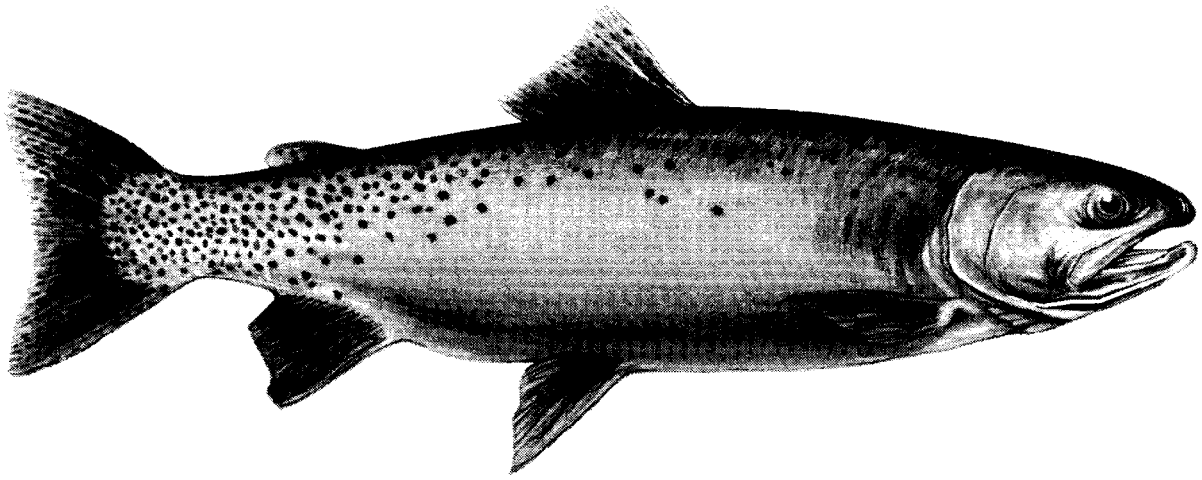
FISHERIES MANAGEMENT PLAN
1996-2000



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FISHERIES MANAGEMENT PLAN
1996-2000

INTRODUCTION AND PURPOSE

Title 36 Idaho Code, declares fish and wildlife to be the property of the state of Idaho and mandates the Idaho Fish and Game Commission (Commission) to "preserve, protect, and perpetuate such wildlife and provide for the citizens of this state and as by law permitted to others, continued supplies of such wildlife for hunting, fishing, and trapping." Under the Commission's guidance, the Idaho Department of Fish and Game (Department) manages the fish and wildlife of the state.

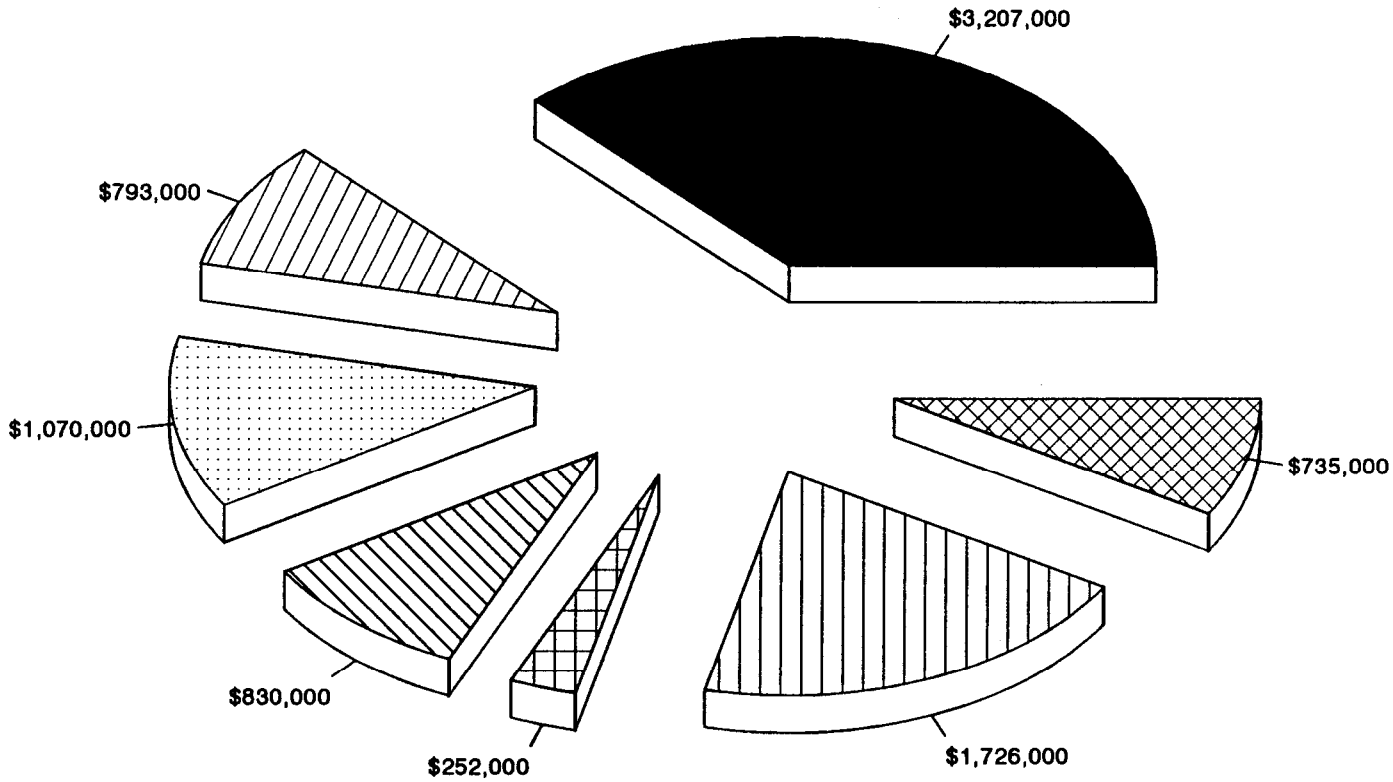
This fishery management plan describes the management direction which the Department intends to pursue over the next five years in order to provide the continued supplies of fish and fishing opportunity as mandated by law. It describes overall Department and specific fisheries policies and sets forth major fisheries goals and objectives. In some cases, the management direction outlined in this plan is a continuation of long-established programs. In other cases, factors limiting fisheries are identified and corrective measures proposed. After public review and Commission **approval,** this document will be the guide for management of fishery resources in Idaho from 1996 through 2000. Annual work plans of field and headquarters fisheries managers will be developed within the priorities and framework of the plan.

Budget preparation for fisheries activities of the Department will be within the guidelines of this plan as needed to support annual activities. The Department receives about $6.6 million annually from the sale of fishing licenses and the Federal Sport Fish Restoration Program, which places a tax on fishing tackle, equipment, and motor boat fuels. We also receive $10 million in "contract" money to implement and evaluate various mitigation programs, primarily for salmon and steelhead. The Department receives no general state tax money to manage fisheries and aquatic resources. Excluding the activities which are funded with contract money, the Department currently spends about $8.6 million on fisheries related programs ($2 million more than anglers contribute) (Figure 1). Programs listed are those which the Department intends to initiate or accomplish within this planning period. A summary of the previous five-year program period goals and accomplishments is included (Appendix A).

The Department has management responsibility for 83 species of fish in Idaho, of which 14 species are native game fish. An additional 28 species are game fish that have been introduced (Appendix B). Populations of these fish occur throughout the 26,000 miles of rivers and creeks, 225,000 acres of lakes, and 239,000 acres of reservoirs found in the state.

The Idaho Department of Commerce estimates that the recreation and tourism industry is the third largest in the state. Sport fishing is a significant part of this big business. Sport fishermen in Idaho spent nearly $400 million in 1991. The 1992-93 steelhead fishery generated $52 million to $98 million of economic activity. Even the short nine-day fishery on three miles of the Little Salmon River for 500 spring chinook returning to Rapid River Hatchery in 1992 generated $675,000 to $1.5 million to the state's economy that year.

Figure 1. Where fisheries dollars are spent.



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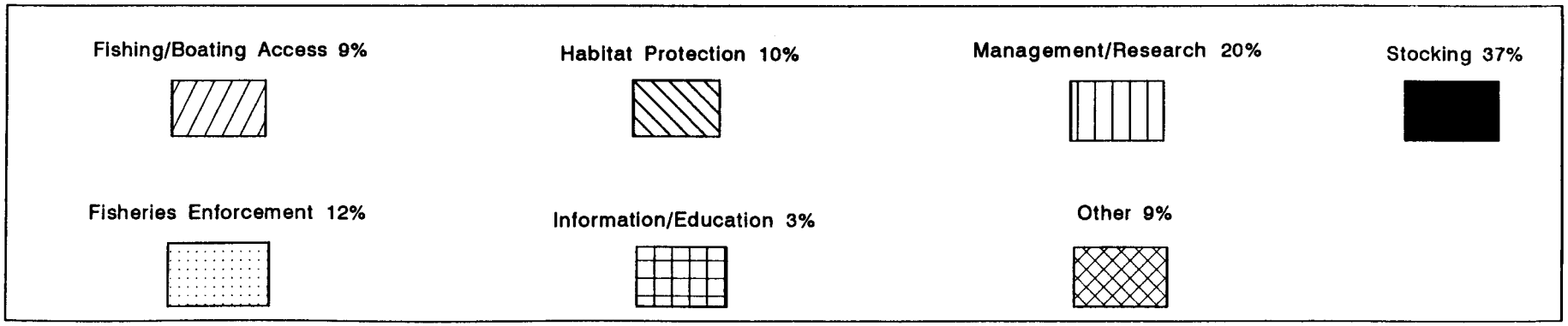


Primary fish species from a management standpoint are native sport fish, including rainbow trout, cutthroat trout, bull trout, steelhead (rainbow trout), chinook salmon, kokanee salmon, whitefish, and white sturgeon. Two of these, steelhead and chinook salmon, migrate to the ocean to complete a portion of their life cycle (i.e., they are "anadromous" species), and thus management of these two species involves cooperative agreements among other state, federal, and tribal agencies. Introduced game fish, such as brown trout, lake trout, brook trout, landlocked coho and chinook salmon, bass, sunfish, perch, crappie, catfish, walleye, northern pike, and tiger muskie, provide sport fisheries where habitat conditions are unsuitable for native species and also provide a diversity of angling opportunity. A small group of fish species, including certain species of game fish and five species of nongame fish, have been designated as "Species of Special Concern" because of limited range in Idaho, low populations, or threats to their existence.

The major responsibility of Department fisheries activities is to provide continued supplies of game fish for sport fishermen. A top priority is to manage populations so that sport fishing demands can be met through natural production of fish species. Management activities are aided by a wide range of research projects and other **information-gathering** activities. In areas where sufficient fish habitat exists but natural production is insufficient to meet demands, fish stocks may be rebuilt through supplementation. Appropriate wild stocks will be evaluated and utilized wherever possible. Hatchery subcatchable (put-grow-and-take) and catchable (putand-take) programs are used in other heavily-fished, public waters to provide recreational fishing opportunity, with emphasis on those **areas** that will allow a high proportion of hatchery-produced fish to be returned to the creel. A variety of regulations are used on different waters to provide a mixture of sport fishing opportunities. New fishing opportunities will continue to be developed through reclamation of damaged habitats and development of new water areas.

The five-year focus of the anadromous fish program is to maintain hatchery-supported steelhead fisheries in Idaho and take management actions in Idaho necessary to preserve wild steelhead, chinook, and sockeye salmon. In addition, efforts working toward and promoting actions which improve the mainstem Snake River and Columbia River migration route for these fish will continue. These efforts are needed to improve the survival of salmon and steelhead leaving Idaho and returning from the ocean. Improved survival is the key to restoring salmon and wild steelhead runs and the traditional fisheries of the 1970s they supported.

The Department also has responsibility for **management** of commercial fisheries in Idaho. Commercial fishing in public waters is limited to nongame fish species, crayfish, and mysis shrimp. These operations are regulated to minimize the potential for impacting sport fisheries.

The Department's Fisheries Program is divided into four areas of activities: (1) resident fisheries management, (2) **anadromous** fisheries management, (3) hatcheries, and (4) fisheries research. Professionally trained fisheries employees are organized into operations sections to accomplish the responsibilities of each **area** of activity.

The primary management responsibility of resident and anadromous fisheries management sections is expressed in a mission statement "to preserve and perpetuate the wild, natural, and hatchery fish resources of Idaho, and to provide sustained angling opportunities which provide optimum benefits for a diverse and changing public." Management activities include manipulation of fish populations, fish habitat protection and enhancement, development of angler access and angler information, coordination with the general fishing public, and

development of harvest regulations. Most of the management effort involves Department field staff (biologists, technicians, and others) working in coordination with headquarters staff, and often with personnel of state and federal land management agencies and Indian tribes as well.

The hatcheries section raises fish to meet particular fisheries management goals. New technologies to raise healthy fish in the most cost-effective manner are developed. The hatcheries have a fish health unit designed to identify and treat various fish diseases and to improve the health and disease resistance of particular stocks. Fisheries projects that benefit directly from the hatchery program include put-and-take and put-grow-and-take fish stocking programs, supplementation of salmon and steelhead natural production, supplementation of reduced populations of resident fish, and production of other game fishes.

The fisheries research section serves to enhance management capabilities by providing detailed information on specific fisheries or biological systems to address specific management needs. The mission statement of the section is "to develop and effectively communicate scientifically sound information and tools to enhance the management of Idaho's fisheries." In addition to collecting and analyzing biological data, the fisheries research section aids in the development of management recommendations, development of management methods, and summarizing existing information.

The programmatic function of habitat protection is carried out through the Natural Resources Policy Bureau. Regional fisheries staff, however, supply data needs and manpower supporting regional environmental staff biologists and the Natural Resources Policy Bureau. Regional fisheries staff still provide primary response to land and water management actions in the Salmon Region, which lacks an environmental staff biologist.

HOW TO USE THIS DOCUMENT

The plan is divided into two parts:

1. The first part deals with fisheries on a statewide basis, provides Department policies and Bureau of Fisheries policies, outlines general management direction, and describes specific statewide programs.

2. The second part proposes specific management direction for each drainage. A narrative overview describes the location, gives pertinent statistics on use, land management activities, demographics, and describes the habitat and important fisheries. Objectives and programs specific to each drainage are listed. Management direction for important waters in each drainage is presented.

PART I - STATEWIDE MANAGEMENT DEPARTMENT POLICIES

The wildlife policy of Idaho is contained in Idaho Code, Section 36-103, which states:

> **All wildlife, including all wild animals, wild birds, and fish, within the state of Idaho, is hereby declared to be the property of the state of Idaho. It shall be preserved, protected, perpetuated, and managed. It shall be only captured or taken at such times or places, under such conditions, or by such means, or in such manner, as will preserve, protect, and perpetuate such wildlife, and provide for the citizens of this state and, as by law permitted to others, continued supplies of such wildlife for hunting, fishing, and trapping.**

In order to accomplish the Department's mission to protect fish and wildlife resources and to provide for their use by the public, a number of guiding principles have been developed. They are:

Management

1. **The Department will advocate that fish and wildlife receive equal** treatment **with all other resources in land and water management decisions.**

2. **The fish and wildlife resources of Idaho belong to the residents of the state and, while national interests will also be considered, these resources will be managed for the recreational and other legitimate benefits that can be derived primarily by the residents of Idaho.**

3. **Fish and wildlife management will be designed to provide a variety of consumptive and nonconsumptive recreational opportunities, as well as scientific and educational uses.**

4. **Fish and wildlife habitat and populations will be preserved, protected, perpetuated, and managed for their intrinsic and ecological values, as well as their direct benefit to man.**

5. **The Department will support sport fishing, hunting, and trapping as traditional and legitimate uses of Idaho's fish and wildlife resources.**

6. **The Department will manage wildlife at levels that provide for recreational opportunity but do not result in significant damage to private property.**

7. **The Department will use the best available biological and sociological information in making resource decisions and supports research efforts to provide** state-of-the-art techniques **and data.**

Public Involvement

8. The Department will involve the public in the decision-making process, using a variety of formats, including public meetings, surveys, and working groups.

9. The Department is the principal government spokesman for Idaho's fish and wildlife resources and habitats and has a responsibility to inform interested citizens of potential threats to those resources.

10. The Department will promote and conduct training and educational programs that emphasize sportsmanship, outdoor skills, ethical outdoor behavior, the needs of fish and wildlife, and the wise use and appreciation of fish and wildlife resources.

11. The Department will provide information on Idaho's hunting and fishing to identify recreational opportunities and to meet specific management goals.

12. The Department will emphasize individual recreational opportunities rather than promoting contests or competitions, or activities that may result in commercialization of fish and wildlife resources.

Regulations

13. Within the range of biologically sound alternatives, the Department will consider legal and economic factors, desires of the sporting public, social **acceptability,** and administrative feasibility when promulgating regulations.

14. Regulations will be designed for **ease** of understanding and will include only **those restrictions necessary to meet desired management objectives.**

Access

15. On land open to the public, the **Department** will advocate access that provides a variety of fish- and **wildlife-associated recreational opportunities** while achieving habitat and population **management** goals.

16. The Department will **cooperate** with sportsmen and landowners to minimize negative impacts of outdoor recreation on private lands and ensure the continued availability of recreational access by permission to private lands for wildlife-associated recreation.

Importations and Introductions

17. Maintaining self-perpetuating populations of fish and wildlife will receive priority over stocking programs.

18. Introduction of fish and wildlife species may be considered when (1) substantial benefits are anticipated; (2) sufficient and suitable habitat is available; (3) impacts to native species are acceptable; and (4) where necessary, approval is obtained from appropriate agencies or private landholders.

19. The Department will advocate strict controls on the importation and introduction of exotic fish and wildlife.

Land Acquisition

20. The Department will focus land acquisition efforts on critical habitats, particularly wetlands, access to waterways, and land adjacent to existing Wildlife Management Areas.

21. The Department will support payment of a fee in lieu of taxes for unimproved real property it owns or holds.

22. The Department will control noxious weeds on Department-owned lands.

Cooperation with other Agencies

23. Agreements with other governing agencies will be developed to insure cooperative **management** of fish and wildlife resources shared in common.

24. The Department will advocate land **management** practices that protect, restore, and enhance fish and wildlife habitat, especially habitats such as wetlands and riparian areas that benefit a wide variety of fish and wildlife species.

25. Cooperation and assistance will be provided in the development of fish and wildlife management plans and educational programs where benefits accrue to the general public.

Native Americans

26. Native American treaty rights will be recognized in the management of fish and wildlife.

Outfitting

27. The Department will oppose the issuance of outfitting licenses and special use permits where the impacts to fish and wildlife resources are unacceptable or the opportunity for non-guided recreation is significantly impaired.

Habitat Protection

28. The Department will actively support and participate in efforts to protect or enhance the quality of water in Idaho's lakes, rivers, and streams.

29. The Department will oppose legislation, land and water use activities, policies or programs that result in significant and unwarranted loss of fish and wildlife habitat or populations and will advocate project designs that minimize or eliminate such losses.

30. The Department will advocate strictly-controlled use of pesticides and other substances that can result in direct or indirect mortality to fish or wildlife and their replacement with less toxic materials or elimination wherever possible.

Mitigation

31. Whenever unavoidable fish and wildlife habitat or population losses occur, the Department will, where practical and legally possible, actively seek compensation under the following guidelines:

For long-term losses caused by habitat elimination or degradation, compensation by acquisition and improvement of alternate habitat will be sought rather than monetary restitution. Compensation must be permanent and include funding necessary for annual operations, maintenance, and monitoring if these are required to insure that target goals for fish and wildlife benefits are achieved.

Monetary restitution, based on costs to replace lost resources, will be sought for losses caused by direct mortality if replacement of animals is not feasible.

Whenever possible, replacement of losses will be by the same fish and wildlife species or by habitat capable of producing the same species that suffered the loss, and compensation programs will be located in the immediate area of loss.

Offsite **locations and different species may be substituted in compensation programs if "onsite" and "inkind" compensation is not possible.**

Compensation levels will be based on loss of habitat and loss of potential for fish and wildlife production and recreation rather than numbers of animals or days of use of animals occurring at the time of loss.

In jointly-funded projects requiring fish and wildlife mitigation, participating entities will share mitigation credit proportional to their contribution.

Enforcement

32. The Department will seek to reduce illegal activities that result in the taking of fish or wildlife or which damage fish or wildlife habitat.

FISHERIES POLICIES

1. Idaho waters will be managed to provide optimum sport fishery benefits.

2. Protection and restoration of fish habitat and water quality will be a top priority in the management program.

3. Wild native populations of resident and anadromous fish species will receive priority consideration in management decisions.

4. Management decisions will emphasize maintenance of self-sustaining populations of fish.

5. The Department will oppose any activity that results in significant loss or degradation of habitat capable of supporting self-sustaining fish populations.

6. Factors affecting downstream survival will receive priority attention in anadromous fish management.

7. Hatchery-reared fish will be stocked as appropriate to preserve, establish, or reestablish depleted fish populations and to provide angling opportunity to the general public.

8. The Department will strive to maintain genetic integrity of wild native stocks of resident fish and naturally-managed anadromous fish when using hatchery supplementation.

9. Non-native species of fish will be introduced only in waters where they are not expected to adversely impact stocks of wild native fish.

10. Department funds will not be used to manage waters closed to public fishing access, except where such closures are part of a Department-approved management program.

NATURAL RESOURCES POLICY BUREAU POLICIES RELATING TO FISHERIES

1. The Department will provide timely reviews of projects that affect Idaho's fish and wildlife resources, based solely on potential effects on those resources and their recreational use and will suggest means of eliminating or reducing adverse impacts.

2. The Department will maintain effective channels of communication with others concerned with management of Idaho's land and water resources, to insure that fish and wildlife resources are considered in planning activities.

3. The Department will support and participate in efforts to eliminate non-point sources of pollution to **Idaho waters, restore** water quality where needed, and to protect or restore beneficial uses.

4. The Department will work with **developers** and the Federal Energy Regulatory Commission to insure that hydroelectric **development** on Idaho waters will have benign impacts to aquatic resources.

5. The Department will strive to insure that adequate flows remain in Idaho streams to protect aquatic and riparian resources and provide for fish- and wildlife-oriented recreation.

6. The Department will oppose hydroelectric development on rivers designated as "protected" by the Northwest Power Planning Council unless the project has a benign impact on fish and wildlife resources, or provides an exceptional benefit to fish and wildlife.

7. The Department will support and participate in efforts to develop a State Protected River System and the inclusion of important fish and wildlife habitats into that system.

8. The Department will develop cooperative agreements for the management and enforcement of road closure areas involving both public and private lands.

STATEWIDE FISHERIES MANAGEMENT GOALS

1. Increase sport fishing opportunities in Idaho.

2. Provide a diversity of angling opportunities of types desired by the public.

3. Maintain or enhance the quality of fish habitat.

4. Fully utilize fish habitat capabilities by increasing populations of suitable fish species to carrying capacity of the habitat.

5. **Maintain** angler success rates at or **above** the present level.

6. Maintain or restore wild native populations of game fish in suitable waters.

IDAHO ANGLERS AND THEIR PREFERENCES

To obtain anglers' input for development of the 1996-2000 Fisheries Management Plan, the Department conducted a mail survey of one thousand Idaho anglers in 1994. Similar surveys were conducted in 1967, 1977, and 1987. Names were selected at random from a list of all types of license buyers, resident and non-resident. The number of anglers who sent in completed surveys is twice the number in typical political surveys, and results are accurate to within a few percentage points of what surveying all 400,000 Idaho anglers would have provided.

Angler Characteristics

As in previous surveys, residents constitute about two-thirds of the anglers who fish in Idaho. The greatest number of resident anglers live in the Southwest (26%) and Magic Valley (18%) regions; the least in the Salmon Region (4%). This is a significant shift from 1987 when 38% resided in the Southwest Region and only 13% resided in the Magic Valley Region. The vast majority of non-residents come from our six bordering states, with Utah residents picking up almost 40% of the non-resident licenses. California residents made up 24% of the non-resident anglers in 1987 but only 4% in 1994. Similar to what was found in 1987, three out of four anglers were male.

Fishing Habits

With the vast majority of Idaho's population living almost within sight of the Snake River, it was the body of water that was most frequently listed by anglers when asked to name their

three most frequently fished waters. The Salmon, Clearwater, Henrys Fork Snake, and South Fork Snake rivers ranked 2, 4, 5, and 10. Henrys Lake, Lake Pend Oreille, and Brownlee, C.J. Strike, and Cascade reservoirs were the most popular lakes and reservoirs. They finished 3, 6, 7, 8, and 9, respectively, as the most frequently fished waters. When anglers were asked where they would fish most often if the time, distance, and difficulty of getting there were not a factor, the Snake River still ranked high. The Henrys Fork, Brownlee Reservoir, and the South Fork Snake River moved up a notch or two in the top ten, and Dworshak and Island Park reservoirs moved up into the top ten. Alpine lakes showed the biggest difference in ranking between frequency fished (54th) and where anglers would like to fish (17th).

Trout remain the bread and butter fish of Idaho (Table 1). When asked what three species they most preferred to fish for, just over 60% of anglers listed "trout" as one of the three. Other top preferred species (and the percent of anglers listing them) were bass (31 %), rainbow trout (26%), steelhead (23%), cutthroat trout (18%), crappie (13%), brown trout (12%), catfish (12%), **kokanee** (11 %), and perch (8%).

One significant change in angler characteristics from recent surveys was in the number of days fished per year. Anglers had fished an **average** of 9.2 days in 1977, and anglers reported fishing an average of 18.4 days in 1994. This is a trend that has been projected nationwide due to a decreasing rate of participation in fishing by youths and an aging of current anglers, who tend to fish more often the longer they are involved in the sport.

Six out of ten angler days in 1994 were spent on lakes or reservoirs, up somewhat from previous surveys. Half of the angling effort in 1994 was specifically directed toward "trout." About 10% of the effort was directed toward other coldwater species such as steelhead, **kokanee,** whitefish, and **landlocked chinook.** Similar to results of the 1987 survey, about 30% of angler days in 1994 were spent pursuing warmwater species. In 1994, 10% of the angling days were spent just pursuing "anything that bites."

Fish Management

Idaho has roughly 26,000 miles of fishable streams and 202 major lowland lakes and reservoirs. Basic habitat conditions have the greatest influence on what kinds and how many fish a water will support. Lowland lakes and reservoirs generally support many kinds of fish from warmwater to trout species. Different management strategies involving stocking and special fishing rules are used to best provide the diversity of fishing that anglers want (Figure 2).

Fishing rules are one of the main tools used to "manage" fish populations and provide different types of angling experiences, but they can also be very controversial. To help the Department manage Idaho fisheries, the survey asked a number of questions about what types of fishing Idaho anglers want and how they feel about special rules.

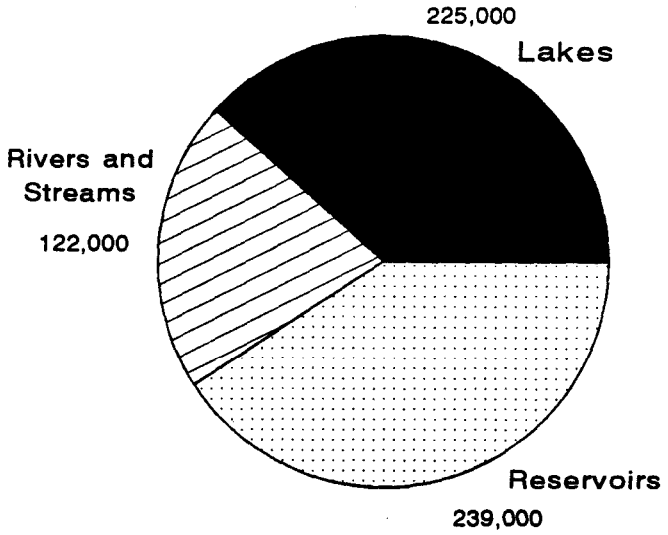
Anglers were asked if they would like more, fewer, or the same number of waters managed with special rules that require some sizes of fish to be released in order to have more and larger fish to catch, but not harvest. Forty-two percent of the anglers said they wanted more waters managed this way for trout, 16% wanted fewer, and 42% wanted no change. In response to the same question concerning bass management, 34% wanted more waters managed this way, 16% wanted fewer, and 50% wanted no change. In a follow up question, two-thirds of the anglers said they supported restrictive rules if they would result in a

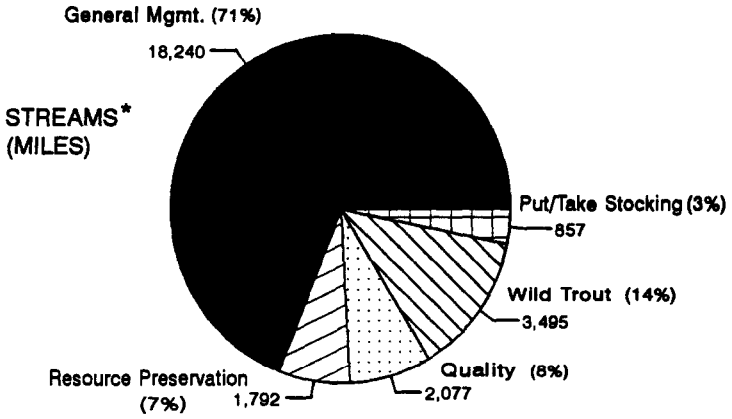
Table 1. Most preferred species of fish sought by anglers in Idaho, 1994.

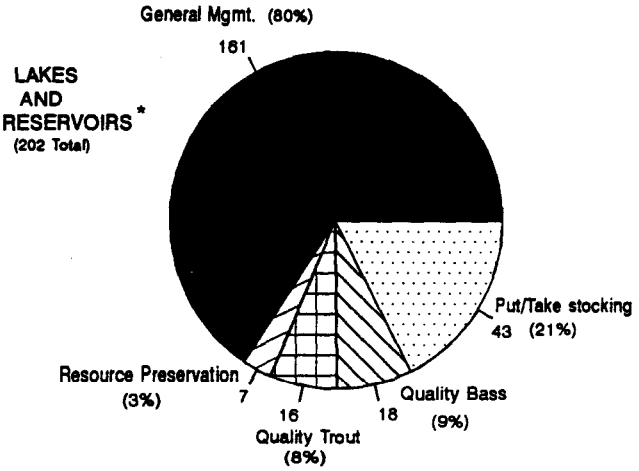
Coldwater - 67		Warmwater - 33	
Species	%	Species	%
Rainbow trout	10	Any bass	12
Any trout	24	Crappie	5
Cutthroat trout	7	Perch	3
Steelhead trout	9	Catfish	4
Brook trout	3	Largemouth bass	1
Brown trout	4	**Walleye**	2
Kokanee	4	Smallmouth bass	1
Anadromous chinook	3	Bluegill	1
Lake trout	1	Pike	2
Other **species**	2	Sturgeon	1
		Other species	1

TABLE 1

Figure 2. Surface acres of water in Idaho and how its fisheries are managed.







*A water may have different trout and warmwater management programs.

significant, or any increase, in numbers and sizes of trout, a few supported restrictive rules even if they did not change the fish population, and one-fourth did not support restrictive rules at all unless the trout population was in danger of overharvest.

Anglers who fished for trout in 1994 said that they spent one out of four days fishing on waters which had special rules that required all or certain sizes of trout to be released. Anglers who fished for bass during 1994 were asked how many of their bass-fishing days were spent on waters "where special regulations required you to release bass larger than the 1 2 inch general size limit." Anglers responded that 40% of their bass fishing days were spent on these waters. In both cases, the proportion of angling effort expended on these special rule waters is greater than the proportion of waters in the state that are managed this way.

A "cost" of using special rules to provide a diversity of fishing opportunities is rules complexity. To get a better feel for how serious a problem this was for Idaho anglers, those surveyed were asked how often they have "difficulty knowing what the fishing regulations are for the area you want to fish." Forty percent indicated that they have difficulty "sometimes." The rest of the respondents were evenly split between "not very often/rarely" and "almost always/more times than not."

Respondents then ranked ten factors which might cause difficulty in knowing what the rules are. While having "too many **areas** with exceptions to the **general regulations"** came out the highest, "not knowing where boundaries are" was second. Other top-five factors were: too many different types of rules, not knowing how to use the rules brochure, and rules being changed too often.

Funding

Two hundred randomly-selected anglers from each of the seven regions of the state were asked to hypothetically spread their fishing license dollars among major programs. Those proportions were applied to the Fisheries-related income (fishing licenses and Sport Fish Restoration funds) and then compared with how funds were actually spent (Figure 3). In general, funds were spent in the areas and proportion that anglers want. Areas of difference include Department expenditure of more money for fish stocking and management surveys and less for habitat efforts than anglers indicated.

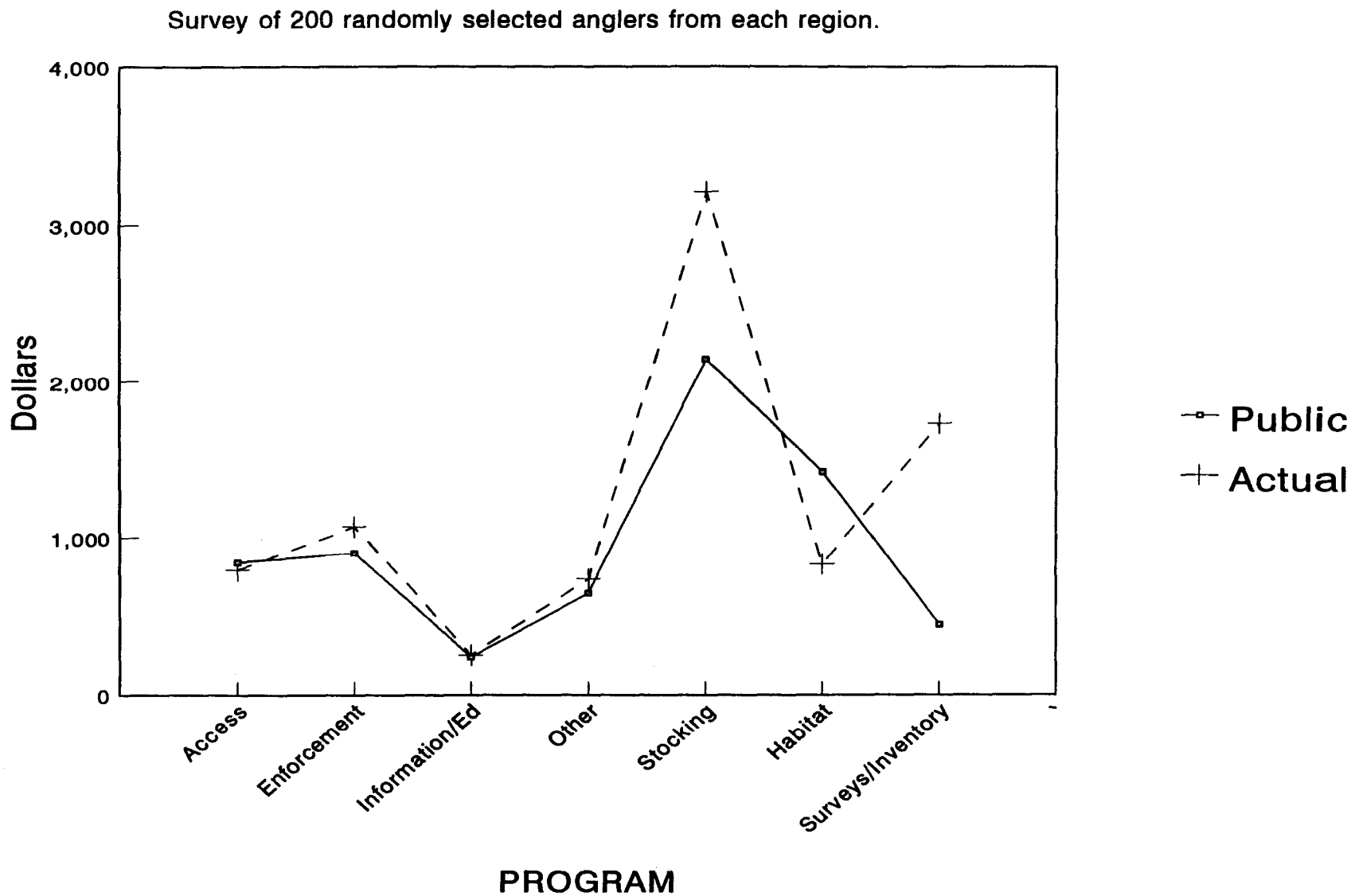
Angler Information

By a margin of over two to one, anglers indicated that they would like to get more information from the Department. When asked what types of information they would like to get, information on fishing rules was most often (62%) selected. Three other types of information that half or more of the anglers indicated they would like to get were "current fishing conditions," "places to go fishing," and "results of fish population surveys."

Respondents wanted to get their information in written form, either picking it up at vendors, getting it in the newspaper, or receiving it by direct mail. Far fewer indicated they wanted to get the information over TV, radio, or phone "hot lines." Not surprisingly, very few felt that public meetings were a good way to get information from the Department.

Twenty-eight percent of the surveyed anglers were contacted in the field by a Department employee while fishing in 1994. These contacts with enforcement officers, fisheries

Figure 3. Anglers' recommended fisheries spending.



biologists, and creel census clerks are an important avenue for communication between anglers and the Department. Thirty-one percent of those who were contacted said that their opinion of the Department was enhanced by the contact, while only 5% said their opinion was less following the contact.

Other Items

Anglers around the state make many suggestions to the Department on things they would like to see in the fisheries management program. Many decisions are made primarily on based on what is best for the resource. Other decisions are made almost entirely as a matter of public preference. It is important for the Department to hear the views of all anglers, not just organized groups or anglers with special fishery interests. A survey such as our random mail survey gives an unbiased picture of the angling public as a whole.

In this survey, anglers were asked about some suggestions which had been made to the Department during the last few years. One proposal was to allow the use of a second fishing rod in certain waters where overharvest of wild trout or other species was not a concern. Based on the mail survey, 47% of Idaho anglers support the suggestion and 42% oppose it; certainly not a clear mandate. Results of a follow up survey indicated that 57% of all anglers would likely fish with two rods if it was allowed.

Another suggestion made to the Department was to extend the general trout season on streams past the current November 30 closure through the winter on a catch-and-release basis. Based on this survey, 39% of Idaho anglers support the idea, 33% are not sure, and 28% oppose it. Some anglers have suggested a trout stamp which would help pay for improving trout stream habitat or rearing and stocking trout. Anglers were more decided in their opinions on this issue, with 36% supporting and 48% opposed.

In a final topic on the survey, anglers indicated that the recovery of chinook and sockeye salmon was important or extremely important to 64% of them; 20% said it was unimportant. When asked if they would be willing to pay $5 more per month on their utility bill if it would recover salmon, 41 % said yes and 42% said no.

On-going Angler Direction

The previous five-year plan was guided by angler input which set the stage for continuing that direction in the current plan. **Several** of the major directions **are listed below:**

> The general Idaho angler seems quite satisfied with the quality of the Department's hatchery trout product. About one-third of those surveyed (1987) would like to have a few trout larger than 9 inches stocked, even knowing that one 12-inch trout will displace three 9-inch trout from the hatchery. A slightly larger fraction of the anglers did not want larger fish at the expense of fewer numbers stocked.
>
> The average size of bass, which anglers indicated was acceptable, was 11.2 inches for largemouth and 10.7 inches for smallmouth. A 16-inch bass was the size most often considered as quality size for largemouth, while a 14-inch smallmouth was considered a quality bass.

The 1987 opinion survey indicated that Idaho anglers generally agree that walleye should only be stocked in waters that are closed systems where they do not have the potential to impact other game fish populations outside the waters where introduced, or reservoirs in drainages already containing walleye. Almost 60% of the survey respondents would oppose further introduction of walleye if they would negatively affect trout or salmon or steelhead populations. Nineteen percent were in favor of walleye introductions, and 23% had no opinion.

Over one-half of the survey respondents felt that fishing tournaments and contests should be regulated or prohibited. These opinions were unchanged from those expressed in 1977.

PROGRAM DIRECTION

Based on the Idaho Angler Opinion Survey and angler input through other means, the following are the major areas of concern and program directions desired by Idaho anglers and approaches proposed to meet them. The underlying theme for the next five years is the most frequent comment received: support for current programs and direction. Continue that course.

1. Increase emphasis on habitat protection.

2. **Provide a diversity of angling opportunity.**

3. **Provide increased family fishing opportunity, especially near population centers, and manage as non-complicated, consumptive fisheries.**

4. **Continue quality and trophy fishing opportunity. Provide additional quality and trophy managed waters "away from peoples backyards."**

5. **Continue emphasis on protection and enhancement of wild trout.**

6. Continue emphasis on hatchery trout programs in streams, lakes, and reservoirs.

7. Continue emphasis on protection and **enhancement** of salmon and steelhead.

8. Provide additional angling information to the public.

9. Provide increased access, particularly for bank anglers.

10. Provide educational programs to encourage children to fish.

11. Simplify and standardize fishing regulations.

1. Increase Emphasis on Habitat Protection

The angling public surveyed consistently says the Department should increase emphasis on habitat protection. We will work with land management agencies (U.S. Bureau of Land

Management, U.S. Forest Service, Idaho Department of Lands), water management agencies (U.S. Bureau of Reclamation, U.S. Army Corps of Engineers, Idaho Department of Water Resources), private landowners, and regulatory agencies (Idaho Department of Health and Welfare, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, Federal Energy Regulatory Commission) to reduce impacts of land-disturbing activities, improve management practices, and enforce water quality standards. Minimum stream flows will be established for priority fisheries streams.

The 1989 Legislature created antidegradation legislation and established two positions for the Department to address this issue. These new positions and some internal reorganization that shifted a Fisheries Bureau position to the Natural Resources Policy Bureau have helped to address immediate habitat concerns; particularly antidegradation, the development of coordinated statewide habitat protection activities, and provide assistance to landowners. The Department established habitat coordinators in six of the seven regions during the previous planning period.

Regional habitat coordinators should allow for increased advocacy of habitat concerns. They should contribute to greater public awareness of habitat issues and education of the public on how to prevent or minimize problems. Additionally, they should provide fishery input needed to develop and implement programs to correct past problems. Programs such as use of grazing systems, fencing of key streams to prevent grazing impacts, streambank stabilization projects, **revegetation** projects, and recommending logging and farming practices that are more benign to stream environments can improve fish habitat.

An important **component** of these programs might **be** the **expansion** of volunteer help in the process. This should increase public **awareness** of habitat importance and expand the public's feeling of ownership in the programs.

2. Provide a Diversity of Angling Opportunity

A mixture of hatchery and wild trout **management** and general, quality, and trophy **management** regulations may be used to provide a diversity of angling opportunities within geographic **areas.** A diversity of angling opportunity, especially near population centers, may invite **greater** use and **increased** angler **satisfaction.**

The Department currently stocks 24 different fish species and 13 additional "strains" to provide a diversity of angling **opportunities. Some** of these existing species will be proposed for introduction in additional lakes and reservoirs to provide a diversity of species available within various **geographical areas.** Bull trout, **lake** trout, and splake may be used in mountain lakes to provide a diversity of angling opportunity and utilize stunted brook trout. Atlantic salmon **have been experimentally** introduced **and** will **be evaluated.** Other game fish and forage fish species will be considered for introduction into Idaho waters. Intensive studies of their potential effects on wild trout and other existing species will be made 'prior to any introductions.

3. Provide Increased Family Fishing Opportunity, Especially Near Population Centers, and Manage as Uncomplicated Consumptive Fisheries.

Providing additional information on fishing opportunities available and increasing angler access will serve to increase family fishing opportunity. In addition, during the next five-year period

the Department will identify sites and complete or initiate development of new fishing lakes. Acquisition of, or easement to, private ponds near heavily populated areas will also be pursued to provide increased fishing opportunity. This, particularly, will benefit family groups that traditionally do not travel far to participate in fishing activities.

4. Continue Quality and Trophy Fishing Opportunity and Provide Additional Quality and Trophy Managed Waters "Away From Peoples Backyards."

As the Angler Opinion Survey points out, the quality of an angling experience is affected by many factors. Within this plan, however, the terms "quality" and "trophy" are used to refer to the size of fish being managed. (See Quality and Trophy Fish Management Program Description for definitions.) A quality or trophy fishery is one specifically managed to limit harvest in some way to provide enhanced catch rates and/or larger fish.

During this five-year period, the Department proposes to manage approximately five to ten additional streams or stream segments with regulations to increase quality or trophy trout fishing opportunities. Emphasis will be to provide opportunities in southwest, southeast, and west-central Idaho. During this five-year period, the Department proposes to manage approximately 10 to 15 additional lakes or reservoirs for quality or trophy trout fishing and approximately 5 to 10 additional lakes or reservoirs for quality or trophy bass.

5. Continue Emphasis on Protection and Enhancement of Wild Trout

During this five-year period, the Department **proposes** to continue emphasis on protection and **enhancement** of wild trout in **several** ways. The program measures described **above** under habitat protection will be one of the most important. These measures strive to both maintain existing habitat quality and enhance habitat to improve wild trout populations. The Department will continue a major program of "wild trout management" which is described in more detail in a following section.

Under this program, the Department will **manage** for wild trout in streams with the potential to support acceptable fisheries on wild trout alone. This may involve varying levels of harvest regulation necessary to maintain catch rates.

The Department should also strive to control overharvest and mortality of wild trout through **nonregulatory** means. Public information materials and programs will be used to promote nonconsumptive values of wild trout and educate anglers on release methods to minimize hooking mortality.

Hatchery trout stockings should be concentrated in high access areas to be designated and managed as hatchery trout fisheries. This may reduce potential impacts of competition, interbreeding, and increasing consumptive fishing pressure on wild trout.

Additional measures to protect spawning wild trout or young fish in rearing streams where they are especially vulnerable to overharvest may be necessary. Harvest restrictions or catch-and-release rules should be utilized where possible, with fishing closures used only where biologically necessary.

The Department proposes to also undertake measures to restore wild trout access to streams where culverts, diversions, and other manmade structures have blocked passage. This should

include pressure on agencies responsible for road construction and development of water resources to utilize state-of-the-art techniques, incorporate fish passage criteria, and incorporate fish screening criteria into projects. The Department will require passage facilities and screens on new structures where appropriate to maintain wild trout access.

6. Continue Emphasis on Hatchery Trout Programs in Streams, Lakes, and Reservoirs

The Idaho Department of Fish and Game proposes to increase emphasis on hatchery trout programs in streams by increasing the frequency and number of fish stocked in hatchery-supported streams where there is convenient angler access and the return to anglers is good. Streams may be designated as "put-and-take" trout streams which will be identified in free angler brochures and maps made available to the public.

Hatchery trout programs in lakes and reservoirs may be enhanced by planting greater numbers of fingerling and 5- to 7-inch "subcatchable" trout in the fall where natural food and overwinter survival conditions are good. Planting greater numbers of subcatchables and utilizing natural growth conditions rather than planting catchable size trout may result in increased catch rates and harvest opportunity.

Experimental rearing of trout in net pens at the lakes where they will be released will be evaluated. In addition to economically providing a quality fish, fish reared in this manner in other states have returned to the shoreline rearing areas as adults and provided excellent fisheries. Because of concerns about water quality and lake aesthetics, this program will be monitored to ensure desired results without undue environmental damage.

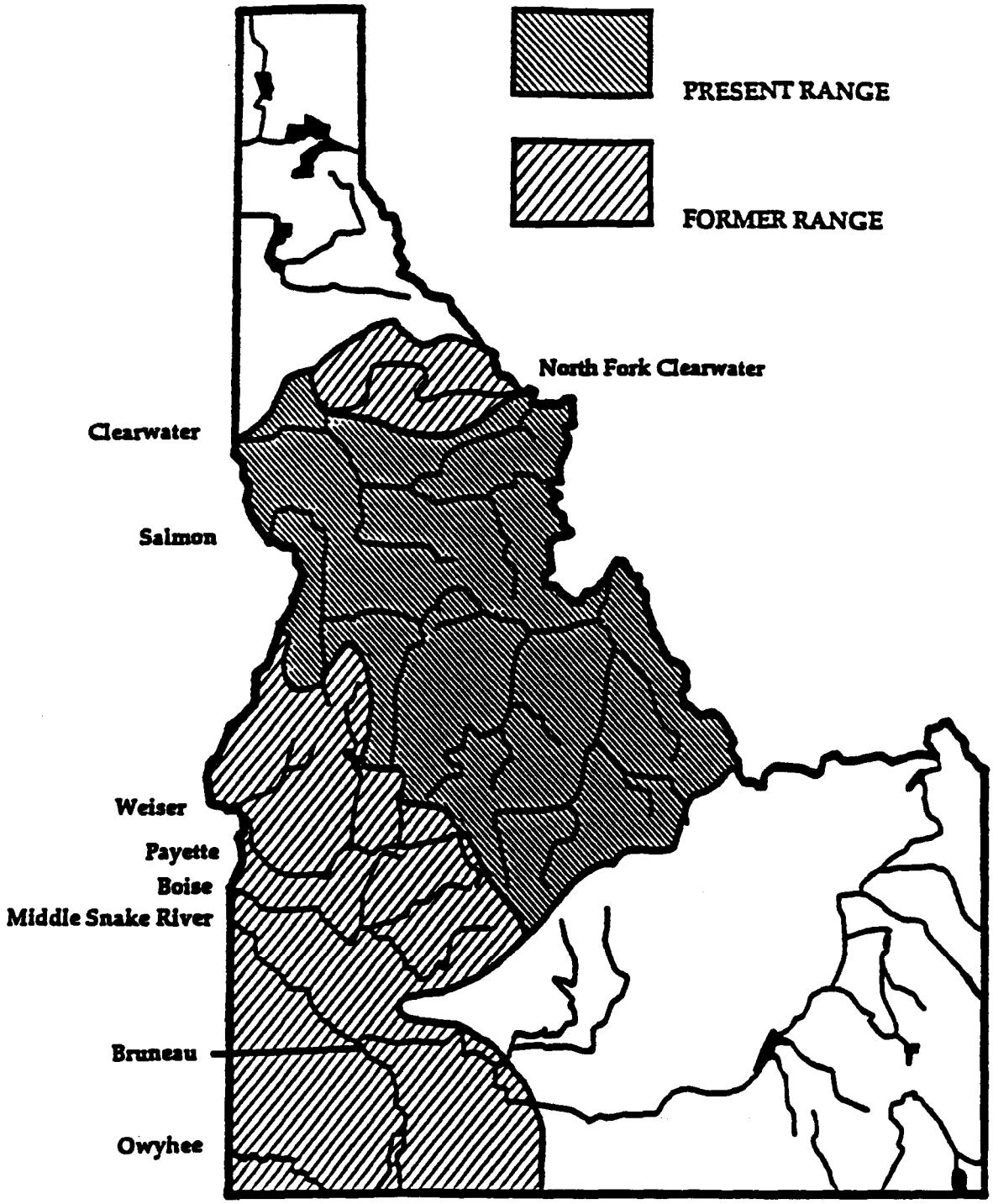
Where harvest restrictions are necessary to maintain or restore wild trout populations in streams, lakes, and reservoirs, harvest **opportunity** may be provided by marked hatchery fish. A more indepth description of hatchery trout programs is provided in a following section on hatchery trout.

7. Continue Emphasis on Protection and Enhancement of Salmon and Steelhead

The range (Figure 4) and abundance of anadromous salmon and **steelhead** in Idaho are reduced from historic conditions. About 62% of Idaho's historic spawning and rearing habitat for spring and summer chinook salmon remains **available.** A similar amount of steelhead habitat remains. Approximately 25% of the historical surface area of sockeye salmon nursery lakes in Idaho remains accessible. The greatest loss of production habitat has occurred for Snake River fall chinook salmon, for which only 17% of the historic habitat is currently accessible. Approximately 30% of Idaho's streams inhabited by salmon and steelhead are located within areas designated as wilderness or waterways classified as wild and scenic rivers.

The reduction in abundance of fish has been severe for salmon (Figure 5). A primary factor in the decline of Idaho's once productive anadromous stocks has been development of the Snake and Columbia rivers' hydroelectric system. Mortalities to migrating juveniles are incurred either because of adverse migration conditions or physical damage as they pass through dams. Habitat degradation and mixed-stock fisheries have also contributed to the decline. Drought and poor ocean rearing conditions during the early 1990s exacerbated the mortality problems for anadromous salmon and steelhead. Sockeye salmon were listed as endangered under the Federal Endangered Species Act (ESA) in 1991. In 1992, spring, summer, and fall chinook salmon in the Snake River Basin were listed as threatened under the

Figure 4. Anadromous fish in Idaho.



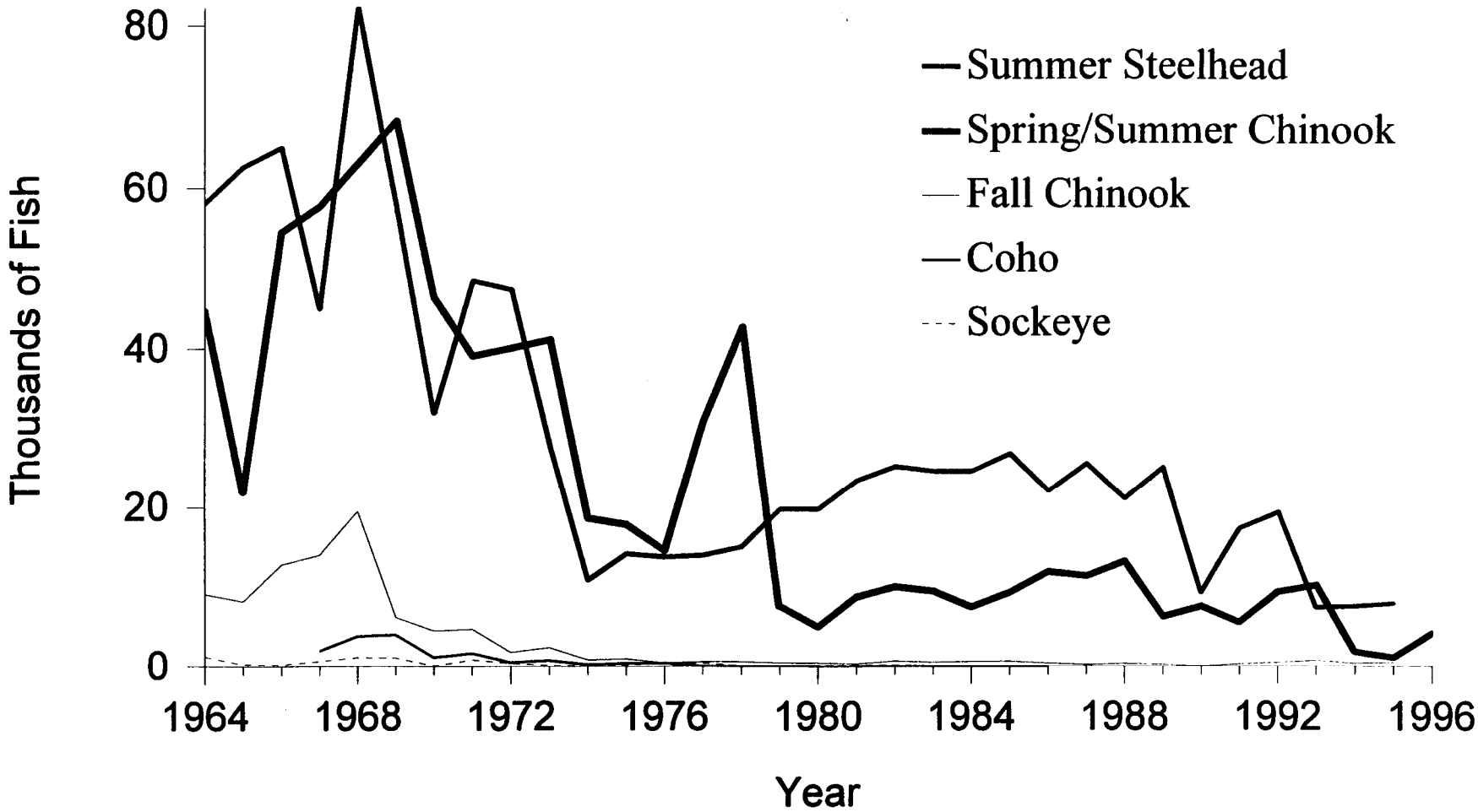


Figure 5. Adult returns of wild salmon and steelhead to the uppermost dam on the lower Snake River, 1964-1995. Uppermost dam was: Ice Harbor from 1964-68; Lower Monumental during 1969; Little Goose from 1970-74; and Lower Granite from 1975-95.

ESA, excluding spring and summer chinook salmon in the Clearwater Basin. The National Marine Fisheries Service (NMFS) became the federal authority in charge of Snake River salmon as a listed species. Historic low returns of adult spring and summer chinook salmon occurred during 1994-95, leading to a proposal by NMFS to reclassify all three runs of chinook as endangered. The result of federal listings is that actions to protect or enhance Idaho's salmon must be consistent with the federal recovery plan and standards. In addition, NMFS began a status review to consider listing Idaho steelhead under the ESA in 1994.

As a result of historically low runs of salmon, the Department has increased emphasis on preserving the numerous subpopulations of native salmon that are genetically and ecologically adapted to return, spawn, and rear in Idaho. In 1991, the Department began a captive breeding program to perpetuate the few Snake River sockeye in existence at Redfish Lake near Stanley. Juvenile fish were reared to sexual maturity, bypassing the major mortality phase of migration to the ocean. The program is considered an emergency preservation effort that is experimental. Due to lack of spring and summer chinook adult returns in 1994-95, captive techniques will likely be necessary for some of the chinook populations in the Salmon River drainage during 1996-2000. Juvenile chinook salmon were collected from the Selway River beginning in 1992 and from the Yankee Fork, Lemhi River, and East Fork of the Salmon River in 1995 for experimental rearing to maturity. Captive programs for listed salmon will be guided by a Snake River Salmon Recovery Plan, currently in development by NMFS.

Efforts to achieve improved survival of Snake River salmon and steelhead will remain an important management activity. Improvement in migration survival provides our best avenue of success for **enhancement** of all salmon and steelhead populations, wild or hatchery, in Idaho. Priorities will be directed at improving juvenile migration and resulting adult salmon and steelhead returns through the federal hydroelectric system. The Department's goal is to preserve Idaho's salmon runs and to recover them to provide benefits to all users.

Other opportunities for **enhancement** of **salmon populations** will be **limited** due to low **abundance of** adult **sockeye** and **chinook.** Work will continue on priorities from the previous fish management plan, such as improvement of hatchery fish health and smolt quality factors most likely associated with early migration mortality; maintaining wild salmon and steelhead management program; managing for natural production; and implementation of fisheries safeguarding **naturally-produced** salmon and steelhead while providing fishing opportunity for surplus hatchery fish in Idaho.

Hatchery facilities to produce a total of about 20 million salmon and **steelhead** smolts are in operation as partial mitigation for losses to Idaho runs attributed to hydroelectric dams. However, low smolt-to-adult survival (less than 0.2%) of spring and summer chinook salmon smolts produced by these facilities have not returned enough adults to meet program goals. Mitigation planning expected returns three to four times better for both hatchery and naturally-produced fish than those occurring. By 1997, chinook salmon hatcheries will only release about 8% of their smolt capacity, but smolt releases should increase during 1998-99. Wild chinook salmon, such as in the Middle Fork Salmon River, have also experienced low smolt-to-adult return. We project only 66,000 wild smolts will migrate in 1997, returning less than 300 adults during 1999-2000.

The hatchery steelhead program was slightly modified beginning in 1993 to reduce potential ecological effects to listed salmon. Modifications included altering release sites and numbers (Table 2), but steelhead harvest should remain within the range of the last five years. Further

Table 2. Hatchery steelhead smolt releases in the Snake, Salmon, and Clearwater rivers, 1991-1995.

	Hatchery steelhead smolt release (millions)		
Year	Clearwater River	Salmon River	Snake River
1991	2.66	5.32	0.91
1992	2.31	4.37	0.66
1993	2.80	4.58	0.66
1994	**2.55**	4.37	0.61
1995	2.97	3.97	0.61

TABLE2

modification will be implemented during 1996-2000 with the addition of acclimation/release ponds for steelhead smolts to reduce residualism. These ponds should benefit both steelhead and resident fish anglers.

The Department will seek to ensure sufficient returns of anadromous fish to Idaho waters to perpetuate both naturally- and hatchery-produced runs and to allow angler harvest through negotiation or legal means. Efforts will be continued to ensure a fair allocation of the available harvest of anadromous fish among the various Idaho user groups when a surplus is available. The Department will work with Idaho Indian Tribes to develop ceremonial harvest opportunities in years when surplus fish for treaty harvest are not available.

8. Provide Additional Angling Information to the Public

During this five-year planning period, the Department will increase its production of maps, brochures, and other information to make it easier for the public to understand and utilize their fishery resource. "Angler's Guide" brochures will be developed for major lowland lakes and reservoirs, which will include lake maps, location of angler facilities, information on species present, and angler tips. Adjunct to that will be development or expansion of informational type signs in high use areas (boat ramps, parks, trailheads, etc.) which may include brochures and maps. Location of hatchery-stocked trout will be advertised and maps made available through vendors and Department employees to direct anglers to these areas. The current methods for disseminating information will be expanded where possible. This includes radio, television, newspapers, and Department publications.

9. Provide Increased Access, Particularly for Bank Anglers

The Department will continue its programs of landowner relations, acquiring easements, leasing, or purchase and development of key areas to provide access for anglers. Additional fishing docks and handicap access facilities will be provided at public fishing lakes with limited fishing access. Additional boat ramps and docks will be built or existing ones repaired or replaced where appropriate. Approximately $400,000 per year will be expended in the next five years for the maintenance of existing or acquisition and development of new boating and fishing access facilities, with major funding provided through federal excise tax on fishing and boating equipment. This subject is presented in more detail in a separate five-year plan on access management to be updated and made available upon request from the Department early in the planning period.

10. Provide Educational Programs to Encourage Children to Fish

Coupling new water, better family-oriented facilities, and additional access areas with more educational programs can fulfill the anglers' desires to encourage children to start fishing. In 1990, the Department created an Aquatic Education Coordinator position to develop a curriculum that can be taught through the school system to educate children about the aquatic world around them. During the next five years, the Department will conduct or facilitate an annual program of youth fishing clinics around the state to teach angler skills, fishing ethics, and an appreciation of habitat requirements needed to support fish populations.

11. Simplify and Standardize Fishing Regulations

The Department will continue efforts to standardize length limits or bag limits where appropriate to make it easier for anglers to understand the fishing regulations. Standard year-round seasons for lakes and reservoirs, standard stream fishing opening dates, and liberalized regulations have been implemented to make regulations simpler and more understandable where they do not jeopardize fish populations. During the next five years, the Department will increase the use of signs about regulations and landmarks to identify different regulation areas.

PROGRAM AND SPECIES DESCRIPTIONS

Fisheries Management

Wild Trout

Maintaining wild trout fisheries in Idaho waters continues to be a major concern of Idaho anglers and the Department. **Biologically,** wild native trout are essential because they are the best-suited fish for many Idaho waters in which they evolved. Sociologically, wild trout are important because many anglers perceive that wild fish are of higher quality than hatchery-reared fish. Economically, managing for wild trout in streams and utilizing natural recruitment and growth potential has tremendous advantages over managing with hatchery put-and-take size trout, where it often requires more than the cost of a season license to put one day's limit in the creel. Wild trout are sensitive to habitat conditions and fishing pressure. The Department has emphasized wild trout management for the past two decades, with special fishing regulations on some populations and increased emphasis on habitat protection to areas which support wild trout.

During the next five-year period, the Department proposes to continue placing emphasis on wild trout management. Following the Department policy of managing for natural production potential and the public's desire to protect and enhance wild trout, the Department proposes to manage streams for wild trout alone wherever there is the potential to provide an acceptable wild trout fishery. Wild trout management will involve:

1. Education of the angling public and promotion of voluntarily limiting harvest to maintain populations.

2. Regulations to control harvest, where necessary, to maintain acceptable catch rates.

3. Elimination or reduction of competition with hatchery put-and-take trout.

4. Increased involvement by the Department and anglers in stream habitat protection and enhancement.

As previously discussed in the Program Direction section, our efforts to educate the angling public will be elevated to a higher level. The following discussion on hatchery trout explains how we will reduce competition with wild trout, and the habitat protection aspect will receive major and increasing attention over the five years this plan is in effect. Where necessary to

reduce harvest by regulations, some form of size limit is generally required. Bag limits are normally reduced as well, but reducing bag limits alone does little to reduce harvest if the number of anglers remains the same. Even when unregulated, the majority of anglers catch and harvest three or fewer fish per trip. Total harvest is directly related to the number of anglers, unless a major portion of the fish caught are released voluntarily or because of regulation.

Designated wild trout streams will be managed under a 2-fish bag limit, while designated put-and-take trout streams and streams with year-round seasons will be managed under the current 6-trout limit. As mentioned previously, the reduction in bag limit alone would do little to control harvest and may not be biologically necessary in lightly-fished streams. However, having a differential bag limit may serve to shift angling pressure and direct more consumptive-oriented anglers to put-and-take trout and year-round waters. The differential bag limit would **also** reinforce the nonconsumptive values of wild trout. It would add complexity to the fishing regulations, however. Under this approach, additional restrictions would still be needed for more heavily-fished streams and for more vulnerable species in even lightly-fished streams.

Hatchery Trout

The Department currently has 1 2 hatcheries that produce only resident salmonids. Three other facilities produce resident fish in addition to their primary function as anadromous fish hatcheries.

Domesticated rainbow trout stocks, used in this program, do not survive well in streams and contribute little to production. Fingerling trout (3 to 7 inches) do not generally do well in streams, and only a small **percentage** survive to **catchable** size. **Therefore,** most trout stocked in streams are rainbows reared to catchable size (8 to 10 inches). Hatchery trout of various sizes from fry to catchable size are used in lakes and reservoirs depending on growth, survival, and reservoir water conditions.

Fish diseases in hatchery stocks, as well as wild stocks, are a concern to the Department. As a result, the **Department** has **participated** in the **development** of, and is adhering to, fish disease guidelines set forth by the Pacific Northwest Fish Health Protection Committee and the Integrated Hatcheries Operation Team.

Put-and-take trout stocking programs are expensive. The trout must be stocked at times and places where they are available to anglers and where a high percentage will be caught. These large trout cost approximately $0.50 each to rear and stock. In streams where only one out of five are harvested, each fish harvested costs $2.50. Under these conditions, just one day's limit costs the equivalent of a season license.

No increase in numbers of put-and-take trout is proposed in this planning period. Fishing opportunity can be increased and improved by increasing efficiency of put-and-take trout programs through (1) concentrating **releases** of catchables in easily accessible, heavily-fished waters; (2) timing releases to coincide with peaks in fishing pressure; (3) testing strains of rainbow trout which improve returns to creel, (4) publicizing the location of put-and-take trout streams; (5) improving pools and holding water where possible; and (6) producing a consistently high-quality product at the hatcheries.

During the next five-year period, return rates for put-and-take trout will continue to be evaluated, and programs continued only where at least a 40% return rate by numbers or 100% return by weight can be achieved. This means that some fishing spots will not be stocked in the future. They are the ones that have poor return rates. Other fishing spots will receive more large hatchery trout and/or will be stocked more often. In some cases, where a hatchery put-and-take program provides the only viable alternative for a fishery, we will continue to use this program, even if the desired return rate is not met.

Shifting hatchery catchable size fish stocking in lakes and reservoirs to 5- to 7-inch subcatchables will be evaluated on individual waters. If successful, this will allow the Department to stock greater numbers of trout and return fish to the creel at a lower production cost.

Details of planned hatchery production, development, and maintenance are described in separate reports available from the Department.

Quality and Trophy Management

Bass

While trout remain the mainstay of Idaho fishing, bass have increased in popularity and are the preferred species by over 31 % of Idaho anglers. Because of increasing harvest and relatively slow growth across most of Idaho, the Department instituted a statewide 12-inch minimum size limit on bass to improve size quality and catch rates. Evaluations to date in most waters have documented several-fold increases in total catch rates and a doubling or more of catch rates for fish over 12 inches, though the percentage of fish over 12 inches may have decreased.

In the Angler Opinion Survey, over two-thirds of the anglers expressing an opinion stated they would like to have some waters managed to provide increased catch rates for bass larger than 15 inches, even though harvest would be restricted. While the statewide 12-inch minimum size limit improved catch rates for 12-inch bass, it is not designed to significantly increase catch rates for 14- to 16-inch bass, which most anglers consider as "quality" size.

During the next five-year period, the Department will continue to manage some lakes and reservoirs for quality **bass** in addition to **managing** some for trophy fishing opportunity. Management of additional waters for quality bass or trophy fishing will be pursued where biologically appropriate and supported by anglers.

Quality and trophy bass **management** differ in the size of bass, the total catch rates, and the harvest opportunity the regulations are designed to provide. They are defined as follows:

> Quality Bass Management: A management program using special regulations which reduce or delay harvest to provide increased catch rates for 12- to 16-inch bass, but where less than 20% would exceed 16 inches.

Under quality bass management, the percentage of fish which exceed 12 inches would be greater than under general regulations, but total catch rates may be reduced. This management would provide for limited seasonal harvest of fish under 12 inches and over 16 inches. The Department currently manages 11 lakes and reservoirs as quality bass waters.

Trophy Bass Management: A management program using special regulations which reduce or delay harvest to provide increased numbers of larger bass such that 20% or more exceed 16 inches.

Trophy bass management would maximize both catch rates and size of bass and provide only for harvest of trophy-sized bass. The Department currently manages seven lakes and reservoirs as trophy bass waters.

Special regulations used under quality and trophy bass **management** would use a combination of a 2-fish bag limit and various size limits and/or seasonal harvest restrictions. The primary regulation **for** quality **bass management** would **require the release of all** bass prior to July 1 and provide for harvest of bass less than 12 or over 16 inches after that date. The primary regulation for trophy **bass management** would **require the release of all bass** less than 20 inches.

During the next five-year period, the Department will evaluate the success of quality and trophy bass regulations and, if appropriate, place approximately five to ten additional lakes or reservoirs under quality or trophy bass management. Growth and recruitment under the 12-inch minimum size limit will continue to be evaluated and site-specific regulation modifications made where needed.

Trout

The terms "quality" and "trophy" have been applied to trout fisheries by anglers and managers to connotate various things, including whether fish were of wild origin or not and the aesthetics of the surroundings. Within the context of the Department's fish management programs and this Plan, however, they are used to refer to specific management programs which apply special regulations to increase the size of trout. They generally provide increased catch rates as well. Trout may be of wild or hatchery origin.

Quality and trophy trout management differ in the size of trout the regulations are designed to provide. They are defined as follows:

Quality Trout Management: A **management program** using special regulations which reduce or delay mortality to provide increased catch rates and increased size of trout, but where less than 20% of the fish exceed 16 inches.

Quality trout management is **appropriate** for lakes and streams with poorer productivity and growth potential, or on waters with trophy growth potential where the majority of affected anglers desire to retain more harvest opportunity than that provided under trophy management.

Tro^{p}hy Trout Management: A management program using special regulations which reduce or delay mortality to provide increased catch rates and increased size of trout such that 20% or more of the trout exceed 16 inches.

Trophy trout management is appropriate for lakes and streams with good productivity and growth potential where the majority of affected anglers desire to forego a major portion of or all harvest opportunity in order to catch large trout.

Special regulations used under quality and trophy trout management programs will use a combination of a 2-fish bag limit and various size limits, or catch-and-release where appropriate. Bait and/or gear restrictions may be applied where necessary to achieve size structure goals. The Department will propose quality management programs that may utilize a minimum size limit of 14 inches or slot limits such as none **between** 8 and 16 inches or 12 and 16 inches, depending primarily on productivity and biological characteristics of the fish population. Trophy **management** programs may utilize a minimum size limit of 20 inches, or slot limits such as none between 12 and 20 inches, **again** primarily depending on productivity and biological characteristics of the fish population. The most restrictive regulation, **catch-and-release,** may be used as part of quality or trophy trout **management,** depending on **the same characteristics.**

Quality and trophy management may include seasonal restrictions to reduce mortality of spawners, or trout as they concentrate to migrate downstream in the fall in response to dropping water temperatures. It may **also apply** to all trout within **a body of water, or may be applied to certain species in order to provide a** diversity of opportunity within the same body of water or **a geographical area.**

Idaho is **fortunate to** have many **bodies** of **water** which **provide large trout without special regulations** because of their productivity or minimal angling pressure. These waters will remain under current **general management** with a 6-fish bag limit or wild trout **management** with a 2-fish bag limit. As the number of anglers using the water increases and harvest rates impact the size structure of the trout, or as more anglers desire to optimize catch rates and size of fish and **de-emphasize harvest, quality** and **trophy** trout **management** may **be applied** to additional waters.

The Department has been a leader in the northwest in special regulations to enhance the size of trout and provide quality and trophy trout fisheries. There are currently 2,077 miles of streams managed with special regulations designed to increase the size and catch rate of trout. This represents about 8% of the **approximately** 26,000 miles of trout streams and rivers in Idaho. There are currently 16 lowland lakes and reservoirs managed with special regulations designed to provide increased size of trout. This represents about 8% of the approximately 202 lowland trout lakes and reservoirs.

Forty-two percent of the anglers responding to the 1994 Angler Opinion Survey would like to see additional waters managed for larger trout. In the next five-year period, the Department proposes to apply trophy or quality trout management on approximately 5 to 10 additional streams or stream segments and 10 to 15 additional lakes or reservoirs. During the same period, the Department will evaluate some current quality trout regulations in place which do not restrict gear type or the use of bait. Results of research conducted on bait hooking

mortality will be made available. Handling methods to minimize bait hooking mortality will be evaluated and a major effort made to educate and encourage anglers to apply techniques to minimize bait hooking mortality.

Steelhead and Salmon (Anadromous) Management

The Snake River above Lewiston historically produced an estimated 55% of the summer steelhead trout, 40% of the spring chinook salmon, and 45% of the summer chinook salmon in the Columbia River. Lesser numbers of sockeye salmon, coho salmon, and fall chinook salmon inhabited the Snake River drainage.

Snake River coho are extinct. As discussed under "Program Direction," all other runs of salmon and wild steelhead into Idaho are now at a low level. The only stocks not seriously threatened are hatchery-produced steelhead trout. The strategies and management actions for this planning period are conservation-oriented because of low fish abundance.

The long-range goals of the anadromous fish program are to (1) maintain genetic diversity and integrity of both naturally- and hatchery-produced fish; (2) rebuild naturally-producing populations of anadromous fish to utilize existing and potential habitat at an optimal level; (3) achieve **equitable** mitigation benefits for losses of anadromous fish caused by development of the hydroelectric dam system on the Snake and Columbia rivers; (4) secure adequate migration conditions to increase smolt and adult survival; (5) allow consumptive harvest by sport and treaty fishers; and (6) coordinate regional **management** with Idaho anadromous management to ensure **achievement** of Idaho escapement and other goals.

To meet fishery goals, Idaho's anadromous fish management utilizes both natural and hatchery production. Natural production recruits and sustains **populations** by spawning and rearing in the natural habitat with no human intervention, regardless of the parentage of the spawners. Hatchery production recruits and sustains fish **populations** in a controlled artificial spawning and rearing environment. Fish managers classify three groups of salmon and steelhead based on definition of production and broodstock history: wild, natural, and hatchery fish.

Wild/Natural

Wild fish are native fish which have no history of hatchery or nonnative fish outplanting or a limited amount unlikely to have had genetic impact. Natural fish also result from natural spawning, but are either not of native broodstock, or have had opportunity to breed with introduced hatchery fish. "Preservation" describes the fishery management applied to wild/natural salmon and **steelhead** (see drainage management plans). This is a management program which prohibits harvest and/or angling in order to preserve salmon and steelhead populations. For salmon listed under the ESA, preservation **management** is consistent with federal rules and recovery activities.

The Department will emphasize maintaining remaining runs of wild, native stocks of salmon and steelhead where they occur. Examples include wild steelhead in the Selway River and the South Fork Salmon River drainages, or wild salmon and steelhead in the Middle Fork Salmon River drainage and the Salmon Canyon tributaries. Maintaining genetic integrity of the native stocks is essential to continued production (hatchery and natural) of quality anadromous fish, as well as being the only practical means of utilizing the production capability of wilderness streams.

A variety of actions will be employed to manage wild and natural fish populations. Artificial production will be limited or curtailed in areas to be managed for natural production. Releases of hatchery-produced fish will be managed to minimize straying of those fish as juveniles or adults into wild fish streams. Fisheries programs will not reduce population status to a level reducing genetic integrity. Population abundance will be increased by improving survival of juveniles and adults with priority on major mortality factors related to migration through the hydroelectric system and regional fisheries. Naturally reproducing populations will be enhanced by setting fishing regulations to concentrate angler harvest on hatchery fish, continuing efforts to preserve and restore spawning and rearing habitat, and improving survival of downstream migrants.

Wide-scale outplanting of hatchery fish to increase natural production was curtailed during the last planning period. Supplementation of natural stocks with hatchery fish has not yielded desired results and rebuilding. Poor contribution of supplemented populations is likely caused by the same low smolt-to-adult survival as wild fish experience. While survival bottlenecks exist, rebuilding through supplementation or other production mechanisms is unlikely. Supplementation of natural fish populations will be limited to regionally coordinated and Department-approved evaluation studies.

Experimental and emergency use of wild anadromous fish stocks in captive rearing programs will be undertaken in this planning period. Bringing wild fish into captivity will be considered only if essential for long-term preservation. Careful monitoring of wild/natural salmon and steelhead populations will be necessary for future preservation and recovery management decisions.

<u>Hatchery</u>

Hatchery fish are sustained by some degree of artificial production, generally for several generations. They are released from hatcheries primarily as smolts and return as adults for spawning and subsequent artificial production of their progeny. Genetic material or behavior may be different than wild/natural salmon and steelhead due to adaptation to the hatchery environment. Of the fishery management classifications (see drainage management plans), "anadromous" refers to management for anadromous steelhead and non-listed chinook salmon which directs harvest opportunity, when possible, on known hatchery fish.

Management of salmon and steelhead hatcheries has focused on providing large numbers of smolts to provide adult returns to perpetuate hatchery production, produce fish for supplementation, and to provide harvest opportunity. Idaho's anadromous fish hatcheries were built as mitigation for lost production due to hydroelectric development. However, chinook harvest opportunity has not been consistent due to poor smolt-to-adult returns. Because of their better survival, steelhead harvest opportunity has been consistently provided, although the number of harvestable steelhead has ranged widely.

The Department will continue to utilize hatchery production to (1) produce fish that maintain optimum survival to adults through disease control, fish culture practices, and release strategies; and (2) provide fish at various life stages that can be utilized for harvest, supplementation, reintroduction, and research purposes. A new role of hatcheries will be to help preserve salmon populations on the verge of extinction. The Department will continue to develop hatchery practices than can be used with wild or natural broodstock that will be

suitable for returning their progeny to natural rearing habitat. We will also continue to mark hatchery smolts prior to release to avoid mixed stock harvest conflicts and to maximize **harvest and natural production management options.**

White Stumeon

The white sturgeon is the largest freshwater fish in North America, reaching documented sizes of up to 18 feet in length and 1,385 pounds, and rumored to be even larger. White sturgeon originally occurred in the Snake River downstream from Shoshone Falls, the lower Salmon River, and in the Kootenai River.

Sturgeon have declined in Idaho. The decline began in the 1880s when demand for smoked sturgeon and caviar caused sturgeon to be overfished. Construction of dams in the early 1900s accelerated the decline as much of the large, free-flowing river habitat required by sturgeon was lost. Present populations of sturgeon in the Snake River drainage are restricted to short river reaches, isolated from other populations by dams. Commercial fishing for sturgeon was stopped in 1943. Harvest of sturgeon from the Snake River drainage has been prohibited since 1970. Harvest of sturgeon was also prohibited in the United States' section of the Kootenai River beginning in 1984 because this population was also decreasing. Kootenai sturgeon were listed in 1994 by the U.S. Fish and Wildlife Service as a federally endangered species under the ESA. **Because** of the listing and continued population decline, the **Kootenai** River was **closed** to sturgeon fishing in **1995.**

To gather information about the many different populations of sturgeon in the state, the Department started a mandatory sturgeon permit program in 1989. Permits more than doubled by 1994 when about 6,000 permits were issued. The permit information, such as catch and size, is evaluated annually to aid in management decisions affecting sturgeon.

The statewide sturgeon management goal is to preserve, restore, and enhance viable white sturgeon populations capable of providing sport fishing opportunity. The Department has five policies governing sturgeon management. They are:

1. **Status of existing sturgeon populations will be determined and monitored, and factors suppressing populations will be evaluated.**

2. Sport fishing will be **regulated commensurate** with **population** status.

3. Habitat loss or **degradation will be opposed and measures promoted to improve** limiting factors.

4. Importation of non-native sturgeon will be restricted to avoid potential genetic or disease impacts to native stocks.

5. Sturgeon populations will be supplemented with native stocks where necessary to maintain future management options, to research survival rates, or to utilize suitable rearing habitat where natural recruitment does not exist.

Research conducted on the Kootenai River sturgeon population showed that no significant recruitment has occurred since 1974. The Department feels that changes in the flow pattern of the Kootenai River caused by Libby Dam (located in northwest Montana) is the major factor

inhibiting recruitment. Trapping of nutrients by Libby Dam is potentially another contributing factor to reproductive failure. Lack of reproduction was a major factor in listing Kootenai sturgeon under the ESA. The Department's research will continue to focus on regulation of discharge and nutrients as the major factors affecting recovery of the Kootenai River sturgeon population. The Department will participate on the Kootenai Sturgeon Recovery Team of the U.S. Fish and Wildlife Service to develop recovery measures that emphasize restoration of natural sturgeon reproduction and recruitment to the Kootenai River white sturgeon populations.

Successful sturgeon culture capabilities have been developed, and young hatchery sturgeon were released into the mid-Snake River in 1989, 1991, and 1994. These fish were tagged, then stocked in free-flowing reaches between major dams where reproduction has been eliminated. An introduction was also made into the Snake River downstream from American Falls, outside the historic range of sturgeon, resulting in a new fishery. The Department will continue evaluating survival of hatchery-reared sturgeon in the Snake River. Additional supplementation will be made if warranted.

Any further reduction in sturgeon habitat will be opposed. The long-range goals of the Department are to improve sturgeon habitat, increase populations of sturgeon, recover **Kootenai sturgeon so** that they **are delisted,** and **provide** angling **opportunity.**

Warmwater Game Ash

Approximately one-third of the surface acreage of water in the state is suitable habitat for one or more species of warmwater fish or for mixed fisheries with salmonids. Warmwater habitat is generally located at elevations below 3,000 feet mean sea level, except for lakes in southern and eastern Idaho.

Anglers that prefer warmwater **species have** increased from 7% to 23% to 33% **between** 1977 and 1987 and 1994 according to the Angler Opinion Surveys. These **species** support **approximately 30% of the fishing pressure expended in Idaho each year.**

Because warmwater game fish reproduce naturally in most cases, stocking is generally unnecessary once a population is established. Management of warmwater game fish in reservoirs is less expensive than trout management. Because many warmwater game fish are prolific, along with **hatchery** trout, they can **provide** the consumptive harvest that wild trout cannot.

In many waters, warmwater and **coldwater** fish **are compatible.** For **example,** "two-story" fisheries are **established** in many large reservoirs with warmwater species occupying shoreline waters and salmonids occupying **offshore areas. Because** the two types of fish occupy different habitats, a **greater** catch **rate** and yield of **game** fish may **be available** than if either were **managed alone.** Smallmouth **bass are** particularly suited for **management** with hatchery rainbow trout in large reservoirs, and in some cases, they have been shown to improve trout growth by reducing nongame fish populations. However, they may be a significant predator on fingerling trout, but their impact on **kokanee** and other salmonids is largely unknown. In some habitats, primarily small lakes and reservoirs, warmwater species can be detrimental to trout fisheries. Some species of warmwater fish tend to become overpopulated and stunted in small bodies of water. Because small warmwater fish may utilize the same foods as trout, they can retard trout growth and survival. Some species of warmwater game fish are

effective predators on other fish. The presence of either large predators or overpopulated warmwater game fish can preclude stocking of fingerling salmonids as a management option.

Most waters suitable for establishment of a warmwater fishery have received introductions. Regulations were developed to improve the quality of bass and provide some trophy opportunity. Additional species were introduced to existing warmwater fisheries to diversify opportunity and provide forage.

During the next five-year period, the primary emphasis will be on management to improve existing warmwater fisheries. Addition of habitat structure and fish concentration devices will be used to improve catch rates for bluegill and crappie. Regulations will be used to provide quality and trophy bass fishing opportunities. Further evaluation of forage needs for bass and other species will be made, and forage introduced where needed. Additional species will be added to diversify fisheries in some cases.

The primary warmwater introductions that will be considered will be smallmouth bass in several large trout reservoirs. Northern pike will be considered for introduction beyond their current distribution pending completion of current research on the species. New studies of walleye ecology and interactions with western fish species will be reviewed.

Alpine Lake Management

High mountain lake anglers have **expressed** the greatest satisfaction for any of the **Department's** fishery programs. That reflects the **general experience** of the angler's outing, as well as the quality of fishing at **alpine lakes.** High mountain **lake management** for **over 50** years has **basically been to** stock **lakes on** a regular basis (usually two- to **three-year** intervals) to assure **adequate** supplies of fish for anglers. Alpine **lakes have been** stocked with salmonids native to Idaho (but not necessarily native to a particular lake) and with exotic salmonids (brook trout, golden trout, brown trout, Arctic grayling, Arctic char, Atlantic salmon).

During this five-year planning **period,** the **Department** will **develop** a **Comprehensive** Alpine Lakes Management Plan **based** on the following guiding principles. We will also review current practices to bring them in-line with these guiding **principles as soon as possible.**

1. **Some alpine lakes** in **each** major drainage will **be maintained** fishless.

   Since many (and possibly most) alpine lake ecosystems evolved without fish **populations, there** is a **need** to maintain some lakes as reservoirs for genetic and biological diversity, natural heritage and wilderness values, and for scientific research of other aquatic life forms.

2. Management of alpine lakes in wilderness and national recreation areas will be coordinated closely with the land management agencies.

   The "Policies and Guidelines for Fish and Wildlife Management in Wilderness and Primitive Areas" manual, developed by the U.S. Forest **Service,** U.S. **Bureau of** Land **Management, and** the

International Association of Fish and Wildlife Agencies, will guide management of these alpine lakes. Stocking plans for wilderness lakes should address impacts on fisheries, lake ecosystems, recreational use, and aesthetics.

3. Maintenance of self-sustaining trout populations.

Determination of lakes capable of providing natural reproduction will be made. Stocking programs will be modified to reflect needs for these lakes and to reduce costs of programs. Detrimental effects of stocking fish on top of existing populations will be reduced.

4. Maintenance of species of special concern and threatened and endangered species within **alpine lake drainages.**

Priority will be placed on management of alpine lakes in a manner so as to limit, or reduce impacts to, species of special concern and threatened and endangered species in and downstream from **alpine lakes.**

Part of the **alpine lakes comprehensive plan** will be development of an assessment manual based on physical and **biological** parameters of a lake. This information is currently being gathered in ongoing research and, hopefully, can be applied statewide. This should refine stocking practices to avoid indiscriminate stocking due to a lack of survey data. This may improve the quality of the alpine lake **experience** for the sportsman and the condition of the aquatic ecosystems.

Federally Listed Species

There are three fish species in Idaho that are listed as threatened or endangered under the Federal **ESA. The** Snake River sockeye salmon were listed **as endangered** in 1991. Naturally-produced Snake River spring, summer, and fall chinook, excluding the Clearwater River, were listed as threatened in 1992. The Kootenai River sturgeon was listed as endangered in 1994. Numbers of these fishes has ranged from zero to a few thousand, reflecting their ESA status. Bull trout are currently a species under consideration for listing by the U.S. Fish and Wildlife Service.

The ESA is a federal law passed by Congress in 1973. Its purpose is to provide a means of assuring the preservation of animal and plant species that are in danger of extinction. An endangered species is any species which is in danger of extinction throughout all or a significant portion of its range, whereas a threatened species is any species which is likely to **become** an **endangered** species within the **foreseeable** future throughout all or a significant portion of its range. Species may be broadly defined to include isolated breeding populations that are significant to ecological importance, such as the Snake River sockeye salmon or Kootenai River white sturgeon. Both listed "species" are comprised of a single spawning population in Idaho. Restoration of a species to a level safe from extinction is the key aim of the ESA. Typically, restoration actions are guided by a recovery plan, and the tools of recovery may range from captive breeding to land acquisition. Critical habitat is also usually identified for listed species in order to provide special protection for key breeding and rearing areas.

Section 9 of the ESA prohibits the taking of listed species unless authorized by the federal management agency in charge. For anadromous fish, the federal manager is the National Marine Fisheries Service, and for resident fish, it is the U.S. Fish and Wildlife Service. Essentially all of the Department's management and research activities for listed fish, or for other fish species that live where listed fish do, fall under the definition of take. Even though the Department is a conservation agency, it must be federally authorized to conduct tasks that preserve, protect, and perpetuate fish and wildlife resources when its actions affect listed fish. The ESA requires the federal managers to determine that proposed actions are not likely to jeopardize the continued existence or recovery of listed fishes.

The administrative requirements for both the Department and the federal managers to propose and authorize activities are very lengthy because of their legal nature. Considerable reporting to the federal managers is also required. These responsibilities are in addition to state management functions. The substantial research, management, and administrative activities associated with federally listed fishes are supported primarily with federal contracts because federal hydropower development has been a major factor in the decline of all of Idaho's current ESA-listed fishes.

Research, propagation, and management of listed fishes is directed at preservation and recovery in order to delist them. The sockeye captive broodstock program, implemented in 1991, is a significant **example** of a preservation action taken by the Department. Information and education about the status and **presence** of listed **species** has **also been** emphasized, such as the sturgeon newsletter distributed in 1995.

Changes in other species management is sometimes required to reduce potential adverse effects to listed fishes. An **example** is the hatchery steelhead program, where there are concerns about interactions such as competition and predation with listed chinook. The Department has taken actions to minimize these interactions. Steelhead **releases** have been shifted out of chinook spawning **and** rearing **areas** and **release** numbers **have been** reduced. The **Department** is **also** planning to **enhance** its capability to acclimate steelhead at **several** sites in the Salmon River to reduce the number of steelhead that reside in the river, rather than migrate. Acclimation ponds will retain those steelhead that are not **predisposed** to migrate.

The Department will continue to work with federal managers of listed fishes to ensure that Department programs do not **jeopardize** listed fishes. However, the Department will not support needless constraint of fisheries and fishing opportunity without defensible biological information.

Species of Special Concern

A number of races (or subspecies) and species of fish are considered to be threatened, endangered, or of special concern in Idaho (Table 3) but they are not federally listed under the ESA.

The Fisheries Bureau defines and classifies Threatened and Endangered Species in this Plan similar to Federal definition:

> Threatened Species: Any species which is likely to become an endangered species within the foreseeable future in all or a significant portion of its range within Idaho.

Table 3. A list of fish species that are endangered, threatened, or of special concern in Idaho. (Note: This list is developed for management purposes. This is not a list determined for, or by, the Federal Endangered Species Act.)

Status
E Endangered
T Threatened
SC Special Concern (Categories A, B, and C)

TABLE3

Common name	Scientific Name	Status	Comments
White sturgeon (Snake and Salmon Rivers)	*Acipenser transmontanus*	SC-A	Habitat has been altered, and population limited by impoundments. Additional impoundments or water quality degradation could change status to threatened.
Burbot (Ling)	*Lota iota*	T	Restricted range - Kootenai River. Population status unknown.
Steelhead trout	*Oncorhynchus mykiss*	SC-A	Some discrete stocks may be threatened.
Redband trout	*Oncorhynchus mykiss gairdneri*	SC-A	Habitat degradation has severely limited range. Hybridization with other rainbow trout stocks has diluted gene pool.
Cutthroat trout	*Oncorhynchus c/ark/ ssp.*		Several subspecies.
Bonneville cutthroat trout	*Oncorhynchus c/ark/ utah*	*E*	Restricted range - Preuss, Giraffe, and Dry creeks. Has suffered severe population declines from habitat degradation.
Westslope cutthroat trout	*Oncorhynchus Clark/ lewisi*	SC-A	Sensitive to habitat modification, overharvest, and hybridization.
Yellowstone cutthroat trout	*Oncorhynchus c/ark/ bouvieri*	SC-A	Sensitive to habitat modification, overharvest, and hybridization.

Common name	Scientific name	Status	Comments
Bear Lake cutthroat trout	*Oncorhynchus clarki ssp.*	SC-A	Restricted range - Bear Lake.
Fine-spotted cutthroat trout	*Oncorhynchus c/arki ssp.*	SC-A	Restricted range - South Fork Snake River.
Bull trout	*Salvelinus confluentus*	SC-A	Sensitive to habitat modification and overharvest.
Bear Lake whitefish	*Prosopium abyss/cola*	SC-A	Restricted range - Bear Lake.
Bonneville whitefish	*Prosopium spi/onotus*	SC-A	Restricted range - Bear Lake.
Bonneville cisco	*Prosopium gemmifer*	SC-A	Restricted range - Bear Lake.
Bear Lake sculpin	*Cottus extensus*	SC-A	Restricted range - Bear Lake.
Shoshone sculpin	*Cottus greenei*	SC-A	Restricted range - Snake River aquifer springs.
Wood River sculpin	*Cottus leiopomus*	SC-A	Restricted range - Wood River.
Leatherside chub	*Gila copei*	SC-C	Population status unknown.
Sand roller	*Percopsis transmontana*	SC-C	Restricted range - Clearwater and Snake rivers near Lewiston. Population status unknown.
Pacific lamprey	*Lampetra tridentata*	E	Population status unknown.

TABLES

Endangered Species: Any species which is in danger of extinction throughout all or a significant portion of its range within Idaho.

In contrast with the six bird and mammal species listed as Threatened and Endangered Wildlife under Idaho Code, the fish species listed as threatened or endangered have no statutory protection under Idaho Code. Their classification as threatened or endangered is a policy statement for management, not legal, purposes.

Species of special concern are defined as native species which are either low in number, limited in distribution, or have suffered significant population reductions due to habitat losses. The list includes three categories of species:

A. Species which meet one or more of the criteria above and for which Idaho presently contains, or formerly constituted, a significant portion of their range (i.e. priority species);

B. Species which meet one or more of the criteria **above** but whose populations in Idaho are on the edge of a range that falls largely outside the state (i.e. peripheral species); and

C. Species that may be rare in the state but for which there is little information on their population status, distribution, and/or habitat requirements (i.e. undetermined status species).

Making the Idaho **endangered,** threatened, or **special** concern list **does** not automatically create a **management** action response, as would happen if the Federal ESA was applied. The Department will consider these sensitive species when making any fishery **management** decisions that affect their numbers, genetic integrity, or habitat. Likewise, we will use our knowledge of these fish to affect decisions by other agencies, entities, or individuals relative to the health of these species.

We will seek funding from outside, nontraditional sources to do status assessments, monitoring, or research of nongame species on this list. The Regional Fishery Managers, in concert with the Fisheries Bureau, will pursue information on **population** status and distribution by integrating inventory and monitoring activities into their annual work plans. The logical **progression is to develop species management or conservation plans to guide recovery or maintenance of populations.** When **appropriate,** we will **collaborate** with other state, federal, or private entities to develop conservation plans. The first priority for conservation plans will be candidate species for federal listing.

The Department will closely control the stocking of fish species and other aquatic organisms that might compete or interbreed with these fish, or indirectly have a detrimental affect on populations. We realize that in some cases, artificial augmentation may be the only viable alternative. This is where species management or conservation plans will provide direction.

White Sturgeon

As previously noted, the white sturgeon in Idaho has been affected by habitat alteration and overfishing. Remaining habitat will be protected and angling activity carefully regulated to

preserve the species. Sturgeon culture programs have been implemented and may be used as a tool to rebuild populations.

Burbot

Burbot are only found in the Kootenai River. They have a preference for cold, slow moving water. They experience the same altered flow environment as the federally listed Kootenai River sturgeon due to Libby Dam operations. The dam is operated for hydropower production, and has reversed the natural hydrograph to produce high discharge in the winter and low discharge in the summer. The Department has conducted research to learn more about the status and life history of burbot. Consistent with Department policy to not use license funds for fisheries primarily affected by hydropower development, the research has been funded by Bonneville Power Administration. Research is in progress exploring both the effect of altered flow and water temperature on this fish.

Steelhead Trout

As discussed under "Program Direction," the National Marine Fisheries Service is conducting a status review to determine if Snake River steelhead should be listed. Similar to listed chinook salmon and sockeye, altered habitat due to federal hydropower development in the lower Snake and Columbia rivers migration corridor is a major factor in the substantial decline of wild steelhead. The Department began restricting wild steelhead harvest in the late 1970s, and fully restricted harvest beginning in the mid-1980s to protect spawners. Considerable hatchery production of steelhead in Idaho has not increased or sustained natural steelhead production. Population trends of naturally-produced steelhead closely follow those of spring and summer chinook salmon (Figure 5).

Redband Trout

Listings in previous management plans have included redband trout as a species of special concern. This subspecies of rainbow trout is uniquely adapted to streams with extreme water flow and temperature variations and high alkalinity in the high desert of southwest Idaho. Recently, taxonomists have concluded that the native rainbow throughout nearly all of southwest and southcentral Idaho are redband trout. Redband populations have remained genetically isolated in areas of extreme environmental conditions where other rainbow trout strains, races, or subspecies have been unable to survive, but land management practices have threatened their status. Hybridization with other rainbow trout stocks has also diluted the remaining gene pool. The redband trout is the only subspecies expected to survive in these types of environment and provide a viable fishery. Therefore, it has a higher value in its native environments and should receive management priority by the Department and land management agencies. The redband was petitioned in 1995 for listing under the ESA. The U.S. Fish and Wildlife Service is in the process of addressing the petitions. The outcome will possibly direct future action.

Cutthroat **Trout**

The 1990 Idaho Legislature passed into law legislation declaring the cutthroat trout as the state fish. The state fish is several subspecies of native cutthroat; most are in the special concern category. The most widely distributed subspecies and the one that has suffered the greatest habitat loss is the westslope. However, all cutthroat must be seriously considered

in land management decisions in their remaining unprotected habitat. The Department will emphasize cutthroat trout when reviewing timber sales, mining practices, grazing management, point and nonpoint source pollution, and antidegradation guidelines.

The Snake River fine-spotted and the Yellowstone cutthroat may be the same fish, but some taxonomists still suggest they are separate subspecies. The fine-spotted is also a candidate species for federal listing. Within Idaho, the high quality habitat is restricted to the Snake River drainage upstream from American Falls Reservoir. Habitat is most affected by water withdrawals. Where possible, the Department will recover populations by working in cooperation with irrigation canal companies and the Bureau of Reclamation to screen diversions and develop more benign management practices for water storage and irrigation.

The other two subspecies have extremely limited range in the very southeast corner of Idaho. The Bear Lake cutthroat is endemic to Bear Lake and its tributaries. It has been adversely affected by water management, introductions of other fish species, grazing practices, and irrigation withdrawal in the tributaries. The Bonneville cutthroat is found in only a handful of small tributaries to the Bear River in Idaho and has a very limited distribution outside Idaho. The Bonneville cutthroat is also a candidate species for federal listing. The Caribou National Forest has responsibility for managing most of these affected streams. Adequate protection of the streams and riparian habitats from **inappropriate** grazing practices has not been provided, **leading to population** decline. **The Department** is pursuing agreements **to** protect these streams against further **habitat** loss **and to enhance already degraded habitats.**

Bull Trout

Bull trout are the only native char in Idaho. Until 1980, this fish was considered to be the same species as the **coastal** Dolly Varden ***Sa/ve/inus ma/ma*, and** is still commonly called Dolly Varden in Idaho. This species **has** only recently **been reared** in Idaho **hatcheries and** primarily exists in Idaho only as wild, native **populations.** Bull trout fill a unique niche in Idaho fish communities. Bull trout **are** included **as** a **species of special** concern **because of** its wild, native status and **the potential to become** extinct **in some major drainages.** Bull trout distribution and numbers **have declined,** primarily **due to habitat degradation.** This fish was **petitioned** for **federal** listing in **1993, and** after a status review, **the** U.S. Fish **and** Wildlife Service concluded in 1994 that a listing **under the ESA** was **warranted** but precluded **due to** the many other species of higher priority for listing. Bull trout remain a candidate species for federal listing, subject to annual status review. To protect bull trout, the Department closed most of Idaho to bull trout harvest in 1994 and all of Idaho to harvest in 1996. A conservation plan was **developed** by the **Department,** U.S. Forest Service, U.S. **Bureau** of Land Management, U.S. Fish and Wildlife Service, and Idaho **Department** of Health and Welfare in 1995 to enact measures to reverse the decline of bull trout **populations** in Idaho and restore their habitats.

Fishes Endemic to Bear Lake

The Bear Lake whitefish, Bonneville whitefish, **Bonneville** cisco, Bear Lake sculpin, and the Bear Lake cutthroat are only found in **Bear** Lake. **Because** of their restricted range, they are vulnerable to extinction should their habitat be altered from water management of Bear Lake and related tributaries critical to persistence of these species. The Department will work with the Utah Division of Wildlife Resources, water managers, and landowners to reduce impacts to these fish.

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Shoshone Sculpin

Prior to 1990, the Shoshone sculpin was the only Idaho fish species to be nominated for threatened status under the ESA. That nomination was withdrawn after extensive inventory revealed healthy but isolated populations in a few remaining free-flowing springs in the Thousand Springs area and the Snake River adjacent to the springs. Remaining habitat must be preserved to ensure a healthy population.

Wood River Sculpin

The Wood River sculpin has been located in tributaries to the Little Wood and Big Wood rivers and Camas Creek. More inventory work is needed to determine the extent of its range. It warrants the protection afforded by the Species of Special Concern Listing until its range is more clearly defined. Inventory work is being done by the Nature Conservancy in concert with the Department in tributaries to the Big and Little Wood rivers.

Leatherside Chub

Little is known about the leatherside chub in Idaho. Available information suggests it was never abundant, and rarely reported. It inhabits clear cool streams and prefers a pool environment. Its natural distribution in Idaho was confined to the upper Snake River and Wood River drainages, and the Bonneville Basin. Even though extensive stream sampling has occurred throughout its range, it has only been found rarely in Trapper Creek and the Goose Creek and Cassia Creek drainages by Department personnel.

Sand Roller

The status of sand roller in Idaho, past and present, is unknown. No known record exists to determine their population status. Changes in the riverine habitats in the Columbia River basin may pose the largest threat to the survival of this fish species. Construction of dams and resulting reservoir environments, pollutants, and invasion of non-native species (particularly piscivores) are all threats to the continued survival of this fish (Cochnauer 1995). However, it **appears** that sand rollers are quite **common throughout the** Lower **Columbia River (Mongillo and Hallock 1995). Data collected by these Washington investigations does not indicate upward or downward trends in population status.**

Pacific Lamprey

The Pacific lamprey was **once common** in the **Snake, Clearwater,** and Salmon river **drainages.** Columbia and Snake river dams may pose the greatest threat to the survival of Pacific lamprey in Idaho. Counts of adults at Lower Granite Dam have declined in recent years. Counts of adults at Ice Harbor Dam numbered 50,000 in 1963, declined to 40 in 1993, and increased to 400 in 1994. Habitat changes in headwater tributaries through land use activities may also be a threat. Use of **ammocoetes** as bait for sturgeon and smallmouth bass, often collected at dam fish collection facilities, may have had a serious impact on the numbers of lamprey reaching the ocean. Salmon and steelhead bypass systems at Snake and Columbia river dams are detrimental to lamprey **ammocoetes.**

Other **Species**

An exotic char that is threatened in its native range because of habitat alteration and introduced non-native fish is unique to Idaho. The blueback trout *Sa/vel/nus alpinus* oquassa (formerly the sunapee trout which was synonymized with the blueback by taxonomists) was introduced into high mountain lakes of the Sawtooth Range, tributary to the Salmon River, many years ago. This fish was only recently (1978) rediscovered. Because it is not native, it will not be listed as a species of special concern, but protection of this fish and its habitat should be a high priority. The Department will protect this species by suppressing publicity, carefully monitoring the populations to determine their status, and by not stocking species which would adversely affect blueback trout in waters where they occur. It is listed by the American Fisheries Society as threatened (1989).

Other Aauatic Animals

All wildlife are considered to be the property of the state and are protected and managed by the Department. Aquatic animals that are important to, or may have an impact on, fish management include amphibians, mollusks, crustaceans, and insects. Aquatic mammals which also may impact fish management are not considered in this document.

One amphibian, the bullfrog *Rana* ***catesbiana,*** *is* **legally** classified **as** a game fish for management purposes and is subject to sport harvest. Management consists of restricting harvest to the same season as other game fish in waters where they occur. No program for specific management of bullfrogs is proposed for this five-year plan. Scientists specializing in amphibians **are concerned** about apparent declines in amphibian **abundance** and what effect introduced amphibians, such as the bullfrog, may play. Transplanting bullfrogs into suitable, underutilized habitat will not be **undertaken** without advice from amphibian specialists.

Other amphibians, crustaceans, aquatic insects, and mollusks provide forage for game fish, are used by anglers for bait, or are of scientific or aesthetic value. No management programs are **proposed;** however, present populations should be maintained.

Fisheries Research

The mission of the **Department's** Fisheries **Research Section is:**

"To develop and effectively communicate scientifically sound information and too/s to enhance the management of Idaho's fisheries."

The section has four organizational components: anadromous fish species mitigation, resident fish species mitigation (both 100% outside funding), discretionary research, and program management/technical support (both funded 75% with federal sport fish restoration funds).

These four programs contain 10, 6, 6, and 2 full time **professional** staff, respectively.

Mitigation research is applied in an adaptive management approach. Population monitoring and other findings are used to recover populations of endangered sockeye, chinook, and Kootenai River sturgeon, as well as populations of steelhead, kokanee, burbot and other species that have been adversely impacted by hydropower systems. The general direction of

these research activities is coordinated with other resource agencies, tribes, and federal or utility funding entities and set through funding contracts.

Because of the evolving status of salmon and steelhead recovery issues and approaches, research efforts on those species must be somewhat dynamic. Department anadromous research and management personnel identified and prioritized information needs most critical to recovery efforts during the next five years. Those information needs and schedule are displayed in Table 4.

To provide direction for the remainder of the Department's fisheries research program, a combination of **management,** hatchery and research personnel identified and prioritized needed information and tools that would enhance fisheries management in Idaho. With the current staff committed to discretionary research, the top fifteen items could be addressed during the 1996-2000 planning period. Those research activities and the planned schedule for addressing each are shown in Table 5.

Table 4. Anadromous Research Activities, 1996-2000.

	INFORMATION **NEEDS** TO **BE ADDRESSED** BY ANADROMOUS **RESEARCH**	SCHEDULE
1 .	**Relative** survival of smolts **subjected** to various mainstem migration scenarios.	1996-2000
2	Response in survival of smolts to returning adults for various migration conditions.	1996-2000
3	Effective communication of sound scientific information on **anadromous** fish.	1996-2000
4	**Chinook captive rearing and captive broodstock techniques**	**1996**
5	**Chinook and steelhead life history parameters.**	1996-2000
6	Written **documentation** of historic **anadromous** resource status, policies and **management** in Idaho.	1996
7	A synopsis of hatchery **supplementation** research for salmon and steelhead.	**1996**
8	Catch and **release** mortality of adult chinook.	1996-1997
9	Improvement of smolt production from hatchery stocks.	1996-1998
10	Relative benefits of volitional smolt **releases.**	1997-2000

Table 5. Discretionary Research Priorities, 1996-2000.

PRIORITY*	MANAGEMENT NEEDS TO BE ADDRESSED BY DISCRETIONARY RESEARCH	SCHEDULE
1(4)	A standardized common fisheries data base for streams, lowland and alpine lakes.	1995-96
2(13)	A matrix for designing creel censuses which yield estimates of given precision and reliability.	**1995**
3(1)	Population effects of whirling disease in Idaho.	1995-98
4(3)	Tradeoffs in economics and angler satisfaction from stocking lowland lakes with hatchery trout at various sizes, times, frequencies, densities and condition.	1995-99
5(10)	Population effects of electrofishing injury.	1995-97
6(11)	Relative numbers, characteristics, and ultimate fate of anglers displaced by various **regulation** changes.	1995-97
7(8)	Improved methods for determining angler opinions and preferences. 19(12) A **method for** quantifying angler **satisfaction.** 24(20) Can adjusting **expectations improve** angler satisfaction. 25(16) **Do** social norms or **expectations bias** angler's responses on opinion surveys.	1995-99 1998-99 1997-99 1996-98
8(-)	A matrix for designing trout stream sampling programs which will yield estimates of given precision and reliability which **are representative enough** for various sampling objectives.	1998-99
9(6)	A synopsis of **alpine lake management.**	**1995**
10(9)	Sterile hatchery trout which can **be produced economically** and consistently on a production level that will avoid genetic risk to wild trout and/or perform **better**	1995-99
11(-)	The response of bull trout populations to the 1994 harvest closure.	1995-99
12(7)	Relationships between physical and chemical characteristics of lakes and reservoirs and the quality of fisheries.	1995-97
13(5)	The mechanisms and magnitude of fish losses from reservoirs, whether losses hinder the attainment of fisheries goals, and if so, how to minimize or mitigate losses.	1997-99

14(14)	Life history characteristics of Idaho hatchery rainbow brood stocks which might influence the ultimate size and contribution to the fishery.	1997-99
15(2)	The fishery impact of stream trout losses to irrigation diversions/if significant, means of minimizing or mitigating.	1995-99
+	Methods for increasing catchability of hatchery trout.	1995-99
+	The ability of special regulations which do not prohibit bait to meet management objectives.	1995-99
+	Finalize and communicate "random response" method for measuring regulation non-compliance.	1996

* Projects prioritized by two methods: ranking based on a combination of a) potential benefit to fishery, b) likelihood of success, and c) cost; and ranking (in parenthesis) of general importance with no specific criteria.

+ Projects which are ongoing or were not rated but complement planned research.

Habitat Protection

During this planning period, the **Department** will actively promote the habitat and life history needs of the fishery resources in Idaho. We will seek the cooperation of other agencies and private landowners to develop and implement actions which will result in the protection, **maintenance,** or enhancement of aquatic habitats.

We will assist others to develop and monitor **management** practices designed to protect, maintain, or enhance habitats. We will actively pursue **coordination** of activities with other State of Idaho resource managers.

The habitat protection **objectives** of the department shall be to:

1. Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features necessary to ensure protection and restoration of the aquatic systems.

2. Maintain and restore spatial and temporal connectivity within and between watersheds. Lateral, longitudinal, and drainage network connections include floodplain, wetlands, upslope areas, headwater tributaries, and intact refugia. These linkages must provide unobstructed migration routes to areas critical for fulfilling bull trout life history requirements.

3. Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.

4. Maintain and restore ground water and surface water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. Water quality must remain in the range that maintains the biological, physical, and chemical integrity of the ecosystem, benefiting survival, growth, reproduction, and migration.

5. Maintain and restore the sediment regime in which the aquatic ecosystem evolved. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.

6. Maintain and restore ground water and instream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.

7. Maintain and restore the species composition and structural diversity of plant communities in riparian zones and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, and channel migration and to supply amounts and distributions of large woods sufficient to sustain physical complexity and stability.

The Department will encourage and actively work with land managers in the development of implementation of measures to evaluate watersheds. Watershed evaluations should:

1. Focus on ecosystem planning.

2. Describe those factors limiting aquatic habitats and the impacts of land use activities.

3. Determine local fish population species and health of the habitat.

4. Determine the physical and **biological** processes that effect local aquatic health.

The product of a watershed evaluation should guide and prioritize management actions, help determine aquatic and riparian **management** objectives, **appropriate** boundaries for riparian management areas, and help to prioritize restoration activities where needed.

The Department will encourage adoption of habitat and population restoration practice that will place the highest priority on protection of those habitats that provide full function for survival of inland native fish.

Department restoration goals are to:

1. Maintain options for future recovery by ensuring a secure, well-distributed, and diverse constellation of natural habitats and co-adapted populations remain in place over the long term.

2. Secure existing populations of aquatic species, including fish, and maintain the critical areas supporting healthy ecosystem functions.

3. Institute recovery measures that stand the greatest chance of producing measurable improvements in the status and abundance of wild fish populations, and improvement of ecosystem function, the near term.

The Department will encourage restoration efforts to be directed at controlling the cause rather than the symptom of habitat degradation.

Fishing Access

Having access to fishing waters is an important part of the Fisheries Program. Anglers recognize that access is important and that access opportunity is not automatic, but must be provided for in many areas. Two hundred randomly selected anglers from each region were asked to allocate the use of their fishing license dollars among major programs. Those anglers allocated 12.7% of their dollars to access development. The Department spends about 9% of the fisheries budget on access exclusive of the steelhead permit account. The steelhead permit account uses a portion of the cost of each steelhead permit ($3.50) primarily to acquire, maintain, and improve access for steelhead fishing. This program will continue as funds and opportunity allow.

Each management region of the state has a Department Land Specialist who works in conjunction with field fisheries managers and headquarters staff to acquire and maintain fishing access to fishing waters. About 250 sites are currently in the access program and provide fishing access, boat ramps and docks, parking, and toilet facilities. In addition, the program has constructed and developed some major fishing waters such as Spring Valley Reservoir and Horsethief Reservoir. Smaller fishing ponds have been acquired and developed throughout the state. The program cooperates with local irrigation districts and others to help repair dams, spillways, and outlet works to maintain or enhance fisheries. Costs of this program are currently about $ 1 million annually. As future access sites are developed, we will need to consider ways to minimize maintenance requirements. Anglers and volunteers will be asked to help reduce costly maintenance so that more access opportunities can be provided.

During the five-year plan period, previous access achievements will be reviewed and new priorities set for furthering access opportunities for fishing.

Public Information and Surveys

The fishery program will continue efforts to develop and provide fisheries information to anglers and others. Forty-nine percent of the anglers polled in the Statewide Angler Opinion Survey indicated the Department should provide more information, particularly information made available at license vendors, mailed to them, or released in newspapers. Over the next five years, the list of preferred information resulting from the Opinion Survey will be used to guide our efforts:

1. Fishing Rules - simplification, readability

2. Current Fishing Conditions - 1-800-ASK-FISH, news releases

3. Places to go Fishing - fishing water brochures, fishing guide

4. Result of Fish Surveys - regional newsletter reports, research reports, media articles and coverage

5. Fishing Tips - fishing leaflets, workshops

6. Environmental Issues - habitat and fish relationships, articles, regional newsletter reports, research reports, media articles and special interest coverage

Commercial Fisheries Management

Commercial Fishina

Commercial fishing regulations were adopted in 1988 by the Idaho Legislature to document the use of crayfish (of the genus *Pacifastacus)* and nongame fish for commercial purposes. Commercial fishing rules were adopted by the Commission in 1988. The regulations established an equitable fee structure for the take of these resources. Some nongame fish have considerable commercial value as animal feed, fish bait, fertilizer, and for human consumption. These species may reduce game fish populations through competition and predation and may be a nuisance to sport anglers. In many Idaho waters, the majority of the fish biomass is nongame fish such as suckers, carp, squawfish, and chubs.

Nongame fish are also important for their scientific and aesthetic values. Idaho has four unique species of riongame fish that occupy limited ranges either entirely within the state or in common waters with Utah, Nevada, and Wyoming **(See** section dealing with Species of Concern). Shoshone sculpin occur only in large springs in the Thousand Springs area and in the Snake River adjacent to those springs. Wood River sculpin are found only in most tributaries of both the Little and Big **Wood** Rivers and in Camas Creek tributaries. Studies are planned which will accurately define locations and status. Bear Lake sculpin occur only in Bear Lake. Leatherside chubs **have been observed** in Trapper **Creek** in 1986, 1987, and 1994, and in Goose and **Cassia creeks drainages** in 1986 and 1987. However, drought conditions since then may have affected these populations.

Crayfish are one of the commercial species used for human consumption and are also an important bait for fishing. They **are also** an important food source for **some** of our sport fishes. The effect of commercial **exploitation** of crayfish on the **food availability** for game fishes is still unknown. However, reporting requirements of the commercial license will provide the Department with information during this planning period. If necessary, controls on the harvest of crayfish will be developed.

Mysis shrimp in Pend Oreille Lake is the only other aquatic organism commercially fished in Idaho. Harvest permits have been only experimental until this time. Harvest techniques and timing are tightly regulated. It is regulated because fishing techniques used to capture the shrimp also capture kokanee. The Department receives shrimp and kokanee information in monthly reports and monitors this unique fishery for its effects on the kokanee population. During this five-year planning period, public comment and direction will be determined for commercial harvest of mysis shrimp.

Fishing Contests

Effective July 1, 1989, the Department was given the statutory authority to regulate fishing contests, tournaments, and derbies. Pursuant to that authority, a permit is required from the Department for any event in which a prize is awarded to participants based on the capture of an individual fish or the size or number of fish captured.

The Department recognizes and permits two types of fishing contests: (1) a catch-and-release contest where contest rules require specific procedures to keep target species of fish alive and healthy and require that all fish caught by participants be released back into the contest water on the same day they were captured, and (2) a harvest contest where contest rules do not require participants to keep all target species of fish alive but allow participants to harvest the fish.

Applications are reviewed for the potential impact of the contest on other recreational users or impacts to fish populations or fish management goals for the water area. Additional harvest restrictions may be included as provisions of a harvest contest permit.

Permits for catch-and-release contests will require live wells equipped with aeration or recirculation. No harvest will be permitted during **catch-and-release** contests.

Appendix A.

STATUS REPORT: CURRENT

Program Direction	1991-1995 Goal	1994 Status
Increase emphasis on habitat protection.	Establish minimum stream flows for priority streams.	Applications submitted for 20 streams; flows granted for 6.
	Establish aquatic habitat specialists in each region.	Positions established in 6 of 7 regions.
	Conduct habitat improvement projects.	Numerous major stream fencing and fish passage projects completed.
	Expand volunteer involvement.	Utilized in nearly all habitat projects.
Increase emphasis on protection and enhancement of wild trout.	Enhance wild trout habitat protection.	See above.
	Increase public awareness of wild trout values.	Cutthroat established as state fish; posters, wild trout bumper stickers, signs, and brochures produced and distributed; press and TV coverage.
	Reduce potential impacts of hatchery trout on wild trout.	Eliminated stocking in numerous rivers where wild trout populations exist.
	Implement statewide wild trout management program.	Wild trout regulation implemented on 3,500 miles of stream; bull trout closed to harvest and interagency conservation agreement developed to protect depressed populations.
Increase emphasis on hatchery trout programs.	Designate, sign and publicize locations of put-and-take trout streams.	Signing completed; streams listed in fishing brochure.
	Eliminate inefficient stocking sites where less that 40% by number or 100% by weight are caught by anglers.	Roughly 1/3 eliminated, changes in progress to improve return rates on 1/3.
	Concentrate stockings in high-use/high-return streams.	Fish from eliminated stocking sites shifted to high return areas.
	Increase the number and frequency of fish stockings.	Done in majority of sites.
	Evaluate experimental net pen rearing.	Rearing conducted in Pend Oreille and Payette lakes; fish contributing to fishery.
Increase emphasis on protection and enhancement of salmon and steelhead.	Enhance hatchery fish health and smolt quality.	Antibiotic treatments and culling program have reduced incidence of bacterial kidney disease from 25% to less than 5%.
	Maintain a secure wild fish management program.	Have maintained wild management-only drainages.
	Emphasize management for natural production.	Supplementation research on-going; releasing 2/3 rather than 1/3 of fish returing to hatchery to spawn naturally.
	Provide continued fisheries for surplus hatchery fish.	Continued steelhead seasons but chinook seasons only at Little Salmon River.
	Intensify efforts to improve migration survival.	Department filed suit over NMFS decision to maintain status quo on dam operations which kill salmon.
Intensify quality fishing opportunity.	Manage 5-10 additional streams or stream segments to provide quality trout fishing.	Six added.
	Manage 10-15 additional lakes or reservoirs to provide quality trout fishing.	Five added.
	Manage 5-10 additional lakes or reservoirs to provide quality bass fishing.	Seven added.

MANAGEMENT PLAN

Program Direction	1991-1995 Goal	1994 Status
Provide additional angling information.	Develop Anglers Guide brochures on all lowland lakes and reservoirs.	Brochures developed for four. "On-going program"
	Informative signs and brochures.	Numerous informational signs, stream drainage maps and brochures completed; angling reports provided over 1-800-ASK-FISH.
	Provide locations of put-and-take stocking sites with signs and maps.	Standardized put-and-take signs posted at all put-and-take stream stocking sites, stocked streams listed in fishing rules, new angler guide with expanded maps in production.
Provide a diversity of angling opportunity.	Provide a mix of hatchery trout and wild trout management, and general and quality management.	See Earlier Discussions.
	Evaluate potential new species introductions and stock if appropriate.	New bull trout, splake, lake trout, kokanee, sterile tiger muskie, channel catfish or smallmouth bass introductions in over two dozen waters; three forage fish introductions evaluated and rejected; four new smallmouth introductions under evaluation.
Provide increased access, particularly for bank anglers.	Continue program of acquiring lease, easement or fee title to key areas to provide angler access.	Purchase on Portneuf River, easements on Rapid River.
	Expend approximately $400,000 per year on maintenance or development of new fishing, handicap, docks and boating access facilities.	$1,900,000 spent through first 3.5 years at over 100 sites.
Provide increased family fishing opportunity, especially near population centers.	Provide additional access and information on where to go.	See above.
	Identify sites and initiate development of new fishing waters.	Family fishing ponds improved or developed at Montpelier, Salmon, Grangeville, Nampa, and Fenn; three new reservoir sites being evaluated.
	Acquire or get public easement to ponds near urban areas.	Easements or acquisitions made on ponds at Victor, Rexburg, and Priest Lake.
Provide educational programs to encourage children to fish.	Develop a curriculum to teach fishing.	Text and curriculum completed and made available to schools.
	Conduct youth fishing clinics.	110 Department clinics conducted with 12,500 youth participating; assisted in other youth fishing activities with 10,000 participants.
Simplify and standardize fishing regulations.	Standardize length and bag limits.	Standardize 2-fish bag limit in all but a few special regulation waters with a menu of standard length limits.
	Increase signage, information and other means of making regulations more understandable.	Maps explaining regulations developed for 7 river systems; numerous special signs developed; standardized, color-coded signs developed and posted with corresponding color-coded maps in fishing brochure; brochure highlighted and reorganized by region; rules given by water area on 1-800-ASK-FISH.

Appendix B. A list of Idaho fishes and their distribution by drainage.

Family		Species								
Common Name	Scientific Name	Common Name	Scientific Name	Origin°			Pa	Sb			
Lamprey	Petromyzontidae	Pacific lamprey	Lampetra tridentata	N				X			
Sturgeon	Acipenseridae	White sturgeon	Acipenser transmontanus	N				X			
Trout	Salmonidae	Bear Lake whitefish	Prosopium abyssicola	N							
		Pygmy whitefish	Prosopium coulteri	N							
		Bonneville cisco	Prosopium gemmiferu	N							
		Bonneville whitefish	Prosopium spilonotus	N						X	
		Mountain whitefish	Prosopium williamsoni	N							X
		Lake whitefish	Coregonus clupeaformis								
		Coho salmon	Oncorhynchus kisutch								
		Sockeye salmon	Oncorhynchus nerka	N				X			
		Kokanee salmon	Oncorhynchus nerka kennerlyi	N		X'		X			X'
		Chinook salmon	Oncorhynchus tshawytscha	N		X'		X			
		Golden trout	Oncorhynchus aguabonita			X					X
		Cutthroat trout	Oncorhynchus clarki								
Westslope			Oncorhynchus clarki lewisi	N							
Yellowstone			Oncorhynchus clarki bouvieri	N							X
Bonneville			Oncorhynchus clarki utah	N							
Bear Lake			Oncorhynchus clarki ssp.	N					X'		
Finespotted (Snake River)			Oncorhynchus clarki ssp.	N					X		
Lahontan			Oncorhynchus clarki henshawi						X		X
		Rainbow trout	Oncorhynchus mykiss	N				X	X'		X'
		Redband trout	Oncorhynchus mykiss gairdneri	N				X			
		Brown trout	Salmo trutta					X			
		Atlantic salmon	Salmo salar					X			
		Blueback trout	Salvelinus alpinus oquassa					X			
		Brook trout	Salvelinus fontinalis					X			X
		Bull trout	Salvelinus confluentus	N	X			X			X
		Lake trout	Salvelinus namaycush					X			
		Arctic grayling	Thymallus arcticus								X

Appendix B. Continued.

Family		Species									
Common Name	Scientific Name	Common Name	Scientific Name	Origin'			Pa	Sb			
Pike	Esocidae	Northern pike	Esox lucius		X	X					
		Tiger muskie	Esox lucius x E. masquinongy								X
Minnow	Cyprinidae	Chiselmouth	Acrocheilus alutaceus	N							
		Goldfish	Carassius auratus								X
		Lake chub	Couesius plumbeus	N							
		Carp	Cyprinus carpio								
		Grass carp	Ctenopharyngodon idella					X	X		
		Utah chub	Gila atraria	N				X			X
		Tui chub	Gila bicolor					X			
		Leatherside chub	Gila copei	N				X			
		Peamouth	Mylocheilus caurinus	N				X			
		Spottail shiner	Notropis hudsonius					X			
		Fathead minnow	Pimephales promelas					X			
		Northern squawfish	Ptychocheilus oregonensis	N				X			
		Longnose dace	Rhinichthys cataractae	N			X	X			X
		Leopard dace	Rhinichthys falcatus	N				X			
		Speckled dace	Rhinichthys osculus	N			X	X		X	X
		Bedside shiner	Richardsonius balteatus	N		X		X		X	X
		Tench	Tinca tinca								
Sucker	Catostomidae	Utah sucker	Catostomus ardens	N						X	X
		Longnose sucker	Catostomus catostomus	N							
		Bridgelip sucker	Catostomus columbianus	N							
		Bluehead sucker	Catostomus discobolus	N						X	
		Largescale sucker	Catostomus macrocheilus	N							
		Mountain sucker	Catostomus platyrhynchus	N							X
Catfish	Ictaluridae	Black bullhead	Ameiurus melas								
		Brown bullhead	Ameiurus nebulosus					X		X	
		Yellow bullhead	Ameiurus natalis								

Appendix B. Continued.

Family		Species									
Common Name	Scientific Name	Common Name	Scientific Name	Origin°			P	Sb	S		
		Blue catifsh	Ictalurus furcatus					X	X		
		Channel catfish	Ictalurus punctatus					X			
		Tadpole madtom	Noturus gyrinus					X			
		Flathead catfish	Pylodictis olivaris								
Trout-perch	Percopsidae	Sand roller	Percopsis transmontana	N							
Cod	Gadidae	Burbot fling)	Lots lota	N							
Livebearcr	Poeciliidae	Mosquitofish	Gambusia affinis								
		Guppy	Poecilia reticulata	I`						X	X
		Green swordtail	Xiphophorus helleri	I`						X	X
		Platy	Xiphophorus ssp.	I`							X
Sunfish	Centrarchidae	Green sunfish	Lepomis cyanellus								
		Pumpkinseed	Lepomis gibbosus								
		Warmouth	Lepomis gulosus					X			
		Bluegill	Lepomis macrochirus					X			
		Smallmouth bass	Micropterus dolomieu		X	X		X	X	X	
		Largemouth bass	Micropterus salmoides		X	X		X	X	X	
		Black crappie	Pomoxis nigromaculatus					X			X
		White crappie	Pomoxis annularis								
Perch	Percidae	Yellow perch	Perca flavescens								
		Walleye	Stizostedion vitreum							X	
		Sauger	Stizostedion canadense								
Sculpin	Cottidae	Mottled sculpin	Cottus bairdi	N							
		Paiute sculpin	Cottus beldingi	N				X			X
		Slimy sculpin	Cottus cognatus	N				X			
		Shorthead sculpin	Cottus confusus	N							X
		Bear Lake sculpin	Cottus extensus	N							

Appendix B. Continued.

Family		Species			Drainage'							
Common Name	Scientific Name	Common Name	Scientific Name	Origin°	K	P	S	Pa	Sb	Sa	B	
Shoshone sculpin			Cottus greenei	N					X			
Wood River sculpin			Cottus leiopomus	N					X			
Torrent sculpin			Cottus rhotheus	N	X	X	X	X	X			
Cichlid`	Cichlidae	Mozambique (Java) talapia	Talapia mossambica	I`					X			
Redbelly (Zill's) talapia			Talapia zilli	I`					X			
Convict cichlid			Cichlasoma nigrofasciatum	1[c]					X			
Loach	Cobitidae	Oriental weatherfish	Misgurnus anguillicaudatus	I					X			
Shad	Clupeidae	American shad	Alosa sapidissima	1					X			

' K = Kootenai River drainage, P = Pend Oreille River drainage, S =Spokane River drainage, Pa =Palouse River drainage, Sb = Snake River below Shoshone Falls, Sa = Snake River above Shoshone Falls, B = Bear River drainages, and I = Independent drainages.
° N = Native and I = Introduced.
Confined to geothermal waters.

PART II

FISHERY MANAGEMENT PLANS BY DRAINAGE

This portion addresses specific management direction for individual waters. The waters of the state are broken down into 34 separate drainages (Figure 6). Each drainage section consists of three parts:

1. Overview

A narrative which describes the fisheries and management of the drainage in general terms.

2. Objectives and Proarams

This section lists fisheries objectives for the drainage as a whole or a combination of water areas, and management programs necessary to achieve them.

3. Management Direction

A table which lists the type of fisheries, species present, management, and further management direction proposed for individual waters.

DEFINITIONS OF TERMS USED IN DRAINAGE MANAGEMENT DIRECTION TABLES

1. Fishery Tv^Pes

A. **Coldwater -** fisheries supported by resident populations of salmonid game fish including trout, char, **nonanadromous salmon (kokanee,** coho, chinook), and whitefish (family Salmonidae).

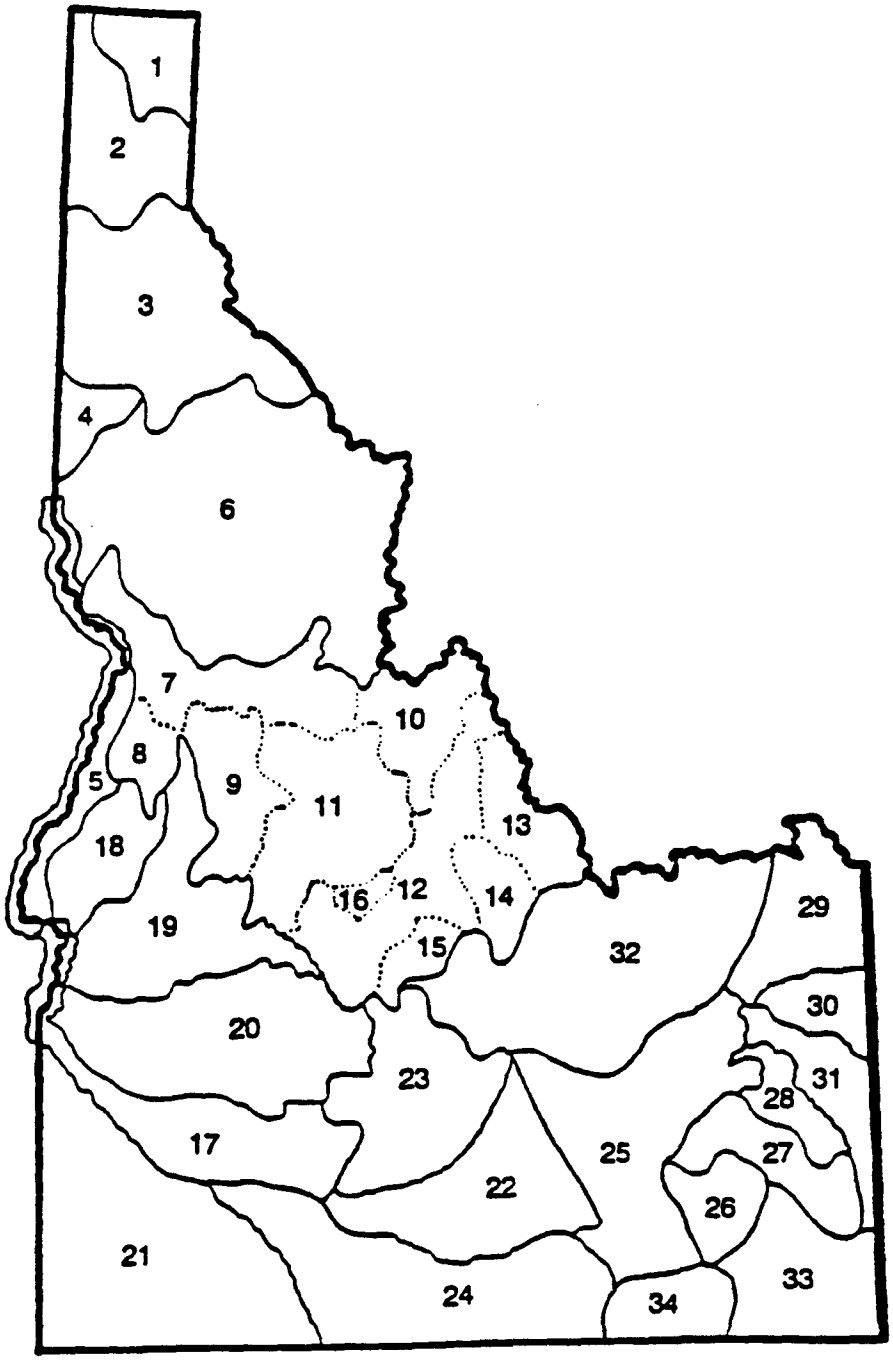
B. **Warmwater -** fisheries supported by warmwater or coolwater game fish including bass, crappie, sunfish, catfish, northern pike, tiger muskie, walleye, and yellow perch (families Centrarchidae, Ictaluridae, Percidae, and Esocidae).

C. **Mixed -** fisheries supported by a combination of coldwater and warmwater fish species.

D. **Anadromous -** fisheries supported by anadromous salmonids (steelhead trout, chinook salmon, and sockeye salmon).

2. Species Present

The major sport fish species currently present and any other species being proposed for introduction at this time. Species which will be considered for introduction but are not proposed at this time are referred to under "management direction."



Drainages Used in the
Idaho Fisheries Management Plan

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1.	Kootenai	61
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Figure 6. Drainages used in the Idaho Fisheries Management Plan.

3. Fishery Management

Describes the primary management applied to the water area; a secondary management listing may be given where a different specific management is applied to individual species. A more complete description of management programs, fishery characteristics, and applicable regulations is provided in Part I of the Plan.

A. **Put-and-Take** Trout - a management program using intensive stocking of catchable size (larger than 8 inches) hatchery rainbow trout to provide high consumptive catch rates. Applied to small lakes, ponds, and reservoirs and certain streams or stream reaches with good access and moderate to high fishing pressure. Used where long-term survival and growth is limited due to water area characteristics or harvest rates. Other species, including some naturally-produced trout, may be present.

B. Wild Trout - a management program which relies on the natural production potential of a stream to provide fishing opportunity for wild trout. Applied to streams with good to excellent trout habitat where consumptive fishing pressure is light to moderate.

C. **Quality -** a management program which limits, by regulation, the size and numbers of fish which may be harvested in order to provide increased catch rates for larger fish which are considered quality size by most anglers. May be applied to water areas or .to specific species within a water area.

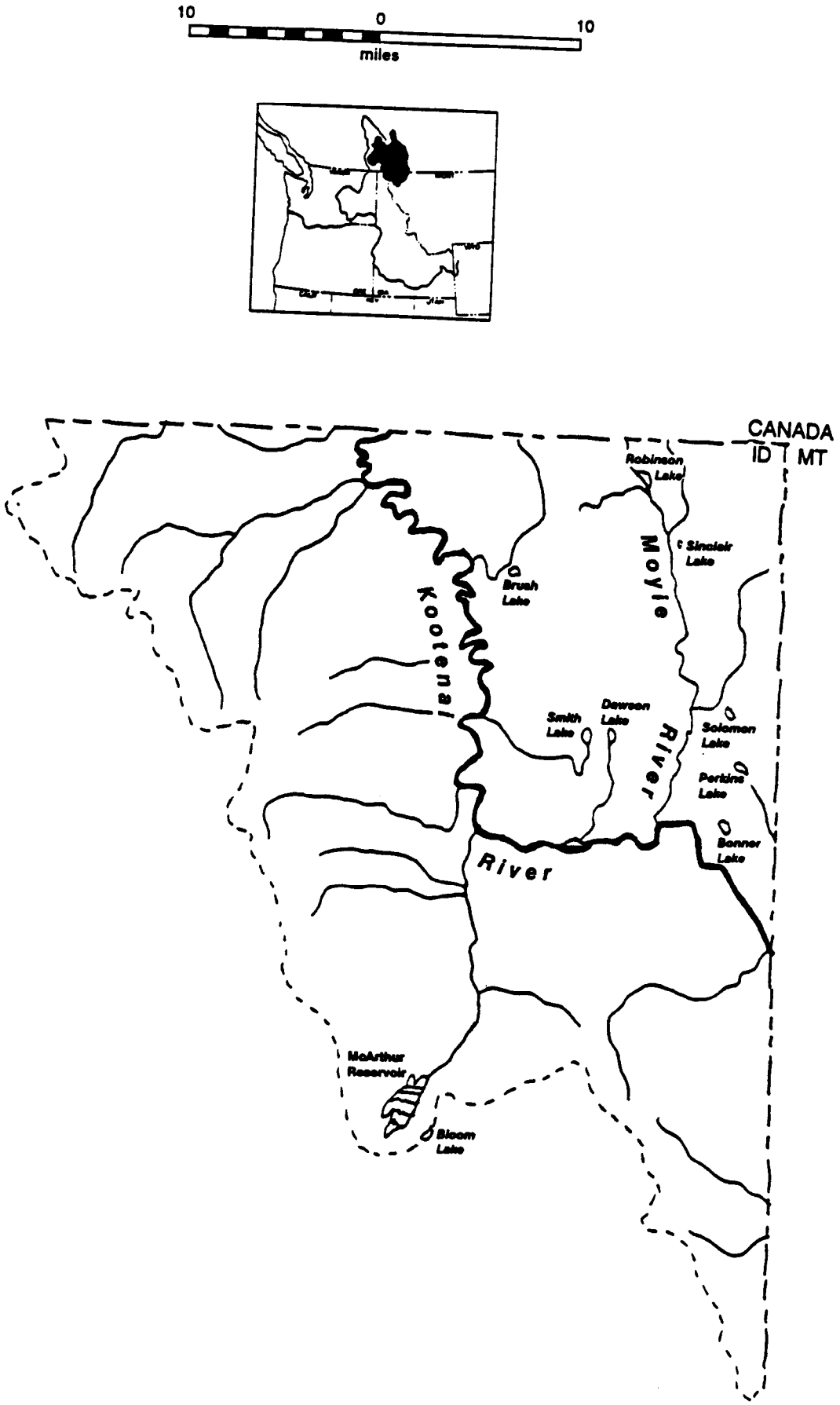
D. **Trophy -** a management program which limits, by regulation, the size and numbers of fish which may be harvested in order to provide increased catch rates for larger fish which are considered trophy size by most anglers. May be applied to water areas or to specific species within a water area.

E. Preservation - a management program which prohibits harvest or angling in order to preserve and rebuild the viability of a wild population. May be applied to an individual species or to water areas which are important spawning or nursery areas.

F. **Anadromous -** a management program for anadromous steelhead and chinook salmon which provides for harvest opportunity, where possible, on known hatchery origin fish while preserving and rebuilding wild and natural fish.

G. **General -** a general management program applied to lakes and reservoirs and rivers and streams not suited for wild trout or put-and-take trout management. General management waters may provide warmwater, coldwater, or mixed fisheries. Coldwater fishing is primarily managed through stocking of fry, fingerling, or catchable-size fish which are expected to achieve some growth and contribute to the fishery over an extended time. No special regulations are applied.

Kootenai River Drainage



1. KOOTENAI RIVER DRAINAGE

A. Overview

The Kootenai River is located at the north end of the Idaho Panhandle in Boundary County. It originates in southeastern British Columbia, flows south and west through Montana, and northwest through Idaho, then returns to Canada where it flows through Kootenay Lake and joins the Columbia River at Castlegar, British Columbia. At the International border at Porthill, Idaho, it drains approximately 13,700 square miles with an average discharge cf 16,100 cfs. The 66 miles of river in Idaho can be divided into two reaches. The 47-mile section from Porthill to Bonners Ferry is a slow moving, broad, meandering river with holes up to 100 feet deep. Water level is affected by a dam at the outlet of Kootenay Lake. The 19 miles of river upstream from Bonners Ferry to Montana flows in a canyon with an average gradient of 3 feet/mile.

Closing of Libby Dam in Montana in March 1972 changed the natural **seasonal** flow and **temperature** regimes in the **Kootenai** River. **Mean** flows during spring runoff have been reduced 50% and wintertime flows have tripled. Average wintertime water **temperatures have** increased by **about** 7°F, resulting in the river remaining virtually ice free. Sediments **trapped** in the **impoundment have dramatically reduced** turbidity and nutrient loads in the river and lake.

The Kootenai River is the only drainage in the State of Idaho where ling (burbot) are native. The Kootenai River is also home to the white sturgeon. Fisheries for both of these species have **been closed** in **response** to major declines in these populations. The **Kootenai** River white sturgeon was listed as an **Endangered Species** on **September** 7, 1994. Alterations of the natural flow regime on an annual basis for flood control and daily or weekly basis for **power production** is **believed** to be the primary **reason** for the lack of successful **reproduction** of sturgeon and burbot. Reductions in river productivity, elimination of former sloughs, heavy metals, and organic pesticide contamination are also suspected of contributing to their decline.

Numerous tributaries drain the **Selkirk** and Purcell mountain ranges and enter the Kootenai River directly or through larger tributaries. Due to past glaciation, most Kootenai River tributaries are blocked by falls near their mouths, and recruitment of fish from tributaries is limited.

Trout production in **naturally-accessible** portions of tributaries has been reduced by habitat **alteration** and **degradation. Sedimentation** from logging, roading, and wildfires has degraded former spawning and rearing areas. Manmade obstructions, diversions, and channelization have eliminated former trout habitat completely. The Deep Creek and Boundary Creek drainages are the largest accessible tributaries of the Kootenai River.

The Moyie River is the largest tributary of the Kootenai drainage in Idaho but is isolated from the Kootenai River by a dam and natural falls near its mouth. The Moyie

originates at Moyie Lake in British Columbia and flows 58 miles through Canada and 26 miles through Idaho. The river above Meadow Creek has a relatively flat gradient with relatively few pools and virtually no tributary streams to provide wild trout production. This section is also roaded and the fishery is supported by stocking put-and-take rainbow trout. The river gradient below Meadow Creek is much steeper, providing much better trout habitat. This river section is mostly unroaded, and Deer and Meadow creeks provide enough wild trout production to maintain a trout fishery without stocking.

Inland (redband) rainbow trout are native to the Kootenai River drainage and are present in the mainstem Kootenai River and above barriers in some tributaries. Hatchery rainbow trout have been widely introduced throughout the drainage, however. Other native salmonids include westslope cutthroat trout, bull trout, and mountain whitefish. Introduced eastern brook trout are present throughout the drainage, and a few remnant early spawning kokanee salmon from Kootenay Lake, British Columbia, are present in the mainstem Kootenai River and some west side tributaries during the summer and fall. Kokanee salmon also enter the Kootenai River from Libby Reservoir during some years.

Numerous mountain lakes in the Selkirk and Purcell ranges are stocked with trout fry on a rotating basis. Westslope cutthroat trout, domestic Kamloops rainbow trout, and brook trout are present in most of the lakes, although a few lakes are reserved for specialty species, such as Arctic grayling and golden trout.

Numerous natural lowland lakes provide a mixed bag fishery for trout and spiny-rayed species. Naturalized populations of largemouth bass, black crappie, brown bullhead, yellow perch, and pumpkinseed are present in most lakes. Channel catfish, tiger muskie, and bluegill have been introduced in some lakes. Put-and-take rainbow trout, brook trout fingerlings, and some kokanee salmon are stocked in these lakes to provide salmonid fisheries.

The majority of waters in the Kootenai drainage produce fishing for trout. The Kootenai River and its tributaries, mountain lakes, lowland lakes, and the Moyie River with its tributaries all provide moderate amounts of relatively high quality trout fishing. Although numbers and size of fish have been reduced since the turn of the century, the area has potential for improved fishery management.

B. Objectives and Programs

1. Objective: Restore sport fish populations in the Kootenai River to self-sustaining levels capable of supporting an improved sport fishery.

Program: Implement and evaluate inriver flows designed to provide spawning and recruitment of white sturgeon and ling. Continue research to identify other critical limiting factors to sturgeon, ling, and other sport fish species.

2. Objective: Minimize impacts to and enhance trout spawning and rearing habitat.

Program: Work with government agencies, private developers, interested sportsmen's groups, and local schools to make protection and enhancement of fisheries habitat a primary concern in land use decisions.

3. Objective: Improve the efficiency of hatchery put-and-take trout stocking programs.

Program: Evaluate rate of return, catch rate, and angler use on put-and-take supported waters through a routine data collection system.

Program: Adjust rate, timing, or location of stocking to improve rate of return to the creel.

Program: Utilize stocks of rainbow that maximize return to the creel.

Program: Enhance holding water in the upper Moyie River to improve habitat for stocked put-and-take trout.

Program: Inform anglers of hatchery-supported trout fishing opportunities through maps, brochures, media **coverage, and** signing to **improve** return to the creel.

Program: Discontinue put-and-take stocking in waters where a 40% or greater by number or 100% or greater by weight return to the creel cannot be met by the end of this planning period. Provide alternative fisheries to maintain angling opportunity.

4. Objective: Provide diverse angling opportunities in lowland lakes.

Program: Evaluate the existing tiger muskie and channel catfish stocking programs. Continue maintenance stocking of tiger muskie and channel catfish where fisheries have been created and seek new waters that have potential. Construct channel catfish spawning habitat in select waters in an attempt to provide natural reproduction. Establish bluegill in select waters to diversify panfish populations.

Program: Consider managing one or two lowland lakes as a quality bass or trout lake if there is public demand and support.

5. Objective: Improve fishing and boating access.

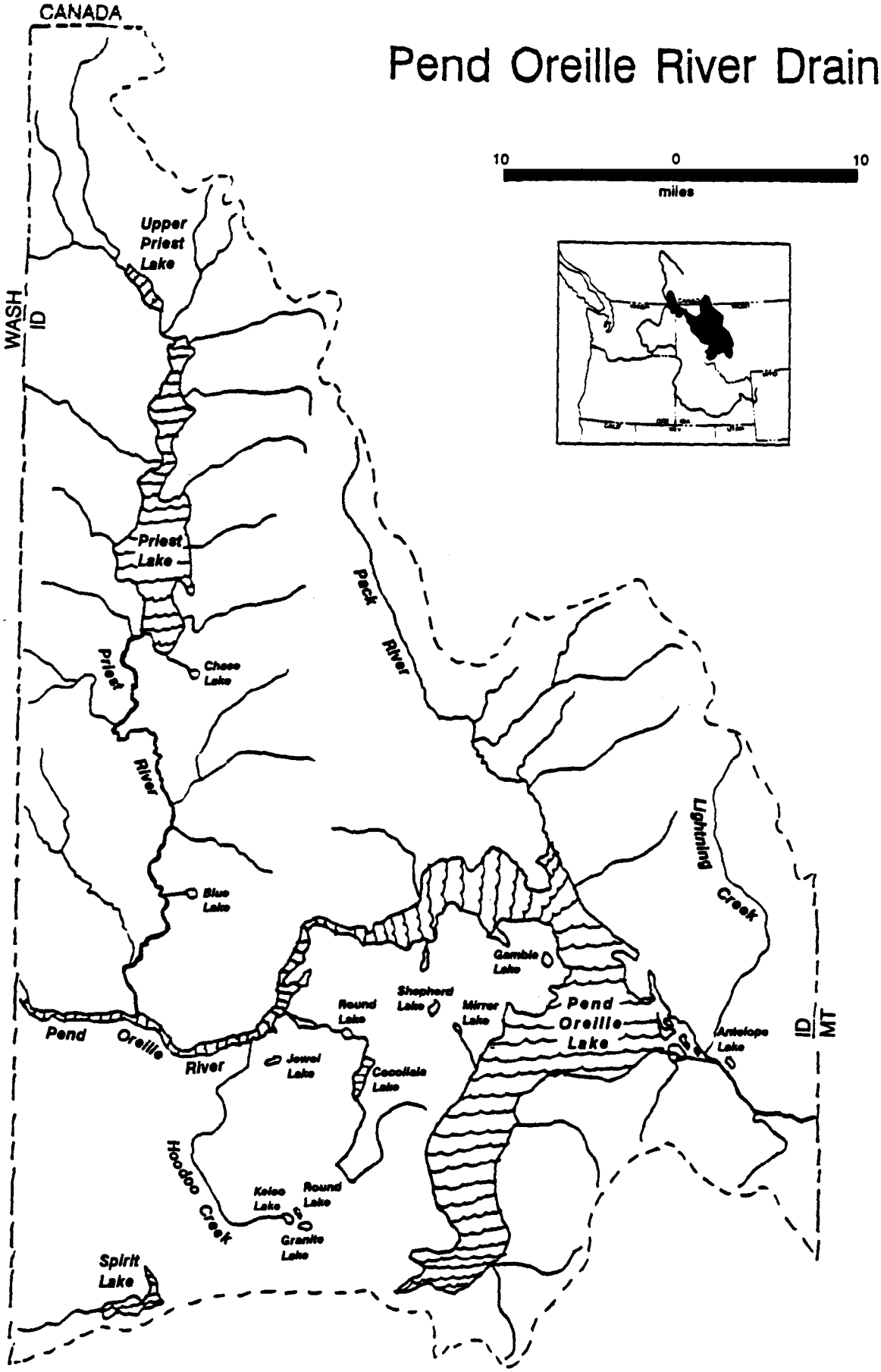
Program: Develop or enhance fishing and boat **access areas** through easements, cooperative agreements, or purchase. Utilize the Department's Challenge Grant Program to build fishing docks for shoreline anglers.

Drainage: KOOTENAI RIVER

Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Kootenai River from Montana border to Canadian border	66/	Coldwater	Rainbow trout **Cutthroat** trout **Brook** trout **Mountain** whitefish **Kokanee salmon** **Bull** trout **White sturgeon** Ling **(burbot)**	**General** **Preservation** **Preservation**	Work toward obtaining more favorable flows to improve habitat conditions for salmonids and improve the fishery. Improve fishermen access. Maintain harvest closure in river and tributary streams. Determine critical habitat Identify factors that **are** causing depressed populations and implement **recommendations** from BPA-funded research.
Accessible tributaries to Kootenai River	130/	**Coldwater**	**Rainbow trout** **Cutthroat trout** **Brook** trout **Kokanee salmon** **Bull trout**	**General** **Preservation**	Enhance trout production for the Kootenai River by identifying critical streams, improving habitat conditions, and modifying regulations if necessary. Maintain stream closures until the **productivity** of **Kootenay Lake B.C. improves** and kokanee salmon **stocks are restored.** Maintain **harvest closure** in **tributary** streams. Determine **critical habitat.**
Inaccessible tributaries to Kootenai River	300/	Coldwater	**Rainbow** trout **Cutthroat trout** **Brook** trout	Wild trout	Maintain limited consumptive fishery for small resident trout.
Moyie River above Meadow Creek	17/	**Coldwater**	Rainbow trout **Cutthroat** trout **Brook** trout **Bull** trout	Put-and-take trout Preservation	Maintain fishery by stocking hatchery put-and-take rainbow trout due to limited wild recruitment. Monitor success of habitat improvement structures. Maintain harvest closure in river and tributary streams. Determine critical habitat.
Moyie River below Meadow Creek	8/	Coldwater	Rainbow trout Cutthroat trout Bull trout	Wild trout Preservation	Maintain fishery for wild trout. Maintain harvest closure in river and tributary streams. Determine critical habitat.
Moyie River tributaries	35/	Coldwater	Rainbow trout Cutthroat trout **Brook** trout	**General**	Maintain limited consumptive fishery for small resident trout.
McArthur Reservoir	/800	Warmwater	Yellow perch	General	Evaluate the effect of water level management on perch abundance and size. Try to maximize perch size within the constraints of waterfowl management.

Robinson, Smith, Brush, and Perkins lakes	**/179**	**Mixed**	**Rainbow trout Kokanee salmon Brook trout Splake Largemouth bass Yellow perch Bluegill Pumpkinseed Black crappie Bullhead**	**General**	**Stock put-and-take rainbow trout, brook trout fingerlings, and kokanee salmon fry in selected lakes to provide salmonid fisheries. Evaluate splake introduction in Perkins Lake. Diversify fishery by introducing channel catfish in Smith Lake. Evaluate response of largemouth bass populations to current regulations and modify if there is a public desire.**
Bonner Lake	/23	**Mixed**	**Rainbow trout Bass Black crappie Pumpkinseed**	**Quality**	**Consider Bonner Lake for management as a quality trout fishery. Rotenone and restock with fingerling rainbow and cutthroat trout.**
Dawson Lake	**/35**	**Warmwater**	**Largemouth bass Black crappie Yellow perch Bluegill Pumpkinseed Channel catfish Tiger muskie Bullhead**	**General**	**Continue maintenance stocking of channel catfish and tiger muskie.**
Bloom Lake	**/20**	**Coldwater**	**Brook trout Splake**	**General**	**Resolve access problems with landowners. Maintain fishery by stocking fingerling brook trout. Evaluate splake introduction.**
Solomon and Sinclair lakes	**/10.5**	**Coldwater**	**Rainbow trout**	**Put-and-take trout**	**Provide year-round consumptive fishery for trout by stocking put-and-take rainbow trout. Work with forest service to reestablish historic lake level of Solomon Lake.**
Alpine Lakes (20 in the Kootenai River drainage)	**/260**	**Coldwater**	**Cutthroat trout Rainbow trout Brook trout Golden trout Arctic grayling**	**General**	**Continue maintenance stocking of trout fry to provide fisheries that are consistent with lake productivity and angler pressure. Use only westslope cutthroat trout for cutthroat trout stocking. Reserve some lakes for specialty fish (golden trout and Arctic grayling) only. Determine where stunted brook trout lakes could be converted to more desirable fisheries with rotenone treatments and restocking. Utilize a more intense volunteer creel census program to evaluate if species selection and stocking rates are producing desired fisheries. Do not stock lakes that are currently fishless in order to maintain some natural alpine lake ecosystems.**

Pend Oreille River Drainage



2. PEND OREILLE RIVER DRAINAGE

A. Overview

The Pend Oreille River drains about 24,200 square miles of land in western Montana and the Panhandle of northern Idaho. Most of the 2,133 square miles of the drainage within Idaho lie in Bonner County. Major tributaries of the Pend Oreille River include the Clark Fork, Flathead, Bitterroot, Blackfoot, and St. Regis rivers in Montana and the Priest and Pack rivers and Lightning Creek in Idaho.

Pend Oreille Lake is the largest natural lake in Idaho covering 85,960 surface acres with a shoreline length of 111 miles. The lake basin is deep and steep-sided with a maximum depth of 1,152 feet and mean depth of 538 feet. The combined surface area of Pend Oreille Lake and the backwaters of Albeni Falls Dam, located on the Pend Oreille River 23 miles downstream of the lake, is 94,720 acres.'

Priest and Upper Priest lakes are glacial lakes connected by a shallow winding channel. Priest Lake has a surface area of about 23,360 acres with a maximum depth of 369 feet and mean depth of 123 feet. Upper Priest Lake is accessible only by boat or foot trail, covers about 1,400 surface acres, and has a maximum 100-foot depth.

Spirit Lake has a surface area of 1,477 acres and a maximum depth of about 90 feet.

There are also many smaller lowland lakes in the drainage and numerous alpine lakes in the Selkirk and Cabinet mountains.

Westslope cutthroat trout, pygmy whitefish, mountain whitefish, and bull trout are the only salmonids native to the Pend Oreille drainage in Idaho. Prior to the 1940s, cutthroat trout were the most frequently caught fish in the Pend Oreille system. Accounts of good fishing, long stringers of 12- to 16-inch fish, and tributaries full of spawners were common at the turn of the century and into the early 1900s.

Bull trout in Priest and Pend Oreille lakes fed on the whitefish but did not obtain an unusually large size. Spawning runs of mountain whitefish were harvested in Priest Lake tributaries and also supported a significant commercial fishery on Lake Pend Oreille.

Introduction of exotics has played both a positive and negative role in shaping the fisheries of the Pend Oreille drainage. Lake Superior whitefish were introduced to Pend Oreille in 1889. Eastern brook trout were widely distributed in the early 1900s and were successful in outcompeting and eventually replacing native cutthroat in some watersheds. Lake trout were introduced into Priest and Pend Oreille lakes in the 1920s, but provided little in the way of a sport fish in either system during the first half of the century.

During the 1930s, kokanee salmon became established in Pend Oreille Lake by moving naturally into the system from Flathead Lake in Montana in the early 1900s. Kokanee salmon were transplanted from Pend Oreille Lake to Spirit Lake in 1937 and Priest Lake in the 1940s. Kokanee established themselves quickly in each of these lake systems, displacing native mountain whitefish in the open water habitat. In Pend Oreille Lake, kokanee supported a major sport fishery with historical harvests topping one million fish. Spirit Lake has become the most productive kokanee salmon fishery in Idaho producing the most pounds of kokanee harvested per acre of lake. The relative importance of the fishery has only been limited by the lake's size.

Kokanee also provided a new forage base for native and introduced fish predators. A significant trophy fishery for record class lake trout and bull trout developed in Priest Lake in the 1950s. In Pend Oreille Lake, Gerrard rainbow trout from Kootenay Lake, British Columbia, were introduced in 1941, producing a world record 37-pound rainbow trout in 1947. A world record 32-pound bull trout was taken from Pend Oreille Lake in 1949. Lake Pend Oreille has been widely recognized as a major trophy fishery producing dozens of rainbow trout in the 20+ pound range annually. The combined kokanee and trophy trout fishery in Pend Oreille Lake has made it one of the most important and unique fisheries in the United States.

The introduction of *Mysis* recta, the **aposteme** shrimp, to Priest and Pend Oreille lakes **in the 1960s also changed the lakes' fisheries. Mysis were introduced in an effort to enhance food for kokanee. That occurred on a limited basis, and record sized kokanee were caught in Priest Lake** during the **early** 1970s. **More** importantly, Mysis provided an **excellent food** source for **lake** trout, causing **increased** productivity **and a** population **explosion. The kokanee population collapsed very rapidly in the late 1970s, and several years** of stocking millions of **hatchery** fry **were not successful at restoring the fishery. Lake trout now dominate the system and provide primarily a yield fishery for relatively small fish (17-22 inches). Lake trout in Pend Oreille Lake have not responded to the presence of Mysis as dramatically as in Priest Lake. Mysis also utilize the same** food **supply as kokanee and have caused a** shift in the **abundance** and **species composition of zooplankton, although no direct competition for a limited food supply has been shown.**

Historical overharvest, the **impact** of **land use practices** such as logging, **farming, residential development and roading, and the construction of hydroelectric dams have taken a toll on the fisheries as the Pend Oreille drainage has been settled and developed.** Even by the 1950s, the annual harvest of both cutthroat and bull trout declined in Priest and Pend Oreille lakes. Restrictive regulations have been successful in restoring cutthroat populations if habitat is in good shape and competition and predation from introduced species is minimal. Despite restrictive regulations, the cumulative impacts of land use development and introduced species has reduced native cutthroat populations to a remnant of their former abundance in the rivers and lakes of the Pend Oreille drainage.

Bull trout are less resilient than cutthroat and much more susceptible to the impacts of habitat degradation than other species. In Priest Lake, bull trout have declined to

very low levels and may be on the verge of extinction. Bull trout still persist in Upper Priest Lake, but at very low levels. The bull trout population in Pend Oreille Lake declined dramatically when hundreds of miles of spawning and rearing tributaries were blocked by the construction of Cabinet Gorge Dam on the Clark Fork River in 1952. Power peaking at Cabinet Gorge Dam also results in widely fluctuating flows in the Clark Fork River, negatively impacting salmonid habitat. The population has remained relatively stable the past 40 years, but deteriorating habitat conditions in the remaining accessible tributaries are placing the population at risk. The relicensing of Washington Water Power's Cabinet Gorge and Noxon dams on the Clark Fork River system offer the opportunity to mitigate for losses and ongoing impacts to the Pend Oreille bull trout population. Harvest of bull trout has been closed in the entire state of Idaho. Poaching of large spawning bull trout in streams is still a problem.

The kokanee population of Pend Oreille Lake has also declined dramatically, primarily because the operation of system dams eliminated spawning habitat and reduced spawning success after their construction. Historically, the adult population of around five million kokanee supported a sport and commercial fishery averaging one million fish. In recent history, adult kokanee populations and the fishery they support have been 20% or less of historical levels. Cabinet Gorge Dam did block a run of 100,000 tributary spawning kokanee, but the vast majority of kokanee in Lake Pend Oreille are lake shore spawners and were not impacted by the loss of tributary spawning habitat. Albeni Falls Dam, constructed in 1952, 23 miles below the lake on the Pend Oreille River, modified the natural annual hydrograph to tame spring floods and produce electricity, but in the process eliminated virtually all the shoreline spawning areas for kokanee. When the lake was managed primarily for flood control prior to 1966, deep water spawning beds produced good numbers of kokanee even when the water was dropped after the kokanee had spawned. Starting in 1966, the lake was drawn down an additional five feet in most years to generate additional hydropower. This water management strategy has left the most productive spawning beds dewatered and the few remaining spawning areas sedimented in, reducing spawning success.

Construction of the Cabinet Gorge Hatchery in 1986 was an attempt to mitigate for dam related losses and the impact of Mysis shrimp and was intended to replace the wild kokanee population of Lake Pend Oreille with hatchery fish. Hatchery kokanee have kept the population from collapsing, but it was unrealistic to expect 15 million hatchery fry to replace over 200 million wild fry. Restoration of the fishery will depend on reestablishing the wild component of the kokanee population. Further enhancement of the trophy trout fishery in Lake Pend Oreille will be postponed until the kokanee population is capable of supporting additional predation.

The current operation of Albeni Falls Dam has also virtually eliminated any hope of establishing a fishery in the Pend Oreille River. Impoundment of the river has created a warm slackwater reservoir from June though September and a cold flowing river from October though May. Over 40 years of artificially high water have also eliminated the natural vegetative cover along the shoreline, causing severe erosion and additional impacts to fish habitat. Habitat conditions are not suitable for the establishment of either a trout or warmwater fishery. A higher winter pool level would provide critical

overwinter habitat for bass and it is likely a productive warmwater fishery could be established, similar to the river below Albeni Falls Dam.

The introduction of channel catfish, tiger muskie, and bluegill sunfish has diversified the warmwater fishery in several lakes. Other game fish in the Pend Oreille drainage include brook trout, brown trout, largemouth and smallmouth bass, northern pike, tiger muskie, yellow perch, black crappie, pumpkinseed, bluegill, bullhead, and channel catfish.

B. Objectives and Programs

1. Objective: Maintain viable populations of bull trout in both the Upper Priest Lake and Pend Oreille Lake systems to provide unique fisheries for native char.

Program: Evaluate bull trout population response to the 1996 harvest closure by monitoring spawning escapement in tributary streams and catch rates in the lake fishery. Actively work with local, state, and federal entities to develop and implement a Conservation Agreement for the Lake Pend Oreille population of bull trout that has a goal of restoring the harvest fishery. Reassess the options for a harvest fishery at the end of this planning period.

Program: Publicize the extreme sensitivity of bull trout to habitat degradation. Work to obtain special consideration, protection, and improvement of critical bull trout habitat in land use decisions. Monitor bull trout spawning escapement and success in Priest and Pend Oreille Lake tributaries. Maintain strict closures until the populations rebuild. Focus available enforcement to reduce poaching losses. Publicize the unique characteristics of these populations and their vulnerability to poaching. Work to influence public and court attitudes regarding poaching.

Program: Work with Washington Water Power Company, state, federal, tribal, and private entities during the relicensing of Cabinet Gorge Dam to mitigate for the loss of spawning and rearing habitat to bull trout and other salmonids in the Pend Oreille/Clark Fork River system.

Program: Conduct research on bull trout population dynamics, life history characteristics, genetic integrity, and critical habitat needs to maintain and restore the Lake Pend Oreille bull trout population to a harvestable level.

2. Objective: Restore kokanee populations in Pend Oreille Lake to a level that provides a sustainable sport fishery harvest of 750,000 fish and allows for the expansion of the trophy trout and char fishery.

Program: Work with the community, State and Federal legislators and Federal water management agencies to manage the winter pool level of Pend Oreille Lake at a level that will restore shoreline spawning areas for kokanee.

Program: Monitor kokanee population restoration efforts and adopt strategies that maximize wild kokanee production.

Program: Continue to refine and implement management strategies at the Cabinet Gorge Hatchery to maximize the survival of hatchery kokanee fry to adult.

3. Objective: Restore the trophy trout fishery of Lake Pend Oreille once kokanee populations are at a level to sustain additional predation.

Program: Work with the Forest Service, private developers, and interested sportsmen's groups to make protection of fisheries habitat a primary concern in land use decisions. Work with Forest Service and sportsmen's groups to rehabilitate habitat where possible.

Program: Obtain pure strain Gerrard rainbow trout from Kootenay Lake, British Columbia, to supplement wild production. Work with Montana to avoid introductions of other stocks of rainbow trout in the Clark Fork River reservoirs above Pend Oreille Lake.

Program: Modify fishing regulations if necessary to achieve trophy trout management goals established by the public.

Program: Shift research emphasis to predator population dynamics and predator/prey interactions to determine the potential of the system.

4. Objective: Improve westslope cutthroat trout fisheries on Lake Pend Oreille.

Program: Develop a dependable westslope cutthroat trout broodstock with the ability to infuse wild fish on a regular basis. Evaluate if net pen culture can improve cutthroat trout fisheries by monitoring the harvest of net pen-reared fish.

5. Objective: Minimize impacts to lake fisheries due to lakeshore encroachment, pollution, and nutrient loading.

Program: Work with county planners to make protection of fish habitat and water quality a primary concern in land use decisions.

6. Objective: Improve fishing and boating access.

Program: Develop or enhance fishing and boat access areas through easements, cooperative agreements, or purchase. Utilize the Department's Challenge Grant program to build fishing docks for shoreline anglers.

7. Objective: Improve the efficiency of hatchery put-and-take trout stocking programs.

Program: Evaluate rate of return, catch rate, and angler use on put-and-take supported waters through a routine data collection system.

Program: Adjust rate, timing, or location of stocking to improve rate of return to the creel.

Program: Acquire or develop small, highly accessible waters to provide an intensive hatchery-supported fishery.

Program: Utilize strains of rainbow trout that maximize return to the creel.

Program: Inform anglers of hatchery supported trout fishing opportunities through maps, brochures, media coverage, and signing to improve return to the creel.

Program: Discontinue put-and-take stocking in waters where a 40% or greater by number or 100% or greater by weight return to the creel cannot be met by the end of this planning period.

8. Objective: Provide diverse angling opportunities in lowland lakes.

Program: Evaluate the existing tiger muskie and channel catfish stocking programs. Continue maintenance stocking of tiger muskies and channel catfish where fisheries have been created and seek new waters that have potential. Construct channel catfish spawning habitat in select waters in an attempt to provide natural reproduction. Establish bluegill sunfish in select waters to diversify panfish populations.

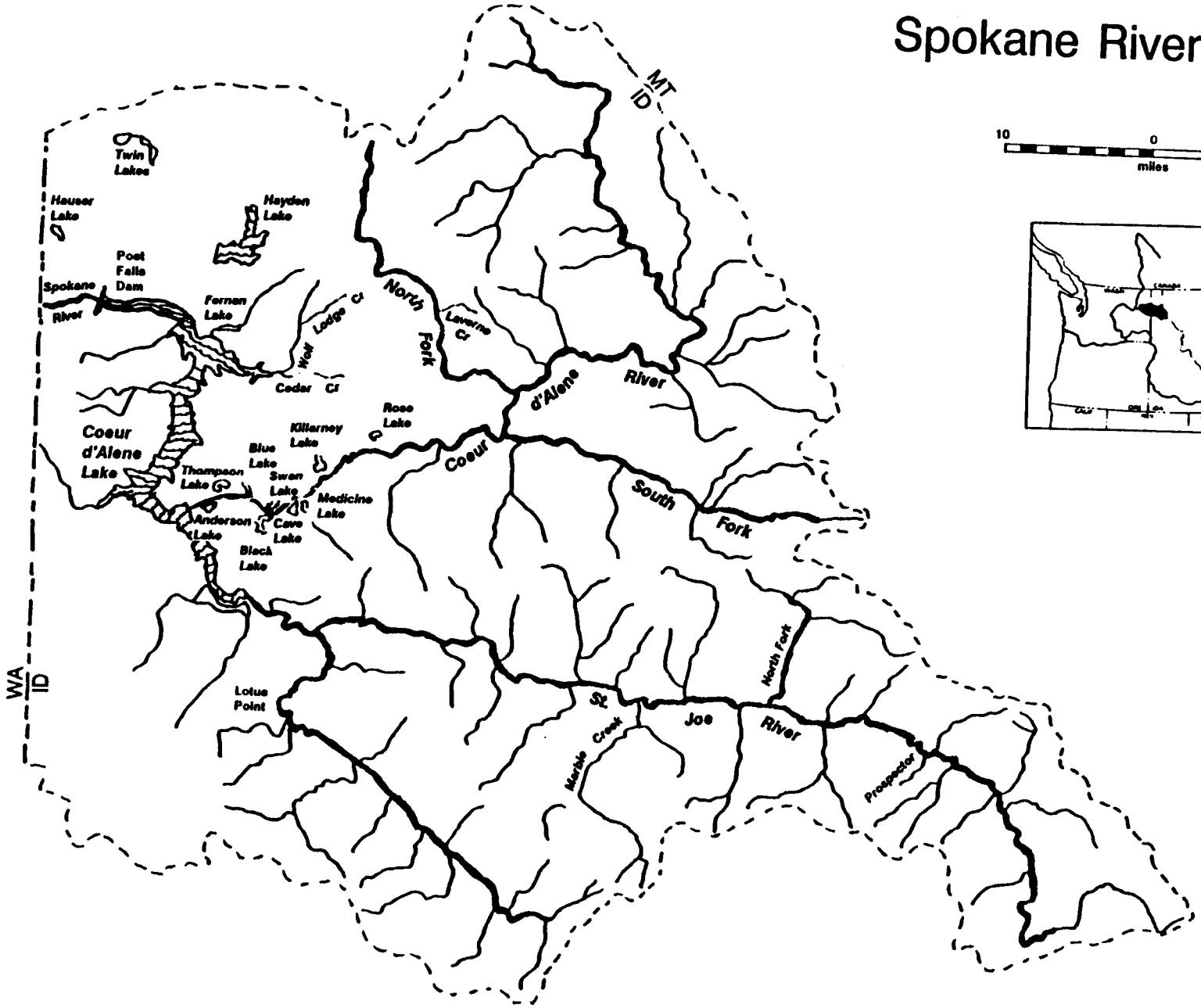
Drainage: PEND OREILLE RIVER

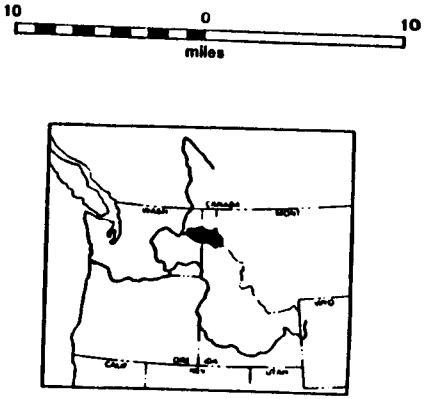
Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Pend Oreille Lake and tributaries	200/85,960	Mixed	Rainbow trout	Trophy	Continue standard statewide trophy trout regulations until the kokanee population is enhanced. Enhance the rainbow population with regulations and stocking once kokanee are reestablished.
			Cutthroat trout Brown trout Lake trout	Quality	Maintain liberal harvest regulations on the lake to provide a consumptive trout fishery. Supplement cutthroat trout with net pen production. Maintain restrictive regulations on selected tributary streams used by adfluvial fish to maximize production of wild fish for the lake.
			Bull trout	Preservation	Maintain harvest closures in tributary streams and lakes, protect and restore critical habitat, educate anglers to reduce unintentional harvest of bull trout, increase enforcement to reduce poaching and remove non-native fishes that compete directly with bull trout.
			Kokanee salmon Lake **whitefish** **Mountain whitefish**	General	Continue spawning habitat restoration efforts to re-establish wild **kokanee populations.** Continue hatchery enhancement efforts for kokanee to provide a consumptive fishery for anglers and forage for fish predators. Encourage increased utilization of lake whitefish to offset reduced limits on rainbow trout.
			Brook trout Cutthroat trout	Wild trout	Maintain limited consumptive fishery for small resident trout in tributaries not used by adfluvial trout.
			Largemouth **bass** **Smallmouth** bass **Northern** pike **Black crappie** Yellow perch	General	Maintain existing warmwater fisheries where they will not interfere with salmonid management programs.
Pend Oreille River	25/11,000	Mixed	**Rainbow** trout **Brown** trout **Cutthroat** trout Largemouth bass Black crappie Yellow perch Bluegill Pumpkinseed Bullhead	General	Modify water level management of Albeni Falls Reservoir to reduce impacts on fish habitat. Consider introducing new species (smallmouth bass and channel catfish) to improve fishery without negatively impacting management in Pend Oreille Lake.
Hoodoo Creek	11/	Coldwater	Rainbow trout Brook trout Brown trout	General	Continue limited maintenance stocking of brown trout fingerlings. Work with riparian landowners and sportsmen's groups to restore instream and riparian habitat.

Priest Lake and tributaries	100/23,360	Coldwater	Lake trout Cutthroat trout Bull trout Brook trout	Quality Preservation Preservation General	Better define management goals based on public desires and biological potential. Either create a quality fishery for lake trout with appropriate regulations or manage as a consumptive fishery with simple regulations. Maintain wild cutthroat trout stocks by protecting adult fish in the lake with catch-and-release regulations. Provide a limited consumptive harvest of wild cutthroat in selected tributary streams. Encourage anglers to fish resident populations above barrier falls rather than lake run stocks. Maintain harvest closures in lake and tributary streams. Maintain consumptive fishery on selected tributaries to offset harvest restrictions on adfluvial cutthroat trout streams.
Upper Priest Lake and tributaries	50/1,400	Coldwater	Cutthroat trout Bull trout Lake trout Kokanee salmon	Preservation	Manage the lake with catch-and-release regulations to maintain strong populations of adfluvial cutthroat trout and bull trout. Removal of lake trout is desirable, but concern for a mixed-stock overharvest of bull trout is the primary concern. Seek ways to resolve conflicts. Do not increase kokanee salmon beyond existing low level to avoid creating competition problems with native species.
Priest River and tributaries	120/	Coldwater	Cutthroat trout Brook trout Brown trout Mountain whitefish Bull trout	General Preservation	Encourage appropriate agencies to evaluate changes in water level management of Priest Lake to enhance fishery flows in Priest River. Maintain bonus brook trout limit on Priest River tributaries to provide consumptive trout fisheries. Maintain harvest closure in river and tributary streams. Determine critical habitat.
Blue Lake	/120	Warmwater	Largemouth bass Northern pike Tiger muskie Black crappie Yellow perch Bluegill Channel catfish Pumpkinseed	General	Work with private landowners to insure continued public access. Continue maintenance stocking of channel catfish and tiger muskie to diversify warmwater fishery. Establish a self-reproducing population of bluegill. Seek ways to reduce weed growth.
Jewel Lake	/35	Mixed	Cutthroat trout Rainbow trout Yellow perch	Quality	Continue to manage as a quality trout fishery. Treat with rotenone periodically to remove stunted perch, and restock with trout.
Mirror Lake	/90	Coldwater	Cutthroat trout Brook trout Kokanee salmon	General	Maintain a consumptive trout only fishery by stocking fingerling cutthroat and brook trout and kokanee fry. Seek ways to resolve access problems.

Kelso, Little, Round, and Granite lakes	/100	Mixed	Largemouth bass Rainbow trout Black crappie Yellow perch Bluegill Bullhead Pumpkinseed	Quality General	Provide a quality largemouth bass fishery for small lake anglers with a slot limit regulation. Evaluate the success of the regulation to provide larger bass. Maintain consumptive fisheries for other species.
Cocolalla, Round, and Blanchard (Stoneridge Reservoir) lakes	/960	Mixed	Rainbow trout Cutthroat trout Brook trout Brown trout Largemouth bass Black crappie Yellow perch Bluegill Bullhead Channel catfish Pumpkinseed	General	Maintain trout fisheries in Round and Blanchard lakes by stocking put-and-take rainbow. Discontinue trout stocking in Cocolalla due to poor returns. Maintain the channel catfish program in Cocolalla by stocking and experiment with natural production by providing spawning nest tubes.
Shepherd and Gamble lakes	/250	Warmwater	Largemouth bass Tiger muskie Black crappie Yellow perch Bluegill Bullhead Pumpkinseed	General	Maintain tiger muskie stocking in Shepherd Lake to provide a specialized fishery. Consider introductions of bluegill to Gamble Lake to diversify the fishery.
Spirit Lake and tributaries	10/1,477	Mixed	Kokanee salmon Rainbow trout Cutthroat trout Brook trout Brown trout Largemouth bass Black crappie Yellow perch Bluegill Bullhead Pumpkinseed	General	Maintain a high yield kokanee salmon fishery. Monitor kokanee population abundance. Discontinue put-and-take rainbow stocking and replace with fingerling cutthroat trout to maintain trout fishing opportunity. Maintain the existing fishery for warmwater species.
Alpine lakes (21 in the Pend Oreille River drainage)	/150	Coldwater	Cutthroat trout Rainbow trout Brook trout Golden trout Arctic grayling	General	Continue maintenance stocking of trout fry to provide fisheries that are consistent with lake productivity and angling pressure. Use only westslope cutthroat trout for cutthroat trout stocking. Reserve some lakes for specialty fish (golden trout and Arctic grayling) only. Determine where stunted brook trout lakes could be converted to more desirable fisheries with rotenone treatments and restocking. Utilize a more intensive volunteer creel census program to evaluate if species selection and stocking rates are producing desired fisheries. Do not stock lakes that are currently fishless in order to maintain some natural alpine lake ecosystems.

Spokane River Drainage





3. SPOKANE RIVER DRAINAGE A.

Overview

The Spokane River drains about 3,840 square miles in northern Idaho. The major tributaries of the drainage include the St. Joe, St. Maries, and Coeur d'Alene rivers which all feed into Coeur d'Alene Lake. Diversity of fishing opportunity in the drainage is great. There are many lowland lakes ranging from a few acres to 31,487-acre Coeur d'Alene Lake. Several lakes are close to the major population center and support important urban fisheries. River systems range from small mountain streams to the much larger St. Joe, Coeur d'Alene, and Spokane rivers. Mountain lakes are found in the headwaters of the South Fork Coeur d'Alene and St. Joe rivers.

Native game fish in the drainage include westslope cutthroat trout, bull trout, and mountain whitefish. The St. Joe, Coeur d'Alene, and St. Maries rivers contain populations of resident, river run, and lake run cutthroat trout. Historically, both the St. Joe and Coeur d'Alene rivers were regarded as among the finest trout streams in America. The upper St. Joe River has regained that status. Both Coeur d'Alene and Hayden lakes were noted for great numbers of large fish often ranging over 5 pounds.

Introduced game species include rainbow trout, kokanee salmon, brook trout, brown trout, chinook salmon, largemouth bass, smalimouth bass, pumpkinseed, bluegill, green sunfish, perch, crappie, bullhead, channel catfish, tiger muskie, and northern pike. A notable fishery for large wild rainbow and brown trout is present in the lower Spokane River. Largemouth bass are well established throughout the drainage's lakes. Historically, the area was noted for excellent bass fishing and more recently has seen a tremendous increase in bass fishing pressure. The Coeur d'Alene Lake system has become the focus of several major bass fishing tournaments.

Illegal introductions of northern pike have established populations throughout the Coeur d'Alene Lake system and in Fernan, Hauser, Hayden, and Twin lakes. Densities appear to be very low and growth is excellent. Fishing pressure is contributing to low population densities. Attempts to increase northern pike population densities through angling restrictions and enhanced recruitment could result in poorer growth and increase predation on other desirable species such as adfluvial cutthroat trout and bass.

Kokanee salmon have become the dominant species in Coeur d'Alene Lake and are still the most sought after game fish in the region. In 1979, the lake provided a harvest of nearly 600,000 kokanee salmon and supported over 250,000 angler hours. By 1981, kokanee salmon numbers exceeded carrying capacity in Coeur d'Alene Lake, and size of fish became unacceptably small to anglers. Fall chinook salmon were introduced in 1982 to control kokanee salmon and have created a very popular sport fishery. Chinook salmon are having the desired impact on kokanee salmon abundance, but stable population levels and desired fisheries have not been achieved yet. Chinook salmon are successfully reproducing in the system, but numbers are controlled.

Hatchery chinook **are also** used to supplement wild production so predator/prey balances can be maintained while producing a relatively consistent fishery.

Mining, logging and forest development, highway construction, and other land use impacts have taken a major toll on the drainage fisheries. Heavy metal pollution, stream channelization and sedimentation, and migration blocks have had an especially severe impact on cutthroat trout. Increased fishing pressure due to normal population expansion and improved access, and the introduction of competing species have also played an important role in the decline of cutthroat trout. Cutthroat trout stocks in the lake systems currently exist at a fraction of historic levels. Some river populations have responded **favorably** to special regulations.

Bull trout have also been impacted by overfishing, competition with non-native species, and habitat degradation. The harvest of bull trout was closed in the entire Spokane River drainage in 1988, but populations of fluvial and adfluvial fish have not responded, primarily due to the loss and degradation of habitat. The last remaining fluvial population of bull trout remaining in the entire **Spokane** drainage is using spawning and rearing streams in the unroaded headwater portion to the St. Joe River.

The **Spokane** system has over 800 miles of streams which **are generally accessible** to fish for spawning and rearing. The opportunity exists to rely heavily on extensive natural reproduction rather than expensive hatchery facilities to provide better fishing. In 1988, a **comprehensive and complex** set of regulations **were developed** to **manage** primarily for wild native cutthroat trout while still maintaining some limited harvest opportunity for cutthroat and stocked rainbow trout. The regulations were successful in reestablishing a world class fishery for cutthroat in the upper St. Joe River and improving fishing lower in the river. Similar regulations have not worked in the Coeur d'Alene River drainage where habitat degradation is much worse.

Attempts to maintain harvest opportunities for trout in some portion of the **Spokane drainage** have been met with limited success, however. The productivity of north Idaho waters is low, fish populations are easily overharvested, and restrictive regulations are often necessary to allow suitable waters to be adequately stocked with naturally-produced fish of **desirable** size. The **demand** for harvesting fish **exceeds** what the wild trout population can supply, so stocked hatchery rainbow trout have been used to supplement wild cutthroat trout production. Despite concentrating hatchery rainbow trout in limited stretches of river and advertizing those areas, the statewide harvest goal of a 40% return by number is rarely met. Hatchery rainbow trout also create a source of competition and hybridization with wild cutthroat trout. The complexity of regulations required to provide both a high level of enhancement for wild trout and harvest opportunity for stocked trout has lead to confusion, frustration, and displacement of some anglers. Management for wild trout in the Spokane drainage with some limited harvest opportunity and no stocking of hatchery rainbow trout in rivers is **achievable** if anglers are willing to **forgo liberal** harvest regulations.

The **lakes** of the **Spokane drainage have** supported the bulk of the fisheries in recent years, and other than cutthroat trout stocks, fisheries have been maintained in the face

of development. Habitat degradation will continue to take its toll, however, and many lakes are beginning to show habitat problems. Declining water quality and shoreline encroachment are serious problems. Continued rapid development of north Idaho is likely to eliminate future fishery management options.

B. Objectives and Programs

1. Objective: Minimize impacts of land use and development on fishery habitat in streams.

   Program: Work with the Forest Service, other agencies, private developers and landowners, and interested sportsmen's groups to make protection of fisheries habitat a primary concern in land use decisions. Incorporate evaluations of existing habitat in survey projects whenever possible. Develop a data base to demonstrate the magnitude of habitat loss and more effectively influence land use decisions. Work with the Forest Service and Department of Transportation to ensure mitigation of habitat loss or restoration of habitat whenever possible.

2. Objective: Manage the Spokane River drainage for wild westslope cutthroat trout while reducing the complexity of the regulations.

   Program: Provide harvest opportunity for wild trout within the productive capability of the system.

   Program: Maintain or expand the catch-and-release areas to meet public demand.

   Program: If it is socially acceptable, eliminate stocking of put-and-take rainbow trout in the rivers and develop catch out ponds adjacent to the river to replace lost harvest opportunity. If stocking cannot be eliminated completely, reduce and concentrate stocking of rainbow in rivers to minimize impacts to wild cutthroat and meet statewide return goals.

3. Objective: Minimize impacts to existing lake fisheries due to increasing lakeshore encroachment, pollution, and nutrient loading causing degradation of water quality and fish habitat.

   Program: Work with county planners to make protection of fish habitat and water quality a primary concern in land use decisions.

4. Objective: Improve angler compliance with special regulations.

   Program: Develop informational programs and brochures to encourage compliance. Educate anglers on the need for regulations, the kinds and location of regulations, and alternative fishing opportunities.

5. **Objective: Improve fishing and boating access.**

Program: Develop or enhance fishing and boat access areas through easements, cooperative agreements, or purchase. Utilize the Department's Challenge Grant program to build fishing docks for shoreline anglers.

6. **Objective: Curtail illegal introductions of fish. Illegal introductions of exotic fishes threaten the stability of other established fisheries.**

Program: Develop informational programs to educate anglers and the public to risks of random introductions of exotic species. Through planning, use enforcement efforts to curtail illegal introductions.

7. **Objective: Improve the efficiency of hatchery put-and-take trout stocking programs.**

Program: Evaluate rate of return, catch rate, and angler use on put-and-take supported waters through a routine data collection system.

Program: Adjust rate, timing, or location of stockings to improve rate of return to the creel.

Program: Utilize stocks of rainbow that maximize return to the creel.

Program: Develop ponds adjacent to traditional use areas of rivers to provide consumptive harvest fisheries.

Program: Inform anglers of hatchery supported trout fishing opportunities through maps, brochures, media coverage and signing to improve return to the creel.

Program: Discontinue put-and-take stocking in waters where a 40% or greater return by number or 100% or greater return by weight to the creel cannot be met by the end of this planning period.

8. **Objective: Provide diverse angling opportunities in lowland lakes.**

Program: Evaluate the existing tiger muskie and channel catfish stocking programs. Continue maintenance stocking of tiger muskies and channel catfish where fisheries have been created and seek new waters that have potential. Construct channel catfish spawning habitat in select waters in an attempt **to provide natural reproduction. Establish bluegill in select waters to diversify panfish populations.**

Drainage: SPOKANE RIVER

Water	Miles/acre	Fishery			**Management** Direction
		Type	Species Present	**Management**	
Coeur d'Alene Lake and minor tributaries (including Chatcolet, Hidden, Benewah, and Round lakes)	100/31,487	Mixed	Cutthroat trout **Rainbow** trout **Brook** trout	**General**	Maintain adfluvial westslope cutthroat trout populations with regulations on the fake and in selected streams that restrict, but do not eliminate harvest. Continue to work with private landowners and **agencies** to identify and correct habitat problems on both private land, the Interstate 90 corridor, and Forest Service ownership within the Wolf Lodge Creek watershed. Maintain the fishing closure on cutthroat trout in Wolf Lodge Creek to provide maximum recruitment for the Coeur d'Alene **Lake** fishery.
			Bull trout	**Preservation**	Maintain harvest closure.
			Chinook salmon	**Quality**	Manage the chinook salmon **population** at a level that provides greater catches of **3-18** pound fish as opposed to fewer, but larger (20 + pound) fish. Maintain desired population levels with hatchery supplementation and control of wild chinook salmon recruitment.
			Kokanee salmon	**General**	Manage the **kokanee** salmon population at a level that provides a yield fishery for 10-inch fish and forage for chinook salmon.
			Largemouth bass Smallmouth **bass** Northern **pike** Black **crappie** Yellow perch Bluegill **Bullhead** **Pumpkinseed**	**General**	Maintain consumptive fisheries on warmwater species to provide yield fisheries while reducing potential predation and competition impacts on adfluvial cutthroat trout. Maintain northern pike population densities at low levels with liberal harvest regulations to maintain rapid growth rates while reducing predation on largemouth bass and cutthroat trout.
Hayden Lake and tributaries	20/3,756	Mixed	Rainbow trout Cutthroat trout Splake	Quality	Maintain quality trout fishery with *hatchery* supplementation. **Evaluate** size and timing of fingerling releases to maximize survival. Evaluate stock differences between rainbow trout to determine what stock will best meet angler desires. Maintain tributary closures and harvest season on lake to maximize wild trout production. **Evaluate** growth and return to the creel of splake.
			Smallmouth bass Largemouth bass Black crappie	Quality	Provide high catch rates for better than average size fish with regulations that reduce, but do not eliminate harvest. **Evaluate** bass and crappie population structure and fishery to determine if the regulations are functioning properly.

DRAINAGE.1

			Yellow perch Bluegill Bullhead Pumpkinseed Northern pike	General	Maintain consumptive fisheries. Introduce and attempt to establish bluegill to enhance warmwater fishery. Encourage maximum harvest of northern pike to reduce impacts to other fish populations.
Upper and Lower Twin lakes	/850	Mixed	Rainbow trout Cutthroat trout Brook trout Kokanee salmon Largemouth bass Black crappie Yellow perch Northern pike Bluegill Green sunfish Bullhead Pumpkinseed	General General	Stock put-and-take rainbow trout to provide a consumptive trout fishery. Limit rainbow trout stocking in Upper Twin Lake to early spring only while water temperature is suitable. Continue annual stocking of limited numbers of kokanee salmon fry in the lower lake to provide a few large kokanee salmon in the catch. Establish bluegill in the Twin Lakes system to diversify the warmwater fishery.
Fernan Lake	/300	Mixed	Rainbow trout Cutthroat trout Largemouth bass Northern pike Black crappie Yellow perch Sunfish Bullhead Channel catfish	General General	Stock put-and-take rainbow trout to provide consumptive trout fishery. Stock small numbers of surplus broodstock when available to add trophy fish to the catch. Maintain channel catfish stocking. Manage bass for the consumptive angler by allowing the harvest of any size bass.
Hauser Lake	/550	Mixed	Rainbow trout Cutthroat trout Brook trout Brown trout Largemouth bass Tiger muskie Northern pike Black crappie Yellow perch Bluegill Bullhead Channel catfish Pumpkinseed Green sunfish	General General	Stock put-and-take rainbow trout to provide consumptive trout fishery. Utilize Hauser Lake for stocking of surplus fingerling trout of other species. Enhance diversity of the warmwater fishery by establishing bluegill, channel catfish, and tiger muskie. Maintain channel catfish and tiger muskie with stocking and evaluate the success of this program. Determine public support for establishing a walleye fishery and implement if there is strong support from an informed public.

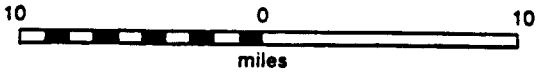
Lateral Lakes (Anderson, Thompson, Blue, Swan, Medicine, Cave, Black, Bull Run, and Rose lakes and slackwater portions of the Coeur d'Alene River)	/2,960	Warmwater	Largemouth bass Northern pike Yellow perch Black crappie Bluegill Bullhead Pumpkinseed	Trophy Quality General	Manage the majority of lakes for year-round consumptive fisheries on warmwater species. Manage Blue Lake as a trophy bass fishery and Anderson Lake as a quality bass fishery. Maintain northern pike population densities at low levels to maintain rapid growth while reducing predation on bass and cutthroat trout.
North Fork Coeur d'Alene River and tributaries above and including Yellow Dog Creek and Little North Fork Coeur d'Alene River and tributaries above and including Laverne Creek	200/	Goldwater	Cutthroat trout	Quality	Maintain catch-and-release regulations to maximize catch rates and fish size and provide fish for harvest outside of catch-and-release waters.
North Fork Coeur d'Alene River below Yellow Dog Creek, Little North Fork Coeur d'Alene River below Laverne Creek, and South Fork Coeur d'Alene River	105/	Coldwater	Rainbow trout	Put-and-take trout	Phase out or significantly reduce rainbow stocking during this planning period. Provide harvest opportunity for stocked rainbow in catch-out ponds located near traditional harvest areas.
			Brook trout Mountain whitefish Kokanee salmon Chinook salmon	General	Maintain existing harvest fisheries on brook trout and mountain whitefish. Allow harvest on kokanee salmon and chinook salmon in the lower river.
			Cutthroat trout	Wild trout	Utilize less complex restrictive regulations to allow westslope cutthroat trout populations to rebuild while providing limited harvest. Consider additional areas for catch-and-release.
			Bull trout	Preservation	Maintain closure on bull trout harvest.
Tributaries of the Mainstem North Fork and South Fork Coeur d'Alene rivers that are outside catch-and-release boundaries	300 + /	Coldwater	Cutthroat trout Brook trout	Wild trout	Allow limited harvest fishery on resident cutthroat trout while protecting migratory stocks with special regulations. Allow continued liberal harvest of brook trout.
St. Joe River and tributaries above Prospector Creek	200+1	Coldwater	Cutthroat trout Bull trout Brook trout	Quality	Maintain catch-and-release regulations to maximize catch rates and fish size and provide fish for harvest outside of catch-and-release waters.
St. Joe River below Prospector Creek, North Fork St. Joe, and Marble Creek	90/	Coldwater	Rainbow trout	Put-and-take trout	Phase out or significantly reduce rainbow stocking during this planning period. Provide harvest opportunity for stocked rainbow in catch-out ponds located near traditional harvest areas.
			Brook trout	General	Maintain existing harvest fisheries for brook trout and mountain whitefish.
			Cutthroat trout	Wild trout	Utilize less complex restrictive regulations to allow westslope cutthroat trout populations to rebuild while providing limited harvest. Consider additional areas for catch-and-release.
			Bull trout	Preservation	Maintain closure on bull trout harvest.

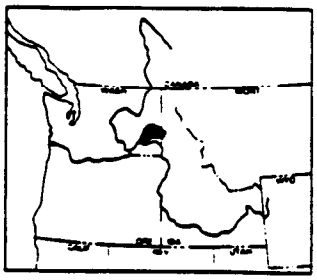
Tributaries of the St. Joe River below Prospector Creek, North Fork of the St. Joe, and Marble Creek	300+1	Coldwater	Cutthroat trout Brook trout	Wild trout	Allow limited harvest fishery on resident cutthroat trout while protecting migratory stocks with special regulations. Allow continued liberal harvest of brook trout.
Slackwater area of St. Joe River	14/	Mixed	Largemouth bass Black crappie Yellow perch Bullhead Channel catfish	General	Evaluate the success of channel catfish introductions. Consider quality largemouth bass regulations to enhance the bass fishery if there is public demand and support.
			Cutthroat trout	Wild trout	Allow limited harvest fishery.
St. Maries River above slackwater	160/	Coldwater	Rainbow trout	Put-and-take trout	Provide a limited harvest fishery for rainbow trout by stocking trout in specific areas of the river that are advertised or in catch-out ponds near traditional harvest areas. Utilize fall spawning stocks of rainbow trout to reduce risk of hybridization with cutthroat trout.
			Brook trout Mountain whitefish	General	Maintain existing harvest fisheries for brook trout and mountain whitefish.
			Cutthroat trout	Quality	Utilize restrictive regulations to allow westslope cutthroat trout populations to rebuild while providing limited harvest.
			Bull trout	Preservation	Maintain closure on bull trout harvest.
Tributaries of the St. Maries River	200 + /	Coldwater	Cutthroat trout Brook trout	Wild trout	Allow limited harvest fishery on resident cutthroat trout while protecting migratory stocks with special regulations. Allow continued liberal harvest of brook trout.
Slackwater area of the St. Maries River	9/	Mixed	Largemouth bass Black crappie Yellow perch Bullhead Channel catfish	General	Evaluate the success of channel catfish introductions. Consider quality largemouth bass regulations to enhance the bass fishery if there is public demand and support.
			Cutthroat trout	Wild trout	Allow limited harvest fishery.
Spokane River (Coeur d'Alene Lake to Post Falls Dam)	15/	Mixed	Cutthroat trout	Wild trout	Utilize restrictive regulations to provide limited consumptive fisheries for westslope cutthroat trout while allowing the population to rebuild. Evaluate the effectiveness of the existing regulations at rebuilding healthy cutthroat trout population and providing desired angling opportunities during this planning period.
			Largemouth bass Black crappie Yellow perch Bluegill Pumpkinseed	General	Maintain the existing zoning of regulations in the river to provide harvest of warmwater fish where cutthroat trout enhancement goals are not jeopardized. Restrict harvest of warmwater species in areas of the river and during time periods when cutthroat trout are particularly vulnerable to overharvest.

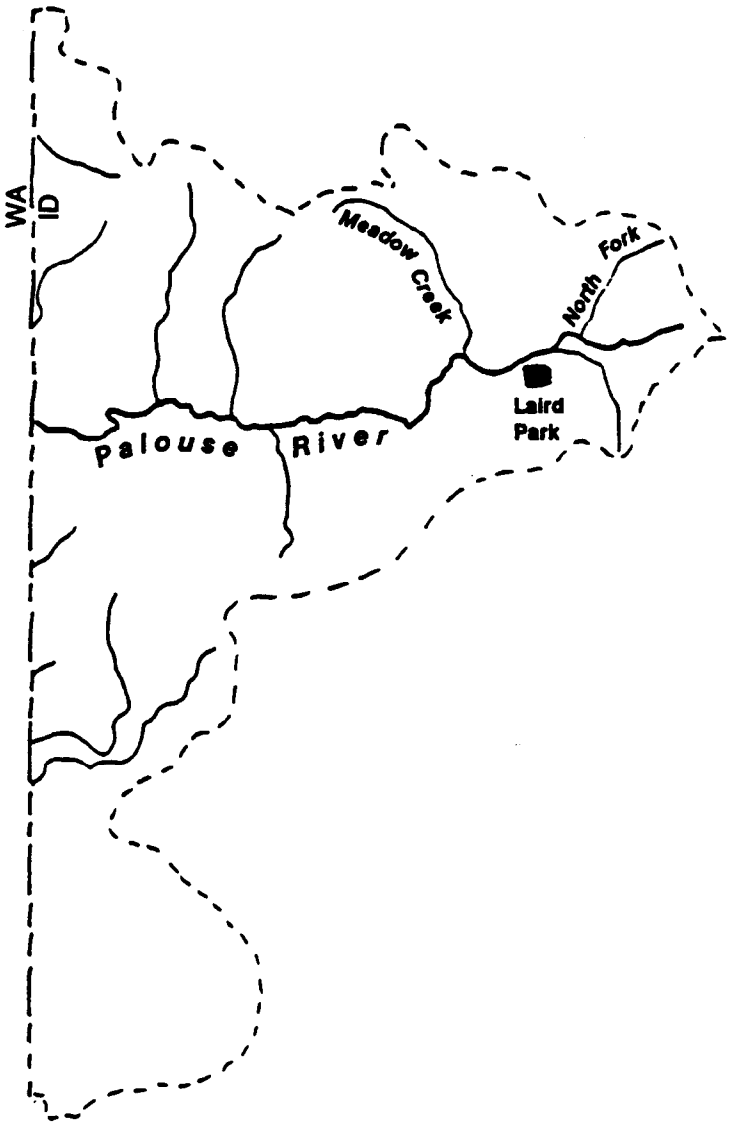
DRAINAGE.1

Spokane River (Post Falls Dam downstream to stateline)	**6/**	**Coldwater**	**Rainbow trout Brown trout**	**Wild trout**	**Determine what opportunities exist to enhance both size and catch rates for rainbow trout through regulation reform and habitat enhancement. Evaluate population dynamics and limitations. Evaluate brown trout population status and potential effects on native rainbow populations before any additional enhancement effort is made. Work with WWP during relicensing of Post Falls Dam to enhance fish habitat that has been negatively impacted by dam operations.**
Alpine lakes (12 in the Spokane River drainage)	**/140**	**Coldwater**	**Rainbow trout Cutthroat trout Brook trout Golden trout Arctic grayling**	**General**	**Continue maintenance stocking of trout fry to provide fisheries that are consistent with lake productivity. Use only westslope cutthroat trout for cutthroat trout lakes. Reserve some lakes for specialty fish (Arctic grayling and golden trout) only. Determine where stunted brook trout lakes could be converted to more desirable species, or utilize bull trout, lake trout or splake to reduce brook trout densities and provide a trophy component to the fishery. Utilize a more intensive volunteer creel census program to evaluate if species selection and stocking rates are producing desired fisheries. Do not stock lakes that are currently fishless in order to maintain some natural alpine lake ecosystems.**

Palouse River Drainage







4. PALOUSE RIVER DRAINAGE

A. Overview

The Palouse River drains from a timbered, mountainous area with elevations ranging to 5,000 feet mean sea level (msl) through rolling hills developed as agricultural land at an elevation of 2,500 feet msl near the Idaho-Washington border. The upper reaches of the Palouse drainage have been extensively roaded, logged, and dredge mined, while the lower **areas** have been intensively farmed. The only remaining trout habitat in the drainage is located near the headwaters. Substantial improvements in fish populations in the drainage will necessitate rebuilding riparian habitat that will increase flow and reduce water temperature during the summer.

B. Objectives and Programs

1. Objective: Improve fish habitat.

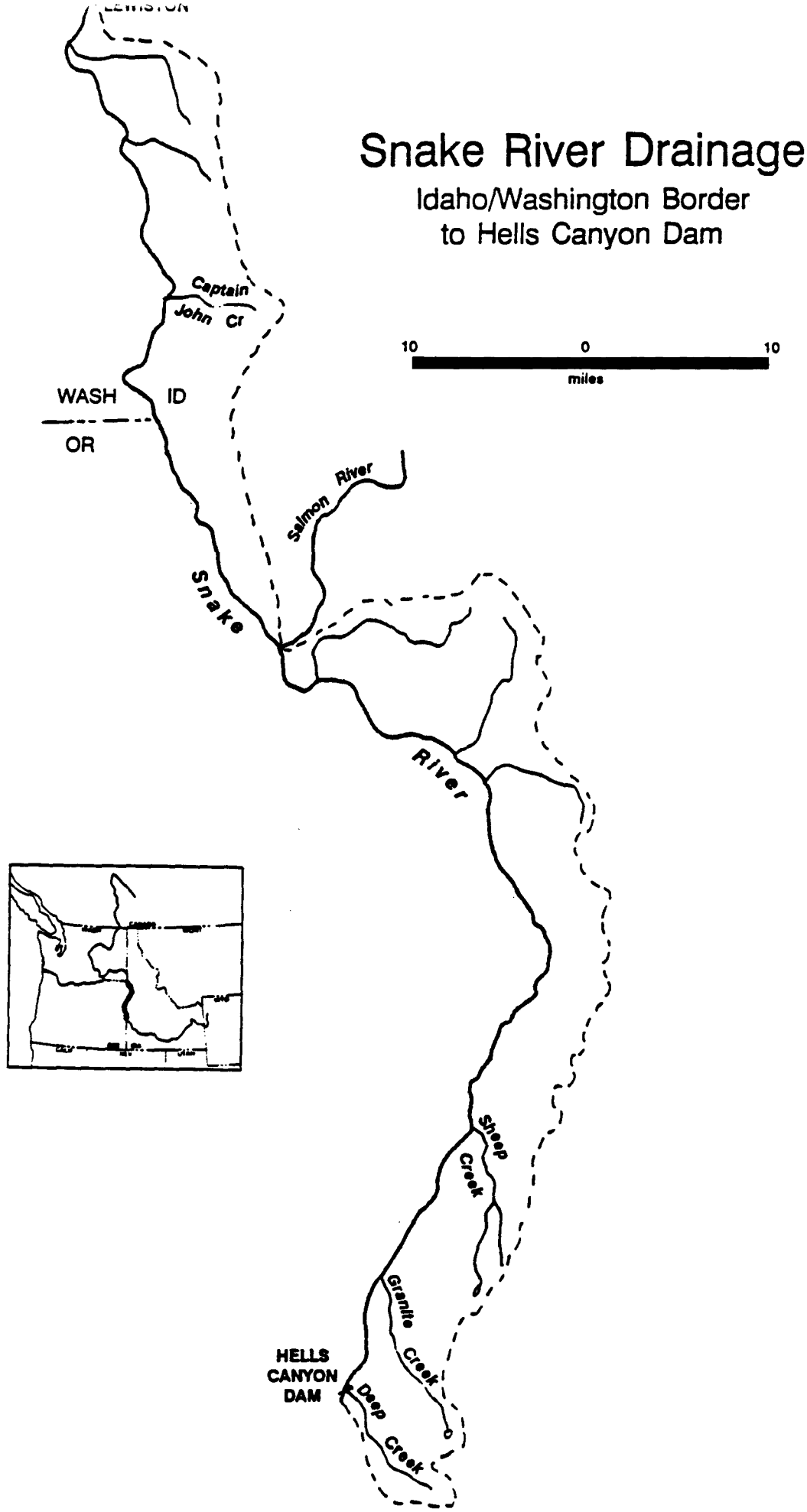
   Program: Work with USFS and private landowners to protect and improve habitat.

2. Objective: Increase fishing **opportunities** with small reservoirs.

   Program: Work with public and private landowners to identify potential new small reservoir sites and initiate process for construction.

Drainage: PALOUSE RIVER

Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Palouse River from Washington border to headwaters, including tributaries	70/	Mixed	Rainbow trout Brown trout Brook trout Largemouth bass Smallmouth bass	Put-and-take trout	Stock with catchable rainbow where returns to the creel can be maximized. Assess need for further warmwater fish enhancement in the drainage.
			Bull trout	Preservation	Closed to harvest.


Snake River Drainage
Idaho/Washington Border
to Hells Canyon Dam
10
0
10
miles
Captain
John Cr
WASH
ID
OR
Salmon River
Snake
River
Sheep
Creek
Granite Creek
HELLS
CANYON
DAM
Deep Creek

5. SNAKE RIVER AND MINOR TRIBUTARIES
IDAHO/WASHINGTON **BORDER** TO HELLS CANYON DAM

A. Overview

The portion of the Snake River from the Idaho-Washington border at Lewiston upstream to Hells Canyon Dam is 108 miles in length. The section from the Washington-Oregon border to Hells Canyon Dam flows through the deepest gorge in the United States in the Hells Canyon National Recreation Area. Forty miles of the river from the Washington-Oregon border to Big Canyon Creek is designated a "scenic" river under the Wild and Scenic Rivers System, and the remaining upper 32 miles is classified as "wild." Both the Idaho and Oregon sides of the river in the upper portions of the recreation area are bounded by wilderness. Legislation passed by Congress in 1989 prohibits the Federal Energy Regulatory Commission from issuing any licenses to develop new mainstem hydropower projects in the Snake River. Congressional intent also includes federally authorized projects.

River flows are controlled by Hells Canyon Dam and upstream storage. Daily water levels can fluctuate vertically 3 to 4 feet below Hells Canyon Dam. Quality of water passing through the canyon has improved substantially since the creation of the upriver =impoundments. The reservoirs act as settling basins that enhance water quality. **Recreational** use of the river from Hells Canyon Dam to Lewiston is very high.

The lower portion of the river near Lewiston is impounded by Lower Granite Dam which lies 40 miles **below** Lewiston. The reservoir **extends above** the towns of Lewiston and Clarkston, making the area an inland **seaport.**

The Snake River upstream to Hells Canyon Dam is the migration corridor for adult and juvenile **anadromous** fish moving **to** and from the **Salmon,** Imnaha, **and Grande Ronde subbasins.** Spring, summer, and fall **chinook** salmon, **sockeye** salmon, Pacific lamprey, and **steelhead** pass through this reach of the river. Fall chinook salmon also spawn in the mainstem of the Snake River. Most of the minor Snake River tributaries which are accessible to anadromous fish, such as Granite, Sheep, and Captain John creeks, are suitable for **steelhead** spawning and rearing.

The mainstem Snake River will continue to **be managed** for **exploitation** of hatchery steelhead, but consumptive harvest of naturally-produced steelhead or chinook is not expected during the next five years.

Major resident game fish species found in the river include smallmouth bass, white sturgeon, channel catfish, and rainbow trout. The rainbow fishery is primarily supported by maintenance stocking. The present sturgeon fishery is nonconsumptive because of depressed populations. Sturgeon ranging to 9 feet have been caught in recent years.

The small tributaries in this reach of the Snake River drain from high forested areas through break lands to arid bottoms before entering the river. Many streams have a very steep gradient and are accessible to steelhead trout only in the lower reaches. The upper reaches of some of the larger streams, such as Granite and Sheep creeks, support populations of resident rainbow, cutthroat, and bull trout.

B. Objectives and Programs

1. Objective: Improve juvenile fish migration survival to lower Granite Dam.

Program: Establish long-term total dissolved gas monitoring stations below Hells Canyon Dam. Collect data on anadromous and resident fish populations, including mortality and gas bubble incidence during periods of high gas levels and correlate with anadromous adult returns. Coordinate all activities with Idaho Power Company. Develop and work to obtain flow regimes in the Snake River that maximize survival of migrating juvenile and adult anadromous fish. Continue to develop smolt timing and relative abundance indices to aid control of water budget flow and water storage management. Monitor resident trout and bass diets to determine extent of predation on fall chinook salmon juveniles.

2. Objective: Enhance natural production of fall chinook below Hells Canyon Dam.

Program: Document impacts of fluctuating water levels on fall chinook survival, spawning success, and ecology. Work with Idaho Power Company and federal regulatory agencies to minimize flow fluctuations from Hells Canyon Dam to enhance fall chinook survival.

3. Objective: Enhance game fish production below Hells Canyon Dam.

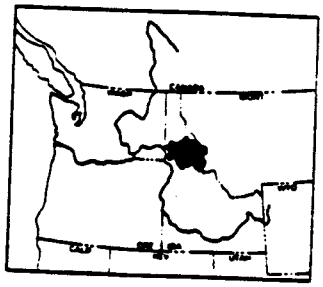
Program: Document impacts of fluctuating water levels on game fish with emphasis on smallmouth bass and white sturgeon, survival, spawning success, and ecology. Work with Idaho Power Company and federal regulatory agencies to minimize flow fluctuations from Hells Canyon Dam to enhance resident game fish survival.

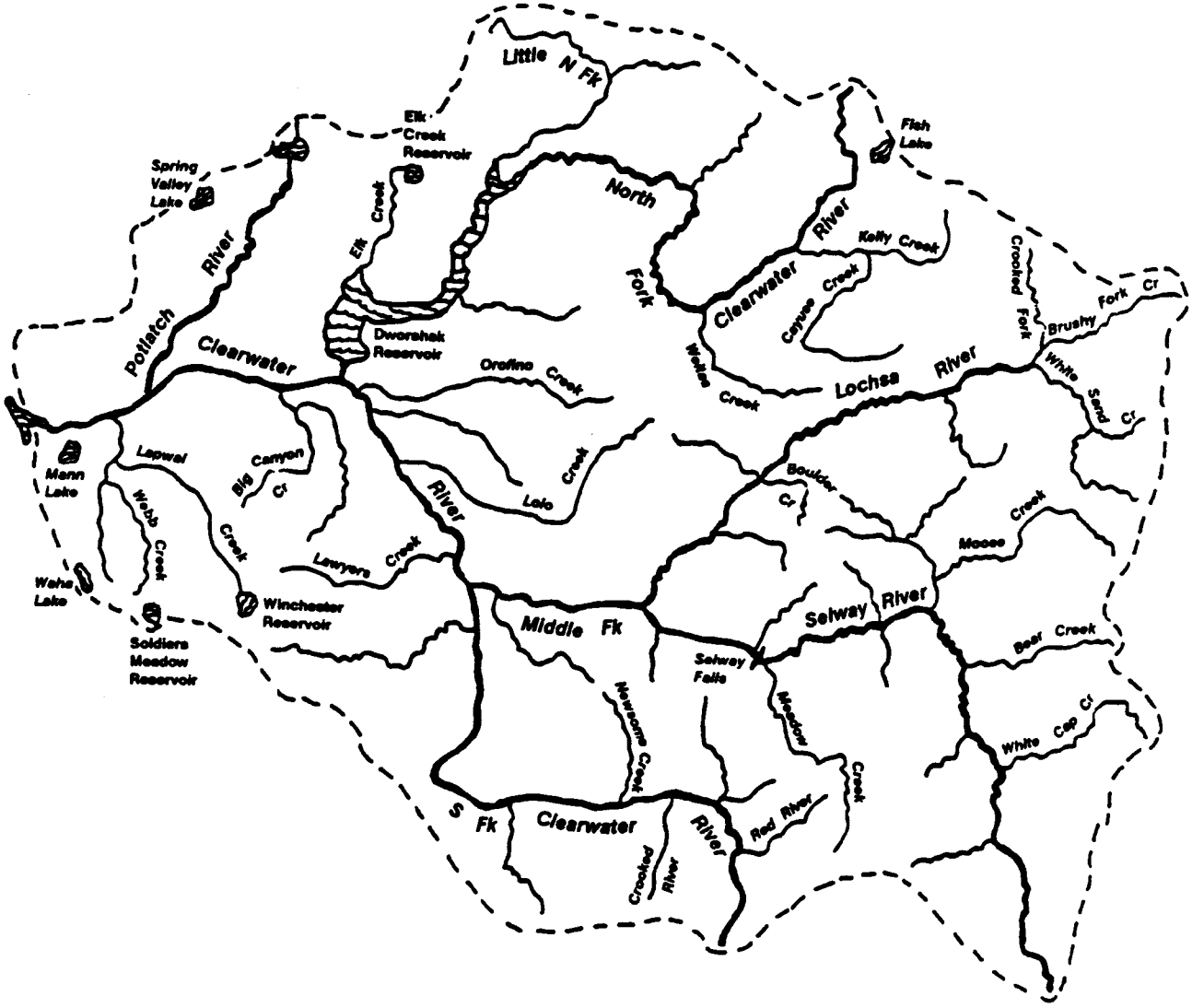
4. Objective: Manage mountain lakes within productivity and user preference constraints of individual lakes.

Program: Continue mountain lakes investigations in cooperation with USFS to collect biological, physical and chemical characteristics of each lake. Using acquired information, develop management plans.

Drainage: SNAKE RIVER AND	TRIBUTARIES - IDAHO/WASHINGTON BORDER TO HELLS CANYON DAM				
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Snake River from the Idaho/ Washington border to Hells Canyon Dam	183/	Mixed/ Anadromous	Steelhead Chinook salmon	Anadromous	Minimize impacts to minor tributaries of naturally-produced spring chinook salmon. Manage minor tributaries for natural production of steelhead. Coordinate fall chinook salmon management with lower Snake River managers.
			Rainbow trout Smallmouth bass Channel catfish Mountain whitefish	General	Coordinate all management and regulations with adjoining states, USFS, and Nez Perce Tribe. Continue evaluation of all species. Evaluate impacts of resident fish on juvenile fall chinook. Continue dissolved gas monitoring stations.
			White sturgeon Bull trout	Preservation	Closed to bull trout and white sturgeon harvest. Evaluate need for further restriction to reduce hooking mortality of white sturgeon. Continue population monitoring of white sturgeon.
Alpine lakes	/82	Coldwater	Rainbow trout Cutthroat trout Brook trout Bull trout Arctic grayling Golden trout	General	Provide 1.0 fish/hour catch rates. Develop management strategies for each lake. Stock only those lakes that do not support natural reproduction. Improve fish population structure in stunted brook trout lakes through predator introduction (brown trout, bull trout, etc.) or chemical rehabilitation.
			Bull trout	Preservation	Closed to bull trout harvest.

Clearwater River Drainage





6. CLEARWATER RIVER DRAINAGE

A. Overview

The Clearwater River originates in the Bitterroot mountain range on the Idaho-Montana border and flows westerly across the state to Lewiston where it joins the Snake River. The river drains approximately 9,640 square miles and ranges in elevation from nearly 9,000 feet msl to 725 feet msl. There are three major tributaries to the Clearwater River including the North Fork, the Middle Fork which originates at the confluence of the Lochsa and Selway rivers, and the South Fork. Mean annual discharge for the drainage is 15,290 cfs with a range of 500 to 177,000 cfs.

The eastern half of the drainage is mainly national forest land, while the western half is largely private land, including corporate timber holdings. There is also a scattering of state land in this area. The Nez Perce Indian Reservation makes up 13% of the drainage from approximately the South Fork Clearwater River to near Lewiston. Sixty-three miles of the main Clearwater and 11 miles of the South Fork are included in the Reservation. The entire drainage is part of the native American ceded lands.

Approximately 24% of the drainage in the Selway and portions of the Lochsa and South Fork Clearwater drainages are classified wilderness. The Middle Fork Clearwater, including the Lochsa and Selway rivers, is part of the National Wild and Scenic Rivers System. There is some remaining roadless area left in the Clearwater drainage that is not wilderness. Much of this **unaltered area is found in the upper North Fork Clearwater River near Kelly and Weitas creeks and in the lower Selway and upper Lochsa drainages.**

Fishery habitat ranges from pristine streams and rivers found in roadless areas and wilderness to heavily-silted and dredged waters found in logged, mined, and farmed areas. Road construction, agriculture, and silviculture are major sources of siltation. The South Fork Clearwater drainage has been heavily impacted by dredge and placer mining. Overgrazing has also contributed to loss of important riparian habitat. Fishery potential has been severely reduced in much of the impacted areas.

One of the most productive chinook salmon and steelhead streams in the state was impounded and eliminated from natural production of anadromous fish by the construction of Dworshak Dam. Since construction of the dam, the lower end of the North Fork Clearwater has been exclusively devoted to artificial production of anadromous fish with both Dworshak National Fish Hatchery and Clearwater Fish Hatchery located near the mouth of the North Fork. In addition, Kooskia National Fish Hatchery, located at the mouth of Clear Creek on the Middle Fork Clearwater, raises spring chinook and steelhead in conjunction with Dworshak. The Clearwater Fish Hatchery rears steelhead trout and chinook salmon. This program includes three satellite ponds located on Crooked River, Red River, and the Lochsa River which rear chinook.

Anadromous management action in the **Clearwater will emphasize maintaining existing natural spawning populations of chinook and steelhead and preserving good** habitat **quality. The mainstems of** the **Clearwater, South Fork, North Fork, and lower Middle Fork will continue to be managed for exploitation of hatchery steelhead. Development of** strategies **to provide fishing opportunity on surplus hatchery chinook will also be emphasized.**

The drainage supports a myriad of fish and fishing opportunity. Major trout species include resident rainbow and cutthroat **trout, bull trout, mountain whitefish, kokanee salmon, chinook salmon, and steelhead. There are approximately 450 mountain lakes in the area which support a mixture of hatchery-supported and naturally-reproducing populations of trout. Kokanee salmon are the most abundant species found in 16,970-acre Dworshak Reservoir, the largest impoundment in the drainage. Smallmouth bass are found in Dworshak Reservoir and the main Clearwater River.**

Fishing opportunity ranges from quality fisheries with gear and harvest restrictions on cutthroat **trout to high-yield, consumptive fisheries for kokanee. The area also provides extensive angling opportunity for steelhead. Fishing for chinook salmon is not anticipated in the next five years.**

There are ten lowland lakes and ponds in the area that are managed mostly for put-and-take fisheries utilizing catchable rainbow trout. Some of the waters support put-and-grow trout and kokanee fisheries resulting from fingerling releases. Warmwater species including largemouth bass, smallmouth bass, crappie, bluegill, and bullheads are important fisheries. Within the drainage are a multitude of private farm ponds for which department personnel provide consultation on a regular basis.

B. Objectives and Proarams

1. **Objective: Maintain and improve fish habitat and water quality within the Clearwater drainage.**

   Program: Continue working with land management agencies (Forest Service, Bureau of Land Management, State Department of Lands) and private land owners to inform, educate, and assist with land management planning for protecting fish habitat and water quality. Emphasize the need for riparian habitat protection and enhancement. Encourage containment of sediment production areas, including old mining sites. Oppose land use activities that degrade quality of natural production areas.

2. **Objective: Maintain a diversity of fishing opportunity in the Clearwater River drainage to meet angler demand.**

Program: Within the biological constraints of the fish resource, provide an array of lake and stream fishing opportunities including:

a. High yield kokanee salmon fisheries.

b. Yield fisheries on catchable and fingerling released trout.

c. Fishing (catch-and-release) for trophy-sized rainbow, cutthroat, and steelhead trout.

d. Yield and trophy fisheries for smallmouth and largemouth bass.

e. Yield fisheries for brook, cutthroat, and rainbow trout in mountain lakes.

f. Opportunities to harvest steelhead and chinook salmon when run size permits.

3. Objective: Develop strategies including a funding source to construct a new reservoir in the Clearwater drainage.

Program: Evaluate sites for reservoir construction in the Weippe area and at other sites as they become known.

4. Objective: Assess the need to protect wild/natural populations of juvenile steelhead in nursery streams as these fish often provide summer fishing opportunity in many streams.

Program: Evaluate harvest rates of wild/natural juvenile steelhead in selected Clearwater tributaries to determine if protection is warranted.

5. Objective: Increase fishing access. Program: As opportunities allow,

acquire additional fishing access sites.

6. Objective: Maintain existing natural spawning populations of chinook salmon and steelhead.

Program: Work with the Nez Perce Tribe to develop hatchery fish release programs that preserve and protect genetic resources of naturally-spawning chinook salmon and steelhead populations. Mark hatchery smolts released into tributaries. Modify weir management to sustain natural populations.

7. Objective: Support anadromous objectives with Dworshak Reservoir flows.

Program: Work with Corps of Engineers to provide flows from Dworshak Reservoir to maximize survival of migrating anadromous fish and evaluate

effects on resident fisheries and ecology. Continue reservoir flow modification to support steelhead fishing, when possible.

8. Objective: Work with private landowners to enhance fishing opportunities in private farm ponds.

Program: Continue consultation with private fish pond permitees to provide fisheries in farm ponds. Provide warmwater fish for give-aways as lowland lake populations allow.

9. Objective: Manage mountain lakes within productivity and user preferences constraints of individual lakes.

Program: Continue mountain lake investigations in cooperation with USFS to collect biological, physical, and chemical characteristics of each lake. Use acquired information to develop management plans.

Drainage: CLEARWATER RIVER					
			Fishery		
Water	Miles/acre	Type	Species Present	Management	Management Direction
Winchester Lake	/85	Mixed	Rainbow trout Largemouth bass Bullhead	Put-and-take trout	Stock catchable and fingerling rainbow trout to maintain catch rate of 0.5 fish/hour. Support implementation of the enhancement plan for improving water quality and secure funding. Electric motors only water. Evaluate status of largemouth bass population. Evaluate fish populations every three years.
Spring Valley Reservoir	/53	Mixed	Rainbow trout Largemouth bass Bluegill	Put-and-take trout	Stock catchable and fingerling rainbow trout to maintain catch rate of 0.5 fish/hour. Electric motors only water. Evaluate fish populations every three years.
Mann Lake	/145	Mixed	Rainbow trout Largemouth bass Black crappie Bluegill Channel catfish	Put-and-take trout	Stock catchable and fingerling rainbow trout to maintain catch rate of 0.5 fish/hour. Electric motors only water. Evaluate fish populations every three years.
Waha Lake	/94	Mixed	Kokanee salmon Smallmouth bass Rainbow trout	General	Reinitiate rainbow trout stocking. Evaluate aeration plan for enhancing water quality. Evaluate fish populations every three years.
Soldiers Meadow Reservoir	/101	Coldwater	Rainbow trout Kokanee salmon	Put-and-take trout	Stock rainbow trout catchables and/or fingerlings as peeded to maintain catch rate of 0.5 fish/hour. Evaluate fish populations every three years.
Moose Creek Reservoir	/50	Mixed	Largemouth bass Rainbow trout Bluegill Black crappie Pumpkinseed	Put-and-take trout Trophy	Stock catchable rainbow trout to maintain catch rate of 0.5 fish/hour. Monitor largemouth bass population as a response to trophy regulation (2 over 18 inches). Electric motors only water. Evaluate fish populations every three years.
Elk Creek Reservoir	/81	Mixed	Rainbow trout Brook trout Smallmouth bass Largemouth bass	Put-and-take trout	Stock catchable rainbow trout to maintain catch rate of 0.5 fish/hour. Monitor success of introduced smallmouth and largemouth bass populations.
Campbell's Pond	/7	Coldwater	Rainbow trout	Put-and-take trout	Stock catchable rainbow trout to maintain catch rate of 0.5 fish/hour. Evaluate fingerling releases.
Robinson's Pond	/2	Mixed	Rainbow trout Bullhead Pumpkinseed	Put-and-take trout	Stock catchable rainbow trout to maintain catch rate of 0.5 fish/hour. Consider draining for removing stunted bullheads and nongame species. Consider dredging to improve habitat.
Lewiston Levee ponds	/12	Coldwater	Rainbow trout	Put-and-take trout	Stock catchable rainbow trout as needed.

Fish Lake (Cedars)	/117	Coldwater	Cutthroat trout Bull trout	Wild trout Preservation	Season opens August 1 to protect outlet spawning cutthroat trout. Maintain as no motors water. Maintain or improve spawning habitat in the outlet stream. Closed to harvest.
Steep Lake	/8	Coldwater	Golden trout	Wild trout	Season opens August 1 to protect spawning golden trout.
Other alpine lakes	/4,300	Coldwater	Cutthroat trout Rainbow trout Brook trout Golden trout Arctic grayling Bull trout	General Preservation	Put-and-grow with salmonid fry to provide variety of species in backcountry areas. Develop management strategies for each lake to maintain catch rates of 0.5 to 1.0 fish/hour. Reduce or cease stocking of lakes with natural reproduction. Emphasize use of westslope cutthroat trout in lakes that drain into the Selway and upper North Fork of the Clearwater River. Determine public acceptance to stocking in wilderness lakes. Closed to harvest.
White Sands Pond	/3	Coldwater	Rainbow trout	Put-and-take trout	Stock catchable rainbow trout to provide additional fishing opportunity in the Powell area.
Clearwater River from mouth to South Fork Clearwater River	75/	Mixed/ Anadromous	Steelhead Chinook salmon Rainbow trout Cutthroat trout Mountain whitefish Kokanee salmon Smallmouth bass Bull trout	Anadromous General Preservation	Maintain diversity of angling opportunity with catch-and-release regulations and no motors waters, and maximize returns of hatchery fish to anglers. Evaluate trout strains suited for large river habitat. Allow salvage fishery for kokanee salmon lost through Dworshak Dam when abundance warrants. Maintain warmwater fishery as conditions will allow. Promote winter mountain whitefish fishery. Closed to harvest.
Potlatch River and tributaries	55/	Mixed/ Anadromous	Steelhead Rainbow trout Brook trout Smallmouth bass	Anadromous General	Stock catchable rainbow where returns are adequate. Maintain warmwater fishery.
Lolo Creek and tributaries	86/	Coldwater/ Anadromous	Steelhead Chinook salmon Rainbow trout Cutthroat trout Mountain whitefish Brook trout	Anadromous General	Cooperate with Nez Perce Tribe in restoring anadromous fish populations. Promote reduction of brook trout population through liberal harvest regulations. Improve habitat quality.
Other mainstem Clearwater River tributaries	283/	Coldwater/ Anadromous	Steelhead Rainbow trout Mountain whitefish Brook trout	Anadromous Put-and-take trout	Maintain or improve present habitat. Stock catchable rainbow in some tributaries to maintain catch rate of 0.5 fish/hour and adequate returns to the creel.

Middle Fork Clearwater River (from South Fork to Selway-Lochsa confluence)	**23/**	**Coldwater/ Anadromous**	**Steelhead** **Chinook salmon** **Rainbow trout** **Cutthroat trout** **Mountain whitefish** **Bull trout**	**Anadromous** **General** **Preservation**	**Continue harvest opportunity for hatchery steelhead up to mouth of Clear Creek.** **Promote mountain whitefish fishery.** **Closed to harvest.**
Clear Creek and tributaries	**65/**	**Coldwater/ Anadromous**	**Chinook salmon** **Steelhead** **Rainbow trout** **Cutthroat trout** **Bull trout**	**Anadromous** **General** **Preservation**	**Develop guidelines to start releasing chinook salmon and steelhead adults above the Clear Creek weir for natural production.** **Maintain or improve habitat. Reestablish riparian vegetation to reduce water temperatures.** **Closed to harvest.**
Other Middle Fork tributaries	**32/**	**Coldwater/ Anadromous**	**Steelhead** **Rainbow trout** **Cutthroat trout** **Brook trout**	**Anadromous** **General**	**Maintain or improve present habitat for providing wild production at optimum potential.** **Reduce brook trout populations through liberal harvest regulations.**

DRAINAGE. ▸

Drainage: NORTH FORK CLEARWATER RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
North Fork from mouth to Dworshak Dam	1.4/	Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Maximize returns of hatchery steelhead to the anglers.
			Rainbow trout Mountain whitefish Kokanee salmon	General	Allow salvage fishery for kokanee salmon that are lost through the dam when abundance warrants.
Dworshak Reservoir (Dam to Grandad Bridge)	41/15,440	Mixed	Bull trout	Preservation	Closed to harvest.
			Kokanee salmon Rainbow trout Cutthroat trout Smallmouth bass Largemouth bass	General	Maintain a kokanee salmon population that will provide a 12-inch fish at a catch rate of 0.7 fish/hour. Stock catchable rainbow trout at boat ramps for winter fishery. Enhance smallmouth bass fishery through regulation.
Dworshak Reservoir (Grandad Bridge to end of slack water)	12/1,650	Mixed	Cutthroat trout	Wild trout	Trout limit restricted to protect cutthroat trout population.
			Rainbow trout Kokanee salmon Smallmouth bass	General	Enhance smallmouth bass fishery through regulations.
			Bull trout	Preservation	Closed to harvest.
Little North Fork Clearwater River and tributaries from mouth to Foehl Creek	61/	Coldwater	Bull trout	Preservation	Closed to harvest.
			Rainbow trout Kokanee salmon	Wild trout	Trout limit is restricted.
			Mountain whitefish Smallmouth bass	General	Enhance smallmouth bass fishery through regulation. Restrict season to general trout season.
Little North Fork Clearwater River and tributaries above and including Foehl Creek	56/	Coldwater	Rainbow trout Cutthroat trout Mountain whitefish	Wild trout	Maintain limited consumptive fishery supported by wild trout. Evaluate impacts of land management activities on habitat and fish populations. Strive to protect critical habitat and maintain low access fishing opportunity.
			Bull trout	Preservation	Closed to harvest.
Alpine lakes (15 in Little North Fork Clearwater River drainage)	/150	Coldwater	Cutthroat trout Rainbow trout Brook trout Golden trout Arctic grayling	General	Continue maintenance stocking of trout fry to provide fisheries that are consistent with lake productivity and angling pressure. Emphasize use of westslope cutthroat trout for stocking most lakes. Continue to survey lakes to improve management.

DRAINAGE. ▸

North Fork Clearwater River from slackwater in Dworshak Reservoir upstream	387/	Coldwater	Bull trout Rainbow trout Cutthroat trout Mountain whitefish Brook trout	Preservation Quality trout	Closed to harvest. Restrict trout harvest. Protect cutthroat trout. Encourage winter mountain whitefish fishery. Conduct intensive survey and angler census. Encourage harvest of brook trout.
Tributaries EXCEPT Kelly Creek		Coldwater	Kokanee salmon	Preservation	Maintain closure to protect spawning kokanee salmon.
Kelly Creek and tributaries	119/	Coldwater	Bull trout Cutthroat trout Rainbow trout Mountain whitefish Kokanee salmon	Preservation Quality trout Preservation	Closed to harvest. Quality wild trout water managed as catch-and-release. Support roadless status for remaining watershed to maintain or improve present habitat. Maintain closure to protect spawning kokanee salmon.

Drainage: SOUTH FORK CLEARWATER RIVER

Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
South Fork Clearwater River	65/	Mixed/ Anadromous	Steelhead Chinook salmon	Anadromous	Primary emphasis on hatchery steelhead spring fishery and summer fishery on residual steelhead smolts.
			Bull trout	Preservation	Closed to harvest.
			Mountain whitefish Rainbow trout Cutthroat trout	General	Winter fishery to harvest mountain whitefish population. Work with USFS to improve habitat. Conduct study to assess Pacific lamprey population.
Ten Mile Creek and tributaries	20/	Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Maintain or improve present habitat.
			Bull trout	Preservation	Closed to harvest.
			Rainbow trout Cutthroat trout Mountain whitefish	Wild trout	Manage for wild trout. Restrict harvest.
Johns Creek		Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Work with USFS to maintain habitat.
			Cutthroat trout Rainbow trout Mountain whitefish	Wild trout	Restrict harvest.
			Bull trout	Preservation	Closed to harvest.
Newsome Creek and tributaries	164/	Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Continue to release hatchery steelhead smolts. Maintain or improve habitat.
			Bull trout	Preservation	Closed to harvest.
			Rainbow trout Cutthroat trout Mountain whitefish	General	Maintain or improve habitat.
Red River and tributaries		Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Work with USFS to improve habitat.
			Bull trout	Preservation	Closed to harvest.
			Cutthroat trout Rainbow trout Brook trout	General	Work with USFS to improve habitat. Encourage brook trout harvest. Assess Pacific lamprey population status.

American River and tributaries		Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Work with USFS and BLM to improve habitat.
			Bull trout	Preservation	Closed to harvest.
			Cutthroat trout Rainbow trout	General	Work with USFS to improve habitat.
Crooked River and tributaries		Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Work with USFS to improve habitat.
			Bull trout	Preservation	Closed to harvest.
			Cutthroat trout Rainbow trout	Wild trout	Restrict trout harvest.
Five Mile Pond	1/	Coldwater	Rainbow trout	General	Rainbow trout put-and-take fishery.
Other South Fork Clearwater River tributaries	114/	Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Work with USFS to improve habitat.
			Bull trout	Preservation	Closed to harvest.
			Cutthroat trout Rainbow trout	General	Work with USFS to improve habitat. Maintain or improve present habitat.

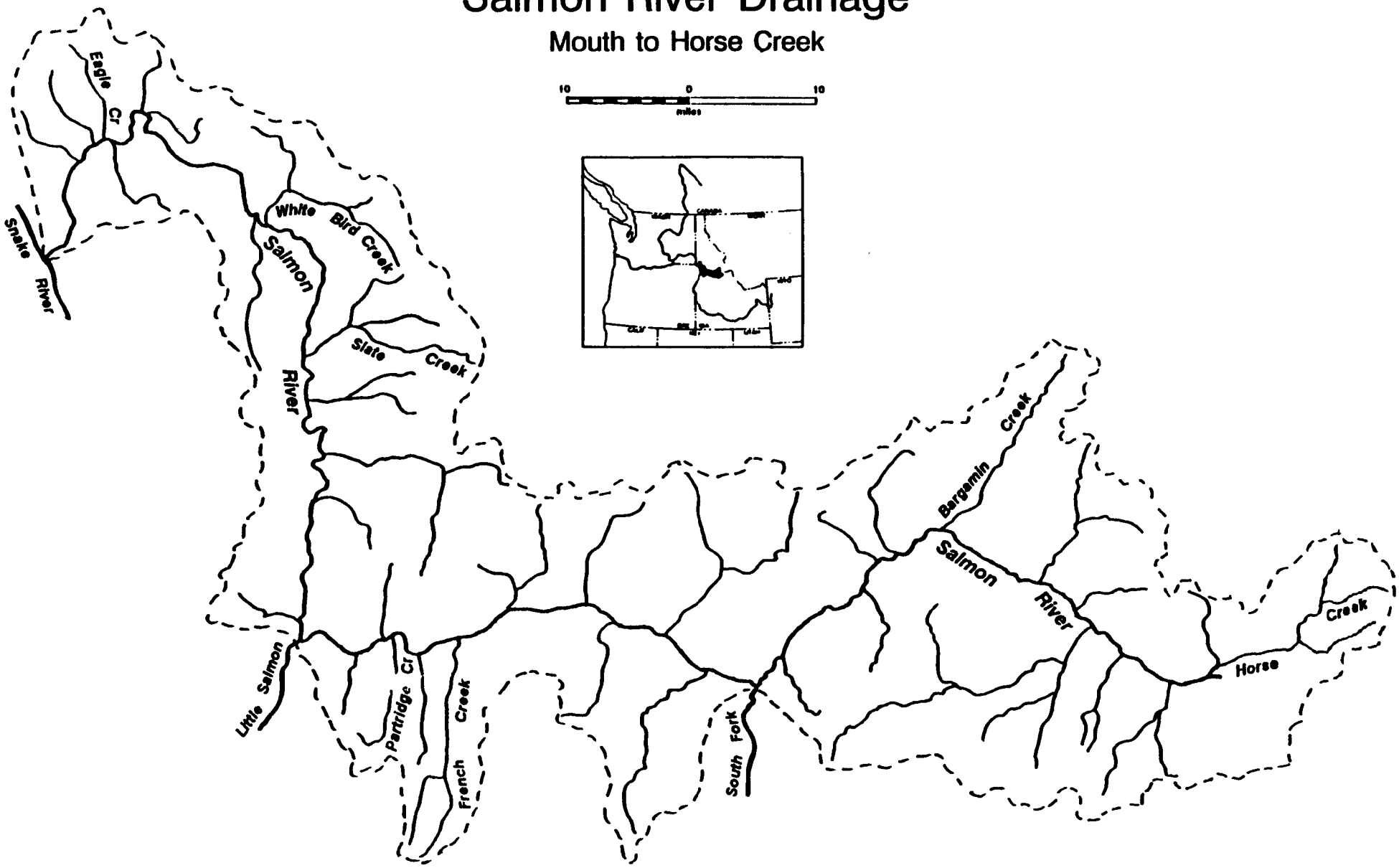
Drainage: LOCHSA RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Mainstem Lochsa River from mouth to Wilderness Gateway Bridge IMP 123)	217/	Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Maintenance of native/natural gene pool.
			Bull trout	Preservation	Closed to harvest.
			Cutthroat trout Rainbow trout Mountain whitefish	Quality	Restrict harvest of trout. Winter mountain whitefish fishery.
Lochsa River tributaries below Wilderness Gateway Bridge, including Fish Creek	261/	Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Maintain or improve present habitat. Support roadless status for remaining Fish Creek watershed to protect critical steelhead habitat.
			Bull trout	Preservation	Closed to harvest.
			Rainbow trout Cutthroat trout Mountain whitefish	Wild trout	Restrict trout harvest. July 1 fishing opener.
Wilderness Gateway Bridge to Crooked Fork Creek/White Sand Creek confluence and Crooked Fork Creek from mouth to Brushy Fork Creek	44/	Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Develop harvest strategy to utilize surplus Powell Pond hatchery chinook salmon.
			Cutthroat trout Rainbow trout Mountain whitefish	Quality	Quality wild trout water managed as catch-and-release. Maintain or improve present habitat.
			Bull trout	Preservation	Closed to harvest.
Lochsa River tributaries above Wilderness Gateway Bridge, including Crooked Fork Creek above Brushy Fork Creek		Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Protect and maintain habitat.
			Bull trout	Preservation	Closed to harvest.
			Cutthroat trout Rainbow trout Mountain whitefish	Quality	Quality wild trout water managed as catch-and-release. Maintain or improve present habitat. Restrict trout harvest. July 1 opener.
Alpine lakes		Coldwater	Cutthroat trout Rainbow trout	General	Continue maintenance stocking of trout fry in selected lakes to provide fisheries that are consistent with lake productivity and angling pressure. Emphasize westslope cutthroat trout for stocking. Continue lake surveys to determine user preferences and lake productivity.

Drainage: SELWAY RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Selway River and tributaries from mouth to Meadow Creek Bridge	20/	Coldwater/ Anadromous	Steelhead Chinook salmon	Preservation	Maintain native wild steelhead gene pool and do not release hatchery steelhead. Work with Nez Perce Tribe to evaluate sustainability of existing naturally-produced chinook salmon population and need for artificial production actions. Maintain or improve present habitat.
			Bull trout	Preservation	Closed to harvest.
			Rainbow trout Cutthroat trout Mountain whitefish	Quality	Restrict trout harvest.
Tributaries below Selway Falls		Coldwater/ Anadromous	Steelhead Chinook salmon	Preservation	Protect and improve habitat.
			Bull trout	Preservation	Closed to harvest.
			Cutthroat trout Rainbow trout	Wild trout	Restrict trout harvest. July 1 fishing opener.
Selway River from Selway Falls Bridge upstream	71/	Coldwater/ Anadromous	Steelhead	Preservation	Maintain native steelhead gene pool. No hatchery stocking.
			Chinook salmon	Anadromous	Work with Nez Perce Tribe to evaluate sustainability of existing naturally-produced chinook salmon population and need for artificial production.
			Bull trout	Preservation	Closed to harvest.
			Rainbow trout Cutthroat trout Mountain whitefish	Quality	Manage as catch-and-release trout fishery.
Alpine lakes		Coldwater	Cutthroat trout Rainbow trout	General	Continue maintenance stocking of trout fry to provide fisheries that are consistent with lake productivity and angling pressure. Emphasize use of westslope cutthroat trout for stocking. Continue surveys to determine user preferences and lake productivities.
Selway River tributaries above Meadow Creek Bridge		Coldwater/ Anadromous	Steelhead Chinook salmon	Preservation	Maintain native wild steelhead gene pool and do not release hatchery steelhead. Work with Nez Perce Tribe to evaluate sustainability of existing naturally-produced chinook salmon population and need for artificial production actions.
			Bull trout	Preservation	Closed to harvest.

			Cutthroat trout Rainbow trout Mountain whitefish	Wild trout	Restrict trout harvest. July 1 fishing opener.
Fenn Pond		Coldwater	Rainbow trout	General	Rainbow trout put-and-take fishery.

Salmon River Drainage

Mouth to Horse Creek



7. SALMON RIVER DRAINAGE - MOUTH TO HORSE CREEK A.

Overview

Horse Creek enters the Salmon River from the north side of the river 187 miles upstream from the confluence of the Salmon and Snake rivers. This reach of river is the migration corridor for spring and summer chinook, sockeye, and steelhead, as well as an overwintering area for adult steelhead and juvenile chinook and steelhead. It supports a myriad of recreational opportunities including rafting, jet **boating, and steelhead fishing. There is also fishing opportunity for rainbow trout,** cutthroat **trout, and smallmouth bass. Sturgeon and bull trout are present in this reach of the river. Portions of the Salmon River between the mouth and Horse Creek are protected by wilderness and wild river status. The upper segment drains parts of the Frank Church River of No Return and Gospel Hump Wilderness areas.**

The 53-mile section of river from the mouth to Hammer Creek is under consideration for classification in the Wild and Scenic Rivers System. This reach of river has limited access and provides for a quality steelhead fishing opportunity. White-water boating is increasing in popularity. The Central Idaho Wilderness Act of 1980 prohibits mining activity in this river stretch.

The section of river from Hammer Creek to Long Tom Bar is heavily accessed. Highway 95 parallels 30 miles of the river from Whitebird upstream to Riggins. The river from Riggins upstream to Long Tom Bar is bounded by a secondary road. Fall chinook salmon spawning has been documented in this river section in 1993 and 1994.

There are 74 miles of unroaded river between Long Tom Bar and Horse Creek. This section of Salmon River is commonly referred to as the Salmon River canyon. This reach of river has limited access and is classified "wild" under the Wild and Scenic Rivers System. It supports an expanding use of jet boat traffic directed toward fall and spring steelhead fishing. Most of the commercial fishing outfitter **services occur in this area.**

Downstream from Long Tom Bar, naturally-reproducing populations of chinook salmon exist in primarily Slate and Whitebird creeks. No chinook salmon have been stocked in the lower Salmon tributaries, except the Little **Salmon. (The** Little **Salmon River is discussed separately.) Spring chinook production in Slate and Whitebird creeks results from wild fish and perhaps strays from the Rapid River program.**

Many of the tributary streams in the Salmon River canyon are important producers of wild steelhead. These tributaries represent the largest and the only continguous production area for wild A-run steelhead trout in the Salmon River. Resident fisheries in these tributaries are supported primarily by wild juvenile steelhead trout. Chamberlain Creek also supports wild chinook salmon production. Most of these tributaries have good to excellent habitat.

Anadromous management action in this river section will emphasize maintaining existing natural spawning populations of chinook salmon and steelhead and preserving good habitat quality. Tributaries in the Salmon River canyon will continue to be managed for wild chinook salmon and steelhead trout production. Maintenance of the genetic resources contained in the wild populations in this river section will be a top priority. The mainstem Salmon River will continue to be managed for exploitation of hatchery steelhead trout, but consumptive harvest is not expected on naturally-produced steelhead or chinook salmon during the next five years. Wild adult steelhead trout will continue to provide opportunity for catch and release fishing.

There are no significant impoundments within the Salmon River drainage. The integrity of the drainage, including the diversity of fishing and recreational opportunity, is dependent on a free-flowing river. Legislation passed by Congress in 1989 prohibits the Federal Energy Regulatory Commission from issuing any licenses to develop new mainstem hydropower projects in the unprotected portions of the Salmon River. Congressional intent also includes federally-authorized projects.

B. Objectives and Programs

1. Objective: Maintain maximum potential for fishery and recreational values in the Salmon River from mouth to Horse Creek.

Program: Support inclusion of the lower 53-mile reach of the Salmon River from the mouth to Hammer Creek into the Wild and Scenic Rivers System to promote maximum protection of the river corridor.

Support a mineral withdrawal along the Salmon River corridor between Hammer and Vinegar creeks to ensure adequate riparian and water quality protection.

2. Objective: Maintain existing natural spawning populations of chinook salmon and steelhead.

Program: Allow natural production to sustain existing natural populations. Do not outplant hatchery steelhead trout and chinook salmon into the mainstem or tributaries, from French Creek upstream to the Middle Fork Salmon River, except the existing hatchery chinook program on the mainstem South Fork Salmon River, to preserve wild fish genetic resources. Limit hatchery outplanting in the rest of this section to support supplementation research and areas devoid of naturally-produced anadromous fish.

3. Objective: Minimize harvest impacts to naturally-produced chinook salmon and steelhead trout.

Program: Maintain fishing rules designed to avoid excessive harvest of juvenile steelhead trout and evaluate impact of consumptive harvest of wild steelhead smolts. Implement rule change if warranted.

4. **Objective: Maintain and improve habitat quality of tributary production areas.**

Program: Oppose land use activities that further degrade the quality of natural production areas. Encourage implementation of grazing management plans which eliminate negative grazing impacts to fishery productivity and survival.

5. **Objective: Increase fishing access.**

Program: Develop small outboard and float boat launch facilities where possible.

6. **Objective: Manage mountain lakes within productivity and user preference constraints of individual lakes.**

Program: Continue mountain lakes investigations in cooperation with USFS to collect biological, physical and chemical characteristics of each lake. Use acquired information to develop management plans.

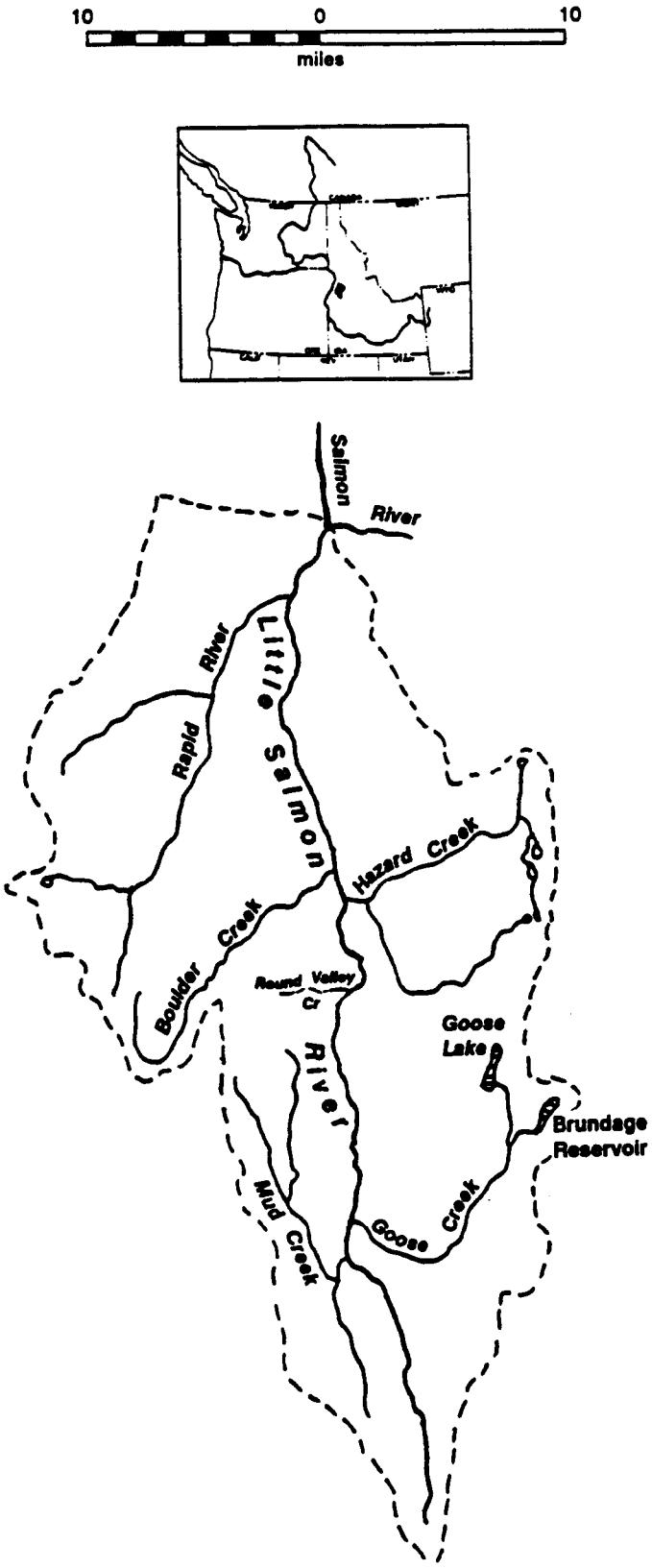
7. **Objective: Protect native cutthroat and bull trout from harvest by**

anglers. Program: Maintain no harvest fisheries for these species.

Drainage: SALMON RIVER - MOUTH TO HORSE CREEK					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
From mouth to Little Salmon River, including tributaries (except Little Salmon River)	365/	Mixed/ Anadromous	Steelhead	Anadromous	Enhance steelhead fishing opportunity with smolt releases into Salmon River and selected tributaries. Maximize harvest of surplus hatchery steelhead in the Salmon River.
			Chinook salmon	Presewation	Manage for natural production of spring chinook salmon. Work with Nez Perce Tribe to develop hatchery and natural production plans for Slate Creek.
			Bull trout	Preservation	Closed to harvest.
			Rainbow trout Cutthroat trout Mountain whitefish Smallmouth bass	General	Stock the mainstem with hatchery rainbow trout of an appropriate stock. Evaluate growth, condition, and return to the creel. Restrict harvest of cutthroat trout.
			White sturgeon	Preservation	Maintain sturgeon fishery as nonconsumptive. Evaluate need for further fishing restrictions to reduce hooking mortality.
White Bird Creek		Coldwater/ Anadromous	Steelhead Chinook salmon	Anadromous	Work with USFS to protect and improve habitat.
			Rainbow trout	Wild trout	Restrict trout harvest.
Tolo Lake	/20	Warmwater	Largemouth bass Rainbow trout	General	No motors water. Put-and-take trout fishery.
Grangeville Pond	/5	Coldwater	Brook trout	General	Develop public access to the pond.
From Little Salmon River to Horse Creek	366/	Mixed/ Anadromous	Chinook salmon	Preservation	Maintain salmon harvest closure to maximize production of wild chinook salmon.
			Steelhead	Anadromous	Enhance steelhead fishing opportunity with smolt releases into the Salmon River and selected tributaries. Improve angler access to the river. Support roadless status for the remaining Bargamin Creek watershed to protect critical steelhead spawning and rearing habitat.
			Bull trout	Preservation	Closed to harvest.
			Rainbow trout Cutthroat trout Mountain whitefish	Wild trout	Maintain or improve present habitat quality. Evaluate population status of cutthroat and bull trout and develop regulations to enhance fishery in the long term.

			Sturgeon Smallmouth bass	Preservation General	Maintain sturgeon fishery as nonconsumptive.
Tributaries from Little Salmon River to Horse Creek except those listed below		Coldwater/ Anadromous	Steelhead Chinook salmon Bull trout Cutthroat trout Rainbow trout	Preservation Preservation Wild trout	Maintain steelhead and chinook fishing closure. Closed to harvest. Restrict harvest of trout.
Partridge Creek		Coldwater/ Anadromous	Steelhead Chinook salmon Bull trout Rainbow trout Cutthroat trout Brook trout Mountain whitefish	Preservation Preservation Wild trout	Supplement with hatchery steelhead if no naturally-produced fish are present. Closed to harvest. Evaluate population status of wild salmonids.
French Creek		Coldwater/ Anadromous	Steelhead Chinook salmon Bull trout Rainbow trout Brook trout Cutthroat trout Mountain whitefish	Preservation Preservation Wild trout	Evaluate juvenile and smolt releases. Supplement with hatchery fish if no naturally-produced fish are present. Closed to harvest. Evaluate population status of wild salmonids.
Alpine lakes	/500	Coldwater	Rainbow trout Cutthroat trout Brook trout Arctic grayling Golden trout Rainbow x cutthroat hybrids Bull trout	General Preservation	Develop management strategies for each lake based on productivity and user preferences. Closed to harvest.

Little Salmon River Drainage



8. LITTLE SALMON RIVER DRAINAGE

A. Overview

The Little Salmon River heads in the Meadows Valley in Adams County and flows northward to its confluence with the Salmon River at Riggins. Major tributaries include Goose Creek, Hazard Creek, Boulder Creek, and Rapid River. Major lakes and reservoirs include Fish (Mud) Lake, Goose Lake, Brundage Reservoir, and Hazard Lake. The drainage area is 516 square miles and includes elevations from 1,760 feet msl at the mouth to 9,000 feet in the Seven Devils Mountains and Hazard Creek drainages. Discharge at Riggins **averages** 789 cfs with extremes of 54 cfs to 12,600 cfs recorded in the past 38 years.

Most of the **drainage** is forest lands, including wild and unroaded areas. There are 15,300 acres of irrigated agricultural lands, primarily hay meadows and pastures, in the drainage.

The Little Salmon River drainage from its mouth to and including Hazard Creek supports spring chinook salmon, steelhead, rainbow trout, cutthroat trout, bull trout, brook trout, mountain whitefish, and nongame species. Cascades prevent anadromous fish species from upstream migration beyond Round Valley Creek. Above Round Valley Creek, the Little Salmon River is a low gradient, meandering stream with high gradient tributaries.

The Rapid River **drainage** is extremely important to Idaho's **anadromous** fish **program.** Upper Rapid River is classified as wild and scenic, and this drainage provides essential, **good quality spawning and rearing habitat for bull trout, salmon, and steelhead to maintain natural production.** It **also supplies** high-quality water for Idaho Power Company's Rapid River Hatchery, which spawns and rears spring chinook. A **harvestable** surplus of hatchery adult spring chinook salmon return to Rapid River in most years. These fish are utilized for treaty and nontreaty fisheries. Anadromous management in the Little Salmon River drainage emphasizes hatchery production to provide spring chinook for harvest as the first priority. Rapid River Hatchery has also supplied eggs for a number of programs outside of the drainage, such as the **Clearwater** River.

The Little **Salmon** River **steelhead** smolt **release program** is designed to provide harvest opportunity on hatchery steelhead in the mainstem Salmon River near Riggins and in the Little Salmon. It is the only Salmon River tributary open during steelhead season.

The cascades passage barrier in the Little Salmon River at river mile 21 has been **considered** for removal in the Northwest Power Planning Council's Fish and Wildlife Program. However, **because** of the current emphasis on improving mainstem Snake and Columbia migrant survival rates and the need to improve water and riparian quality above the barrier, its removal will not be accomplished during this five-year period. Agencies should seek public input regarding anadromous and resident fish potentials and preference.

Fish Lake lies on a headwater tributary southeast of New Meadows. The Department owns the dam and most of the reservoir and has developed a broodstock of westslope cutthroat trout for egg-taking purposes. The westslope cutthroat is the native cutthroat for many Idaho waters, and egg availability is scarce. Fish Lake should produce 200,000 to 300,000 eggs annually.

Goose and Hazard lakes are very popular recreation areas and provide fishing opportunity in high elevation settings for many anglers.

B. Objectives and Proarams

1. Objective: Maximize harvest and harvest opportunity on hatchery-produced salmon and steelhead contingent upon achieving hatchery escapement needs.

Program: Continue **to evaluate** adult salmon **and steelhead** harvest **to develop seasons** that ensure hatchery **escapement needs are** met, minimize surplus fish into the hatchery, and maximize the catch. Continue to ad-clip hatchery **steelhead** and **chinook** and harvest only **marked** fish. Structure nontreaty chinook harvest to ensure anglers an **opportunity** to harvest their share of the run surplus.

2. Objective: Improve water quality and fish habitat upstream of the barriers near Round Valley Creek.

Program: Work with the landowners that participate in state and federal programs to improve grazing, irrigation, and farming practices and improve water quality.

Drainage: LITTLE SALMON RIVER					
Water	Miles/acre	Fishery			Management Direction
		Type	**Species Present**	Management	
Little Salmon River and tributaries, mouth to Round **Valley Creek (except Rapid River)**	104/	**Coldwater/ Anadromous**	**Chinook** salmon Steelhead	**Anadromous**	Allow for **required escapement** of spring **chinook** salmon to Rapid River Hatchery. Allow limited harvest of hatchery salmon should predictors so indicate. Monitor any harvest fishery closely through creel survey. Continue development and enhancement of terminal steelhead fishery through smolt **releases.** Release A and B type smolts to allow return of larger fish for anglers.
			Rainbow trout **Brook** trout Cutthroat trout Mountain whitefish	Wild trout	Enhance populations of wild trout by improving water quality throughout the **drainage. Provide** trout fishery on residualized **steelhead** smolts **and** limited plants at **campgrounds.**
			Bull trout	Preservation	Closed to harvest.
Rapid River and tributaries from mouth to headwaters	**35/**	**Coldwater/ Anadromous**	**Chinook** salmon **Steelhead** Bull trout	Preservation	**Enhance** spring **chinook** salmon returns to **Rapid** River trap and allow natural escapement to maximize seeding of spawning habitat. Allow for maximum steelhead escapement to seed the **drainage** to **optimal** potential.
			Rainbow trout Mountain whitefish	Wild trout	Maintain and improve existing habitat to sustain/enhance wild **salmonid** stocks.
Little Salmon River and tributaries from Round Valley **Creek to headwaters**	**89/**	Coldwater	**Rainbow** trout **Brook** trout Cutthroat trout	Wild trout	Assess current status of salmonid populations through direct sampling. **Pursue aggressive program of** habitat rehabilitation with **landowners** and federal/state agencies. Improve water quality **and riparian** vegetation throughout this river section. **Seek** public input **regarding desired** fishing opportunity.
			Bull trout	Preservation	Closed to harvest.
Fish (Mud) Lake	/30	Coldwater	Cutthroat trout	Preservation	Maintain system for broodstock rearing and egg-taking operation. No fishing permitted.
Brundage Reservoir	/270	Coldwater	**Rainbow** trout	Quality	Maintain quality trout fishery through annual supplementation with specific rainbow trout strains. Maintain catch rate of 1.0 fish/hour. Restrict harvest of fish between 12 and 20 inches.
Goose Lake	/520	Coldwater	**Rainbow** trout **Brook** trout Cutthroat trout	**General**	Experiment with specific rainbow and cutthroat trout strains to **improve** fishery. Supplement with catchable trout.

Hazard Lake	**/90**	**Coldwater**	**Brook trout** **Rainbow trout** **Cutthroat trout** **Rainbow x cutthroat hybrids** **Bull trout**	**General** **Preservation**	**Collect baseline fishery data to assess status of system. Develop improved trout fishery to enhance catch rates and sizes of fish. Augment Main Hazard Lake with catchable rainbow trout.** **Closed to harvest.**
Other alpine lakes (42)	**/1,000**	**Coldwater**	**Rainbow trout** **Cutthroat trout** **Golden trout** **Brook trout** **Arctic grayling** **Hybrid trout** **Bull trout**	**General** **Preservation**	**Maintenance stocking on a three-year rotational basis with salmonid fingerlings to provide species diversity. Collect baseline data on lakes in cooperation with USFS to improve fishing. Seek ways to rehabilitate or improve stunted brook trout lakes.** **Closed to harvest.**

Salmon River Drainage

South Fork

9. SOUTH FORK SALMON RIVER DRAINAGE

A. Overview

The South Fork Salmon River drainage lies in central Idaho in Valley and Idaho counties. The drainage flows northerly through the Idaho batholith and enters the Salmon River at Mackay Bar. Elevations vary from 9,280 feet msl at North Loon Mountain to 2,166 feet msl at the mouth.

The land is characterized by extreme changes in elevation and aspect within short distances. Topography varies from steep canyon lands to meadows. The Idaho batholith soils consist largely of weathered granitic sands and fines and are sensitive to disturbance. Precipitation **averages** 32 inches annually, with major storm events occurring about every ten years.

Resident fish species, including rainbow trout, cutthroat trout, bull trout, mountain whitefish, **brook** trout, **lake** trout, **kokanee,** and numerous **nongame** fish species, occupy 515 miles of streams and 37 lakes. They provide popular fisheries for many anglers.

Principal **tributaries to** the South Fork **Salmon** River **are** the **Secesh** River, the **East** Fork South Fork Salmon River and its tributary, Johnson Creek. Warm Lake is the largest lake, measuring **640** surface acres; **all** others **are alpine lakes** and **range** in size from 1 to 160 acres.

Anadromous fish **species** (chinook salmon, **steelhead) have** access to most of the drainage. Historically, the **steelhead** spawning run **exceeded** 3,000 fish. Current estimates are less than 800 spawners. The South Fork Salmon River historically **supported** the largest summer chinook run in the state of **Idaho. Salmon** fishing was a major economic resource in the South Fork Salmon River prior to 1965, when anglers **harvested** 1,700-4,000 salmon annually. **Steelhead** anglers **harvested** 750-800 fish per year. These runs **have dwindled considerably** since then, and run sizes **are about** one-tenth of their former **abundance.** The **seasons were** closed in **1965** for chinook and **1968** for **steelhead** and **have** not **been reopened.** The **decrease** in numbers of South Fork Salmon River **chinook** and **steelhead were** caused by two major problems: (1) logging and road construction activities created unstable soil conditions in the South Fork Salmon River that have damaged the aquatic habitat, and (2) serious fish passage problems and increased mortality were caused by construction of hydroelectric dams on the lower Snake and Columbia rivers.

The South Fork Salmon River is one of only three drainages in Idaho that supports populations of wild, native **steelhead.** These fish **are predominantly** large steelhead which spend two or three years in the ocean, compared to the smaller A-run steelhead which inhabit much of the rest of the Salmon River drainage. Preservation of this native gene pool is a high priority.

FMPNRTVS

DRAINAGE.2

Hatchery production of summer chinook began at McCall Fish Hatchery in 1980 as part of the mitigation for lower Snake River dams. However, no hatchery summer chinook have been outplanted into the Secesh River in order to preserve the native gene pool.

Resident fish species were also seriously impacted by aquatic habitat degradation. Additionally, cutthroat trout and bull trout have been reduced from their former abundance by overharvest largely due to improved access to the area.

B. Objectives and Programs

1. Objective: Preserve genetic integrity of wild, native steelhead and summer chinook.

Program: Do not outplant any hatchery steelhead into the South Fork Salmon River or hatchery summer chinook into the Secesh. Manage hatchery-supplemented Salmon River steelhead and spring chinook stocks to minimize straying into the South Fork Salmon River. Minimize straying of South Fork Salmon River hatchery summer chinook into the Secesh.

2. Objective: Maintain existing natural spawning populations of salmon and steelhead.

Program: Allow natural production to sustain existing naturally-produced populations. Limit outplanting of hatchery summer chinook, other than direct hatchery releases, to support supplementation research. Modify weir management to sustain natural populations of summer chinook.

3. Objective: Maintain and improve habitat quality of mainstem and tributary production areas.

Program: Oppose land use activities that further degrade the quality of natural production areas. Participate in land management plan reviews. Encourage implementation of land management programs which eliminate negative impacts to fishery productivity and survival. Participate in interagency mining oversight committees to review operating plans and work with regulatory agencies to require strict compliance with mining laws to protect water quality and fish populations. Develop monitoring programs for fish populations and fish habitat. Continue to monitor and evaluate benefits from habitat projects.

4. Objective: Preserve genetic integrity of wild, native cutthroat and bull trout. Also, increase population size.

Program: Maintain "no harvest" fisheries on these species.

FMPNRTVS

DRAINAGE.2

5. Objective: Provide a harvest opportunity on hatchery rainbow trout in the Yellow Pine, Idaho area.

   Program: Participate in a community effort to construct a pond for a put and take fishery.

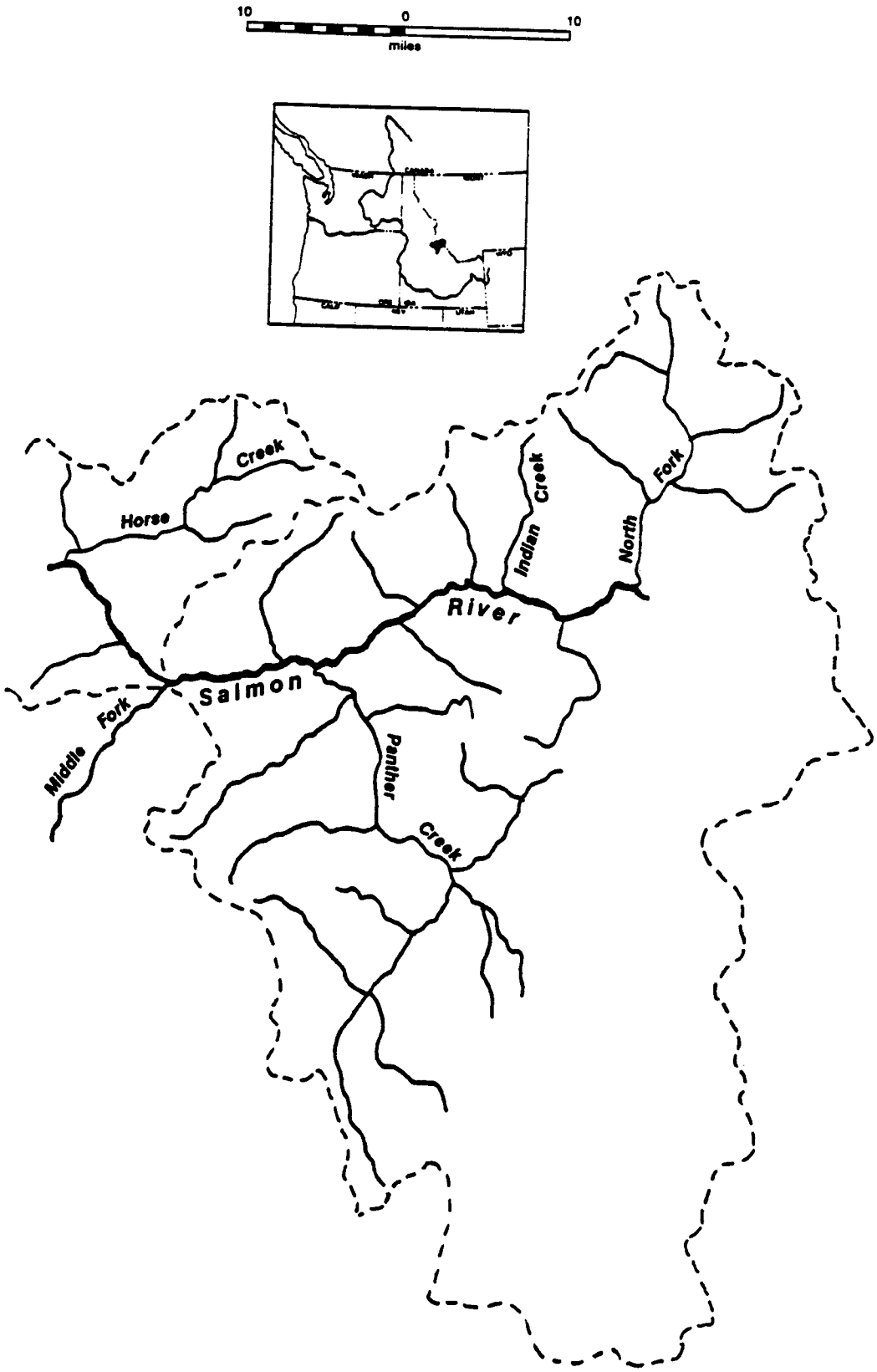
   Program: Provide signing that discourages harvest of **steelhead** parr and identifies nearby harvest opportunities.

Drainage: SOUTH FORK SALMON RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
South Fork from mouth to Secesh River, including tributaries	162/	Coldwater/ Anadromous	Chinook salmon Steelhead Bull trout	Preservation	Restore maximum escapement of summer chinook salmon returning to hatchery trap and historic spawning areas. Improve aquatic habitat by discouraging activities which may degrade the environment further. Continue aggressive vigilance of proposed mining and roading activities. Increase steelhead runs to tributary and historic spawning areas. Bull trout closed to harvest.
			Cutthroat trout Rainbow trout Mountain whitefish	Wild trout	Enhance populations of wild trout through continued restrictive regulations. Evaluate hatchery supplementation with appropriate cutthroat stock.
South Fork from Secesh River to headwaters	120/	Coldwater/ Anadromous	Chinook salmon Steelhead Bull trout	Preservation	Bypass one-third of summer chinook salmon captured at South Fork trap to naturally seed Stolle Meadows spawning area. Increase steelhead runs returning to historic spawning areas.
			Cutthroat trout Rainbow trout Mountain whitefish	Wild trout	Enhance populations of wild trout through continued restrictive regulations and possible introductions from wild broodstock.
Secesh River and tributaries	93/	Coldwater/ Anadromous	Chinook salmon Steelhead	Preservation	Increase anadromous fish runs returning to Secesh Meadows and Lake Creek to historic levels. Preserve wild characteristics of anadromous populations. Continue aggressive stance against habitat degradation. Obtain conservation easement in Burgdorf Meadow.
			Cutthroat trout Bull trout	Preservation	Enhance populations of wild trout through continued restrictive regulations.
			Rainbow trout Brook trout Mountain whitefish	Wild trout	
East Fork South Fork Salmon River and tributaries (excluding Johnson Creek and tributaries)	86/	Coldwater/ Anadromous	Chinook salmon Steelhead	Preservation	Increase anadromous runs to historic spawning areas. Continue aggressive stance against habitat degradation.
			Cutthroat trout Bull trout	Preservation	Enhance populations of wild trout through continued restrictive regulations and possible introduction from wild broodstock.
			Rainbow trout Brook trout Mountain whitefish	Wild trout	Provide catchable rainbow trout fishing opportunity by participating in a pond construction project near Yellow Pine.

Johnson Creek and tributaries	**54/**	**Coldwater/ Anadromous**	**Chinook salmon** **Steelhead** **Cutthroat trout** **Bull trout** **Brook trout** **Rainbow trout** **Mountain whitefish**	**Preservation** **Preservation** **Wild trout**	**Increase anadromous fish runs to mainstem and tributary spawning areas. Monitor proposed road reconstruction to avoid habitat degradation.** **Enhance populations of wild trout through continued restrictive regulations and possible wild broodstock introductions.**
Warm Lake	**/640**	**Coldwater**	**Rainbow trout** **Lake trout** **Brook trout** **Kokanee salmon** **Bull trout**	**General** **Preservation**	**Maintain current catchable rainbow trout stocking. Improve fishing success by educating anglers on where, when, and how to catch fish.** **Closed to harvest.**
Alpine lakes (36 in South Fork Salmon River drainage)	**/890**	**Coldwater**	**Rainbow trout** **Brook trout** **Cutthroat trout** **Arctic grayling**	**General/Trophy**	**Maintenance stocking with salmonid fry on a three-year rotation. Plant only westslope cutthroat strain to reduce competition! hybridization with native cutthroat. Develop trophy lakes that have shown exceptional growth potential. Provide diverse opportunity for species and sizes. Collect baseline information on stocking success in cooperation with Forest Service.**

Salmon River Drainage

Horse Creek to North Fork



DRAINAGE.2

10. SALMON RIVER DRAINAGE - HORSE CREEK TO NORTH FORK A.

Overview

The Salmon River drainage includes 14,100 square miles and flows 410 miles from its headwaters in Blaine County in south central Idaho to its confluence with the Snake River in Idaho County in northwestern Idaho. Upstream from the confluence of the Middle Fork, the Salmon River is lower gradient and it flows through open canyon and broad valleys. The portion from Horse Creek to North Fork is 50 miles long and is located entirely within Lemhi County. There is only a trail along the river from Horse Creek upstream to Corn Creek, and a road along the river for 46 miles from Corn Creek to the North Fork. There is a boat ramp at Corn Creek which receives heavy use from floaters during the summer months and jet **boaters** during the fall **and** spring **steelhead seasons. Boats are the** primary **mode of** access **below** Corn Creek.

The Salmon River is listed under the Wild and Scenic Rivers Act. From Vinegar Creek (near Riggins) to Corn Creek, the river is classified as "wild," and from Corn Creek to the North Fork, it is classified as **"recreational."**

From Horse Creek to the North Fork, the Salmon River has a long history of mining activity. Logging is also an important industry within this area. Gold was discovered near Shoup in 1881 and a mining town quickly developed. Cobalt is a mining community on Panther Creek that once had a population of more than 500 people when the Blackbird Mine was operational.

With declines in mining and logging activity, recreation has emerged as the largest industry. Fishing, and particularly steelhead fishing, is an important recreational activity in this area. Wild and natural steelhead migrate to this area in the early fall and overwinter prior to resuming their spawning migration in the spring. Since wild and hatchery stocks intermingle and wild stocks are consistently underescaped, harvest occurs on hatchery fish only (identified by adipose fin clips). The mainstem Salmon River will continue to be managed for exploitation of hatchery steelhead, but consumptive harvest is not expected on naturally-produced steelhead or chinook during the next five years. Naturally-produced steelhead will continue to provide opportunity for catch-and-release fishing in the Salmon River.

The Panther Creek **drainage** contains nearly 100 miles of streams and reportedly supported chinook runs of 2,000 spawners in addition to substantial runs of steelhead. Although **habitat** is in **good** condition, by the **late** 1960s, **anadromous** fish runs had declined due to poor water quality as a result of mine effluents. Little or no salmon or steelhead currently use Panther Creek for spawning or rearing. There are continuing efforts by the State of Idaho to secure funds to improve the water quality in this drainage.

The North Fork drainage contains about 60 miles of stream, some of which has been impacted by a variety of land-use activities such as mining and logging. It currently

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supports chinook and steelhead spawning and rearing. Other smaller tributaries to the main Salmon, such as Indian, Colson, and Pine creeks, primarily support steelhead spawning and rearing.

Small numbers of white sturgeon inhabit the river downstream from Horse Creek and may be present upstream. Limited habitat is available and, historically, sturgeon were present at least as far upstream as Salmon.

Westslope cutthroat trout emigrate from the Middle Fork Salmon River to overwinter in this portion of the Salmon River.

Despite secondary roading in many of the tributary drainages, low to moderate fishing effort is expended for resident trout species in these areas. Also, resident trout populations are low in the main river during the summer months and, consequently, low to moderate fishing effort is expended during this period.

B. Objectives and Programs

1. Objective: Maintain existing natural spawning populations of salmon and steelhead.

   Program: Allow natural production to sustain existing naturally-produced populations. Increase enforcement efforts to ensure compliance with differential harvest regulations to protect wild steelhead. Do not outplant hatchery steelhead and salmon into the mainstem or tributaries, from Horse Creek upstream to the Middle Fork Salmon River, to preserve wild fish genetic resources. Other areas devoid of naturally-produced salmon and steelhead would also be considered for outplanting hatchery fish.

2. Objective: Maintain and improve habitat quality of tributary production areas.

   Program: Oppose land use activities that further degrade the quality of natural production areas. Participate in allotment management plan review. Encourage implementation of grazing management plans which eliminate negative grazing impacts to fishery productivity and survival. Participate in interagency mining oversight committees to review operating plans and work with regulatory agencies to require strict compliance with mining laws to protect water quality and fish populations. Develop monitoring programs for fish populations and fish habitat relative to mining activities, if needed. Implement rehabilitation measures for Panther Creek drainage.

3. Objective: Correct passage problems (culverts and falls) which restrict anadromous fish access to spawning tributaries.

Program: Cooperate with USFS in constructing fish **passage** improvement structures for culverts and improving passage around falls and high gradient areas. Identify and screen or repair irrigation diversions where needed.

4. Objective: Improve the quality of resident trout fishing in the mainstem Salmon River during the summer months.

   Program: Consider implementation of a protective fishery rule on cutthroat trout

concentrated in cold water refuges near tributary streams.

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Drainage: SALMON RIVER - HORSE CREEK TO NORTH FORK					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
From Horse Creek to North Fork	50/	Coldwater/ Anadromous	Wild/natural steelhead Chinook salmon	Preservation	Maintain harvest closure until MFSR and upper Salmon River escapement goals are met.
			Hatchery steelhead	Anadromous	Provide maximum yield of fish surplus to escapement goals.
			Cutthroat trout	Preservation	Maintain harvest closure to protect MFSR cutthroat which migrate to and overwinter in this area.
			Rainbow trout Mountain whitefish	General	Limited yield fishery during summer.
			Bull trout	Preservation	Closed to harvest.
Tributaries between Horse Creek and North Fork	150/	Coldwater/ Anadromous	Rainbow trout Cutthroat trout Brook trout	General	Provide yield fishery supported by natural production.
			Steelhead Chinook salmon Bull trout	Preservation	Maintain harvest closure in spawning tributaries.
Horse Creek	19/	Coldwater/ Anadromous	Rainbow trout Cutthroat trout Mountain whitefish	Wild trout	Naturally-supported yield fishery. Access restricted to trail or boat.
			Steelhead Chinook salmon Bull trout	Preservation	Maintain harvest closure. No hatchery supplementation. Important spawning/rearing tributary for wild A-strain steelhead.
North Fork Salmon River	22/	Coldwater/ Anadromous	Rainbow trout Cutthroat trout Brook trout	General	Limited yield fishery.
			Steelhead Chinook salmon Bull trout	Preservation	Maintain harvest closure.
Alpine lakes	/233	Coldwater	Rainbow trout Cutthroat trout	General	Aerial stock selected lakes with fry on a three-year rotational basis. Collect baseline data on lakes in cooperation with Forest Service.
Anderson Pond	/3	Coldwater	Rainbow trout	Put-and-take trout	Put-and-take fishery for catchable sized hatchery rainbow trout.

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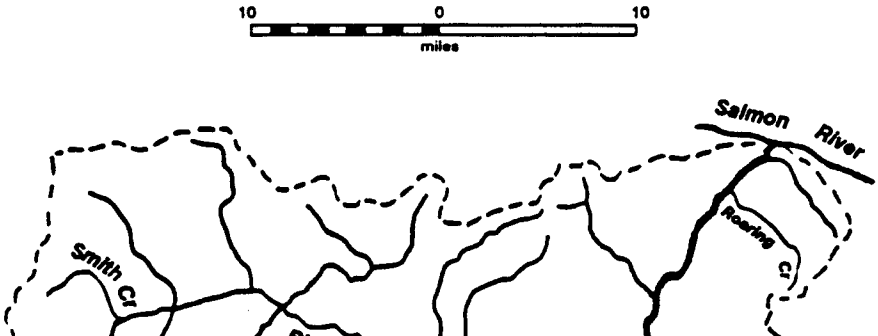
Salmon River Drainage

Middle Fork



11. MIDDLE FORK SALMON RIVER DRAINAGE A.

Overview

The Middle Fork Salmon River drains 2,830 square miles of central Idaho. The main river is classified as wild as part of the Wild and Scenic Rivers System, and most of the drainage is within the Frank Church River of No Return Wilderness Area. Prior to classification as wilderness, the Middle Fork Salmon River drainage was included in the Idaho Primitive Area.

The topography in the Middle Fork Salmon River drainage is extremely rugged and remote. Road access is limited to a single point on the main river at Dagger Falls and secondary roads to the upper ends of a few tributary streams. The principal means of access are aircraft, boat, and trail.

Except for some alpine lakes and a few small streams, the Middle Fork Salmon River drainage contains only native species and fish stocks that have evolved there. Historically, a significant portion of the chinook salmon and steelhead in the Salmon River drainage spawned and reared in the Middle Fork Salmon River and tributaries.

Anadromous species include wild, indigenous spring and summer chinook salmon and summer steelhead. The Middle Fork Salmon River is one of only three drainages in the Columbia Basin that supports a population of wild steelhead classified as B-run because they are predominantly large fish which spend two or three years in the ocean. Renewed efforts began in 1990 to collect fork length information to better characterize Middle Fork Salmon River steelhead populations. Both the chinook and steelhead of the Middle Fork Salmon River are adapted to the long migration distances necessary for their perpetuation. Preservation of the indigenous gene pools is a high priority, as is rebuilding these runs. The key component to meeting this objective is improved Columbia and Snake River migration survival.

Although the Middle Fork Salmon River supported a major chinook fishery, with annual harvest exceeding 2,000 fish in the late 1960s, nontreaty harvest has not been allowed for salmon and steelhead since 1978 because of very low run sizes. Middle Fork Salmon River steelhead are caught incidentally during fisheries in the mainstem Salmon River which target hatchery steelhead where they provide an exceptional catch-and-release opportunity for trophy class wild steelhead. Although harvest opportunity is not expected for salmon or steelhead in the Middle Fork Salmon River in the next five years, the long-term goal is to provide low yield, quality fisheries on these native species. This goal is achievable only if improved juvenile migration survival through the Snake and Columbia hydroelectric system is attained.

Native, resident game species include bull trout, cutthroat trout, and mountain whitefish. The Middle Fork Salmon River cutthroat trout population has recently been identified as a pure westslope strain and unique to any other westslope strain yet identified throughout the current range.

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There are no major dams in the Middle Fork drainage, and many of the streams are in pristine condition. Some tributary streams have been, and are being, altered by mining activity. Major mining sites and their access roads were not included in the wilderness area. Other tributaries are impacted by grazing allotments that cause streambank and riparian vegetation damage.

B. <u>Objectives and Programs</u>

1. Objective: Preserve genetic integrity of wild native salmon, steelhead, and trout.

Program: No hatchery fish will be stocked in the stream environments.

Program: Manage hatchery supplemented Salmon River anadromous stocks to minimize straying into the Middle Fork Salmon River.

Program: Continue to work with other state and federal agencies to improve juvenile downstream and adult upstream passage to and from the Middle Fork Salmon River.

2. Objective: Manage resident fisheries for low angler density fishing experiences and high catch rates and fish size.

Program: Develop or maintain fishing rules that maximize high catch rates.

Program: Employ multi-agency bull trout conservation strategy to protect bull trout.

Program: Maintain cutthroat harvest restrictions in the main Salmon River to protect adults which emigrate there to overwinter.

3. Objective: Maintain and improve habitat and water quality of key tributary fish production areas.

Program: Work with Forest Service and permittees to improve riparian area vegetation.

Program: Reduce instream sediment where sediment is limiting fish production.

Program: Identify and screen irrigation diversions where needed.

Program: Continue to monitor fish benefits from habitat enhancement projects.

Program: Participate in interagency mining oversight committees to review operating plans and work with regulatory agencies to require strict compliance with mining laws to protect water quality and fish populations. Develop

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monitoring programs for fish populations and fish habitat relative to mining activities, if needed.

Program: Participate in grazing allotment management plan reviews. Encourage implementation of grazing management plans which eliminate negative grazing impacts to fish production.

4. Objective: Maximize recruitment of westslope cutthroat trout to the main river from tributaries.

Program: Continue restrictive rules in tributaries. Continue monitoring fish densities by snorkeling. Expand the angler education program to provide information about brook trout and whitefish consumption.

5. Objective: Re-establish anadromous runs to the numbers necessary to fully utilize available spawning and rearing habitat.

Program: Continue to work with other state and federal agencies to improve juvenile downstream and adult upstream passage to and from the Middle Fork Salmon River. Regulate the Idaho anadromous sport harvest to maximize Middle Fork Salmon River escapement.

6. Objective: Develop methodologies for making accurate estimates of anadromous spawning escapement to the Middle Fork Salmon River.

Program: Work with other agencies to initiate research aimed at making chinook and steelhead escapement estimates to the Middle Fork Salmon River. Continue parr density monitoring and redd counts.

Drainage: MIDDLE FORK SALMON RIVER

Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
From mouth to Roaring Creek	4/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout	Preservation	Preservation of wild stocks. Provide catch-and-release opportunity.
			Steelhead Chinook salmon	Preservation	Preservation of wild stocks. Fall closure to protect wild steelhead holding in lower Middle Fork.
			Mountain whitefish	General	Maximize yield during period open for other species.
From Roaring Creek to Boundary Creek including all tributaries except Camas and Loon creeks	92/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout Bull trout	Preservation	Catch-and-release for all species except allow general harvest on mountain whitefish. Provide high catch rates and an old age population structure.
			Steelhead Chinook salmon	Preservation	Closed to harvest of adult chinook salmon and steelhead to protect wild stocks. Maximize yields of mountain whitefish during period open for other species.
			Mountain whitefish	General	
From Boundary Creek to Dagger Creek	1/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout Bull trout Mountain whitefish Chinook salmon Steelhead	Preservation	Maintain closure to prevent harassment and mortality of fish concentrated below falls.
From Dagger Creek upstream to headwaters (including Bear Valley, Capehorn, and Marsh creeks)	36/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout	Special	Reduced bag limit to provide harvest opportunity and protect trout populations. Provide high catch rates and an old age population structure.
			Mountain whitefish Brook trout	General	
			Steelhead Chinook salmon Bull trout	Preservation	Preservation of wild stocks.
Big Creek from mouth to headwaters and tributaries	45/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout Brook trout Bull trout Mountain whitefish	Quality	Catch-and-release for all species except allow general harvest on mountain whitefish and brook trout. Provide high catch rates and a natural population structure.
			Chinook salmon Steelhead	Preservation	Maintain harvest closure to preserve wild runs of anadromous salmonids.

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Camas Creek	24/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout Mountain whitefish Chinook salmon Steelhead Bull trout	Preservation Preservation	Catch-and-release for all species in the mainstem and allow minimal harvest opportunity in tributaries. Maximize yields of mountain whitefish during period open for other species. Closed to harvest to protect wild stocks.
Loon Creek	25/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout Mountain whitefish Chinook salmon Steelhead Bull trout	Preservation Preservation	Catch-and-release for all species in the mainstem and allow minimal harvest opportunity in tributaries. Maximize yields of mountain whitefish during period open for other species. Closed to harvest to protect wild stocks.
Tributaries downstream from Boundary Creek (except Camas and Loon creeks)	200/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout Brook trout Mountain whitefish Steelhead Chinook salmon Bull trout	Quality Preservation	Catch-and-release for all species except allow general harvest on mountain whitefish and brook trout. Provide high catch rates and a natural population structure. Maintain harvest closure to preserve wild runs of salmonids.
Capehorn, Beaver, and Knapp creeks	28/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout Brook trout Mountain whitefish Chinook salmon Steelhead Bull trout	Wild trout Preservation	Naturally supported fishery. Closed to harvest of adult chinook salmon, steelhead, and bull trout to protect wild stocks.
Marsh Creek from mouth to Capehorn Creek	4/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout Brook trout Mountain whitefish Steelhead Chinook salmon Bull trout	Quality Preservation	Maintain catch-and-release to provide high maximized catch rates and quality size and protect MFSR broodstock. Closed to harvest of adult chinook salmon, steelhead, and bull trout to protect wild stocks.

Marsh Creek from Capehorn Creek upstream	4/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout Brook trout Mountain whitefish Steelhead Chinook salmon Bull trout	Wild trout Preservation	Naturally supported fishery with special closure to protect spawning chinook salmon. Closed to harvest of adult chinook salmon, steelhead, and bull trout to protect wild stocks.
Bear Valley Creek		Coldwater/ Anadromous	Cutthroat trout Steelhead Chinook salmon Bull trout	Quality Preservation	Maintain catch-and-release regulation. Provide quality fishing experience for cutthroat. Establish riparian vegetation objective. Closed to harvest of adult chinook salmon, steelhead, and bull trout to protect wild stocks.
Josephus Lake	/7	Coldwater	Rainbow trout Cutthroat trout	General	Stock with catchable rainbow trout.
Yellowjacket Lake	/5	Coldwater	Rainbow trout	General	Stock with catchable rainbow trout.
Capehorn lakes	/44	Coldwater	Rainbow trout Brook trout	General	Capehorn #2 (middle lake) stocked with catchable rainbow trout to provide fishery for scout camp. Large (upper) lake provides a brook trout fishery.
Alpine lakes	/2,000	Coldwater	Cutthroat trout Rainbow trout Golden trout Brook trout Arctic grayling Bull trout	General Preservation	Provide diversity of angling opportunity. Popular lakes with no brook trout, no reproduction, and low potential for winter kill are stocked with fry from a helicopter on a three-year rotational basis. Stock no rainbow and only westslope subspecies of cutthroat trout to avoid genetic dilution of MFSR stocks. Continue evaluating success of program at popular lakes. Reduce or eliminate stocking in lakes with natural reproduction. Enhance fisheries in stunted brook trout lakes through renovation or introduction of predators. Closed to harvest.

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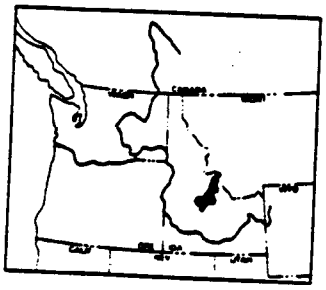
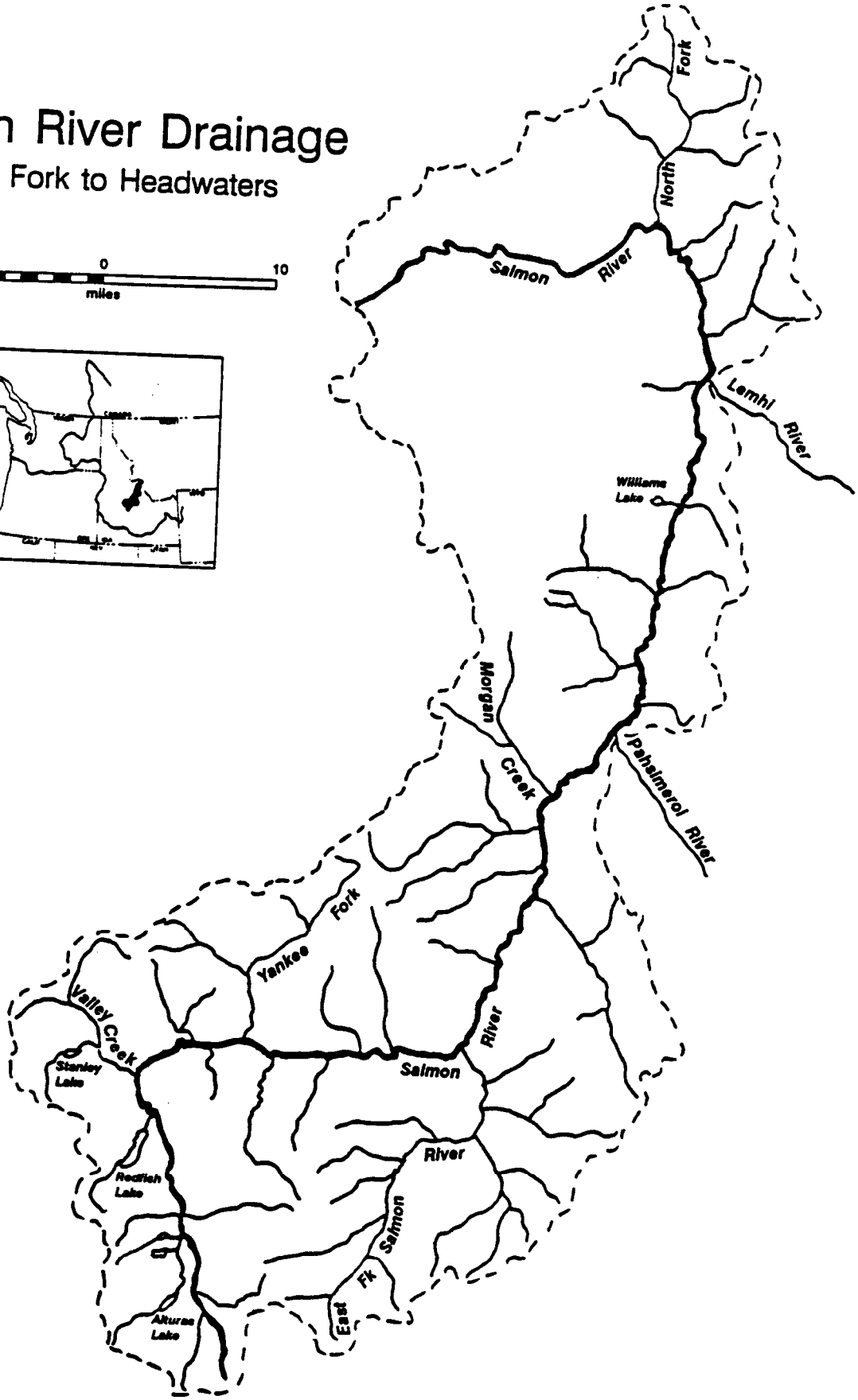
Salmon River Drainage

North Fork to Headwaters





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12. SALMON RIVER - NORTH FORK TO HEADWATERS

A. Overview

The portion of the Salmon River between North Fork and the headwaters is 173 miles long and drains **approximately** 6,000 square miles. Highways 93 and 75 border the entire stretch of river. The **headwaters** area, upstream from Thompson Creek, is within the Sawtooth National **Recreation** Area, which is administered by the USFS. Major tributaries include the Lemhi, Pahsimeroi, East Fork Salmon, and Yankee Fork Salmon rivers, which are reported separately following this section.

The **drainage** is **characterized** by mountainous terrain bisected by **river valleys. Major mountain ranges include the Bitterroot Range along the Idaho/Montana border; the Lemhi Range, southwest** of the Lemhi River; the Lost River Range, southwest of **the Pahsimeroi River; the White Cloud Peaks, east of the upper Salmon River; and the Sawtooth Range within the Sawtooth Wilderness, west of the upper Salmon River. Numerous lakes with roaded access in the Stanley area provide significant recreational opportunity. They include Stanley, Redfish, Little Redfish, Yellowbelly, Pettit, Alturas, and Perkins lakes. Also, hundreds of lakes within the Sawtooth Wilderness and White Cloud Peaks areas provide fishing opportunity in a secluded, wilderness setting for backpacking enthusiasts. Salmon, Challis, and Stanley are the only population centers in the upper Salmon River drainage. Logging, mining, ranching, and recreation are the major industries in the area.**

Many recreationists are attracted to the scenic beauty and recreational opportunities of the Sawtooth National Recreation Area. The granitic watershed yields few nutrients to the upper Salmon River and the large moraine lakes. Sterile waters and a short growing season render the lakes and streams incapable of producing the fish necessary for **a large** consumptive harvest. **Therefore, approximately** 117,000 **hatchery rainbow trout are stocked into popular waters in the upper Salmon River drainage. Early in the season the fishery is primarily supported** by non-migrating **hatchery steelhead** smolts.

Anadromous management action in the Salmon River from North Fork to the headwaters will emphasize maintaining existing natural spawning populations of chinook and steelhead and preserving good habitat quality. The mainstem Salmon River will continue to be managed for exploitation of hatchery steelhead, but consumptive harvest is not expected on naturally produced steelhead or chinook during the next five years. The reach of Salmon River from the East Fork to Yankee Fork contains good habitat for mainstem spawning chinook. Many of the Salmon River headwater tributaries are meandering meadow streams in a subalpine valley which are critical spawning and rearing areas for spring chinook.

At one time, significant runs of sockeye salmon returned to spawn along the shorelines and inlets of the large Stanley Basin lakes. In 1910, Sunbeam Dam was constructed across the Salmon River, just upstream from Yankee Fork. Fish passage was improbable until a fish ladder was completed in 1920. Even then, fish passage was

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very limited. In 1934, the dam was breached and unimpeded fish passage was restored. Sockeye runs continued at remnant levels but declined steadily. In 1994, trapping on Redfish Lake Creek captured only 1 adult fish. Redfish Lake, and possibly Alturas, are the only Stanley Basin lakes that support sockeye production. Both Redfish and Alturas lakes support kokanee populations. Investigation will be continuing into sockeye and kokanee interaction and enhancement in these lakes.

Broodstock for hatchery steelhead stocked into this portion of the river are trapped in two places. A-run steelhead are trapped at Idaho Power Company's Pahsimeroi Hatchery and Sawtooth Hatchery, a Lower Snake River Compensation Project facility. Eggs are reared at steelhead hatcheries in the Hagerman Valley and smolts are trucked back to the upper Salmon River.

B. Objectives and Proarams

1. **Objective: Maintain existing natural spawning populations of salmon and steelhead.**

   Program: Allow natural production to sustain existing naturally produced populations. Limit outplanting of hatchery fish, other than direct hatchery releases, to support supplementation research and areas devoid of naturally producing populations of salmon and steelhead. Modify weir management to sustain and rebuild natural populations. Continue intensive smolt monitoring research to gain natural production and survival information.

2. **Objective: Increase access and facilities for steelhead and salmon anglers.**

   Program: Acquire additional public fishing access with purchases or easements, develop boat launches, parking sites, and sanitation facilities.

3. **Objective: Improve the quality of resident trout fishing in the mainstem Salmon River during the summer months.**

   Program: Implement protective fishing regulations on cutthroat and rainbow trout.

4. **Objective: Examine feasibility of reestablishing sockeye runs to historic areas.**

   Program: Cooperate with and support efforts by other agencies to protect and enhance sockeye runs. Evaluate benefits and feasibility of lake fertilization to enhance kokanee/sockeye production.

5. **Objective: Maintain and improve habitat quality of mainstem and tributary production areas.**

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Program: Encourage land management activities that further improve the quality of natural production areas. Participate in allotment management plan review. Encourage implementation of grazing management plans which eliminate negative grazing impacts to fishery productivity and survival. Participate in interagency mining oversight committees to review operating plans and work with regulatory agencies to require strict compliance with mining laws to protect water quality and fish populations. Develop monitoring programs for fish populations and fish habitat relative to mining activities, if needed. Continue to monitor and evaluate benefits from habitat projects.

6. Objective: Provide fishing opportunity for wild trout in streams.

Program: Transplant westslope cutthroat **trout into the Salmon River and tributaries above Hell Roaring Creek.**

7. Objective: Continue improving efficiency of catchable stocking in the Stanley area.

Program: Maintain high stocking frequency in heavily used areas between Hell Roaring Creek and Rough Creek bridge.

8. Objective: Improve anadromous juvenile and adult fish passage in the Salmon River.

Program: Work with Sawtooth National Recreation Area to alleviate passage problems in main river and tributaries due to irrigation diversions and dewatering. Identify and screen irrigation diversions, or repair screens, as needed.

Drainage: SALMON RIVER - NORTH FORK TO HEADWATERS					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
From North Fork to East Fork	106/	Coldwater/ Anadromous	Rainbow trout	Quality	Provide yield fishery for naturally-produced trout.
			Mountain whitefish	General	Maximize mountain whitefish yield.
			Wild/natural steelhead Bull trout Cutthroat trout Chinook salmon	Preservation	Maintain harvest closure.
			Hatchery steelhead	Anadromous	Provide maximum yield of fish surplus to escapement goals.
From East Fork to Sawtooth Fish Hatchery	41/	Coldwater/ Anadromous	Wild/natural rainbow	Quality	Maintain put-and-take fishery to support intensive effort during summer months. Fishery augmented by natural production and releases of steelhead smolts from Sawtooth Hatchery.
			Hatchery rainbow trout Mountain whitefish	General	Maximize mountain whitefish yield. Maintain closure adjacent to hatchery.
			Wild/natural steelhead Bull trout Cutthroat trout Chinook salmon	Preservation	Maintain harvest closure.
			Hatchery steelhead	Anadromous	Provide maximum yield of fish surplus to escapement goals. Trap sufficient numbers of hatchery steelhead to provide for production needs. Continue to release adult chinook salmon and steelhead returning to Sawtooth Fish Hatchery above the weir for natural production.
From Sawtooth Fish Hatchery to Hell Roaring Creek	8/	Coldwater/ Anadromous	Rainbow trout	Put-and-take trout	Maintain put-and-take fishery to support intensive effort during summer months. Fishery augmented by natural production.
			Mountain whitefish	General	Maximize mountain whitefish yield.
			Steelhead Chinook salmon Bull trout Cutthroat trout	Preservation	Maintain harvest closure.
From Hell Roaring Creek to headwaters	17/	Coldwater/ Anadromous	Rainbow trout Brook trout Mountain whitefish	Quality	Manage for reduced yield and natural production.

			Steelhead Chinook salmon Bull trout Cutthroat trout	Preservation	Maintain harvest closure. Improve passage past irrigation ditches. Reestablish westslope cutthroat trout.
Tributaries between North Fork and headwaters (excluding Lemhi, Pahsimeroi, East Fork, Yankee Fork rivers and Valley Creek)	466/	Coldwater/ Anadromous	Rainbow trout Cutthroat trout Brook trout Mountain whitefish Chinook salmon Steelhead Bull trout	General Preservation	Reestablish westslope cutthroat trout that provide yield fishery for naturally-produced trout. Maximize mountain whitefish yield.
Valley Creek from mouth to Valley Creek Road Bridge	1/	Coldwater/ Anadromous	Rainbow trout Steelhead Chinook salmon Bull trout	Put-and-take trout Preservation	Provide put-and-take fishery.
Valley Creek from Valley Creek Road Bridge to headwaters, including tributaries	20/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout Brook trout Steelhead Chinook salmon Bull trout	Special Preservation	Catch and release to reestablish westslope cutthroat trout.
Alturas Lake Creek (upstream from Alturas Lake)	7/	Coldwater/ Anadromous	Cutthroat trout Rainbow trout Bull trout Brook trout	Preservation	Closure to protect spawning bull trout and kokanee.
Lake Creek upstream from Williams Lake	5/	Coldwater	Rainbow trout	General Special closure	Maintain spring closure to protect rainbow spawners.
Williams Lake	/228	Coldwater	Rainbow trout Bull trout	General Preservation	Yield fishery supported by natural production. Develop plan for aeration. Closed to harvest.
Wallace Lake	/10	Coldwater	Rainbow trout	Put-and-take trout	Stock hatchery rainbow of catchable size to provide put-and-take fishery.
Iron Lake	/18	Coldwater	Rainbow trout	Put-and-take trout	Stock hatchery rainbow of catchable size to provide put-and-take fishery.
Mosquito Flat Reservoir	/37	Coldwater	Rainbow trout Brook trout	Put-and-take trout Put-grow-take trout	Stock hatchery rainbow to provide fishery.
Bayhorse lakes	/22	Coldwater	Rainbow trout	Put-and-take trout	Stock hatchery rainbow of catchable size to provide put-and-take fishery.

Stanley Lake	/182	Coldwater/ Anadromous	Rainbow trout Brook trout Lake trout Kokanee salmon	General	Continue stocking catchable rainbow trout. Discontinue stocking of lake trout. Provide yield fishery.
Little Redfish Lake	/65	Coldwater	Rainbow trout Kokanee salmon Bull trout	General Preservation	Yield fishery provided by catchable rainbow trout with some natural production. Closed to harvest.
Redfish Lake	/1,502	Coldwater/ Anadromous	Rainbow trout Kokanee salmon Sockeye salmon Bull trout	General Preservation	Reduce kokanee population. Support efforts to reestablish sockeye population. Hatchery supplementation and lake fertilization.
Yellowbelly Lake	/188	Coldwater	Cutthroat trout Brook trout Rainbow trout	Preservation General	Develop westslope cutthroat trout broodstock. Manage as a catch and release fishery. Allow harvest of brook trout and rainbow trout.
Pettit Lake	/389	Coldwater	Rainbow trout Brook trout Cutthroat trout	General	Provide yield fishery with catchable rainbow trout and some natural production.
Elk Lake	/10	Coldwater	Cutthroat trout	Trophy	Catch and release trophy westslope cutthroat fishery.
Valley Creek lakes 1 and 2	/20	Coldwater	Cutthroat trout	Trophy	Catch and release trophy westslope cutthroat fishery.
Alturas Lake	/838	Coldwater/ Anadromous	Rainbow trout Kokanee salmon Sockeye salmon Bull trout	General Preservation	Provide yield fishery with catchable rainbow trout and some natural production. Support efforts to reestablish sockeye salmon population.
Perkins Lake	/51	Coldwater	Rainbow trout Mountain whitefish Bull trout	General Preservation	Provide yield fishery with catchable rainbow trout and some natural production. Closed to harvest.
Alpine lakes	/5,000	Coldwater	Rainbow trout Cutthroat trout Golden trout Brook trout Arctic grayling	General	Provide diversity of angling opportunity. Provide yield fisheries in lakes where effort is relatively low and access is restricted to trails. Aerial stock fry in selected lakes every three years. Begin evaluating program. Reduce or eliminate stocking in lakes with natural reproduction.

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Lemhi River Drainage

13. LEMHI RIVER DRAINAGE

A. Overview

The Lemhi River flows 56 miles from the confluence of Texas and Eighteen-mile creeks to the Salmon River at river mile 258.5 at the city of Salmon. The river drains approximately 1,290 square miles and flows through a broad valley of fertile agricultural land between the **Bitterroot** and Lemhi mountain ranges. The valley includes more than 25,000 acres of land irrigated for hay production and grazing. The principal form of irrigation is flooding from an extensive system of ditches. All major ditches are screened and have bypass systems to prevent fish losses. The river is **overappropriated** for irrigation and is dewatered in the lower reach during low flow years which **impedes** adult and juvenile salmon **and steelhead** migration.

The drainage supports runs of both salmon and steelhead. The amount of spawning habitat has been reduced by stream alterations but is still significant, particularly in the upper reaches.

Hatchery chinook have not been outplanted into this drainage in large numbers since 1982. The population has sustained itself through natural production. Steelhead were outplanted annually through the 1980s. Over the next five years, anadromous management action in the Lemhi will emphasize maintaining existing natural spawning populations of chinook and steelhead.

Native resident trout include rainbow, cutthroat, and bull trout. Brook trout are present in limited numbers.

B. Objectives and Proarams

1. Objective: Maintain existing natural spawning **populations** of salmon and **steelhead.**

Program: Allow natural production to sustain existing naturally-producing **populations.** Limit **outplanting of hatchery fish to support supplementation research and areas devoid of naturally-producing populations of salmon and steelhead.**

2. Objective: Improve angler access to the Lemhi River.

Program: Negotiate with landowners to establish fishing by permission, easements, or purchases.

3. Objective: **Improve** flows in lower river during **peak irrigation season.**

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Program: Investigate methods such as improved irrigation delivery systems, ditch consolidations, permanent head gates, stream channel improvements, etc.

4. Objective: Minimize loss of juvenile salmon and steelhead to irrigation diversions on streams.

Program: Continue evaluation of the current screening program.

Program: Accelerate replacement of old wiper screens with new roller drum screens. Install screens in remaining unscreened ditches, particularly in the Hayden Creek drainage.

5. **Objective: Improve** resident trout **population** structure.

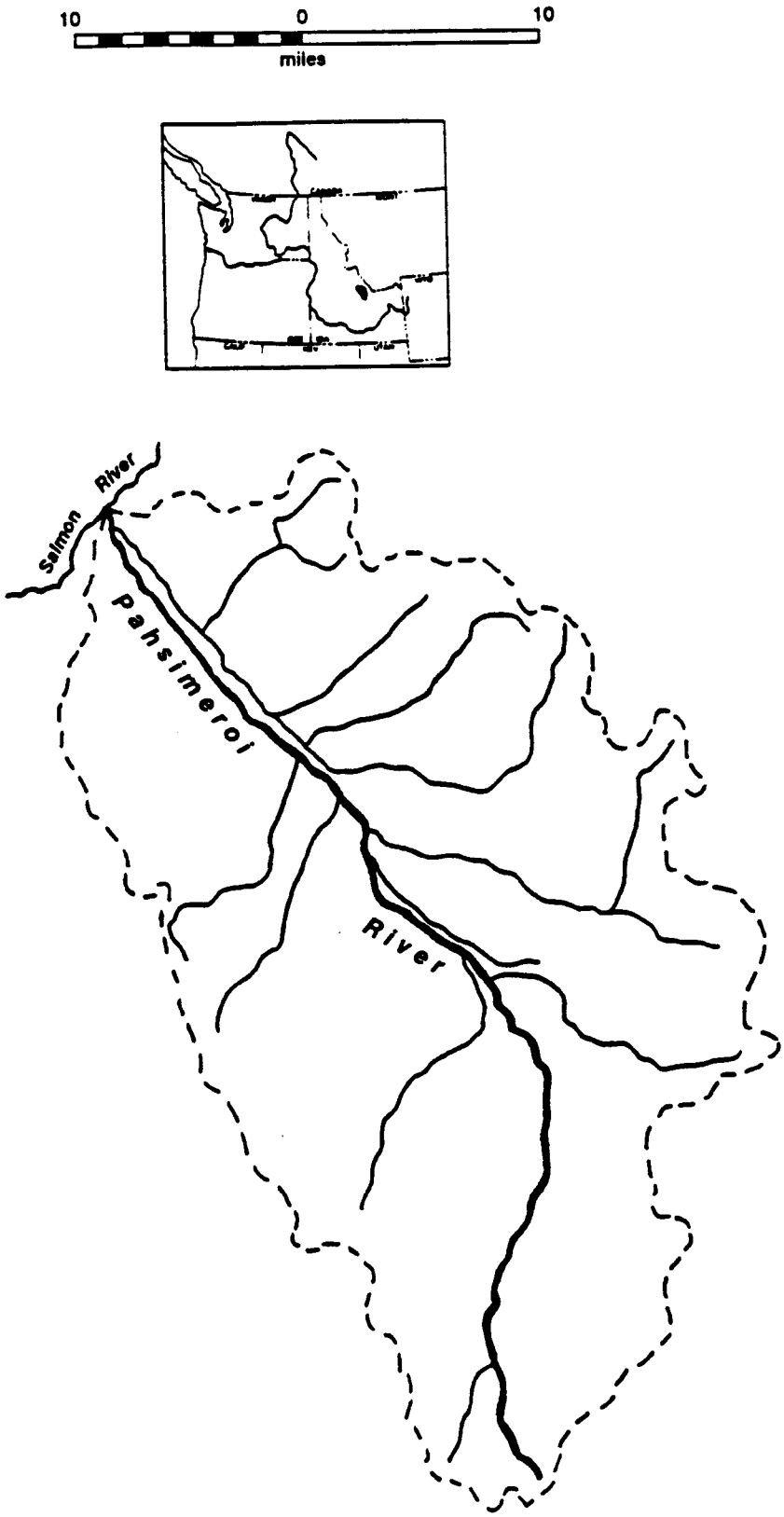
Program: Implement a 14-inch minimum length restriction on rainbow trout and no harvest on cutthroat trout. Through the model watershed project, proceed with riparian fencing to **provide streambank** stability in critical **areas** to protect and **enhance** spawning and rearing **areas** and ultimately improve **temperature** regimes.

FMPNRTVS

DRAINAGE.2

Drainage: LEMHI RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Lemhi River	558/	Coldwater/ Anadromous	Rainbow trout Brook trout Mountain whitefish Steelhead Chinook salmon Bull trout Cutthroat trout	Quality General Preservation	Provide yield fishery for naturally-produced trout (14-inch minimum). Maximize mountain whitefish yield. Maintain harvest closure.
Lemhi River tributaries	420/	Coldwater	Rainbow trout Cutthroat trout Bull trout	General Preservation	Limited yield fishery on natural fish.
Meadow Lake	/12	Coldwater	Rainbow trout	General	Provide put-and-take fishery.
Alpine lakes	/421	Coldwater	Rainbow trout Cutthroat trout Brook trout Arctic grayling	General	Provide a diversity of angling opportunity. Aerial stock selected lakes with fry on a three-year rotational basis. Collect baseline data on lakes in cooperation with USFS.

Pahsimeroi River Drainage



14. PAHSIMEROI RIVER DRAINAGE

A. Overview

The Pahsimeroi River flows 49 miles from the confluence of the East and West Forks to the Salmon River at river mile 304. The drainage is approximately 845 square miles. Similar to the Lemhi River, the Pahsimeroi Valley is mostly under private ownership and heavily irrigated (particularly in the lower drainage) for hay and grazing. All major tributaries are dewatered in the lower reaches during the irrigation season and are inaccessible to chinook for spawning.

The Pahsimeroi Valley lies between the Lemhi and Lost River mountain ranges. Water **percolates** through the **broad,** pervious alluvial fan in the **upper** valley and enters the river through ground water and springs lower in the valley. Therefore, productivity in the river is higher than most streams in the upper Salmon River drainage.

A hatchery on the Pahsimeroi River, owned and funded by Idaho Power Company and **operated** by the Department, traps and rears summer chinook salmon and also traps A-run **steelhead** which **are reared** at fish hatcheries in the Hagerman Valley. The hatchery was constructed and is **operated** as mitigation for lost **anadromous** production from the Hells Canyon Dam complex. The adult steelhead returning to the Pahsimeroi Hatchery contribute significantly to the steelhead fishery in the upper Salmon River.

Anadromous **management** action in the **Pahsimeroi** River will **emphasize maintaining existing natural spawning populations of chinook and steelhead.**

Resident fish species include rainbow trout, brook trout, bull trout, whitefish, and cutthroat trout. Trout densities have declined consistently over the past 10 years.

B. Objectives and Proarams

1. Objective: Maintain existing natural spawning **populations** of salmon and **steelhead.**

Program: Allow natural production to sustain existing, naturally-producing populations. Limit outplanting of hatchery fish, other than direct hatchery

releases, to support **supplementation** research and **areas** devoid of naturally-producing salmon and **steelhead.** Modify weir **management** to sustain natural populations.

2. Objective: Improve angler access to the Pahsimeroi River.

Program: **Negotiate** with landowners to establish fishing by permission, easements or purchases.

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3. **Objective: Minimize loss of juvenile salmon and steelhead to irrigation diversions on streams.**

   Program: Continue to upgrade existing screens and install screens in remaining unscreened ditches.

4. **Objective: Improve resident trout population structure.**

   Program: Implement 14-inch minimum length restriction on rainbow trout and no harvest on cutthroat trout. Through model watershed project, proceed with riparian fencing to provide streambank stability in critical areas to protect and enhance spawning and rearing areas and ultimately improve temperature

regimes.

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Drainage: PAHSIMEROI RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Pahsimeroi River	276/	Coldwater/ Anadromous	Rainbow trout	Quality	Provide yield fishery for naturally-produced trout (14-inch minimum).
			Brook trout Mountain whitefish	General	Maximize mountain whitefish yield.
			Steelhead Chinook salmon Bull trout Cutthroat trout	Preservation	Maintain harvest closure to protect spawning fish. Trap sufficient numbers of hatchery chinook salmon and steelhead for production programs.
Pahsimeroi River tributaries	227/	Coldwater	Rainbow trout Cutthroat trout Mountain whitefish	General	Limited yield fishery for naturally-produced fish.
			Bull trout	Preservation	

DRAINAGE.2

Salmon River Drainage

East Fork

15. EAST FORK SALMON RIVER DRAINAGE

A. Overview

The East Fork Salmon River flows 33 miles from the confluence of the South and West forks before entering the Salmon River at river mile 343. The drainage area is 540 square miles and includes the White Cloud Peaks to the west and the Boulder Mountains to the south. Water supply and quality in the upper drainage is excellent for fish spawning and rearing. In the lower drainage, the river bisects a zone of volcanic soils which are highly erosive. Lack of vegetative cover and livestock grazing in the riparian zone result in substantial sediment loads to the river, particularly during spring runoff.

The drainage supports runs of spring and summer chinook salmon and steelhead trout. The East Fork is one of the most important tributaries for salmon spawning and rearing in the upper Salmon River drainage. A trapping facility, constructed at approximately river mile 18 in 1984, collects steelhead as part of the Sawtooth Hatchery operation. Hatchery steelhead in this drainage are B-run fish originally from Dworshak National Fish Hatchery.

B. Objectives and Proarams

1. Objective: Maintain existing natural spawning populations of salmon and steelhead.

   Program: Allow natural production to sustain existing, naturally-produced populations. Limit outplanting of hatchery fish, other than direct hatchery **releases,** to **support** supplementation **research and areas** devoid of naturally-producing populations of salmon and steelhead. Modify weir management to sustain natural populations.

2. Objective: Maintain and improve fish habitat and water quality.

   Program: **Encourage** land use activities that improve the quality of natural production **areas.** Participate in allotment management plan review. Work with landowners, the **Shoshone-Bannock** Tribes, and land management agencies to improve grazing practices, fence riparian areas, and take other actions to reduce erosion and eliminate negative grazing impacts to fishery productivity and survival.

3. **Objective: Improve anadromous juvenile and adult fish passage in the Salmon River.**

Program: Work with landowners to alleviate passage problems due to irrigation diversions. Identify and screen irrigation diversions, or repair screens, as

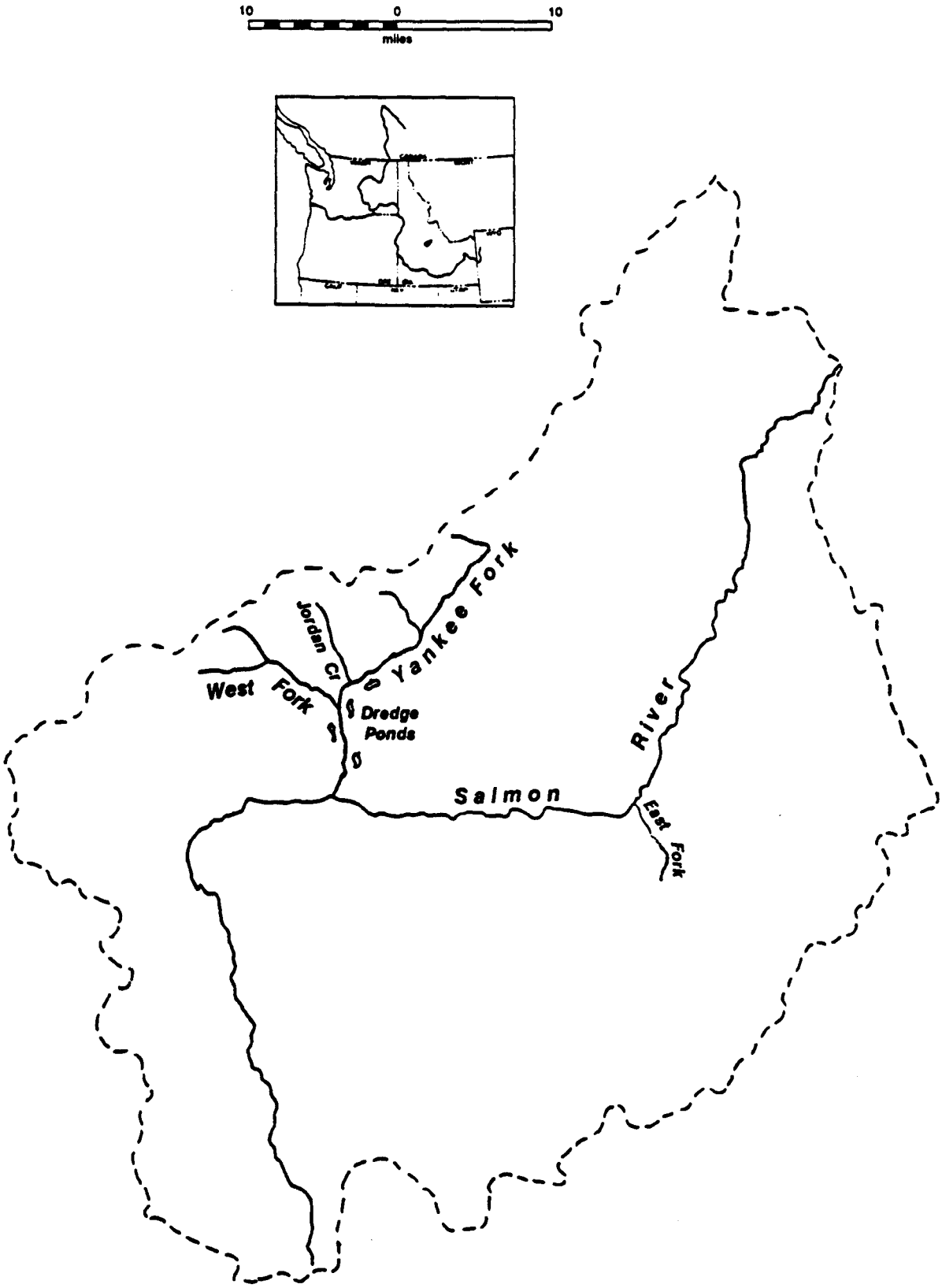
needed.

FMPNRTVS

Drainage: EAST FORK SALMON	RIVER				
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
East Fork Salmon River	33/	Coldwater/ Anadromous	Rainbow trout Mountain whitefish Cutthroat trout Steelhead Chinook salmon Bull trout	Wild trout General Preservation	Provide limited yield fishery for naturally-produced trout. Maintain total seasonal fishery closure to protect chinook salmon spawners. Maintain harvest closure to protect spawning fish.
Jimmy Smith Lake	/62	Coldwater	Rainbow trout	General	Provide yield fishery supported by natural production.
Herd Lake	/30	Coldwater	Rainbow trout	General	Provide yield fishery supported by natural production.
East Fork tributaries	199/	Coldwater	Rainbow trout Cutthroat trout Bull trout	General Preservation	Limited yield fishery.

Salmon River Drainage

Yankee Fork



DRAINAGE.2

16. YANKEE FORK SALMON RIVER DRAINAGE

A. Overview

The Yankee Fork Salmon River flows 26 miles from its headwaters to the Salmon River at river mile 367.1. The drainage area is 195 square miles. Soils are primarily Idaho Batholith granitics which produce infertile streams.

Gold was discovered in the drainage in 1873, and the towns of Custer and Bonanza **developed** into thriving mining communities along the banks of the Yankee Fork. Until the late 1930s, gold was extracted by placer mining. In 1938, a large dredge was constructed and operated from 1939-1942 by the Silas Mason Company. After World War II, the dredge was reactivated and operated until 1952. It was estimated that $ 1 1 million worth of gold was extracted (at market values effective at the time of mining) from approximately eight miles of Yankee Fork and Jordan Creek. Mining activity continues today throughout the drainage and particularly in the Jordan Creek drainage.

Secondary roads **border** the entire length of Jordan Creek and the **Yankee** Fork upstream to McKay Creek. The lower West Fork is accessible by road, and the remainder of the stream is **bordered** by a trail.

Despite the extensive mining, **Yankee** Fork continues to support runs of chinook salmon and steelhead. **Shoshone-Bannock** Tribal biologists **have been** augmenting the chinook population with hatchery juvenile **releases** from selected dredge ponds. Hatchery steelhead **have also been** outplanted into this **drainage.** Resident **species** include rainbow trout, bull trout, and cutthroat trout. The dredge ponds are stocked with catchable rainbow trout during the summer months.

B. Objectives and Proorams

1. Objective: Preservation of chinook and steelhead by harvest closures.

   Program: Coordinate efforts with **Shoshone-Bannock** Tribes to protect existing chinook salmon spawners.

2. Objective: Maintain and improve fish habitat and water quality.

   Program: Reduce impacts of mining activity to fish populations and habitat by continuing to work with agencies such as the U.S. Forest Service and Department of Water Resources, mining companies, and private consultants to provide adequate protective measures in licensing and permitting agreements.

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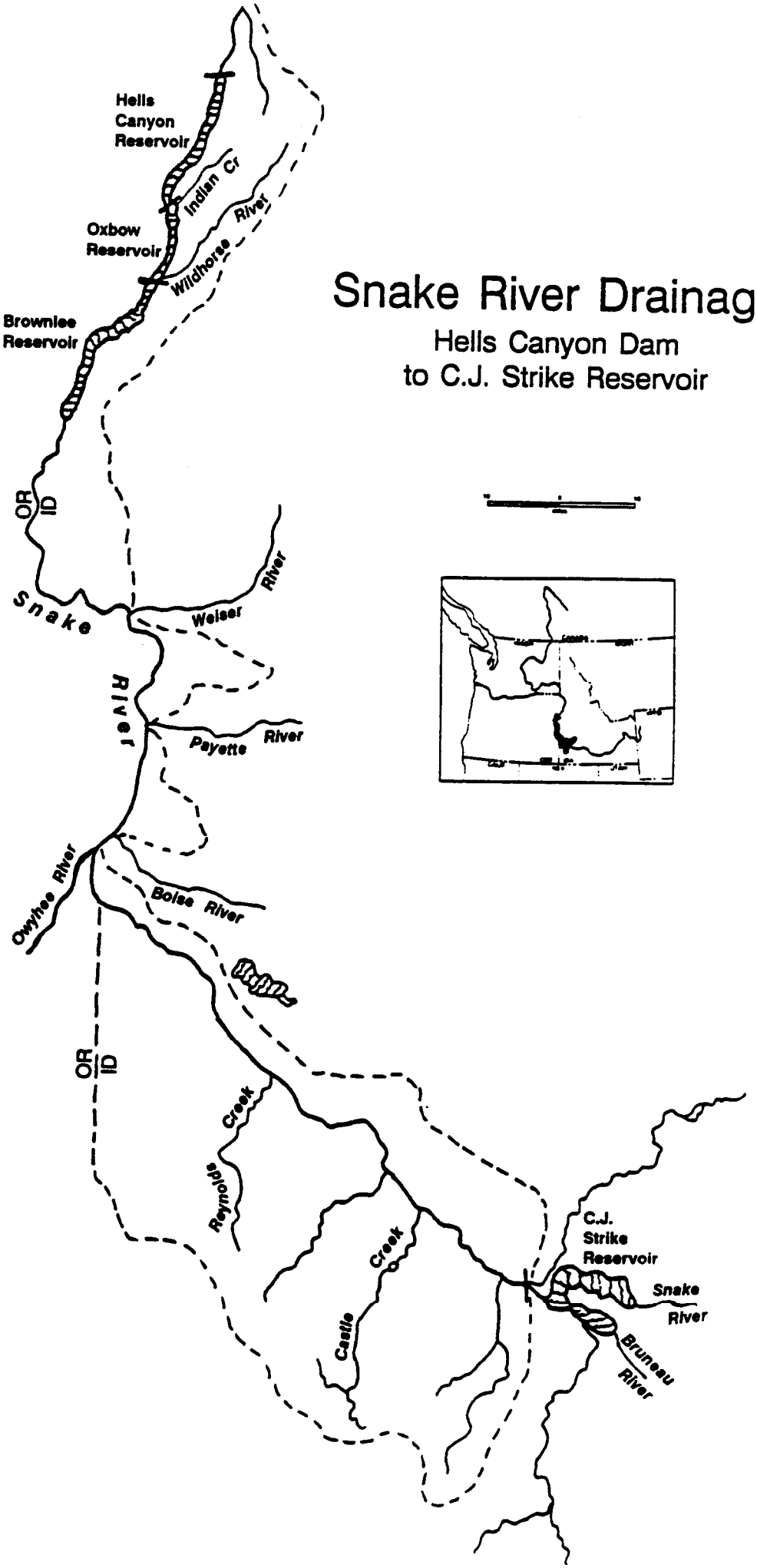
Drainage: YANKEE FORK SALMON RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Yankee Fork Salmon River including West Fork	36/	Coldwater/ Anadromous	Rainbow trout Cutthroat trout Chinook salmon Steelhead Bull trout	General Preservation	Provide limited yield fishery for naturally-produced trout. Maintain harvest closure.
Yankee Fork Dredge ponds	/10	Coldwater/ Anadromous	Rainbow trout Chinook salmon	Put-and-take trout Preservation	Provide put-and-take fishery. Increase stocking to provide additional harvest opportunity. Shoshone-Bannock Tribal biologists have developed program for pond rearing chinook salmon.
Yankee Fork tributaries (except West Fork)	70/	Coldwater	Rainbow trout Cutthroat trout	General	Limited yield fishery.

Snake River Drainage

Hells Canyon Dam to C.J. Strike Reservoir



17. SNAKE RIVER DRAINAGE FROM HELLS CANYON DAM to C.J. STRIKE RESERVOIR

A. Overview

The Snake River between Hells Canyon Dam and the backwaters of C.J. Strike Reservoir has been greatly altered by impoundments and diversions. Within this reach of river, Idaho Power has constructed five major impoundments: Hells Canyon, Oxbow, Brownlee, Swan Falls, and C.J. Strike. These five reservoirs impound 111 miles of river with a total of 27,400 surface acres of water. There is 154 miles of flowing water remaining within this reach. The Snake **River impoundments between** Hells **Canyon** Dam and the **State** Highway 51 bridge support **populations** of **warmwater** and **coldwater game** fish.

Major tributaries to the Snake River between Hells Canyon Dam and C.J. Strike Reservoir include the Weiser, Payette, Malheur, Boise, Owyhee, and Bruneau rivers. The Malheur is entirely in Oregon and will not be discussed in this plan. The other major tributaries are covered separately in this plan under the major headings of Weiser River Drainage, Payette River Drainage, Boise River Drainage, Owyhee River Drainage, and Bruneau River Drainage.

Minor or small tributaries to the Snake River within this planning section flow from the Seven Devil Mountains, Cuddy Mountains, Hitt Mountains, and the Owyhee Mountains. Streams draining the semi-arid Owyhee Mountains flow through deep, rugged canyons; many flow intermittent during the warm summer months. The remaining small tributaries drain high elevation, mountainous terrain. These streams are all typically steep gradient, boulder strewn with small, **deep pools. Redband** trout **are** the native **trout species in these streams. Populations of redbands exist in those tributaries capable of supporting trout. This subspecies of rainbow trout will be given management priority to protect wild stocks from overharvest and habitat degradation.**

From Brownlee Reservoir upstream to Walters Ferry, the Snake River flows through a broad, flat plain with low gradient, few rapids or riffles, and many large islands. This section of river supports a diversity of warmwater game species, including smallmouth bass, channel catfish, largemouth bass, crappie, bluegill, sunfish, and flathead catfish. Rainbow trout, mountain whitefish, and white sturgeon are also found in this reach. From Walters Ferry upstream to Swan Falls Dam, the Snake River flows through a narrow canyon with boulder strewn rapids and large, deep pools. The primary fishery

upstream from Walters Ferry consists of smallmouth bass, channel catfish, and white sturgeon.

B. Objectives and Programs

1. Objective: **Provide a** diversity of smallmouth **bass** fishing **experiences** within the river and mainstem impoundments.

Program: Evaluate regulation alternatives and public support for special regulations that would increase catch rates for larger size classes of bass in Brownlee, Oxbow, and/or Hells Canyon reservoirs.

Program: From C.J. Strike to Swan Falls assess need for special regulations to maintain catch rates for large bass.

Program: Assess current growth and condition of smallmouth bass. If warranted, identify a suitable prey fish species and seek interstate approval for introduction to the Snake River from C.J. Strike Reservoir downstream to Brownlee Reservoir to enhance growth and production of smallmouth bass.

2. Objective: Enhance fisheries for largemouth in reservoirs with suitable adult habitat that are limited by juvenile recruitment.

Program: Evaluate stocking of sublegal largemouth bass at a rate of one per acre in waters that have adult habitat but are recruitment limited.

Program: Enhance spawning and rearing habitat for largemouth bass by constructing dikes, islands, and windbreaks to allow vegetation to grow in protected areas.

3. Objective: Increase **abundance** of white sturgeon.

Program: Pending evaluation of hatchery fish contribution and impact in the Bliss reach release juveniles into free flowing sectors of the Snake River **between** C.J. **Strike** and **Brownlee.**

Program: Monitor catch rates through volunteer sturgeon permits and conduct **mark, recapture, population** estimate studies to **determine abundance** of sturgeon.

Program: **Release** limited numbers of yearling sturgeon in the flowing reaches **below Brownlee** and Oxbow Dam to **provide** a catch **and release** fishery.

4. Objective: Determine fish densities and habitat condition status of major tributaries to Oxbow and Hells Canyon reservoirs such as Wildhorse River and

DRAINAGE.2

Indian **Creek.**

Program: Survey these drainages to document current status of wild salmonids present and condition of habitats so the Department can better manage these resources and offer appropriate and accurate responses to proposed land management activities of private, state and federal entities.

5. Objective: Determine fish densities and habitat condition status of major tributaries to Oxbow and Hells Canyon reservoirs such as Wildhorse River and Indian Creek.

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Program: Survey these drainages to document current status of wild salmonids present and condition of habitats so the Department can better manage these resources and offer appropriate and accurate responses to proposed land management activities of private, state, and federal entities.

6. Objective: Determine distribution and density of redband trout and document habitat condition of redband trout in the Snake River tributaries upstream from Brownlee Dam.

Program: Survey tributaries for presence and density of redband trout.

Program: Monitor habitat conditions in tributary streams. Develop relationships between presence and density of redband trout and habitat conditions.

Program: Attempt to define factors limiting redband trout populations.

7. Objective: Investigate channel catfish age, growth, survival, and movement in the Snake River upstream from Brownlee Reservoir.

Program: Determine age and growth rates of channel catfish upstream from Brownlee Reservoir.

Program: Tag channel catfish upstream from Brownlee Reservoir. Determine

movement and angler exploitation of channel catfish within this reach.

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Drainage: SNAKE RIVER - HELLS CANYON DAM TO C.J. STRIKE RESERVOIR					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Hells Canyon Reservoir		Mixed/ Anadromous	Steelhead	Anadromous	Maintain limited fishery with hatchery steelhead when adult fish are available.
			Rainbow trout Smallmouth bass Largemouth bass Channel catfish Bluegill Crappie Yellow perch Bullhead Kokanee salmon	General	Stock additional trout as fall subcatchables. Maintain catch rates for warmwater fish at a minimum of 1.0 fish/hour.
			Sturgeon		Provide a limited catch-and-release fishery on hatchery-origin sturgeon.
Oxbow Reservoir		Mixed	Smallmouth bass Largemouth bass	Quality	Maintain and evaluate quality bass regulations.
			Rainbow trout Bluegill Crappie Yellow perch Bullhead	General	Increase trout stocking using subcatchables. Maintain catch rates for warmwater fish at a minimum of 1.0 fish/hour. Perform creel survey to assess angler exploitation and effectiveness of trout stocking.
			Sturgeon		Provide a limited catch-and-release fishery on hatchery-origin sturgeon.
Tributaries including Wildhorse River and Indian Creek	110/	Coldwater	Rainbow/redband trout Brook trout	Wild trout	Maintain 0.5 fish/hour catch rates on naturally-produced trout. Inventory these drainages to assess fish densities and habitat condition. Redband subspecies of rainbow trout will receive management priority to prevent overharvest and habitat degradation.
			Bull trout	Preservation	Closed to harvest.

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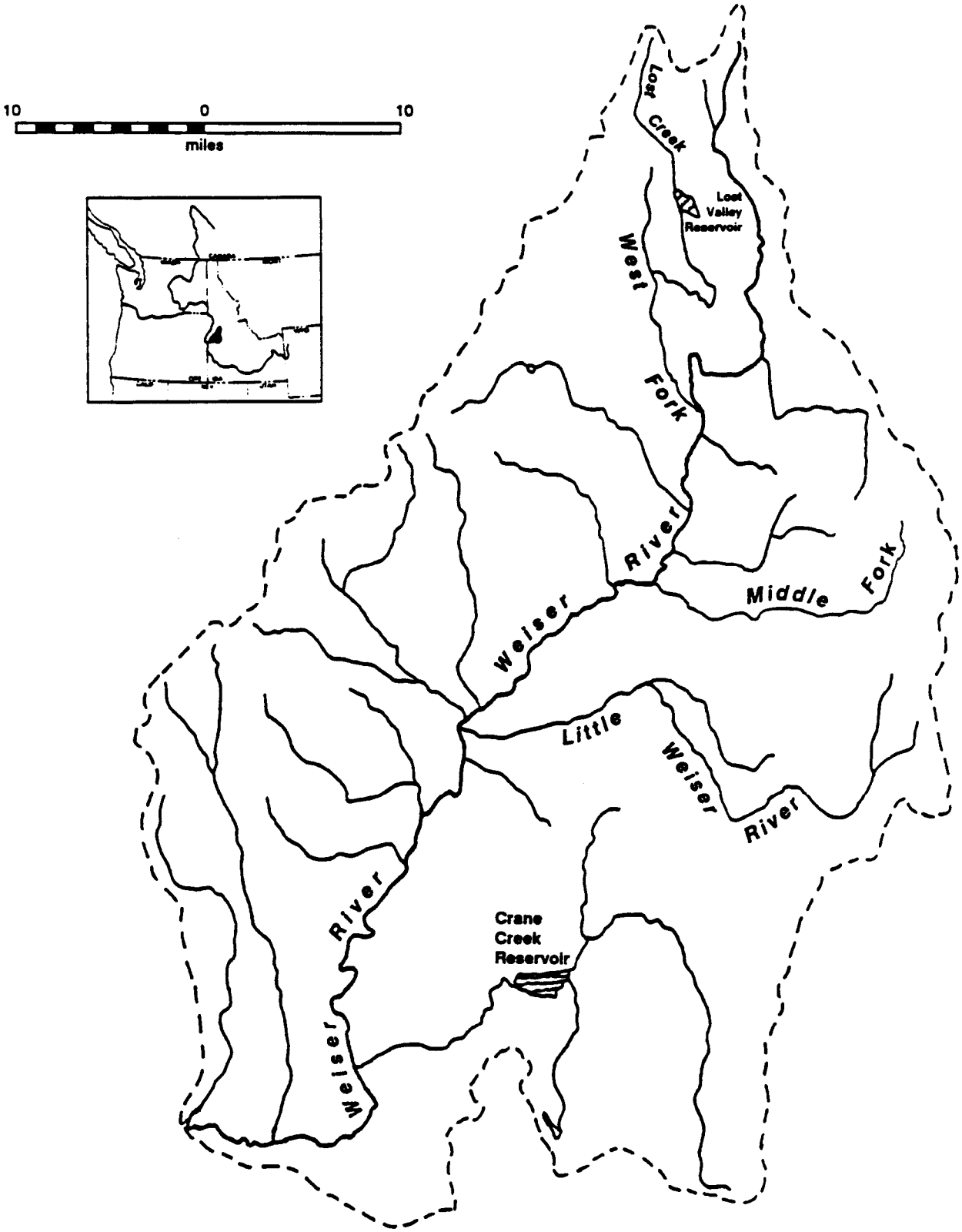
Brownlee Reservoir	55/15,000	Mixed	Smallmouth bass Largemouth bass Bluegill Black crappie White crappie Yellow perch Bullhead Rainbow trout Channel catfish Sturgeon	General General Preservation	Evaluate regulation alternatives and public desire for implementation of regulations that will enhance the opportunities to catch large bass and reduce the number of small bass in the fishery. Investigate turbine losses of game fish. Seek to minimize losses. Seek reduction of drawdown for flood control in January, February, and March and confine to April and May to enhance resident fisheries and flows for migrating juvenile anadromous fish. Document current bass and catfish growth and condition. Assess the need for additional forage. Monitor crappie and other panfish populations. Seek to maintain strong year classes of panfish.
Snake River from Brownlee Reservoir to Swan Falls Dam i_t	121/	Mixed	Largemouth bass Smallmouth bass Channel catfish Flathead catfish Bluegill White crappie Black crappie Bullhead Yellow perch Pumpkinseed Rainbow trout Mountain whitefish Sturgeon	General Preservation	Document current bass and catfish population size, growth, and condition. Assess need for additional forage. Identify factors limiting fishery. Assess population size structure of sturgeon. Enhance sturgeon fishing through stock of hatchery-reared juvenile sturgeon.
Reynolds Creek	25/	Coldwater	Rainbow trout	General	Improve production of native redband trout by seeking improved range and riparian management through BLM planning process.
Swan Falls Reservoir	/900	Mixed	Largemouth bass Smallmouth bass Bullhead Yellow perch Bluegill Channel catfish Rainbow trout White Crappie Black Crappie Pumpkinseed Mountain whitefish Flathead catfish	General Preservation	Determine fish population species composition and size structure. Monitor sturgeon population status. Investigate the use of Lahontan cutthroat or redband trout to develop trout fisheries.

Castle Creek	41/	Mixed	Rainbow trout Black crappie	General	Develop a reservoir in the lower reach of Castle Creek to enhance resident trout and crappie fishery and to augment flows for juvenile anadromous fish migrants. Manage headwaters for low yield, low participation fishery on native redband trout by seeking improved range and riparian management through BLM planning process.
Snake River from Castle Creek to C.J. Strike Dam	25/	Mixed	Largemouth bass Smallmouth bass Channel catfish Bullhead Flathead catfish Black crappie White crappie Bluegill Pumpkinseed Warmouth Yellow perch Rainbow trout Mountain whitefish Sturgeon	General Preservation	Enhance smallmouth bass fishery by introduction of suitable prey species and seeking modification of extreme peaking and flow fluctuations below C.J. Strike Dam. Maintain high catch rates for large bass. Monitor sturgeon population between C.J. Strike Dam and Swan Falls Reservoir.
C.J. Strike Reservoir	/7,500	Mixed	Largemouth bass Smallmouth bass Channel catfish Bluegill Yellow perch Pumpkinseed Bullhead White crappie Black crappie Warmouth Rainbow trout Mountain whitefish	General Preservation	Continue largemouth bass production in Cottonwood ponds. Modify program as needed to improve contribution to largemouth bass population. Monitor effectiveness of largemouth bass program. Enhance channel catfish population. Monitor crayfish population to assess impacts of commercial fishery. Add habitat to enhance reproduction of bass and catfish. Support a year-round trout fishery by annually stocking fingerlings (30/acre) and catchable rainbow trout (10/acre). Monitor status of sturgeon population
Crane Falls Lake	/84	Mixed	Largemouth bass Bluegill Pumpkinseed Black crappie Bullhead Rainbow trout	Trophy General	Evaluate trophy regulations in place and response in size of bass and catch rates. Monitor return of hatchery planted rainbow trout. Determine cost effectiveness and angler preference for rainbow trout program. Maintain suitable water quality pumping the lake down as needed.

Cove Arm Reservoir	/76	Mixed	Largemouth bass Bluegill Pumpkinseed Black crappie Bullhead	General	Investigate opportunity to enhance warmwater fish habitat. Stock with catchables (20/acre) to support a year-round trout fishery. Monitor return of rainbow trout. Determine cost.

Weiser River Drainage



DRAINAGE.2

18. WEISER RIVER DRAINAGE

A. Overview

The Weiser River Basin lies in southwestern Idaho. It drains from the Seven Devils Mountains on the north and west, the Cuddy Mountains to the west, and the West Mountains to the east. The drainage flows in a southwesterly direction of about 112 miles where it drains into the Snake River near the City of Weiser. Elevations in the drainage vary from 8,000 feet in the mountains to 2,090 feet at Weiser. The Weiser River drains a basin area of 1,660 square miles, primarily in low, rolling foothills dissected by many small streams. It has an average annual runoff of 742,000 acre-feet of water. Most of the runoff comes during the spring, with extremely low flows during the remainder of the year.

The Weiser River has no mainstem storage reservoirs. Private irrigation districts have constructed four reservoirs on tributary streams. Those reservoirs, Lost Valley, C. Ben Robs, Crane **Creek, and** Manns Creek, **have** a total **storage** capacity of **about** 83,000 **acre-feet** of water. All **were** constructed to **provide** irrigation benefits, and typically fill during the high spring runoff **period** and **become** extremely low in the late summer and early fall. In extremely dry years, such as 1977, Crane Creek, C. Ben Robs, and Lost Valley reservoirs **have gone** dry. Manns **Creek,** C. **Ben** Robs, and Crane Creek reservoirs **are best** suited for **production** of warmwater game species. Manns **Creek** offers limited **potential** for **rainbow** trout. All three **support populations of largemouth bass** and **crappie.** Crane **Creek Reservoir** contains **excellent** numbers **of** white crappie. Lost Valley **Reservoir** at times is an excellent rainbow trout fishery but has a history of problems **associated** with stunted yellow perch. It was chemically reclaimed in 1985, 1991, and 1994.

From the mouth of the Weiser River upstream to Galloway Dam, the river supports a marginal warmwater fishery. Low summer flows and poor water quality limit fishery production in this section of river. From Galloway Dam upstream to Cambridge, the river supports a limited fishery of rainbow trout and smallmouth bass. Upstream from Cambridge, rainbow trout and mountain whitefish dominate the fishery. Tributaries to the Weiser River which have not been adversely impacted by agricultural practices or stream alterations support excellent populations of native rainbow/redband trout. The redband trout is thought to be a unique subspecies of rainbow trout and will be managed for racial preservation with no hatchery influence in important drainages.

Bull trout also exist in some streams within the basin. Bull trout are considered a candidate species for listing under The **Endangered** Species Act by the U.S. Fish and Wildlife Service.

B. Objectives and Programs

1. Objective: Obtain stream resource maintenance flows to enhance the severely reduced fish populations.

   Program: Quantify and apply for minimum stream flows where unallocated flows are available.

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Program: Work with Natural Resource Conservation Service, Idaho Department of Health and Welfare, and landowners to utilize more efficient irrigation systems.

2. Objective: Improve methods to control flooding and erosion.

Program: Work with Natural Resource Conservation Service, Idaho Department of Health and Welfare, and Idaho Department of Water Resources to have environmentally acceptable methods used for stream channel alterations and riparian vegetation removals.

3. Objective: Provide improved trout fishing opportunity.

Program: Encourage and participate in proposed expansion of Lost Valley Reservoir dam and reservoir for irrigation in the Weiser, Idaho area.

Program: Utilize increased instream flows resulting from the Lost Valley Reservoir expansion to improve water quality and quantity in the Weiser River.

Program: Utilize enlarged reservoir and increased minimum pool to improve fish habitat and improve carryover of rainbow trout.

Program: Monitor fish community for yellow perch repopulation. Chemically eradicate if/when yellow perch become limiting to trout growth and survival.

4. Objective: Determine distribution and density of redband trout and document habitat conditions in streams within the basin.

Program: Inventory streams within the basin to determine distribution and abundance of redband trout.

Program: Inventory streams within the basin to determine instream habitat conditions.

5. Objective: Improve warmwater fishery in Crane Creek Reservoir.

Program: Investigate methods for reducing nongame fish populations and increasing game fish populations in Crane Creek Reservoir.

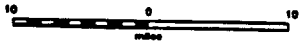
Drainage: WEISER RIVER

Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Weiser River from mouth to little Weiser River	36/	Mixed	Smallmouth bass Channel catfish Rainbow trout Mountain whitefish	General	Evaluate current fishery and angler satisfaction. Identify limiting factors and seek to reduce their impacts on fish production.
Mainstem from mouth of Little Weiser River upstream and tributaries not listed below	196/	Mixed	Rainbow/redband trout Brook trout Smallmouth bass Brown trout Mountain whitefish Bull trout	Wild trout Preservation	Maintain 0.5 fish/hour catch rates on naturally-produced trout. Redband subspecies will be managed for racial preservation and limiting hatchery rainbow stocking. Maintain spawning season closure. Harvest closure.
Little Weiser River and tributaries	62/	Coldwater	Rainbow/redband trout Brook trout Mountain whitefish Bull trout	Wild trout Preservation	Maintain 0.5 fish/hour catch rates on naturally-produced trout. Redband subspecies will be managed for racial preservation by limiting hatchery rainbow stocking. Maintain spawning season closure. Harvest closure.
Middle Fork Weiser River and tributaries	28/	Coldwater	Rainbow/redband trout Brook trout Mountain whitefish Bull trout	Wild trout Preservation	Maintain 0.5 fish/hour catch rates on naturally-produced and hatchery rainbow trout. Continue limited hatchery plantings on Middle Fork near campgrounds only. Redband subspecies will receive priority management. Harvest closure.
West Fork Weiser River and tributaries	36/	Coldwater	Rainbow/redband trout Brook trout Mountain whitefish Bull trout	Wild trout Preservation	Maintain 0.5 fish/hour catch rates on naturally-produced trout. Redband subspecies will be managed for racial preservation by limiting hatchery rainbow trout stocking. Maintain spawning season closure. Harvest closure.
Mann Creek Reservoir (Spangler Reservoir)	/281	Mixed	Largemouth bass Black crappie Rainbow trout	General	Evaluate current fishery and angler satisfaction.
Crane Creek Reservoir	/2,200	Mixed	Largemouth bass Bullhead White crappie Cutthroat trout	General	Evaluate species composition and fish population size, growth, and reproduction potential. Provide additional angling by stocking Lahontan cutthroat to increase predation on prey species. Evaluate potential for providing a Lahontan cutthroat coldwater fishing opportunity.

C. Ben Ross Reservoir	/353	Mixed	Largemouth bass Bluegill Crappie Bullhead Rainbow trout	Quality General	Maintain quality bass regulation. Evaluate the feasibility of constructing habitat structures. Work with landowner to retain access to shoreline.
Lost Valley Reservoir	/633	Coldwater	Rainbow trout Brook trout Yellow perch	General	Maintain 0.5 to 1.0 fish/hour catch rates on 10- to 16-inch rainbow trout from annual fingerling and catchable rainbow plants. Expect overpopulation of yellow perch on a 5- to 6-year cycle, and chemically eradicate the reservoir when the perch population retards trout growth or becomes a serious nuisance to anglers.

DRAINAGE.2

Payette River Drainage



19. PAYETTE RIVER DRAINAGE

A. Overview

The Payette River Basin lies in southwestern Idaho. Its headwaters originate in the Sawtooth and Salmon River mountains at elevations over 10,000 feet. The drainage flows in a southwesterly direction for over 175 miles where it empties into the Snake River near Payette at an elevation of 2,125 feet. The Payette River Basin comprises about 3,240 square miles.

Principal tributaries are the North and South Forks of the Payette River. The North Fork drains about 950 square miles and the South Fork about 1,200 square miles. The Payette River has an average annual discharge into the Snake River of 2,192,000 acre-feet of water. Historically, the drainage has had ample water to meet demands. Irrigation accounts for the largest water use, with about 160,000 acres of irrigated farmland. This system also provides water for recreation, hydroelectric generation, mining, and logging. The drainage is comprised of primarily granitic soils which are highly erosive.

Due to the wide range in elevation, the Payette River has a variety of fish and fish habitats. Salmon and steelhead were eliminated in the drainage by Black Canyon Dam. From its mouth upstream to Black Canyon Dam, the river supports a mixed fishery for coldwater and warmwater species. Mountain whitefish make up the bulk of game fish in this section of river, with smailmouth bass, largemouth bass, channel catfish, black **crappie,** rainbow trout, and brown trout making significant contributions. Upstream from Black Canyon Dam, the gradient of the river increases with coldwater species increasing in **abundance.** The South Fork of the Payette River supports excellent populations of wild **rainbow** trout and is **one** of the **more popular** recreation rivers in the region. The North Fork of the Payette River has been severely altered by railroad and highway construction and provides only a marginal fishery for salmonids. However, in unaltered sections such as the Cabarton reach, the North Fork is very productive for salmonids.

There **are** five major **impoundments** in the Payette basin, **Black** Canyon, **Sagehen, Paddock, Cascade, and Deadwood reservoirs, also several small impoundments and** natural **lakes** with increased storage, such as the three Payette Lakes. Impoundments in the Payette basin primarily serve irrigation needs with flood control and recreation providing additional benefits. Black Canyon, on the mainstem, provides only marginal fish habitat. Sand from upstream land disturbances has covered most habitat. Paddock Reservoir, on Big Willow Creek, has one of the better populations of black crappie in the state and a good fishery for largemouth bass. Cascade Reservoir on the North Fork is one of the most heavily fished waters in the state. Anglers fishing Cascade have the opportunity to harvest an abundance of yellow perch, coho salmon, and rainbow trout. Deadwood Reservoir provides a popular fishery for kokanee and cutthroat trout.

Alpine lakes within the Payette River drainage provide anglers with a variety of fishing opportunity. Rainbow trout, cutthroat trout, rainbow x cutthroat hybrids, golden trout, and Arctic grayling are all stocked in alpine lakes within the drainage. Brook trout are also present in a number of lakes, but in many cases are stunted, and alternative

management may be warranted. There are a total of 178 alpine lakes in the Payette drainage. Many of these lakes are too small to support a fishery. The Department

presently stocks 90 of the alpine lakes in the Payette River system. A number of alpine lakes in the Payette River drainage have self-sustaining populations.

B. Objectives and Programs

1. **Objective: Provide a diversity of fishing opportunities within the Payette River drainage.**

   Program: Zone the stream areas to concentrate hatchery catchable stocking in locations where the highest return to creel will occur.

   Program: Manage for wild trout where habitat and fish populations will sustain an acceptable fishery.

   Program: Manage for increased catch rates and size in selected stream reaches using quality trout regulations.

   Program: Stock appropriate strains of trout in natural production areas to better utilize the rearing capacity and provide larger and more desirable fish.

   Program: Stock adult steelhead directly downstream from Black Canyon Dam as these fish are available.

   Program: Increase warmwater angling by acquiring access or title to ponds in the Lower Payette River drainage. Gain access to private ponds for rearing warmwater fish to stock into state waters.

   Program: Improve land use management through working with federal, state, and private landowners on proper land uses to increase soil stability in the drainage.

2. **Objective: Assess the potential for securing stream maintenance flows to protect fisheries on the North Fork Payette River, Lake Fork Creek, and other tributaries.**

   Program: Gather needed biological and economic information for the Idaho Water Resource Board to justify pursuing stream maintenance flows for fish and wildlife protection.

3. **Objective: Maintain riparian and floodplain values for fish and public access.**

   Program: Work with Valley County to limit residential development in the floodplain.

   Program: Work with Valley County and landowners to provide public access to the North Fork Payette River.

4. **Objective: Maintain/enhance the large-size, mature nature of the lake trout population in Payette Lake.**

Program: Implement trophy regulations for lake trout to maximize numbers of large, mature fish.

FMPNRTVS

DRAINAGE.2

Drainage: PAYETTE RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Mouth to Black Canyon Dam	72/	Mixed	Smallmouth bass Channel catfish Largemouth bass Black crappie Flathead catfish Bullhead Bluegill Yellow perch Pumpkinseed Mountain whitefish Rainbow trout	General	Put-and-take with catchable rainbow and steelhead directly below Black Canyon Dam. Evaluate population size, growth, and reproduction of smallmouth bass and channel catfish. Determine catch rates for existing fishery. Determine angler satisfaction with existing fishery.
Black Canyon Reservoir	/1,100	Warmwater	Largemouth bass Black crappie Bullhead Bluegill Channel catfish	General	Evaluate fish population structure and fishery. Determine catch rates and determine angler satisfaction with current fishery. Conduct experimental stocking of sub-adult warmwater species and evaluate contribution of fishery and cost effectiveness.
Black Canyon to Middle Fork and South Fork to Deadwood River	107/	Coldwater	Rainbow trout Mountain whitefish Cutthroat trout Bull trout	Wild trout Preservation	Maintain as a non-stocking native fishery. Evaluate fish and habitat semi-annually by visual and snorkeling techniques. Closed to harvest.
Emmett Airport and Star Lane ponds	/4	Mixed	Largemouth bass Bullhead Bluegill Pumpkinseed Channel catfish Rainbow trout	General	Add prey species as stocks become overpopulated. Site selective rotenoning to reduce spawning and success. Add appropriate stocks of fish to provide an increased fishery.
Paddock Reservoir	/1,302	Warmwater	Largemouth bass Black crappie Bullhead Bluegill	General	When possible add additional structure for bass and bluegill nursery and growth habitat. As appropriate strains of trout are available, create a coldwater fishery to compliment the warmwater fishes. Evaluate past introduction establishment of bluegill. Investigate the feasibility of planting Lahontan cutthroat or redband trout to develop coldwater fishery.
Warmwater lowland ponds and reservoirs	/200	Warmwater	Largemouth bass Bluegill Pumpkinseed Bullhead Smallmouth bass Channel catfish Black crappie	General	Maintain warmwater populations to use for maximum local fishing. Use stunted stocks for introduction into new water.

Squaw Creek and Willow Creek	71/	Mixed	Rainbow trout Bullhead catfish	Wild trout General	Maintain native stocks. Inventory for status and distribution of redband trout.
Sagehen Reservoir	/180	Coldwater	Rainbow trout	Put-and-take trout	Put-and-take with hatchery catchables. Inventory tributary stream to develop a management plan for the natural spawning stocks.
North Fork Payette River from Banks to Smiths Ferry, including tributaries	78/	Coldwater	Rainbow trout Mountain whitefish	Wild trout	Manage wild trout. Maintain catch rate of 0.5 fish/hour. Inventory to assess status of wild rainbow trout fishery. Seek to improve angler access with land management agencies.
North Fork Payette River from Smiths Ferry to Cascade Dam, including tributaries	74/	Coldwater	Rainbow trout Yellow perch Brown trout Mountain whitefish Bullhead	Wild trout General	Manage for wild trout. Maintain catch rate of 0.5 fish/hour. Encourage land management agencies to leave Cabarton Reach unroaded to protect wild trout.
North Fork Payette River from Tamarack Fall Bridge to Lardo Dam	24/	Coldwater	Rainbow trout Brown trout Mountain whitefish Brook trout Kokanee salmon	Put-and-take trout	Seek to establish a naturally reproducing trout population. Pursue establishment of stream maintenance flow through Water Resource Board. Work with landowners and land management agencies to protect riparian and floodplain. Discourage residential development near the river. Work with Valley County to maintain public access.
North Fork Payette River from Payette Lake to headwaters, including Fisher Creek and other tributaries	34/	Coldwater	Rainbow trout Brook trout Mountain whitefish Kokanee salmon Pennask rainbow trout Cutthroat trout Bull trout	Put-and-take trout Wild trout	Concentrate supplemental hatchery trout in high angler use areas. Continue stocking westslope cutthroat to establish self-sustaining population. Enhance spawning habitat for kokanee salmon to improve survival of embryos if warranted. Maintain spawning season closure for kokanee salmon. Pursue establishment of stream maintenance flow through Water Resource Board.
Gold Fork Creek and tributaries	49/	Coldwater	Rainbow trout Brook trout Kokanee salmon Coho salmon Bull trout	Put-and-take trout	Concentrate supplemental hatchery trout in high angler use areas. Improve natural trout production in drainage. Assess opportunity to seek habitat improvements in drainage by contacting private landowners and land management agencies. Investigate feasibility of providing fish passage over the Gold Fork irrigation diversion dam. Plant coho smolts to establish a spawning run out of Cascade Reservoir. Encourage construction of an enhanced wetland/subimpound to maintain the Gold Fork arm at the Cascade Reservoir full pool level.

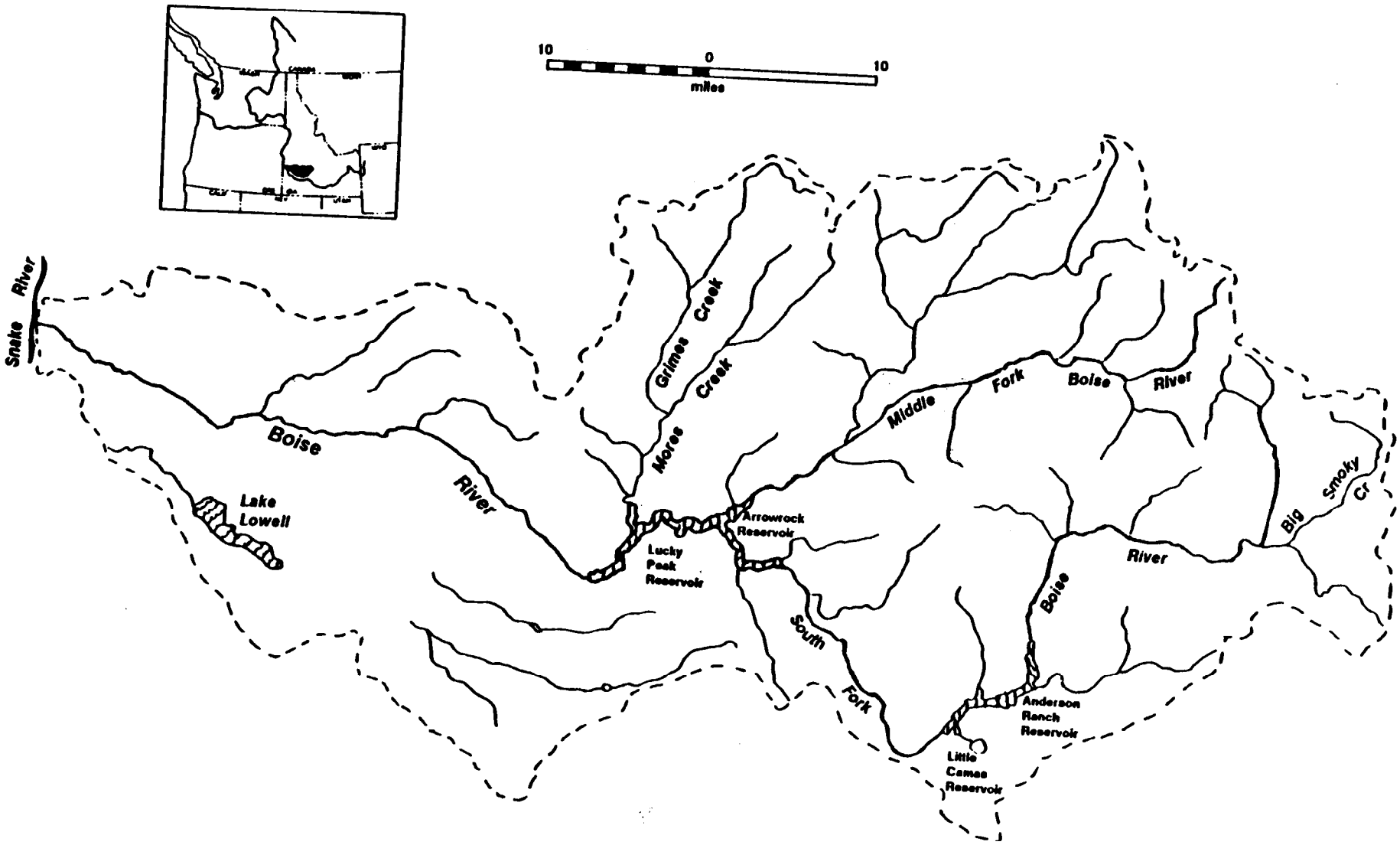
Lake Fork Creek from mouth to Little Payette Lake, including tributaries	37/	Coldwater	Rainbow trout Kokanee salmon Coho salmon Brook trout	General	Pursue establishment of stream maintenance flow through Water Resources Board to provide quality trout stream fishery. Screen major irrigation ditches to prevent fish loss through canals. Assess fish losses occurring in mainstem Lake Irrigation District canal and laterals through biological sampling. Support Lake Irrigation District Canal Company's plans to modify parts of canal system to improve water delivery efficiency. If surplus water is available after reconstruction, pursue establishment of stream maintenance flow. Screen canals found to cause significant fish losses.
Lake Fork Creek from Little Payette Lake to Brown's Pond		Coldwater	Rainbow trout Kokanee salmon	Trophy	Manage for natural trout production to Little Payette. Maintain trophy regulations to protect spawning adults. Allow kokanee salmon harvest.
Lake Fork Creek from Brown's Pond to headwaters		Coldwater	Rainbow trout Brook trout	Put-and-take trout	Concentrate supplemental hatchery trout in high angler use areas. Evaluate return to creel and adjust stocking strategy as needed.
Boulder Creek and tributaries	17/	Coldwater	Rainbow trout Brook trout	Put-and-take trout	Concentrate supplemental hatchery trout in high angler use areas. Enhance natural trout production in drainage. Work with landowners and land management agencies to improve fish habitat.
Valley County ponds	/1,247	Coldwater	Rainbow trout Cutthroat trout	General	Develop diversity and increase fishing opportunity for trout in area ponds by working with landowners to allow public access.
Horsethief Reservoir	/1,270	Coldwater	Rainbow trout Rainbow x cutthroat hybrids Brook trout Brown trout Yellow perch Splake	General	Maintain as a hatchery-supported fishery due to high angler use and excellent access. Keep year-round season due to public support. Stock trout species and strains that continue to provide good return rates. Monitor perch population and take appropriate management action to reduce or eliminate perch if necessary. Utilize fingerling plants augmented with catchable rainbow prior to the general opener. Stock large fingerling brown trout to provide diversity and a large fish component to the harvest. Improve recreation facilities on IDFG lands to prevent resource
Blackwell Lake		Coldwater	Rainbow trout	Trophy	Establish as trophy mountain lake.
Brush Lake		Coldwater	Rainbow trout Cutthroat trout Rainbow x cutthroat hybrids	Trophy	Monitor success of trophy trout regulations established in 1990 and revise if necessary.
Louie Lake		Coldwater	Rainbow trout Cutthroat trout Rainbow x cutthroat hybrids	Trophy	Monitor success of trophy trout regulations established in 1990 and revise if necessary.

All other alpine lakes	/1,386	Coldwater	Rainbow trout Arctic grayling Brook trout Cutthroat trout Brown trout Rainbow x cutthroat hybrids	General	Stock with fingerling salmonids to provide diverse fishing opportunity in backcountry areas. Stock most lakes on a three-year rotation. Provide catch rates of at least 0.5 fish/hour. Explore feasibility of rehabilitating stunted brook trout lakes through stocking predator species or chemical treatments. Work cooperatively with USFS on all projects. Increase the number of lakes under trophy management.
Cascade Reservoir	/28,300	Mixed	Rainbow trout Kokanee salmon Coho salmon Yellow perch Channel catfish Black crappie Smallmouth bass	General	Manage Cascade Reservoir for both yellow perch and salmonid species as co-equals. Seek to improve warmwater fishing opportunity. Maintain catch rates for 8-inch or larger perch at 1.0 to 2.0 fish/hour and for trout at 0.5 fish/hour. Decrease annual trout stocking of catchable rainbow trout until water quality improves. Improve tributary habitat condition and access for natural trout production. Continue strong support for water quality improvement studies and encourage timely implementation. Creel surveys will be done to assess angler use and harvest and assist in evaluating and refining trout stocking policy if needed. Stock catchable rainbow trout at 5/acre. Best fit stocking program to the reservoir to enhance fishing success and opportunity. Evaluate smailmouth bass, channel catfish, and black crappie population status and potential. Evaluate the public's attitudes toward planned introduction of tiger muskle and largemouth bass to provide a diverse fishing opportunity. Encourage construction of enhanced wetlands/subimpoundments in the Gold Fork and North Fork arms and the development of
Little Payette Lake	/1,450	Mixed	Rainbow trout Smallmouth bass Kokanee salmon	Trophy	Maintain as trophy trout fishery and overall catch rate of at least 0.5 fish/hour. Refine regulations if warranted to provide large trout for anglers. Monitor nongame fish populations and chemically eradicate if biologically warranted. Allow harvest of kokanee salmon. Monitor smallmouth bass population.
Upper Payette Lake	/400	Coldwater	Rainbow trout Brook trout Splake	General	Maintain as hatchery-supported system due to high catch rate and excellent return rate. Explore feasibility of alternative species. Maintain catch rates of at least 0.5 fish/hour.
Payette Lake	/5,337	Coldwater	Rainbow trout Cutthroat trout Kokanee salmon Lake trout	General Trophy	Maintain average kokanee salmon size at 10 to 12 inches through population manipulation. Seek to improve survival rate of annual hatchery kokanee salmon plants. Protect adult kokanee salmon in North Fork Payette River during spawning. Continue stocking westslope cutthroat trout to develop self-sustaining shoreline fishery. Monitor lake trout population and maintain as trophy size fish by using restrictive size and bag limits. Use hatchery rainbow trout to supplement existing fishery in high angler use areas only. Employ net pen rearing techniques to enhance the survival of westslope cutthroat trout. Encourage wise land management use in adjacent watersheds to maintain high water

Middle Fork Payette River to Silver Creek and up Silver Creek to above Warmsprings Plunge and bridge	23/	Coldwater	Rainbow trout Cutthroat trout Mountain whitefish Brook trout Bull trout	Put-and-take trout Preservation	Put-and-take with catchable rainbow. Evaluate fishery on a tri-year basis using common database and established snorkeling transects. Closed to harvest.
Middle Fork Payette River upstream from Silver Creek and above bridge directly above Silver Creek Plunge	53/	Coldwater	Rainbow trout Cutthroat trout Mountain whitefish Brook trout Bull trout	Wild trout Preservation	Non-stocking, retain as a native fishery. Evaluate fishery on a tri-year basis using common database and established snorkeling transects. Closed to harvest.
Deadwood River from mouth to Deadwood Dam, including tributaries	30/	Coldwater	Rainbow trout Mountain whitefish Bull trout	Wild trout Preservation	Maintain population of wild trout with new access. Evaluate limit restrictions. Closed to harvest.
Deadwood Reservoir	/3,000	Coldwater	Kokanee salmon Cutthroat trout Rainbow trout Fall chinook salmon Brook trout Mountain whitefish Bull trout	General Preservation	Manage kokanee salmon fishery to yield four-year-old spawners with mean length that exceeds 14 inches by controlling age class and number of spawners using natural spawning areas. Establish self-sustaining population of westslope cutthroat. Closed to harvest.
South Fork Payette River from Deadwood River to Tenmile Bridge, including tributaries	125/	Coldwater	Cutthroat trout Brook trout Mountain whitefish Rainbow trout Bull trout	Put-and-take trout Preservation	Put-and-take hatchery catchables. Develop catch-out ponds for hatchery trout to increase return to the creel of planted trout and to reduce competition with wild trout. Closed to harvest.
South Fork Payette River from Tenmile Bridge to headwaters, including tributaries	41/	Coldwater	Cutthroat trout Brook trout Mountain whitefish Rainbow trout Bull trout	Wild trout Preservation	Maintain wild trout fishery. Monitor mountain lake stocking with two- to three-year stocking cycles. Visit lakes to determine effectiveness of stocking and public pressure. Closed to harvest.
Clear Creek	22/	Coldwater	Rainbow trout Mountain whitefish Bull trout	General Preservation	Maintain fishery without planting hatchery trout. Closed to harvest.

Bull Trout Lake	/90	Coldwater	Brook trout Rainbow trout Kokanee salmon Atlantic salmon Bull trout	General Preservation	Manage kokanee salmon for maximizing prey population for bull trout and landlocked salmon by stocking with appropriate stock. Provide fishing opportunities in attractive scenic setting. Stock Atlantic salmon, bull trout, and kokanee salmon to obtain proper balance between predator and prey. Allow kokanee salmon and bull trout to escape to natural spawning areas. Set fishing regulations to emphasize high catch rates and low yield or harvest of large fish. Closed to harvest.

Boise River Drainage



20. BOISE RIVER DRAINAGE

A. Overview

The Boise River basin lies in southwestern Idaho and contains about 4,100 square miles of land. The headwaters of the Boise River originate in the Sawtooth Mountains at elevations in excess of 10,000 feet. It flows in a westerly direction for about 200 miles before emptying into the Snake River near Parma at an elevation of 2,100 feet. Major tributaries to the Boise River include the North Fork Boise River (382 square miles), the South Fork Boise River (1,314 square miles) and Mores Creek (426 square miles). This basin has an average annual runoff of 2,005,000 acre-feet of water.

The Boise River has three major instream impoundments, Anderson Ranch, Arrowrock and Lucky Peak reservoirs, and one large off-stream impoundment, Lake Lowell. The four large **reservoirs** have a **combined storage** capacity of 1,143,249 acre-feet of water. The Boise River reservoirs supply water storage for irrigation flood control, recreation, **hydropower,** and instream flows.

Because of the wide range in elevations, **geographic** features, and water uses, the Boise River has a great variety of habitat types and fish species. The drainage includes the major population center in the state, has over 250,000 acres of irrigated cropland, and some of Idaho's earliest mining, logging, and hydroelectric developments. Man-caused impacts have severely degraded most habitats over a long period of time creating severe limitation on fishery productivities.

From the mouth of the Boise River upstream to Star, low summer flows and poor water quality limit fishery production. This section of river supports a fair fishery for largemouth bass, smallmouth bass, and channel catfish. From Star upstream to Lucky Peak Dam, the river changes from a warmwater to a coldwater fishery. Mountain whitefish make up the bulk of the game fish biomass, with hatchery-reared rainbow trout, wild rainbow trout, and fingerling brown trout plants supporting the bulk of the fishing pressure. Upstream from Lucky **Peak** and Arrowrock reservoirs, rivers and streams contain excellent populations of wild rainbow trout, mountain whitefish, and bull trout. Brook trout, **redband** trout, and cutthroat trout occur in some tributary streams. Due to the heavy angling pressure exerted on these streams, catchable-size hatchery rainbow trout supplement wild populations in selected heavy use areas.

DRAINAGE.2

In 1978, the South Fork Boise River between Arrowrock Reservoir and Anderson Ranch Dam was the first designated quality trout stream segment in southwestern Idaho. Wild rainbow trout and mountain whitefish make up the majority of the fish caught in the South Fork. The rainbow trout fishery there is managed with limit, size, and tackle restrictions. In 1978, anglers caught an estimated 19,150 rainbow trout and released 18,059 (94%). In 1988, anglers caught an estimated 18,400 rainbow trout and released 99%.

A 1988 creel survey of the South Fork Boise River between Featherville and Big Smokey Creek estimated effort at 228 hours/km. Hatchery rainbow trout made up over 80% of fish checked in anglers' creels, but the overall return total creel rate was only 21 %, indicating hatchery fish need to be more efficiently utilized.

Popular reservoir fishing within the Boise River drainage exists at Lake Lowell, Lucky Peak, Arrowrock, Anderson Ranch, and Little Camas reservoirs. The Lake Lowell fishery consists primarily of largemouth bass, smallmouth bass, yellow perch, black crappie, bullhead, bluegill, and channel catfish. Lucky Peak and Anderson Ranch reservoirs provide "two-story" fisheries with smallmouth bass occupying the warm, inshore waters and rainbow trout and kokanee dominating the cold, mid-water fishery. The rainbow trout fishery in these reservoirs depends heavily on stocked catchable or fingerling size fish. Little Camas and Arrowrock reservoirs also provide excellent fishing for rainbow trout stocked as catchables and/or fingerlings. Neither of these two reservoirs has a conservation pool, and both have a history of total water evacuation.

Good spawning conditions in tributary streams provide a continuous supply of kokanee in Anderson Ranch Reservoir, but maintenance stocking is required in Lucky Peak and Arrowrock reservoirs. At Anderson Ranch Reservoir, one of the more popular kokanee fisheries in southern Idaho, anglers harvested an estimated 40,000 + **kokanee** in 1979 and 34,000 in 1985. **Kokanee populations** in the reservoir **have** fluctuated significantly from **1983** through **1989 due to extreme** high and low water conditions in the **drainage.** Ongoing studies **of kokanee populations are being** used **to develop** models to reduce **population** fluctuations through stocking in low number years. Fall chinook salmon will **be considered to crop** excess **kokanee** numbers and **to provide** a trophy fishery if **kokanee** numbers **become excessive.**

Alpine **lakes** within the **Boise** River **drainage provide** anglers with a variety of fishing **opportunity. Rainbow,** cutthroat, **and brook** trout **are abundant** with lesser numbers **of golden** trout. There **are** 224 **alpine** lakes in the **Boise drainage.** Most of these lakes **are too** small to **support** a fishery. The **Department** presently stocks 68 of the alpine lakes in the Boise River system.

B. Objectives and Proarams

1. **Objective: Provide a diversity** of fishing **opportunities** within the **Boise** River **drainage.**

Program: Zone the stream areas to concentrate hatchery catchable stocking in the locations where the highest return to the creel will occur.

Program: Manage for wild trout where **habitat** and fish populations will sustain **acceptable fisheries.**

Program: Manage for increased catch rates and fish size in selected stream reaches with quality and trophy trout regulations.

Program: Stock **appropriate** strains of trout and other species to better utilize the rearing capacity and provide larger and more **desirable** fish to the angler.

Program: Manage warmwater fisheries to provide a wide variety of sizes and species **readily available** to the **large population** of the Treasure Valley area.

Program: **Develop** a pond in the Mores Creek drainage for planting catchable

rainbows.

FMPNRTVS

Program: Stock alpine lakes with a variety of species including rainbow trout, cutthroat trout, golden trout, and Arctic grayling to provide a variety of fishing experience. Impacts on native species will be considered prior to stocking new species.

2. Objective: Seek better land management practices that significantly improve fishery habitats.

Program: Provide sediment objectives/standards to land management agencies where sediment is the limiting factor in aquatic habitats.

Program: Provide riparian vegetation objectives to land management agencies where grazing, development, or other activities have degraded riparian zones.

Program: Seek to provide habitat necessary to preserve populations of native bull trout and redband trout.

3. Objective: Monitor effects of land management activities, fishery regulations, and other fishery management activities on fish habitat and fish populations.

Program: Collect common data base information on habitat and fish populations throughout the Boise River drainage.

Program: Examine changes and trends in common data base information and attempt to determine causes for any changes that are noted.

4. Objective: Seek improved reservoir management and stream flows.

Program: Pursue development of a minimum pool in Arrowrock Reservoir.

Program: Study water management at Lake Lowell to determine the relationship between fish production and water levels.

5. Objective: Maintain and improve bull trout populations. Program: Maintain "no harvest" rule for bull trout on rivers and tributaries.

Program: Provide information to public on pressure, how to identify, and how to release bull trout.

Program: Evaluate bull trout populations in reservoirs to determine if a limited harvest opportunity exists.

Drainage: BOISE RIVER

Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Mouth to Star	34/	Mixed	Rainbow trout Mountain whitefish Largemouth bass Smallmouth bass Channel catfish Black crappie	General	Work with state and federal regulatory agencies to improve water quality and habitat condition. Evaluate fish population, species composition, and size structure. Determine angler satisfaction with current fishery.
Star to Barber Dam	25/	Coldwater	Rainbow trout Steelhead Brown trout Mountain whitefish	Put-and-take trout	Work with state and federal regulatory agencies to improve water quality and habitat condition. Stock with rainbow trout, brown trout, and steelhead seasonally. Stock catchable rainbow trout year-round. Manage for high density of anglers.
Barber Dam to Lucky Peak	4/	Coldwater	Rainbow trout Brown trout Mountain whitefish	General	Evaluate potential trophy trout management. Evaluate natural production potential.
Mores Creek		Coldwater	Rainbow trout Mountain whitefish	General	Work with regulatory agencies to enhance habitat. Stock with catchable rainbow trout.
Boise River Drains	92/	Coldwater	Rainbow trout Brown trout Mountain whitefish	General	Work with communities and regulatory agencies to improve water quality and habitat conditions. Improve angler access. Evaluate hatchery fingerling brown trout planting program.
Loggers Creek	2/	Coldwater	Rainbow trout Brown trout Mountain whitefish	General	Manage as a nursery stream to provide catchable size fish to Boise River.
Middle Fork Boise River from Arrowrock Reservoir to North Fork Boise River	11/	Coldwater	Rainbow trout Mountain whitefish Bull trout	Put-and-take trout Preservation	Stock with catchable rainbow trout following high water period until Labor Day. Evaluate return to the creel of hatchery trout. Monitor angler use and satisfaction with current fishery. Closed to harvest.
From North Fork to Atlanta Power Dam	32/	Coldwater	Rainbow trout Cutthroat trout Mountain whitefish Brook trout Bull trout	Quality Preservation	Manage for high catch rates on wild fish. Closed to harvest.
From Atlanta Power Dam to Sawtooth Wilderness Boundary	4/	Coldwater	Rainbow trout Cutthroat trout Mountain whitefish Brook trout Bull trout	Put-and-take trout Preservation	Stock with catchable rainbow following high water period until Labor Day. Evaluate return of hatchery trout. Develop catch-out pond for planting catchables to avoid competition with wild trout. Closed to harvest.

Upstream of Sawtooth Wilderness Boundary and all tributaries	30/	Coldwater	Rainbow trout Cutthroat trout Mountain whitefish Brook trout Bull trout	Wild trout Preservation	Manage for high catch rates and low angler densities. Manage for wild fish. Closed to harvest.
South Fork Boise River from Arrowrock Reservoir to Neal Bridge		Coldwater	Rainbow trout Mountain whitefish Bull trout	General Preservation	Manage for harvest opportunity for stream trout and mountain whitefish. Closed to harvest.
South Fork Boise River from Arrowrock Reservoir to Danskin Bridge	18/	Coldwater	Rainbow trout Mountain whitefish Bull trout	Trophy Preservation	Work with USFS to preserve low density angling experience. Manage for high catch rates for large fish. Closed to harvest.
South Fork Boise River from Danskin to Anderson Ranch Dam	10/	Coldwater	Rainbow trout Mountain whitefish Bull trout	Trophy Preservation	Manage for high catch rates for large fish. Closed to harvest.
South Fork Boise River from Anderson Ranch Reservoir to Pine Bridge	0.6/	Coldwater	Fall chinook salmon Rainbow trout Kokanee salmon Mountain whitefish Bull trout	General Preservation	Annual river closure to protect spawning kokanee to trap site. Monitor fall chinook salmon runs, if restocked, target fish for harvest. Closed to harvest.
South Fork Boise River from Pine Bridge to Beaver Creek	25/	Coldwater	Rainbow trout Mountain whitefish Kokanee salmon Bull trout	Put-and-take trout General Preservation	Good quality habitat with wild trout potential. High accessibility and campgrounds give potential for hatchery return rates of > 30%. Consider use of regulation allowing harvest of adipose fin-clipped fish only. Closed to harvest.
South Fork Boise River from Beaver Creek to Big Smoky Creek	10/	Coldwater	Rainbow trout Mountain whitefish Kokanee salmon Bull trout	Quality Preservation	Good quality habitat for wild trout. Manage for quality > 14-inch wild rainbow trout to increase natural reproduction. Closed to harvest.
South Fork Boise River from Big Smoky Creek to headwaters	15/	Coldwater	Rainbow trout Mountain whitefish Kokanee salmon Bull trout	Put-and-take trout General Preservation	Good quality habitat, however limited natural productivity limit wild trout in accessible areas. Maintain stocking if return rates meet 40% goals. Closed to harvest.

Big Smoky Creek from mouth to Calf Creek	4/	Coldwater	Rainbow trout Mountain whitefish Kokanee salmon Bull trout	Put-and-take trout General Preservation	Good quality habitat with wild trout potential. High accessibility gives potential for >30% return on fish. Consider evaluation of adipose fin regulation to allow wild stocks to rebuild and maintain harvest opportunity on catchable rainbow. Closed to harvest.
Big Smoky Creek from Calf Creek to headwaters	15/	Coldwater	Rainbow trout Mountain whitefish Bull trout	Wild trout Preservation	Evaluate social and biological potential for quality management. Emphasize bull trout, self-sustaining rainbow populations. Maintain limited harvest opportunity. Closed to harvest.
Little Smoky Creek	20/	Coldwater	Rainbow trout Bull trout	Put-and-take trout Preservation	Evaluate hatchery program. Closed to harvest.
All other streams in South Fork Boise River drainage upstream from Anderson Ranch Reservoir	277/	Coldwater	Rainbow trout Mountain whitefish Bull trout	Wild trout Preservation	Investigate potentially unique redband trout and ensure survival. Maintain naturally reproducing populations and harvest opportunity. Closed to harvest.
North Fork Boise River from mouth to Rabbit Creek	7/	Coldwater	Rainbow trout Mountain whitefish Bull trout	Wild trout Preservation	Manage for high catch rates (3 fish/hour) and low angler densities. Closed to harvest.
Rabbit Creek to Deer Park (Hunter Creek)	13/	Coldwater	Rainbow trout Mountain whitefish Bull trout	Put-and-take trout Preservation	Manage for high yield and moderate angler densities. Closed to harvest.
Deer Park to headwaters and all tributaries	41/	Coldwater	Rainbow trout Mountain whitefish Bull trout	Wild trout Preservation	Manage for high catch rates (3 fish/hour) and low angler densities. Closed to harvest.
Lucky Peak Reservoir	/2,850	Mixed	Smallmouth bass Yellow perch Rainbow trout Kokanee salmon Mountain whitefish Bull trout	General Preservation	Evaluate status of smallmouth bass fishery. Provide an attractive kokanee salmon fishery for large fish. Investigate feasibility of providing a trout fishery by stocking large numbers of fingerling rainbow in Lucky Peak Reservoir to avoid excessive competition for plankton and jeopardizing quality of kokanee salmon fishery. Continue to stock catchable rainbow trout. Investigate feasibility of introducing lake trout. Closed to harvest.

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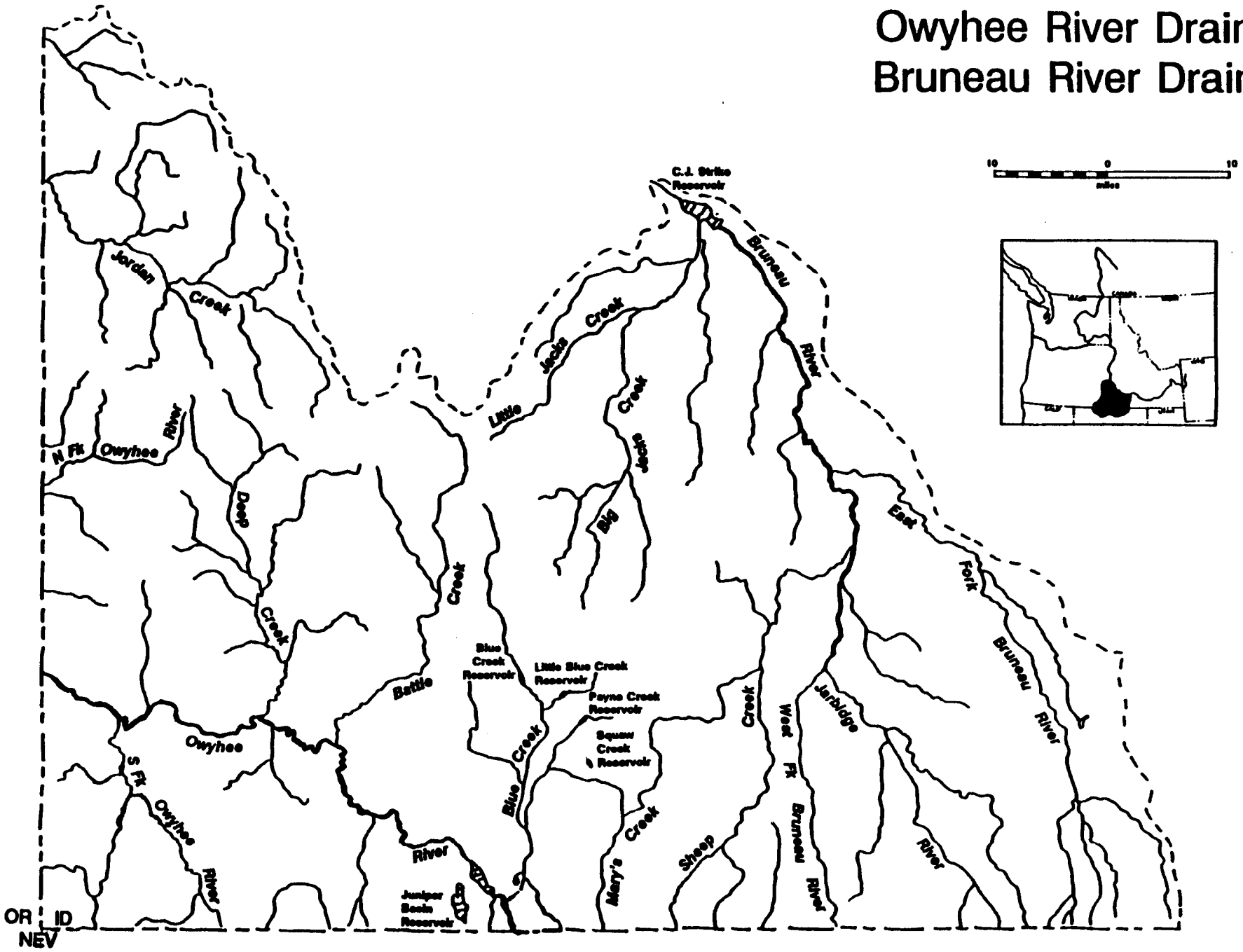
Arrowrock Reservoir	/4,000	Mixed	Smallmouth bass Yellow perch Rainbow trout Mountain whitefish Bull trout	General Preservation	Seek minimum pool through federal government. Stock annually with fingerling rainbow trout. Closed to harvest.
Lake Lowell	/10,000	Mixed	Largemouth bass Smallmouth bass Channel catfish Bluegill Yellow perch Black crappie Pumpkinseed Rainbow trout Cutthroat trout	Quality General	Determine angler use and harvest rates. Manage bass with primary emphasis on quality fishery. Investigate feasibility of planting Lahontan cutthroat trout.
Anderson Ranch Reservoir	/4,740	Mixed	Rainbow trout Bull trout Mountain whitefish Kokanee salmon Fall chinook salmon Yellow perch Smallmouth bass	General	Emphasize kokanee. Continue developing model to evaluate potential. Goal of 1.0 kokanee/hour with mean size of 12 to 14 inches if productivity allows. Consider fall chinook salmon if kokanee numbers are excessive. Improve trout fishing through hatchery program and public awareness. Maintain smalimouth bass to diversify fishing opportunity.
Little Camas Reservoir	/1,455	Mixed	Rainbow trout Smallmouth bass	General	Use fall fingerling plants to improve carryover in high water years.
Mountain Home Reservoir		Mixed	Rainbow trout Largemouth bass	General	Stock with rainbow trout when water levels allow. Work with irrigation companies to leave conservation pool so trout can overwinter.
Long Tom Reservoir		Coldwater	Rainbow trout	General	Work to secure minimum pool. Establish trophy lake when conservation pool is secure.
Featherville dredge ponds	/3	Coldwater	Rainbow trout	Put-and-take trout	Continue stocking hatchery rainbow trout. Increase numbers to provide 1.0 fish/hour.
Big Trinity Lake	/12	Coldwater	Rainbow trout	Put-and-take trout	Accessible by road. Stock annually with catchables. Stock cutthroat trout fingerlings for diversity.
Little Trinity Lake	/3	Coldwater	Rainbow trout	General	Accessible by road. Stock annually with catchables. Stock cutthroat trout fingerlings for diversity.
Other alpine lakes	/801	Coldwater	Rainbow trout Cutthroat trout Golden trout Brook trout Arctic grayling	General	Put-and-grow for trout and char.

Owyhee River Drainage
Bruneau River Drainage



21. OWYHEE RIVER DRAINAGE, BRUNEAU RIVER DRAINAGE, AND MINOR TRIBUTARIES SOUTH OF SNAKE RIVER

A. Overview

The Owyhee River and Bruneau River basins lie in southwestern Idaho, southeastern Oregon, and northern Nevada. This basin encompasses approximately 11,340 square miles of semi-arid, high desert country, of which about 8,000 square miles lies within Idaho. In the higher bench lands of the Bruneau and Owyhee, the rivers and their tributaries flow through deeply incised canyons. Elevations in the Owyhee drainage range from 8,100 feet in the Owyhee Mountains to 2,400 feet at the Snake River. The Owyhee River has an annual average discharge of 661,500 acre-feet of water at the Oregon/Idaho border. Elevations in the Bruneau drainage range from over 10,000 feet in the Jarbidge Mountains to 2,455 feet at the mouth. The Bruneau River has an annual average discharge of 292,000 acre-feet of water.

Most of the Owyhee River drainage contains excellent populations of redband trout. A Bureau of Land Management resource inventory identified redband trout in 23 of 27 perennial streams and 7 of 15 intermittent streams. Due to the unique qualities of this fish and the inaccessibility of the Owyhee drainage, this entire drainage will be managed for racial preservation. Lahontan cutthroat trout have been introduced into several reservoirs near Riddle.

No cutthroat trout are present in the Bruneau River drainage. A remnant population of bull trout exists in the Jarbidge River. Populations of native redband trout exist in many tributaries. Redband trout are widely distributed, however, some local populations have been severely affected by land management activities and drought.

From the mouth of the Bruneau River upstream to the hot springs, the water quality b not suitable to support coldwater species. Significant angling pressure occurs on the more accessible streams of the Bruneau River drainage, but pressure is extremely light on most of the relatively inaccessible streams. The main Jarbidge River downstream from its confluence with the East Fork, and the Bruneau River are utilized for float trips.

The Bruneau River, West Fork, lower East Fork, lower Sheep Creek, and Jarbidge River have been recommended for National Wild Rivers status. Any fish stocking that would change or impact native species should be deferred.

Livestock grazing on some tributary streams has impacted fish habitat, and efforts should be made to work with landowners and land management agencies to improve habitat.

B. Objectives and Proaramp

1. Objective: Manage stream and reservoir fisheries to preserve the genetic integrity of native desert redband trout.

   Program: Stock other strains and species of fish where they will not pose a threat to preserving redband trout.

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Program: Restock streams with depleted populations where habitat conditions have been restored with redband trout by collecting fish or eggs from adjacent areas that contain native redband trout.

Program: Develop a broodstock reservoir for redband trout to annually produce fingerlings that could be used for stocking reservoirs and streams in this area.

Program: Determine distribution and density of redband populations within the basin. Determine habitat condition of streams containing redband trout.

2. Objective: Work cooperatively with state and federal land management agencies and grazing permittees to improve riparian and aquatic habitats.

Program: Establish riparian vegetation objectives in management plans capable of protecting streambanks and riparian areas during high water.

Program: Monitor stations on major tributaries of the Owyhee and Bruneau river systems to determine trends in riparian conditions, aquatic habitat, and fish production.

3. Objective: Increase reservoir fishing opportunities.

Program: Seek opportunities to construct new fishing reservoirs in cooperation with federal, state, and private landowners.

Program: Seek cooperative agreements with private landowners to gain access to existing reservoirs.

Program: Restock reservoirs with appropriate stocks of fish when drought conditions cause fish kills or dewatering.

Program: Renovate reservoirs with undesirable fish populations when they limit the fishery.

4. Objective: Maintain and improve bull trout populations in the Jarbidge River drainage.

Program: Maintain catch-and-release regulations on river and tributaries. Encourage Nevada Division of Wildlife to adopt similar protective regulations.

Program: Support effort by state and federal agencies to remove man-made migration barriers.

Program: Provide information to public on presence, how to identify, and how to release bull trout.

Drainage: OWYHEE RIVER					
Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Owyhee River (downstream of the South Fork) including tributaries	239/	Mixed	Smallmouth bass Rainbow trout	General	Maintain high catch rates for large fish. Monitor fishery to determine need for restrictive regulations. Evaluate current growth, size and age structure, and exploitation. Evaluate potential response to special regulations and public desire for quality management. Maintain wild redband populations.
North Fork Owyhee River, including tributaries	61/	Coldwater	Rainbow trout	General	Evaluate potential response to special regulations and public desire for quality management. If appropriate, impose quality trout and bass regulation. Maintain wild redband populations.
South Fork Owyhee River, including tributaries	95/	Mixed	Smallmouth bass Rainbow trout	General	Maintain high catch rates for large size. Monitor fishery to determine need for restrictive regulations. Evaluate current growth, size and age structure, and exploitation. Evaluate potential response to special regulations and public desire for quality management. If appropriate, impose quality trout and bass regulation. Maintain wild redband populations. Work with Nevada Fish and Game to avoid stocking trout that pose a threat to the future of redband trout.
Owyhee River (South Fork to Nevada state line), including tributaries (except Deep Creek, Battle Creek, and Blue Creek	12/	Mixed	Smallmouth bass Rainbow trout	General	Evaluate current growth, size and age structure, and exploitation. Evaluate potential response to special regulations and public desire for quality management. If appropriate, impose quality trout and bass regulation. Maintain wild redband trout populations.
Deep Creek, including tributaries	142/	Coldwater	Rainbow trout	General	Evaluate current growth, size and age structure, and exploitation. Evaluate potential response to special regulations and public desire for quality management. If appropriate, impose quality trout and bass regulation. Maintain wild redband trout populations.
Battle Creek, including tributaries	103/	Coldwater	Rainbow trout	General	Evaluate current growth, size and age structure, and exploitation. Evaluate potential response to special regulations and public desire for quality management. If appropriate, impose quality trout and bass regulation. Maintain wild redband trout populations.
Blue Creek, including tributaries	139/	Coldwater	Rainbow trout Cutthroat trout	General	Investigate feasibility of treating drainage above reservoir to eliminate squawfish.
Juniper Basin Reservoir	/200	Warmwater	White crappie	General	Work with BLM to excavate a deeper area to carry over fish during low water periods. Stock with white crappie and restock after low water years.
Blue Creek Reservoir	/131	Coldwater	Rainbow trout	General	Stock with redband trout following low water years. Manage for preservation of redband trout from Blue Creek Reservoir upstream. Sample periodically.

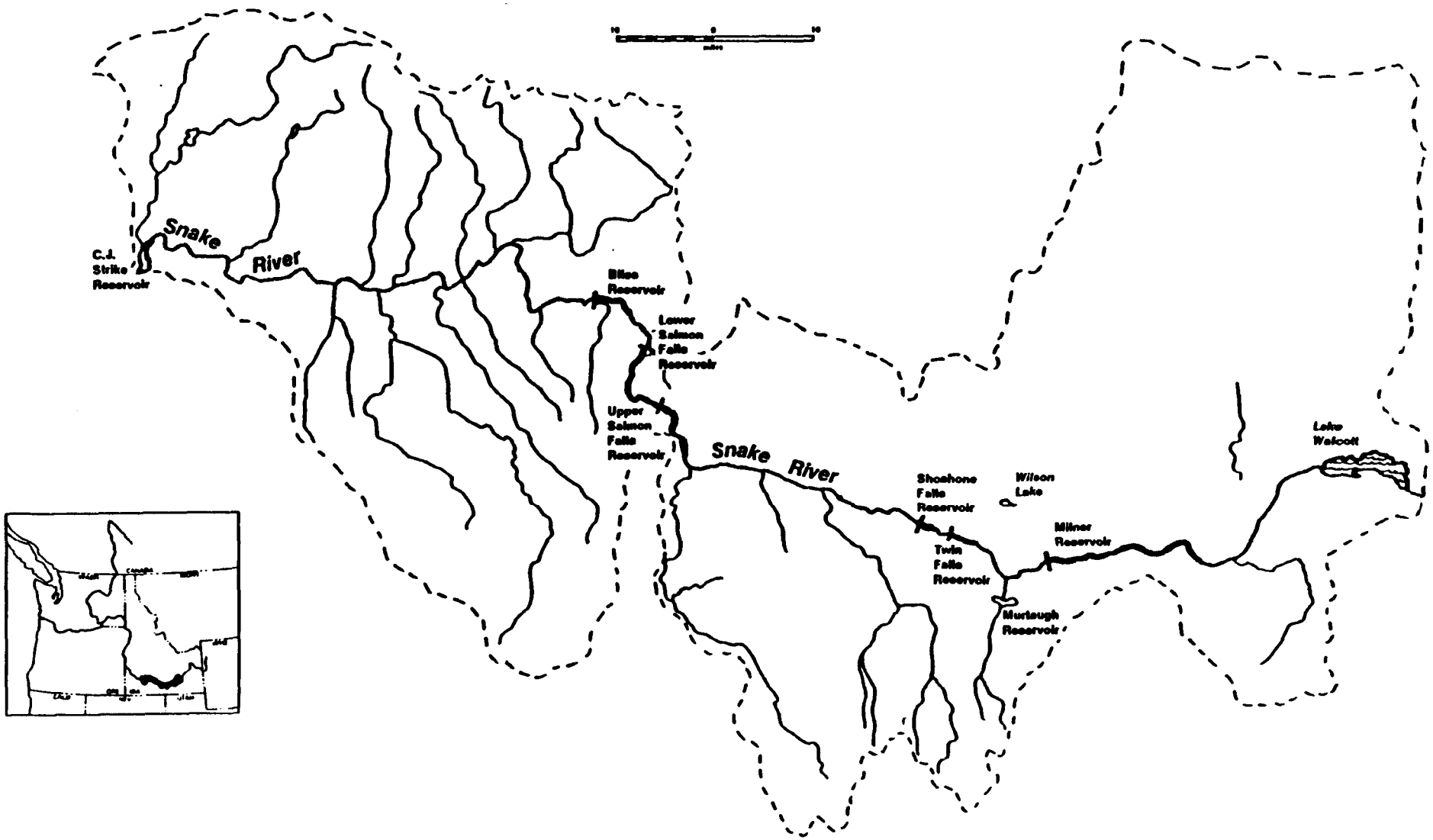
Little Blue Creek Reservoir	/188	Coldwater	Cutthroat trout	General	Manage for broodstock source of Lake Lenore strain of Lahontan cutthroat trout. Allow 25 pairs of spawners to ascend Little Blue Creek to naturally spawn in the inlet stream.
Grasmere Reservoir	/213	Coldwater	Rainbow trout Cutthroat trout	General	Sample periodically:
Mary's Creek Reservoir (Snow Creek Reservoir)	/120	Coldwater	Rainbow trout	General	Treat with rotenone and restock with redband trout.
Shoofly Reservoir	/85	Coldwater	Cutthroat trout	General	Manage as a broodstock lake for Lahontan cutthroat trout. Stock annually with Lake Lenore strain of Lahontan cutthroat fingerlings. Sample periodically.
Bybee Reservoir	/70	Coldwater	Cutthroat trout	General	Stock annually with Lake Lenore strain of Lahontan cutthroat trout fingerlings. Sample periodically.
Payne Creek Reservoir	/55	Coldwater	Cutthroat trout	General	Stock annually with Lahontan cutthroat trout. Sample periodically.
Squaw Creek Reservoir	/80	Mixed	Rainbow trout Largemouth bass	General	Investigate treatment of reservoir and reservoir upstream on Duck Valley Indian Reservation to eliminate squawfish. Stock annually with redband trout fingerlings. Eliminate largemouth bass with treatment.

Drainage: BRUNEAU RIVER

Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Bruneau River (mouth to upper diversion dam)	10/	Warmwater	Smallmouth bass Channel catfish	General	Manage for smallmouth bass and channel catfish fishery. Study water temperatures.
Bruneau River from upper diversion dam to West Fork, including tributaries (except below)	314/	Coldwater	Redband/rainbow trout Mountain whitefish Bull trout	Wild trout Preservation	Manage for redband trout and bull trout. Access limited by deeply incised canyon. Work with BLM and private land owners to improve riparian habitat. Closed to harvest.
East Fork Bruneau River (Clover Creek) and tributaries	165/	Coldwater	Redband/rainbow trout Brook trout Mountain whitefish Bull trout	Wild trout Preservation	Maintain wild trout populations and investigate status of bull trout. Work to improve riparian habitats. Closed to harvest.
Sheep Creek (including Mary's Creek)	143/	Coldwater	Redband/rainbow trout	General	Maintain existing populations of redband trout.
West Fork Bruneau River and tributaries	103/	Coldwater	Redband/rainbow trout Mountain whitefish Bull trout	Wild trout Preservation	Manage for native redband trout and bull trout and work with Nevada Fish and Game to eliminate stocking of trout that would threaten future of redband trout. Evaluate current growth, size and age structure, and exploitation. Evaluate potential response to special regulations and public desire for quality management. If appropriate, impose quality regulation. Closed to harvest.
Jarbidge River and tributaries	87/	Coldwater	Bull trout Redband/rainbow trout Mountain whitefish	Wild trout	Maintain wild populations of native trout. Monitor bull trout population to determine if more restrictive regulations are needed. Catch rate of 1.0 fish/hour.

Snake River Drainage

C.J. Strike Reservoir to Lake Walcott



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22. (MAIN SNAKE RIVER - C.J. STRIKE **RESERVOIR** TO LAKE WALCOTT A.

Overview

With the exception of spawning areas, trout habitat in the main Snake River is good throughout most of the free-flowing reaches between C.J. Strike Reservoir and Lake Walcott. It is especially good in the section between Milner Dam and King Hill, where **large** amounts of spring flow **are** discharged into the **Snake** River from the **Snake** River Plain aquifer. An **approximate average** discharge of 5,900 cfs (4.3 million **acre-feet/year)** flows from these springs along the north **bank** of the **Snake** River. These springs include 11 of the 65 springs in the United States which have an **average** discharge **exceeding** 100 cfs. **Water** quality from **these** springs has **been** excellent, but continuing **development of the** springs **by commercial** fish farmers is lowering water quality in the river. Additional water quality problems are occurring in the river and **tributaries** from **excessive** nutrients **and** sediments from agricultural **and** municipal discharges. **Due to** these discharges, **low** dissolved **oxygen** levels **at** night has **been** a **problem, along** with **excessive vegetation along** portions **of the** river.

Trophy size trout are caught in portions of the Snake River, such as the areas below Minidoka Dam and Upper Salmon Falls Dam. Species of trout present are rainbow, brown, cutthroat, and rainbow x cutthroat hybrids. The cutthroat trout and rainbow x cutthroat hybrids are found mainly in the area between Milner Dam and Twin Falls Dam, an area seriously impacted by low flows during the irrigation season. Many of these hybrid trout attain large sizes, some reaching weights of over 6 pounds. Vinyard Creek, an aquifer spring entering the Snake River on the north side just above Twin Falls, is the major spawning area for cutthroat trout and the rainbow x cutthroat hybrid trout.

Many of the minor tributary streams entering the Snake River also contain good trout habitat and support good populations of wild trout, primarily rainbow. Some of the streams, especially the springs, are utilized for spawning by trout from the Snake River.

The main Snake River contains seven reservoirs which are suitable in varying degrees for trout; Bliss, Lower and Upper Salmon Falls, Shoshone Falls, Twin Falls, Milner, and Lake Walcott. The trout fishery in Lower Salmon Falls Reservoir is the best of the six reservoirs, with the fishery being supported by releases of hatchery rainbow trout. During extreme high or low water years in the Snake River, flushing or peaking action may reduce reservoir productivity and cause stocked fish to emigrate from Snake River reservoirs. Many of the smaller lakes, ponds, and reservoirs close to the Snake River are also highly suitable for rainbow trout.

White sturgeon are found in varying numbers throughout the Snake River from Shoshone Falls downstream. The best sturgeon **population,** however, occurs in the free-flowing river section between Bliss Dam and C.J. Strike Reservoir, where they are successfully reproducing. However, reproduction may be declining in low water years. Recent **studies** have **shown sturgeon** grow at a rapid **rate** in this **area** with some reaching lengths of over 9 feet. Angler interest in this species is high and they are regarded as exceptionally desirable, even though the fishery is on a catch-and-release

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basis. With the development of sturgeon culture techniques using native broodstock, populations can be enhanced in free-flowing areas between Shoshone Falls and Bliss Dam.

Areas with warmwater fisheries are fairly numerous in the main Snake River and minor tributary drainages, but a great demand exists for more waters of this type in the populated portions of the drainage. Major warmwater species present in the Snake River and surrounding waters are largemouth and smallmouth bass, bluegill, brown bullhead, channel catfish, and yellow perch. Channel catfish plantings were made almost annually in the main Snake River in this area between 1965 and 1972. Periodic plantings have been made in the Snake River and nearby waters since 1972, and self-sustaining populations have become established between Bliss Dam and C.J. Strike Reservoir. Emerald Lake near Burley has been stocked with channel catfish fry for a number of years, and the plantings are showing great promise. Growth of these fish has been good and a 20-pound channel catfish was caught in May of 1982. Bullhead angling is excellent in Wilson Lake where the fish reach sizes over 2 pounds. Good populations of largemouth and smallmouth bass are found in impoundments on the Snake River, and some waters in the Hagerman area produce good angling for large bluegill.

Numerous major hydropower facilities, which would seriously jeopardize the existing trout and sturgeon fisheries, have been proposed on the main Snake River in this area. Hydropower facilities proposed on tributary streams would also have impacts on trout fisheries by reducing access for spawning trout and reduced stream flows.

The Snake River has the greatest potential for increasing angler opportunity of any major water in the southern portion of Idaho. Lack of flows, especially during irrigation season, apparently deteriorating water quality, and loss of spawning areas appear to be the factors most significantly affecting fish populations in the Snake River. Should water become available, every effort should be made to improve summer flows.

Drainage: SNAKE RIVER - C.J. STRIKE RESERVOIR TO LAKE WALCOTT					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Snake River from Loveridge Bridge to Bliss Dam	47.3/	Mixed	Sturgeon	Preservation	Maintain catch-and-release regulation on sturgeon unless studies indicate otherwise. Emphasize high quality sturgeon fishery and habitat protection.
			Rainbow trout Brown trout Mountain whitefish Channel catfish Smallmouth bass Largemouth bass Yellow perch	General	Investigate potential of fingerling stocking to improve trout fishery. Determine if stocking is necessary to maintain fishery for catfish. Improve angler access.
Bliss Reservoir	5/625	Warmwater	Largemouth bass Smallmouth bass Channel catfish Black crappie	General	Investigate feasibility of other warmwater species in the reservoir.
Backwaters of Bliss Pool to Lower Salmon Falls Dam	8/	Mixed	Sturgeon	Preservation	Maintain catch-and-release regulation on sturgeon unless studies indicate otherwise. Evaluate sturgeon stocked from experimental program to improve sturgeon fishing opportunity.
			Rainbow trout Brown trout	Trophy	Continue to investigate potential of stocking fingerlings or subcatchable trout to improve trout fishing. Consider experimenting with other strains or species of trout.
			Mountain whitefish Channel catfish Smallmouth bass Largemouth bass Yellow perch	General	Evaluate potential for quality or trophy fishery and implement a program if socially and biologically acceptable.
Lower Salmon Falls Reservoir	7/420	Mixed	Rainbow trout Largemouth bass Channel catfish Bluegill	General	Continue annual rainbow stockings in the Bell Rapids area. Consider use of other strains or species. Study feasibility and stock if studies so indicate. Evaluate potential for quality or trophy fishery and implement program if socially and biologically acceptable.
Upper Salmon Falls Reservoir	5/648	Mixed	Rainbow trout Largemouth bass Smallmouth bass Channel catfish	General	Investigate potential for improving fishery stocking fingerling and catchable trout.

Backwaters of Upper Salmon Falls Reservoir to Shoshone Falls, also flowing water between upper and lower Salmon Falls dams	30.4/	Mixed	Sturgeon Rainbow trout Brown trout Mountain whitefish Channel catfish Largemouth bass Smallmouth bass Yellow perch	Preservation General .	Maintain catch-and-release regulation on sturgeon unless studies indicate otherwise. Stock juvenile sturgeon to improve populations over entire reach. Maintain Dolman Rapids as large-size trout water. Strongly oppose proposed hydropower projects which may jeopardize fisheries. Investigate potential for improving trout fishery with fingerling plants. Stock channel catfish to improve warmwater opportunities. Improve access. Work to improve summer flows.
Shoshone Falls Reservoir	1.2/60	Mixed	Rainbow trout Cutthroat trout Smallmouth bass	General	Investigate potential of catchable rainbow trout to provide fishery in high turnover reservoir. Consider stocking smallmouth bass.
Backwaters of Shoshone Falls Reservoir to Twin Falls Dam	1/	Mixed	Rainbow trout Cutthroat trout Smallmouth bass	General	Manage as a yield fishery with approximate catch rate of 0.5 fish/hour.
Twin Falls Reservoir	1/96	Coldwater	Cutthroat trout Rainbow trout Rainbow x cutthroat hybrids	General	Emphasize protection of native cutthroat trout and rainbow x cutthroat hybrid populations. Oppose any project which would increase size of reservoir. Manage as a unit with reach upstream to Murtaugh Bridge.
Backwaters of Twin Falls Reservoir to Murtaugh Bridge	11.6/	Coldwater	Cutthroat trout Rainbow x cutthroat hybrids Rainbow trout	General	Stock fingerling cutthroat trout if necessary to improve recruitment. Emphasize maintenance of trophy fishery. Evaluate potential for improved trout management with special regulations. Evaluate potential for developing smallmouth bass fishery. Work to improve summer flows.
Murtaugh Bridge to Milner Dam	8.5/	Coldwater	Cutthroat trout Rainbow trout	General	Work on improving habitat through improved flow management. Evaluate potential for spawning in Dry Creek. Determine need for hatchery program in IPC bypass reach.
Milner Reservoir	22/3,000	Warmwater	Smallmouth bass Largemouth bass Channel catfish	General	Emphasize establishment of self-sustaining warmwater fish species. Continue stockings of channel or blue catfish. Improve warmwater fish habitat by placing cover structures on reservoir bottom.
Backwaters of Milner Reservoir to Minidoka Dam	5.1/	Coldwater	Cutthroat trout Rainbow trout Brown trout	General	Use fingerling program to improve recruitment. Stocking in Lake Walcott may need to be increased to improve downstream fishery. Maintain catch rate of 0.5 fish/hour. Work to improve flow management.
Lake Walcott (Minidoka Reservoir)	14/11,850	Mixed	Rainbow trout Cutthroat trout Yellow perch Brown bullhead Smallmouth bass Largemouth bass	General	Stock fingerling rainbow trout on an annual basis. Monitor bass populations and adjust management direction to conform with findings. Stock crappie and evaluate.

Billingsley Creek from mouth to Tupper Grade Crossing	5.5/	Coldwater	Rainbow trout Brown trout	General	Evaluate annual stocking of brown trout fry. Oppose impacts of any future commercial fish rearing operations. Place necessary requirements on any proposed hydropower projects to protect fisheries and wildlife values. Maintain catch rate of approximately 0.5 trout/hour.
Billingsley Creek from Tupper Grade Crossing to Vader Grade	2.5/	Coldwater	Rainbow trout Brown trout	Trophy	Manage as high-quality trophy fishery. Maintain catch rate of approximately 1.0 trout/hour. Fly fishing only as condition of free public access.
Billingsley Creek from Vader Grade Crossing to headwaters	1/	Coldwater	Rainbow trout	Wild trout	Maintain catch rate of approximately 1.0 trout/hour.
Riley Creek	2.5/	Coldwater	Rainbow trout	Put-and-take trout	Maintain wild trout populations between state and national hatcheries with maximum harvest to reduce disease potentials at hatchery. Manage lower portion in conjunction with other WMA waters. Regular stocking in impoundment.
Deep Creek, mouth to Twin Falls Highline Canal	16/	Coldwater	Rainbow trout	General	Manage as yield fishery. Maintain satisfactory instream flow.
Mud Creek	8/	Coldwater	Rainbow trout	General	Maintain adequate minimum instream flows.
Cedar Draw Creek from mouth to Twin Falls Highline Canal	12/	Coldwater	Rainbow trout Brown trout	General	Continue assistance with state, federal, and private personnel on clean water project on stream. Maintain adequate minimum instream flows and other environmental protection an hydro sites and fish hatcheries. Reintroduce wild rainbow trout above lower hatchery diversion and install ladder.
Cedar Draw Creek from Highline Canal to headwaters	2/	Coldwater	Rainbow trout Brown trout	General	Continue assistance on ongoing clean water project.
Perrine Coulee	2/	Coldwater	Rainbow trout	Put-and-take trout	Put-and-take for rainbow trout.
All other streams in drainage except Salmon Falls, Rock, and Goose creeks and Raft River drainages	166/	Mixed	Rainbow trout Cutthroat trout Rainbow x cutthroat hybrid Brown trout Redband trout Smallmouth bass Largemouth bass Bluegill	General	Manage for yield fishery. Evaluate potential of areas for put-and-take fisheries. .
Bruneau Sand Dunes lakes	/100	Warmwater	Largemouth bass Channel catfish Bluegill	Trophy General	Identify site for and develop trophy bass water. Make periodic stockings of channel and/or blue catfish to increase numbers. Cooperate with State Parks in promoting fishery. Maintain water levels with pumping program.
Blair Trail Diversion Reservoir	/15	Mixed	Rainbow trout Bluegill	Put-and-take trout	Put-and-take fishery. Consider stocking largemouth bass.

Morrow Reservoir	/60	Warmwater	Largemouth bass Bluegill Brown bullhead Black crappie	General	Manage as yield fishery.
Pioneer (Clover Creek) Reservoir	/220	Warmwater	Largemouth bass Bluegill Bullhead	General	Rotenone reservoir and portions of tributaries to eliminate extremely high carp populations. Use drawdown to manage bluegill populations. Develop boat access. Investigate methods to increase capacity.
Bray Lake	/204	Mixed	Rainbow trout Cutthroat trout Channel catfish	General	Work with landowners to acquire minimum reservoir level. Experimental stocking with indigenous redband trout from Dry Creek. Introduce forage such as mountain suckers. Evaluate potential for trophy fishery. Stop stocking channel catfish until suitable forage is established.
Frank Oster lakes, effluent lagoon, and Riley Creek impoundments	/30	Mixed	Rainbow trout Largemouth bass Bluegill	Put-and-take trout General	Seasons established around waterfowl needs. No motors water. Maintain catch rate of 0.7 fish/hour with catchable rainbow trout. Seasons established around waterfowl needs. No motors water.
All other lakes and ponds on the Hagerman Wildlife Management Area	/35	Mixed	Rainbow trout Largemouth bass Bluegill Channel catfish	Put-and-take trout General	No motors water. Continue dredging operation to improve habitat in cooperation with land management personnel. Maintain catch rate of approximately 0.5 fish/hour. Continue dredging operations to improve habitat. Improve bluegill spawning habitat. No motors water. Maintain July 1 opener. Consider West Highway Pond for improved water quality and trophy bass.
Niagara Springs Wildlife Management Area ponds	/8	Coldwater	Rainbow trout	Wild trout	Explore potential for creating quality or trophy fishing opportunity. Manage for catch rates of 1.0 fish/hour.
Crystal Lake	/8	Coldwater	Rainbow trout	Put-and-take trout	Put-and-take for 1.0 fish/hour catch rate. Continue cooperative program with Clear Springs Trout Company to stock fish.
Scott Pond	/1	Coldwater	Rainbow trout	Put-and-take trout	Consider developing self-sustaining brook trout population. Plant catchable rainbow trout on an annual basis. Enlarge existing pond area for trout if funds are available.
Dierkes Lake	/100	Mixed	Rainbow trout Largemouth bass Bluegill	Put-and-take trout Trophy	Put-and-take for rainbow trout. Evaluate stocking program. Work to improve bass/bluegill fishery. Consider smallmouth bass introduction. Monitor trophy bass regulation to improve bluegill population structure.
Murtaugh Reservoir	/827	Warmwater	Channel catfish Yellow perch Brown bullhead	General	Low winter pool limits fishery potential. Consider developing seasonal fishery using catchable-sized warmwater fish stocked during irrigation season on experimental basis.

Wilson Lake	/484	Warmwater	Brown bullhead Yellow perch Channel catfish Largemouth bass	General	Experimentally stock channel and/or blue catfish in lake periodically and evaluate. Continue to emphasize high quality bullhead angling in the lake. Consider other introductions, including tiger muskie, smallmouth bass, and bluegill
Emerald Lake	/30	Mixed	Rainbow trout Channel catfish Largemouth bass Bluegill	Put-and-take trout General	Stock regularly with hatchery rainbow trout as needed to maintain catch rate of approximately 0.7 fish/hour.
Freedom Park Pond	/1	Coldwater	Rainbow trout	Put-and-take trout	Put-and-take fishery for rainbow trout. Consider establishing as a juvenile-only water.
Thousand Springs Nature Conservancy Area	2/	Coldwater	Rainbow trout Shoshone sculpin	Wild trout Preservation	Preserve unique aesthetic qualities of area. Manage for native wild trout and Shoshone sculpin.
Box Canyon Springs	1.2/	Coldwater	Rainbow trout Shoshone sculpin	Wild trout Preservation	Preserve unique aesthetic qualities of stream. Maintain adequate instream flow for aquatic life and riparian habitat. Maintain *very* high standards for protection of stream environment which could be impacted by a proposed hydropower project and/or fish hatchery developments.
Banbury Springs	0.2/	Coldwater	Rainbow trout Shoshone sculpin	Wild trout Preservation	Preserve unique aesthetic qualities of area and oppose development which would adversely impact area. Manage on a wild trout basis, with approximate catch rate of 1.0 fish/hour. Maintain adequate instream flow in all stream channels. Preserve Shoshone sculpin.
All other aquifer spring in Gooding County	10/	Coldwater	Rainbow trout	General	Manage as yield fishery. Maintain catch rate of approximately 1.0 fish/hour. Preserve quality of undeveloped aquifer springs.
Devil's Corral Springs	1/	Coldwater	Rainbow trout	Wild trout	Preserve aesthetic qualities of area.
Vinyard Creek	0.5/	Coldwater	Cutthroat trout Rainbow trout Rainbow x cutthroat hybrids	Wild trout	Preserve aesthetic qualities of area. Work with appropriate agencies and private landowners to eliminate irrigation water from lower portion of creek. Strongly oppose any development of trails into area. Protect unique population of cutthroat and hybrid trout which spawn and rear in stream. Strongly oppose any project which would raise height of Twin Falls Dam and inundate Vinyard Creek. Manage for 1.0 fish/hour; change regulations if necessary.
All other aquifer springs in Jerome County	0.2/	Coldwater	Rainbow trout	Wild trout	Manage as yield fishery.

DRAINAGE.2

Big Wood River Drainage

23. BIG WOOD RIVER DRAINAGE

A. Overview

The Wood River basin has a drainage area of over 2,990 square miles. Major drainages in the Wood River system are the Big Wood and Little Wood rivers. At its lower end, the Big Wood River is also known as Malad River. Flows from the Wood River drainage are controlled for irrigation and flood control by four major reservoirs: Magic, Little Wood River, Fish Creek, and Mormon. **Approximately** 144,000 acres are irrigated from reservoir **storage** and other diversions. Recent hydroelectric **power developments** are currently in operation at Magic Dam, Little Wood River Dam, the confluence of the Big Wood and Little Wood rivers, the Little Wood near Shoshone, and the Malad River dams. Additional hydropower facilities are **proposed** for the Malad River near the Malad Gorge State Park.

This drainage contains the most productive trout streams, lake, and reservoir habitat in south central Idaho. Nearly all the major rivers, streams, lakes, reservoirs, and ponds are suitable for trout. Rainbow trout are the most important game fish species in the drainage, but the lower Little Wood River and lower Silver Creek support excellent brown trout **populations,** and portions of the drainage sustain high **populations** of **brook** trout. Brown trout have **established** wild **populations** in the Big Wood River in the section from the **backwaters** of Magic Reservoir to **about Stanton** Crossing, and significant and steadily increasing numbers of brown trout are now found in the reservoir. No significant **populations** of wild trout are found in any of the major reservoirs of the drainage, and the trout fisheries are largely **dependent** on annual plantings of hatchery fish. Trout fisheries in the larger reservoirs are normally **maintained** by fingerling planting but **receive catchable** plants following droughts or heavy drawdown periods. Wild trout **populations** varying from fair to excellent are found in most of the streams in the drainage. Excellent **populations** of wild trophy **rainbow** trout are found in the Big **Wood** River **between** Magic Dam and the Richfield Canal in good water years; and in Silver Creek and its main tributaries. During good water years, trophy **rainbow** trout are **produced** in Richfield Canal. The Big **Wood** River **from Hailey to Ketchum has the potential to produce trophy rainbow trout with restrictive** fishing **regulations. Both** wild **and hatchery brown trout** (fry and fingerling plants) reach trophy size in the lower Little Wood River and lower Silver Creek. Wild trout populations are **supplemented** with **catchable rainbow** trout plants in portions of **several heavily fished streams. Loss of habitat from floodplain development, irrigation diversions, livestock grazing, and hydropower development has negatively impacted** fish **populations.**

Good populations of warmwater game fish **are found** in many waters of the Wood River drainage, mainly in reservoirs, lakes, and ponds. The principal warmwater fish species present are yellow perch, largemouth and smallmouth bass, and bluegill.

Angler pressure is very high in portions of the **drainage.** One of the most intensely fished stream sections in the area is the Big Wood River between Gimlet and the mouth of Prairie Creek. An increasing demand by anglers for more trophy fisheries has led to establishing more restrictive regulations on the Big Wood River and Silver Creek. Magic

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DRAINAGE.2

Reservoir is the largest reservoir in the drainage and receives the highest angler pressure of any water in the Magic Valley Region.

There are 16 alpine lakes which support fish in this drainage. These lakes are all relatively productive, and most of them support high quality rainbow trout and cutthroat trout angling. The lakes are normally stocked by helicopter every third year. Experimental Arctic grayling plants have been made in one alpine lake in the drainage and have done very well. Baker Lake is managed with a trophy trout regulation to provide anglers with the opportunity to have a quality alpine lake fishery.

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DRAINAGE.2

Drainage: BIG WOOD RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Big Wood (Malad) River from mouth to 1-84 Bridge	3/	Mixed	Rainbow trout Smallmouth bass	Wild trout General	Wild trout populations. Maintain catch rates at 0.7 fish/hour. Consider stocking Idaho Power impoundments with an adipose fin regulation. Oppose further hydropower development.
Big Wood River from 1-84 Bridge to Richfield Canal Diversion	60/	Mixed	Rainbow trout Smallmouth bass	General	Evaluate potential of hydro mitigation ponds for put-and-take fishery. Maintain smallmouth bass fishery.
Big Wood River from Richfield Canal diversion upstream to Magic Dam	3/	Coldwater	Rainbow trout Brown trout	General	Maintain trophy size of fish and achieve catch rates of 0.7 fish/hour. Change management if fishery not maintained under current conditions. Work to maintain minimum flow for fish survival.
Big Wood River from Magic Reservoir upstream to Glendale diversion	14/	Coldwater	Rainbow trout Brown trout Brook trout	General	Establish catch rate goals based on ability to get year-round water.
Big Wood River from Glendale diversion upstream to Mile 122 Bridge on Highway 75	12/	Coldwater	Rainbow trout Mountain whitefish Brook trout	Quality	Improve habitat and river stability using native woody material where possible. Oppose further flood plain development. Catch rate goal of 1.0 fish/hour. Evaluate new regulations.
Big Wood River from Mile 122 Bridge on Highway 75 upstream to mouth of North Fork	14/	Coldwater	Rainbow trout Mountain whitefish Brook trout	Trophy	Wild trout water, catch-and-release. Improve habitat and river stability using native woody material where possible. Oppose further floodplain development. Maintain catch rate 1.0 fish/hour. Evaluate new regulations.
Big Wood River from mouth of North Fork to headwaters	18/	Coldwater	Rainbow trout Brook trout Mountain whitefish	Put-and-take trout	Yield fishery for wild and hatchery trout and mountain whitefish. Maintain catch rate of 0.7 fish/hour.
Trail Creek mouth to Wilson Creek	9/	Coldwater	Rainbow trout Brook trout	Put-and-take trout	Stock with catchable rainbow trout to provide catch rates of 0.7 fish/hour. Work to provide fish passage for Big Wood River spawners.
Warm Springs Creek from mouth to Rooks Creek campground	11/	Coldwater	Rainbow trout Brook trout	Put-and-take trout	Stock with catchable rainbow trout to provide catch rates of 0.7 fish/hour. Evaluate potential of wild trout only status.
Richfield Canal	14/	Coldwater	Rainbow trout	General	Stock fish in low water years to provide 0.5 fish/hour.
Little Wood River from mouth to Shoshone (Milner-Gooding Canal)	18/	Warmwater	Smallmouth bass	General	Maintain as smallmouth bass fishery with catch rate of 0.5 fish/hour.
Little Wood River from Shoshone to Dietrich diversion dam	17/	Coldwater	Rainbow trout Brown trout	Put-and-take trout	Stock hatchery rainbow trout in potential high use areas to increase opportunity. Work to provide year-round flows for this reach.

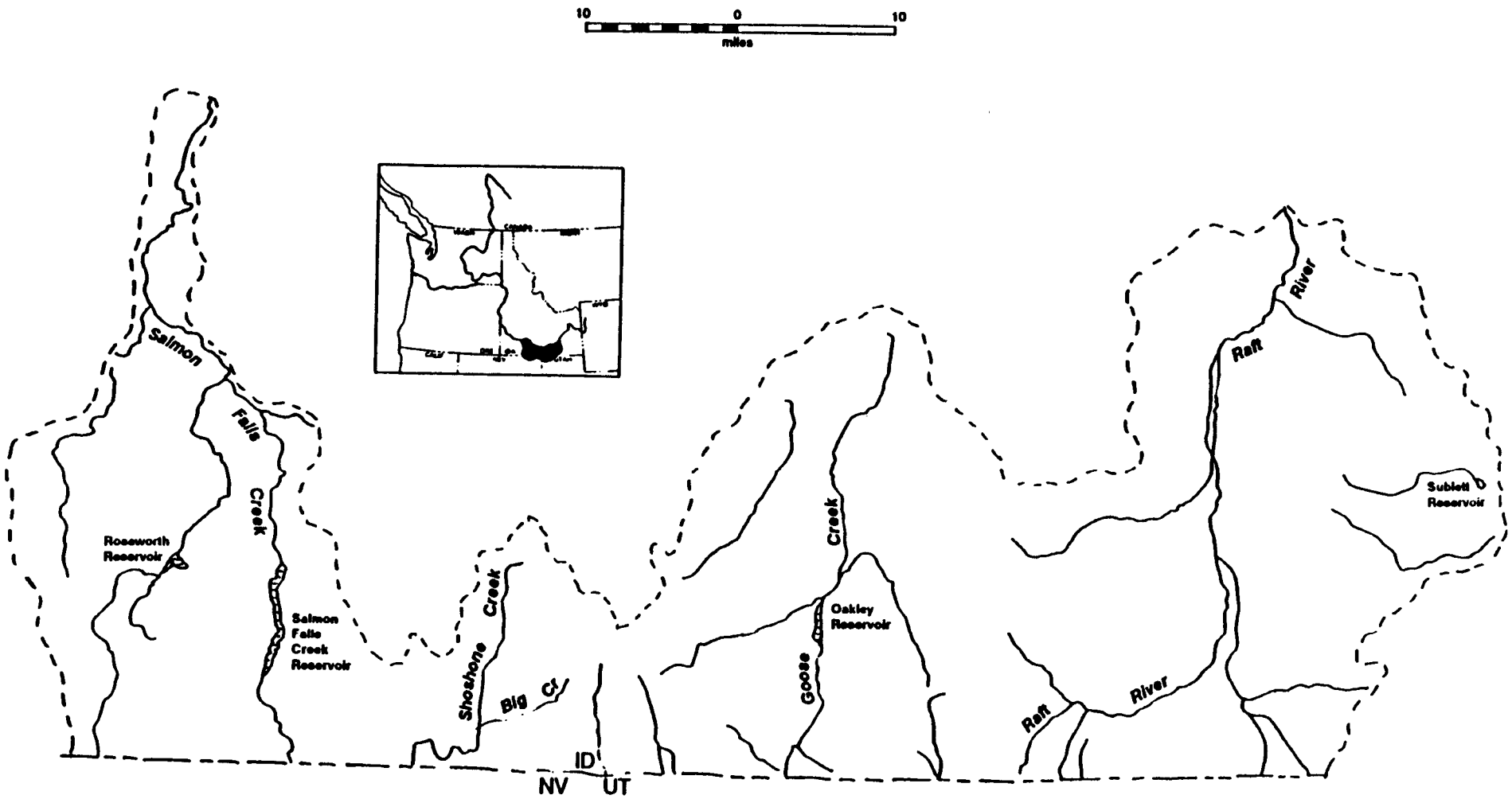
Little Wood River from Dietrich diversion dam to downstream boundary of Bear Track Williams State Recreation Area	10/	Coldwater	Rainbow trout Brown trout	General	Brown and rainbow trout fishery with catch rate of 0.7 trout/hour. Make supplemental plantings of brown trout as needed and evaluate. Develop habitat improvement program in conjunction with BLM. Reverse declining trend of rainbow trout. Experimentally stock redband trout or similar strains and evaluate performance.
Little Wood River through Bear Track Williams State Recreation Area	3/	Coldwater	Rainbow trout Brown trout	Trophy	Quality brown and rainbow trout fishery with catch rate of 1.0 fish/hour. Fly fishing only, catch-and-release basis as an access stipulation. Improve riparian conditions.
Little Wood River from upper boundary Bear Track Williams State Recreation Area to mouth of Silver Creek	4/	Coldwater	Rainbow trout Brown trout	General	Brown and rainbow trout fishery with catch rate of 0.7 fish/hour. Make supplemental stockings of brown trout fry as needed and evaluate. Develop improvement program in conjunction habitat with BLM. Reverse declining trend of rainbow trout.
Little Wood River from mouth of Silver Creek to canal diversions north of Carey	13/	Coldwater	Rainbow trout Brown trout	General	Support proposed instream flow through area to improve fishery.
Little Wood River from canal diversions to dam	3/	Coldwater	Rainbow trout Brown trout	Put-and-take trout	Stock hatchery rainbow trout to provide fishery and evaluate. Work for year-round flow downstream to diversions.
Little Wood River from Little Wood Reservoir upstream to second bridge	2/	Coldwater	Rainbow trout	Put-and-take trout	Continue stocking program in high use area at campground.
Little Wood River from second bridge above Little Wood Reservoir to headwaters	20/	Coldwater	Rainbow trout Brook trout	Wild trout	Maintain wild trout fishery with catch rates of 1.0 fish/hour.
Silver Creek from mouth upstream to county road bridge near Picabo	14/	Coldwater	Rainbow trout Brown trout	Wild trout	Wild trout fishery with average catch rate of 0.7 fish/hour. Maintain or improve rainbow trout population. Improve riparian habitat.
Silver Creek from county road bridge north of Picabo to Highway 20 Bridge at Milepost 187	6/	Coldwater	Rainbow trout Brown trout Mountain whitefish	Quality	Catch rate of 1.0 fish/hour. Improve riparian habitat.
Silver Creek and tributaries upstream of Highway 20 Bridge at Milepost 187 Bridge and Sullivan Lake within Nature Conservancy property	8.5/	Coldwater	Rainbow trout Brown trout Mountain whitefish	Trophy	Catch-and-release. Fly fishing only on Nature Conservancy as access stipulation. Maintain catch rate of 1.0 fish/hour.
Stalker Creek from public fishing portion of Nature Conservancy property upstream (including tributaries)	10/	Coldwater	Rainbow trout Brook trout Brown trout	Wild trout	Catch rates of 1.0 fish/hour. Inform landowners/developers of need for maintaining habitat.

Loving Creek, from Nature Conservancy boundary upstream to headwaters, except Hayspur Hatchery grounds	3/	Coldwater	Rainbow trout Brook trout Brown trout	General	Maintain catch rate of 0.7 fish/hour.
Loving Creek, Hayspur Hatchery grounds	1/	Coldwater	Rainbow trout Brown trout Brook trout	Trophy	Continue to develop habitat for trophy fishery in new stream channel. Catch rates of 1.0 fish/hour.
Gavers Lagoon	/1	Coldwater	Rainbow trout	Put-and-take trout	Stock with catchable rainbow trout and occasional broodstock culls. Provide catch rate of 1.0 fish/hour.
Grove Creek	5/	Coldwater	Rainbow trout Brook trout Brown trout	Wild trout	Catch rate of 0.7 fish/hour.
Camas Creek	50/	Coldwater	Rainbow trout Brown trout	General	Investigate potential for fishery development. Improve habitat where feasible to increase carrying capacity.
All other streams in Big Wood River drainage	265/	Coldwater	Rainbow trout Brook trout Brown trout	Wild trout	Maintain or improve existing habitat to increase carrying capacity for resident fish and spawning and rearing of migratory fish. Where habitat is suitable, 1.0 fish/hour.
Irving (Dog Creek) Reservoir	/95	Mixed	Largemouth bass Bluegill Rainbow trout Channel catfish Yellow perch Brown bullhead	General	Supplement warmwater fishery with put-and-take rainbow fishery in winter months. Use tiger muskie to utilize forage species and monitor. Investigate use of water level management to control vegetation and carp reproduction.
Thorn Creek Reservoir	/126	Coldwater	Rainbow trout	General	Cooperate with BLM to improve carryover of water and fish in low water years. Catch rate of 0.7 fish/hour.
Magic Reservoir	/3,776	Mixed	Rainbow trout Brown trout Yellow perch	General	Emphasize rainbow trout fishery with large annual fingerling rainbow stockings and limited catchable rainbow stockings after extreme drawdown. Maintain overall catch rate of 1.0 trout/hour on opening weekend of general season and 0.5 trout/hour through remaining season.
Mormon Reservoir	/2,700	Mixed	Rainbow trout Yellow perch	General	Consider brown trout if forage fish become excessive. Consider quality regulation. Work to acquire minimum pool.
Carey Lake	/200	Warmwater	Largemouth bass Bluegill Yellow perch Brown bullhead	General	Yield warmwater fishery. Conduct fish population and limnological studies of lake to aid in assessing fisheries and to determine management direction. Cooperate with lands to maintain adequate water volume to prevent winterkill.
Little Wood River Reservoir	/575	Coldwater	Rainbow trout	General	Maintain fishery with fingerling and catchable rainbow stocking. Maintain catch rate of 1.0 fish/hour for ice fishery and 0.5 fish/hour in general season.
Fish Creek Reservoir	/516	Coldwater	Rainbow trout	General	Maintain fishery with fingerling and catchable rainbow stockings as determined desirable. Maintain catch rate of 1.5 fish/hour for ice fishery and 0.5 fish/hour during general season.

Lava Lake	/20	Coldwater	Rainbow trout	Put-and-take trout	Evaluate potential for improving fishery with fingerling stocking and restrictive regulations.
Baker Lake	/10	Coldwater	Cutthroat trout	Trophy	Maintain trophy fishing opportunity.
Upper Box Canyon Lake	/2	Coldwater	Brook trout Bull trout	General Preservation	Evaluate bull trout introductions.
All other alpine lakes (total of 14; 2 in Little Wood River drainage and 12 in Big Wood River drainage)	/80	Coldwater	Cutthroat trout Rainbow trout Arctic grayling Brook trout	General	Maintain diverse angling opportunity by stocking different lakes with different species. Stock every three years in cooperation with USFS to provide catch rates of 0.7 fish/hour.

Salmon Falls Creek, Goose Creek, Raft River

and other drainages of the Snake River



24. SALMON FALLS CREEK, GOOSE CREEK, ROCK CREEK, AND RAFT RIVER DRAINAGES

A. Overview

There **are** four major drainages south of the Snake River between C.J. Strike Reservoir and Massacre Rocks - Raft River, Goose Creek, Rock Creek, and Salmon Falls Creek. The four drainages **have a** combined drainage **area** of **over** 6,870 **square** miles. Three major reservoirs, Oakley, Salmon Falls Creek, and Roseworth, and one minor reservoir, Sublett, store water for irrigation and flood control. These reservoirs all support trout fisheries varying from fair to excellent. Sublett has excellent trout reproduction in tributary streams.

All of these **drainages have** streams which **support good** wild trout populations. Species found in different portions of the area are rainbow, cutthroat, brown, and **brook** trout. **Populations** of native cutthroat trout **are** found in the Raft River and **Goose** Creek drainages. Native cutthroat trout **populations** in **some areas have been** declining **as** a result **of** land uses **degrading habitat** and **introduction of** other **species,** particularly rainbow trout. Programs for maintaining or improving existing cutthroat trout **populations** and restoring remnant **populations** will **be emphasized. Leatherside** chub, a species of concern, is **present** in **Goose** and Raft river **drainages.**

Beaver ponds furnish much **valuable** trout **habitat on** many **of** the smaller streams **of** the Raft River **and Goose Creek drainages. Large portions of** streams in the Raft River, **Goose Creek, and Salmon Falls Creek drainages have been degraded by overgrazing** and **poor land use practices** in **past** years.

The lower portions of **Shoshone Creek and** its tributaries **were** chemically **eradicated** in 1972 to **reduce nongame** fish **populations** in **cooperation** with **Nevada Department** of Wildlife. **Rainbow,** brown, **and** cutthroat trout **were** then **reestablished** in the **area.**

Salmon Falls **Creek** Reservoir was **completed** in 1912, **and** until the spring of **1984,** was **considered** a closed system. As a result, it has **received** plantings of many **species** of fish through the years. Record snows in the **drainage** caused the reservoir to fill and spill for the first time in the spring **of 1984. No evidence** has **been found to** indicate that any fish survived the spill below the reservoir. It currently has a greater variety of **game** fish **species** than any other reservoir in the **area. Game species** currently in the reservoir **are rainbow** trout, brown trout, **kokanee,** yellow perch, black crappie,

smallmouth bass, and walleye. Salmonids are maintained by hatchery stocking. **Walleye** and **kokanee are** the two most recent additions, and **both** species **have done** well. With the addition of walleye, numbers of nongame fish have declined and an additional forage species, the spottail shiner, has been introduced to supplement the **forage** base.

The walleye fishery in Salmon Falls Creek Reservoir has been extremely well received and is very popular with a large segment of anglers. A creel census undertaken on the reservoir in the summer of 1983 indicated approximately 1,400 walleye were taken by anglers, and the number taken per year has been steadily increasing. Some walleye in the reservoir are now reaching trophy sizes, with the current state record being a 15-

pound 9-ounce fish caught in 1987. Trout fishing remains good with the stocking of larger catchable rainbow trout instead of fingerings.

Angling pressure varies considerably throughout the drainages. It is high on Roseworth, Sublett, and Salmon Falls Creek reservoirs, but is relatively light on streams in the Salmon Falls Creek and Raft River drainages. Easily accessible streams in the Goose Creek and Rock Creek drainages receive very high use.

There are three alpine lakes which support game fish in the Raft River drainage: the Independence Lakes on Independence Mountain near Oakley, and Lake Cleveland on Mount Harrison. The Independence Lakes have good cutthroat trout and Arctic grayling populations which result from fry plantings. Lake Cleveland is accessible by road, and

the fishery is maintained by catchable rainbow trout stockings.

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Drainage: SALMON FALLS CREEK, ROCK CREEK, GOOSE CREEK, AND RAFT RIVER DRAINAGES					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Salmon Falls Creek from mouth to Balanced Rock Park	26/	Mixed	Rainbow trout Smallmouth bass	Put-and-take trout	Stock catchable rainbow trout at Balanced Rock Park. Allow increased harvest of smallmouth bass by removing minimum length limit.
Salmon Falls Creek from Balanced Rock to Salmon Falls Creek Dam	18/	Mixed	Rainbow trout Brook trout Smallmouth bass	General	Maintain wild trout fishery. Allow increased harvest of smallmouth bass by removing minimum length limit.
From backwaters of Salmon Falls Creek Reservoir to Nevada border	7/	Mixed	Rainbow trout Brown tout Smallmouth bass Walleye	General	Maintain wild trout fishery.
Shoshone Creek from Nevada border to mouth of Big Creek	10/	Coldwater	Rainbow trout Brown trout	Wild trout	Work with USFS and BLM to improve habitat through grazing and beaver management.
Shoshone Creek from mouth of Big Creek to headwaters	12/	Coldwater	Rainbow trout	Wild trout	Work with USFS and BLM to improve habitat through grazing and beaver management.
Big Creek from mouth to headwaters	14/	Coldwater	Rainbow trout Brown trout	Wild trout	Work with USFS and BLM to improve habitat through grazing and beaver management.
All other streams in Salmon Falls Creek drainage	57/	Coldwater	Rainbow trout	Wild trout	Evaluate need for harvest restrictions to maintain native. trout where present.
Salmon Falls Creek Reservoir	/3,400	Mixed	Rainbow trout Kokanee salmon Walleye Yellow perch Smallmouth bass Black crappie	General	Emphasize species diversity. Stock kokanee and catchable rainbow trout. Catch rate of 0.5 fish/hour on salmonids. Monitor effect of walleye on forage fish species.
Roseworth Reservoir (Cedar Creek Reservoir)	/1,500	Coldwater	Rainbow trout	General	Emphasize rainbow trout in reservoir. Improve carryover with fall fingerling plants in good water year. Catch rate of 0.5 fish/hour.
Rock Creek from mouth to Twin Falls Highline Canal	21/	Coldwater	Rainbow trout Brown trout	Put-and-take trout	Continue cooperation with local and state agencies to continue Rock Creek rural clean water projects. Continue annual brown trout stockings. Continue stocking hatchery rainbow at high use sites. Assure adequate minimum instream flows and other environmental protection at hydro sites. Work to improve fish passage. Experiment with rainbow trout fingerlings to improve catch rates to 0.7 fish/hour. Year-round season
Rock creek and tributaries from Twin Falls Highline Canal to headwaters	15/	Coldwater	Rainbow trout Brown trout Brook trout	Put-and-take trout	Continue cooperation on Rock Creek rural clean water project. Improve to approximately 0.7 fish/hour.

Goose Creek from Oakley Reservoir to headwaters (within Idaho)	44/	Coldwater	Cutthroat trout Rainbow trout	Wild trout	Improve quality of cutthroat trout fishery. Improve catch rate to 1.0 fish/hour.
Big Cottonwood Creek from Walls Ranch to headwaters	15/	Coldwater	Cutthroat trout	Wild trout	Place emphasis on cutthroat and preservation of stream habitat. Strongly oppose additional road or trail construction along stream. Maintain catch rate of 1.0 fish/hour.
Oakley Reservoir	/1,350	Mixed	Rainbow trout Cutthroat trout Channel catfish Yellow perch Walleye	General	Maintain catch rate of 0.5 trout/hour. Stock channel catfish. Continue to monitor walleye and spottail shiner populations.
Tributaries to Sublett Reservoir	30/	Coldwater	Cutthroat trout Brown trout Rainbow trout	Wild trout	Manage as a wild trout fishery with emphasis on preservation of stream qualities for spawning and rearing. Emphasis on native cutthroat trout. Continue cooperation with USFS and Sublett Irrigation District to maintain riparian vegetation and protect stream habitat. Maintain catch rate of 1.0 fish/hour.
Sublett Reservoir	/113	Coldwater	Cutthroat trout Rainbow trout Brown trout Kokanee salmon	General	Stock with fall fingerling cutthroat trout. Closely monitor spawning runs of rainbow, cutthroat, and brown trout for spawning success. Experiment with kokanee salmon and evaluate. Maintain close cooperation and coordination with Sublett Irrigation District to assure public access. Catch rate of 0.5 fish/hour.
Cassia Creek from Elba to Conner	5/	Coldwater	Rainbow trout Brook trout Cutthroat trout	Put-and-take trout	Stock and evaluate return to creel. Catch rate 0.7 fish/hour.
Other streams in Raft River and Goose Creek drainages	361/	Coldwater	Cutthroat trout Rainbow trout Brook trout	Wild trout	Emphasize protection of native cutthroat in streams where present. Maintain catch rate of 1.0 trout/hour. Evaluate streams for reintroduction of native cutthroat. Emphasize harvest opportunity for brook trout. Work with landowners and land management agencies to improve habitat.
Independence lakes #1 and #2	/28	Coldwater	Cutthroat trout Arctic grayling	General	Stock trout every three years and Arctic grayling as available in Independence #2. Catch rates of 0.7 fish/hour. Support USFS policy of non-motorized access only.
Lake Cleveland	/6	Coldwater	Rainbow trout Cutthroat trout	Put-and-take trout	Accessible by road. Stock annually with hatchery rainbow and cutthroat trout fingerlings. Evaluate fingerling plants. Catch rates of 0.7 fish/hour.

DRAINAGE.2

25. SNAKE RIVER-LAKE WALCOTT TO CONFLUENCE OF SOUTH FORK AND HENRYS FORK

A. Overview

The Snake River from Massacre Rocks upstream to the confluence of the North (Henrys) and South forks encompasses a variety of habitat types. This section extends **approximately** 125 miles, of which **approximately** 20 miles is flooded by American Falls Reservoir.

The six miles of river from Eagle Rock upstream to American Falls Dam is considered a Class 1 trout stream. As much as 58,000 hours of fishing occurs in this reach annually, and annual trout harvest during the fishing season is as much as 22,000 fish. This section is **also noted for** trophy size trout; numerous fish **are taken** in **the 5-** to 10-pound class. Fish **and** fish **population** size is **dependent on the** amount **of** water **retained** in American Falls **Reservoir.** Most **of** the **large** trout in the river reach were reared in the reservoir.

Trout **planted** in American Falls Reservoir annually **migrate downstream in mid-summer because the reservoir becomes too warm, may be drawn down too low, and may lack sufficient oxygen. Reservoir releases in mid-summer result in high temperatures and low oxygen in the tailrace. Winter storage of water in the reservoir reduces river flows, placing additional stress on trout.**

American Falls Reservoir covers 56,000 surface acres and has a usable storage of 1.7 million acre-feet. It is a popular fishing reservoir, with an estimated 26,000 rainbow harvested and 125,000 hours fishing during the season when water volume has been sufficient in previous years. The reservoir is stocked annually with catchable trout in the early spring and growth is significant. Most trout caught range in size from one to 2 pounds, and virtually all are of hatchery origin. Use of fall-stocked fingerling in the reservoir and river above were evaluated and found to be successful for developing a fishery. In addition, the reservoir contains a dense population of nongame fish, primarily suckers, carp, and chubs.

The Snake River from the backwaters of American Falls Reservoir upstream to Tilden Bridge, a distance of approximately 20 miles, is a Class 1 stream. The stream in this area is somewhat inaccessible because of private land along the river and limited access through the Fort Hall Indian Reservation. Numerous springs arise on the reservation in the area known as the Bottoms located near the upper end of American

Falls Reservoir and between the Portneuf River on the south and the Snake River on the north. The springs produce approximately 2,000,000 acre-feet of water annually, more than enough to fill American Falls Reservoir. The two best-known springs in this area are Clear Creek and Spring Creek, both Class 1 waters for 7 miles and 1 1 miles, respectively. These springs contain rainbow trout, brown trout, cutthroat trout, and mountain whitefish. Most of the trout caught are from stocked rainbow trout fingerlings.

The Snake River from Tilden Bridge upstream to the **Gem** State Power Plant spans 37 river miles and is **characterized** by low unstable banks of small river rock. Water is diverted from the river at numerous points in this reach. During the irrigation season

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and early fall, river flows are low due to irrigation diversions and upstream water storage. Research (1987, 1988) documented catch rates of 0.08 to 0.25 trout/hour between American Falls Reservoir and the Gem State Hydro project. Hatchery rainbow trout comprised the majority of the catch; however, large wild rainbow, brown, and cutthroat trout are caught in this reach also. Research recommends increased supplemental stocking of fingerling brown and cutthroat trout to capitalize on high growth rates in this recruitment limited river reach. Large numbers of rainbow and brown trout have been stocked in that reach since 1991, and the fisheries in the river and reservoir below have improved.

Access to the river in this section is poor due to the predominance of private land ownership. Most access is by **boat. Additional access for boat, bank,** and wade **anglers** would **enhance** the **value of** this **fishery.**

Reservoirs and ponds along the Snake River in this area include Springfield Reservoir, McTucker Ponds, and Rose Pond. Springfield Reservoir covers 66 surface acres and is primarily operated as an irrigation diversion facility. This reservoir is annually stocked with catchable-size hatchery rainbow trout; it receives heavy fishing pressure, and is open to fishing all year. Fish survival is severely impacted by piscivorous birds. McTucker Ponds are eight small gravel pits covering 25 surface acres, located near the upper end of American Falls Reservoir. These ponds are opened to year-round fishing. Annually planted with catchable-size trout, they also contain largemouth bass, bluegill, and channel catfish. Rose Pond is located north of Blackfoot and contains rainbow trout, bluegill, and largemouth bass. Rose Pond is reduced from over 20 surface acres in summer to less than 3 shallow acres in winter as the ground water level recedes. Therefore, very few fish survive the winter.

The Snake River from the Gem State project to the outflow of the upper Idaho Falls Power Plant is essentially a put-and-take hatchery rainbow trout fishery. Both the Department and the City of Idaho Falls stock this reach with hatchery catchable rainbow trout. In 1987, hatchery rainbow trout comprised 58% of the trout harvest, followed by cutthroat (24%), wild rainbow (11%), and brown trout (7%). The hydro power impoundments in this section block upstream migration of spawning brown and cutthroat trout and provide less productive trout habitat than free-flowing reaches. This section will be managed for optimum return to the creel of catchable rainbow trout.

The remainder of the upper Snake River from **the Idaho** Falls **Upper Power** Plant **to** the **confluence of the** Henrys **Fork and South Fork (39** miles) **produces occasional** catches **of large rainbow and** cutthroat trout. **Brown** trout **are also** caught in this reach. No

hatchery stocking occurs in this reach of river. The fishery in this area has declined since **the** Teton **Dam** failure **due to** silt **deposition and** loss **of** habitat. Little **improvement** has **been noted** in recent years. **Because** of hatchery space limitations and very poor return to the creel in this fishery, this river reach will not receive **catchable** hatchery trout. We will **attempt** to **supplement** natural production with fingerling **brown and** cutthroat trout as our hatchery **production** allows.

Reservoirs and ponds along the Snake River in this area supporting fisheries include Roberts Gravel Pond and Market Lake, both of which are owned by the Department. Roberts Gravel Pond covers 35 surface acres and contains yellow perch, rainbow trout, channel catfish, bluegill, pumpkinseed, and bullhead. Aeration during winter periods

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has offset past winter kills in Roberts Gravel Pond. It is managed as a mixed fishery; however, catch rates and angler satisfaction for all species have been low in recent years. Roberts Graves Pond may benefit from rotenone renovation and a revised management plan. Market Lake WMA water channels contain yellow perch, bullhead, and Utah chubs. The Market Lake WMA waterfowl marsh has been renovated into new management units connected by newly dredged canals. These canals provide the majority of fish habitat at Market Lake and should improve fishing opportunities for yellow perch, catifsh, and possibly largemouth bass. Drought conditions since 1986 have severely limited angling opportunities at Market Lake. It is managed as a mixed fishery.

The Snake River from American Falls Reservoir to the confluence of the Henrys Fork and South Fork has undergone much change in trout habitat quality that limits our ability to provide improvements in quality and quantity of trout angling opportunity. Alternate species management may provide the best and most cost effective means to improve fishing in this portion of the river. Smalimouth bass especially perform well in this type of river habitat. Experience in similar river reaches in Idaho and Oregon has shown that smallmouth bass are compatible with both resident and anadromous salmonids. The Department has introduced smallmouth bass in the Idaho Falls area impoundments and will pursue the possibility of introducing smallmouth bass in waters on Shoshone-Bannock Tribal lands near American Falls Reservoir to provide increased

diversity of angling opportunity.

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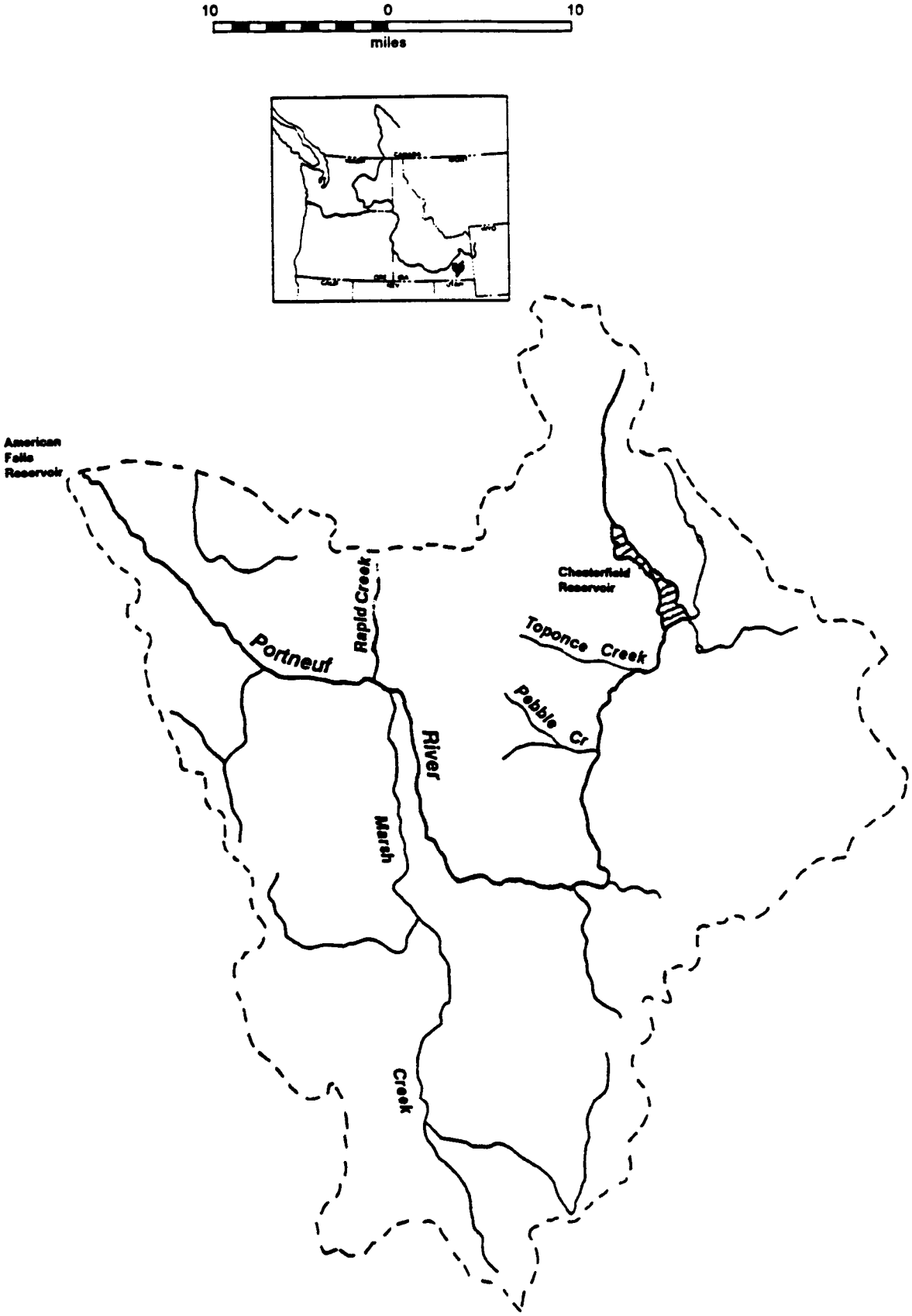
Drainage: SNAKE RIVER - LAKE WALCOTT TO CONFLUENCE OF SOUTH FORK AND HENRYS FORK					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Snake River from eastern boundary of Minidoka Wildlife Refuge to Eagle Rock	8/	Coldwater	Rainbow trout Brown trout Smallmouth bass	General	Assess status of the fishery including status of recently introduced channel catfish, smallmouth bass, and sturgeon.
Snake River from Eagle Rock to American Falls Dam	7/	Coldwater	Rainbow trout Brown trout Cutthroat trout	Put-and-grow trout Quality	Develop a fishery management plan for the reach consistent with research findings and public input.
American Falls Reservoir	/56,000	Coldwater	Rainbow trout Cutthroat trout	Put-and-grow trout	Develop a fishery management plan using research findings and public input.
Rock Creek and tributaries	55/	Coldwater	Cutthroat trout Rainbow trout	Quality General	Evaluate potential for hatchery-supported segment below Rockland and in the East Fork. Develop angler access. Work with other agencies to minimize grazing impacts.
Springfield Lake	/66	Coldwater	Rainbow trout Splake	Put-and-grow trout	Evaluate survival of rainbow trout and splake relative to cormorant predation.
McTucker ponds	110	Mixed	Rainbow trout Bluegill Largemouth bass Channel catfish	Put-and-take trout Put-and-grow	Improve fishing access and provide informative signs. Seek funding for floating fishing piers.
Rose Pond	/5	Mixed	Rainbow trout Largemouth bass Bluegill	Put-and-grow trout	Work with county and state highway departments to deepen ponds.
American Falls Reservoir to Gem State Dam	57/	Coldwater	Cutthroat trout Brown trout Rainbow trout Mountain whitefish	Quality Wild trout Put-and-grow trout	Increase catch rate for all trout to 0.5 fish/hour. Rely on hatchery rainbow and brown trout fingerling recruitment.
Gem State Dam to outflow of Idaho Falls upper power plant	12/	Coldwater	Rainbow trout Brown trout Mountain whitefish Cutthroat trout	Put-and-take trout Wild trout General Quality	Maintain catch rate for all trout at 0.3 fish/hour. Supplemental stocking of 26,000 catchable rainbow trout/year. Monitor smallmouth bass introductions.
Idaho Falls upper power plant to South Fork	39/	Coldwater	Cutthroat trout Brown trout Rainbow trout Mountain whitefish	Quality Wild trout General	Upper Snake Region cutthroat trout restricted harvest. Improve angler boat access. Increase catch rates for all trout to 0.5 fish/hour. Rely on natural recruitment with experimental supplemental stocking of cutthroat and brown trout fingerlings. Monitor smallmouth bass introductions.
Roberts Gravel Pond	/35	Mixed	Rainbow trout Yellow perch Bluegill Channel catfish Bullhead	General	Improve habitat to increase harvest. Catchable rainbow trout stocked in spring and fall. Annual release of channel catfish. Evaluate benefits of fish renovision; revise management plan.

Market Lake	**/545**	**Warmwater**	**Yellow perch** **Largemouth bass** **Bullhead**	**General**	**Work with waterfowl water management to maintain warmwater fishery.. Emphasis in yellow perch. Evaluate potential of largemouth bass and channel catfish.**
Spring Creek, Taylor, Bannock, Jim, and Texas sloughs	**33/**	**Coldwater**	**Rainbow trout** **Cutthroat trout**	**General** **Quality**	**Put-and-grow fishery. Maintain catch rates of 0.5 fish/hour. Conduct spot creel checks to assess catch rate, effort, and size. Increase supplementation with cutthroat and rainbow trout fingerlings.**

Portneuf River Drainage



DRAINAGE.2

26. PORTNEUF RIVER DRAINAGE

A. Overview

The Portneuf River and tributaries total 297 miles of stream, and drain nearly 1,300 square miles. In addition, there are four irrigation storage reservoirs in the drainage covering 1,705 acres.

The Portneuf River originates upstream from Chesterfield Reservoir on the Fort Hall Indian **Reservation** and terminates in American Falls Reservoir. From American Falls Reservoir upstream to Pocatello, the river receives **considerable** spring water and contains populations of wild rainbow trout. The reach from Pocatello upstream to Marsh Creek contains very few trout, receives very little fishing pressure, and is severely impacted by sediment, irrigation withdrawals, **damaged streambanks,** and high water **temperatures.** From the confluence of Marsh Creek upstream to the Portneuf/Marsh Valley Canal diversion, silt conditions are less severe, but low flows caused by irrigation diversions adversely affect the **populations** of wild brown trout, the main **game species** in this **area.**

Conditions improve from the **Portneuf/Marsh** Valley diversion upstream to Lava Hot Springs. This area contains a mixture of hatchery and natural rainbow trout, brown trout, and cutthroat trout. The 16 miles from Lava Hot Springs upstream to Chesterfield **Road** (Kelly **Road) bridge once supported** an excellent wild **rainbow** trout **population and** was a very **popular** fishery. An **estimated** 7,000 anglers fished 17,300 hours and caught 3,000 wild rainbow, 4,200 hatchery rainbow, and 900 cutthroat trout in this area during 1979. Sampling in this area indicates the trout **population** was made up of 69% wild rainbow trout, 19% hatchery rainbow trout, and 12% cutthroat trout.

Harvest of wild trout on the river **declined** in the **late 1980s** to a few hundred fish annually, and is currently so low that restrictive regulations would be ineffective. The Department is currently involved in a **cooperative** effort to correct sediment problems in the Portneuf/Marsh Valley Canal. This reach was identified as contributing most heavily to **sediment-loading** impacts in the river below.

This 10-mile reach upstream from the **Chesterfield** (Kelly) **Road bridge** to Chesterfield Reservoir has **been extensively damaged** by stream channel **alterations** and contains few trout. From Chesterfield Reservoir upstream, the river is small, has significant **beaver** activity, and is heavily **impacted** by cattle. This **area and** the river near American Falls Reservoir is within the **boundaries** of the Fort Hall Indian Reservation.

Reduction in sediment is underway with the following projects:

1. Improvement of existing riparian corridor fences.

2. Construction of additional corridor fences.

3. Development of a DEQ/Soil Conservation District project to exclude livestock from and **revegetate** the outlet canal.

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DRAINAGE.2

4. Development of a Portneuf/Marsh Valley Canal Company, Idaho Department of Water Resources, and IDFG project to construct grade control structures in the outlet canal.

Major tributaries to the Portneuf River include Mink, Marsh, Rapid, Dempsey, Pebble, and Toponce creeks. They may serve as spawning areas for trout from the Portneuf River and nursery areas for fluvial trout; however, trout movement and the importance of these tributaries to the river is unknown.

Four irrigation reservoirs are located in this drainage; Hawkins, Wiregrass, Chesterfield, and Twenty-four Mile. The lack of suitable spawning areas and annual irrigation drawdown precludes the development of any type of wild trout fisheries in these waters. Catchable and fingerling trout are released in spring and fall, respectively. Trout grow rapidly, and a high percentage are caught the first season. Some carryover occurs if water levels are favorable, and fish are caught at much larger size (1- to 2-pounds) the next year. Chesterfield Reservoir was renovated in fall 1988 and produced rainbow trout exceeding 5 pounds by fall 1989.

The Highway Pond near Pocatello currently contains no water and provides no angling opportunity. It was planted annually with hatchery trout which grew well and were harvested at a high rate. Due to the proximity of this pit to Pocatello and its past notoriety for producing large trout, it has been slated for deepening by Bannock County and the Department to provide a perpetual urban fishery.

Drainage: PORTNEUF RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Mana a ement Direction
Portneuf River from American Falls Reservoir to Marsh Creek, including Marsh Creek	20/	Coldwater	Rainbow trout Brown trout Cutthroat trout	General Quality	Investigate potential of urban hatchery-supported river fishery in vicinity of highway pond. Also, consider developing inner city canal fisheries on Pocatello Creek.
Portneuf River from Marsh Creek to Marsh Valley Canal diversion	20/	Coldwater	Brown trout Rainbow trout Cutthroat trout	General Quality	Conduct habitat improvement projects. Stock fingerling brown trout and catchable rainbow trout.
Hawkins Reservoir	/54	Coldwater	Rainbow trout	Put-and-take trout	Stock catchable size rainbow trout in early spring. Water supply is often insufficient for fish survival.
Wiregrass Reservoir	/6	Coldwater	Rainbow trout	Put-and-take trout	Stock catchables in early spring.
Portneuf River from Marsh Valley Canal to Lava Hot Springs	7/	Coldwater	Rainbow trout Brown trout Cutthroat trout	Put-and-take trout Put-and-grow trout Quality	Work on access permits with Lava Chamber of Commerce and landowners. Limit hatchery zone to upper three miles near Lava. Improve riparian habitat.
Portneuf River from Lava Hot Springs to Broxon Road	6/	Coldwater	Rainbow trout Brown trout Cutthroat trout	Put-and-take trout Quality	Develop additional public access areas.
Portneuf River from Broxon Road to Kelly Road Bridge	8/	Coldwater	Rainbow trout Cutthroat trout	Wild trout Quality	Reduce sediment problems via upstream habitat improvement in canal and tributaries. Consider quality regulations for rainbow if water quality improves.
Portneuf River from Kelly Road Bridge to Chesterfield Reservoir	9/	Coldwater	Rainbow trout Cutthroat trout	General Quality	Monitor habitat improvement and fish population after canal and stream bank improvements mature.
Chesterfield Reservoir	/1,600	Mixed	Cutthroat trout Rainbow trout Rainbow x cutthroat hybrids Brown trout	Put-and-grow trout	Continue mixed fingerling and catchable stocking programs based on research findings.
Portneuf River above Chesterfield Reservoir		Coldwater	Cutthroat trout		Managed by the Shoshone-Bannock Tribe.
Pebble Creek	10/	Coldwater	Cutthroat trout Rainbow trout	Quality Put-and-take trout	Seek habitat improvement project opportunities.
Toponce Creek	12/	Coldwater	Cutthroat trout Rainbow trout	Quality Put-and-take trout	Work with irrigators to improve fish passage.
24-Mile Reservoir	/44	Coldwater	Rainbow x cutthroat hybrids Brook trout Rainbow trout	Trophy General	Maintain moderate stocking rate. Stock with fingerlings.

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27. BLACKFOOT RIVER AND TRIBUTARIES

A. Overview

The Blackfoot River and tributaries total 346 miles covering 734 surface acres. Blackfoot Reservoir covers 19,000 surface acres and contains 50,000 acre-feet of water at capacity. The Blackfoot River is the reservoir's major tributary and has a mean annual flow of 168 cfs. The river upstream from the reservoir extends 35 miles to its origin at the confluence of Lane and Diamond creeks.

Habitat conditions generally are fair in the upper river and tributaries, with a few notable exceptions due to livestock grazing and irrigation diversions. One of the largest phosphate ore reserves in the United States is located in this drainage. Environmental problems associated with phosphate mining have been minimal to date.

Most trout caught downstream from Blackfoot Reservoir have escaped from the reservoir or are hatchery rainbow planted directly into the river. Mountain whitefish are the dominant game fish species in river sections downstream from Wolverine Creek. Department personnel will work with biologists from the Shoshone-Bannock Tribes to obtain minimum flows for the river, especially during winter. However, increased flows are unlikely until the Blackfoot Reservoir refills. After an extended drought such as occurred between 1987 and 1994, at least two consecutive years of above normal precipitation are required to refill Blackfoot Reservoir.

Trout harvest from Blackfoot Reservoir varies from 46% to 80% hatchery rainbow, with the balance being composed of hatchery Bear Lake and Wild Yellowstone cutthroat. Wild cutthroat make up about 90% of the catch from the river and tributaries upstream from Slug Creek.

The Blackfoot River, its tributaries, and the Blackfoot Reservoir serve integral roles in the life history and ecology of wild cutthroat trout. Mature cutthroat from the reservoir ascend the river in April and May and enter upper tributaries to spawn in late May and June. Progeny rear in the tributaries for varying periods up to two years. Most juvenile cutthroat trout return to Blackfoot Reservoir after rearing one, two, or three years in the streams. They stay in the reservoir until ready to start the spawning cycle.

Studies completed on the reservoir and river indicated the wild cutthroat trout population was being overexploited. Size and numbers of cutthroat trout caught had decreased significantly prior to 1985. Regulations to offset this decline were implemented in 1985 but were ineffective. An evaluation of the cutthroat trout population made in 1988 showed that the river fishery had completely collapsed.

In 1983, stocking of Bear Lake cutthroat trout was started in Blackfoot Reservoir. These fish were reared for one year in the hatchery prior to release as 5-inch fingerlings. Cutthroat trout were treated with morpholine in Grace Hatchery before being released, and were planted in the Little Blackfoot River at its mouth. The stream also was treated with morpholine to attract fish at the time of spawning. This planting location and morpholine treatment was an attempt to maintain the separate strains of cutthroat trout. Egg survival from Bear Lake cutthroat spawners captured in the Little Blackfoot River was poor. Beginning in 1990, the Bear Lake cutthroat trout were

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released in the Blackfoot River. Since 1991, a fish trap has been operated on the upper Blackfoot River to enumerate Yellowstone cutthroat trout spawners and to prevent Bear Lake cutthroat and rainbow trout spawners from ascending the Blackfoot River.

A major management planning effort was initiated in 1988 for the entire Upper Blackfoot System. Wild cutthroat trout must now be released in the reservoir and only 2 cutthroat over 18 inches per day can be taken on the river. No bait fishing is allowed on the river upstream from the reservoir. Computer modeling to simulate the wild trout population indicated that 12-15 years will be required under these regulations before the wild cutthroat trout fishery is restored to 1959-60 levels. Prolonged drought will extend the restoration period.

The management plan also deals with hatchery programs for the reservoir. Stocking fingerling Bear Lake cutthroat trout will continue at 250-300,000 annually. Bear Lake cutthroat trout did not survive well during the drought years. Beginning in 1996, the Bear Lake cutthroat trout program will be replaced with the Kamloops strain of rainbow trout as a potential trophy trout for harvest.

Hatchery rainbow were typically stocked in spring and summer at 80,000 per year, but the emphasis during the early 1990s was on fingerling stocking. The target release was 2,000,000 rainbow annually and was evaluated in 1991, 1992 and 1993. Analysis of this information demonstrated poor survival and essentially no contribution of these fish to the fishery.

Dike Lake (35 surface acres) was created by a **dike** across one of the **bays** of Blackfoot Reservoir to prevent a **seepage** water loss. It is extremely productive and known for rapid growth rates of stocked trout. During the winter months, vegetation in the water decays, resulting in oxygen depletion and, in most years, a complete fish kill. Past attempts to prevent this winterkill have been unsuccessful, but new aeration technology will **be used and evaluated** in an attempt to hold trout through the winter. However Blackfoot Reservoir must be at least half full before water level in Dike Lake is **deep** enough to support a fish population. The winter of 1996-97 will be the first time the aeration system can be tested.

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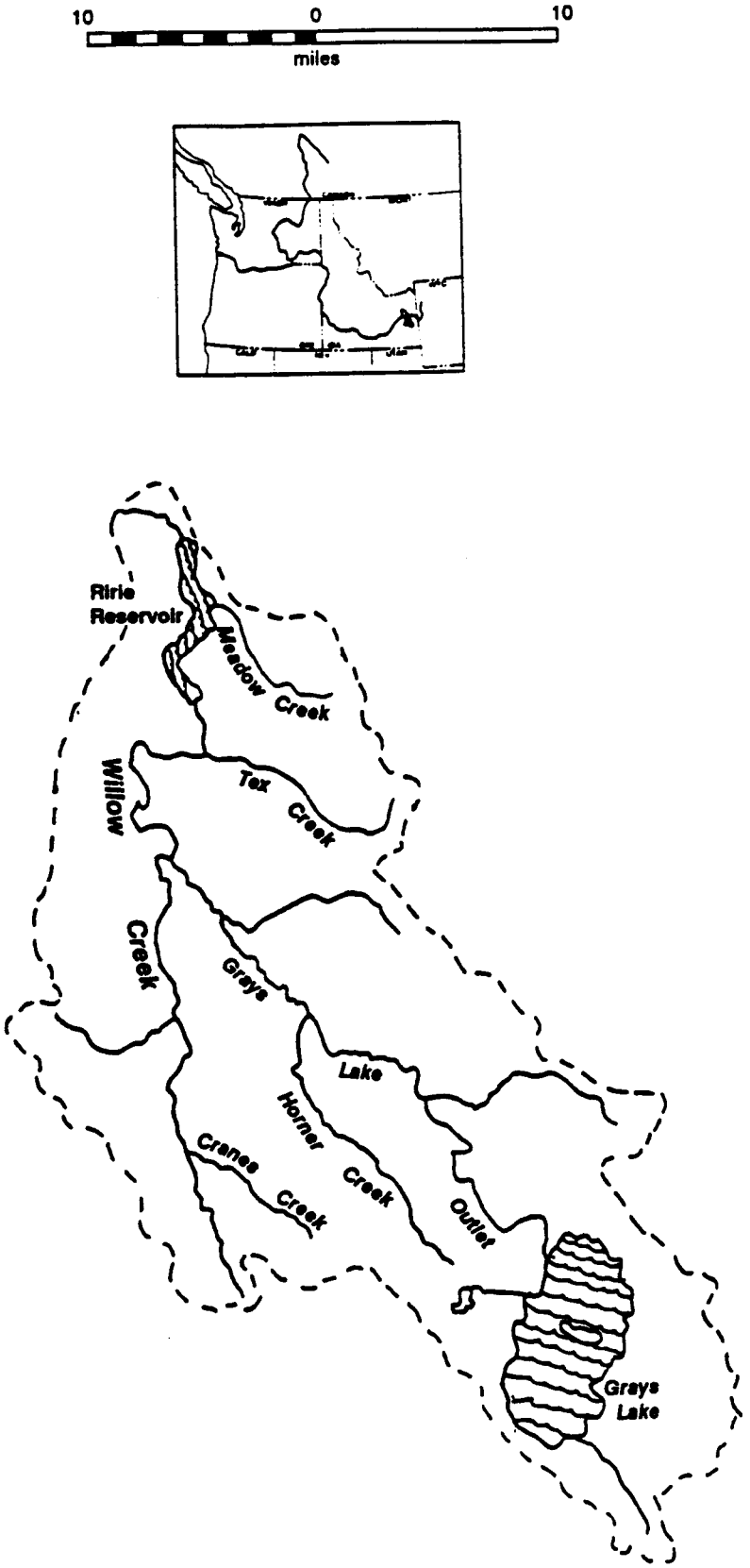
Drainage: BLACKFOOT RIVER					
Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Blackfoot River from mouth to equalizing reservoir	14/	Coldwater	Rainbow trout Mountain whitefish Cutthroat trout	General Quality	Evaluate potential for access development and future urban hatchery fishery from equalizing reservoir to Highway 91 Bridge.
Blackfoot River from equalizing reservoir to Wolverine Creek	18/	Coldwater	Rainbow trout Mountain whitefish Cutthroat trout	General Quality	Assess population status for evaluation of current program (may have hatchery potential). Work with federal agencies and farmers to curb heavy sediment loads from upstream sediment sources.
Blackfoot River from Wolverine Creek to Rawlins Creek	14/	Coldwater	Rainbow trout Mountain whitefish Cutthroat trout	General Quality	Assess potential for habitat improvement.
Rawlins and Brush creeks (lower three miles)	3/	Coldwater	Rainbow trout Brook trout Cutthroat trout	Put-and-take trout Quality	Stock hatchery zone in lower three miles of Rawlins and Brush creeks.
Rawlins and Brush creeks (above hatchery zone)	9/	Coldwater	Rainbow trout Brook trout Cutthroat trout	Wild trout Quality	
Blackfoot River from Rawlins Creek to Cutthroat Campground	11/	Coldwater	Rainbow trout Cutthroat trout	General Quality	
Blackfoot River from Cutthroat Campground to Government Dam	10/	Coldwater	Rainbow trout Brook trout Cutthroat trout	Put-and-take trout Quality	
Corral Creek		Coldwater	Rainbow trout Brook trout	Put-and-take trout	
Other Blackfoot River tributaries from mouth to Government Dam		Coldwater	Rainbow trout Cutthroat trout	General Quality	
Blackfoot Reservoir	/18,000	Coldwater	Rainbow trout Yellowstone cutthroat trout Kamloops rainbow trout	Put-and-grow trout Catch-and-release Put-and-grow trout	See Upper Blackfoot System Fishery Management Plan.
Dike Lake	/35	Coldwater	Rainbow trout	Put-and-take trout	Evaluate effectiveness of winter aeration and potential for trophy management.
Blackfoot River and tributaries above the reservoir	60/	Coldwater	Rainbow trout Brook trout Cutthroat trout	General Conservation	Stock rainbow in lower two to three miles of river to provide additional harvest opportunity during recovery. Develop angler access throughout drainage. Work on habitat improvement, particularly on upper valley tributaries. See Upper Blackfoot System Fishery Management Plan. Improve fish habitat on UBRWMA. Reestablish flow to natural channel on Kellen Ranch.

Willow Creek Drainage



28. WILLOW CREEK DRAINAGE

A. Overview

Major tributaries to Willow Creek are Grays Lake Outlet and Cranes, Meadow, and Tex creeks. Since 1924, up to 20,000 acre-feet of water a year has been diverted from the Willow Creek drainage to Blackfoot Reservoir through Clark's Cut Canal. The construction of Ririe Dam, a rock-face, earth-filled structure, was completed by the Corp of Engineers in 1976. The reservoir has a total capacity of 80,540 acre-feet and a surface **area** of 1,470 and is managed for priorities of flood control and irrigation water storage. The reservoir is drawn down to 35,000 acre-feet annually by November 1 to provide winter flow storage (flood control).

The 20 miles of Willow Creek below Ririe Dam is controlled for irrigation and flood control. This segment of Willow Creek is annually dewatered to keep ice buildup from causing floods near Idaho Falls. Maintaining a wild fishery in this area is only feasible with minimum year-long releases below Ririe Reservoir, although numerous trout from irrigation ditches which flow into Willow Creek via the South Fork Snake River provide a **seasonal** fishery. Prior to dewatering lower Willow Creek in 1976, the catch rate was 0.44 trout/hour, with 10,500 hours (5,600 angler days) of effort expended annually. Catch rates declined to 0.33 trout/hour and 3,000 hours of effort in 1980. Game fish found in this area are primarily cutthroat and brown trout. Lesser numbers of rainbow trout and mountain whitefish are also present.

A 400-yard-long portion of Willow Creek flows through Highland Park within Idaho Falls. This area has marginal water quality during summer months and is dewatered during the winter time. However, the area is suitable for development as a short-term fishing area to support activities such as fishing clinics, free fishing day, etc. The area needs a water control structure on the west side of the park.

Ririe Reservoir has **developed** into a very popular fishery only 20 miles from Idaho Falls. It supports one of the most intensive salmonid reservoir fisheries in Idaho. Angler use was at least 60,000 hours with a catch rate of 0.20 trout/hour in 1993. This fishery is supported primarily through hatchery **releases** of **rainbow** trout and **kokanee** salmon. Minor catches of cutthroat and brown trout are also made. Steep banks and limited access restrict bank fishermen to 35% of the effort. **Kokanee** were substituted for coho

salmon in 1990 due to **disease** in coho broodstock and lack of coho recruitment into the fishery as **2.5-year-old** fish. **Splake (brook** trout x **lake** trout hybrid) and lake trout were stocked in 1993 on an experimental basis to control chubs and suckers and provide another sport fishery. Effectiveness of the program is unknown at this time.

Smallmouth bass were introduced into Ririe Reservoir from 1984 to 1986. A self-reproducing population has developed from the original introductions, but likely suffered major losses of adults through the dam during the severe late summer drawdowns of 1992. The smallmouth bass fishery should continue to expand in Ririe Reservoir during the early 1990s as naturally-reproduced fish begin to contribute to angler catch, however, known slow somatic growth and public concern about cropping by anglers

warrant vigilant monitoring of the population.

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The 95 miles of streams in the drainage of Willow Creek **above** Ririe Reservoir are mainly in narrow canyons and contain important wild cutthroat trout populations. **Water** flows **vary** from **extremes** of **several thousand** second-feet during runoff to a few second-feet in late summer and winter in Willow Creek. Dry land farming and grazing practices have denuded riparian vegetation within the upper watershed. As a result, ground water inflow is virtually nonexistent within the lower portion of this area. Water temperature varies widely, both daily and seasonally. Turbidity is high during the late winter and spring runoff and **generally remains so** until mid-summer. The Soil **Conservation Service** has **identified** the Willow **Creek drainage** as one of the most serious (ten worst) soil erosion areas in the United States. A water quality program has been initiated to reduce loss of top soils and improve the water quality of Willow **Creek above** Ririe Dam. Riparian **habitat improvement** through **improved** grazing **management** is a high **priority on both state** and **private** lands.

Cutthroat trout in the mainstem areas of Willow Creek and Grays Lake Outlet are dependent on downstream movement from tributary spawning and nursery areas. Most tributaries of Willow **Creek contain** wild **populations** of cutthroat, brown, and/or **brook** trout. Native cutthroat trout **populations are presently depressed** in the **drainage, although** thought to remain **viable. Overharvest** of cutthroat trout is contributing to the **decline of this species. Angler catch and effort information available for this area shows catch rates of 0.8 fish/hour and effort of 60,000 hours in 1984. Cutthroat and brown trout presently dominate the catch in tributaries with hatchery catchable rainbow trout found in areas of road access where they are stocked. No wild rainbow have been found in the Willow Creek drainage. Beginning in 1990, the Upper Snake Region restricted harvest for cutthroat trout in rivers and** streams. The limit is 2 **cutthroat, all fish between 8 and 16 inches must be released. This rule should have begun to restore cutthroat trout populations in the Willow Creek system above Ririe Reservoir with major increases in numbers and size of cutthroat by 1995; however, prolonged severe drought conditions in the late 1980s through 1994 caused the fish habitat quality and trout populations in this system to at best maintain status quo and probably deteriorated significantly.**

B. Objectives and Programs

1. **Objective: Restore native fluvial cutthroat trout populations.**

Program: Phase out put-and-take hatchery rainbow trout stocking which could be deleterious to cutthroat trout through competition, hybridization, and by

attracting **elevated** levels of consumptive angling pressure.

Program: Maintain restrictive harvest rules for cutthroat trout and a late (July 1) **season opener** in **principal** spawning **tributaries.**

Program: Critically evaluate both agency and private stockings of fish in the drainage for possible negative effects on native cutthroat, restrict and/or comment on accordingly.

Program: Work to improve habitat and stream flow protection and/or enhancement.

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2. **Objective: Restore put-and-grow brown trout fishery, particularly in the Gray's Lake outlet, as possible without harming the native cutthroat trout stock.**

   Program: Continue stocking of fingerling brown trout in the outlet area, maintain fish quality and stocking conditions to maximize utility.

   Program: Work to improve habitat and stream flow protection and/or enhancement.

Ririe Reservoir

1. **Objective: Maintain a satisfactory salmonid fishery.**

   Program: Continue stocking hatchery rainbow trout at a size and on a schedule which provides high quality fishing and maximum economic efficiency

   Program: Stock other salmonids such as brown trout, lake trout, or splake for non-game fish control and fishery diversity if trials prove the efficacy of such actions and risk to cutthroat trout in the drainage is deemed acceptable.

   Program: Work to improve habitat and stream flow protection and/or enhancement to provide adequate spawning area for reservoir salmonids.

2. **Objective: Maintain a satisfactory smallmouth bass fishery.**

   Program: Monitor the bass population, primarily with data provided by organized tournament bass anglers and regularly scheduled creel surveys.

   Program: Implement management actions (such as regulations more restrictive rules) if the actions are determined to have a high probability of significantly improving some aspects of the bass population and/or fishery and the actions are acceptable to the public.

   Program: Work with organized bass anglers to minimize the biological and social impacts of bass tournaments.

   Program: Develop bass habitat in cooperation with bass angler clubs.

3. **Objective: Increase utilization of and appreciation for abundant yellow perch.**

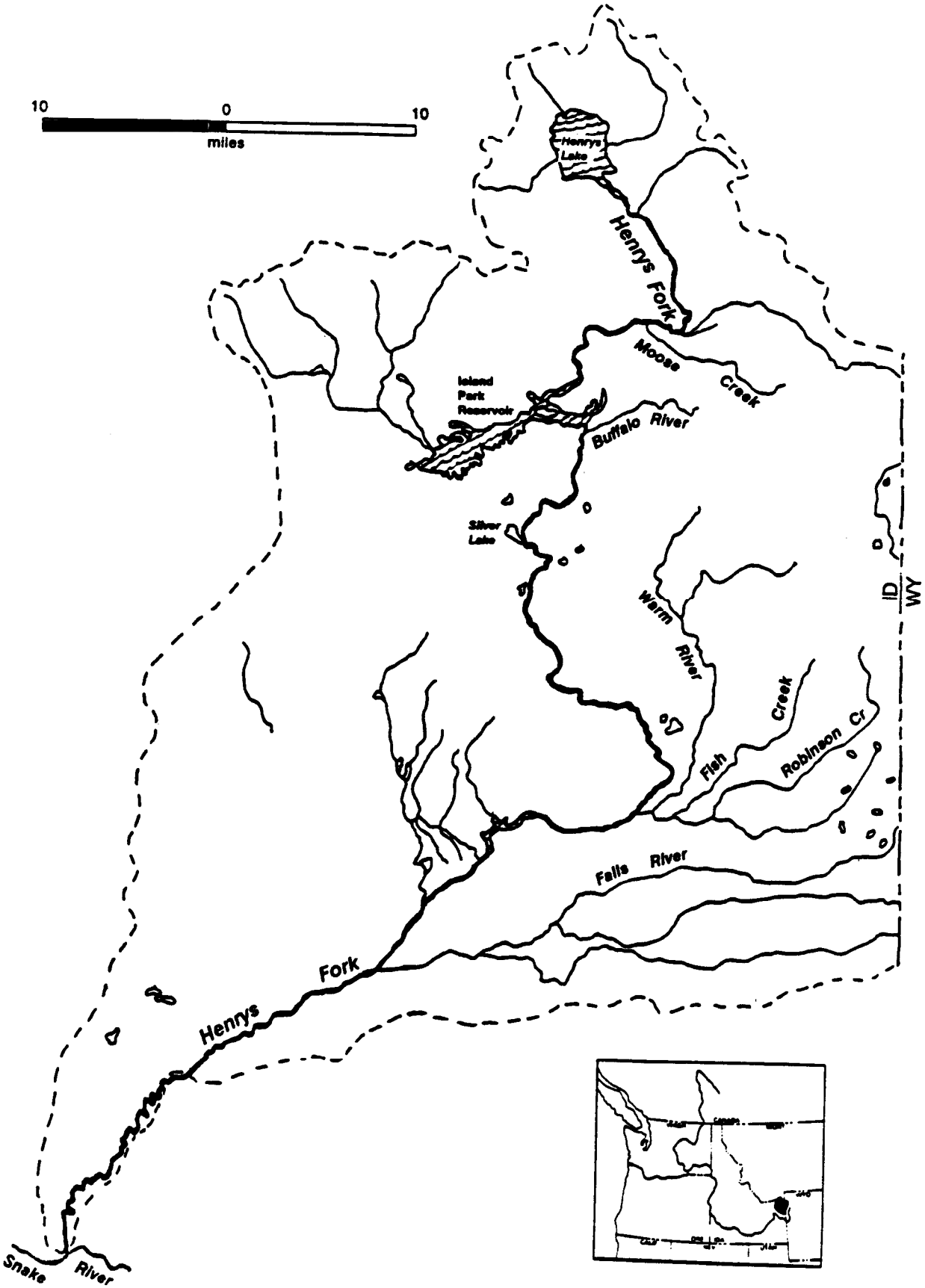
   Program: Continue a comprehensive effort to educate the public about the positive aspects of having what is now a very well established yellow perch

   population in the reservoir, (quality table fare, catchability, and a numerical abundance well suited to consumptive angling).

Drainage: WILLOW CREEK

Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Willow Creek from Eagle Rock Canal to Ririe Dam	5/	Coldwater	Rainbow trout Cutthroat trout Brown trout	General	Area annually dewatered. Low priority fishery unless year-round flows negotiated with Bureau of Reclamation.
Ririe Reservoir	/1,470	Mixed	Rainbow trout Kokanee salmon Brown trout Cutthroat trout Yellow perch Smallmouth bass	Put-and-take trout General	Put-and-take fishery supplemented with fingerling releases of rainbow. Put-and-grow kokanee salmon fishery. Maintain catch rates of 0.6 fish/hour with lengths of 10 to 12 inches. Review cutthroat trout reservoir harvest status if/when stream populations rebuild. Manage bass under general statewide bass limits. Monitor populations.
Willow Creek and Grays Lake Outlet above Ririe Reservoir	80/	Coldwater	Cutthroat trout Rainbow trout Brown trout	Quality Put-and-take trout	Restore wild populations of native cutthroat trout through restricted harvest regulations. Put-and-grow brown trout fishery. Phase out put-and-take rainbow trout.
All other tributaries	83/	Coldwater	Cutthroat trout Brown trout Brook trout	Quality Wild trout	Restore wild populations of native cutthroat trout through restricted harvest regulations and delayed season openers. Catch rates of 1.0 fish/hour. Natural reproducing populations of brown or brook trout occur in specific tributaries and provide fishery diversity.

Henrys Fork Snake River Drainage



29. HENRYS **FORK SNAKE** RIVER **DRAINAGE**

A. Overview

The Henrys Fork drainage provides one of the most important rainbow trout fisheries in the state in terms of habitat, fish populations, and angler use. Important tributaries include the Teton, Fall, Warm, and Buffalo rivers. Henrys Lake and Island Park Reservoir are important components of the Henrys Fork fishery. The Teton River is discussed as a separate drainage.

The **Henrys** Fork **Snake** River **below** St. Anthony **suffers from** impacts of irrigation withdrawals **and low flows** which limit **salmonid** populations. The habitat below the confluence of the Teton River is severely degraded as a result of the Teton Dam failure and flood in 1976. Creel census of five miles of the lower Henrys Fork in 1980 revealed catch rates of 0.15 fish/hour for cutthroat trout and mountain whitefish.

Electrofishing surveys in **1988** and **1989 have** documented a population of **large** cutthroat trout which apparently recruit from the Teton River. The Area 6 restricted cutthroat harvest regulation will increase survival and recruitment of wild cutthroat trout from the Teton River into this river reach. Together with supplemental stocking of cutthroat and brown trout fingerlings, the lower Henrys Fork should provide catch rates of 0.3 fish/hour or more.

The Henrys Fork from St. Anthony to Big Springs attracts fishermen from throughout the nation. A major part of the fishing pressure is from tourists traveling to Yellowstone National Park. Annual angler use and harvest along this segment has been well documented at 175,000 hours of effort, with catch rates of 1.25 fish/hour in 1976. Wild **rainbow** trout **comprised 53%** of the catch, hatchery **rainbow** trout 19%, brook trout 16%, and native cutthroat trout 1 %. Hybrids (rainbow x cutthroat) and mountain whitefish made up the remaining 12%, although mountain whitefish are the most numerous game fish present.

Management of the Henrys Fork from St. Anthony to Island Park Dam will emphasize wild, natural populations without hatchery supplementation. This section of river is currently producing **good** numbers of wild rainbow and some brown and cutthroat trout. Mountain whitefish are very abundant. Monitoring will continue, especially

below Ashton Reservoir to ensure maintenance of current catch rates of 1.0 fish/hour or better. The Henrys Fork from Riverside Campground to Island Park Reservoir supports a world famous wild rainbow trout fishery. Catch rates and trout population sizes declined steadily through the 1980s and early 1990s. Both rebounded significantly in 1993 after the fall of 1992 draining and chemical renovation of Island Park Reservoir. This reach will remain a trophy fishery, managed under catch-and-release rules. Ashton Reservoir will be managed for a yield fishery under general rules.

Island Park Reservoir is a widely fluctuating irrigation reservoir with a mean surface area of 8,400 acres. It provides an important reservoir fishery for rainbow trout and

kokanee, with catch rates of up to 0.6 fish/hour. The fishery has been affected by loss of fish downstream through the dam and by other unknown factors since the 1992 renovation. The result of these constraints on the Island Park Reservoir fishery has

been a decline in catch rates and angler satisfaction. Supplemental stocking of cutthroat fingerlings in Island Park Reservoir will remain an option pending further evaluation of public attitudes about their use in the reservoir. Fall spawned rainbow trout fingerlings will be utilized for spring and fall release in the reservoir. Kokanee stocking will be maintained or increased in the future to provide both an open water fishery and a spawning fishery, and a viewing opportunity in the Upper Henrys Fork. Establishment of a late kokanee run (Pend Orielle Lake stock) in addition to the present early fall run will be considered. Lahontan cutthroat were stocked in 1993 as a predator but returned poorly to the creel in 1994. Further attempts will be made to utilize this species for control of nongame fish (Utah chub and sucker) while hopefully providing a more diverse salmonid fishery. Other piscivorous salmonids may be considered for introduction as nongame fish control agents.

From Island Park Reservoir upstream to Henrys Lake, the Henrys Fork provides a yield fishery **supported** by natural production and supplemented by hatchery catchable **rainbow** trout.

Henrys Lake outlet is a low gradient stream section which flows through an intensively used, privately owned cattle grazing area. Angler effort is concentrated below Henrys Lake Dam downstream to Highway 20. Trout emigration from Henrys Lake supports the majority of angler harvest. Cutthroat spawning in the three miles below Henrys Lake Dam is very obvious, with extensive angler pressure during the early weeks of the **season.** Low winter stream flows result in dewatering in the upper section of Henrys Lake Outlet. Opportunities to negotiate minimum stream flows and fence protective riparian zones will be pursued.

Henrys Lake is a shallow, highly productive lake covering 6,500 acres in the headwaters of the Henrys Fork. It has a long history of supporting an extensive sport fishery for large, native cutthroat trout. Since 1924, hatchery operations at the lake have taken cutthroat eggs for use in maintaining cutthroat trout fisheries in many areas of the state, including Henrys Lake.

Henrys Lake has **been managed** as a trophy trout water since 1976, utilizing rainbow x cutthroat hybrids. Catch rate **goals are** 0.7 fish/hour with management **goals** having a catch rate of about 0.45 fish/hour for cutthroat, 0.15 fish/hour for hybrid and 0.10 fish/hour for **brook** trout. **Size goals are** 20% of hybrids **over** 20 inches, 10% cutthroat over 20 inches and 5% of brook trout over 18 inches. Henrys Lake produces large brook trout including the state record of 7.2 lbs. Cutthroat trout provide the majority of the catch, and **good** populations of pure strain cutthroat are necessary so that

adequate eggs **are available** to **produce rainbow x** cutthroat hybrids. Declines in cutthroat stocks due to low water flows in the tributaries from 1977 to 1981 caused drastic declines in the spawning runs, which restricted the hybrid program at that time. A 2-fish limit was instituted in 1980 to protect reduced populations of cutthroat. Since 1981, cooperative agreements between the Department, the Henrys Lake Foundation and area ranchers have improved riparian and instream spawning and rearing habitat through protective fencing of spawning tributaries of Henrys Lake. Fish losses to irrigation ditches **have also been reduced by** cooperative diversion screening projects. These activities will continue during the next five years on Duck Creek, Howard Creek, Targhee Creek, and Kelly Springs. Evaluations of enhancement trout recruitment from these spawning tributaries to Henrys Lake will be conducted over the next five years.

From 1981 through 1984, emphasis on hatchery cutthroat enhancement provided cutthroat releases of 2,000,000 or more fry annually. By 1984, cutthroat populations had dramatically increased with a total catch rate of 1.7 fish/hour and 163,000 hours of effort. Increased densities of cutthroat may depress growth rates, thereby threatening the trophy management goals of Henrys Lake. During 1981 to 1984, hybrid and brook trout enhancement goals were not consistently met, resulting in declining catch rates of hybrids and brook trout. Beginning in 1985, cutthroat stocking was reduced to 1,000,000 per year with increased stocking of hybrid and brook trout production. Emphasis was targeted on producing a consistent number of larger hybrid fingerlings with further **experimentation** on sterilized hybrid crosses. Enhancement for brook trout is targeted for the Temiscamie strain depending on availability.

Stockings of rainbow x cutthroat hybrids were increased to approximately 250,000 per year. Hybrids in 1993 and 1994 provided 21 % and 43% of the catch, exceeding the management target of 20% of the Henrys Lake catch. Hybrid contribution to the catch over the last 10 years averaged 34%. Hybrid releases will be monitored and adjusted to protect Henrys Lake cutthroat trout stock integrity. Research of a sterilized hybrid program is ongoing to develop a viable, cost effective sterile hybrid program in the next five years. Utah chubs were documented in Henrys Lake in 1993 during annual gill net surveys. Utah chubs are a serious nuisance species throughout southern Idaho in regulated irrigation impoundments and pose a potential threat to the Henrys Lake fishery. Annual surveys since the 1993 discovery of Utah chubs have indicated very low numbers of this species in Henrys Lake which suggest a stable, low level population. Intensive annual surveys will be conducted during the next five years to understand fully the status of Utah chubs in Henrys Lake.

Warm River is a major tributary to Henrys Fork. Warm River base flow is provided by large springs six miles upstream from its confluence with the Henrys Fork. It has large sections of good spawning gravel and fairly constant temperatures which make it ideal for trout spawning. Rainbow and brown trout migrate from the Henrys Fork to spawn in Warm River during spring and fall, respectively. Due to the lack of spawning habitat in Henrys Fork between Ashton Dam and Mesa Falls, Warm River is critical to the maintenance of wild rainbow and brown trout populations for this section of the Henrys Fork. Warm River from the mouth upstream to the railroad tunnel is closed annually on September 30 for protection of spawning brown trout.

Angler use and harvest in Warm River during **1984 equaled 8,000 hours of effort and 1.1 fish/hour. Hatchery catchable rainbow trout made up the majority of the harvest.**

DRAINAGE.2

The Fall River is the largest Henrys Fork tributary. The Fall River supports an excellent wild rainbow trout fishery with catch rates of 1.0 fish/hour or better. Cutthroat trout and rainbow x cutthroat hybrids make up an incidental portion of the catch, but are expected to contribute more under the Upper Snake Region cutthroat trout enhancement regulation. There is little recent information on the Fall River fishery. The lower four miles of the river is annually dewatered and does not support a viable wild trout fishery. The remainder of the drainage is in good condition. Conant Creek and drainage, tributary to the Fall River, has suffered greatly from the drought of the late 1980s, early 1990s, and has basically been rendered impotent as a spawning drainage by irrigation withdrawal dewatering.

B. Objectives and Programs

1. **Objective: Maintain quality trout fishing from the South Fork confluence upstream to Riverside Campground.**

   Program: Monitor trout populations in indicator reaches by electrofishing on a regularly scheduled basis, propose rule changes as biologically or socially necessary.

   Program: Maintain restrictive harvest rule for all trout and seasons and area closures as needed for protection of spawners.

   Program: Work to improve habitat and stream flow protection and/or enhancement.

2. **Objective: Sustain as high quality of a rainbow trout fishery as possible (high catch rates and desirable size structure) on the catch and release section from Riverside Campground upstream to Island Park Dam.**

   Program: Continue to pursue implementation of fish passage at the Buffalo Hydro diversion dam to make the Buffalo River accessible to Henrys Fork rainbow trout spawners.

   Program: Continue long-term monitoring of trout population and angling success through regularly scheduled sampling surveys.

   Program: Fund research to study mechanisms of trout recruitment in this reach as well as development of practical population monitoring techniques.

   Program: Work to improve habitat and stream flow protection and/or enhancement.

3. **Objective: Manage the river above Island Park Reservoir for satisfactory and diverse angling opportunity as desired by the public.**

   Program: Continue long-term monitoring of trout population and angling success through regularly scheduled sampling surveys, propose regulation changes as biologically or socially necessary.

   Program: Work to improve habitat and stream flow protection and/or enhancement.

4. **Objective: Maintain maximum fishing opportunity as possible without detriment to ecologically sensitive species (trumpeter swans).**

Program: Monitor, through and in coordination with the IDFG Wildlife Bureau and the USFWS and it's contractors, the spring nest distribution of trumpeter swans and potential impacts to swans by anglers, implementing emergency regulations (area closures, etc.) as needed.

Island Park Reservoir

1. Objective: Produce/maintain a quality consumptive reservoir salmonid fishery without ill effects to the adjacent tributary and mainstem stream reaches.

Program: Continue stocking hatchery rainbow trout at a size and on a schedule which provides high quality fishing and maximum economic efficiency.

Program: Continue to evaluate stocking of Lahontan cutthroat for non-game fish control and creating fishery diversity. Evaluate other prospective species for the same program, keeping integrity of adjacent river and stream fisheries in mind.

Program: Provide habitat and stream flow protection and/or enhancement.

Drainage: HENRYS FORK SNAKE RIVER

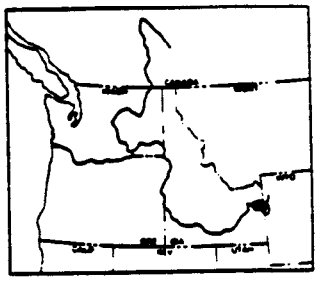
Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Mouth to St. Anthony	30/	Coldwater	Rainbow trout Brown trout Mountain whitefish Cutthroat trout	General Quality	Upper Snake cutthroat trout restricted harvest. Manage for cutthroat trout below Teton River.
St. Anthony to Fritz Bridge	10/	Coldwater	Rainbow trout Brown trout Mountain whitefish	Wild trout General	Manage as a fishery supported by natural production. Maintain catch rate of 1.0 fish/hour. Monitor to prevent overharvest of trout.
Fritz Bridge to Ashton Dam	3/	Coldwater	Rainbow trout Brown trout Mountain whitefish	Wild trout General	Spawning season closure for rainbow trout. No motors.
Ashton Dam to U.S. 20 Bridge	4/400	Coldwater	Rainbow trout Brown trout Kokanee salmon Mountain whitefish	Put-and-take trout Wild trout General	Stock catchable rainbow trout to maintain catch rates of 1.0 fish/hour. Kokanee salmon are downstream drift from Island Park Reservoir.
U.S. 20 Bridge to Lower Mesa Falls	25/	Coldwater	Rainbow trout Brown trout Mountain whitefish	Wild trout General	Maintain wild population of rainbow trout to provide 12-inch average size and overall catch rate of 1.0 fish/hour.
Lower Mesa Falls to Riverside Campground	12/	Coldwater	Rainbow trout Brook trout Mountain whitefish	Wild trout General	Maintain 1.0 fish/hour catch rate for trout.
Riverside Campground to Island Park Dam, except Harriman State Park	9/	Coldwater	Rainbow trout Mountain whitefish	Trophy General	Catch and release to maintain catch rate above 1.0 fish/hour for wild rainbow trout, with 5% of population over 18 inches. Conduct/fund research into rainbow trout recruit mechanisms.
Harriman State Park	8/	Coldwater	Rainbow trout Mountain whitefish	Trophy General	Fly fishing only as access stipulation. Short season for waterfowl protection. Catch-and-release to produce trophy fish and protect spawning population. Maintain catch rate above 1.0 fish/hour.
Island Park Reservoir (up to McCrea Bridge)	/8,400	Coldwater	Rainbow trout Cutthroat trout Rainbow x cutthroat hybrids Brook trout Kokanee salmon Mountain whitefish	General	Put-and-grow fishery for rainbow, cutthroat, and rainbow x cutthroat hybrids, and kokanee. Supplemental catchable rainbow trout stockings. Maintain catch rate of 0.6 fish/hour. Use alternate species to utilize nongame forage fish.
Tributaries to Island Park Reservoir	45/	Coldwater	Rainbow trout Cutthroat trout Brook trout	Wild trout Quality General	Maintain present fisheries with catch rate of 0.8 fish/hour. Habitat improvement needed in tributaries. Upper Snake cutthroat trout restricted harvest.

McCrea Bridge to Henrys Lake Outlet	9/	Coldwater	Rainbow trout Cutthroat trout Rainbow x cutthroat hybrids Brook trout Mountain whitefish	Put-and-take trout Quality General	Upper Snake cutthroat trout restricted harvest. Put-and-take fishery on catchable rainbow trout. Maintain catch rates of 0.7 fish/hour.
Henrys Lake Outlet to Big Springs	2/	Coldwater	Rainbow trout Cutthroat trout Brook trout Mountain whitefish	Preservation	Total angling closure for spawning, rearing, and fish observation.
Henrys Lake Outlet	12/	Coldwater	Cutthroat trout Rainbow x cutthroat hybrids Rainbow trout Brook trout Mountain whitefish	Quality General	Close spawning area below dam to protect spawners and redds. Maintain wild trout populations to provide catch rates of 1.0 fish/hour. Develop information signs on spawning and life history. Minimum flow agreement and habitat improvement needed.
Henrys Lake	/6,500	Coldwater	Cutthroat trout Rainbow x cutthroat hybrids Brook trout	Trophy	Population maintenance stocking. Manage to produce catch rates of 0.7 fish/hour with 0.45 cutthroat trout/hour, 0.15 hybrid trout/hour, and 0.10 brook trout/hour. Seasons and limits regulated to protect spawners and produce large fish.
Henrys Lake tributaries	13/	Coldwater	Cutthroat trout Brook trout	Quality Wild trout	Upper Snake cutthroat trout restricted harvest. Manage for spawning and rearing of cutthroat and brook trout. Seek remedies to dewatering, continue irrigation ditch screening, and riparian fencing program.
Fall River and tributaries	76/	Coldwater	Rainbow trout Brook trout Mountain whitefish Cutthroat trout	Wild trout General Quality	Upper Snake cutthroat trout restricted harvest. Improve stream flows and habitat. Improve fish passage. Maintain catch rates at 1.0 fish/hour.
Warm River and tributaries except Robinson Creek	92/	Coldwater	Rainbow trout Brook trout Mountain whitefish Brown trout Cutthroat trout	General Wild trout Quality	Upper Snake cutthroat trout restricted harvest. Maintain wild trout population. Monitor to prevent overharvest. Supplemental put-and-take fishery in heavily fished areas of Warm River. Maintain catch rates of 1.0 fish/hour. Increase utilization of brook trout in tributaries.
Warm River from mouth of Robinson Creek to Highway 47 Bridge	0.2/	Coldwater	Rainbow trout Brown trout Brook trout Mountain whitefish	Preservation	Spawning, rearing, and fish observation area.
Robinson Creek and tributaries	91/	Coldwater	Rainbow trout Brook trout Mountain whitefish Brown trout Cutthroat trout	General Wild trout Quality	Upper Snake cutthroat trout restricted harvest. Maintain wild trout population. Monitor to protect brown trout population. Encourage increased utilization of brook trout.

Buffalo River and tributaries	**50/**	**Coldwater**	**Rainbow trout Brook trout Cutthroat trout**	**General Quality**	**Maintain wild populations to produce catch rates of 0.7 fish/hour. Upper Snake cutthroat trout restricted harvest for Henrys Fork rainbow trout.**
Moose Creek and tributaries	**6/**	**Coldwater**	**Rainbow trout Brook trout Kokanee salmon**	**General Preservation**	**Season restriction to protect kokanee salmon spawning run from Island Park Reservoir.**
Sand Creek Wildlife Management Area	**/167**	**Coldwater**	**Rainbow trout Cutthroat trout Brook trout**	**General**	**Put-and-grow fishery for rainbow and cutthroat trout. Maintain catch rate of 0.5 fish/hour. Investigate introductions of largemouth bass and bluegill.**
Silver and Golden lakes	**/220**	**Coldwater**	**Rainbow trout Brook trout**	**Preservation**	**Administrative closure by Harriman State Park to protect waterfowl and natural features.**
Other lakes and ponds	**/345**	**Coldwater**	**Rainbow trout Cutthroat trout Brook trout Arctic grayling**	**General**	**Maintain present fisheries with catch rate of 0.8 fish/hour. Supplemental stocking of rainbow and cutthroat trout fingerlings. Investigate suitability for warmwater species.**

DRAINAGE.2

Teton River Drainage



30. TETON RIVER DRAINAGE

A. Overview

The Teton River originates on the west slope of the Teton Mountains and drains 890 square miles to its confluence with the Henrys Fork near St. Anthony. Prior to the construction and collapse of the Teton Dam in 1976, the river supported a self-sustaining native cutthroat trout fishery with a 1974 and 1975 overall catch rate of 1.34 and 1.31 fish/hour. Cutthroat were in the highest concentration below the dam (57%) followed by the canyon (31 %) and upper valley (22%). Wild and hatchery rainbow trout, hybrid rainbow x cutthroat trout, brook trout, and mountain whitefish are other game fish present.

The Teton River Fishery Enhancement Program began in 1988 to improve angling opportunity by restoring habitat lost in the flood and in gradual, cumulative changes from land use practices. Objectives are to 1) **rehabilitate** habitat so cutthroat trout can become self-sustaining; 2) increase overall catch rate to 1.5 fish/hour from the 0.74 fish/hour **observed** in 1980; 3) increase average size in the catch to 14 inches; 4) increase angler access.

Since the implementation of the project, several activities are ongoing to accomplish these objectives. Cooperative fencing, pasture management, and livestock non-use agreements with landowners are being used to protect and improve riparian habitat in tributaries and river sections. Revegetation and tree revetments will speed recovery and reduce sediment. Fish passage problems at culverts and canal diversions are being resolved. Instream flow negotiations are being pursued. More angler access is being provided through negotiated easements, new or improved boat ramp facilities, and property purchases.

Beginning in **1990,** all **cutthroat** trout **between** 8 and 16 inches have **been protected** under the **Upper Snake cutthroat** slot limit. In 1988, prior to the rule change, 93% of the cutthroat harvested in the Teton River were within this window, and 51 % of all cutthroat caught were harvested. In 1994, only 4% of all cutthroat caught were harvested. The 2-fish bag and slot limits have been successful in providing more and larger wild cutthroat to anglers. Annual cutthroat fingerling stocking in excess of 1,000,000 fish in the mid-1980s was reduced to 150,000 in the late 1980s. Fingerling plants were discontinued in 1992 due to poor returns and increasing numbers of wild fish.

Catchable rainbow trout have **been stocked** in the Teton **Valley** at about 7,500 per year from 1990 to 1994. These fish returned to the creel at 47% in 1994 (an increase of 11% from 1988), and the remaining 53% was estimated to have been caught and released. However, about 80% of the estimated total catch in 1994 was wild trout. The catchable rainbow allocation will be transferred to easily accessible fishing ponds beginning in 1995 to provide year-round fisheries. Catchable rainbow stocked below the Teton Dam site returned at only 3% in 1988 and was discontinued the next year.

Although exotic wild rainbow and hybrid trout provide a significant component of the catch throughout the Teton River drainage (26% in 1988 and 41 % in 1994), they pose a threat to the genetic integrity and long-term viability of wild cutthroat populations.

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DRAINAGE.2

Harvest of rainbow and exotic brook trout will be encouraged through the general six fish and bonus brook trout limits. Stocking of rainbow trout will be discontinued except in closed or screened impoundments. Populations will continue to be monitored and additional control measures may be implemented if warranted.

Habitat protection and enhancement, improved access to spawning and rearing habitat, and continued regulation of harvest to protect cutthroat trout through one spawning season will increase cutthroat numbers, size and catch rates, thus improving angler satisfaction. The Department will continue to monitor the success of these activities and to provide increased angler access.

B. Objectives and Programs

1. Objective: Preserve genetic integrity and **population** viability of wild native cutthroat trout.

   Program: Do not stock streams with other species of fish that would interbreed or compete with cutthroat.

   Program: Stock other species of fish only in reservoirs or ponds that will not **pose a threat to cutthroat.**

   Program: Where habitat conditions have been restored and depleted populations warrant, restock streams with cutthroat by collecting fish or eggs from adjacent areas.

   Program: Work to obtain special consideration, protection, and improvement of critical cutthroat habitat in land use decisions.

   Program: Protect cutthroat through at least one spawning season by late openers on important tributaries, slot limits, **and reduced bag** limits.

2. Objective: Increase consumptive trout fishing opportunity for bank anglers near population centers.

   Program: Acquire **or lease** small, highly **accessible ponds** to **provide** an intensive hatchery **supported** fishery. **Develop handicapped** facilities where feasible.

   Program: Transfer hatchery fish formerly stocked in the Teton River to ponds. **Evaluate** rate of return, catch rate, and angler use; adjust rate and timing of stocking to provide at least 50% return to the creel.

   Program: Inform anglers of hatchery supported trout fishing opportunities through maps, brochures, media **coverage,** and signs.

3. Objective: Monitor incidence of fish **disease and** minimize its threat to wild trout populations.

   Program: Determine if whirling **disease** is present, and if **so, evaluate its effects on wild trout populations.**

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Program: Educate private pond owners on the threat of whirling disease and strictly enforce fish transport regulations.

Program: Educate the public on the threat of whirling disease and methods to control its spread.

Program: Evaluate the effects of black spot disease on wild trout populations.

4. Objective: Monitor status of illegal fish releases and minimize its threat to wild trout populations.

Program: Monitor status of illegal brown trout and hatchery fish introductions.

Program: Educate the public on the threat of illegal fish releases and strictly enforce rules.

5. Objective: Minimize impacts of land use and development on fish habitat and water quality.

Program: Work with government agencies, private landowners and developers, and interested sportsmen's groups to make protection and enhancement of fish habitat and water quality a primary concern in land use decisions.

Program: Maintain cooperative fencing, pasture management, and livestock non-use projects with local landowners.

Program: Insure restoration of habitat or mitigation of habitat loss whenever possible.

6. Objective: Minimize loss of juvenile fish to irrigation diversions and stream dewatering.

Program: Identify and screen diversions where needed in cooperation with local irrigators.

Program: Negotiate with local irrigators for minimum flows when possible.

Program: Coordinate with Fisheries Research on canal loss study.

7. Objective: Obtain adult fish passage around or through barriers.

Program: Operate and maintain South Fork Teton River fish ladder.

Program: Identify migration barriers at irrigation diversions and obtain passage around them in cooperation with local irrigators.

Program: Identify culvert barriers and obtain passage through culverts.

Program: Negotiate with local irrigators for minimum stream flows when possible.

8. **Objective: Improve angler compliance with special rules.**

Program: Develop informational programs to encourage compliance. Educate anglers on the need for rules, the kinds and location of rules, and alternative fishing opportunities.

Program: Focus available enforcement to reduce poaching losses.

9. **Objective: Improve fishing and boating access.**

Program: Develop or enhance fishing and boating access areas through

permission, easements, cooperative agreements, or purchase.

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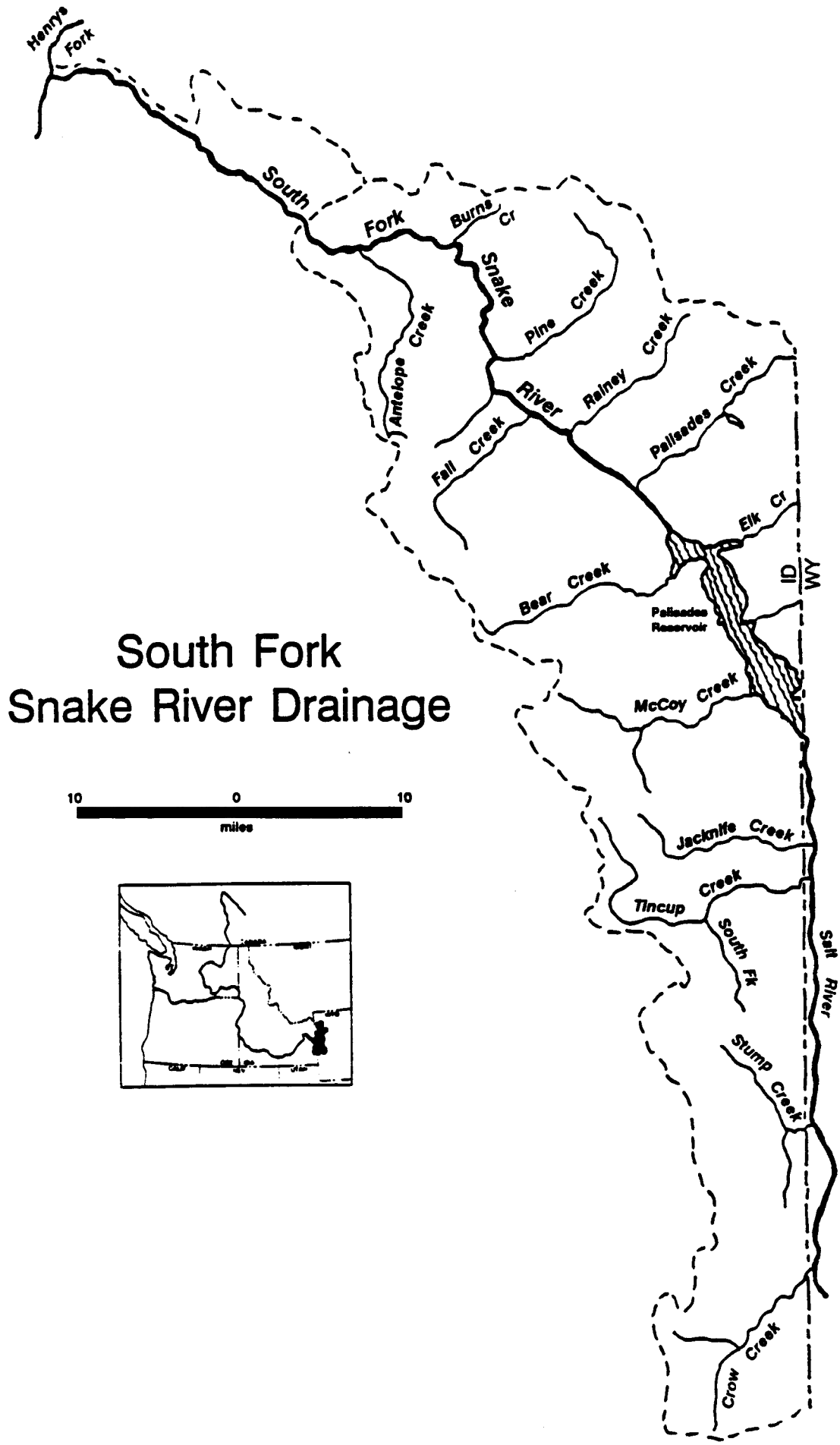
Drainage: TETON RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
North and South Fork from mouth to Felt Dam	78/	Coldwater	Cutthroat trout Rainbow trout Mountain whitefish	Quality Wild trout General	Upper Snake cutthroat trout restricted harvest. Improve access in canyon, near dam, and below forks. Protect and/or improve habitat and flows. Improve cutthroat trout catch rate to 1.0 fish/hour. Improve overall catch rate to 1.5 fish/hour.
Felt Dam to Trail Creek	22/	Coldwater	Cutthroat trout Rainbow trout Brook trout Mountain whitefish	Quality Wild trout General	Upper Snake cutthroat trout restricted harvest. Keep bonus brook trout limit. Protect and/or improve habitat. Improve cutthroat catch rate to 1.0 fish/hour. Improve overall catch rate to 1.5 fish/hour.
Teton, Fox, Trail, Bitch, Badger, Moody, and Canyon creeks	27/	Coldwater	Cutthroat trout Rainbow trout Brook trout Mountain whitefish	Quality Wild trout General	Upper Snake cutthroat trout restricted harvest. Keep bonus brook trout limit. Close Teton Creek and Fox Creek until July 1 -- spawning closure. Protect and/or improve habitat; improve spawner access where necessary.
All other tributaries	84/	Coldwater	Cutthroat trout Brook trout	Quality General	Upper Snake cutthroat trout restricted harvest. Keep bonus brook trout limit. Protect and/or improve habitat.
Trail Creek Pond	/2	Coldwater	Rainbow trout Brook trout	General	Maintain catchable plants to provide catch rates of 2.0 fish/hour and 50% return to the creel. Develop handicapped access.
Packsaddle Lake	/4	Coldwater	Cutthroat trout	General	Maintain fingerling plants every three years. Monitor catch and size on incidental baths.


Henrys Fork
South Fork Snake River
Burns Cr
Antelope Creek
Pine Creek
Rainey Creek
Fall Creek
Palisades Creek
Elk Cr
Bear Creek
Palisades Reservoir
McCoy Creek
Jackknife Creek
Tincup Creek
South Fk
Stump Creek
Crow Creek
Salt River
WY
ID
South Fork
Snake River Drainage
10
0
10
miles

DRAINAGE.2

31. SOUTH FORK SNAKE RIVER DRAINAGE

A. Overview

The South Fork Snake River drainage includes the mainstem and tributaries from its confluence with the Henrys Fork upstream to the Idaho-Wyoming State boundary. This management drainage area includes Palisades Reservoir and its tributaries and Salt River tributaries which originate in Idaho (including Jacknife, Tincup, Stump and Crow creeks).

The South Fork Snake River has been called Idaho's most unique riparian ecosystem containing the largest continuous cottonwood ecosystem in the state. The South Fork provides habitat for nine nesting bald eagle pairs and up to 100 wintering eagles. The U.S. Fish and Wildlife Service considers this river section to be the most important fish and wildlife habitat in the state of Idaho.

In the South Fork **Snake** River and tributaries below Palisades Dam, wild native cutthroat trout supported 90% of the catch in 1981. Cutthroat below the dam are a mixture of **both fine-spotted and Yellowstone** races. **Fine-spotted** cutthroat **are** stocked **as sub-catchables** and **catchables** into **Palisades Reservoir** and **some are** flushed into the South Fork with reservoir **drawdowns.** The role of this recruitment to the South Fork fishery is unknown but is **believed** to be minor. Fishing effort on the South Fork **below Palisades** Dam was 25,000 angler **days** with a catch **rate of** 0.53 **game** fish/hour in 1981. Brown trout **provided** only a small **portion of** the catch (9%) but offer the **opportunity** to catch a trophy fish. The **present** state **record** brown trout weighing 26.4 lbs was caught from this river. An updated creel survey will be done in the future to evaluate fishing pressure, catch rates, total catch and harvest, and angler opinions.

Special rules restricting harvest of cutthroat trout were **enacted** upstream of the Heise Measuring **Cable** to Irwin in **1984 and** to **Palisades** Dam in **1988.** Increased cutthroat numbers and fish size in these areas resulted in an estimated 300% increase in fishing effort by **1989. Based** on this success, the **Upper Snake** restricted cutthroat harvest rule was **implemented** in **1990 and** included the lower South **Fork (below** Heise) and all tributaries. The 2-fish, 8 to 16 inch slot limit was extended to all trout species in the mainstem in 1992.

Although exotic wild rainbow, hybrid, and brown trout **provide** a significant component of the catch throughout the South **Fork drainage,** they **pose** a **potential** threat to the genetic integrity and long-term viability of wild cutthroat populations. Stocking in the mainstem and tributaries was discontinued in the early 1980s. The Department will continue to monitor populations and will implement measures to reduce numbers of exotic species or other control measures if warranted.

Mountain whitefish are the most abundant game fish in the drainage but are not extensively utilized by fishermen. Through the adoption of fishing contest rules in 1989, the Department and angling groups will sponsor mountain whitefish derbies to enhance angler awareness and utilization of mountain whitefish.

Habitat in the South Fork mainstem is generally in good condition. Winter flow releases, regulated to manage Palisades Reservoir storage, have resulted in significant

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dewatering of secondary channels of the South Fork. The dewatering causes major losses of juvenile salmonids during winter. Dewatering during the late 1980s resulted in reduction of cutthroat populations which temporarily offset gains made through harvest regulation. A multi-agency study completed in 1992 **defined a minimum winter** flow **release** of 1,500 cfs at Palisades Dam. Implementation of this minimum stream flow will enhance long-term population stability.

The lower 20 miles of the river is impacted by low water during late fall and winter due to irrigation diversions and reduced flows from Palisades Reservoir. Loss of fish from the river to these irrigation diversions often creates good seasonal fisheries. One such canal, an old side channel of the river called the Great Feeder or Dry Bed, utilized as a feeder canal, is 20 miles in length and provides **adequate** habitat to support a fishery. Dewatering of the Dry Bed annually in the spring for **headgate** maintenance results in a loss of fish and a salvage season is in effect.

Palisades Reservoir provides fishing opportunity for bank, boat and ice fishermen. Fishing effort was 22,500 angler hours during 1993. Lake trout and kokanee have been introduced, but only small natural populations have developed. Large fluctuation in water levels (up to 80 vertical ft) may affect these open water species.

Size, **brood** source, and location of stocking hatchery cutthroat are being fine-tuned in **cooperation** with Wyoming Game and Fish and the U.S. Fish and Wildlife Service to produce higher catch rates on the reservoir. Presence of mysis shrimp was **documented** for the first time in **1994** while trawling for **kokanee.** Mysis density was low **and** will **be monitored** concurrent with future trawling efforts for **kokanee.** The Big **Elk Creek kokanee** spawning run will **be monitored,** but no further **kokanee** introductions will **be made** under **agreement** with Wyoming **Game and** Fish.

Tributary streams to the South Fork and Salt River are in need of population restoration through screening of diversions and grazing management for riparian restoration. Screening was implemented in 1994 on Palisades Creek. Rainey Creek will remain a priority for resolving fish losses to irrigation diversions and dewatering. Improved grazing management in the majority of the Forest Service riparian allotments will be necessary to restore stream habitat in all tributaries.

Salt River (Wyoming) tributaries which originate in Idaho include Jacknife, Tincup, Stump and Crow creeks. These tributaries will be managed for restricted cutthroat harvest to **restore populations.** Fisheries interaction **between** the Salt River and its tributaries and Palisades Reservoir is not clearly understood. Idaho is **cooperating** with Wyoming to define fish movements to better **manage** this system.

B. Objectives and Programs

1. Objective: Preserve genetic integrity and population viability of wild native cutthroat trout.

   Program: Do not stock streams with other species of fish that would interbreed or compete with cutthroat.

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Program: Stock other species of fish only in reservoirs or ponds that will not pose a threat to cutthroat.

Program: Where habitat conditions have been restored and depleted populations warrant, restock streams with cutthroat by collecting fish or eggs from adjacent **areas.**

Program: Work to obtain special consideration, protection, and improvement of critical cutthroat habitat in **land use decisions.**

Program: Protect cutthroat through at least one spawning season by late openers on important tributaries, slot limits, **and reduced** bag limits.

2. **Objective: Obtain adequate winter stream flows** to reduce juvenile fish mortality.

Program: Work with Bureau of Reclamation to maintain at least 1500 cfs release from Palisades Dam during winter. Establish ramping rates to minimize water level fluctuations.

3. Objective: Monitor incidence of fish **disease** and minimize its threat to wild trout **populations.**

Program: Determine if whirling disease is present, and if so, evaluate its effects on wild **trout populations.**

Program: Educate private pond owners **on** the threat of whirling **disease** and strictly enforce fish transport regulations.

Program: Educate the public on the threat of whirling **disease** and **methods** to control its spread.

4. Objective: Minimize loss of juvenile fish to irrigation diversions and stream dewatering.

Program: Operate and maintain the Palisades Creek and Burns Creek screens in **cooperation** with local irrigators.

Program: Identify and screen diversions where needed in **cooperation** with local irrigators.

Program: Negotiate with local irrigators for maintenance flows when possible.

Program: **Coordinate** with Fisheries Research on canal loss study.

5. Objective: Minimize impacts of land use and development on fish habitat and water quality.

Program: Work with government agencies, private landowners and developers, and interested sportsmen's groups to make protection and enhancement of fish habitat and water quality a primary concern in land use decisions.

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Program: Insure restoration of habitat or mitigation of habitat loss whenever possible.

6. Objective: Improve angler compliance with special rules.

Program: Develop informational programs to encourage compliance. Educate anglers on the need for rules, the kinds and location of rules, and alternative fishing opportunities.

Program: Focus available enforcement to reduce poaching losses.

<u>Palisades Reservoir</u>

1. Objective: Maintain a satisfactory salmonid fishery.

Program: Continue stocking hatchery cutthroat trout from Jackson National Fish Hatchery of a variety and size and on a schedule which provides high quality fishing and maximum economic efficiency.

Program: Evaluate and stock other salmonids such as brown trout, lake trout, or splake for non-game fish control and fishery diversity if trials prove the efficacy of such actions and risk to cutthroat trout in the drainage is deemed acceptable.

Program: Provide habitat and stream flow protection and/or enhancement.

2. Objective: Maintain adfluvial cutthroat trout populations.

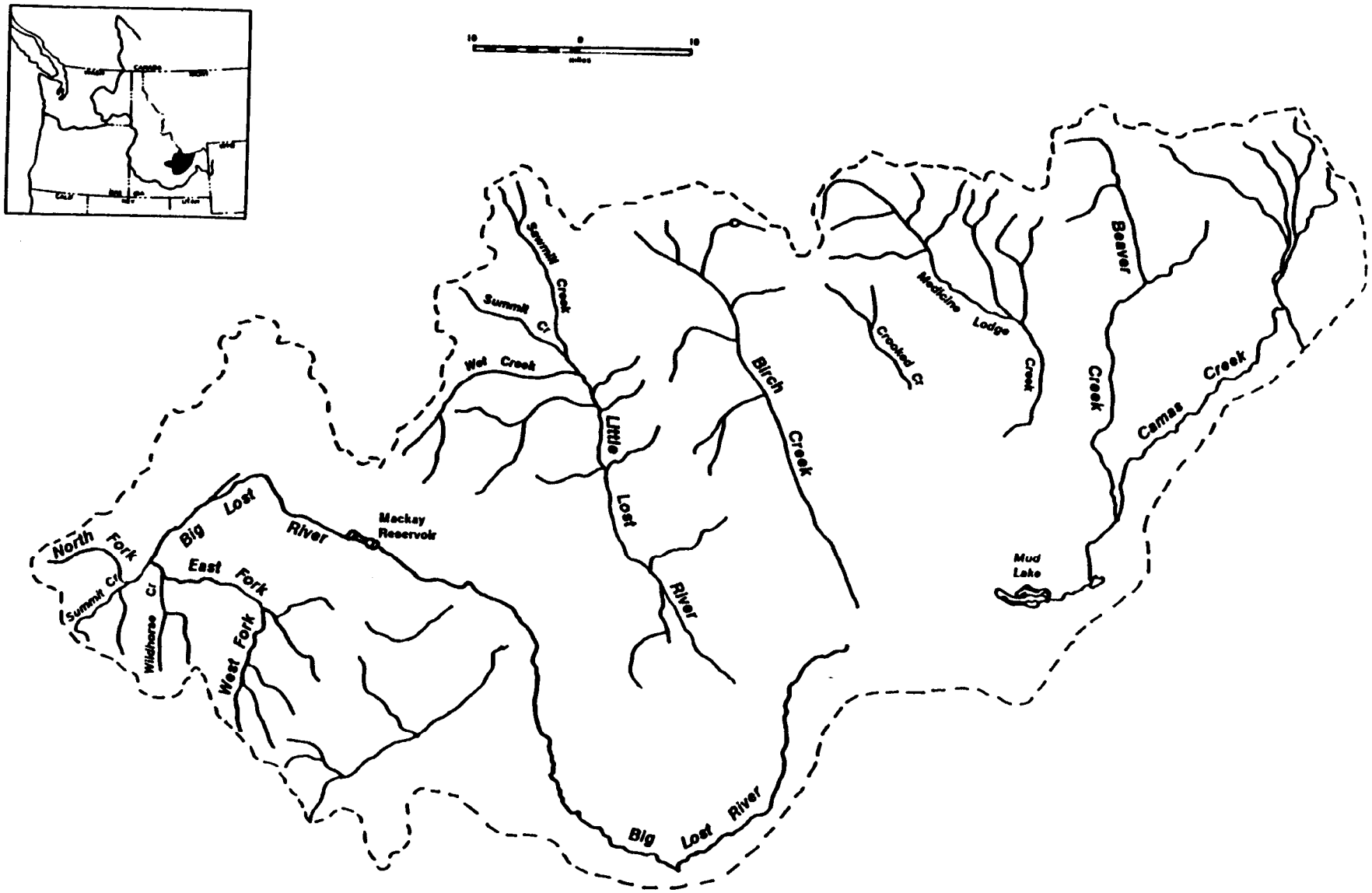
Program: Maintain restrictive harvest rules for cutthroat trout and consider late season openers in principal spawning tributaries if monitoring and/or public indicates need for doing so.

Program: Critically evaluate both agency and private stockings of fish in the drainage for possible negative effects on native cutthroat; restrict and or comment on accordingly.

Drainage: SOUTH FORK SNAKE RIVER					
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Mouth to Heise	23/	Coldwater	Cutthroat trout Brown trout Rainbow trout Mountain whitefish	Quality Wild trout General	Upper Snake cutthroat trout with additional rainbow and brown trout restricted harvest. Maintain overall catch rates at 0.7 fish/hour. Screen irrigation canals to prevent fish losses if funding can be secured. Emphasize mountain whitefish harvest.
Heise to Palisades Dam	40/	Coldwater	Cutthroat trout Brown trout Rainbow trout Mountain whitefish	Quality Wild trout General	Upper Snake cutthroat trout with additional rainbow and brown trout restricted harvest. Maintain overall catch rates at 1.0 fish/hour with 5% to 10% larger than 16 inches in population. Emphasize whitefish harvest.
Dry Bed Canal	32/	Coldwater	Cutthroat trout Rainbow trout Brown trout Mountain whitefish	General	Put-and-grow fishery with rainbow trout below Lewisville. Minimize brown trout, cutthroat trout, and mountain whitefish recruitment from South Fork. April salvage season Lewisville to Ririe. Minimize dewatering through agreements with irrigation districts.
Burns, Pine, Rainey, Pritchard, and Palisades creeks	38/	Coldwater	Cutthroat trout	Quality	Upper Snake cutthroat trout restricted harvest. Close Pine Creek and Burns Creek to July 1 -- spawning closure. Restore resident cutthroat populations. Enhance stream habitat and cutthroat trout recruitment with riparian livestock management and diversion screening.
McCoy Creek and tributaries	35/	Coldwater	Cutthroat trout Brown trout	Quality General	Habitat protection from mine impacts. Evaluate response to slot limit in five to six years.
Tincup Creek from Idaho line to Highway 34 Bridge	12/	Coldwater	Cutthroat trout Brown trout	Quality General	Stock fall spawning hatchery rainbow in segment heavily altered by road construction. Evaluate returns.
Tincup Creek from Highway 34 Bridge to headwaters	8/	Coldwater	Cutthroat trout Brown trout	Quality Wild trout	Maintain semi-primitive access to the fishery. Develop hatchery rainbow trout management zone and evaluate returns.
Stump Creek and tributaries	12/	Coldwater	Cutthroat trout Brown trout Brook trout	Quality General	Work with federal agencies on habitat rehabilitation. Develop hatchery rainbow management zone and evaluate returns.
Crow Creek and tributaries	25/	Coldwater	Cutthroat trout Brown trout	Quality General	Investigate development of quality brown trout fishery in Sage Creek in conjunction with habitat improvement. Develop hatchery rainbow management zone and evaluate returns.
Jacknife Creek and tributaries	12/	Coldwater	Cutthroat trout Brown trout	Quality General	Assess needs for habitat improvement program.
All other tributaries	354/	Coldwater	Cutthroat trout	Quality	Upper Snake restricted cutthroat harvest regulations. Enhance habitat with riparian livestock management.

Palisades Reservoir	**/16,150**	**Coldwater**	**Cutthroat trout** **Brown trout** **Lake trout** **Kokanee salmon**	**Put-and-take trout** **Wild trout** **General**	**Put-and-grow fishery for cutthroat trout. Only fine-spotted Snake River cutthroat trout will be stocked through 1993. Evaluate fine-spotted suitability for attaining catch rate goal of 0.5 fish/hour. Evaluate alternate species/strains if catch rate not attained. Maintain average size of cutthroat of 14 inches. Brown trout are all wild fish. Evaluate lake trout for discontinued stocking based on angler success and predation on game species. Remnant kokanee salmon population in Big Elk Creek.**
Upper and Lower Palisades lakes	**/16**	**Coldwater**	**Cutthroat trout**	**Wild trout**	**Maintain catch rate at 0.6 fish/hour.**

Sinks Drainages



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32. SINKS DRAINAGES

A. Overview

The Sinks drainages include the Big Lost and Little Lost rivers, Birch, Camas, Beaver and Medicine Lodge creeks drainages, all of which sink into the upper Snake River Plain aquifer. Rainbow trout, of generally small size, are the predominant fish throughout the drainages, except for some headwaters and a few minor tributaries where brook trout are dominant. Native bull trout and cutthroat are maintaining fishable populations in some limited areas. Mountain whitefish are found only in the Big Lost drainage. Stream quality and fish populations vary from excellent to poor where streams alternately intersect and perch above the groundwater table or enter irrigation ditches. Streams become marginal where they flow into the Snake River Plain due to diversion and freeze out. Where groundwater inflow is lacking, wintertime air temperatures often cause streams **to become** icebound and **leave** their channels. **Severe** habitat degradation has occurred to most streams due to past and/or present grazing practices on private and public range land. Natural flood events have also severely impacted **some drainages,** such as Wildhorse **Creek** in the Big Lost River Drainage.

Irrigation diversions often dewater the lower segment of most drainages. Productivity is generally high due to large amounts of groundwater input. Stream improvement structures, to restore losses of riparian habitat due to grazing, on lower Birch Creek and Summit **Creek** (Little Lost River **drainage) have provided** 100% to 400% increases in trout populations.

Drought conditions since 1987 have impacted many of the smaller headwater tributaries in the Sinks Drainages. With a return to normal snowpack years the **Department** will consider **supplemental** hatchery **releases on** a **case by case** basis where fish **populations have been impacted.** This may include those **drainages managed** for wild trout.

1. Bice Lost River

The Big Lost River is the largest of the sinks drainages. Included in the drainage is Mackay Reservoir. Major tributaries include Antelope, Summit and Wildhorse creeks and the East, West and North forks of the Big Lost River. Estimated fishing effort in 1986 was 11,500 angler days for the drainage above Mackay Reservoir with 11,900 angler days in 1984 fished on the reservoir.

Mackay Reservoir, built in 1916, is a widely fluctuating irrigation supply reservoir having a maximum capacity of 44,500 acre-feet and a minimum pool of 125 acre-feet. Pool levels below 4,600 acre-feet occur about every three years, causing flushing of most trout and **kokanee** through the outlet structure of the dam into the Big Lost River. This results in a poor fishery the following year in the reservoir and makes it impossible to manage Mackay Reservoir for a wild trout fishery. Catch rates for Mackay Reservoir averaged 0.4 fish/hour during summer 1983 with 35,000 hours of fishing effort. During the winter ice fishery at Mackay Reservoir, January and February 1984, catch rate averaged 0.7 fish/hour with 10,800 hours fished. Hatchery rainbow comprised the

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majority of fish caught with some brook trout, kokanee, and wild rainbow trout present.

The 60 miles of Big Lost River below Mackay Reservoir has been extensively modified by numerous irrigation diversions and channelization for flood control which has destroyed about 25% of the channel. Drought conditions have affected the Sinks drainages from 1987 through 1994. During this period, water storage and natural stream flows did not meet irrigation demand which resulted in extensive development of wells in the area from Mackay to the Idaho National Engineering Laboratory boundary. Well development combined with lower natural flows has reduced or eliminated most salmonid populations downstream from the Moore Diversion. Even in years of normal precipitation, **restoration** of any fishery is **questionable** due to **lowering** of the **water** table.

From **Moore** Diversion to **Mackay Reservoir,** the Lost River supports wild rainbow, **brook** trout **and** mountain whitefish **populations.** Fish from Mackay **Reservoir produce an excellent fishery immediately downstream of Mackay** Dam. Large numbers of fish are lost annually to irrigation canals.

The Big Lost River from Mackay Reservoir upstream to Chilly Bridge is annually **dewatered** for irrigation **and** has **suffered** from long-term stream **alteration** activity. From Chilly **Bridge upstream,** the river and **tributaries** support wild **rainbow, brook** trout and mountain whitefish **populations.** From **Bartlett** Point **Road upstream** to the West **Fork-East Fork Confluence,** the mainstem and East **Fork** of the Big Lost River **have been under restricted** harvest for **rainbow** trout since **1988.** This section of the Big Lost River is now managed under a quality trout regulation -- 2 trout over 14 inches. Lost River **tributaries,** with the **exception of Wildhorse Creek, are productive for small brook and rainbow trout. Supplemental** stocking of **catchable rainbow** will continue in Wildhorse **Creek** and other high use sections of the North, East, and West forks of the Big Lost River. Wild trout numbers and catch **rates** in **Antelope Creek** and the upper Big Lost River **drainage have plummeted** since **1988. Possible** causes for these declines include **severe** mortality **associated** with winter **habitat and/or** whirling **disease.**

2. Little Lost River

The Little Lost River **drainage** contains primarily wild **rainbow,** although **brook** trout are **abundant** in **headwater areas. Viable populations** of native bull trout **are present** in Sawmill **Creek** and the **upper** Little Lost River. Creel checks show catch rates averaging 1.2 to 1.3 trout/hour over the last five years. The Little Lost River has been managed on wild trout production since 1983, and under wild trout regulations (2 trout possession limit) since 1993. The entire Little Lost River drainage upstream from Big Springs Creek has had a reduced bag limit of 2 trout since 1994. Bull trout harvest has been closed to preserve the remaining fish.

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3. Birch Creek

Estimated effort for **Birch Creek** was **25,400** hours, with a catch rate of 2.3 fish/hour in 1982. The high catch rate was affected by the large number of small (less than 150 mm) rainbow released by anglers. In 1987, catch rates averaged 1.5 fish/hour. Birch Creek is primarily a hatchery catchable fishery although a creel survey during 1982 indicated a 46% wild rainbow contribution.

4. Medicine Lodge Creek

Estimated effort for Medicine Lodge Creek was 3,700 hours with a catch rate of 1.1 fish/hour in 1987. Estimated effort for the Medicine Lodge drainage was 5,300 hours with a catch rate of 1.1 trout/hour during 1982. Effort and catch rates were lower than those observed during 1963 (11,000 hours fished with 1.4 fish/hour). Rainbow trout comprised 94% of the fish harvest during 1982. Electrofishing of the Medicine **Lodge drainage** in 1981 showed **good** populations of cutthroat and brook trout present in several tributaries, although wild rainbow trout were the dominant species. The Medicine Lodge drainage has been **managed on** wild trout **production** since **1983.**

5. Camas Creek

The Camas **Creek drainage** includes Mud **Lake, Beaver and** Camas creeks as important waters. **Good** populations of wild **rainbow and brook** trout exist in most streams in the headwater **areas.** Brown trout fingerling **releases have provided** a limited fishery for larger trout in Camas Creek. Water conditions limit trout populations in the lower ends of these streams. Native cutthroat trout **are** found in minor numbers in headwater **areas.** Little **comprehensive** angler use and harvest information is **available** on streams in the Camas Creek **drainage.** Creel surveys show catch rates averaging 0.86 trout/hour and ranging up to 1.8 trout/hour in some tributaries during the last five years.

Mud Lake originally contained large numbers of cutthroat trout. Presently, it supports a warmwater fishery with yellow perch, largemouth bass, bluegill, brown **bullhead and black crappie. Nongame** fish **are** still abundant with Utah chubs and Utah suckers the major species. The lake supports a few hatchery **rainbow** trout which **move down** out of Camas **Creek,** but the high summer temperatures, fluctuating water levels and low winter dissolved oxygen have greatly **decreased** the suitability for trout. High spring water levels during 1984

through 1986 improved the perch and bass populations in the lake, and angler use and harvest increased from 1982 through 1986. However, perch populations **dropped** dramatically after 1988 and effort also declined.

In 1988, introductions of tiger muskie were made into Mud Lake to create a trophy fishery while utilizing the **nongame biomass available** in the lake. Tiger muskies are sterile hybrids, northern pike and muskellunge, and will be managed through fingerling **releases** every three years. Bluegill were introduced from 1983-1985. While some natural reproduction exists, no major population has developed. From 1987-1989 black crappie introductions were made into Mud Lake to try to create a self-sustaining population. Evaluation of these releases will be completed in 1990.

Mud Lake has lacked a coldwater fishery since water management changes in the early 1960s impacted Camas Creek and Mud Lake water quality. Experimental introductions of Lahontan cutthroat began in 1990 to evaluate this subspecies potential under existing high alkalinity and temperature conditions.

Preliminary results suggest good survival and growth; providing 14- to 18-inch fish to the catch, primarily during the winter ice fishery. Stocking of Lahontan cutthroat trout fingerlings will continue.

Mud Lake suffered a near total winter kill during the 1992-93 winter, and an apparent partial winter kill during the 1994-95 winter. Extensive restocking efforts in 1993, including over 4,000 yellow perch, 4,000 largemouth bass, and 1,500 12-inch tiger muskies. Fall stocking of Lahontan cutthroat trout fingerlings has been continued on an annual basis. Reestablishing the popular Mud **Lake largemouth bass** fishery will remain high priority. These efforts will be **evaluated** for success during this five-year plan. Success will depend largely on **adequate** winter pool levels in Mud Lake to minimize the threat of future winter kill events.

B. Objectives and Proarams

1. Objective: Improve angling quality in Antelope Creek and upper Big Lost River drainage.

Program: **Evaluate** causes of recent **decline** in catch rates for and **abundance** of wild trout in those waters. Assess potential effects of whirling disease and long-term impacts of drought and winter mortality on those **populations.**

Program: **Evaluate** and implement, if justified, **experimental** supplemental **stocking of rainbow trout to reestablish depleted wild rainbow trout populations.**

2. Objective: Improve water quality conditions in Mud Lake by maintaining higher year-round pool levels to provide for stable game fish populations and improved year-round fishing opportunity.

Program: Work with irrigation storage **spaceholders** and private fishing organizations to facilitate enhanced winter lake volumes.

Program: **Evaluate other feasible** measures to maintain **adequate** winter

dissolved oxygen levels to minimize winter kill events.

3. Objective: Continue to provide for balanced quality and general harvest oriented stream fishing opportunity.

Program: Continue wild trout **management** for Medicine Lodge Creek drainage to protect isolated cutthroat trout populations and maintain wild trout fishing opportunity.

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Program: Continue to provide general harvest fishing opportunity in Birch Creek and Beaver Creek drainages with mixed hatchery catchable and wild trout angling opportunities.

Program: Continue to manage for popular brook trout and supplemented brown

trout angling opportunities in the Camas Creek drainage.

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Drainage: SINKS - BIG AND	LOST RIVERS, BIRCH, MEDICINE LODGE, AND CAMAS CREEKS				
		Fishery			
Water	Miles/acre	Type	Species Present	Management	Management Direction
Big Lost River to Idaho National Engineering Laboratory (INEL) boundary	5/	Coldwater	Rainbow trout Brook trout Mountain whitefish	Closed	All access and fish close by INEL. System annually dewatered with questionable long-term potential.
INEL boundary to Moore Diversion	22/	Coldwater	Rainbow trout Brook trout Mountain whitefish	General	System annually dewatered. Ground and surface waters are over-appropriated. Questionable long-term potential.
Moore Diversion to Mackay Dam	20/	Coldwater	Rainbow trout Brook trout Mountain whitefish	Wild trout General	Maintain wild trout populations. Supplement with put-and-take fishery in areas of high effort to maintain catch rates of 1.0 fish/hour. Evaluate returns of catchable rainbow trout. Winter
Mackay Reservoir	/1,000	Coldwater	Rainbow trout Brook trout Kokanee salmon	Put-and-take trout General	Put-and-take and put-and-grow fishery for rainbow trout. Manage for catch rate of 0.5 fish/hour. Shift production to late fall fingerling to maximize growth under annual drawdown
Mackay Reservoir to Chilly Bridge	15/	Coldwater	Rainbow trout Brook trout	General	Dewatered through diversions and natural sinks.
Chilly Bridge upstream to West Fork	45/	Coldwater	Rainbow trout Brodk trout Mountain whitefish	Quality General	Restricted harvest regulations for rainbow trout from Bartlett Point Road to East Fork-West Fork confluence. Catch rates of 1.0 fish/hour. Winter whitefish season. Evaluate quality trout
Tributaries including North Fork, West Fork, Upper East Fork, Wildhorse, and Summit creeks	232/	Coldwater	Rainbow trout Brook trout Mountain whitefish	Put-and-take trout General	Maintain wild populations of trout to produce catch rates of 1.2 fish/hour. Use supplemental put-and-take stocking in areas of high use. Evaluate potential of experimental releases of Arctic
Little Lost River and tributaries	110/	Coldwater	Rainbow trout Bull trout Brook trout	Wild trout Preservation General	Maintain wild populations of rainbow, brook, and bull trout to provide catch rates of 0.5 fish/hour. Manage bull trout population under statewide regulation directives; closed to harvest
Birch Creek and tributaries	32/	Coldwater	Rainbow trout Brook trout	Put-and-take trout General	Put-and-take fishery to supplement wild populations. Maintain catch rates of 1.0 fish/hour.
Medicine Lodge Creek and tributaries	64/	Coldwater	Rainbow trout Brook trout Cutthroat trout	Wild trout General Quality	Maintain populations of wild trout. Upper Snake restricted harvest for cutthroat trout. Catch rates of 1.0 fish/hour.
Mud Lake	/7,000	Warmwater	Yellow perch Largemouth bass Black crappie Bluegill Tiger muskie	General	Provide warmwater fishery primarily supported by perch. Experimental stocking of Lahontan cutthroat trout for viability of coldwater fishery. Stock tiger muskies every three years to provide trophy fishery.

Camas Creek from Mud Lake to Camas National Wildlife Refuge	4.5/	Coldwater	Rainbow trout	Put-and-take trout	Put-and-take fishery to provide spring catch rates of 0.5 fish/hour. Spring release only due to poor water quality. Evaluate return to creel of catchable trout.
Camas National Wildlife Refuge (Camas Creek and ponds)	9/600	Warmwater	Yellow perch Largemouth bass	Closed ,	Closed for waterfowl sanctuary. Evaluate fishery in refuge waters and develop plan to allow limited angler entry.
Remainder of Camas Creek and tributaries	70/	Coldwater	Rainbow trout Brook trout Brown trout	Wild trout General	Maintain present wild trout to provide catch rates of 1.0 fish/hour. Put-and-grow fishery for brown trout. Evaluate removal of stunted brook trout population in limited areas.
Beaver Creek from mouth of Spencer	22/	Coldwater	Rainbow trout Brook trout Cutthroat trout	Wild trout General Quality	Dewatered annually.
Beaver Creek and tributaries above Spencer	18/	Coldwater	Rainbow trout Brook trout Cutthroat trout	Put-and-take trout General Quality	Provide catch rates of 0.5 fish/hour on wild fish. Supplement with put-and-take stocking in areas of high use.
, Alpine lakes	/290	Coldwater	Rainbow trout Cutthroat trout Brook trout Golden trout Arctic grayling Rainbow x cutthroat hybrids	General	Maintain present fishery by use of hatchery fry where needed. Expand use of golden trout and Arctic grayling to meet public demand in suitable lakes. Identify lakes to receive golden trout. These lakes should receive no supplemental stocking with alternate species. Utilize new data to adjust stocking rates and frequency to correspond to lake size, productivity, natural production, and public use.

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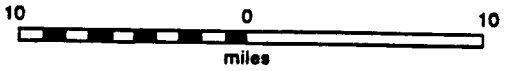
Bear River Drainage



33. BEAR RIVER AND TRIBUTARIES

A. Overview

The Bear River and its major tributary streams comprise 524 river miles. There are a number of irrigation storage reservoirs in the drainage. Bear Lake, the largest lake in the drainage, covers 70,000 surface acres, 32,000 in Idaho.

Habitat for trout in the Bear River is marginal due to high, turbid irrigation flows in summer and inadequate flows during winter. Power facilities have been detrimental to fishing because reservoirs associated with them have rapid turn over, are vertically unstable, and block spawning migrators. In addition, Utah Power and Light Company's Soda Point (Alexander) and Oneida Narrows facilities peak power which severely fluctuates water levels in the river below. The river receives the heaviest fishing pressure downstream from the Alexander and Oneida dams and in the Black Canyon area. Harvest in these areas is primarily hatchery rainbow and brown trout.

Main tributaries to the Bear River include the Malad and Cub rivers, Thomas Fork, Bloomington, Paris, Montpelier, Georgetown, Eight-Mile, Williams, and Mink creeks. St. Charles Creek is a major spawning stream for cutthroat from Bear Lake. Headwater tributaries of Thomas Fork contain populations of the unique Bonneville cutthroat which were identified from these tributaries in 1979 and 1981. In 1993 and 1994, Bonneville cutthroat trout were identified in most of the other tributaries of the Bear River, and the upper ten miles of the Cub River contains wild trout populations and receives heavy fishing pressure.

Most tributaries to the Bear River support populations of self sustaining cutthroat, brook, or brown trout. Highest concentrations of trout are found in the middle and upstream sections. Trout in the lower sections are affected by low summer flows and high temperatures resulting from irrigation withdrawal. Catchable rainbow trout are planted in accessible streams where habitat conditions and returns are favorable.

A number of irrigation reservoirs support game-fish populations in the Bear River drainage and if sufficient water remains at the end of the irrigation season excellent growth and over winter survival occurs. They are stocked with hatchery rainbow trout. In addition, a high percentage contain spiny-rayed game fish such as bluegill, yellow perch, and largemouth bass. Collectively, these reservoirs provide a significant amount of fishing opportunity.

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Bear Lake historically contained populations of cutthroat trout which matured at a large size. Due to overfishing, irrigation diversion and other factors, this population was reduced to a low level. Utah Department of Natural Resources, takes eggs from mature fish which ascend Swan Creek, rears young fish in a hatchery for one year, then releases them back in Bear Lake. The Department of Fish and Game is protecting habitat and improving habitat into St. Charles Creek for Bear Lake Cutthroat spawners. As mitigation for damage caused to Bear Lake fisheries by diverting Bear River Water into Bear Lake, and by the sedimentation associated with failures of the causeway dike in 1993, Utah Power and Light connected the Big Creek Branch of St. Charles Creek to **Bear Lake** in 1995. This will increase the spawning and rearing **habitat** for **Bear** Lake cutthroat and reduce loss of juvenile cutthroat to irrigation diversions. In addition, Bear Lake contains four other species of•endemic fish.

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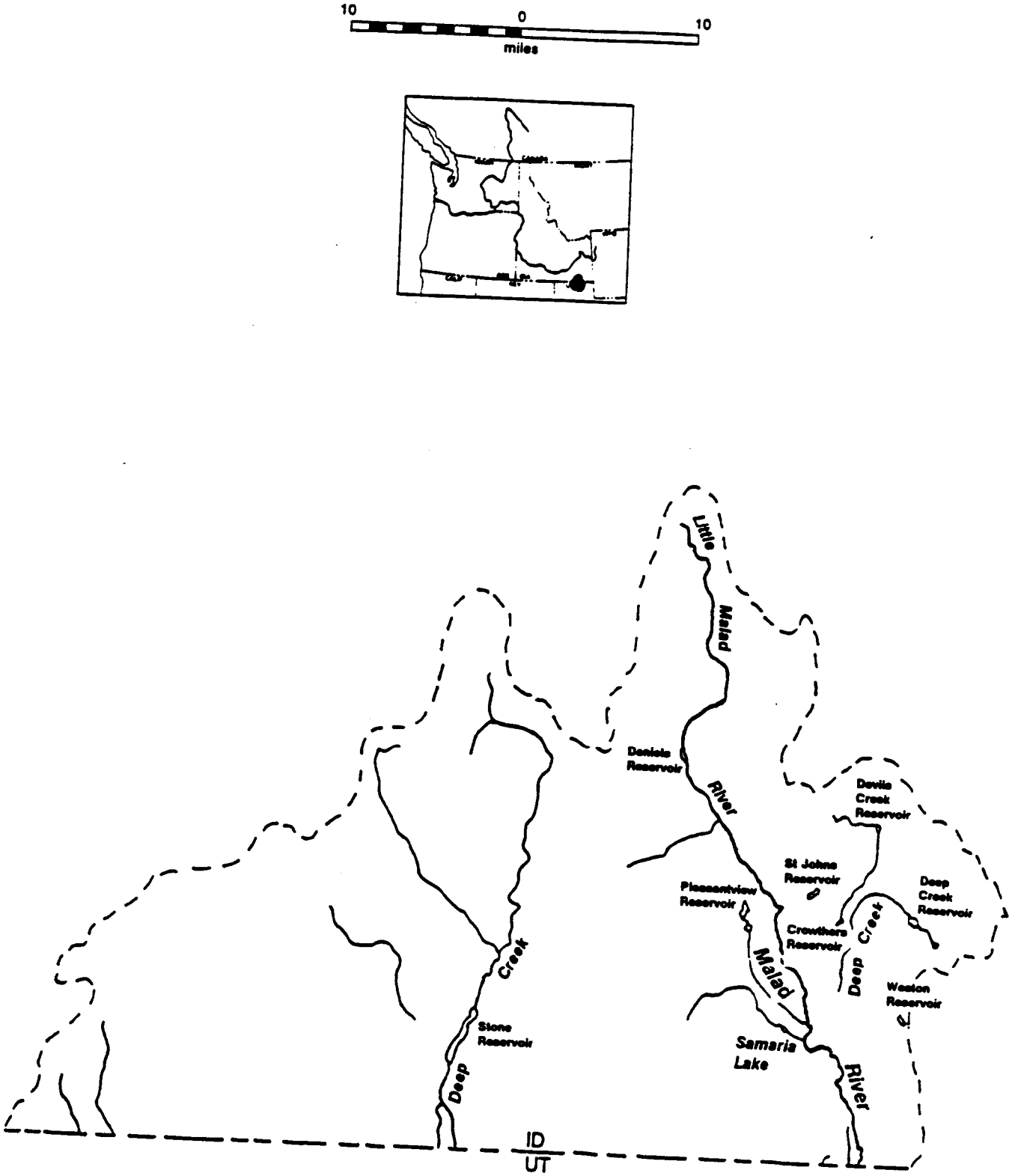
Drainage: BEAR RIVER

Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Bear River from Utah state line upstream to Highway 91	30/	Mixed	Mountain whitefish Channel catfish Rainbow trout Brown trout Walleye	General	Assess status and public awareness of channel catfish population near Preston and consider additional supplementation if necessary. Seek stable regime and develop a more intensive salmonid fishery with better access.
Bear River from Oneida Dam to Highway 91	2.5/	Coldwater	Rainbow trout Walleye Mountain whitefish Brown trout Cutthroat trout	Quality General Put-and-grow trout Quality	Seek more stable flow regime.
Oneida Narrows Reservoir	/500	Mixed	Yellow perch Walleye	General	
Bear River from Oneida Narrows Reservoir headwaters to Black Canyon	/25	Mixed	Rainbow trout Walleye Mountain whitefish	General	
Condie Reservoir	/117	Mixed	Rainbow trout Largemouth bass Yellow perch Bluegill	General Trophy	Stock catchable size trout.
Foster Reservoir	/146	Mixed	Rainbow trout Largemouth bass Bluegill	Put-and-take trout General	Manage around frequent severe drawdowns.
Glendale Reservoir	/230	Mixed	Rainbow trout Cutthroat trout Bluegill Largemouth bass Crappie	Put-and-take trout General Quality	Evaluate survival of crappie introductions.
Johnson Reservoir	/50	Mixed	Rainbow trout Yellow perch Largemouth bass Bluegill	Put-and-take trout General	
Lamont Reservoir	/92	Mixed	Rainbow trout Largemouth bass Bluegill	Put-and-take trout General	
Nash Reservoir	/13	Mixed	Yellow Perch Largemouth bass	General	Restock after five-year drought.
Oxford Reservoir	/20	Warmwater	Largemouth bass Bluegill	General	Restock after five-year drought.

Treasureton Reservoir	/143	Coldwater	Rainbow trout Rainbow x cutthroat hybrids	Quality	
Twin Lakes Reservoir	/446	Mixed	Rainbow trout Largemouth bass Bluegill	Put-and-take trout General'	Reestablish fishery after 1994 renovation.
Weston Reservoir	/112	Mixed	Rainbow trout Largemouth bass Yellow perch	Put-and-take trout General	General fishery assessment, improve angler access.
Winder Reservoir	/94	Mixed	Rainbow trout Largemouth bass Bluegill Green sunfish	Put-and-take trout General	Work with Twin Lake Canal Company to insure enough water for overwinter fish survival.
Bear River from Black Canyon to Soda Point Dam	11/	Mixed	Rainbow trout Cutthroat trout Mountain whitefish Smallmouth bass Brown trout	Put-and-take trout Quality General Put-and-grow trout	Evaluate fishery and monitor minimum flow.
Alexander Reservoir	/1,165	Mixed	Cutthroat trout Yellow perch White crappie Channel catfish	General	Develop habitat program with local angler group and Utah Power and Light Company.
Bear River from Alexander Reservoir to Bear Lake	79/	Coldwater	Rainbow trout Cutthroat trout Mountain whitefish Brown trout	Put-and-take trout Quality General Put-and-grow trout	Reduce turbidity.
Montpelier Reservoir	/120	Coldwater	Rainbow trout Kokanee salmon Cutthroat trout	Put-and-take trout General Put-and-grow trout	
Bloomington Lake	/10	Coldwater	Cutthroat trout	General	Stock 2,000 Bonneville cutthroat.
Little Valley Reservoir	/60	Coldwater	Rainbow trout Cutthroat trout	Put-and-grow trout General	Evaluate success of stocking Bear Lake cutthroat fingerlings. Stock with Bonneville cutthroat trout.
Bear River tributaries	44/	Coldwater	Rainbow trout Cutthroat trout Brook trout Brown trout	Put-and-take trout Quality General	Stock in standard hatchery trout zones.
Bear Lake tributaries	206/	Coldwater	Bear Lake whitefish Brook trout Cutthroat trout	General Catch-and-release	Continue to improve habitat and fish passage conditions in St. Charles Creek.

Bear Lake	/70,000	**Coldwater**	**Cutthroat trout** **Lake trout** **Bonneville Cisco** **Bear Lake whitefish** **Bonneville whitefish**	**Quality**	Develop long-term management .: to reestablish wild cutthroat population and monitor forage species to assess potential for future exotic predator management.
Thomas Fork Creek		Coldwater	Cutthroat trout	Preservation	**Participate in USFS and NRCS habitat improvement programs. Continue preservation program until Bonneville cutthroat trout population rebuilds.**
Preuss Creek		**Coldwater**	**Cutthroat trout**	**Preservation**	**Monitor new allotment management plan.**
Dry Creek		**Coldwater**	**Cutthroat trout**	**Preservation**	**Monitor new allotment management plan.**
Giraffe Creek		**Coldwater**	**Cutthroat trout**	**Preservation**	**Monitor new allotment management plan.**

Malad River Drainage



34. MALAD RIVER DRAINAGE

A. Overview

Streams in the Malad River drainage total 83 miles and cover 86 surface acres. The river's main stream is characterized by high silt, high water temperatures, and poor trout populations. These conditions restrict the expansion of present fisheries. In 1993, the Department stocked channel catfish in the lower Malad River and in 1994 opened this river reach to year around fishing.

Reservoirs in the drainage cover 814 surface acres, and are used for irrigation water storage. They are drawn down during the irrigation season and refilled in the winter and spring. Two reservoirs, Daniels and Devils Creek, have minimum pools for fish, which are **incorporated** as part of the project. These reservoirs are stocked annually with rainbow trout. Populations of spiny-rayed fishes occur in all but Deep Creek and St. Johns Reservoir. Collectively, these reservoirs provide significant fishing opportunity. Little is known, however, about harvest or fishing pressure.

Daniels Reservoir was historically managed as a trophy trout fishery with a two-fish limit. Following treatment for Utah suckers in 1988, Daniels was stocked with rainbow-cutthroat hybrids and Lahontan cutthroat. Trophy regulations are now in effect on trout.

Stone Reservoir is located on Deep Creek in Curlew Valley approximately 6 miles north of Snowville, Utah. It is managed from the Magic Valley Region. It is stocked with rainbow trout annually and has self sustaining populations of largemouth bass and crappie. However during the 1987-1992 drought, the warmwater fish populations

were greatly reduced.

FMPNRTVS

[Drainage: MALAD RIVER

Water	Miles/acre	Fishery			Management Direction
		Type	Species Present	Management	
Malad River from Utah border upstream to Samaria Lake	10/	Mixed	Rainbow trout Bullhead Cutthroat trout Channel catfish	General	
Malad River tributaries	65/	Coldwater	Rainbow trout Cutthroat trout	General	Stock in hatchery-supported zone downstream from Daniels Reservoir.
Daniels Reservoir	/375	Coldwater	Rainbow trout Rainbow x cutthroat hybrids	Trophy	Stock as 6-inch fingerlings.
Deep Creek Reservoir	/183	Mixed	Rainbow trout Cutthroat trout Largemouth bass	Put-and-take trout	Continue wild/natural regulation for wild cutthroat trout population under new year-round season. Evaluate survival of kokanee salmon.
Devils Creek Reservoir	/142	Coldwater	Rainbow trout Cutthroat trout Kokanee salmon	Put-and-take trout General	Continue wild/natural regulation for wild cutthroat trout population. Evaluate survival of kokanee salmon.
Pleasantview Reservoir	/47	Mixed	Rainbow trout	Put-and-take trout	Stock catchables in fall or early spring after water, volume increases.
Samaria Lake	/10	Warmwater	Largemouth bass Green sunfish	General	Check to see if restocking necessary after five-year drought.
Crowthers Reservoir	/33	Mixed	Rainbow trout	Put-and-take trout	
St. Johns Reservoir	/48	Mixed	Rainbow trout Largemouth bass Bluegill	Put-and-take trout Quality General	Evaluate effectiveness of quality regulations.
Stone Reservoir	/30	Mixed	Rainbow trout Black Crappie Largemouth bass	General	Assess fishery status, evaluate suitability for Lahontan cutthroat trout fingerling program. Provide catch rate of 0.5 fish/hour.

TO LEARN MORE

For more information regarding fish management, contact these Fish and Game offices:

Headquarters

Boise, ID 83703 334-3791

Fisheries Bureau

600 S. Walnut St.

Panhandle Region
2750 Kathleen Avenue

Coeur d'Alene, ID 83814 769-1414

Clearwater Region 1540 Warner Avenue

Lewiston, ID 83501 799-5010

Magic Valley Region
868 East Main St.

Jerome, ID 83338 324-4359

McCall Subregion
555 Deinhard Lane

McCall, ID 83638 634-8137

Southeast Region
1345 Barton Rd.

Pocatello, ID 83204 232-4703

Southwest Region
3101 S. Powerline Rd.

Nampa, ID 83686 465-8465

Upper Snake Region
1515 Lincoln Rd.

Idaho Falls, ID 83401 525-7290

Salmon Region

P.O. Box 1336, Highway 93

Salmon, ID 83467 756-2271

CREDITS

State Fisheries Manager:
Dexter R. Pitman

The Fish Management Plan was written by:

Yundt
Dexter Pitman Bill

Horton Sharon

Kiefer Ned Horner

James Davis Tim

Cochnauer Ed

Schriever Donald

Anderson Paul

Janssen Steven

Dale Allen

Fred Partridge

Charles Warren

Richard Scully

James Mende

Mark Gamblin

Bruce Rich Mike

Larkin Mark Liter

Tom Curet