy spring run-offs and meager water supplies during the summer months. Deer and elk herds are limited by the amount of winter range available. Fish populations are often likewise limited to what the stream will produce during the period of time when habitat conditions in the stream are less suitable.

The requirements for irrigation to produce farm crops are increasing. Waste water returning to the stream is often full of the top soil from the irrigated fields. Fish are being lost to irrigation diversions. In addition, less water is being left in the regular stream channels.

Mining, especially dredge mining, where the entire valley floor is completely disrupted, has a drastic effect on the fish habitat in the immediate area. In addition, unless carefully controlled, the stream below the dredging operations is often subjected to heavy silt loads. It doesn't take a conservationist or biologist to realize what effect this has on fish populations.

While mining is one form of stream pollution, an even more serious form is the discharge of domestic and industrial waste into our waters. As our population and industries continue to grow this will become a more vital problem. I wonder how many of us realize there is not a single primary sewage disposal unit in the entire upper Snake River Valley. We who live in the area cannot be proud of this record.

I could list other factors which are having a tendency to further restrict the habitat suitable for fish production. However, the ones mentioned give some idea of the problems we are facing.

We realize that mining, lumbering, power, farming and grazing are neces-

(Continued on page four)

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COVER

Henrys Lake, in the Southeastern Idaho uplands, is noted for its big trout as well as its scenic beauty. This view from the north shore includes Mt. Sawtelle in the distance. The lake drains into the famed Henrys Fork of the Snake River, and the area is visited by thousands of fishermen and tourists annually.

Wildlife Resources of the Future . . .

Invariably, when outdoor enthusiasts get together to discuss fishing and hunting activities, someone expresses the hope that these resources can be maintained for the future. As one sportsman stated while looking at his five-year-old son in a moment of reflection, "You know, in fifty years my boy will be fifty-five years old. Gosh, I hope that there will be something left for the old codger to hunt!"

We realize that the increased economic demands being placed upon the earth's resources of necessity will affect the abundance of wildlife. This means that wildlife will be crowded into smaller living quarters. Operating under this assumption it becomes evident that we must make the remaining habitat produce more abundantly; therefore, skilled technicians are spending hours and days experimenting with different types of forage to determine how it might be induced to grow in areas which have been depleted either through disease, over-use, or other factors. In this way, populations can be maintained, although in a more restricted area.

The number of people participating in hunting and fishing activities has doubled in the last ten years. This means that if wildlife populations had remained fairly constant, there would only be half as much game available per hunter as there was formerly. In addition, modern civilization has developed many complexities which affect directly, and indirectly, the life cycles of fish and game.

In order to meet the challenge presented by these problems, we must have well trained, experienced personnel to work on wildlife resource management. A knowledge of wildlife requirements is necessary, which may be obtained by training and experience. In addition it is essential that wildlife managers have the confidence of the people.

A well-organized sportsmen's group is one of the best safeguards assuring competent management of the resource. They can require that fish and game departments be given adequate authority to undertake desirable programs and see that sufficient money is available to put them into effect. Employment protection should be given personnel so they may carry out long range planning. Sportsmen can ask for an adequate enforcement staff, and competent personnel to make accurate inventory of game stocks and concentrate on research problems.

Fish and game departments must analyze and prepare long range programs, defining their objectives and outlining the methods and procedures to be employed to achieve them. In dealing with living things the time element becomes important. It may take ten years to rehabilitate the results of mistakes made in one year. Increased fishing and hunting pressure, and a highly competitive economy have eliminated hit-and-miss operations. In addition to sound planning the need for an informed, interested public is essential. It is the responsibility of the department to see that the public is informed of programs and progress.

These are some of the things that must be considered. With a sound basic program and with a sound concept of the need for conservation, wildlife populations can be maintained for the future.–ROSS LEONARD, *Director*

TOMORROW'S FISHING IN IDAHO

(*Continued from page four*)

sary to our economic structure. I'm certain that we as conservationists are not opposed to development and progress. However, I sometimes feel that the word progress should be better defined. We should not be obstructionist in any manner, shape, or form. However, in this complex problem of multiple use of our waters, we should insist that fish be given a proper priority in relation to the other interests which have demands on the water. In the past it is questionable if the proper balance has existed. We realize that we cannot keep all our lakes and streams in their original condition, nor do we expect to. However, neither is ruthless exploitation to be condoned.

Other interests have organized and spent time and capital, to sell their programs to the people. We cannot criticize them. One of our primary requirements is to make a living. It is only human nature for each individual, group, or company to promote his own interests. If we criticize at all, perhaps we should criticize ourselves for not selling conservation. However, we cannot expect that conservation will be practiced, especially if it means an immediate reduction of income, or increased capital outlay, unless competing interests are sold on conservation, or through public opinion, regulations are imposed.

The voice of the conservationist has often been weak and feeble—unheard by the people. Sporadic rearguard action has been the rule instead of an active and organized campaign to sell the values of conservation and the values of fish and game.

The values of fishing can compare favorably with the values derived from a competing interest, although it is difficult to place a dollar sign on the value of recreation which people obtain from fishing. To the fisherman, this value is large.

Yet, in order to compare with other interests, we must use the dollar sign as the yardstick for comparison as a common basis to judge the merits of fishing with other demands on land and water. This we can do by looking at the business which fishing and hunting generates, such as the sale of equipment, gasoline, meals, lodgings, guide services, etc. For instance, the Missouri River Basins unit of the Fish and Wildlife Service estimated that a 5.5 mile section of the North Platte River was worth $15,163 per mile in trout fishing expenditures. Remember, that $15,163 is per mile of stream.

The 1953 Biennial report of the Minnesota Fish and Game Department estimated that the business generated by fish and game in Minnesota was $250,000,000 annually. A recent survey indicated that the business generated by fish and game was equal to all the business done at gas stations throughout the nation. The same survey stated that business generated by fish and game actually exceeded the total business transacted by all drugstores throughout the country. Fantastic? Fish and game is big business—bigger, I believe, than even we who are deeply interested in wildlife believe it is. We need not take a back seat when it comes to justifying fish and game. And remember, the figures mentioned do not include recreational values or the value which fish and game animals would have across the meat counter.

Another factor which is influencing our fishing, besides the disappearance of suitable habitat, is the extremely large increase in the number of anglers which are utilizing our lakes and streams. Further justifying the conservation of our fish resources, but adding a strain on those populations.

Today, in the United States we have 3 licensed anglers where 20 years ago we had only one man wetting a line. A 200 per cent increase in 20 years. Nationally there were 1,000,000 more anglers in 1953 than the year before. Idaho has experienced

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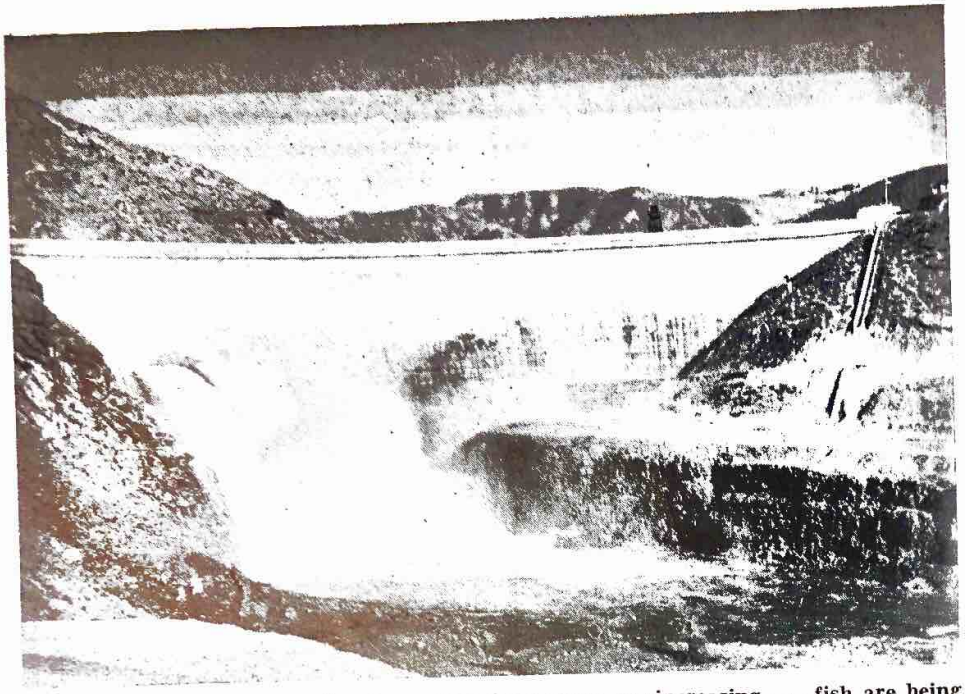


"The requirements for irrigation to produce farm crops are increasing . . . fish are being lost to irrigation diversions. In addition, less water is left in the stream channels."

about a 90 per cent increase in fishermen in the past 10 years.

Good fishing isn't "just going to happen" any more. It will have to be created by the type of management that will yield the greatest return for the remaining habitat. Our education program must be continued and expanded to reach more people.

The future of fishing actually rests upon the shoulders of you the sportsmen, you the conservationist, you the people. A few lines from the December issue of the *Missouri Conservationist* has this to say:

> "In the social field, conservation is quite acceptable, although not quite on dinner-table level except at wildlife banquets. Virtually everyone pays lip service to it, and it is getting difficult to find a man who'll sneer at motherhood, democracy, or conservation. The trouble is, we still leave motherhood to women, democracy to Fourth of July orators, and conservation to government agencies, farsighted laymen and biological scientists."

I'm afraid that only too often that statement hits the nail squarely on the head. Let's not have this be true in Idaho. The job is too big for your Fish and Game Department and other government agencies concerned with conservation. We need your active support. You, the people, are the ones who must decide how our lands and waters are to be used. You are the ones who must make sure of a high priority for our fishery resources. The needs of our economy must be carefully evaluated on the basis of facts and sound thinking.

Once you have drawn your conclusions, support your position through education and public opinion, through the State and Federal legislatures if necessary. Good conservation practices will not be handed to us on a silver platter.

Now I realize I haven't painted a bright future for fishing in Idaho. However, I personally am optimistic. Idaho is blessed with many streams and lakes and is one of the few remaining states which still has good fishing.

The people of Idaho, like most of the nation, are becoming more conscious of the true value of our natural resources. We can have increased industry and agriculture as well as good fishing in Idaho, but only if we make certain that our lands and waters are wisely managed and properly used.

Tomorrow's fishing in Idaho will be exactly what we the people make it. ▲▲▲

It is fortunate that today there is a growing recognition on the part of land users and the public generally of the need to strengthen conservation in our upstream watersheds and to minimize flood damage. *Dwight D. Eisenhower*

WILDLIFE RESOURCE SURVEY

A wildlife resources survey conducted by Willis C. Royall, Jr., showed that resident and non-resident license holders spent an estimated $43,300,000 in Idaho hunting and fishing during 1953.

Questionnaire forms were mailed to license buyers chosen by random sample of fish and game department duplicate license forms. Each person who did not make a return within 16 days was mailed a follow-up letter and questionnaire urging them to respond.

Expenditures of all Idaho resident licensed sportsmen totalled over $34,600,000. Non-resident license holders spent over $8,600,000. Transportation and food and lodging comprised 38 per cent of all resident, and 61 per cent of all non-resident expenditures.

Some interesting observations were made by comparing the survey results with findings of a similiar survey made in Washington in 1950. Although the population of Washington is four times as great as Idaho their total resident license holder expenditure is only about 2.4 times the estimated Idaho total for the same year. On the other hand, Idaho sportsmen show a lower per capita expenditure in every type of sport.

All non-resident per capita outlays by type of sport were much higher than the corresponding resident per capita.

Horses and packers absorb 33 per cent of the non-resident big game hunting outlay, but only nine per cent for residents. Both classes spent a total of over one million dollars for packing and guide services during the year.

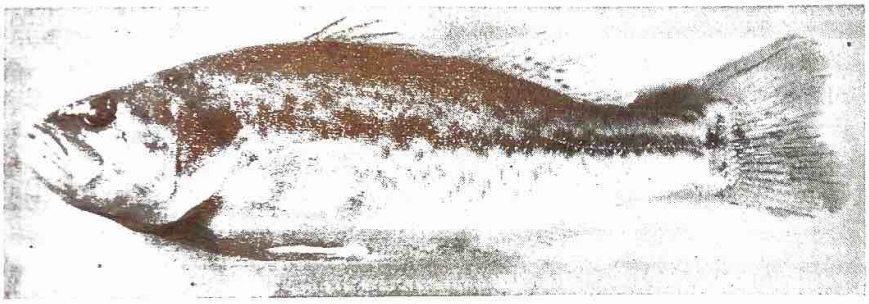
Expenditures per capita by type of sport for both resident and non-resident sportsmen are given in the following table.

	Resident	*Non-Resident*
Upland Game Hunting	$37.00	$109.00
Big Game Hunting	74.00	199.00
Waterfowl Hunting	36.00	114.00
Fishing	93.00	
Season Fishing		180.00
Tourist 5-Day Fishing		95.00
Other General Purchases	75.00	27.00

FISHES OF IDAHO No. 21
LARGEMOUTH BASS
Micropterus salmoides (Lacepede)

BY JAMES C. SIMPSON
Chief,
Fisheries Management Division

The largemouth bass is an introduced species of fish. The first record of its introduction into Idaho was 1887 when Mr. William H. Ridenbaugh received 50 6-inch fish, which were retained in a small pond. In 1892, he released 2,240 bass from his pond and the U. S. Commission planted 1,597 bass. Both releases were made in the Boise River. Since that time bass have been spread over the entire State. At one time it was particularly abundant in the sloughs along the Boise River. With the drainage and filling in of the sloughs, however, its numbers have been reduced until it is almost non-existent in the area. At the present time it is found in greatest abundance in the lake region of Northern Idaho.



Largemouth Bass

Not all releases of largemouth bass have been made wisely. In some cases, they have been planted in trout waters to the detriment of trout. Also, they have been planted in waters which were too cold, thus resulting in poor growth.

The preferred habitat of the largemouth is a lake, pond or sluggish stream with marginal areas which have growths of both submerged and emergent aquatic plants. It does best in waters where the summer temperatures reach 60 to 65 degrees F.

The food of small bass is composed chiefly of water fleas and small insects. As the fish grow older, the diet changes principally to fish, although frogs and crayfish are eaten when available.

Spawning is controlled largely by weather conditions. As the water temperature warms to 60 to 65 degrees F. the male bass selects a nesting site and clears an area for the female to deposit her eggs. From the time the eggs are deposited until the fry leave the nest, every object approaching the nest is ferociously attacked and driven off. If a sudden drop in temperature of 10 degrees F. or more occurs, bass nests are deserted and the eggs and newly-hatched fry die. Eggs are usually deposited in 2 to 4 feet of water. If available, a bed of fine gravel is selected for nest building; if not, a mass of roots or dead vegetation will suffice.

The largemouth bass is olive green above with the underparts whitish. There is usually a dark lateral band on the sides which covers 3 or 4 rows of scales. It can be distinguished from the smallmouth bass by the angle of the jaw. In the largemouth, the maxillary bone extends to or beyond the posterior margin of the eye, while in smallmouth it does not extend beyond the middle of the eye. The largemouth differs from the smallmouth in the absence of vertical bars and dark mottlings on the side.

It is the most popular of the spiny-ray fishes with fishermen. However, due to a greater abundance of perch, crappie and brown bullheads, probably more of these species are caught throughout the State. The largemouth bass is not considered as "gamey" by most anglers as its close relative the smallmouth; it hits a lure hard and puts up a good fight. However, the duration of the struggle is less than that of the smallmouth. The endurance of the largemouth is probably less because it lives in more sluggish waters.

"FANCY PERCH"

If you like your pan fish prepared in really tasty fashion, you'll go for the following recipe for a sideboard snack served cold with the necessary concomitants. Savored in a cool, comfortable spot on a hot day, together with your favorite chilled drink, this is really something.

Lucile Nelson, who lives on Hauser Lake in Kootenai County, and who will always take time out from the duties of caring for the needs of fishermen using the boats at the Nelson docks to relax and talk about the good outdoor life, passed on to us this recipe after we had sampled the delicacy and exclaimed over it.

"Fancy Perch," as Mrs. Nelson calls this snack, are first skinned and then marinated in the following mixture, in a refrigerator pan: For two dozen 8-inch perch use one medium clove of garlic, and three-fourths cup of soy sauce, adding a sprinkle of salt.

Perch should be turned two or three times during the day, keeping the fish in the mixture for two or three days. Then drain and pan fry. Do not roll fish in flour or cornmeal. Serve cold. Lucile says the recipe works equally well with other kinds of pan fish.

Clearing up rampant ills of the land and recovering our drainageways from deliberate expropriation as sewers is the biggest job in "stream improvement" and the biggest job in fish and wildlife management. Compared with this major undertaking, whatever else we do is of minor consequence.

Durward L. Allen

GAME HOGS YOU MAY KNOW . . . . *by Jack Mitchell*

THE "CRIPPLE-WASTER"

If he finds all the crips, he'll have to quit shooting, and that's no fun! Words fail us when it comes to this guy. If he ever does get a retriever, we bet it bites him.

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