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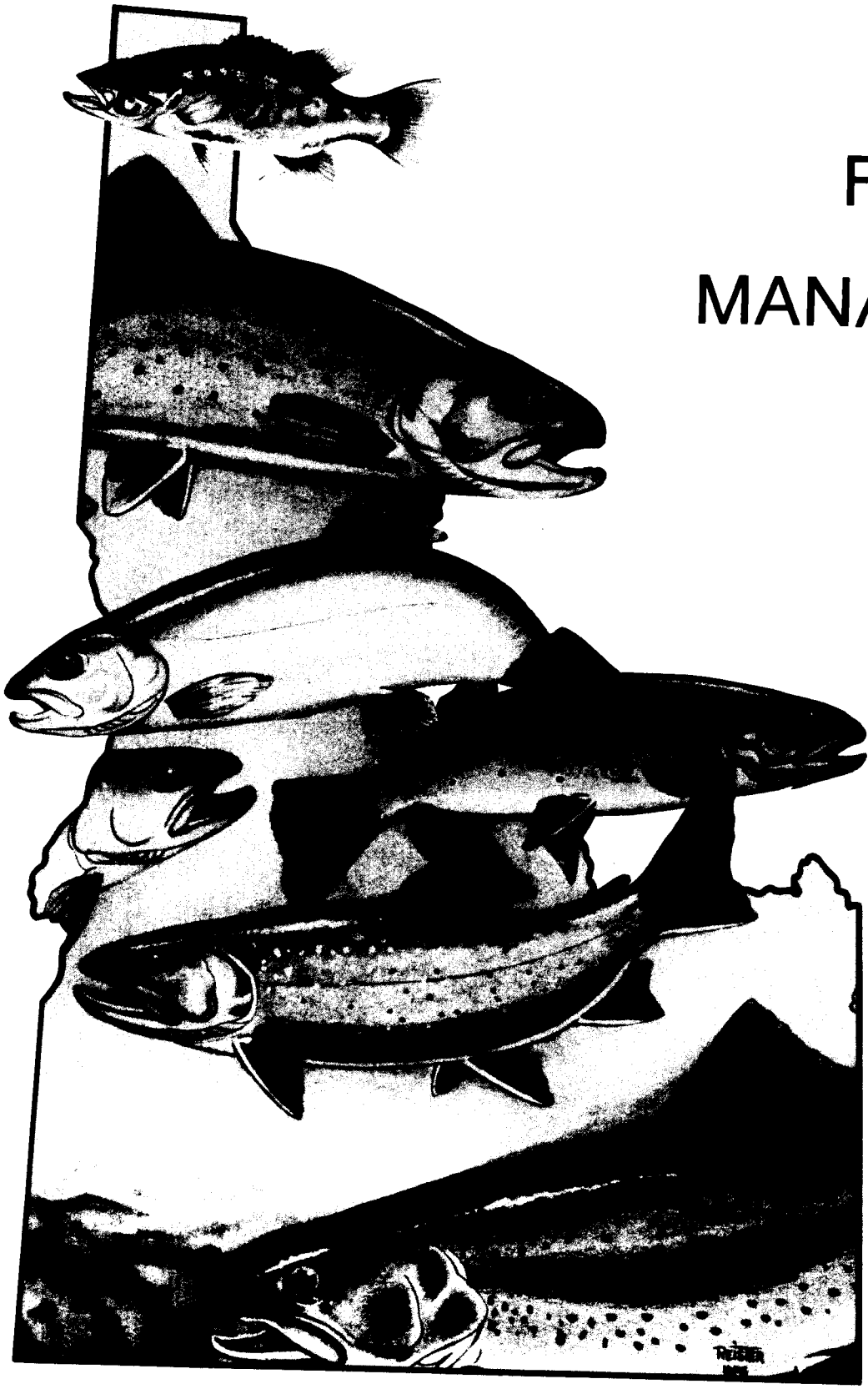

IDAHO FISHERIES MANAGEMENT PLAN 1986 1990

IDAHO FISH & GAME

FISHERIES MANAGEMENT PLAN

1986-1990

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INTRODUCTION

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 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 manages the fish and wildlife of the state.

The development of the Fisheries Management Plan (FMP) is guided by "A PLAN FOR THE FUTURE MANAGEMENT OF IDAHO'S FISH AND WILDLIFE RESOURCES, Volume 1, Goals, Objectives, and Policies, 1975-1990," by the Idaho Department of Fish and Game. The FMP is an outgrowth of this document.

This fishery management plan describes the management direction which the Department intends to pursue in order to provide the continued supplies of fish and fishing opportunity as mandated by law. This document has been in existence since 1983 based on long-term management direction guided by policies set by the Commission. In some cases, the management direction outlined in this plan is a continuation of long-established programs. In other cases, shortcomings are identified and corrective measures proposed. After public review and Commission approval (approved December 1985), this document will be the guide for management of fishery resources in Idaho from 1986 through 1990.

Budget preparation for fisheries research and management activities of the Fish and Game Department will be within the guidelines set down by this plan. Programs listed are those which the Department intends to initiate or accomplish within this planning period.

A. STATEWIDE FISHERIES MANAGEMENT OBJECTIVES

The primary objectives of this plan are:

1. Guide the management of Idaho's fishery resources through 1990;

2. Outline strategies to provide a maximum amount of fishing opportunity of types desired by Idaho's anglers; and

3. Display goals and programs and provide opportunity for input to resource users (fishermen), other resource agencies, and interested publics.

B. STATEWIDE FISHERIES MANAGEMENT GOALS

1. Increase sport fishing opportunity in Idaho.

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

3. Maintain catch rates (fish/hour) at or above the present level.

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

The key to maintaining continued supplies of fish and fishing opportunity is maintaining and improving the quality of fish habitat in Idaho. Water is becoming a precious commodity. Other uses of water, such as agricultural, industrial, municipal, and hydroelectric generation, are often detrimental to fishery resources. Quality of water depends on the quality of the watershed. Any activity which affects the quality or quantity of water available to fish affects the fish population. While the Department is charged with the management of fish, fish habitat is managed by other state agencies, federal agencies, and private individuals who often have goals other than maintaining production of fish. Fishery management then becomes a difficult matter of establishing or maintaining a fishery in altered habitat.

Department personnel have a professional, as well as statutory, responsibility to be the chief advocates for wildlife in Idaho. Others may choose to sacrifice major wildlife values to achieve other goals, but the Department cannot support such decisions and must advise those who do of the trade-offs they are making and the violations of public trust.

The guidelines for this plan are established in "A PLAN FOR THE FUTURE MANAGEMENT OF IDAHO'S FISH AND WILDLIFE RESOURCES, Volume 1, Goals, Objectives, and Policies, 1975-1990," published by the Department in 1978 and referred to as the "policy plan." The policy plan establishes species and program priorities and goals. The policy plan is organized

by species. This fishery management plan is organized by drainages because there are many different species in each drainage of the state, and each species affects the other species in the shared habitat. Management direction in favor of one species may restrict or exclude other species.

This document is divided into two parts:

I. The first section deals with fisheries on a statewide basis, outlines general management direction, statewide problems and programs, and major management programs.

II. The second section proposes specific management direction for each drainage. For each drainage, an overview is provided which describes the habitat and, most important fisheries. Problems and programs specific to the drainage are listed. Management goals are presented in tabular form for important waters in each drainage.

PART I

IDAHO FISHERY MANAGEMENT PLAN - STATEWIDE

1. BACKGROUND

Sport fishing is a major recreational activity in Idaho. Approximately 500,000 fishermen expend 5,900,000 man days fishing Idaho waters annually (1985). Surveys indicate that 85 percent of Idaho's households have at least one member who fishes. Sport fishermen expend in excess of $218,000,000 annually pursuing fishing activities in Idaho.

There are approximately 586,000 surface acres of water in Idaho, including 22,000 miles (122,000 acres) of fishable rivers and streams, 225,000 acres of lakes, and 239,000 acres of reservoirs. The great topographical variation in Idaho contributes to a wide range of fishery habitats from large rivers and reservoirs at 700' msl elevation to alpine lakes and streams over 10,000' msl. Within the variety of habitat, there is similarly a wide variety of fish.

Historically, the native resident (nonanadromous) sport fish occupying most Idaho waters were cutthroat and rainbow trout, bull trout (Dolly Varden), and whitefish. Three distinct runs of anadromous chinook salmon (spring, summer, and fall), sockeye salmon, and steelhead trout occupied waters with access to and from the ocean. White sturgeon were present in the Snake River, lower reaches of major tributaries downstream from Shoshone Falls, and in the Kootenai River. Burbot (ling) occurred in the Kootenai River. Kokanee were present in the Payette and Stanley Basin lakes. In addition to the 14 species of native game fish, there are 26 species of nongame fish native to Idaho waters, including ten species of minnows; six species of suckers; and eight species of sculpin, trout-perch, and lamprey.

Since the arrival of white man, 23 species of game fish and 11 species of nongame fish have been introduced into Idaho waters (Appendix 1, species list). A total of 76 species of fish are confirmed in Idaho waters, six identified in the last five years.

The native game species require cool water, high levels of dissolved oxygen, and flowing streams with clean gravel bottoms to reproduce. In pristine times, most Idaho waters were well suited for salmonid fishes. The undisturbed streams and lakes provided excellent habitat and teemed with trout.

Early explorers and settlers found an abundance of trout in Idaho waters. Fish were an important food supply for miners and settlers in the 1800s. Even into the 1900s, there was an ample supply of trout. The native species, however, are susceptible to overharvest and are sensitive to habitat alteration, and many native fishes suffered serious depletion as early as the 1930s and 1940s.

Idaho waters were harnessed to provide power for mining and diverted or impounded for irrigation. Streams were disturbed by mining activities; altered by road and railroad construction; silted by runoff from soils disturbed by mining, logging and agriculture; and polluted by growing communities and industry. Habitat quality declined rapidly while the human population and fishing pressure increased. Trout populations, under these pressures, declined drastically.

Early fish management efforts consisted of regulatory protection for taking game fish and hatchery programs to introduce new species and supplement natural reproduction. As human populations increased, road access facilitated over-exploitation, habitat quality continued to decline, and the amount and quality of fishing available in Idaho deteriorated through the 1960s even though seasons and limits became more restrictive and hatchery programs became more effective. New reservoir fisheries became established and, to some extent, replaced lost or degraded stream fisheries. Warmwater fisheries became a factor in the total available fishing opportunity.

The decade of the 1970s marked substantial changes in Idaho fishery management. New environmental laws on state and federal levels improved the Department's ability to protect fishery habitat. The National Environmental Policy Act, the Idaho Stream Channel Protection Act, the Idaho Forest Practices Act, state and federal water quality laws, and other legislation allowed the Department to have more impact on decisions affecting fishery habitat, forced land management agencies into giving fish and wildlife habitat consideration in resource development, and made funding available to clean up water pollution, mitigate fish and wildlife losses, and protect the environment.

Recognition of the value of warmwater game fish led to an expanded program of annual stocking and range extension. Many of the expanded warmwater species were supplied to the Department without charge by the USFWS. Presently, these free programs do not exist, with transplant and purchase being used to obtain warmwater species.

Since 1970, changed management philosophies have led to restoration of wild, native trout populations in a number of high quality waters through special regulations. Habitat protection and pollution control have been emphasized, and the rate of loss of fish habitat has been slowed. New species have been introduced into habitat that is unsuitable for native species. Hatchery programs have been expanded to supplement depleted populations and establish fisheries in reservoirs.

Although the amount and quality of stream miles which support game fish are presently reduced from pristine conditions, the construction of dams and reservoirs has doubled the surface acreage of standing water in Idaho (Table 1.1). Introduction of new species and extensive hatchery programs have developed sport fisheries in the new reservoir habitats and in streams made unsuitable for native species. Idaho

waters now provide a larger total harvest of fish than ever before. Few reservoir fisheries for salmonid species are sustained by natural reproduction; the majority require extensive stocking of hatchery-reared fish.

A survey of Idaho angler preference and participation published in 1980 indicated definite preferences for certain fisheries. In spite of the relatively greater surface acreage of standing water over running water in Idaho, stream fishing is preferred by 58 percent of anglers and 47 percent of fishing pressure is directed at streams (Figure 1.1). Most anglers (79 percent) listed trout fishing as their first choice (Figure 1.2), and 68 percent of fishing effort was expended seeking trout (Figure 1.3). Nearly twice as many anglers listed stream fishing for trout as their first preferences as listed lake and reservoir fishing for trout.

Other coldwater fisheries, including steelhead, salmon, kokanee, and whitefish, were listed by 14 percent of the respondents as their first preference. These fisheries supported 16 percent of the fishing effort during the survey period. Salmon and steelhead fisheries, however, were in a depressed status at the time of the survey, and steelhead have increased dramatically.

Warmwater game fish and sturgeon were listed as the first preference by 6.7 percent of the survey respondents and supported 18 percent of the fishing pressure during the survey period.

Because the vast majority (93 percent) of Idaho anglers prefer coldwater fisheries and these fisheries supply 82 percent of the fisherman days expended in Idaho, it appears reasonable that emphasis in fishery management be directed toward coldwater, salmonid fisheries. Although streams total only about 20 percent of the water surface in Idaho, they are preferred over lakes and reservoirs by a majority of anglers and support nearly half of the statewide fishing pressure. Therefore, preservation of stream habitat and management of stream fisheries will be our highest priority.

The number of fishing licenses sold in Idaho has steadily increased over the years (Figure 1.4). Increasing population has contributed to increased fishing pressure. Meeting the demands for fishing opportunity of an increased number of fishermen with an increased amount of leisure time within the present stable or deteriorating fish habitat base will continue as the major challenge facing fishery managers in this planning period.

2. POLICIES

A. The policy plan establishes that warmwater game fish will not be stocked in waters where they will adversely affect goals and objectives set for salmonid game fish.

B. The policy plan establishes that waters will be designated as "hatchery" or "wild" and managed accordingly. No hatchery-reared fish will be introduced into waters classified as "wild." Hatchery fish will be stocked only in waters where they will contribute to fishing by the general public.

C. Wild, native runs of anadromous fish receive priority consideration in all fishery management decisions where runs are established. Preservation of anadromous fish habitat in a free-flowing condition is a high priority. Hatchery programs will be used to rebuild runs of salmon and steelhead in some drainages, while other areas will be reserved for wild runs. Major staff efforts will be invested in solving problems caused by downriver dams and in securing an equitable share of anadromous fish harvest for Idaho anglers.

D. Non-native salmonids and warmwater game fish will not be introduced into waters where they adversely affect goals and objectives set for native, coldwater, or anadromous programs. However, suitable exotic species will be utilized to establish sport fisheries in habitat unsuited for native species, or where the introduced species can provide increased fishing opportunity without undue damage to existing fisheries.

E. "Native wild stocks of resident trout will receive priority consideration in all management decisions involving resident fish" is our basic guideline. Wild trout populations can be maintained at or above present levels through habitat protection, judicious use of artificial propagation using wild or feral stocks and, where necessary, restrictive fishing regulations.

F. We will continue to provide variety in fishing opportunity by using different species and different management schemes on different waters. Species and regulations selected will be matched to the capability of the habitat and preferences of anglers in order to provide a maximum amount of fishing opportunity for the largest number of anglers.

G. Habitat protection and restoration will receive major emphasis in fishery management activities. Public awareness and involvement in habitat protection is essential for success of this program. Staff involvement will be employed at all levels in habitat planning by other agencies and private entities to ensure fisheries are considered.

H. Discourage fish contests and derbies. No Department support will be provided to any promoters of fish derbies. No manpower support, hatchery fish for release, or marked fish to represent target prizes will be provided.

3. RESIDENT SALMONID PROGRAM

Resident trout programs include all nonanadromous salmonids in Idaho waters. This major program is divided into three subprograms: A. rivers and streams; B. lakes and reservoirs; and C. alpine lakes.

A. Rivers and Streams

Although rivers and streams comprise only one-fifth of the surface acreage of water in Idaho, they support nearly one-half the fishing pressure and are preferred by almost 60 percent of anglers. Flowing waters have been severely impacted by human activities. Stream mileage cannot be increased, so increasing the amount of stream fishing opportunity depends upon: (1) protecting or improving stream habitat, (2) improving management of the existing stream fisheries, and (3) innovative culture techniques.

(1) Wild

Maintaining wild trout fisheries in Idaho streams is a major concern of the Department and Idaho fishermen. Respondents to a 1977 questionnaire ranked preservation of wild trout populations as one of the most important fishery management programs in Idaho. Seventy percent of respondents felt the program deserved more emphasis in the future.

Biologically, wild trout are essential because they are the best suited fish for many Idaho waters. Sociologically, wild and native species are important because of anglers' perception of the higher quality of wild fish over hatchery-reared fish or exotic species. Fishing as a sport has many traditions and the tradition of fishing for wild, native trout is very important to many Idaho anglers.

Wild trout are sensitive to habitat conditions and fishing pressure. The Department has emphasized wild trout management in the past decade with special fishing regulations on some wild trout populations and increased emphasis on habitat protection in areas which support wild trout. This emphasis will be continued through this planning period.

There are approximately 1,010 miles of trout streams with special regulations for protection and enhancement of wild trout populations in Idaho (Table 1.2). These areas include many of the highest quality (in terms of habitat condition and fish population) streams in Idaho. Additional waters suitable for this type of management are limited. No major expansion of special regulations is proposed in this planning period; however, wild trout management will be extended to other waters as public acceptance and demand for this program increases.

In addition to the streams with special management for wild trout, there are hundreds of miles of streams in wilderness or unroaded areas, or lightly used areas with limited access which support wild trout fishing, and wild trout are an important component of the fishery in many streams which are supplementally stocked with hatchery trout.

(2) Hatchery

Rivers and streams which are easily accessible receive heavy fishing pressure and harvest. Many miles of rivers and streams in Idaho have been degraded and have lost habitat capable of supporting wild trout populations. Wild trout populations in Idaho streams generally cannot withstand heavy fishing harvest. To support fishing pressure and supply satisfactory fishing opportunity, hatchery trout are stocked in many streams to supplement wild populations or to offset degraded habitat-induced losses.

Domesticated rainbow trout stocks, used in this program, do not experience good long-term survival and contribute little to wild populations. Fingerling trout strains presently available 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 (6" to 10"). Because it is expensive to raise and transport catchable-size fish, they are stocked at times and places where they are available to anglers and a high percentage will be caught. No increase in numbers of catchable-size trout is proposed in this planning period. Fishing opportunity will be increased and improved by increasing efficiency of catchable trout programs through: (1) concentrating releases of catchables in easily-accessible, heavily-fished waters; (2) timing releases to coincide with peaks in fishing pressure; and (3) testing strains of rainbow trout which improve returns to creels.

Fry and fingerling trout will be stocked in streams to establish new populations of new species, to re-establish populations after chemical eradication projects or pollution-caused fish kills, or to supplement depleted populations of wild trout.

B. Lakes and Reservoirs

Lakes and reservoirs comprise 80 percent of the surface acreage in Idaho, but presently support only 50 percent of the fishing pressure. Reservoir construction has more than doubled the acreage of standing water for fish habitat in the state and will continue to increase the amount of water available for fishing. There are

substantial opportunities to increase the amount and quality of lake and reservoir salmonid fishing in Idaho.

(1) Wild

As noted above, wild resident salmonid populations often require supplemental stocking to support harvest; however, there are a number of lakes and reservoirs where wild fish are an important component of the fishery. Nearly 40,000 acres of lakes and reservoirs are covered by special regulations for wild or trophy trout fisheries (Table 1.2). Important wild trout populations in lakes and reservoirs will be protected and enhanced by: (1) closing tributaries to fishing entirely, or during spawning periods; (2) providing fish passage facilities at dams and culverts; (3) screening diversions to prevent loss of juvenile fish; and (4) where necessary, restricting the harvest of fish until they reach maturity.

(2) Hatchery

Underseeding of suitable salmonid habitat occurs in many Idaho waters. Most reservoirs and lakes do not have sufficient natural reproduction to fully seed the habitat and support fishing harvest. Hatchery programs are necessary to take advantage of available habitat and produce enough fish to supply a sustained harvest. Many reservoirs have underutilized warmwater fisheries habitat. Idaho has no warmwater fish hatchery facilities. Reliance on other states, U.S. Fish and Wildlife Service, and private sector hatcheries have not met the demand for establishing warmwater species.

Many lakes and reservoirs have excellent habitat and food supplies for salmonids but lack sufficient recruitment of young fish to utilize the available habitat. In these waters, fry and fingerling releases of suitable trout and salmon stocks can produce harvestable fish.

Increasing demand for hatchery-supported salmonid fisheries will be met by increasing hatchery production of fry (1"-3") and fingerling (3"-6") salmonids which provide the best return to the creel, most fishing opportunity, and maximum cost:benefit ratio. Hatchery programs for native fish species will be expanded where necessary and feasible. New hatchery facilities are needed to meet management needs for fry and fingerling trout.

C. Alpine Lakes

There are approximately 1,700 alpine lakes in Idaho. Nearly all alpine lakes which are suitable for game fish have been stocked at some time in the past 60 years. Some of these introductions have resulted in naturally reproducing populations of trout. Other lakes require periodic restocking to maintain a fishery.

The alpine management program consists of stocking lakes which do not have sufficient natural reproduction. Species stocked, in order of importance, are cutthroat, rainbow, cutthrout-rainbow hybrids, golden trout, and grayling. Brook trout are no longer stocked in alpine lakes because of their tendency to become overpopulated and stunted.

Most stocking is done by means of fixed-wing aircraft or helicopter, but a few lakes are stocked by backpack or horse.

During this planning period, the Department will stock approximately 300 alpine lakes per year on a three-year rotation, maintaining fish populations in approximately 900 lakes. Not all lakes within a drainage or group will be stocked the same year, or with the same species, in order to maintain a variety of sizes of fish. Golden trout and grayling are stocked to provide additional species variety as they are available. Some lakes will remain barren and unstocked for scientific reasons and in keeping with the wilderness management philosophy of unaltered ecosystems.

Alpine lakes statewide are generally underutilized, and fishing pressure is unevenly distributed, with remote lakes being almost unused and accessible lakes heavily used. The Department could expand alpine lake fishing opportunity by stocking more lakes more often, evaluating different species and stocking rates and by tailoring species and stocking rates to the productivity of individual lakes. The costs, primarily manpower for lake inventories, would be excessive to manage alpine lakes intensely. No major change in lake management is contemplated in this planning period. Efforts will be made to update lake inventories, and some increase in number of lakes stocked annually may be made. Commercial outfitting and guiding may be discouraged in lakes which presently receive adequate fishing pressure to maintain desired catch rates, size, and quality of fishing experience expected at alpine lakes.

4. RESIDENT SALMONID HATCHERY PROGRAM

A major goal of the Fisheries Management Plan is to evaluate the production capability of our existing resident hatcheries and compare this with management requests for resident salmonids (trout and salmon) through 1985.

In 1985 there are 12 hatcheries entirely involved in producing resident salmonids. McCall Hatchery raises some fry for alpine lakes and distributes catchable trout raised elsewhere in addition to a primary anadromous fish function.

Rearing trout to catchable size is an expensive program which is not cost-effective in many waters. Within this planning period, the production of catchable-size rainbow trout will not be increased from the present level of 1,000,000 pounds (3,000,000 fish) per year, and further evaluation of the benefits of individual plantings will be made

to reduce demands on the catchable program. Production will be shifted to fry and fingerling salmonids in the remaining space.

Management requests have been tempered by known limits on the existing hatchery system. Upper limits of 30,000,000-40,000,000 fry and fingerling are realistic goals based on 100 fish/acre stocking rates and 300,000 to 400,000 acres of water with stocking requirements.

The production capabilities of the existing resident hatcheries have been compared with management requests for resident salmonids (trout and salmon). (There are still areas in estimated carrying capacity that must be fine tuned.) Overall, the managers' requests should be able to be met by the existing 12 hatcheries over the next five years, but shifts from catchable rainbow to fingerling production will be needed and existing facilities updated.

McCall Hatchery continues to raise some fingerlings for alpine lakes. They also distribute catchable trout raised elsewhere in addition to their primary function of anadromous fish production.

The hatchery system has reached many of its goals, primarily because of the addition of Nampa Hatchery and the partial renovation of the American Falls and Mackay hatcheries.

The addition of the new Cabinet Gorge Hatchery which will raise 20,000,000 kokanee fingerlings will alleviate a shortage of kokanee fingerlings which has existed for stocking areas in the northern portion of Idaho.

Production at the Mullan and Clark Fork hatcheries will need to be reprogrammed after the Cabinet Gorge Hatchery is in full production. 1985 requests from management total 25,865,000 fry and fingerlings. Those numbers should be met except for specialized strains of rainbow trout fingerlings, golden trout, and graylings which were unavailable because of no egg sources.

Management requests for up to 40,000,000 fry and fingerling should be met with the addition of the Cabinet Gorge Hatchery and further construction of additional raceway facilities at the Mackay Hatchery.

Limiting factors in production include lack of fry-rearing space at both the American Falls and Nampa hatcheries, shortage of permanent manpower at a number of the production hatcheries, and continued fish health problems at the largest production unit - the Hagerman Hatchery.

More hatching and starting capacity continues to be a limiting factor at a number of hatcheries. Further increases in requests for fingerlings will create additional shortages of hatching and starting capacity.

The catchable rearing programs at Ashton, Clark Fork, Eagle, Grace, and Mackay have been terminated or greatly reduced. Estimates of fry and

fingerlings which can be reared in space formerly allocated to catchables must be confirmed by trial rearing.

5. ANADROMOUS FISH PROGRAMS

The complexity of anadromous fish management is such that it has required a separate, detailed plan to treat items such as stock selection, harvest management, and production goals. Within this document, only general programs will be outlined, primarily with reference to the impacts of anadromous management on resident species. "The Idaho Anadromous Fishery Management Plan, 1985-1990," has been published and distributed separately.

The range and abundance of anadromous salmon and steelhead in Idaho is reduced from historic conditions. Dams have cut off large amounts of habitat (Figure 1.2). Other habitat has been altered and degraded. Migration routes are impeded by dams and intense fisheries.

The long-range goals of the Department are to restore wild and naturally reproducing populations of anadromous fish to approximately 1960 levels in remaining habitat, achieve mitigation for losses of anadromous fish caused by development of the hydroelectric dam system on the Snake and Columbia rivers, and allow consumptive harvest by sport and treaty fisheries when possible.

A. Wild

Emphasis will be placed on maintaining remaining pure runs of wild, native stocks of steelhead in the Selway River drainage and the South Fork Salmon River drainage and of salmon and steelhead in the Middle Fork Salmon River drainage within the period through 1990. Maintaining genetic integrity of the native stocks is essential to continued production of quality anadromous fish, as well as being the only practical means of utilizing the production capability of natural habitats.

Wild runs and natural reproduction of anadromous fish will be enhanced by setting fishing regulations to concentrate angler harvest on hatchery-supported runs, continuing efforts to preserve spawning and rearing habitat, and improving survival of downstream migrants. In areas where pure wild runs cannot be maintained, natural reproduction will be supplemented with carefully selected strains of hatchery-produced fish of similar characteristics.

B. Hatchery

Major expansions of hatchery production of anadromous fish will take place by 1990 as mitigation for losses to Idaho runs attributed to lower Snake River hydroelectric dams. Hatchery facilities to produce a total of 21.2 million salmon and steelhead smolts are scheduled to be in operation by 1990 (Table 1.5). Adult returns resulting from these smolt releases will provide for increasing harvests of steelhead and are expected to provide salmon harvest within this planning period. As hatchery returns increase

beyond the number of returning adults necessary to sustain the hatchery production, resulting excess production will be carefully distributed to natural spawning areas to increase natural production and to provide fish for sport harvest.

Programs, such as trapping migrating smolts for transport around dams, screening turbine intakes, controlling spillway and downstream flushing flows, and modification of dam operations, are being used to improve the survival of both wild and hatchery smolts.

Efforts will be continued to ensure a fair allocation of the available harvest of anadromous fish among the various user groups. Through negotiation or legal means, the Department will seek to ensure sufficient returns of anadromous fish to Idaho waters to perpetuate both wild and hatchery runs and to allow angler harvest.

6. WARMWATER GAME FISH PROGRAMS

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 (Figure 1.6). Warmwater habitat is generally located at elevations below 3,000' msl except for lakes in southern and eastern Idaho (Figure 1.6).

Although warmwater game fish are preferred by a relatively small proportion (6.7 percent) of Idaho anglers, these species support approximately 20 percent of the fishing pressure expended in Idaho each year. The importance of warmwater fisheries is increasing in Idaho at a rapid rate. In the past ten years, many Idaho anglers have discovered the excellent sporting and eating qualities of warmwater species. Development of warmwater fisheries close to population centers has created added interest. Additional pressure directed toward warmwater fisheries has increased interest and harvest of bass in Idaho. Recent research has shown Idaho's bass are slow growing and easily overharvested. Regulations to protect juvenile bass to allow them to mature and reach more desirable sizes, larger than 12", have been implemented on several waters. Additional waters may need to be added as demand for quality bass fishing increases.

Because warmwater game fish species do not require flowing streams for spawning and they are more flexible than salmonid species in water quality requirements, self-sustaining populations can be established in waters which do not support salmonids.

Some warmwater game fish can sustain higher annual harvests than can salmonids. Because they are prolific spawners, stocking is unnecessary in most cases once a population is established, so management of warmwater game fish in reservoirs may be less expensive than trout management.

There is a substantial amount of habitat suitable for warmwater species which is not supporting adequate populations. Within this planning

period, efforts will be expanded to stock suitable habitat with warmwater game fish species. Investigations to identify additional habitat and different species which can provide added fishing opportunity will be conducted.

Stocking of warmwater species will be intended to establish self-sustaining populations within suitable habitat. Population maintenance stocking will be used only in special situations, such as channel catfish in small lakes and ponds, where a high yield to fishermen is expected and natural reproduction is not adequate.

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 and surface waters and salmonids occupying offshore areas. Because the two types of fish occupy different habitats, a greater yield of game fish may be available than if either were managed alone.

On the other hand, in some habitats, warmwater species are detrimental to trout fisheries. Some species of warmwater fish tend to become overpopulated and stunted. Small perch, bullheads, or sunfish are not acceptable to anglers. Because small, warmwater fish may utilize the same foods as trout, they 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 precludes stocking of fingerling salmonids as a management option.

There is probably more potential for expansion of warmwater fisheries than any other segment of Idaho fisheries. Where impoundment or diversion damages trout habitat, it may create warmwater habitat. It is virtually impossible to construct a trout stream, but almost any impoundment or flooded gravel pit can become a warmwater fishery.

A major problem with warmwater fish management in Idaho is lack of fish to stock. Existing populations have been established with fish imported from the Midwest primarily from USFWS hatcheries and by transplanting fish from populations established within Idaho. Only a few attempts have been made to produce warmwater game fish in Idaho hatcheries and success has been limited. The USFWS is closing warmwater hatcheries and phasing out assistance to states in management of resident fresh-water fisheries.

To expand warmwater game fish in the existing suitable habitat or new habitat as it becomes available from purchase, easement, or "access by permission," the Department will construct warmwater rearing facilities, purchase fish from commercial sources, establish a more intense program of salvage and transplanting from existing populations, or obtain warmwater game fish from other states in exchange for surplus salmonid eggs or fry.

A concerted program of: (1) transplanting suitable species into unstocked habitat from existing populations in Idaho; (2) construction of rearing ponds at existing facilities; and (3) limited purchases of fish from commercial sources to establish populations could result in

having the suitable, warmwater game fish habitat in Idaho stocked within approximately five years of this planning period. The Eagle Hatchery is a good, possible site for construction of warmwater fish-production facilities. Addition of warmwater fish-production facilities would help to maintain and increase existing warmwater fish populations.

Present funding (Federal Aid to Fish Restoration) could allow coverage of all the above points. Additional waters suitable for stocking with warmwater species have been inventoried. Stocking of species within Idaho should be carried out as outlined in Appendix 4. Investigations into different species which may be suitable for habitat in Idaho will be conducted.

Introductions of exotic species have potential for improving some fisheries, but have certain hazards. Predatory fish or overpopulations of sunfish can destroy existing fisheries. Often new species do not perform as expected in new habitat or fail to live up to advance publicity. Before any introductions of new species are initiated, thorough evaluation of the potentials and the impacts on existing fisheries will be made.

7. STURGEON

White sturgeon is the largest fresh-water fish in North America, reaching sizes up to 18' in length and 1,835 pounds, and rumored to be even larger. White sturgeon occur in the Snake River and lower reaches of major tributaries downstream from Shoshone Falls and in the Kootenai River. Much of the large, free-flowing river habitat required by sturgeon has been lost to impoundments. Present populations of sturgeon in the Snake River drainage are restricted to short river reaches and isolated from other populations by dams. Harvest of sturgeon from the Snake River drainage has been prohibited since 1970.

Harvest of sturgeon was also prohibited in the Kootenai River in 1983 because this population was also decreasing.

Special protection of sturgeon populations, their habitat and the possibility of artificial propagation to maintain and enhance populations will be pursued to maintain this unique fish in Idaho waters. Additional life history studies are planned.

8. WHITEFISH

There are five native and one introduced species of whitefish in Idaho waters. Whitefish are important components of fisheries as forage for other game fish, or as game fish themselves. They are generally underused as game fish even though very abundant and harvestable surpluses exist. Regional cultural differences lead to differing degrees of public acceptance of whitefish as sport fish in Idaho. In northern and southwestern Idaho they are highly sought for sport and food, while in eastern Idaho their acceptance is limited. Efforts to

increase utilization of whitefish as a harvestable resource will continue.

9. NONGAME FISH

In many Idaho waters, the majority of the fish biomass is nongame fish, such as suckers, chubs, squawfish, or carp. These species reduce game fish populations through competition and predation and are a nuisance to sport anglers. However, nongame fish have considerable commercial values for animal feeds and human consumption in some areas. Efforts to increase commercial harvest of nongame fish will continue. Poisoning to reduce or eliminate nongame fish populations is a common fishery management technique. Costs of treatments, lack of long-term benefits, and concern for chemical poisons in the environment have reduced the use of chemical control of rough fish populations. Emphasis will be placed on predator management for rough fish control in this planning period. Limited eradication will also take place in selected smaller lakes and reservoirs with stocking to rehabilitate.

Nongame fish are important for their scientific and aesthetic values. There are five unique species of nongame fish in Idaho which occupy very limited areas of the state. Shoshone sculpin occur only in the large springs in the Thousand Springs area. Wood River sculpin are found only in the Wood River system. Bear Lake sculpin occur only in Bear Lake. Leatherside chubs are found in a few small streams in Blaine, Gooding, and Elmore counties. Trout-perch occur in the Clearwater River and small tributaries near Lewiston. These species are worthy of special attention to prevent their extinction in all or portions of their limited range.

Some nongame fish are important as forage for certain game fish. In the past, forage fish introductions have not been utilized in Idaho because of the danger that exotic species may damage existing fisheries. The practicality of forage fish introductions will continue to be re-examined in this planning period.

10. AMPHIBIANS

All wildlife are considered to be property of the State and are protected and managed by the Department. One amphibian, the bullfrog (Rana catesbeiana), is legally classified as a game fish and is subject to sport harvest. Management of bullfrogs consists of restricting harvest to the same season as other game fish in the waters where they occur and enforcing a bag and possession limit. No program for specific management of bullfrogs is proposed other than maintaining present harvest regulations. Transplanting of bullfrogs into suitable unstocked habitat may be undertaken.

Other amphibians provide forage for game fish, are used by fishermen for bait, or are of scientific or aesthetic value. No management programs are proposed. Present populations should be maintained.

11. MOLLUSKS, CRUSTACEANS, AND AQUATIC INSECTS

Mollusks, crustaceans, and aquatic insects provide very important food supplies for game fish and other wildlife. Fresh-water mussels and crayfish are occasionally harvested for human consumption. These species are also of scientific and educational value. Because some species of mollusks, crustaceans, and aquatic insects are sensitive to environmental change and very restricted in habitat requirements, they serve as excellent indicators of environmental degradation.

Sport harvest of fresh-water mussels and crayfish will continue as at present. Commercial use of species in this group is allowed and uncontrolled. The effect of commercial exploitation of crayfish on availability as a prey item needs to be documented. If limiting, needed regulations to control harvest of crayfish should be developed. Because of their value for game fish food, there is some potential to introduce insects or crustaceans into new waters as forage items. However, the only experiment of this type to date, introduction of Mysis shrimp, has resulted in undesirable impacts to important fisheries. All proposals for introductions will be fully reviewed.

12. SPECIES OF SPECIAL CONCERN

A number of races and species of fish are considered to be threatened, endangered, or of special concern in Idaho (Appendix 3, Page 267). The listed species, with one exception, are native species which have restricted ranges within Idaho or which have been impacted by habitat alteration, introduction of exotic species, or overharvest.

As mentioned under the nongame fish program, Wood River and Bear Lake sculpin, leatherside chubs, and trout-perch are indigenous species with limited ranges and are also of special concern.

Runs of wild anadromous fish into Idaho are at a low level. There is concern that habitat modification, dams and reservoirs on the lower Snake and Columbia rivers, and downriver and offshore fisheries could eventually eliminate these species from Idaho. Of particular concern are all wild runs of salmon and steelhead, fall chinook salmon in Hells Canyon, sockeye salmon in the upper Salmon River, and summer chinook salmon.

A. Shoshone Sculpin

Only one fish species, the Shoshone sculpin, has been nominated for federal protection as a rare and endangered species in Idaho. Recent research indicates that Shoshone sculpin populations are healthy, but limited to a few remaining unaltered springs in the Thousands Springs area and the Snake River adjacent to the Springs. Shoshone sculpin have been withdrawn from the federal threatened and endangered species list, but are still considered species of special concern in Idaho. Efforts will be made to preserve remaining habitat for the species.

B. Redband Trout

The redband trout is the native rainbow-like trout of southwestern Idaho desert drainages. The taxonomic status of this race of fish is presently undetermined. Some populations of redband trout have unique management possibilities because of their tolerance of high temperatures and alkalinity. Until the status of redband trout is determined, it will be considered to be of special concern, and populations will be protected from habitat alteration and overharvest as necessary. The genetic purity of this fish can be endangered by indiscriminate stocking of coastal rainbow trout.

C. White Sturgeon

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

D. Cutthroat Trout

The native stocks of cutthroat trout (Westslope, Yellowstone, Bear Lake, Snake River fine-spotted, and Bonneville) in Idaho are sensitive to habitat alteration, susceptible to overharvest, and subject to hybridization with other stocks of rainbow and cutthroat. Because each of the stocks is best adapted for particular water and each has unique management potential, they are all regarded as species of special concern and efforts are made to maintain genetic integrity of native stocks.

The fine-spotted cutthroat of the South Fork Snake River, Palisades Reservoir, and tributaries is a unique race of cutthroat with limited distribution. Snake River fine-spotted and Yellowstone cutthroat occur sympatrically in South Fork tributaries downstream from Palisades Dam. Few Yellowstone cutthroat are found upstream of Palisades Dam. Hybridization with other races of cutthroat and rainbow trout threatens the continued existence of fine-spotted cutthroat. No other cutthroat or rainbow will be stocked within the South Fork drainage, and efforts will be made to maintain populations of the fish and its habitat.

Recently, pure populations of Bonneville cutthroat trout have been discovered in tributaries of the Bear River in the Idaho/Wyoming/Utah border area. This subspecies of cutthroat is the native indigenous trout of most of Utah, where populations and habitat are now much reduced. In cooperation with USFS, Bonneville cutthroat will be protected by preserving habitat and not stocking other races of trout into its limited habitat.

The Bear Lake cutthroat has a limited natural distribution to only Bear Lake. This race is presently supported by natural reproduction in only one tributary in Idaho, St. Charles Creek. The Mantua Hatchery in Utah has been successful at enhancing populations in Bear Lake. Some experimental evaluation has taken

place in Blackfoot Reservoir and Ashton Reservoir. These experimental programs will continue through this planning period.

E. Ling

The Kootenai River is the only Idaho water presently supporting ling populations. This restricted range makes ling vulnerable to elimination from the state should adverse impacts to its habitat occur.

F. Whitefish

There are three endemic species of whitefish in Bear Lake (Bear Lake whitefish, Bonneville whitefish, and Bonneville cisco) which occur in no other water. The limited range of these three species makes them vulnerable to extinction should their habitat be altered.

G. Bull Trout

The only native char in Idaho is the bull trout, Salvelinus confluentus. Until 1980, this fish was considered to be the same species as the coastal Dolly Varden, Salvelinus malma, and is still commonly called Dolly Varden in Idaho. This species has never been reared in hatcheries and exists in Idaho only as wild, native populations. Because of its unique niche in Idaho fish communities, its capability to provide trophy-size fish, its wild, native status, and the potential to become extinct in some major drainages, it is included on the Species of Special Concern list.

H. Sunapee Trout

Recently, sunapee trout (Salvelinus alpinus) populations were discovered in alpine lakes in Idaho, where they had been stocked nearly 60 years ago by the USFS. The sunapee trout is a unique race of arctic char which is endemic to a few isolated lakes in New England. This species is extinct in most of its native range and, outside of Idaho, is considered rare and endangered. The habitat of sunapee trout populations in Idaho is protected by wilderness classification. 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 sunapee trout in waters where they occur.

13. RESEARCH AND SUPPORT PROGRAM NEEDS

The foregoing sections have identified many areas where knowledge of fisheries is lacking or outdated. Section "B" of the fisheries management plan identifies a number of specific problems which require intensive investigations to find solutions and provide improved management.

Appendix 2 lists the research needs identified throughout this plan.

In order to meet the goals of fishery management in Idaho, in 1990, and ensuing years, an ongoing program of research and inventory is essential.

14. PROBLEMS AND PROGRAMS - STATEWIDE

A. **PROBLEM** - Stream fish habitat is lost due to logging, road building, grazing, agriculture, mining, and other land-disturbing activities which increase siltation of streams and habitat losses.

PROGRAMS - Work with the land managing agencies (BLM, USFS, SCS, IDL) and private landowners to protect streams and reduce impact of land-disturbing activities. Support IDHW in maintaining water quality standards. Classify all streams in Idaho in relation to the fishery value based on habitat, species, angler use, and fish abundance. This classification, along with management goals, will determine the amount and type of activities which will be acceptable from a fishery viewpoint. This classification will be reviewed by the public and submitted to the Commission for approval and inclusion in the management plan (Appendix 5). This will revise the 1978 Stream Classification map.

B. **PROBLEM** - The economic values of fish and fishing are not widely recognized and are underrated compared to other uses of land and water.

PROGRAM - Fund research to determine a true and credible value for fish and fishing opportunity. Publicize the economic contribution of fishing recreation.

C. **PROBLEM** - There are many different user groups which desire different types of fisheries. Conflicts develop between fishermen over fish-for-fun versus fish-for-food, bait fishing versus fly fishing, trophy fishing versus maximum-sustained yield, bass versus trout, etc.

PROGRAM - Manage different waters and species to provide a mix of fishery types. Maximize fishing opportunity and fishermen satisfaction with the different fisheries.

D. **PROBLEM** - Angler utilization and their desires for fish and fishing are not current on a statewide basis. This makes informed management decisions difficult.

PROGRAM - Initiate an annual angler telephone survey to determine effort, attitudes and preferences. This information will then be used to determine if management plans are meeting public expectations. Publicize this information and its economic implication to Idaho.

E. **PROBLEM** - One of the larger resident salmonid production hatcheries at Hagerman continues to experience fish health problems which makes it hard to plan the numbers of fingerlings and catchable fish which will come from that station.

PROGRAM - Attempt to control the serious IHN, IPN and PKD problems which exist at this large hatchery by complete disinfection of this hatchery. Riley Creek, which supplies part of the water to this unit, should be depopulated of fish. Fish for Hagerman could be held at other disease-free units until the disinfection of Hagerman is complete. This will not necessarily guarantee that the hatchery will be disease free, but it should lower the incidence of disease to a more acceptable level.

F. **PROBLEM** - Increasing demands for water for hydroelectric generation, irrigation, commercial fish culture, domestic and industrial uses threatens the quality and quantity of fish habitat.

PROGRAMS - Seek instream flow water rights sufficient to protect and maintain aquatic ecosystems. Oppose water developments which threaten fisheries. Seek appropriate mitigation where fisheries are impacted by water development.

G. **PROBLEMS** - Resource management agencies and legislative bodies need public involvement and support in planning and policy development for appropriate and wise use of natural resources. Fishery resources often receive less consideration and funding than are commensurate with their values.

PROGRAM - The Department will use the "Wildlife Ambassadors" program, free fishing day activities and I and E programs to increase public awareness and involvement and support for fisheries resources.

H. **PROBLEM** - Basic data on population status, angler use and harvest, habitat inventory, productivity and angler preferences are outdated or lacking for many important fisheries.

PROGRAMS - (1) Continue development of the computerized data storage and retrieval system and enter existing data; (2) increase updating and collection of basic fishery management data; (3) establish statewide phone or mail survey system for collection of angler use, harvest, and preference data; and (4) update and refine habitat inventory data.

I. **PROBLEM** - Competition and predation between and among various species and sizes of fish limits productivity of desirable species and sizes of sport fish.

PROGRAMS - Adjust populations to reduce predation and competition by: (1) chemically eradicating rough fish or undesirable game fish where feasible; (2) limiting introductions of top level predatory fish which may reduce

yields of other game fish; and (3) setting regulations which encourage harvest of surplus sizes or species of fish.

J. **PROBLEM** - Fishermen are denied access to trout streams because they are in private ownership or access is across private lands.

PROGRAM - Provide increased public access to streams by purchasing easements or access areas and negotiating cooperative agreements, including "access by permission."

K. **PROBLEM** - There are hundreds of farm ponds and private reservoirs in Idaho which are not contributing to the total fishing opportunity in the state.

PROGRAMS - Develop a farm pond program to enhance fishing and encourage public access by: (1) providing technical assistance for private pond management; (2) negotiating "Access by Permission" agreements on private ponds in exchange for stocking and technical assistance; and (3) stocking private ponds only when public access allowed.

L. **PROBLEM** - Major portions of the historic range of anadromous fish have been cut off by dams.

PROGRAM - Work to preserve remaining anadromous streams in free-flowing condition.

M. **PROBLEM** - The return of hatchery trout to the creel and equitable distribution of hatchery trout among fishermen needs to be improved.

PROGRAMS - (1) Test different strains of trout to determine which provide the best return to the creel in fingerling and catchable stocking programs; (2) develop a trout stocking manual to provide consistent guidelines on stocking rates and species for different types of water; and (3) monitor stocking rates and return to creel of different species in various waters and direct hatchery program emphasis toward areas which provide highest return in terms of cost:benefit ratio and maximum angling opportunity.

N. **PROBLEM** - White sturgeon populations in Idaho are limited to free-flowing portions of the Snake River, Salmon River, and Kootenai River. Populations are severely reduced due to habitat loss, past overfishing, poaching, and lack of successful reproduction.

PROGRAMS - (1) Maintain remaining sturgeon habitat in free-flowing condition; (2) continue catch-and-release regulations in the Snake River drainage and Kootenai River; (3) maintain enforcement and public education programs to reduce poaching; and (4) investigate potential for artificial

propagation or transplanting adult fish to restore populations in suitable habitat.

O. **PROBLEM** - Illegal transportation and planting of undesirable fish species by individuals is becoming an increasing threat.

PROGRAMS - Intense efforts through law enforcement and the CAP program will be made to prevent illegal transportation and planting of exotic or other fish species which could be detrimental to existing desirable game fish populations. Develop regulations to control importation of aquaria fish which can survive in Idaho waters and impact native fishes.

P. **PROBLEM** - A need still exists for a suitable golden trout egg source within the state.

PROGRAM - Locate and utilize a suitable golden trout egg source or develop a brood-stock lake to use as an egg source.

Q. **PROBLEM** - Fishery management and research staffs cannot meet the increased workload and need for intensified management.

PROGRAMS - Provide for additional fisheries staff to update data collection, intensify management activities, and increase effectiveness of fishery management programs. Utilize sportsmen's clubs and other volunteer help to aid fisheries management programs whenever feasible.

R. **PROBLEM** - The amount the fishery habitat and waters accessible to anglers in Idaho is not adequate in or near urban areas.

PROGRAMS - Seek funding to construct or buy fishing lakes and purchase access sites near urban areas. Develop fisheries in underutilized urban waters. Negotiate "access by permission" agreements on existing waters where possible.

S. **PROBLEM** - Fish disease outbreaks reduce fish hatchery production.

PROGRAMS - Modernize hatcheries to prevent conditions which lead to disease problems. Conduct research to determine causes and effective controls for disease outbreaks.

T. **PROBLEM** - Hydroelectric projects on the main stem of the Columbia and Snake rivers have severely reduced the survival of Idaho's juvenile and adult anadromous fish.

PROGRAMS - (1) Continue the construction of the LSRCP hatcheries and mitigate for the loss of anadromous smolts at the four lower Snake River projects; (2) work through the Pacific Northwest Power Planning Act to reduce dam-caused mortalities by providing bypass facilities and adequate passage flows; and (3) identify and seek mitigation for remaining dam-caused mortalities.

U. **PROBLEM** - Fish contests and derbies concentrate anglers, crowd nonparticipants, over-utilize resources, and encourage unsportsmanlike or illegal activities by offering large prizes for capturing fish.

PROGRAM - Seek legislation giving the Commission authority to regulate fishing contests. Adopt regulations limiting prizes and restricting time and location of contests to prevent undesirable conflicts with other fishermen or with resource needs.

V. **PROBLEM** - Previous sources of warmwater species, such as smallmouth bass and catfish, are not able to provide sufficient numbers of fish to meet management needs.

PROGRAMS - (1) Identify bodies of water with surplus warmwater fish that can be transplanted to other areas; (2) seek funding to acquire sufficient quantities of warmwater species from commercial suppliers; (3) develop facilities to rear warmwater fish; and (4) develop capability to collect and transplant warmwater fish for stocking.

W. **PROBLEM** - Many bodies of water which may support abundant populations of warmwater species without adversely affecting present management programs have not been stocked.

PROGRAM - Introduce warmwater species in suitable waters to establish self-sustaining populations. See Appendix 4.

X. **PROBLEM** - Bass in Idaho are slow growing with large fish easily exploited resulting in unsatisfactory fisheries.

PROGRAMS - (1) Utilize length and bag restrictions to protect fish to desirable sizes; and (2) determine the adequacy of the new statewide 12" bass length restriction and five-fish bag as being suitable to produce desirable bass fisheries.

Y. **PROBLEM** - Access for handicapped anglers is nearly nonexistent.

PROGRAM - Develop adequate facilities for handicapped anglers that will provide for wheelchairs. These areas should be restricted in use to handicapped and juvenile anglers.

Table 1.1. Acres of fishing water in Idaho[1].

	Streams	Lakes[2]	Reservoirs	Total
Total	122,000	225,000	239,000	586,000
Percent	21	38	41	100

1 Inventory data have not been updated or checked for accuracy since 1966.

2 Includes natural lakes which have been enlarged by dams.

Table 1.2. Summary of special trout regulations, 1985.

CATCH-AND-RELEASE	Miles
Kelly Creek and tributaries	119
Lochsa and Crooked Fork	45
Selway	75
Middle Fork Salmon	97
Coeur d'Alene and tributaries	100
	436
BAIT, SIZE AND/OR LIMIT RESTRICTIONS	
North Fork Coeur d'Alene and tributaries	52
St. Joe River	58
South Fork Boise River	28
Silver Creek and tributaries (fly only)	5
Little Wood River (fly only)	3
Big Wood River	6
Billingsley Creek (fly only)	8
Henrys Fork (3 miles, fly only)	16
South Fork Snake River	62
	238
REDUCED LIMITS (2-3 trout)	
Steep Creek	1
Lake Creek	9
Washington Creek	6
North Fork Clearwater	75
Little Fork Clearwater	61
Breakfast Creek	5
Middle Fork Salmon River tributaries	93
Blackfoot River and tributaries	176
	426
Total stream miles with special trout regulations	1,100
LAKES - Trophy	
Daniels Reservoir	375
Henrys Lake	6,000
Priest and Upper Priest lakes	29,000
Total lake acreage with special trout regulations	35,375

Table 1.3. Comparisons of resident salmonid 1980 production, estimates of 1982 production, and 1985 capacity estimates and management requests (x 1,000).

Year	Number of fish	Rainbow catchable[1]	Rainbow fingerl.	Rainbow fry	Cutthroat fingerl.	Cutthroat fry	Brown fingerl.	Brown fry	Brook fingerl.	Lake fingerl.	Kokanee fry	Coho fingerl.	Chinook fingerl.	Misc. fingerl.	Subtotal fry and fingerl.
1980	Planted	3,597	1,367	2,407	809	853	971	351	34	1,207	1,037	—	569	—	9,605
1984	Planted	3,252	3,907	798	280	5,516	489	222	101	72	7,828	256	439	65	19,983
1985	Estimated capacity[2]	2,931	3,808	250	1,301	3,112	637	879	161	141	7,272	797	238	395	18,989
1985	Management requests[3]	2,939	5,596		5,904		1,163		201	50	10,000[4]	1,108	285	163	27,409

[1] Sizes: catchables 6"+; fingerlings 3-6"; fry 0-3".
[2] Estimated capacity of existing hatcheries modified to increase fry and fingerling capabilities and improve water quality.
[3] Management requests influenced by known hatchery capabilities.
[4] Does not include 20,000,000 from Cabinet Gorge.

Table 1.4. Idaho resident salmonid hatchery static (one-time) capabilities based on existing facilities and estimates for 1985 with changes in catchable program and addition of the Cabinet Gorge facility.

Year Built	Hatchery	Average Temp.	Average Flow	1980 Egg Hatching Capacity	1980 Starting Capacity	1980 Fingerling Capacity	1980 Catchable Capacity	1985 Egg Hatching Capacity	1985 Starting Capacity	1985 Fingerling Capacity	1985 Catchable Capacity
1948	Hagerman	59°	110 cfs	1,000,000	900,000	800,000	1,500,000	1,000,000	900,000	800,000	1,500,000
1974-82	Nampa	59°	345 cfs					1,500,000	1,500,000	1,400,000	750,000
1932	American Falls	55°	20 cfs	1,000,000	800,000	500,000	400,000	1,000,000	800,000	250,000	400,000
1907	Hayspur	50°	15 cfs	1,000,000	1,600,000	1,200,000	300,000	1,000,000	1,600,000	1,200,000	300,000
1946	Grace	52°	10 cfs	1,000,000	800,000	500,000	300,000	1,000,000	800,000	4,000,000	50,000
	Subtotal			4,000,000	4,100,000	3,010,000	2,500,000	5,500,000	5,600,000	6,910,000	3,000,000
1934	Clark Fork	40°	3 cfs	5,000,000	3,000,000	4,500,000		5,000,000	3,000,000	4,500,000	
1938	Mullan	42°	5 cfs	8,000,000	3,000,000	8,000,000				Redistribution only.	
1909	Sandpoint	42°	1.5 cfs	4,000,000	3,500,000	3,500,000			Closed.		
1985	Cabinet Gorge							30,000,000	25,000,000	20,000,000	
	Subtotal			15,000,000	8,500,000	14,000,000		35,000,000	28,000,000	24,500,000	
1920	Ashton	52°	5.6 cfs	750,000	600,000	1,500,000	300,000	750,000	600,000	1,150,000	
1937	Eagle	55°	3 cfs	1,000,000	800,000	2,000,000	100,000	1,000,000	800,000	2,500,000	
1925	Mackay	52°	18 cfs	1,000,000	650,000	5,000,000	300,000	1,000,000	650,000	7,000,000	
1922	Henrys Lake	46°	1 cfs	500,000	200,000	200,000		500,000	400,000	200,000	
	Subtotal			3,250,000	2,450,000	8,700,000	700,000	3,250,000	2,650,000	11,450,000	
	TOTALS			22,250,000	16,050,000	25,710,000	3,200,000	43,750,000	36,250,000	42,860,000	3,000,000

Table 1.5. Summary of existing and approved salmon and steelhead (anadromous) hatchery facilities.

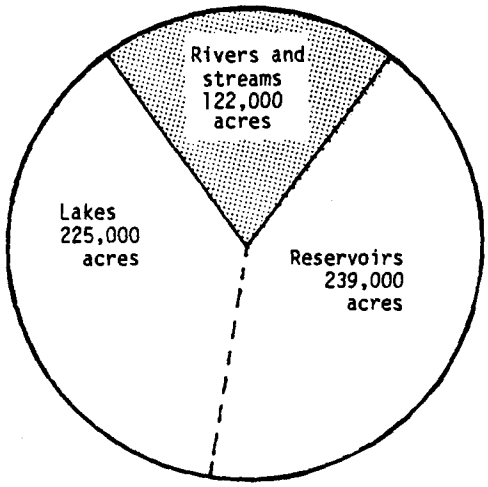
Funded By[3]	Hatchery	Release Site	Smolt Release At Design Capacity Number (x 1,000,000)	Pounds	Estimated Adult Return[1]	Year of Initial Operation
		SPRING CHINOOK				
IPC	Rapid River*	Rapid River[2]	2.0	130,000	17,000	1964
		Snake River	1.0	65,000	8,000	1981
IPC	Pahsimeroi*	Pahsimeroi River	1.0	65,000	8,000	1981
COE/ FWS	Dworshak	Clearwater Drainage	1.0	66,700	8,000	1981
LSRCP	Clearwater Hatchery	Upper Clearwater	1.4	86,000	12,000	—
LSRCP	Sawtooth*	Upper Salmon River	2.2	149,000	19,000	1984
FWS	Kooskia	M.F. Clearwater	0.4	26,000	3,500	1970
TOTAL			9.0	587,700	75,500	
		SUMMER CHINOOK				
LSRCP	McCall	S.F. Salmon River	1.0	61,400	8,000	1980
		SUMMER STEELHEAD				
COE/ FWS	Dworshak	Clearwater River	2.3	328,000	12,000	1969
IPC	Niagara Springs*	Pahsimeroi River	1.0	2,000,000	5,000	1964
		Hells Canyon	1.0	200,000	5,000	1983
LSRCP	Hagerman	Upper Salmon River	2.4	340,000	12,000	1983
LSRCP	Magic Valley	Upper Salmon River	2.0	282,000	10,000	1985
LSRCP	Clearwater Hatchery	Upper Clearwater	2.5	350,000	12,000	1985
TOTAL			11.2	1,710,000	56,000	

1/ Estimated return to the Lower Snake River as per the Lower Snake River Compensation Plan Document (1975).

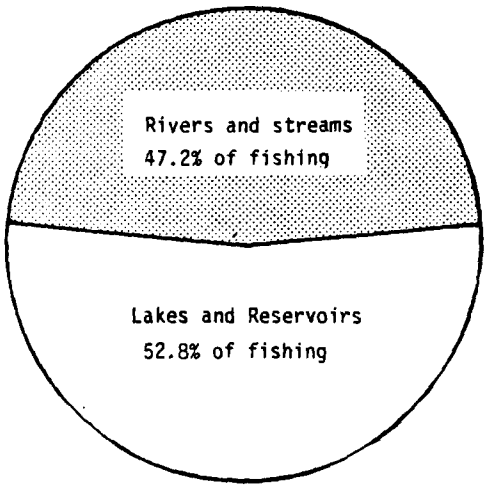
2/ Prior to 1981, all 3,000,000 smolts were released to Rapid River.

3/ LSRCP - Lower Snake River Compensation Plan - mitigation for fish losses caused by mortality at COE dams on the Snake River.
IPC - Idaho Power Company - mitigtion for anadromous fish losses at three Hells Canyon dams.
COE/FWS - Corps of Engineers - mitigation for Dworshak Dam; operated by Fish and Wildlife Service. FWS - Congressional authorization for general mitigation.
*Operated by Fish and Game personnel.

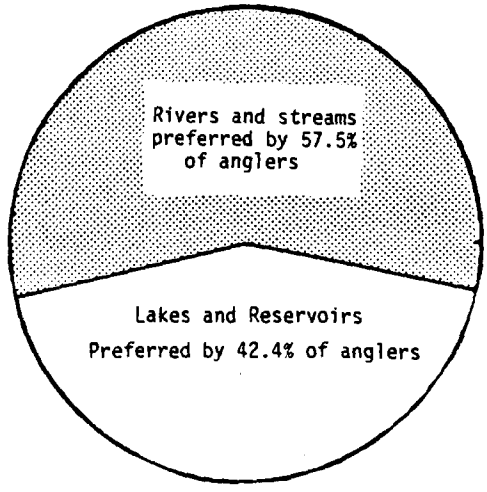
Figure 1.1 Surface acres of water in Idaho



Streams make up only one-fifth of the surface acreage of water in Idaho but they support nearly half the fishing pressure and are preferred by nearly 60 percent of Idaho anglers.



Fishing pressure



First preference of Idaho anglers

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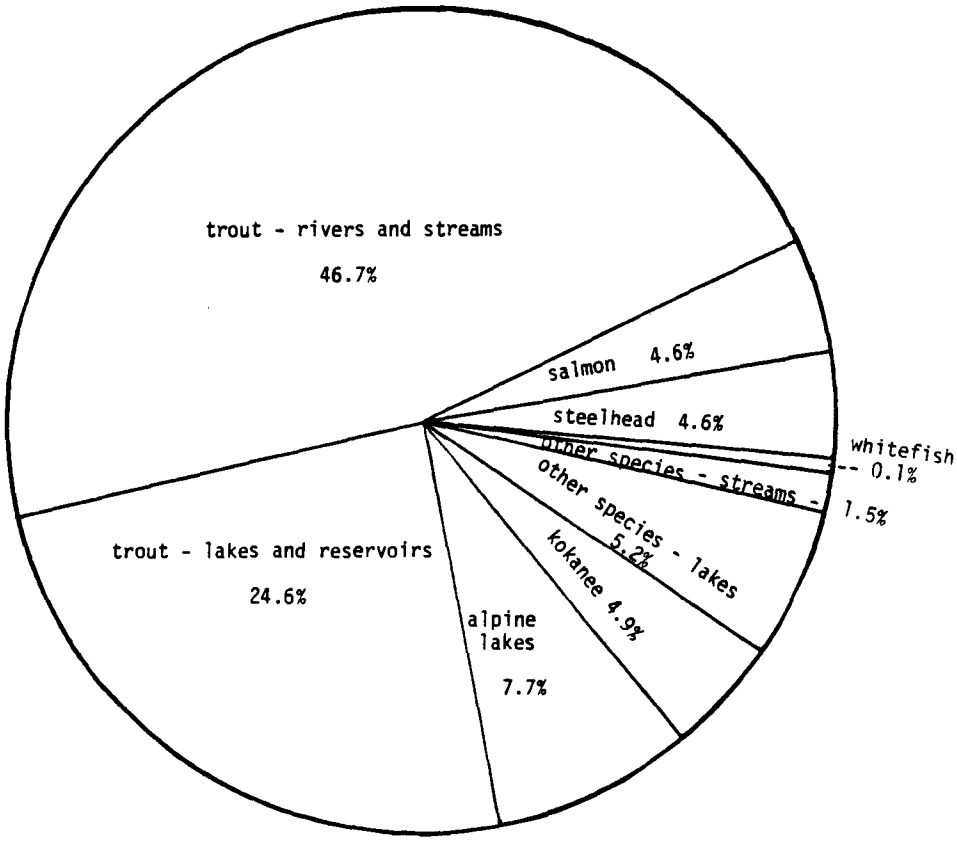

Figure 1.2. Fishery types listed as most preferred by Idaho anglers, 1977 (Mallet, 1980).

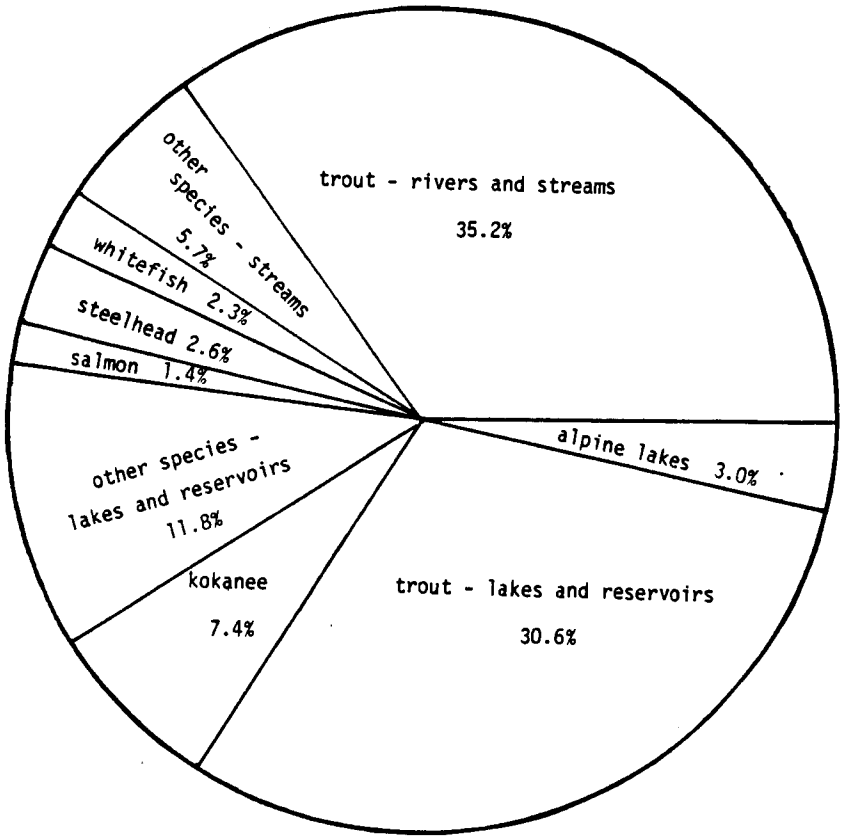

Figure 1.3. Fishing pressure by fishery types, Idaho, 1977.

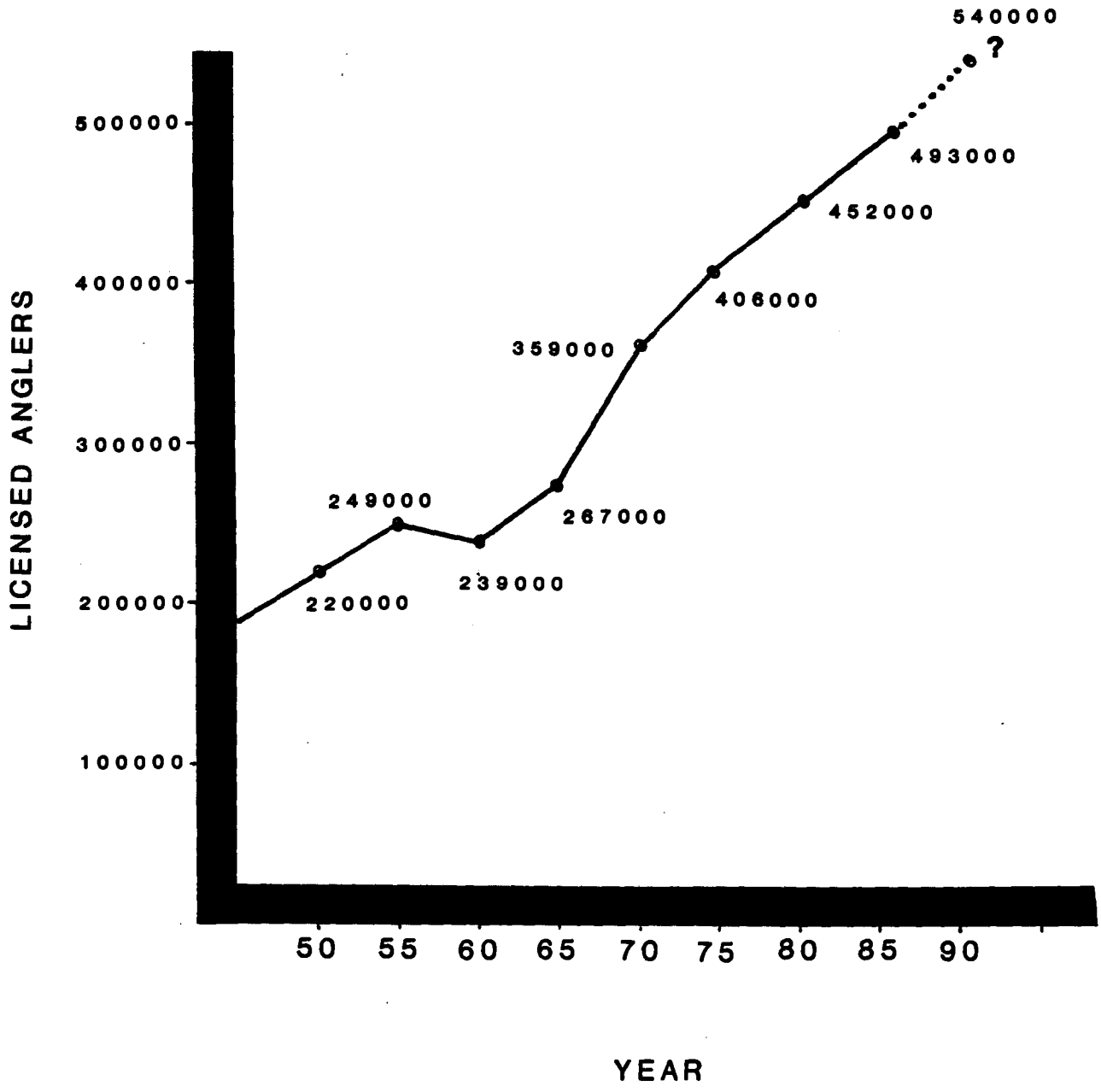

Figure 1.4. Total number of licensed anglers in Idaho, 1950-1985.

Figure 1.5. Anadromous fish range.

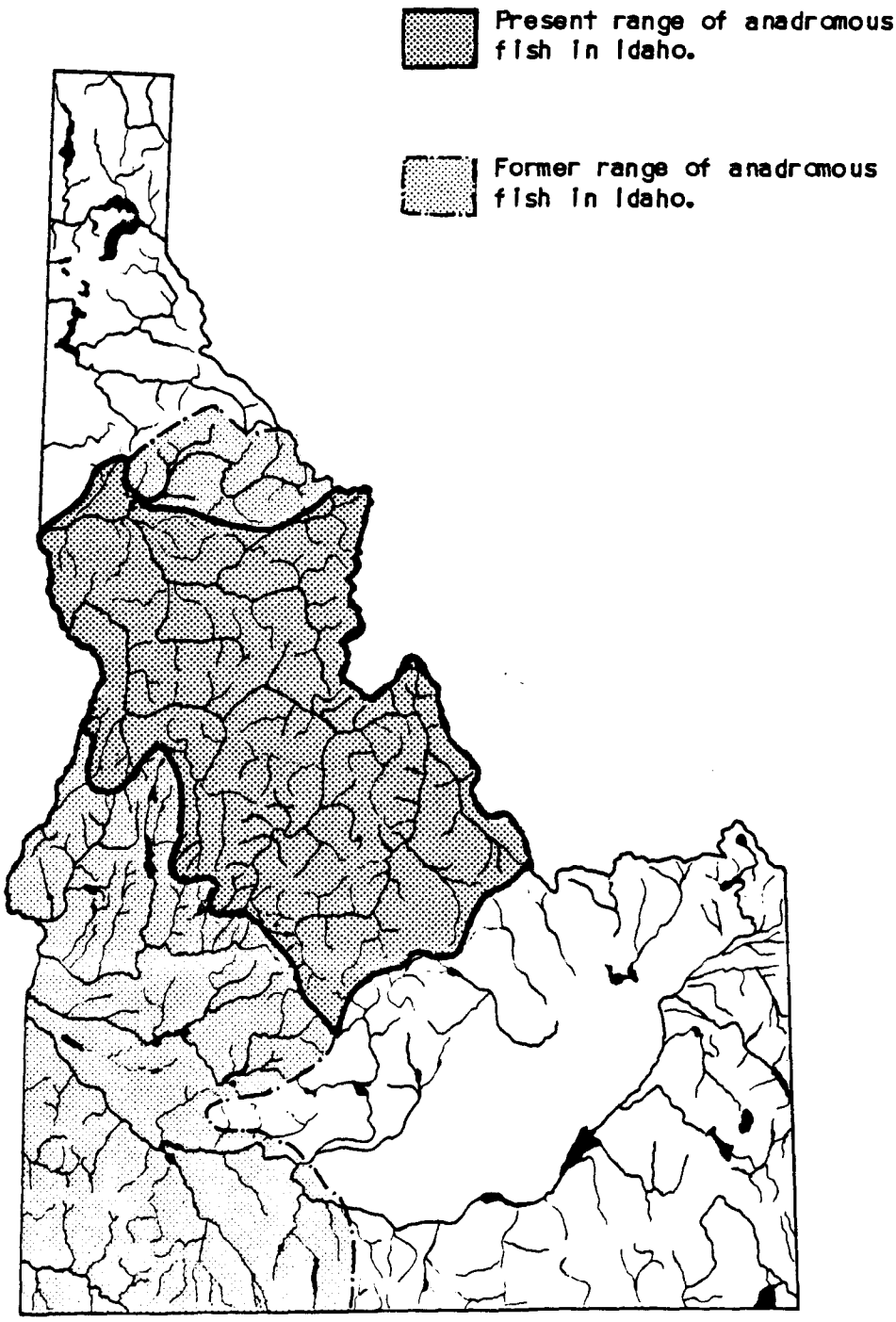

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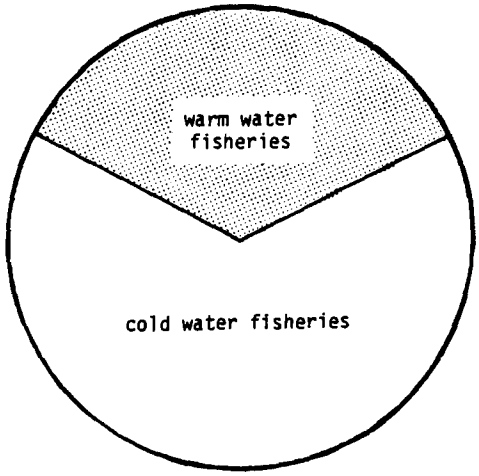
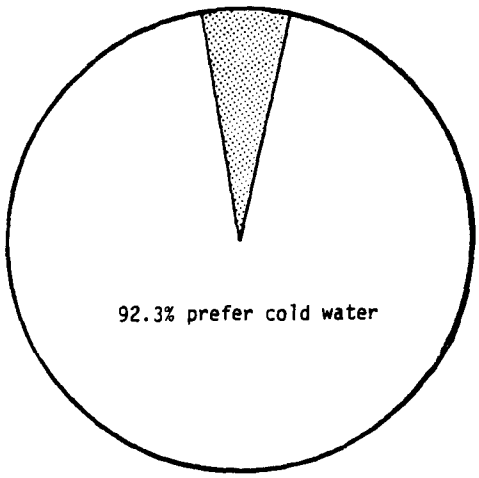
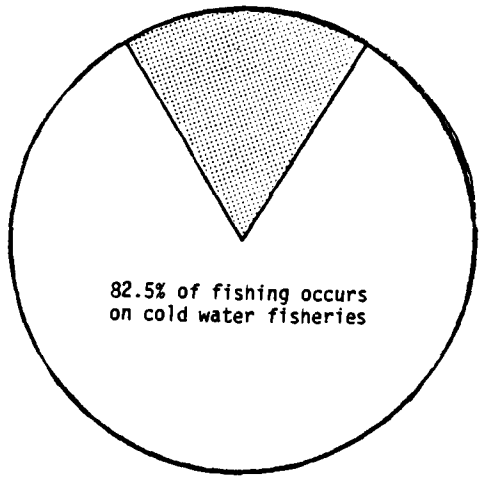
Figure 1.6. Comparison of warmwater habitat to angler preference and fishing pressure.

Thirty-five percent of the water (by surface acreage) in Idaho supports one or more species of warmwater game fish.



However, only 6.7 percent of anglers list warmwater game fish as their first preference and 17.5 percent of fishing pressure is expended on warmwater species.





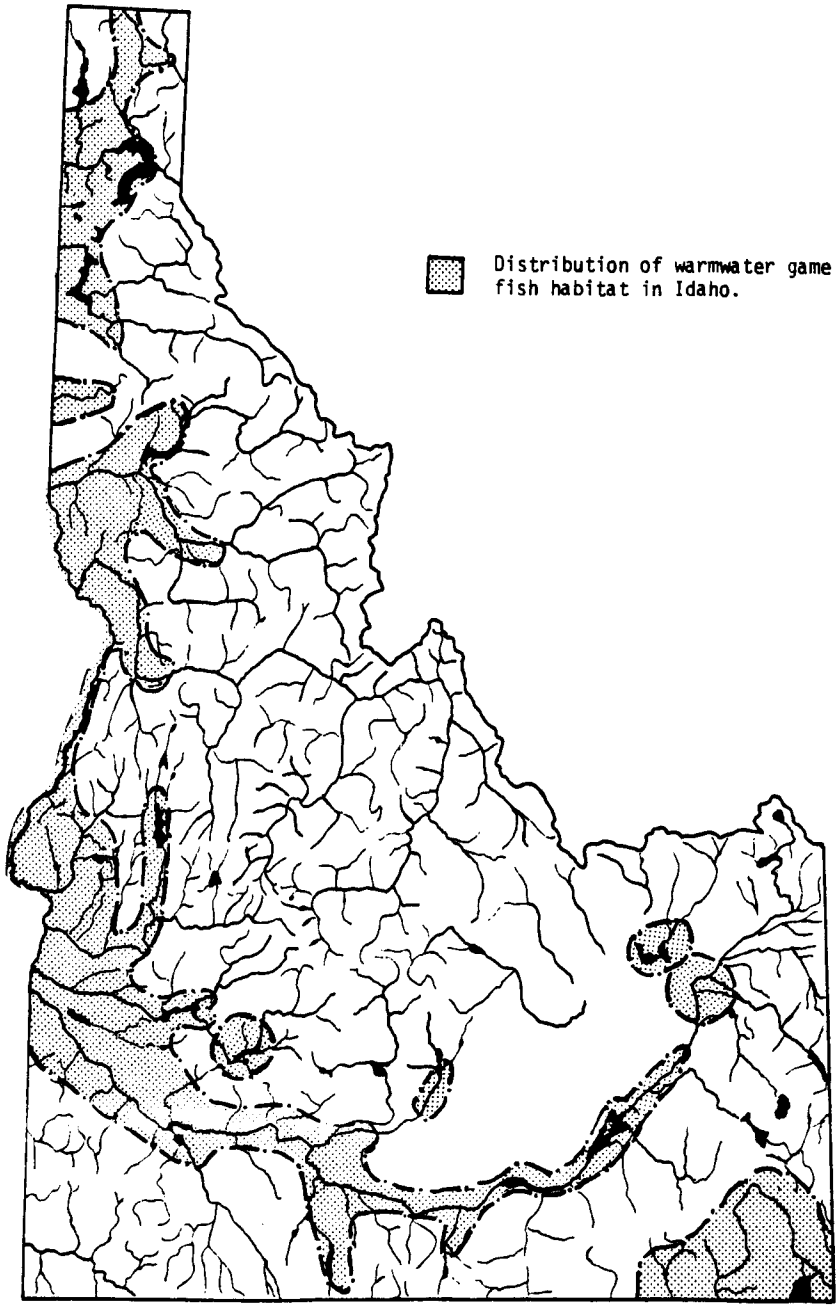


Figure 1.7 Distribution of warmwater game fish habitat in Idaho

PART II

FISHERY MANAGEMENT PLANS BY DRAINAGE

This portion of this document addresses specific management direction for individual waters. The waters of the state are broken down into 35 separate management drainages (Figures 1.8 and 1.9). Each drainage section consists of three parts:

A. Overview

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

B. Problems and Programs

This section lists problems specific to the drainage and management programs necessary to meet the problems.

C. Management Direction

A table which lists species and management plans for individual waters.

The Management Direction Table "C" lists the water or group of waters, the miles and/or acres of fishery habitat, the type and classification of fishery, the primary species being managed, whether the fishery is managed for hatchery or wild fish, the seasons and regulations, and the management direction for that particular water.

DEFINITIONS OF TERMS USED ON DRAINAGE PLANS MANAGEMENT DIRECTION TABLES (TABLE "C")

(1) Fishery Types

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

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

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

(2) Fishery Classification

a. **Preservation** - fisheries managed to preserve a population of fish by restricted fishing regulations or habitat preservation.

b. **Quality** - a fishery in designated wild fish waters which yields wild fish, either consumptively or nonconsumptively and in which angler densities are controlled either directly or indirectly by regulation, access, or other factors. (Quality fisheries are usually characterized by tackle and/or limit regulations, above-average catch rates, and exceptional aesthetic conditions.)

c. **Observation/educational** - an area managed to provide opportunity for the public to view fish in their natural environments and learn the life history and habitat needs of Idaho's fishes. May be closed to fishing activity.

d. **Trophy** - a fishery which yields fish predominantly larger than the norm for the general area in which the fishery occurs. (Trophy fisheries may be supported by either wild or hatchery fish and are generally characterized by limit and/or tackle regulations intended to allow fish to achieve large average size before harvest. Catch rates may be below average in trophy waters.)

e. **Yield** - fisheries managed to provide maximum harvest of game fish within the capacity of the habitat.

(3) Hatchery Programs

a. **Put-and-take fishery** - essentially 100 percent dependent on hatchery-reared fish, primarily catchable, but possibly in conjunction with fingerlings which are expected to be harvested as soon as they reach catchable size. No expectations of long-term survival due to heavy harvest or low winter carryover.

b. **Put-and-grow fishery** - stocked fish are expected to survive and grow and perhaps contribute to the fishery over a long time span. Mostly (80 percent plus) dependent on annual stocking of either catchables or fingerlings, possibly including resident salmon (kokanee, coho, and chinook).

c. **Supplemental put-and-take** - waters which support wild trout populations which are not sufficiently productive to support heavy fishing pressure; stocking will be primarily catchables with low expectations of long-term survival, growth, and carryover.

d. **Population maintenance stocking** - waters due to habitat damage which lack adequate natural production to support a fishery or maintain a population which are regularly (annually) stocked with fry or fingerlings to maintain a specific population.

(4) Wild/Hatchery Designation

It is Department policy to designate waters as either "wild" or "hatchery." Hatchery fish will not be stocked in waters designated

as wild. Many waters contain wild game fish populations which are routinely supplemented with hatchery fish. In this fishery management plan, we have designated waters with both wild and hatchery-supported populations as either hatchery/wild or wild/hatchery; the first term indicating the major origin of game fish present.

a. **Wild** - no hatchery fish stocked.

b. **Wild/hatchery** - predominantly wild with minor hatchery supplementation.

c. **Hatchery/wild** - primarily hatchery supported, but wild populations are present.

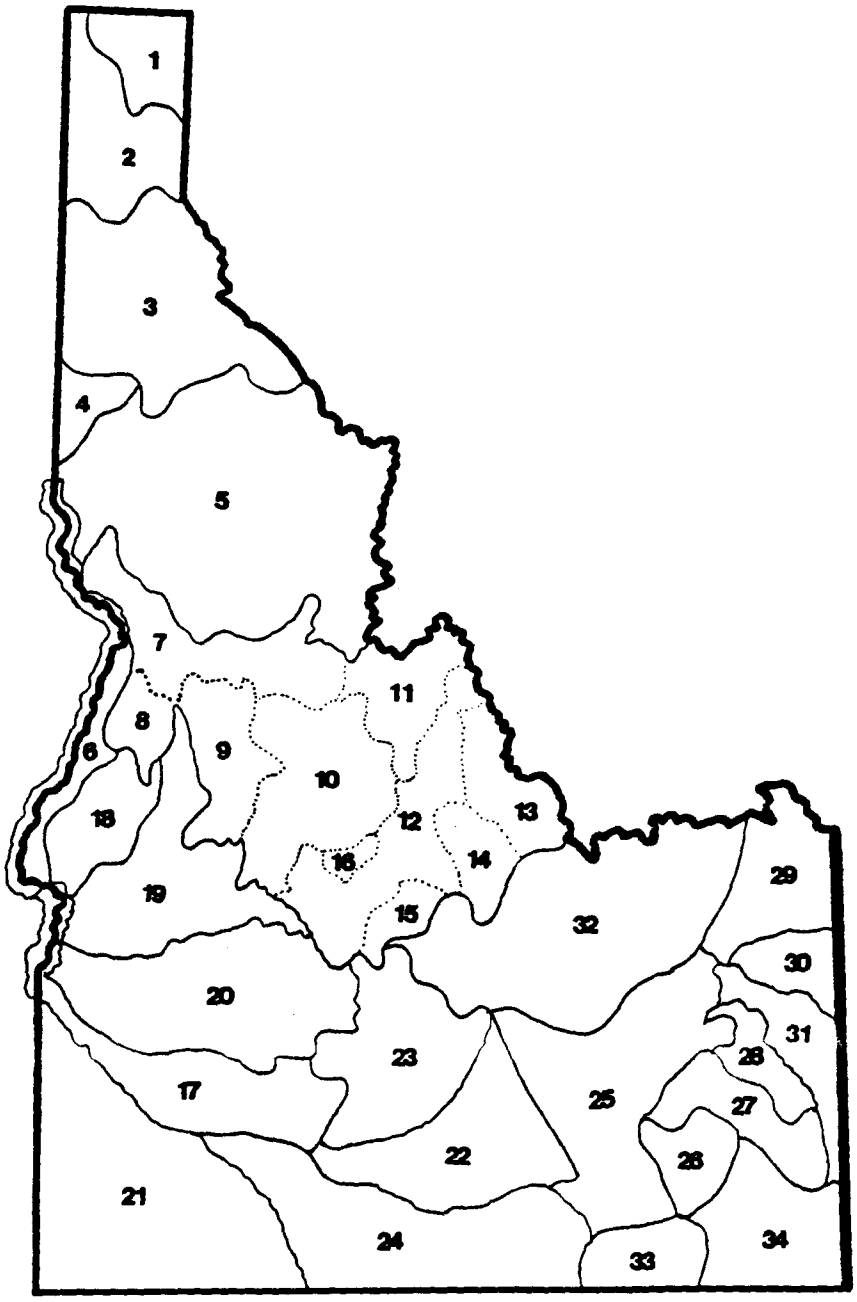
d. **Hatchery** - fish supported by hatchery introductions.

(5) Regulations

a. **General** - waters for which the general fishing season, limits, and regulations apply.

b. **Special** - waters on which the season, limits, and/or regulations differ from the general season, limits, and regulations in order to meet specific management goals.

Note: For additional definitions of terms and acronyms, see Pages 272-274.



Drainages used in the Idaho Fishery Management Plan

Figure 2.1 Drainages used in the Idaho Fishery Management Plan.

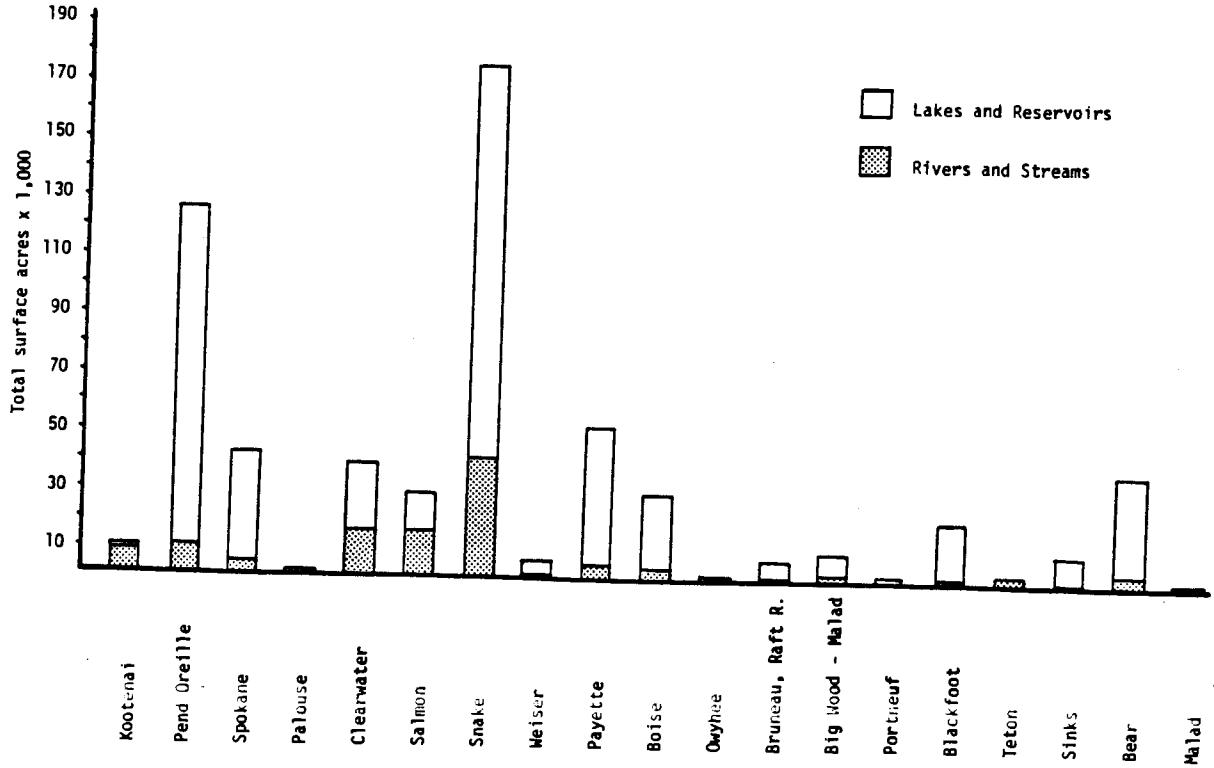
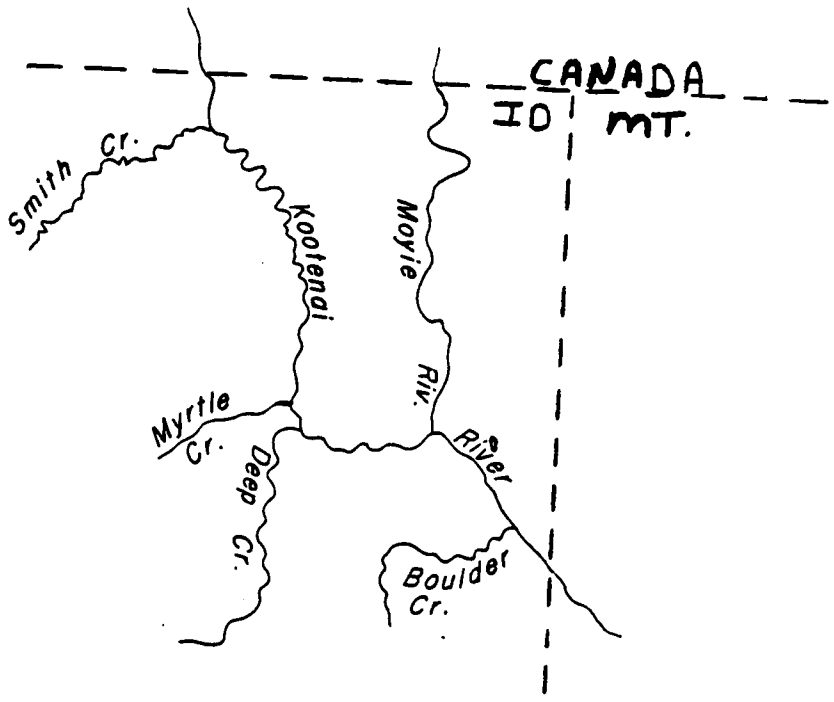
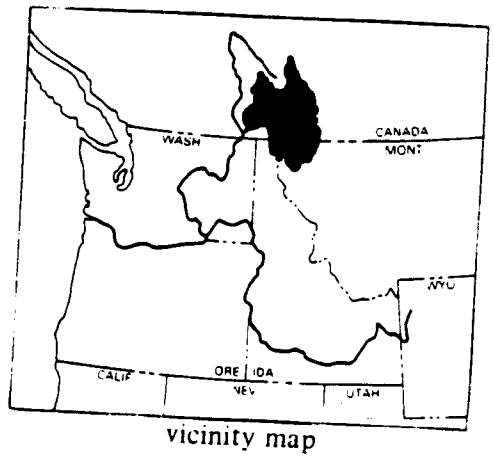


Figure 2.2 Relative sizes in surface area of major Idaho drainages

KOOTENAI





vicinity map

1. KOOTENAI 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 of 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' 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 percent and wintertime flows have tripled. Average wintertime water temperatures have increased by about 4°F. Warmer winter temperatures have resulted in the river remaining virtually ice free, and the impoundment has reduced turbidity and nutrient loads in the river.

The Kootenai River is the only drainage in the State of Idaho where ling (burbot) are native. The Kootenai is also home to the white sturgeon. Fisheries for both of these species have been drastically curtailed in response to major declines in their populations. Elimination of former sloughs and natural flood plain processes, changes caused by Libby Reservoir, possibly overharvest, and several unknown and unquantified effects are suspected of causing these declines.

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 two 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. Very few tributaries of the Moyie are accessible, and recruitment of wild trout is limited.

Inland rainbow are native to the Kootenai River drainage and are present in the main stem Kootenai River and above barriers in some tributaries. Hatchery rainbow have been widely introduced throughout the drainage and largely support the Moyie River fishery. Other native salmonids include westslope cutthroat, bull trout, and mountain whitefish. Introduced eastern brook trout are present throughout the drainage, and early spawning kokanee salmon from Kootenay Lake, British Columbia, are present in the main stem Kootenai River and some west side tributaries during the summer and fall.

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

Numerous natural lowland lakes and McArthur Reservoir provide a mixed bag fishery for trout and spiny-rayed species. Naturalized populations of largemouth bass, black crappie, brown bullhead, yellow perch and pumpkinseed sunfish are present in most lakes. Catchable rainbow, brook trout fingerlings, and some kokanee 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, McArthur Reservoir, 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 a great potential for improved fishery management.

B. Problems and Programs

(1) **PROBLEM** - Past land use and development have degraded, destroyed, or blocked major portions of trout spawning and rearing habitat and will continue to degrade existing habitat in the future.

PROGRAM - Work with government agencies, private developers, and interested sportsmen's groups to make protection of fisheries habitat a primary concern in land use decisions.

(2) **PROBLEM** - Research has shown recruitment of white sturgeon is limited or nonexistent in the Kootenai River. Harvest of sturgeon has been eliminated but causes for the failure in recruitment are unknown.

PROGRAMS - Maintain the harvest closure until a stable viable population develops. Initiate research to identify limiting factors and provide management alternatives.

(3) **PROBLEM** - Public access is currently limited to three areas along 66 miles of the Kootenai River.

PROGRAM - Develop new access areas through purchase, lease, or cooperative agreements.

(4) **PROBLEM** - Recruitment of trout to the Moyie River is limited by suitable spawning and rearing habitat.

PROGRAMS - Maintain a fishery in the Moyie River by stocking hatchery-produced rainbow. Develop program for correction of the culvert block on Meadow Creek.

(5) **PROBLEM** - The Deep Creek drainage provides a significant fishery and production of juvenile rainbow for the Kootenai River. Limitations on the fishery from habitat and exploitation are not well known.

PROGRAMS - Describe the drainage habitat, fishery, and fish populations through an inventory project. Develop management alternatives to maintain or enhance the Deep Creek fishery resource.

(6) **PROBLEM** - Kokanee have provided a popular fall fishery in lower Kootenai River tributaries. A declining population in Kootenay Lake and the spawning tributaries required closure of tributary fishing to maintain the runs.

PROGRAM - Obtain eyed eggs from British Columbia to supplement several tributaries and artificially maintain a fishable run.

(7) **PROBLEM** - Current bass regulations may be inappropriate in several lakes of this drainage due to low exploitation, very poor growth, or winter kill.

PROGRAM - Evaluate response of bass populations to current regulations and modify as appropriate.

(8) **PROBLEM** - Mountain lakes represent a significant fishing opportunity but resources are unavailable to conduct routine management evaluations. Historic stocking practices may threaten the genetic integrity of important wild trout populations lower in the drainage.

PROGRAM - Develop and maintain a mountain lake stocking plan based on best available stocking rate models and consideration of wild stocks.

(9) **PROBLEM** - Hatchery "catchable" trout can provide fishing opportunity where natural reproduction is limited. Production is expensive, however, and stocking should be utilized to provide the greatest fishing opportunity with reasonable returns to the creel.

PROGRAM - Evaluate rate of return, catch rate, and angler use on catchable waters through a routine data collection system. Adjust stocking rates within allocations to optimize all of the above.

(10) **PROBLEM** - Basic data on angler use and fishing success is lacking. Additional data is necessary to prioritize management effort and evaluate programs, but funding for additional census work is unavailable.

PROGRAM - Develop and implement a data collection system that can be maintained by normal enforcement and management routines.

(11) **PROBLEM** - The lowland lakes have been managed without consistent direction and with limited data on biological potential.

PROGRAMS - Continue a biological inventory to describe lake productivity and suitability for a range of fisheries. Standardize stocking rates and evaluate growth as a function of density and productivity. Develop a lowland lake management plan to optimize yield. Propose the introduction of new species where potential yield cannot be realized with existing species.

C. Management Direction

Drainage: Kootenai

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Kootenai River and accessible tributaries	200/	coldwater	yield	rainbow, cutthroat, whitefish, brook, kokanee	wild wild/hatchery	year-round	general	Maintain existing fishery. Enhance production from tributaries through regulation or habitat improvement. Augment kokanee through hatchery production of Kootenay Lake stocks to provide a tributary fishery.
		coldwater	preservation	ling, sturgeon	wild	year-round	special	Maintain closure on sturgeon harvest until a stable, viable population is ensured.
Kootenai River tributaries inaccessible to the river	300/	coldwater	yield	rainbow, cutthroat, brook	wild	general	general	Maintain existing fishery and minimize habitat loss.
McArthur Reservoir	/800	coldwater	yield	brook, rainbow	wild	special	general	Establish largemouth bass and black crappie to control perch and diversify the fishery.
		warmwater		perch, crappie, largemouth bass				
Alpine Lakes	/260	coldwater	yield/quality	cutthroat, brook, rainbow, golden, greyling	hatchery/wild	general	general	Use hatchery-produced fry to stock lakes at densities consistent with productivity. Use only westslope stocks for cutthroat.

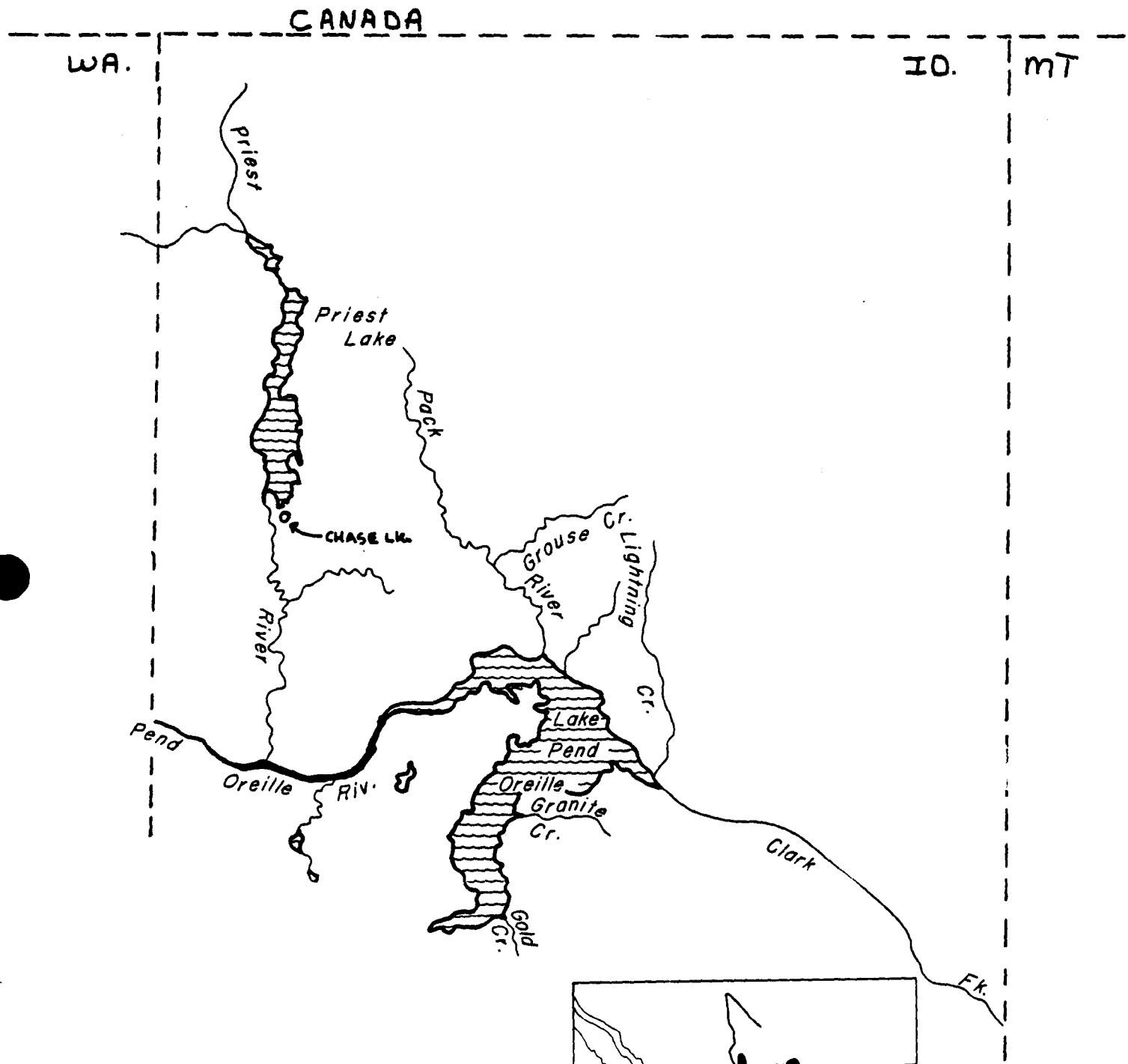
Drainage: Kootenai continued

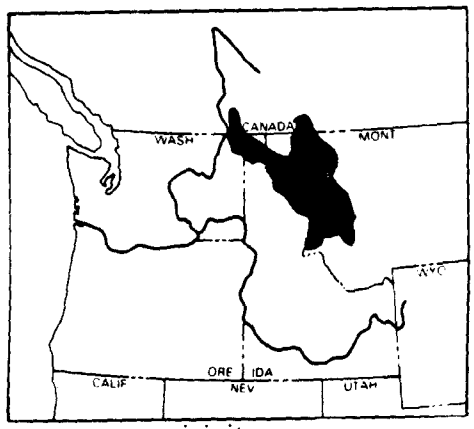
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Perkins, Bonner, Smith, Brush, Robinson lakes	/250	coldwater	yield	rainbow, brook	hatchery/wild	year-round	general	Use hatchery-produced rainbow catchables and/or brook trout fingerlings to maintain fishery with rates of 0.5 fish/hr. Use limited numbers of hatchery-produced kokanee fry to provide occasional catches of large fish.
		warmwater		bass, crappie, sunfish	wild			
Other Lowland Lakes	/200	coldwater	yield	rainbow, brook	hatchery/wild	general	general	Establish largemouth bass and black crappie to control perch and diversify the fisheries or eradicate lakes and restock to provide an improved quality fishery for rainbow trout.
		warmwater		perch, bass, crappie, sunfish, bullhead	wild			

Drainage: Moyie River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Moyie River and tributaries	60/100	coldwater	yield	rainbow, brook, cutthroat	wild/hatchery	general	general	Augment the wild trout fishery with hatchery-produced, catchable rainbow to provide a total catch rate greater than 0.5 fish/hr. Emphasize catchable supplementation above Meadow Creek and wild trout below Meadow Creek.

PEND OREILLE





vicinity map

2. PEND OREILLE 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 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 23,400 acres with a maximum depth of 369 feet and mean depth of 123 feet. Upper Priest Lake is accessible only by boat, covers about 1,400 surface acres and has a maximum 100-foot depth.

Spirit Lake has a surface area of 1,600 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, pygmy whitefish, mountain whitefish and bull trout are the only salmonids native to the Pend Oreille drainage in Idaho. Prior to the 1940's, cutthroat trout were the most frequently caught fish in the Pend Oreille system. Accounts of good fishing, long stringers of 12"-16" fish, and tributaries full of spawners were common at the turn of the century and into the early 1900's.

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

Introduction of exotics has played a major role in fisheries of the Pend Oreille drainage. Lake whitefish were introduced to Pend Oreille in 1889. Lake trout were introduced in Priest Lake and Pend Oreille in the 1920's, but provided little in the way of a sport fish in either system during the first half of the century. During the 1930's, kokanee became established in Pend Oreille Lake moving naturally into the system from Flathead Lake in Montana. Kokanee were transplanted from Pend Oreille to Spirit Lake in 1937 and Priest Lake in the 1940's. Kokanee established themselves

quickly in each of these lake systems and had a profound impact on their fisheries. Kokanee displaced whitefish in the open water habitat but also provided a new forage base for the predators. In Priest Lake, a significant trophy fishery for record-class lake trout and bull trout developed during the 1950's. In Pend Oreille, an abundant kokanee population prompted the introduction of Gerrard rainbow. Since that time the lake has produced world record rainbow and bull trout and has been widely recognized as a major trophy fishery. Kokanee have also supported a major sport fishery in their own right and have become the single most sought after sport fish in northern Idaho. The combined kokanee and trophy fishery in Pend Oreille Lake has made it one of the most important fisheries in the state. Spirit Lake has become one of the most productive kokanee fisheries and has consistently supported high densities of kokanee and fishermen. The relative importance of the fishery has been limited only by the lake's size.

The construction of hydroelectric dams, increased logging and roading and overfishing have taken a toll on fisheries as the drainage has been settled and developed. By the early 1950's, dams on the Clark Fork River blocked runs of game fish from hundreds of miles of critical spawning and rearing streams formerly used by fish from Pend Oreille Lake. Land use impacts in remaining habitat combined with increasing fishing pressure have been significant. The annual harvest of both cutthroat and bull trout declined in Priest and Pend Oreille lakes during the 1950's. Cutthroat may be fairly resilient when overfishing is eliminated. Populations have the potential to rebuild quickly and hatchery production may be used to re-establish production in suitable habitat. Bull trout may not be so resilient and they appear to be much more susceptible to habitat degradation than other species. Large adults in the spawning streams are also vulnerable to excessive poaching. In Priest Lake, bull trout have declined to very low levels and may be on the verge of extinction. Seasons for bull trout have been closed entirely on the Priest Lake system and in the spawning tributaries to Pend Oreille.

The kokanee populations have also declined in both Pend Oreille and Priest lakes. Operation of system dams eliminated spawning habitat and reduced spawning success after their construction. Mysis relicta, the opossum shrimp, was introduced to Pend Oreille and Priest lakes in the 1960's. The introductions were made in an effort to enhance food for kokanee. Although that occurred and record-size kokanee were produced, mysis reduced available food for young kokanee. The kokanee populations in both lakes declined dramatically during the 1970's. In Priest Lake, the mysis introduction led to an increase in lake trout. The combination of declining juvenile survival and increasing numbers of lake trout, which also prey on kokanee, led to the complete collapse of the Priest Lake kokanee fishery. In Pend Oreille, the kokanee population was stabilized at a relatively low level through a supplemental hatchery program. The hatchery work and other research shows that the Pend Oreille kokanee population can be artificially re-established. A new hatchery capable of producing up

to 20 million kokanee fry for Pend Oreille was proposed and funded under a cooperative agreement between the Department, Washington Water Power Company and the Bonneville Power Administration. Rehabilitation of the Pend Oreille kokanee population is expected in the near future. Restoration of kokanee in Priest Lake is less certain. Continued research and experimental enhancement will be necessary to determine that potential. Rehabilitation or expansion of trophy fisheries in both lakes is dependant on restoration of kokanee because kokanee are the primary forage for trophy species

Other game fish in the Pend Oreille drainage include brook trout, brown trout, largemouth bass, northern pike, yellow perch, black crappie, pumpkinseed sunfish and bullhead.

B. Problems and Programs

(1) **PROBLEM** - Dams on the Clark Fork River have eliminated a major portion of spawning and rearing habitat historically available for trout. Development and land use have had a significant impact throughout the drainage and will continue to degrade the quality of existing habitat.

PROGRAMS - 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.

(2) **PROBLEM** - Harvest of trout and char has declined on Pend Oreille Lake but factors regulating the populations are complex including forage, habitat and fishing. Tributary fishing provides an important opportunity but may limit recruitment and the yield of larger fish in the lake. Lake fishing may influence the ultimate yield of "trophy" fish.

PROGRAMS - Conduct research to determine the significance of angling mortality both on the lake and in tributaries. Conduct angler surveys regarding trade-off in fishing opportunity and regulation. Develop goals for management of the trophy fishery and propose appropriate regulation changes. Develop the Cabinet Gorge Hatchery program for kokanee and increase the population to historic levels providing the potential to maintain or expand existing predator populations. Evaluate releases of hatchery produced Kamloops and continue experimental enhancement. Evaluate the kokanee enhancement program and determine surplus production available for predators. Develop targets for predator enhancement.

(3) **PROBLEM** - The Kamloops in Pend Oreille Lake originally came from Gerrard stock rainbow in Kootenay Lake, BC. Historic introductions of other rainbow stocks in the Pend Oreille

drainage threaten the genetic integrity of this population and unique characteristics of fast growth and delayed maturity.

PROGRAM - Introduce only Gerrard rainbow in tributaries to the lake. Work with Montana to avoid introduction of other rainbow stocks in Clark Fork reservoirs above Pend Oreille.

(4) **PROBLEM** - Restoration of kokanee on Priest Lake may be difficult because of predator related mortality.

PROGRAM - Experiment with large releases of hatchery reared fry to determine potential for restoration. Develop potential to support a kokanee population on Priest Lake.

(5) **PROBLEM** - Bull trout have declined dramatically in the Priest lakes. They are threatened by continued habitat loss and poaching in both the Priest and Pend Oreille systems.

PROGRAMS - Publicize the extreme sensitivity of bull trout to habitat degradation. Work to obtain special consideration of critical bull trout habitat in land use decisions. Monitor bull trout spawning escapement and success in Pend Oreille and Priest lake tributaries. Maintain strict closures until the population rebuilds on Priest Lake. 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.

(6) **PROBLEM** - The lakes of this drainage are attracting increased development and recreational use. The result is increasing lakeshore encroachment, pollution and nutrient loading. These processes will continue to cause a degradation of fish habitat and water quality.

PROGRAM - Work with county planning to make protection of fish habitat and water quality a primary concern in land use decisions.

(7) **PROBLEM** - The Pend Oreille River and its tributaries represent an underdeveloped and under utilized fishery. Habitat appears to be suitable to support additional fisheries and the system is relatively close to several population centers.

PROGRAM - Seek funding for a habitat and fisheries inventory and develop new management alternatives. Conduct experimental releases of kokanee in an effort to develop an open water fishery. Evaluate the contribution of catchable rainbow to the fishery. Expand catchable releases if suitable. Continue releases of brown trout

In Hoodoo Creek and Cocolalla Creek to maintain a limited tributary and river fishery.

(8) **PROBLEM** - Spirit Lake supports heavy fishing pressure for kokanee but recruitment is highly variable and severe fluctuation in the fishery may occur.

PROGRAM - Continue kokanee population monitoring and use fry releases to compensate in years of low, wild, fry recruitment.

(9) **PROBLEM** - Westlsope cutthroat have declined from historic levels on the major lakes. In many cases, suitable habitat is available to produce more fish and better fisheries.

PROGRAM - Develop a dependable westslope broodstock with the ability to infuse wild fish on a regular basis. Support research to evaluate artificial enhancement for rebuilding wild production.

(10) **PROBLEM** - Basic data on angler use and fishing success is lacking for waters other than the major lakes. Additional data is necessary to prioritize management effort and evaluate programs, but funding for additional census work is unavailable.

PROGRAM - Develop a data collection system that can be maintained by normal enforcement and management routines.

(11) **PROBLEM** - The lowland lakes have been managed inconsistently and with limited data on biological potential.

PROGRAM - Continue a biological inventory to describe lake productivity and suitability for a range of fisheries. Standardize stocking rates and evaluate growth as a function of density and productivity. Develop a lowland lake management plan to optimize yield. Propose the introduction of new species where potential yield cannot be realized with existing species.

(12) **PROBLEM** - Mountain lakes represent a significant fishing opportunity but resources are unavailable to conduct routine management evaluations. Historic stocking practices may threaten the genetic integrity of important wild trout populations lower in the drainages.

PROGRAM - Develop and maintain a mountain lake stocking plan based on the best available stocking rate models and consideration of wild stocks.

(13) **PROBLEM** - Fishing access is limited on several waters in the drainage.

PROGRAM - Develop or enhance fishing and boat access areas through easements, cooperative agreements or purchase. Principal areas for development include the Pend Oreille River, Spirit Lake and Cocolalla Lake.

C. Management Direction

Drainage: Pend Oreille

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Pend Oreille Lake and tributaries	200/80000	coldwater	yield	kokanee	hatchery/wild	year-round	general	Develop hatchery program for kokanee to support lake at carrying capacity and stabilize forage base for predators. Develop fishery to support angling effort of 200,000 hours, catch rates of 2.0 fish/hr., for fish approximately 10" in length.
			trophy/quality	Kamloops cutthroat	wild/hatchery	general	general/ special	Evaluate experimental enhancement and develop management goals for cutthroat and Kamloops. Propose appropriate regulation changes to optimize harvest consistent with goals and angler preference. Protect existing habitat and spawning populations to maximize smolt production. Minimize habitat degradation due to sedimentation in highly critical drainages, including the Pack River, Grouse Creek, North Fork Grouse Creek, Lightning Creek, Johnson Creek, Twin Creek, Trestle Creek, Granite Creek, North Gold Creek, and Gold Creek.
			trophy	bull trout	wild	general	special and closed	Protect existing habitat and spawning populations to maximize smolt production. Maintain existing bull trout population with estimated spawning escapement of 3,000-4,000 fish.

Drainage: Pend Oreille

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Pend Oreille Lake and tributaries (continued)			yield	lake whitefish, lake trout, brown trout, largemouth bass, crappie, sunfish, yellow perch	wild	general	general	Encourage exploitation of lake trout, lake whitefish, brown trout, and warmwater species to maximize yield. Evaluate feasibility of commercial whitefish harvest.
Priest Lake, Upper Priest Lake and tributaries	100/25000	coldwater	quality	cutthroat	wild/hatchery	general	special and closures	Protect existing habitat and spawning populations to maximize smolt production. Utilize tributary closures, size limits, and artifical enhancement to increase "wild" production and provide in the lake catch rates greater than 0.5 fish/hr. for all cutthroat with 10% of the catch greater than 15".
			yield	kokanee	hatchery	general	general	Reestablish kokanee to provide limited forage for lake trout and bull trout and to support a fishery with catch rates of 0.5 to 1.0 fish/hr.
			preservation	bull trout	wild	closed	special closure	Prevent extinction of bull trout. Rebuild the spawning population to 1,000 fish by strict closure of the entire fishery. Protect existing habitat and spawning populations to maximize smolt production.

Drainage: Pend Oreille

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Priest Lake, Upper Priest Lake and tributaries (continued)			yield	lake trout	wild	general	general	Manage harvest to maximize yield and maintain catch rates of 0.1 fish/hr.
			yield	brook trout	wild	general	general	Continue consumptive harvest of small brook trout. Select tributary streams where harvest will not effect cutthroat and bull trout production.
Pend Oreille River and tributaries	60/8000	coldwater	yield	cutthroat, rainbow, brown, bull trout, kokanee	wild/hatchery	year-round	general	Maintain existing populations of wild trout. Use hatchery-produced brown trout and rainbow fingerlings, rainbow catchables and kokanee fry to support fishery with a total catch rate of 0.5 fish/hr.
		warmwater	yield	bass, crappie, sunfish, yellow perch				Introduce smallmouth bass or northern pike if evaluation supports suitability.
Spirit Lake and tributaries	10/1300	coldwater	yield	kokanee, rainbow, cutthroat, brook trout	wild/hatchery	year-round	general	Maintain a population of 75,000 to 100,000 kokanee available for harvest. Use hatchery-produced fry to stabilize fluctuations in recruitment. Use hatchery rainbow to supplement the trout fishery and maintain a total trout catch rate of 0.2 fish/hr.
		warmwater		bass, crappie, sunfish, bullhead				

Drainage: Pend Oreille

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Kelso Lake	/130	coldwater	yield	rainbow, brown trout	hatchery/wild	general	general	Use hatchery catchables to maintain a fishery with catch rates in excess of 0.5 trout/hr. Use hatchery-produced brown trout fingerling to provide limited catches of large fish.
		warmwater	yield	perch, largemouth bass, bullhead, bluegill				Establish largemouth bass to diversify the fishery.
Jewell Lake	/35	coldwater	quality	cutthroat, rainbow, kokanee, perch	hatchery	general	general	Use hatchery-produced rainbow and cutthroat fingerlings to maintain a fishery with catch rates of 0.2 fish/hr. Use hatchery-produced kokanee fry to provide limited catches of large fish. Eradicate perch to enhance salmonid production.
Blue Lake	/80	coldwater	yield	rainbow	hatchery/wild	year-round	general	Eradicate yellow perch and restock with rainbow fingerling or introduce channel catfish depending on lake survey and suitability.
		warmwater		perch, bass, northern pike, sunfish				
Mirror Lake	/200	coldwater	yield	brook, brown, cutthroat, kokanee	hatchery/wild	general	general	Use hatchery-produced brook trout and cutthroat fingerlings to maintain a fishery with total catch rates of 0.5 fish/hr. Use limited numbers of hatchery-produced brown trout fingerlings and kokanee fry to provide occasional catches of large fish.

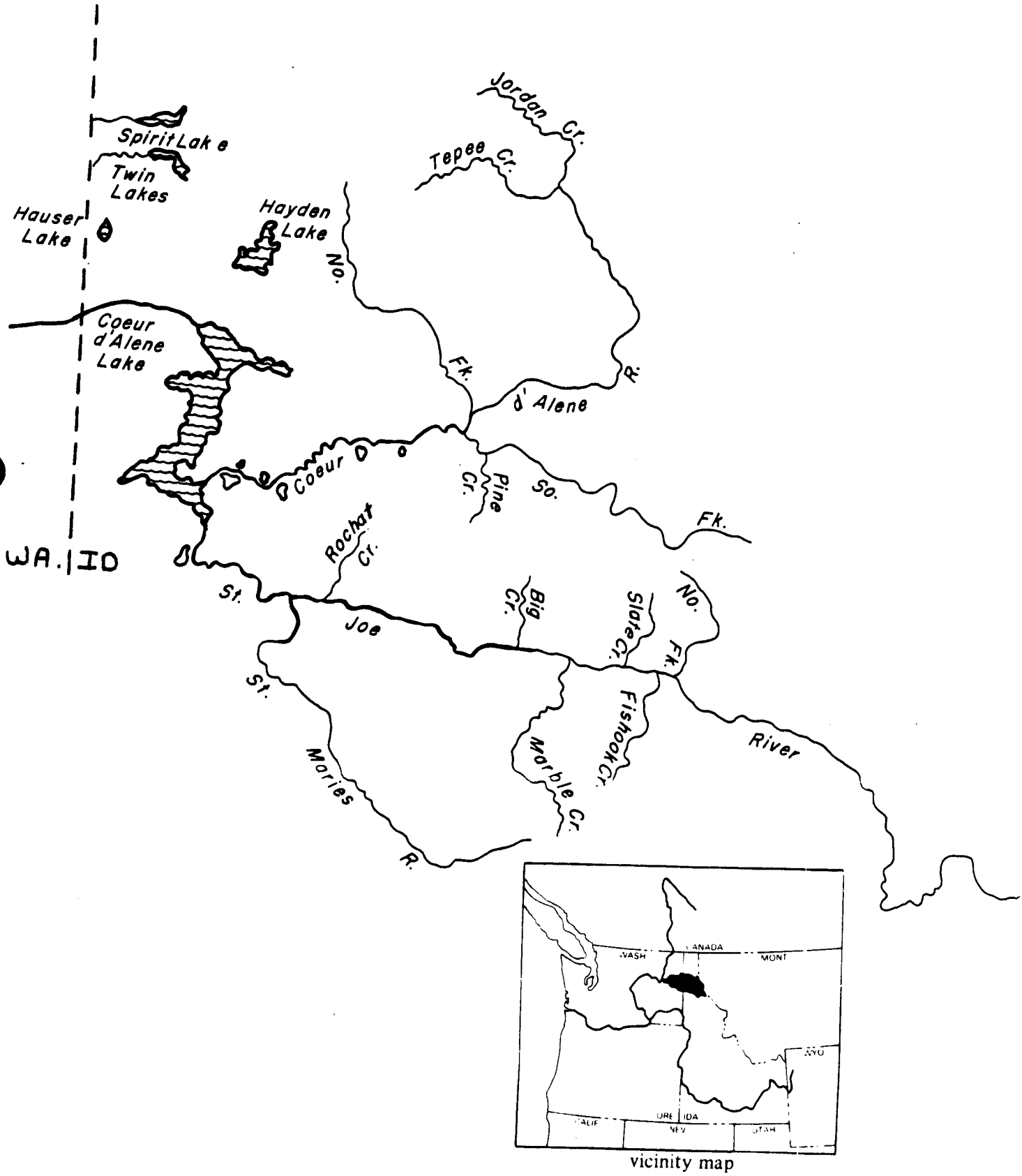
Drainage: Pend Oreille

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Cocolalla Lake and tributaries	5/800	coldwater	yield	rainbow, cutthroat, brown	hatchery/wild	year-round	general	Utilize hatchery rainbow to maintain a trout fishery with catch rates of 0.2 fish/hr. Encourage maximum harvest of warmwater species. Use hatchery-produced brown trout to establish a population and diversify the fishery.
		warmwater		perch, crappie, sunfish, bullhead, largemouth bass				Introduce channel catfish or northern pike if evaluation proves acceptable.
Other Lowland Lakes	/500	coldwater	yield	rainbow	hatchery/wild	year-round	general	Encourage exploitation of warmwater species except largemouth bass. Use hatchery rainbow to supplement fisheries and provide a trout catch rate of 0.5 fish/hr. or greater. Emphasize programs to develop new fishing opportunities. Utilize smallmouth bass, northern pike, channel catfish, and bluegill to diversify the fishery where evaluation proves acceptable.
		warmwater		perch, bass, crappie, sunfish, bullhead				
Priest River and tributaries	120/570	coldwater	yield	rainbow, cutthroat, brook trout, brown trout, bull trout, whitefish	hatchery/wild	year-round	general	Use hatchery rainbow to supplement the Priest River fishery and maintain a catch rate of 0.2 fish/hr. Continue consumptive harvest of brook trout in smaller tributaries.

Drainage: Pend Oreille

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Alpine Lakes	/150	coldwater	quality	cutthroat, rainbow, golden, grayling, brown trout	hatchery	general	general	Use hatchery-produced fry to stock lakes at densities consistent with productivity. Use only westslope cutthroat stocks or wild Gerrard rainbow stocks to maintain genetic integrity of Pend Oreille basin wild stocks. Stock grayling and golden trout in selected lakes to provide unique fisheries. Experiment with brown trout, chinook salmon, or Kamloops to control stunted brook trout.

SPOKANE



vicinity map

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 habitat in the drainage is great. There are many lowland lakes ranging from a few acres to 25,000-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 Lower Spokane. 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, bull trout and mountain whitefish. The St. Joe, Coeur d'Alene and St. Maries rivers contain populations of resident and lake run cutthroat. Historically both the St. Joe and Coeur d'Alene were regarded as among the finest trout streams in America. 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, kokanee, brook trout, brown trout, chinook, largemouth bass, sunfish, perch, crappie, bullhead and northern pike. Notable fisheries for large wild rainbow have developed in the Lower Coeur d'Alene and Spokane rivers. Largemouth bass are well established throughout the drainage's lakes. Historically the area has been 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.

Kokanee have become the dominant species in Coeur d'Alene Lake and the single most sought after game fish in the region. In 1979, the lake provided a harvest of nearly 600,000 kokanee and supported over 250,000 angler hours. Kokanee numbers have exceeded carrying capacity in Coeur d'Alene Lake and size of fish is presently unacceptable to anglers. Introductions of fall chinook have been initiated to control kokanee and can provide a popular trophy 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. 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. Cutthroat stocks in the lake systems currently exist at a fraction of historic levels. River populations have responded

favorably to special regulations, however, and promise significant quality fisheries in the future.

The lakes have supported the bulk of the drainages fisheries in recent years, and other than cutthroat 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 for future fisheries management.

B. Problems and Programs

(1) **PROBLEM** - 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. However, since 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 preference of most anglers for keeping fish to eat presently conflicts with the need to reduce harvests enough to maintain or improve size and numbers of trout. A lack of understanding of this problem results in unrealistic expectations of the fishery resource including the belief that different species will circumvent the underlying problem.

PROGRAMS - Implement biologically-sound programs based on the preferences of anglers informed of the tradeoffs. Provide various types of fishing recreation involving warmwater fish, coldwater fish, stream fishing, lake fishing, consumptive harvest and catch-and-release fishing. Modify the blend of angling opportunity outlined under management direction for specific waters below to create the highest level of angler satisfaction within the constraints of the resource. Even though the primary emphasis is on natural reproduction, stocking of hatchery-reared fish and introductions of new species will be made in waters without adequate spawning and rearing habitat or a source of particular fish where such introductions will not threaten existing fisheries.

(2) **PROBLEM** - Past land use and development have degraded or destroyed major portions of trout spawning and rearing habitat, and will continue to degrade existing habitat in the future.

PROGRAMS - 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 insure mitigation of habitat loss or restoration of habitat whenever possible.

(3) **PROBLEM** - The lakes of this drainage are attracting increased development. The result is increasing lakeshore encroachment, pollution and nutrient loading. These processes will continue to cause 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) **PROBLEM** - Westslope cutthroat are vulnerable to overharvest and special regulations have been necessary to re-establish populations and fisheries. Noncompliance with regulations may limit success of these programs.

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

(5) **PROBLEM** - Limitations in growth and increasing exploitation threatened the decline of many high quality largemouth bass fisheries. As a result of research, special regulations were imposed. Response to the regulations should provide significant enhancement of some fisheries and maintenance of others. Compliance with regulations is not guaranteed, however.

PROGRAM - Develop informational and interpretive programs to encourage compliance. Educate anglers on the need for regulations, the kinds and location of regulations and alternative fishing opportunities. Evaluate the response of populations to regulation changes and modify as appropriate.

(6) **PROBLEM** - Enforcement manpower is limited and not all fisheries regulations can be enforced at an adequate level.

PROGRAM - Through planning, coordinate and focus enforcement efforts on priority fisheries to reduce noncompliance to acceptable levels.

(7) **PROBLEM** - Chinook appear to be well suited to controlling kokanee numbers in Coeur d'Alene Lake while providing an additional trophy fishery. Kokanee growth and fry production will take several years to increase, however, and there is a good chance that the kokanee population could collapse if too many chinook are stocked.

PROGRAM - Monitor kokanee abundance and mortality annually. Regulate chinook stocking to coincide with fry production and stabilize the kokanee population.

(8) **PROBLEM** - The fall chinook fishery on Coeur d'Alene has attracted a lot of interest and participation in the fishery. Spawning adults have provided additional nonconsumptive viewing opportunity, but have also caused public concern regarding a "wasted" resource. Natural reproduction of chinook is not desirable since it could result in uncontrolled kokanee mortality, and competition with juvenile cutthroat.

PROGRAMS - Maintain a viewing area on Wolf Lodge Creek. Weir the system to exclude fish from good spawning habitat and to increase viewing opportunity. Publicize the program through interpretive signs and media. Maintain a spawning season closure on Wolf Lodge Creek to avoid conflicts with the nonconsumptive program and landowners. Encourage maximum exploitation of chinook on the lake and other tributaries. Mark all hatchery released chinook so that the relative contribution of wild fish can be determined and hatchery stocking adjusted accordingly.

(9) **PROBLEM** - Wolf Lodge Creek supports a significant cutthroat fishery on Coeur d'Alene Lake and the Spokane River. A gasoline spill all but eliminated several year classes in that stock. Losses in those year classes threaten the long term viability of the fishery.

PROGRAMS - Maintain closures on the fisheries until all affected year classes have moved through their life cycle. If support is available, trap returning adults in the affected year classes to collect eggs and augment the runs through hatchery incubation and rearing.

(10) **PROBLEM** - 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.

(11) **PROBLEM** - Basic data on angler use and fishing success is lacking for waters other than the major lakes. Additional data is necessary to prioritize management effort and evaluate programs, but funding for additional census work is unavailable.

PROGRAM - Develop a data collection system that can be maintained by normal enforcement and management routines.

(12) **PROBLEM** - The lowland lakes have been managed without a consistent direction, and limited data on biological potential.

PROGRAM - Continue a biological inventory to describe lake productivity and suitability for a range of fisheries. Standardize stocking rates and evaluate growth as a function of density and productivity. Develop a lowland lake management plan to optimize yield. Propose the introduction of new species where potential yield cannot be realized with existing species.

(13) **PROBLEM** - Hatchery "catchable" trout can provide fishing opportunity where natural reproduction is limited. Production is expensive, however, and stocking should be utilized to provide the greatest fishing opportunity with reasonable returns to the creel.

PROGRAM - Evaluate rate of return, catch rate and angler use on catchable waters through the previously mentioned data collection system. Adjust stocking rates within allocations to optimize all three of the above.

(14) **PROBLEM** - Northern pike have become established throughout the lateral lake system and support a popular fishery. Heavy fishing pressure and poor spawning conditions may limit the fishery.

PROGRAM - Through the data collection system, describe population dynamics. Institute harvest regulations if necessary to optimize yield.

(15) **PROBLEM** - Mountain lakes represent a significant fishing opportunity but resources are unavailable to conduct routine management evaluations. Historic stocking practices may threaten the genetic integrity of important wild trout populations lower in the drainages.

PROGRAM - Develop and maintain a mountain lake stocking plan based on best available stocking rate models and consideration of wild stocks.

(16) **PROBLEM** - The Lower Spokane River has produced a quality trout fishery in an urban environment. Limited spawning habitat, fishing mortality and Post Falls Dam operations may limit the fishery, however.

PROGRAMS - Evaluate population dynamics and population limitations. Adjust regulations to optimize the fishery. Establish and maintain a brown trout fishery that will be less vulnerable to exploitation and can provide catches of large fish.

(17) **PROBLEM** - Many waters have limited public access. Development threatens to eliminate access currently available in some areas.

PROGRAM - Develop or enhance public fishing and boating access sites and facilities through easements, cooperative agreements or purchase. Principal areas for development include the Spokane River both above and below Post Falls Dam, and the Coeur d'Alene River from Rose Lake to Prichard, Hayden Lake and Fernan Lake.

C. Management Direction

Drainage: Spokane

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Coeur d'Alene Lake and tributaries	100/25000	coldwater	yield/trophy	kokanee, chinook	wild/hatchery	year-round	general	Adjust releases of chinook to stabilize kokanee population at 100 recruitable fish/hectare. Maintain a kokanee fishery with catch rates of 2.0 fish/hr. for fish 10" in length. Provide a limited trophy fishery for chinook. Provide nonconsumptive viewing of spawning chinook.
		coldwater	quality	cutthroat	wild	closure and general	closure and general	Rebuild cutthroat stocks and fisheries impacted by habitat destruction and pollution.
		warmwater	yield/quality	perch, bass, sunfish, bullhead, pike	wild	year-round	general	Maximize yield of warmwater fisheries.
Wolf Lodge Creek and tributaries	30/	coldwater	preservation/ quality	cutthroat	wild	closure and special	closure and special	Maximize production of smolts for Coeur d'Alene Lake fishery. Maintain closure until lost year classes are rebuilt. Minimize sediment and channelization impacts to maintain highly critical habitat in existing or improved condition.

Drainage: Spokane

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
St. Joe River and tributaries above Prospector Creek	200/5000	coldwater	quality	cutthroat, brook trout, whitefish	wild	general	special	Maintain wild cutthroat population with special regulations. Provide catch rates greater than 2.5 fish/hr. with 5 percent of the catch greater than 13" in length. Minimize sediment and channelization impacts in tributaries to maintain existing production of juvenile cutthroat to the river. Maintain roadless condition of the upper river to provide "wilderness" fishing opportunity and protect highly critical habitat.
St. Joe River and tributaries below Prospector Creek	200/	coldwater	yield	cutthroat, brook trout, whitefish, rainbow, kokanee	wild/hatchery	general	general	Use hatchery rainbow to augment the fishery in the lower river and tributaries and provide total catch rates greater than 0.5 fish/hr. Maintain existing habitat or improve habitat degraded by sedimentation and channelization in critical tributaries to maintain existing production of juvenile cutthroat to the river. Maximize production of cutthroat smolts for Coeur d'Alene Lake in lower tributaries.
St. Joe River and associated lakes below the influence of slack water	/2000	warmwater	yield	largemouth bass, sunfish, crappie, yellow perch, bullhead	wild	general	general	Maximize yield.

Drainage: Spokane

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Marble Creek and tributaries (St. Joe)	40/	coldwater	yield	cutthroat, rainbow	wild/hatchery	general	general	Use hatchery rainbow to augment the fishery in the roaded section. Maintain existing, highly critical habitat to maximize cutthroat
Big Creek and tributaries (St. Joe)	25/	coldwater	yield	cutthroat, rainbow	wild/hatchery	general	general	production in the unroaded section. Discourage new access to maintain roadless fishing opportunity and minimize exploitation.
Coeur d'Alene River and tributaries above Yellow Dog Creek and North Fork Coeur d'Alene River above Laverne Creek	200/	coldwater	quality	cutthroat, brook trout, whitefish	wild	general	special	Rebuild fluvial cutthroat population with special regulations. Provide catch rates of 2.0 fish/hr. with 10 percent of the catch greater than 13" in length. Provide limited harvest of cutthroat if possible. Document loss of tributary habitat due to sedimentation and channelization. Minimize future impacts and encourage repair and mitigation to maximize production of juvenile cutthroat in highly critical tributary habitat.
Coeur d'Alene and tributaries below Yellow Dog Creek and North Fork Coeur d'Alene River below Laverne Creek	200/	coldwater	yield	rainbow, cutthroat, kokanee, brook trout, whitefish, bull trout	wild/hatchery	general	general/ special	Use hatchery rainbow to augment fishery in the lower river and provide total catch rates greater than 0.5 fish/hr. Regulate harvest of adfluvial cutthroat to maximize smolt production for the lake. Discourage further loss of critical tributary habitat due to sedimentation and channelization. Encourage enhancement of severely degraded tributaries.

Drainage: Spokane

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Coeur d'Alene River below slack water and associated lateral lakes	40/5000	warmwater	yield/quality	perch, bass, crappie, sunfish, bullhead, northern pike	wild	general	general/ special	Use general and special regulations to maintain bass population structures with PSDs of 0.4 or better, catch rates of at least 0.2 fish/hr. and common catches of fish greater than 15". Provide a range of opportunity by emphasizing management for quality fishing on several lakes. Maximize yield of other species.
Hayden Lake and tributaries	20/4000	coldwater/	quality/ yield	cutthroat, rainbow, whitefish	hatchery/wild	general	special/ general	Establish a smallmouth bass fishery. Utilize hatchery-produced fingerling trout and size limits to provide a quality trout fishery in an urban setting. Provide harvest rates for 14" or larger trout of 0.2 fish/hr. Minimize habitat loss due to sediment and channel degradation in Hayden, Mokins, and Yellowbanks creeks to maintain highly critical habitat and maximize smolt production for the lake. Evaluate and introduce lake trout to utilize mysis forage base if needed.
		warmwater		perch, crappie, largemouth, sunfish, bullhead, smallmouth				
South Fork Coeur d'Alene River and tributaries	150/160	coldwater	yield	cutthroat, brook trout, rainbow	hatchery/wild	general	general	Use hatchery rainbow catchables to provide catch rates of 0.5 fish/hr.
Spokane River above Post Falls Dam	8/130	coldwater/ warmwater	preservation/ yield	cutthroat, brook trout, perch	wild/hatchery	year-round	general and trout closure	Rebuild cutthroat stocks that support spring fishery above Post Falls Dam. Encourage harvest of warmwater fish.

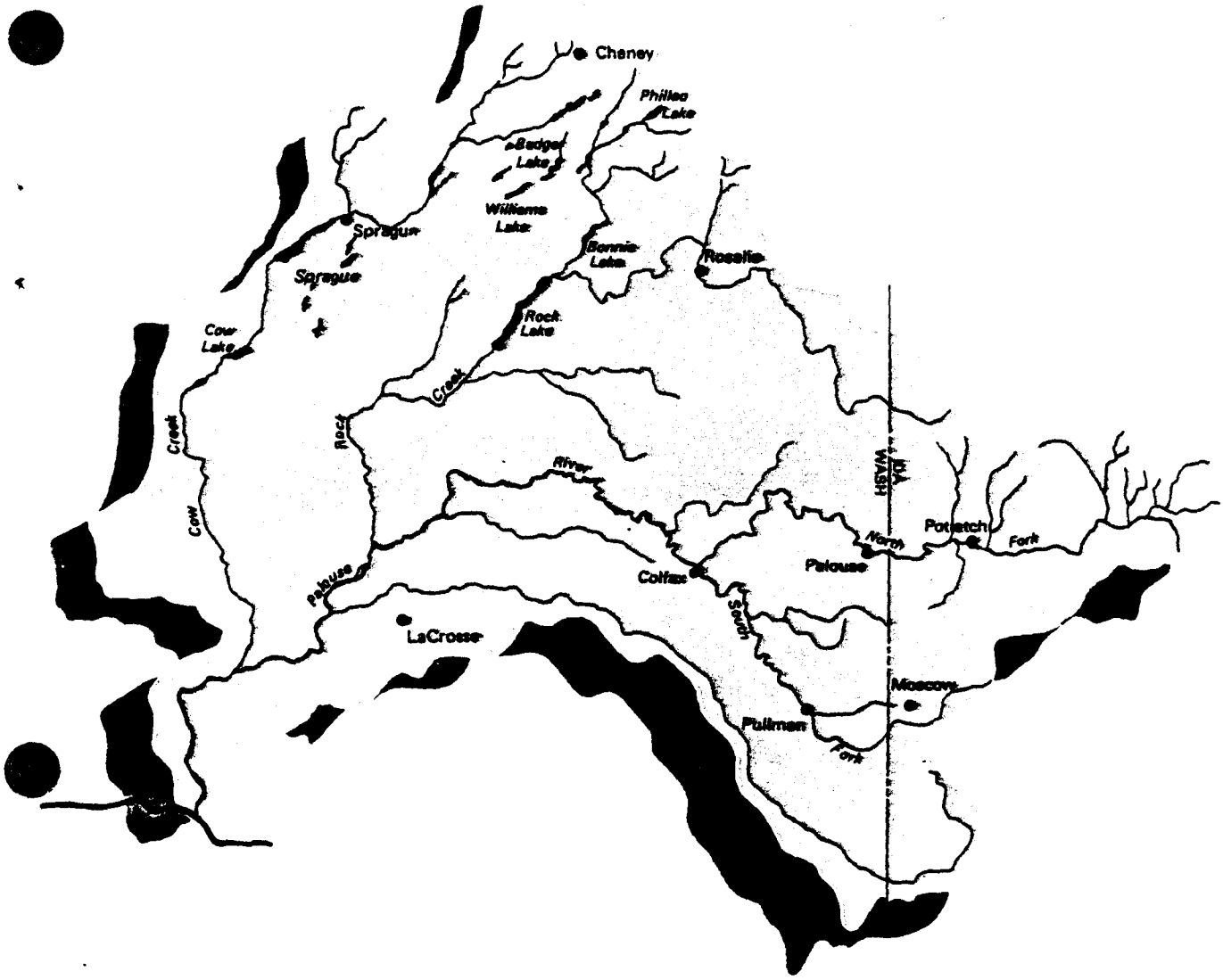
Drainage: Spokane

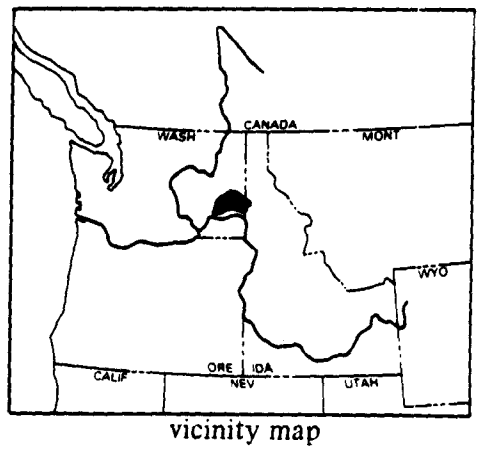
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Spokane River below Post Falls Dam	7/	coldwater	yield/quality	rainbow, cutthroat, brook trout, brown trout	wild/hatchery	year-round	general/ special	Describe limitations in rainbow fishery below Post Falls Dam. Modify regulations if necessary and establish brown trout with hatchery maintenance to provide catch rates of 0.5 fish/hr. and occasional catches of trout greater than 20".
Alpine Lakes	/140	coldwater	yield/quality	brook trout, cutthroat, rainbow, grayling, golden	hatchery/wild	general	general	Use hatchery-produced fry to stock lakes at densities consistent with productivity. Use only westslope for cutthroat stocks. Use grayling and golden trout when available to diversify the fisheries.
Hauser Lake	6/550	coldwater	yield	rainbow, cutthroat, brown trout, kokanee	hatchery/wild	general	general	Use hatchery rainbow catchables to maintain a fishery with catch rates of 0.2 fish/hr. Use hatchery rainbow and brown trout fingerlings and kokanee fry to enhance fishery if possible and provide occasional catches of large fish.
		warmwater		bass, perch, crappie, sunfish, bullhead	wild			
St. Maries River and tributaries	150/460	coldwater	yield	cutthroat, rainbow	wild hatchery/wild	general	general	Use hatchery rainbow catchables to maintain a fishery of 0.5 fish/hr. Maintain existing fluvial rainbow and adfluvial cutthroat populations.
		warmwater		perch, crappie, bullhead, bass, sunfish	wild			

Drainage: Spokane

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Fernan Lake	7/350	coldwater	yield	rainbow, cutthroat, brook trout	hatchery wild wild	year-round	general	Use hatchery rainbow catchables to provide catch rates of 0.3 fish/hr. Use hatchery broodstock to provide occasional catches of large fish.
		warmwater		perch, bass, crappie, sunfish, bullhead	wild	year-round	general	Emphasize bass size limit to ensure compliance and enhance yield. Encourage harvest of other warmwater fish. Enhance access and fishing docks. Introduce channel catfish if evaluation proves acceptable.
Twin Lakes	6/960	coldwater	yield	rainbow, brook trout, kokanee	hatchery/wild	general	general	Use hatchery rainbow and brook trout to provide a fishery with total catch rate of 0.5 fish/hr. Use limited numbers of hatchery-produced brown trout and kokanee fry to provide occasional catches of large fish.
		warmwater		bass, crappie, perch, sunfish, bullhead	wild			

Palouse River Basin





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4. PALOUSE RIVER DRAINAGE

A. Overview

The Palouse River drains from a timbered, mountainous area with elevations ranging to 5,000 feet 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.

B. Problems and Programs

(1) **PROBLEM** - Forest road construction, overgrazing, and intensive farming have significantly increased siltation and affected water flow and temperature in the drainage limiting reproduction and survival of trout.

PROGRAM - Work with USFS and private landowners to minimize further impacts on riparian and stream habitat.

(2) **PROBLEM** - Lower reaches of the river do not presently support trout.

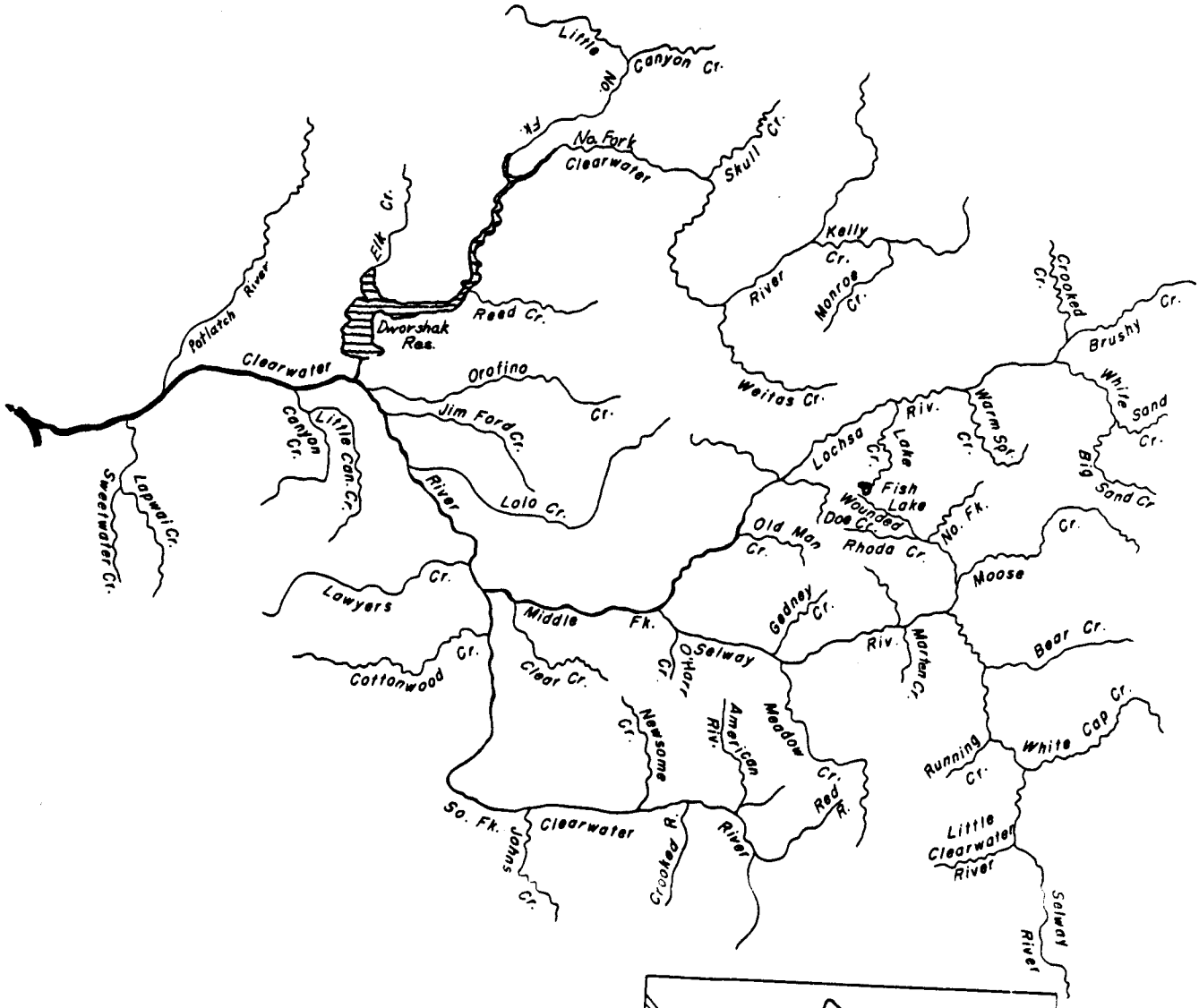
PROGRAMS - (1) Evaluate the success of recent brown trout introduction; (2) assess the status of bass in the drainage and evaluate the potential for other warmwater species; and (3) demonstrate to landowners the need for fencing riparian areas to enhance stream habitat.

C. Management Direction

Drainage: Palouse River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Palouse River from Washington border to headwater, including tributaries	70/110	coldwater	yield	rainbow, brown trout, bull trout, brook trout	hatchery/wild	general	general	Stock with catchable rainbow where returns to the creel can be maximized. Evaluate the success of brown trout introductions and assess the need for protecting spawning populations through regulation changes.
		warmwater	yield	largemouth bass	wild	general	general	Assess need for further warmwater fish enhancement in the drainage.

CLEARWATER



vicinity map

5. 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' msl to 725' 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 from 1960 measured 15,000 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 percent 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 percent 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.

Fishery habitat ranges from pristine streams and rivers found in roadless areas and wilderness areas to heavily-silted and dredged waters found in logged, mined, and farmed areas. Road construction and agriculture 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.

The drainage supports a myriad of fish and fishing opportunity. Major species include resident rainbow and cutthroat trout, bull trout, whitefish, salmon, and steelhead. There are approximately 400 mountain lakes in the area which support a mixture of hatchery-supported and naturally reproducing populations of trout and grayling. Kokanee are the most abundant species found in Dworshak Reservoir, the only major 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 angling opportunity for steelhead trout.

There are approximately ten lowland lakes and reservoirs in the area that are managed mostly as put-and-take fisheries with hatchery rainbow trout. Most of them are productive, but have been impacted by heavy silt loads entering from shorelines and tributaries. Some of the lakes support warmwater species.

B. Problems and Programs

(1) **PROBLEM** - Forest road construction, intensive farming, and overgrazing have altered instream flows, increased streambed siltation, raised water temperatures, and reduced riparian habitat in the lower tributaries to the Clearwater River.

PROGRAMS - (1) Work with USFS, Nez Perce Tribe, private landholders, and state agencies to minimize further degradation of riparian and stream habitat. Support BR plans for proposed stream rehabilitation and improved water flows for the Potlatch River. Emphasize to USFS the importance of cumulative impacts and the timing of timber sales in the Lolo Creek drainage; (2) concentrate hatchery trout releases in popular and easily accessible streams where returns to the creel can be maximized; (3) continue to look for trout stocks that may be better suited to degraded habitat; and (4) evaluate the status of smallmouth bass populations in the lower Potlatch River and recommend enhancement needs.

(2) **PROBLEM** - Dworshak Reservoir supports an expanding population of kokanee that attain lengths of 16" and weights of one pound and provide catch rates of 0.7 fish/hour. Kokanee are a dynamic species that can increase rapidly, reducing their growth to an undesirable size.

PROGRAMS - (1) Monitor the dynamics of the kokanee population in the reservoir to assess the relationship of population density and growth; (2) survey anglers participating in the fishery to determine their catch success and preferences for a kokanee fishery; (3) manage the fishery to provide a maximum amount of fishing opportunity and angler satisfaction; and (4) regulate kokanee population numbers to provide a high yield fishery while maintaining a large average size.

(3) **PROBLEM** - Dworshak Reservoir supports primarily early-spawning (August-September) kokanee that are not available to angling after mid-August. It also supports a small population of late-spawning (November-December) kokanee that are available for harvest during the month of September. Because of cold stream temperatures during the fall months and severe winter

pool level reductions, the reservoir maintains only a small population of late kokanee.

PROGRAM - Stock late spawning kokanee on a maintenance basis to provide late summer and fall fishing.

(4) **PROBLEM** - Dworshak Reservoir is drafted in the winter as a flood control measure. Kokanee losses through the spillway and powerhouse can be very high and detrimental to population stability.

PROGRAM - Examine alternatives to reduce excessive kokanee losses including dam operating procedures and screening of intakes.

(5) **PROBLEM** - The productivity of Dworshak Reservoir has decreased as the reservoir has aged. It has stabilized at a moderate level of productivity.

PROGRAM - Conduct research to reexamine the limnology of the reservoir and relate it to plankton production. Utilize the information to assess the capacity of the reservoir to support plankton-feeding fish. Look for a trout stock that has adapted to plankton feeding and is capable of natural reproduction. Make recommendations that are compatible with management of kokanee.

(6) **PROBLEM** - Smallmouth bass populations in Dworshak Reservoir have declined as the reservoir has aged, likely because of reductions in the redside shiner population.

PROGRAM - Conduct research to assess the status of smallmouth bass and redside shiner populations in the reservoir. Investigate the feasibility for vegetating the shoreline within the zone of drawdown to enhance bass and shiner habitat.

(7) **PROBLEM** - Dworshak Reservoir supports kokanee, a major forage species that could be managed with a trophy predator species.

PROGRAM - Evaluate the feasibility of predator species, such as fall chinook, bull trout, or Kamloops trout, that could provide a trophy fishery.

(8) **PROBLEM** - The Kelly Creek drainage on the North Fork Clearwater supports a nationally-recognized, quality westslope cutthroat trout fishery managed as catch-and-release to maintain its unique status. Increased sediment production and easier access through road construction proposed in this fragile drainage would contribute to the reduction of the present fishery. Upper reaches of the drainage, including Cayuse Creek, maintained at 100 percent of fish potential, are

essential to the continued maintenance of the Kelly Creek cutthroat population and fishery.

PROGRAM - Request that USFS keep the Kelly Creek drainage roadless. If timber harvest is authorized, recommend alternative harvest techniques to reduce impacts on streams to maintain 100 percent of fish potential.

(9) **PROBLEM** - Tributaries used by trout for spawning and rearing are threatened by siltation of streambeds from road construction and logging activity.

PROGRAMS - (1) Work with USFS on timber sale plans emphasizing the need for quantitative measurement of sediment production and assessment of cumulative impacts of sediment; and (2) make recommendations that reduce cumulative impacts of forest management activities.

(10) **PROBLEM** - Elk Creek Reservoir is slowly filling with an aquatic weed (Ceratophyllum sp.) that is reducing fishing opportunity.

PROGRAM - Secure funding for a dredging project to deepen some areas of the reservoir. Increased depth will reduce potential for weed growth and enhance fishing opportunity.

(11) **PROBLEM** - Spring Valley Reservoir supports a tremendous amount of fishing effort that has impacted soil stability around the shoreline. Vehicle parking space is also very limited.

PROGRAM - Secure state funds that will match federal dollars for a proposed project to stabilize the shoreline of the reservoir and enlarge the parking area.

(12) **PROBLEM** - Waha, Soldiers Meadow, and Manns lakes support put-and-take catchable rainbow trout and limited fisheries on fingerling rainbow. Water quality has been seriously degraded in the watershed by siltation and excess nutrients eroded from lands disturbed by road construction and agricultural development.

PROGRAMS - (1) Support the Clearwater Economic Development Association's plans to improve the watershed affecting the lakes; (2) experiment with different trout stocks and stocking rates that may be better suited for providing fisheries from fingerling releases; (3) test Waha Lake for its ability to grow kokanee salmon; and (4) evaluate all three lakes for their present status and potential for warmwater fisheries.

(13) **PROBLEM** - The Lewiston Levee Ponds support a limited warmwater and catchable rainbow trout fishery but are not fishable for

most of the summer months because the CE chemically treats the ponds to control pond weed and algae.

PROGRAMS - (1) Work with CE to develop alternatives to chemical treatment of the ponds; (2) enhance the pond fisheries emphasizing warmwater species, such as bass, bluegill, and channel catfish; and (3) stress the importance of providing year-round fishing.

(14) **PROBLEM** - Steelhead harvest in the Clearwater River is related to the success of production at DNFH and the expansion of wild populations that spawn and rear in the upper reaches of the drainage. When steelhead returns to the Clearwater are large, hatchery surplus causes heavy fishery participation concentrated between Lewiston and Orofino, which reduces steelhead catchability. Reduced fishing success is related to a harassment factor (largely boats and motors) that lowers the percent of fish harvested. Also, angler satisfaction can be reduced by crowding.

PROGRAMS - (1) Maintain a diversity of steelhead angling opportunity on the Clearwater River; (2) continue with the program and evaluation of releasing steelhead smolts into the South Fork Clearwater to distribute fish and fishing opportunity above Orofino; (3) maximize returns of hatchery fish to the angler while affording adequate protection to the wild populations; (4) assess angler attitudes toward a desired steelhead angling experience; and (5) zone the river to reduce conflicts between boat and bank anglers.

(15) **PROBLEM** - Spring chinook salmon stocks in the Clearwater River are at a very low level of abundance. Enhancing those numbers depends partially on building a Clearwater stock of chinook that can be expected to return on a sustained basis. Often, to bolster low egg supplies, sources of lower Columbia River stocks are tapped that do not have the genetic integrity for long returns to the upper Clearwater River.

PROGRAMS - (1) Continue to enhance spring chinook salmon stocks in the Clearwater River through hatchery propagation; and (2) where possible, attempt to maintain integrity of unique stocks.

C. Management Direction

Drainage: Clearwater

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Winchester Lake	/70	coldwater	yield	rainbow, cutthroat	hatchery	general/ice	general	Stock catchable and fingerling rainbow to maintain catch rate of 0.5 fish/hr. Develop enhancement plan for water quality and secure funding.
		warmwater	yield	largemouth bass, bullhead	wild	general	general	Maintain as mixed warmwater/coldwater fishery.
Spring Valley	/53	coldwater	yield	rainbow, cutthroat	hatchery	general/ice	general	Stock catchable and fingerling rainbow to maintain catch rate of 0.5 fish/hr.
		warmwater	yield	largemouth bass	wild	general	general	Maintain as mixed warmwater/coldwater fishery. No motors water.
Manns Lake	/120	coldwater	yield	rainbow	hatchery	general	general	Stock catchable and fingerling rainbow to maintain catch rate of 0.5 fish/hr.
		warmwater	yield	largemouth bass, crappie	wild	general	general	Maintain as mixed warmwater/coldwater fishery. No motors water.
Wahs Lake	/80	coldwater	yield	rainbow, kokanee	hatchery	year-round	general	Stock catchable and fingerling rainbow to maintain catch rate of 0.5 fish/hr. Evaluate kokanee introductions.
Soldiers Meadow Reservoir	/120	coldwater	yield	rainbow	hatchery	general/ice	general	Stock rainbow as needed to maintain catch rate of 0.5 fish/hr.
Moose Creek Reservoir	/70	coldwater	yield	rainbow, brook trout	hatchery	general/ice	general	Stock catchable rainbow to maintain catch rate of 0.5 fish/hr.

Drainage: Clearwater

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Moose Creek Reservoir (continued)		warmwater	yield	largemouth bass, bluegill, bullhead, crappie	wild	general	general	Monitor largemouth bass, crappie, and bluegill populations. No motors water.
Elk Creek Reservoir	/61	coldwater	yield	rainbow, brook trout	hatchery	year-round	general	Stock catchable rainbow to maintain catch rate of 0.5 fish/hr.
		warmwater	yield	smallmouth bass	wild	year-round	general	Introduce smallmouth bass. Dredge reservoir to enhance fishing opportunity.
Dworshak Reservoir Dam to Grandad Bridge	/14775	coldwater	yield	kokanee, rainbow, cutthroat, bull trout, whitefish, northern pike	hatchery/wild	year-round	general	Maintain a mix of early and late spawning kokanee that will provide 15" fish at catch rates of 0.7 fish/hr. Evaluate trout strains suited for the reservoir. Consider different trout or salmon species for providing a trophy fishery. Stock catchable and fingerling rainbow to maintain catch rates of 0.5 fish/hr.
		warmwater	yield	smallmouth bass	wild	year-round	general	Enhance smallmouth bass fishery through regulation or enhanced forage production
Grandad Bridge to end of slack water	/1642	coldwater	preservation	cutthroat, rainbow, kokanee, bull trout, whitefish	hatchery/wild	special	special	Season closes 9/10 to protect cutthroat trout that move down from upper tributaries in the fall. Trout limit restricted to protect cutthroat population.
Campbell's Pond	/7	coldwater	yield	rainbow, brook trout	hatchery	general/ice	general	Stock catchable rainbow to maintain catch rate of 0.5 fish/hr.
Robinson's Pond	/2	coldwater	yield	rainbow	hatchery	general	general	Stock catchable rainbow.

Drainage: Clearwater

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Lewiston Levee Ponds	/12	coldwater	yield	rainbow	hatchery	year-round	general	Stock catchable rainbow in late fall or winter.
		warmwater	yield	largemouth bass, bluegill, channel catfish	wild	year-round	general	Stock largemouth bass, bluegill, and channel catfish. Experiment with biological weed control.
Fish Lake (Cedars)	/117	coldwater	quality	cutthroat, bull trout	wild	special	general	Restrict season to protect outlet spawning cutthroat.
Steep Lake	/6	coldwater	quality	golden trout	wild	special	general	Restrict season to protect spawning golden trout.
Other alpine lakes	/4300	coldwater	yield	cutthroat, rainbow, brook trout, bull trout, golden trout, grayling	hatchery/wild	general	general	Put-and-grow with salmonid fry to provide variety of species in backcountry areas. Stock every third year to maintain catch rates of 0.5-1.0 fish/hr. Reduce or cease stocking of lakes with natural reproduction. Stock only westslope cutthroat in lakes that drain into the Selway and upper North Fork of the Clearwater River.
Hoodoo Lake	/50	coldwater	yield	cutthroat, brook trout	wild	year-round	general	Provide additional fishing opportunity in the Powell area.
White Sands Pond	/3	coldwater	yield	rainbow	hatchery	year-round	general	Provide additional fishing opportunity in the Powell area.
Mainstem Clearwater	75/3225	anadromous	yield	steelhead	hatchery/wild	special	special	Maintain diversity of angling opportunity and maximize returns of hatchery fish to angler. When runs are low, provide fishing opportunity through gear and limit restrictions.

Drainage: Clearwater

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Mainstem Clearwater (continued)		anadromous	preservation	chinook	hatchery	closed	closed	Restore spring chinook populations.
		coldwater	yield	rainbow, cutthroat, bull trout, whitefish, kokanee	hatchery/wild	year-round	general	Evaluate trout strains suited for large river habitat. Allow salvage fishery for kokanee lost through Dworshak Dam.
		warmwater	yield	smallmouth bass	wild	year-round	general	Maintain warmwater fishery.
Potlatch River and tributaries from mouth to Bear Creek	11/33	warmwater	yield	smallmouth bass, rainbow	hatchery/wild	year-round	general	Maintain warmwater fishery, stock catchable rainbow, and evaluate trout suited for Potlatch River.
		coldwater	yield	rainbow, brook trout	hatchery/wild	special	general	Support BR plans for stream rehabilitation and flow augmentation project in Potlatch drainage to enhance fish habitat.
Lolo Creek and tributaries	86/166	anadromous	preservation	steelhead, chinook	hatchery/wild	closed		Stock steelhead fry, smolts, and surplus Dworshak adults into Lolo Creek to enhance populations. Stock chinook salmon fry or smolts into Lolo Creek.
		coldwater	yield	rainbow, cutthroat, whitefish, brook trout	hatchery/wild	general	general	Stock hatchery catchables to maintain catch rates of 0.5 fish/hr. Maintain or improve habitat quality.

Drainage: Clearwater

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Other Clearwater River tributaries	283/454	anadromous	preservation	steelhead	hatchery/wild	closed	closed	Stock steelhead fry or smolts.
		coldwater	yield	rainbow, cutthroat, whitefish, brook trout	hatchery/wild	general	general	Maintain or improve present habitat quality. Stock catchable rainbow in tributaries to maintain catch rate of 0.5 fish/hr.
Middle Fork Clearwater	23/552	anadromous	preservation	steelhead, chinook	hatchery/wild	closed	closed	Restore steelhead and chinook runs by releasing hatchery juveniles.
		coldwater	yield	rainbow, cutthroat	hatchery/wild	general	general	Stock with catchable rainbow as needed to maximize return to creel.
Clear Creek, mouth upstream to 300' above weir at Kooskia National Fish Hatchery (KNFH)	1/3	anadromous	preservation	chinook, steelhead	hatchery/wild	closed	closed	Closure to protect adult steelhead and chinook to KNFH.
		coldwater		rainbow, bull trout, cutthroat	wild	closed	closed	(Same as above.)
Other Middle Fork tributaries	32/16	anadromous	preservation	steelhead	hatchery/wild	closed	closed	
		coldwater	yield	rainbow, cutthroat, brook trout	wild	general	general	Maintain or improve present habitat quality for providing wild production at maximum potential.

Drainage: South Fork Clearwater

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Mainstream South Fork Clearwater, mouth to Hungry Ridge Road bridge (MP 16)	30/240	anadromous	preservation	steelhead	hatchery/wild	closed	closed	Provide a steelhead fishery.
		coldwater	yield	rainbow	hatchery	general	general	Stock with catchable rainbow to maintain catch rate of 0.5 fish/hr.
		coldwater	yield	whitefish	wild	special	general	Winter fishery to harvest under-exploited whitefish population.
		warmwater	yield	smallmouth bass	wild	general	general	Maintain as mixed warmwater/coldwater fishery.
Hungry Ridge Road bridge to Red River/ American River confluence	35/280	anadromous	preservation	steelhead, chinook	hatchery/wild	closed	closed	Season closes 9/10 to protect cutthroat, juvenile steelhead, and chinook which move down from upper tributaries in the fall.
		coldwater	yield	rainbow, cutthroat, bull trout	hatchery/wild	special	special	Stock with catchable rainbow to maintain catch rate of 0.5 fish/hr.
		coldwater	yield	whitefish	wild	special	general	Winter fishery to harvest under-exploited whitefish population.
Meadow Creek and tributaries	15/30	anadromous	preservation	steelhead	hatchery/wild	closed	closed	Plant eyed steelhead eggs from DNFH into Meadow Creek incubation channel to aid restoration of steelhead run.
		coldwater	yield	rainbow, whitefish, bull trout, cutthroat, brook trout	wild	general	general	Maintain or improve present habitat quality for providing wild production at maximum potential.

Drainage: South Fork Clearwater

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Tan Mile Creek and tributaries	20/40	anadromous	preservation	steelhead, chinook	hatchery/wild	closed	closed	Restore steelhead and chinook runs into south fork drainage.
		coldwater	yield	rainbow, cutthroat, bull trout, whitefish	wild	general	general	Maintain present habitat quality. Manage for wild trout in unroaded areas. Restrict mining within the high water mark of Tan Mile Creek.
Newsome Creek and tributaries, Crooked River and tributaries, and Red River and tributaries	164/241	anadromous	preservation	steelhead, chinook	hatchery/wild	closed	closed	Restore steelhead and chinook runs. Utilize hatching channels and rearing ponds as upriver stocks become available.
		coldwater	yield	rainbow, whitefish, bull trout, cutthroat, brook trout	hatchery/wild	general	general	Stock with catchable rainbow to maintain catch rate of 0.5 fish/hr. Close Red River and tributaries above Moose Butte Creek Road from 7/10 to 8/15 to protect spawning chinook.
Other South Fork Clearwater tributaries	114/120	anadromous	preservation	steelhead	hatchery/wild	closed	closed	Restore steelhead runs into South Fork drainage by stocking selected tributaries.
		coldwater	yield	rainbow, cutthroat, bull trout, brook trout, whitefish	wild	general	general	Maintain or improve present habitat quality.

Drainage: North Fork Clearwater

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
North Fork from Ahsahka Highway bridge upstream to within 100 yards of Dworshak Dam	1.4/25	anadromous	trophy	steelhead	hatchery	special	special	Maximize returns of hatchery steelhead to the angler with maximum surpluses returning to the hatchery.
		coldwater	yield	rainbow, cutthroat, whitefish, kokanee	hatchery/wild	year-round	general	Maintain yield fishery and allow salvage fishery for kokanee that are lost through the dam during high spill periods.
Dworshak tributaries below Dent Bridge	60/60	coldwater	yield	rainbow, cutthroat, bull trout, brook trout, whitefish	wild	special	general	Maintain or improve present habitat. Allow additional fishing opportunity for the month of May.
Dworshak tributaries above Dent Bridge	116/81	coldwater	yield	rainbow, cutthroat, bull trout, brook trout, whitefish	wild	general	general	Maintain or improve present habitat. Manage for wild trout in unroaded areas.
Breakfast Creek, Little North Fork Clearwater, and tributaries from mouth to Foehle Creek	61/271	coldwater	preservation	whitefish, cutthroat, rainbow, bull trout	wild	special	special	Close season 9/10 to protect cutthroat trout. Trout limit is restricted.
		coldwater	preservation	kokanee	wild	closed	closed	Maintain closure to protect spawning kokanee.

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Drainage: North Fork Clearwater

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Little North Fork Clearwater upstream from and including Foehls Creek	56/56	coldwater	yield	cutthroat, rainbow, bull trout, whitefish	wild	general	general	Maintain present habitat. Manage for wild trout in unroaded areas.
North Fork Clearwater from slack water in Dworshak Reservoir upstream, including all tributaries, except Kelly, Lake, and Steep creeks	387/2159	coldwater	preservation	cutthroat, rainbow, bull trout, whitefish, brook trout	wild	special	special	Harvest season closes 9/10 to protect cutthroat trout. Trout limit restricted, winter whitefish fishery. Catch-and-release fishing from 9/11 to 10/15.
		coldwater	preservation	kokanee	wild	closed	closed	Maintain closure to protect spawning kokanee.
Kelly Creek and tributaries	119/745	coldwater	quality	cutthroat, rainbow, bull trout, whitefish	wild	general	special	Quality wild trout water with gear and limit restriction. Support roadless statue for remaining watershed.
		coldwater	preservation	kokanee	wild	closed	closed	Maintain closure to protect spawning kokanee.
Lake Creek and tributaries from mouth to and including Goose Creek	9/26	coldwater	preservation	cutthroat, rainbow, bull trout	wild	special	special	Season closes 9/10 to protect cutthroat trout. Trout limit restricted.

Drainage: North Fork Clearwater

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Lake Creek and tributaries from Goose Creek to Fish Lake, including tributaries	8/12	coldwater	preservation	cutthroat, rainbow, bull trout	wild	special	special	Season opens 8/1 to protect outlet spawning cutthroat population from Fish Lake. Trout limit restricted.
Steep Creek	3/3	coldwater	preservation	rainbow, golden trout, cutthroat	wild	special	special	Season opens 8/1 to protect spawning populations of golden trout from Steep Lake. Trout limit restricted.

Drainage: Lochsa

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Main stem Lochsa River, mouth to Wilderness Gateway bridge (MP 123)	27/488	anadromous	preservation	steelhead, chinook	hatchery/wild	closed	closed	Restore upriver salmon and steelhead runs.
		coldwater	yield	rainbow, cutthroat, bull trout	hatchery/wild	special	general	Season closes 9/10 to protect cutthroat, juvenile steelhead, and chinook. Stock with catchable rainbow to maintain catch rate of 0.5 fish/hr.
		coldwater	yield	whitefish	wild	special	general	Winter fishery to harvest under-exploited whitefish population.
Wilderness Gateway bridge to Crooked Fork/White Sand Creek confluence and Crooked Fork Creek from mouth to Brushy Fork Creek	44/792	anadromous	preservation	steelhead, chinook	hatchery/wild	closed	closed	Restore steelhead and chinook runs.
Crooked Fork Creek and tributaries (above Brushy Fork Creek) and White Sand Creek and tributaries	65/242	anadromous	preservation	steelhead, chinook	hatchery/wild	closed	closed	Restore steelhead and chinook runs. Support roadless status for remaining White Sand Creek watershed to protect critical chinook habitat.
		coldwater	yield	cutthroat, rainbow, bull trout, whitefish	wild	general	general	Maintain or improve present habitat quality. Manage for wild trout in unroaded areas.

Drainage: Lochsa

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Other Lochsa River tributaries including Fish Creek	281/510	anadromous	preservation	steelhead	hatchery/wild	closed	closed	Restore steelhead runs by stocking selected tributaries with hatchery juveniles. Support roadless status for remaining Fish Creek watershed to protect critical steelhead habitat.
		coldwater	yield	rainbow, cutthroat, bull trout, whitefish, brook trout	wild	general	general	Maintain or improve present habitat quality.

Drainage: Selway

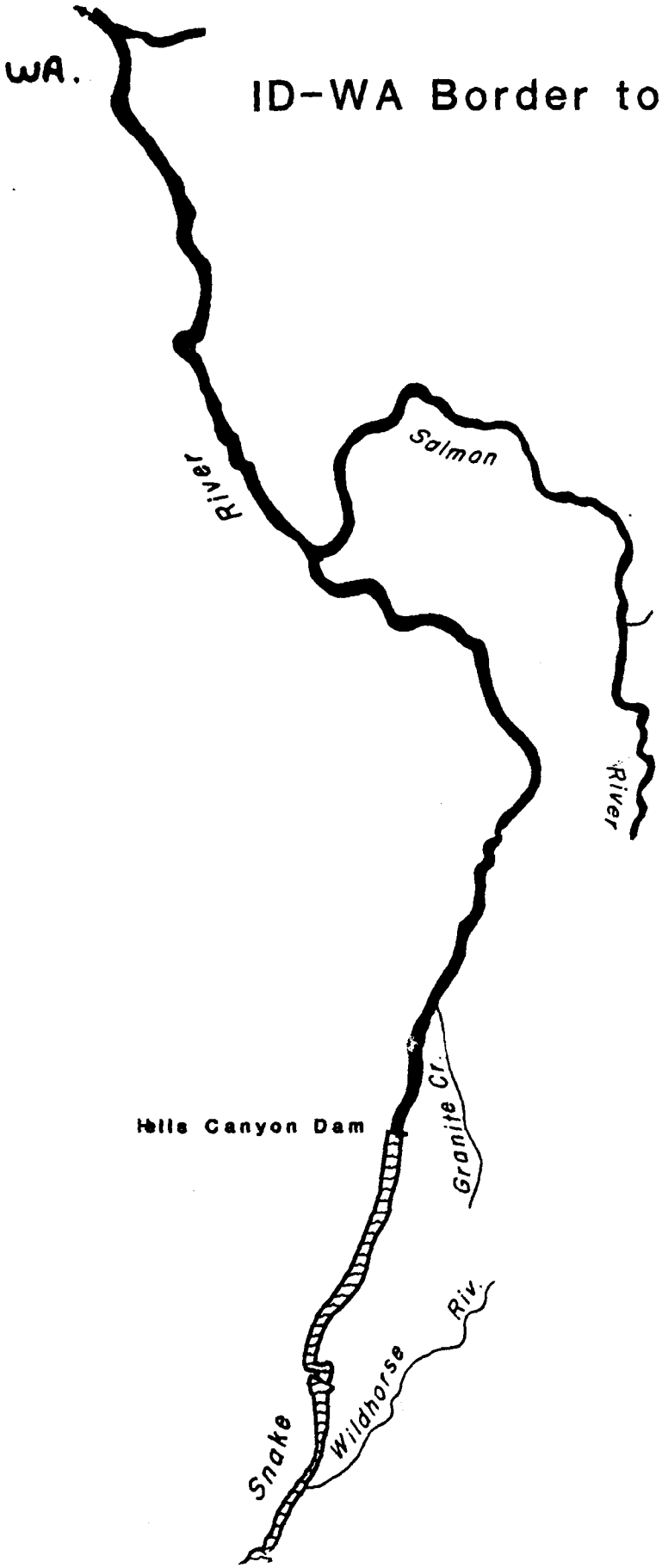
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Main stem Selway River, mouth to Selway Falls cable car	20/480	anadromous	preservation	steelhead	wild	closed	closed	Maintain native clearwater gene pool. No hatchery stocking.
				chinook	hatchery/wild	closed	closed	Restore chinook run in Selway by stocking with upriver stocks.
		coldwater	yield	rainbow, cutthroat, bull trout	hatchery/wild	general	general	Stock with catchable rainbow to maintain catch rate of 0.5 fish/hr.
		coldwater	yield	whitefish	wild	special	general	Provide extra angling opportunity to harvest under-exploited whitefish population.
Meadow Creek bridge upstream	71/1704	anadromous	preservation	steelhead	wild	closed	closed	Maintain native Clearwater gene pool. No hatchery stocking.
				chinook	hatchery/wild	closed	closed	Restore chinook run in Selway by releasing smolts or planting eyed eggs in hatching channel as upriver stocks become available.
		coldwater	quality	rainbow, bull trout, whitefish	wild	general	special	Quality wild trout water managed with gear and limit restrictions.

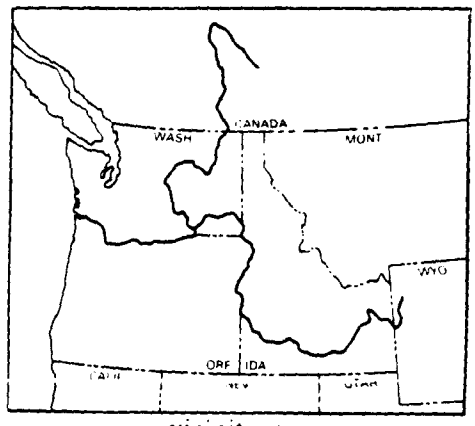
Drainage: Selway

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Meadow, Moose, Bear, Running, & White Cap creeks	312/1002	anadromous	preservation	steelhead	wild	closed	closed	Maintain native Clearwater gene pool.
				chinook	hatchery/wild	closed	closed	Restore chinook in Selway by stocking fry or smolts if upriver stocks become available. Support roadless status for remaining Meadow Creek and upper Running Creek to protect essential chinook and steelhead habitat.
Other Selway tributaries	348/512	anadromous	preservation	steelhead	wild	closed	closed	Maintain native Clearwater gene pool.
		coldwater	yield	cutthroat, rainbow, bull trout, brook trout, whitefish	wild	general	general	Maintain present habitat quality.

SNAKE RIVER

ID-WA Border to Hells Canyon Dam





vicinity map

7. 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.

River flows are controlled by Hells Canyon Dam and upstream storage. Daily water levels can fluctuate vertically 3-4' 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 from Lewiston to the mouth of the Salmon River is the migration corridor for adult and juvenile anadromous fish moving to and from the Salmon River. Spring, summer, and fall chinook salmon and steelhead trout pass through this reach of the river. There is a remnant run of fall chinook that spawn in the main stem of the Snake River above the mouth of the Salmon River. Wild steelhead using this reach are predominantly produced in the Imnaha River which enters from the Oregon side.

Major game fish species found in the river include smallmouth bass, channel and flathead catfish, black crappie, white sturgeon, 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' 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 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. Problems and Programs

(1) **PROBLEM** - Hells Canyon Dam can fluctuate daily water levels in the Snake River below the dam 3-4 vertical feet. These variations in water level negatively impact spawning success of fish in the canyon.

PROGRAM - Work with Idaho Power Company and federal regulatory agencies to minimize flow fluctuations from Hells Canyon Dam to lessen the impact of water level changes on spawning populations of game fish. Conduct research on the status and spawning ecology of game fish in the Snake River with emphasis on smallmouth bass and fall chinook.

(2) **PROBLEM** - Little is known about the status and ecology of channel catfish in the Snake River below Hells Canyon Dam.

PROGRAM - Conduct research to evaluate the status of channel catfish in the river in conjunction with trout, sturgeon, and smallmouth bass research.

(3) **PROBLEM** - White sturgeon have been regulated as a nonconsumptive (catch-and-release) fishery since 1970 because of depressed populations. Noncompliance with regulations may be impacting populations through illegal harvest.

PROGRAM - Continue research into the status of white sturgeon in the Snake River to assess early life history. Relate the significance of illegal harvest to population maintenance.

(4) **PROBLEM** - Lower Granite Dam impounded water into the confluence area of the Snake and Clearwater rivers near Lewiston. Additional water area was created that has potential for enhancing warmwater fish species.

PROGRAM - Develop a program for enhancing warmwater fish habitat in the Lower Granite Reservoir portion of the Snake and Clearwater rivers. Work with CE to assist with construction and placement of habitat structures.

(5) **PROBLEM** - Additional dams are often proposed for the Snake River above Lewiston. Any more impoundments in the Snake River system would seriously jeopardize, if not eliminate, anadromous fish migrating to and from the Salmon River and the Snake River above the mouth of the Salmon. Resident species, such as white sturgeon, would also be seriously impacted.

PROGRAM - Oppose any consideration for the construction of additional dams in the Snake River above Lewiston.

(6) **PROBLEM** - High spill rates at Hells Canyon Dam create nitrogen supersaturation, and gas bubble disease affects game fish.

PROGRAM - Work with Idaho Power Company to reduce gas supersaturation.

(7) **PROBLEM** - Access to the Idaho side of Hells Canyon is limited by rugged terrain, limiting participation in fisheries below Hells Canyon Dam.

PROGRAM - Encourage the USFS to construct riverside trail access below Hells Canyon Dam.

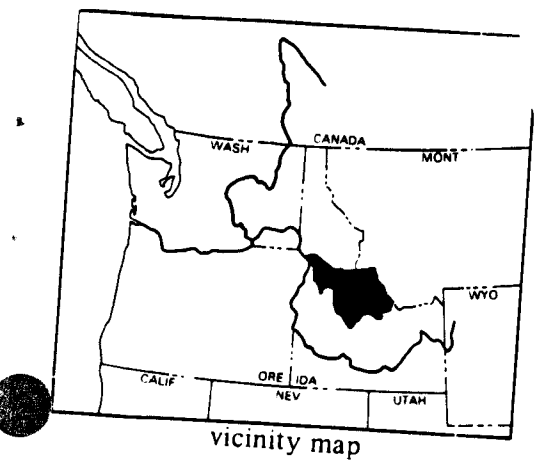
C. Management Direction

Drainage: Snake River - Idaho-Washington Border to Hells Canyon Dam

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
From Washington border to Hells Canyon Dam, including smaller tributaries	183/4847	anadromous	yield	steelhead	hatchery/wild	special	special	Enhance steelhead fishing opportunity with steelhead smolt releases in Snake River. Coordinate all management and regulations with adjoining states.
		anadromous	preservation	chinook	hatchery	closed	closed	Restore spring and fall chinook in Snake River with hatchery production.
		warmwater	yield	smallmouth bass, crappie, channel catfish, flathead catfish	wild	year-round	general	Maintain and enhance warmwater fishery. Assess population for possible regulation change to increase mean length of fish.
		coldwater	yield	rainbow, whitefish	wild/hatchery	year-round	general	Release an appropriate stock of hatchery rainbow fingerlings in Hells Canyon to provide 14"-18" rainbow with catch rates of 1.0 fish/hr.
		coldwater	preservation	sturgeon	wild	year-round	special	Maintain fishery as nonconsumptive until research indicates fish can be harvested.
Alpine lakes	/82	coldwater	yield	rainbow, cutthroat, brook trout	wild/hatchery	general	general	Stock lakes having sufficient natural reproduction with trout fry every third year.

SALMON RIVER

Mouth to Horse Cr.



vicinity map

8. 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 main travel way for upstream and downstream migrating salmon 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, bull trout, and smallmouth bass. Sturgeon are present in this reach of the river. Portions of the Salmon River between the mouth and Horse Creek are roadless and protected by wilderness and wild river status. The upper segment drains parts of the central Idaho 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. In 1984, approximately 20 percent of the steelhead fishing effort occurred in this 60-mile reach of river.

There are 74 miles of unroaded river between Long Tom Bar and Horse Creek. 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.

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.

B. Problems and Programs

(1) **PROBLEM** - Bargamin Creek, a tributary to the main Salmon River 29 miles below Horse Creek, is an important producer of wild steelhead trout. There are few drainages of similar size and quality entering the Salmon River between the South Fork Salmon and Horse Creek. Presently, the drainage has had minimal impact from road construction and maintains excellent water quality. Future logging activity and road building

could, through increased sediment production, severely reduce the potential of the drainage to produce steelhead.

PROGRAM - Support the USFS draft Nez Perce Forest plan to include the remaining Bargamin Creek drainage as a roadless prescription.

(2) **PROBLEM** - Development of the lower 53-mile reach of the Salmon River from Hammer Creek to the mouth would decrease its recreational and fishery resource value.

PROGRAM - Support inclusion of the lower 53-mile stretch of the Salmon River from the mouth to Hammer Creek into the Wild and Scenic Rivers System, designated as a "scenic" river. Support withdrawal for mineral entry.

(3) **PROBLEM** - Plans for small hydropower development on tributaries are steadily increasing and have the potential to negatively impact fish populations in these tributaries.

PROGRAM - Work with the developers and federal and other state agencies to ensure adequate criteria for plant design and maintenance flow requirements. Support a consolidated approach to projects that are concentrating in drainage systems. Reject plans that would impact key anadromous spawning or migration corridors, such as the Little Salmon River at the mouth of Rapid River and Rapid River below the salmon hatchery.

(4) **PROBLEM** - There are insufficient data available on the status of the white sturgeon population in the main Salmon River.

PROGRAM - Determine the status of the white sturgeon population in the main Salmon River. Develop compatible management plans and regulations with Washington and Oregon.

(5) **PROBLEM** - An isolated population of rainbow trout exists in Five Mile Creek. Genetic analyses shows these fish to be unique from any other stocks of rainbow or steelhead presently known.

PROGRAM - Conduct a survey on this population to determine range and population size and structure. Develop a plan to address the future direction for managing this population.

(6) **PROBLEM** - There is insufficient knowledge about movements, staging, timing, and recatch rates of wild steelhead stocks in the Salmon River canyon.

PROGRAM - Investigate these factors with the assistance of selected outfitters and guides.

(7) **PROBLEM** - Adequate data on steelhead harvest catch rates, population structure, participation, etc., has historically been difficult to obtain and has been lacking in the area between Vinegar Creek and Corn Creek.

PROGRAM - Monitor this fishery with the use of jet boats. Involve outfitters and guides to assist in data gathering.

C. Management Direction

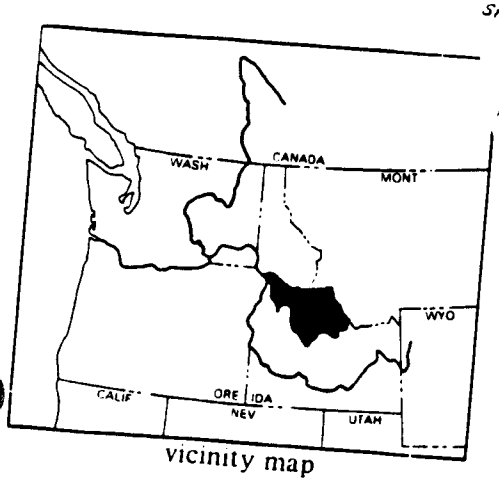
Drainage: Salmon River - Mouth to Horse Creek

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
From mouth to Little Salmon including tributaries (except Little Salmon River)	365/3310	anadromous	yield	steelhead	hatchery/wild	special	special	Enhance steelhead fishing opportunity with smolt releases into Salmon River.
		anadromous	preservation	chinook	hatchery/wild	closed	closed	Restore spring chinook populations in lower Salmon River to levels allowing a consumptive fishery with hatchery production. Support legislation that would permanently designate the lower Salmon River from Hammer Creek to the mouth as a scenic river.
		coldwater	yield	rainbow, bull trout, cutthroat, whitefish	hatchery/wild	year-round	general	Stock the mainstem and accessible tributaries of the lower Salmon River with hatchery rainbow of an appropriate stock.
		coldwater	perservation	sturgeon	wild	year-round	special	Maintain fishery as nonconsumptive until research indicates fish can be harvested.
		warmwater	yield	smallmouth bass	wild	year-round	general	Assess status of smallmouth bass population for possible regulation change to enhance mean length of fish.
From Little Salmon River to Horse Creek including tributaries	366/1910	anadromous	yield	steelhead	hatchery/wild	special	special	Enhance steelhead fishing opportunity with smolt releases into the Salmon River.

Drainage: Salmon River - Mouth to Horse Creek

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
From Little Salmon River to Horse Creek including tributaries (continued)		anadromous	preservation	chinook	hatchery/wild	closed	closed	Restore spring chinook populations to levels allowing a consumptive fishery with hatchery production. Support roadless status for the remaining Bergamin Creek watershed to protect critical steelhead spawning and rearing habitat.
		coldwater	yield	rainbow, bull trout, cutthroat, whitefish	wild	year-round	general	Maintain or improve present habitat quality.
		coldwater	preservation	sturgeon	wild	year-round	special	Maintain fishery as nonconsumptive until research indicates fish can be harvested.
Five Mile Creek		coldwater	preservation	rainbow	wild	general	general	Develop a management plan for this unique strain of rainbow-steelhead. Access the range and status of population. Allow no degradation of habitat or population until plan is completed.
Alpine lakes	50/500	coldwater	yield	rainbow, cutthroat, brook trout, grayling, golden trout	hatchery/wild	general	general	Maintain a variety of sizes and species in alpine lakes with aerial stocking of fry. Most lakes will be stocked with rainbow or cutthroat on a 3-year rotation to maintain catch rates of 1.0 fish/hr.

LITTLE SALMON R.



vicinity map

9. 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' msl at the mouth to 9,000' in the Seven Devils Mountains and Hazard Creek drainages. Discharge at Riggins averages 854 cfs with extremes of 98 cfs to 12,600 cfs recorded in the past ten years. As a relatively short, deep drainage with no significant storage reservoirs, the Little Salmon is subject to annual high spring runoff and periodic floods.

Most of the drainage is forest lands, including wilderness 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 trout, rainbow trout, cutthroat trout, bull trout, brook trout, mountain whitefish, and nongame species. From Hazard Creek to Round Valley Creek, cascades prevent anadromous fish species from further upstream migration. Above Round Valley Creek, 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 populations. Not only does it provide critically-needed spawning and rearing habitat for natural reproduction, but it also supplies high quality water for the Idaho Power Company Circle C (Rapid River) Hatchery. This hatchery returns a fishable surplus of adult chinook salmon in some years and also provides excess eggs for enhancing salmon populations elsewhere in the Snake River drainage including Oregon. Federal legislation protects the Rapid River drainage from undue habitat degradation.

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 brood stock of westslope cutthroat for egg-taking purposes. The westslope cutthroat is the native cutthroat for many Idaho waters and egg availability is scarce. In 1984, 350,000 eggs were taken from 400 females, and we expect the egg take to be upwards of 500,000 eggs when the year classes fill out.

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

High mountain lakes in the Little Salmon drainage provide anglers with a variety of fishing opportunity. Rainbow trout, cutthroat trout, rainbow-cutthroat hybrids, and brook trout are abundant. The Department aerially stocks about 45 lakes on a three-year rotation basis.

B. Problems and Programs

(1) **PROBLEM** - Chinook salmon stocks in the Snake River system are severely depressed and are in need of hatchery production to restore them to former levels of abundance. Pristine environments, such as the Rapid River drainage, capable of producing excellent water quality and superior spawning and rearing habitat are in short supply.

PROGRAM - The Rapid River chinook salmon hatchery has proven its ability to return adult salmon and its overall importance to produce salmon desperately needed for statewide enhancement. We will work with USFS to maintain the integrity of the Rapid River drainage for producing high quality water and preserving spawning and rearing habitat.

(2) **PROBLEM** - Chinook salmon spawners are vulnerable to harvest and are in short supply in recent years.

PROGRAM - Develop plan with Nez Perce Indian tribe to ensure sufficient egg take to meet hatchery and restoration needs. Conduct educational and enforcement programs as necessary.

(3) **PROBLEM** - Suitable steelhead habitat in the Little Salmon River and tributaries is under-stocked.

PROGRAMS - (1) Stock suitable habitat with fry, smolts, or unspawned adult steelhead; (2) work with USFS to remove migration barriers; and (3) preserve or enhance steelhead habitat.

(4) **PROBLEM** - Steelhead and salmon habitat is threatened by multiple small hydropower development.

PROGRAM - (1) Encourage cumulative impact analysis for all known hydro projects, and (2) oppose any projects which result in habitat losses or degradation.

C. Management Direction

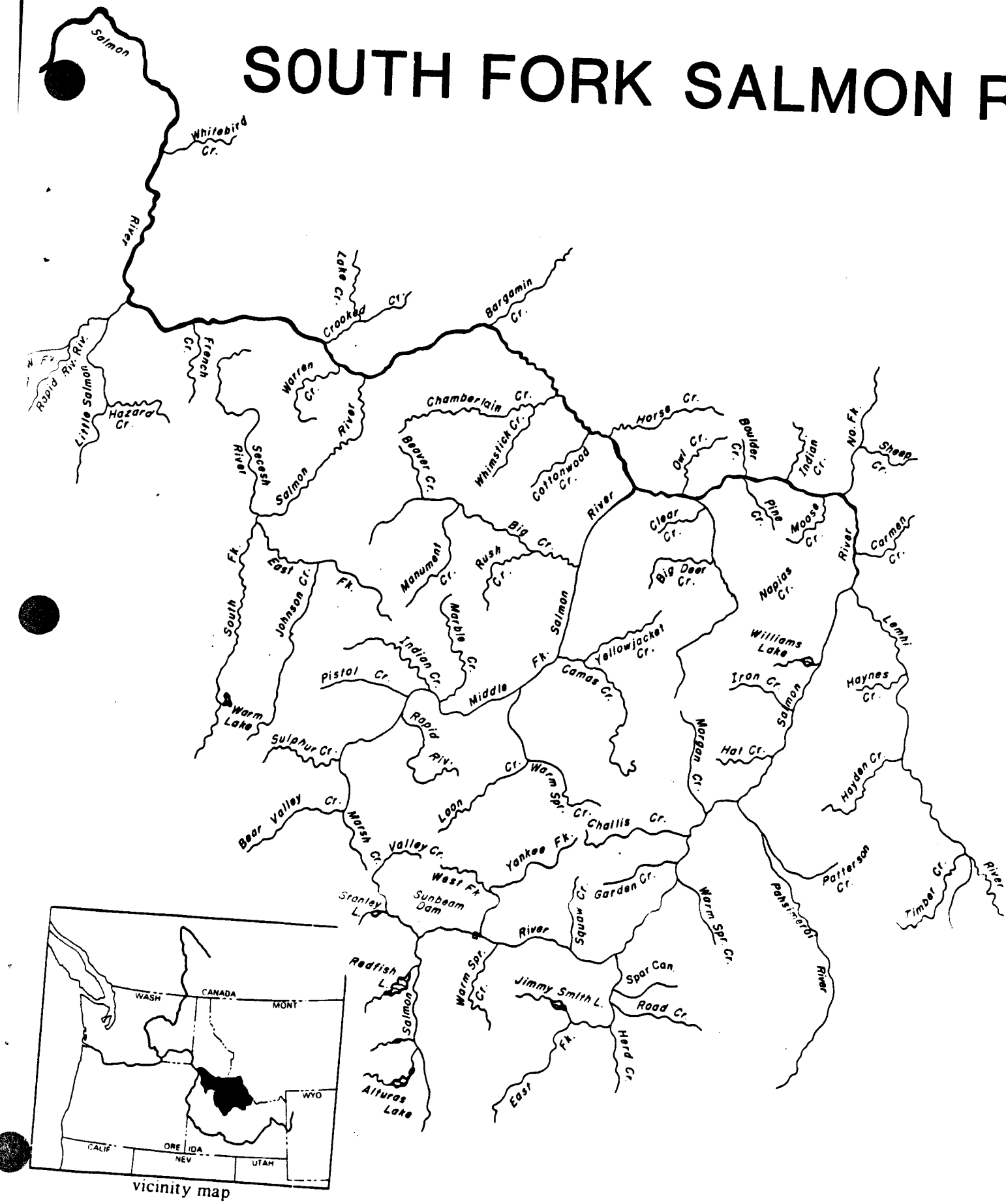
Drainage: Little Salmon River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Little Salmon River & tributaries, mouth to Round Valley Creek	104/78	anadromous	preservation	chinook	hatchery/wild	closed	closed	Allow for required escapement of spring chinook to Rapid River Hatchery.
		anadromous	preservation	steelhead	hatchery/wild	closed	closed	Enhance steelhead populations in selected tributaries through smolt releases.
		coldwater	yield	rainbow, brook trout, bull trout, whitefish, cutthroat	hatchery/wild	general	general	Stock catchable rainbow trout in roaded sections to provide a catch rate of 0.5 fish/hr. Maintain existing populations of wild game fish species. Allow winter fishery on whitefish.
Rapid River and tributaries, mouth to headwaters	35/25	anadromous	preservation	chinook	hatchery/wild	closed	closed	Enhance spring chinook returns to Rapid River Hatchery and allow wild escapement to saturate the habitat.
		anadromous	preservation	steelhead	wild	closed	closed	Allow for maximum escapement to seed the drainage to carrying capacity.
		coldwater	yield	rainbow, whitefish, bull trout	wild	general	general	Maintain integrity of existing habitat to sustain wild stocks.
Little Salmon River and tributaries, Round Valley Creek to headwaters	89/126	coldwater	yield	rainbow, whitefish, bull trout, cutthroat, brook trout	hatchery/wild	general	general	Stock catchable rainbow trout in roaded sections to provide 0.5 fish/hr. Maintain existing populations of wild game fish species. Allow winter fishery on whitefish.

Drainage: Little Salmon River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Fish (Mud) Lake	/30	coldwater	broodstock	westslope cutthroat	hatchery	closed	closed	Maintain for broodstock rearing and egg-taking operation. No fishing allowed.
Brundage Reservoir	/270	coldwater	yield	rainbow	hatchery/wild	general	general	Stock catchable rainbow trout early in the season to prevent losses when the reservoir is drawn down for irrigation.
Goose Lake	/520	coldwater	yield	rainbow, brook trout, cutthroat	hatchery/wild	general	general	Put-and-grow with cutthroat and rainbow fingerlings. Put-and-take with catchable rainbow to maintain 0.5 fish/hr.
Hazard Lake	/90	coldwater	yield	rainbow, brook trout, cutthroat, or rainbow/cutthroat hybrids	hatchery/wild	general	general	Supplemental put-and-take with catchable rainbow trout and put-and-grow with fingerling cutthroat or cutthroat/rainbow hybrids. Wild production supports brook trout. Maintain 0.5 fish/hr. catch rates.
Alpine lakes (42)	/1000	coldwater	yield	rainbow, cutthroat, golden trout, brook trout, grayling fall chinook	hatchery/wild	general	general	Put-and-grow with salmonid fry to provide a variety of species in the backcountry areas. Stock most lakes on a 3-year rotation to maintain 0.5-1.0 fish/hr. Cease or reduce stocking of lakes with wild production. Experiment with predator introductions to reduce stunted brook trout populations.

SOUTH FORK SALMON R.



vicinity map

10. SOUTH FORK SALMON RIVER DRAINAGE

A. Overview

The South Fork Salmon River (SFSR) 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' msl at North Loon Mountain to 2,166' 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" 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 SFSR are the Secesh River, the East Fork South Fork Salmon River (EFSFSR) 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 trout) have access to most of the drainage. Historically, the steelhead spawning run exceeded 3,000 fish. Current estimates are less than 300 spawners. The SFSR historically supported the largest salmon run in the State of Idaho. Salmon fishing was a major economic resource in the SFSR 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 SFSR chinook and steelhead were caused by two major problems: (1) logging and road construction activities created unstable soil conditions in the SFSR 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.

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

B. Problems and Programs

(1) **PROBLEM** - Intensive roading and logging on fragile land types have severely degraded the aquatic environment in the SFSR drainage.

PROGRAM - Continue to work with USFS to allow further improvement of the aquatic environment and prevent future destruction of fish habitat.

(2) **PROBLEM** - As a result of past habitat losses, anadromous fish populations are depressed.

PROGRAM - Stock 1,000,000 summer chinook smolts resulting from the SFSR trapping operation annually to augment wild production.

(3) **PROBLEM** - Past surface mining activities have damaged the aquatic environment in the EFSFSR.

PROGRAM - Continue to work with USFS, Water Resources, IDL, and mining interests to stabilize past mining disturbances and minimize impacts from new operations.

(4) **PROBLEM** - Cutthroat trout populations in the SFSR are seriously depressed due to over-exploitation by anglers and loss of quality habitat.

PROGRAM - Implement restrictive cutthroat harvest regulations on sections of the SFSR and consider hatchery augmentation.

(5) **PROBLEM** - Summer home construction and associated problems will degrade water quality in the Secesh Meadows area.

PROGRAM - Work with federal and state agencies and individual and commercial developers to minimize impacts of residential development.

(6) **PROBLEM** - Valley County zoning ordinances are inadequate to protect aquatic and riverine environments from increasing residential development.

PROGRAM - Work with Valley County officials to obtain zoning ordinances to protect aquatic and riverine environments.

(7) **PROBLEM** - Hatchery anadromous fish enhancement programs may impact wild anadromous and wild resident fish populations.

PROGRAM - Minimize negative impacts by restricting planting sites and times and planting high-quality smolts to decrease residualism.

C. Management Direction

Drainage: South Fork Salmon River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Mainstem SFSR, mouth to Secesh River	182/574	anadromous	preservation	chinook	hatchery/wild	closed	closed	Restore maximum escapement of summer chinook returning to hatchery trap and historic spawning areas.
				steelhead	wild	closed	closed	Restore steelhead runs to tributary and upriver spawning areas. Explore feasibility of restrictive fishery.
		coldwater	quality/ preservation yield	cutthroat, rainbow, bull trout, whitefish	wild	general	special	Enhance existing populations of wild trout. Eliminate harvest of cutthroat and juvenile steelhead to expand population size by catch-and-release fishing.
Secesh River to headwaters	120/758	anadromous	preservation	chinook	wild/hatchery	closed	closed	Bypass 1/3 of adult summer chinook captured at SFSR trap to seed Stolle Meadows spawning area.
		anadromous	preservation	steelhead	hatchery	closed	closed	Restore run of steelhead returning to historic spawning areas.
		coldwater	quality/ preservation yield	cutthroat, bull trout, whitefish, rainbow	wild wild/hatchery	special/ spawning closure	special	Enhance populations of wild trout. Explore possibility of quality fishery in Stolle Meadows. Stock roaded areas with catchable rainbow to maintain 0.5 fish/hr.
Secesh River and tributaries, mouth to confluence of Summit and Lake creeks	93/188	anadromous	preservation	chinook, steelhead	wild	closed	closed	Restore anadromous fish runs returning to Secesh Meadows & Lake Creek. Explore feasibility of smolt releases to enhance population size.

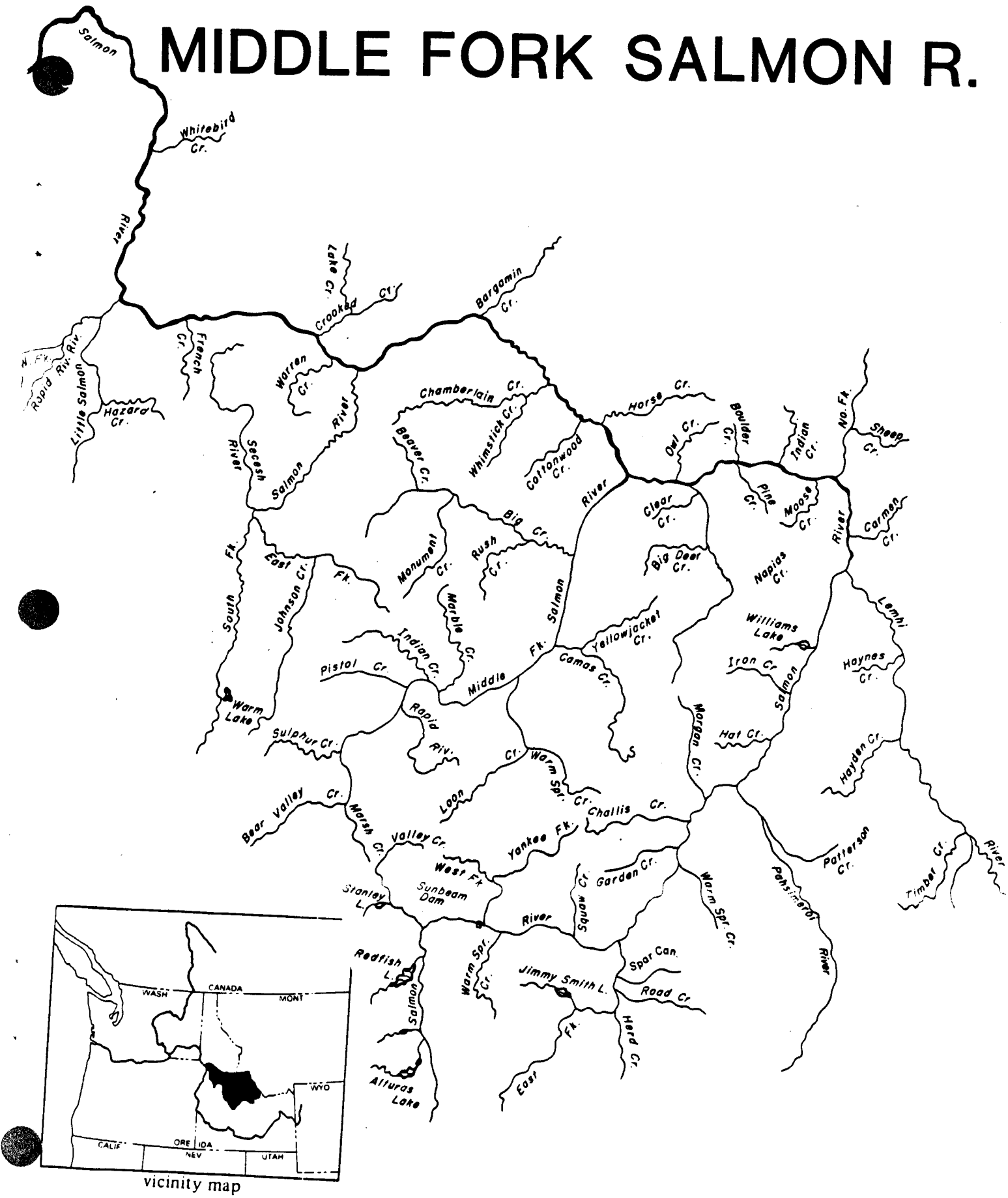
Drainage: South Fork Salmon River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Secesh River and tributaries, mouth to confluence of Summit and Lake creeks (continued)		coldwater	quality/ preservation yield	cutthroat, bull trout, whitefish, brook trout	wild	special	general	Maintain existing populations of wild game fish species. Allow winter fishery on whitefish. Explore feasibility of enhancing cutthroat population in the Secesh Canyon section and in Lick Creek to provide a quality fishery in these reaches and to seed downstream habitat. Supplemental put-and-take catchable rainbow trout in roaded areas to maintain catch rate of 0.5 fish/hr.
				rainbow	wild/hatchery	general	general	
Lake Creek and Loon Creek		anadromous	preservation	chinook, steelhead	wild	closed	closed	Restore anadromous fish runs returning to Secesh Meadows & Lake Creek. Explore feasibility of smolt releases to enhance population size.
		coldwater	quality/ preservation yield	cutthroat, bull trout, brook trout, whitefish,	wild	general	special	Enhance cutthroat populations to provide a quality fishery 1.0 fish/hr. and eliminating harvest on cutthroat. Fishing closure to protect spawning salmon on Loon Creek.
				rainbow	wild/hatchery			
EFSFSR and tributaries (except Johnson Creek)	86/202	anadromous	preservation	chinook, steelhead	wild	closed	closed	Restore anadromous fish runs to natural spawning areas.
		coldwater	quality/ preservation yield	bull trout, cutthroat, whitefish,	wild	general	special	Supplemental put-and-take with catchable rainbow trout in roaded areas to provide 0.5 fish/hr. Maintain existing populations of wild game fish species. Allow winter fishery on whitefish. Eliminate harvest on cutthroat to help enhance populations.
				rainbow	hatchery/wild			

Drainage: South Fork Salmon River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Johnson Creek and tributaries	54/721	anadromous	preservation	chinook, steelhead	wild	closed	closed	Restore anadromous fish runs returning to mainstem and tributary spawning areas. Continue spawning grounds closure.
		coldwater	quality/ preservation yield	cutthroat, bull trout, whitefish, brook trout, rainbow	wild wild/hatchery	special/ spawning closure	special	Supplemental put-and-take with catchable rainbow trout downstream from Ice Hole to provide 0.5 fish/hr. Enhance fishery for wild game fish upstream from Burntlog Creek by restricting harvest of cutthroat to obtain catch rate of 0.7 fish/hr.
Warm Lake	640	coldwater	yield	rainbow, kokanee, lake trout, brook trout, bull trout, cutthroat	hatchery/wild wild	year-round	general	Put-and-take fishery with catchable rainbow, fingerling lake trout, and cutthroat. Natural reproduction of kokanee, brook trout, and bull trout.
Tule Lake	10	coldwater	quality/ trophy	rainbow, grayling	hatchery	general	special	Catch-and-release for large rainbow or arctic grayling.
Alpine lakes (36)	890	coldwater	yield	rainbow, cutthroat, brook trout, grayling	hatchery/wild	general	general	Maintenance stocking with salmonid fry on a three-year rotation. Provide catch rates of at least 0.5 fish/hr. Provide variety of species and sizes. Cease or reduce stocking of lakes with wild production.

MIDDLE FORK SALMON R.



vicinity map

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 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 drainage was included in the Idaho Primitive Area.

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

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.

B. Problems and Programs

(1) **PROBLEM** - Westslope cutthroat trout are unable to maintain viable populations in the Middle Fork Salmon River with general seasons and bag limits.

PROGRAM - Continue to impose restrictive regulations to maintain the westslope cutthroat population at a high level and provide angler satisfaction with high catch rates.

(2) **PROBLEM** - Westslope cutthroat trout recruitment to the main river occurs from tributary streams from which harvest may occur.

PROGRAM - Continue to restrict the cutthroat harvest from tributary streams and monitor cutthroat trout populations.

(3) **PROBLEM** - Mining activity in tributary drainages lowers water quality and threatens fish populations.

PROGRAM - Continue to urge regulatory agencies to require strict compliance with laws to protect the water quality and fish populations.

(4) **PROBLEM** - The Middle Fork and tributaries contain extensive, high-quality steelhead spawning and rearing habitat. The existing steelhead population is insufficient to seed the habitat to carrying capacity.

PROGRAM - Continue to work with other state and federal agencies to improve passage of steelhead through downriver areas. Regulate the Salmon River sport fishery to increase wild steelhead escapement into the Middle Fork drainage.

(5) **PROBLEM** - As a result of dam construction and accompanying mitigation hatchery production, the Middle Fork sustains one of the only two remaining wild, unaltered stocks of steelhead in Idaho.

PROGRAM - Continue to manage the Middle Fork and its tributaries for the preservation and production of wild runs of summer steelhead.

(6) **PROBLEM** - The chinook salmon population is far below the optimum level for seeding the spawning areas.

PROGRAM - Continue to restrict salmon fishing until the spawning runs reach levels determined by the Anadromous Fish Plan (approximately 8,000).

(7) **PROBLEM** - Indian harvest of spawning chinook salmon is contributing toward inadequate seeding of spawning areas.

PROGRAM - Negotiate with tribal councils to cooperatively develop Indian fishery programs which allow sufficient numbers of chinook salmon to spawn to allow the population to increase to a level where everyone will benefit.

(8) **PROBLEM** - Livestock grazing of stream banks adjacent to major salmon and steelhead spawning and rearing areas is reducing the habitat quality.

PROGRAM - Advocate and support programs by land management agencies and riparian habitat users to minimize the effects on habitat quality.

(9) **PROBLEM** - The carrying capacity of westslope cutthroat trout with catch-and-release fishing in the Middle Fork Salmon River is unknown.

PROGRAM - Continue to monitor the status of the cutthroat in the Middle Fork. Protect tributaries from overharvest to allow for full recruitment to the Middle Fork.

(10) **PROBLEM** - Estimates of steelhead spawning escapements and distributions are insufficient for management decisions.

PROGRAM - Intensify adult spawning ground surveys.

(11) **PROBLEM** - Assessment of wild steelhead population levels are needed for more effective management.

PROGRAM - Utilize juvenile rearing densities in the Middle Fork drainage as an evaluation of wild stock status. Develop a five-year plan for the assessment program.

C. Management Direction

Drainage: Middle Fork Salmon River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
From mouth to Goat Creek	2/36	coldwater	quality	cutthroat, rainbow, bull trout, whitefish	wild	special	catch-and-release	Stock preservation. Season shortened to reduce conflict in steelhead holding area.
			yield					
		anadromous	preservation	steelhead	wild	closed	closed	Stock preservation. Maintain closure on steelhead to prevent excessive harvest in this holding area.
Goat Creek to Boundary Creek	94/1179	coldwater	quality	cutthroat, rainbow, bull trout	wild	special	catch-and-release	Stock preservation. Minimize conflict with steelhead by not allowing fishing in spring months until steelhead season is also open.
		coldwater	yield	whitefish	wild	special	special	Allow additional consumptive use during January and February.
		anadromous	preservation	chinook, steelhead	wild	closed	closed	Stock preservation. Allow depressed runs to increase to the potential of the habitat.
Boundary Creek to Dagger Creek	1/9	coldwater	preservation	all	wild	closed	closed	Protection of fish in and near fish ladder.
Dagger Creek upstream	9/81	coldwater	quality	rainbow, bull trout, cutthroat, whitefish	wild	general	special	Maintain or enhance existing populations of wild game fish at 1.5 fish/hr. Use limited access and cutthroat harvest restrictions to maintain or improve cutthroat populations
			yield					
		anadromous	preservation	steelhead, chinook	wild	closed	closed	Stock preservation. Allow depressed runs to increase to potential of the habitat.

Drainage: Middle Fork Salmon River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Indian Creek	15/30	coldwater	quality	cutthroat, rainbow, bull trout, whitefish	wild	general	special	Catch-and-release lower 5 miles to protect wild juvenile steelhead. Reduced cutthroat bag in upper area (2) to provide recruitment to Middle Fork.
		anadromous	preservation	steelhead, chinook	wild	closed	closed	Preserve wild runs of anadromous fish.
Marble Creek	25/60	coldwater	quality	cutthroat, rainbow, bull trout, whitefish	wild	general	special	Catch-and-release lower 5 miles to protect wild juvenile steelhead. Reduced cutthroat bag in upper area (2) to provide recruitment to Middle Fork.
		anadromous	preservation	steelhead, chinook	wild	closed	closed	Preserve wild runs of anadromous fish.
Camas Creek	27/98	coldwater	yield	rainbow, cutthroat, bull trout, whitefish	wild	special	special	Reduce harvest of cutthroat to provide adequate recruitment of the Middle Fork Salmon. Restricted fishery to reduce harassment to spawning chinook salmon. Catch-and-release lower 5 miles to protect juvenile steelhead. Catch rate of 1.5 fish/hr.
Loon Creek	35/127	coldwater	quality	cutthroat, rainbow, bull trout, whitefish	wild	general	special	Catch-and-release lower 5 miles to protect wild juvenile steelhead. Reduced cutthroat bag in upper area (2) to provide recruitment to Middle Fork.
		anadromous	preservation	steelhead, chinook	wild	closed	closed	Preserve wild runs of anadromous fish

Drainage: Middle Fork Salmon River

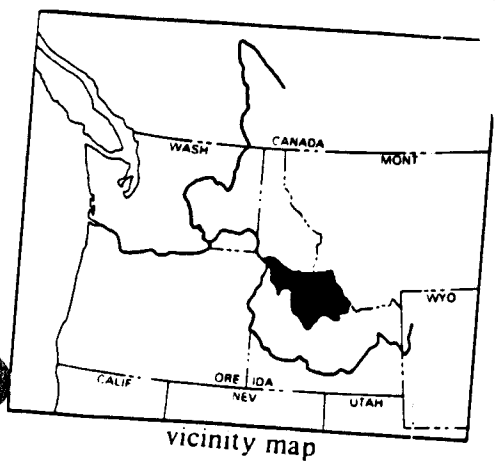
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Tributaries, mouth to Dagger Falls (except Camas, Big, Pistol, Indian, Marble, and Loon creeks)	196/1089	anadromous	preservation	chinook, steelhead	wild	closed	closed	Allow maximum escapement of both wild chinook salmon and steelhead trout returning to traditional and historic spawning and rearing areas.
		coldwater	quality	cutthroat, bull trout, rainbow, whitefish	wild	general	special (no more than 2 cutthroat)	Maintain or enhance existing populations of wild game fish at 1.5 fish/hr. Use limited access and cutthroat harvest restrictions to maintain or improve cutthroat populations.
Pistol Creek	15/30	coldwater	quality	cutthroat, rainbow, bull trout, whitefish	wild	general	special	Catch-and-release lower 5 miles to protect wild juvenile steelhead. Reduced cutthroat bag in upper area (2) to provide recruitment to Middle Fork.
		anadromous	preservation	steelhead, chinook	wild	closed	closed	Preserve wild runs of anadromous fish.
Big Creek	45/218	coldwater	quality	rainbow, cutthroat, bull trout, whitefish	wild	special	special	Catch-and-release for all species from mouth to Smith Creek.
		anadromous	preservation	steelhead, chinook	wild	closed	closed	Preserve wild runs of anadromous fish.
Marsh, Capehorn, Beaver, Benner, and Knapp creeks	40/47	coldwater	yield	rainbow, cutthroat, brook trout, bull trout, whitefish	wild	special	general	Restricted season to reduce harassment of spawning chinook salmon.

Drainage: Middle Fork Salmon River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Bear Valley Creek and tributaries, mouth (confluence with Marsh Creek) to headwaters	71/77	anadromous	preservation	chinook, steelhead	wild	closed	closed	Allow maximum escapement of anadromous fish returning to traditional and historic spawning and rearing areas. Close salmon spawning areas to all fishing during spawning period.
		anadromous	preservation	chinook, steelhead	wild	closed	closed	Allow maximum escapement for wild, native anadromous stocks.
Josephus Lake	15	coldwater	yield	rainbow, cutthroat	hatchery	general	general	Put-and-take fishery for rainbow trout with incidental wild cutthroat. Explore feasibility of raising lake level to increase capacity and carryover.
Yellowjacket Lake	12	coldwater	yield	rainbow	hatchery	general	general	Put-and-take rainbow fishery.
Capehorn Lakes	20	coldwater	yield	rainbow, brook trout	hatchery/wild	general	general	Put-and-take fishery for hatchery rainbow and standard fishery for brook trout. No motors waters.
Alpine lakes	2063	coldwater	yield	cutthroat, rainbow, golden trout, brook trout, bull trout	hatchery/wild	general	general	Maintain catch rates of 1.5 fish/hr. Continue to supplement populations with inadequate reproduction by aerial stocking.
		coldwater	yield	cutthroat, rainbow, bull trout, whitefish	wild	special (salmon spawning closure)	general	Maintain or enhance existing populations of wild game fish species. Close salmon spawning areas to all fishing during spawning period.

SALMON RIVER

Horse Cr. to North Fork



vicinity map

12. SALMON RIVER DRAINAGE - HORSE CREEK TO NORTH FORK

A. Overview

The Salmon River between Horse Creek and North Fork supports a very intensive fishery for steelhead in the fall and spring. Steelhead migrate into this reach in the fall and overwinter until resuming their migration to spawn in the spring.

Wild steelhead trout mingle with hatchery fish in the river between the Middle Fork and Horse Creek. The wild stock of steelhead destined to spawn in the Middle Fork Salmon River is currently of insufficient numbers to populate the vast habitat available in the Middle Fork drainage. Although sport fishing harvest has not been the principal reason for the decline of wild steelhead, reducing the harvest will increase escapement of the spawning population and allow the run to increase.

Steelhead seasons and limits are adjusted yearly after estimates of adult returns are projected from fish counts past dams in the Columbia and Snake rivers. Adult returns are a function of survival rate during outmigration to the sea and the impact of Columbia River sport and commercial fisheries.

Hatchery steelhead can support a more intensive harvest than wild fish. Proportionately fewer adults are necessary for hatchery spawning escapement.

The Salmon River between North Fork and Horse Creek is paralleled by a road for 46 miles down to Corn Creek. Between Corn Creek and Horse Creek, a trail borders the river. The most common means of access below Corn Creek is by boat. Several outfitters launch rafts from the Corn Creek ramp in the summer and fall and use jet boats for hauling steelhead fishermen during fall and spring seasons.

White sturgeon are found in the Salmon River downstream from Horse Creek and may also be present upstream from Horse Creek. Sufficient habitat is available and, historically, white sturgeon were present upstream to the vicinity of the city of Salmon and are still occasionally caught.

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

Westslope cutthroat trout migrate out of the Middle Fork Salmon River to overwinter in the main Salmon River. Chinook and sockeye salmon pass through on their return trip to the headwaters to spawn.

This section of the Salmon River has a long history of mining activity. Gold was discovered near Shoup in 1881 and a mining town

grew up along the river. Cobalt is a mining town on Panther Creek that had a population of more than 500 people when the Blackbird Mine was operating. Increased value of cobalt ore may result in reopening of this mine.

Logging is an important industry within this area, but neither mining nor logging are as important as the recreation industry. Increasing numbers of steelhead fishermen are using the river each year. It is anticipated that the number of steelheaders will increase substantially in the next five years.

Secondary roads border many of the tributary streams, but fishermen's use of resident tributary populations of rainbow and cutthroat is low. A good trail system provides access to mountain lakes.

B. Problems and Programs

(1) **PROBLEM** - Wild steelhead trout destined for the Middle Fork Salmon River and canyon tributaries cannot be harvested at a rate nearly equal to the rate of harvest on hatchery fish. That high a harvest rate will keep this depressed wild stock from expanding to the capabilities of the habitat.

PROGRAM - Maintain a differential harvest program below the Middle Fork to increase the escapement of wild steelhead destined for the Middle Fork and canyon tributaries to allow this wild stock to increase.

(2) **PROBLEM** - Public acceptance of and compliance with differential harvest regulations is necessary for a successful program.

PROGRAM - Increase efforts to inform the public of the importance for maintaining wild steelhead. Intensify enforcement efforts to encourage compliance with the differential harvest regulations.

(3) **PROBLEM** - Lower Panther Creek is toxic to fish and invertebrates due to mine drainage from the Blackbird Mine.

PROGRAM - Encourage regulatory authorities to develop programs which will reduce the toxicity levels in Panther Creek. After it is detoxified, stock steelhead trout, chinook salmon, and resident rainbow.

(4) **PROBLEM** - Steelhead and salmon runs in tributary streams are inadequately seeded.

PROGRAM - Stock steelhead fry and chinook salmon smolts in tributaries to increase the fish populations up to the rearing capacity of the streams.

(5) **PROBLEM** - Culverts block anadromous fish access to spawning and rearing habitat in some tributary streams.

PROGRAM - Request USFS to replace all culverts with structures which allow fish passage. Notify them of their legal obligation under 36-906, Idaho Code, to provide passage.

C. Management Direction

Drainage: Salmon River (Horse Creek to North Fork)

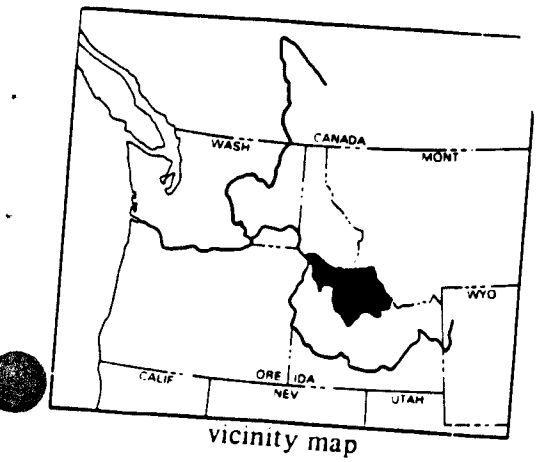
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Salmon River from Horse Creek to North Fork	52/691	anadromous	yield	steelhead	hatchery/wild	special	differential	Reduce harvest of wild fish below Middle Fork with differential harvest regulations to allow escapement into the Middle Fork to reach goals established in anadromous fish plan (approx. 6,000 fish). Control future harvest of wild steelhead by differential bag limits above and below Middle Fork. Provide yield fishery for hatchery steelhead.
		coldwater	preservation	sturgeon	wild	closed		Catch-and-release fishery only for white sturgeon.
		coldwater	preservation	cutthroat	wild	closed		Protect westslope cutthroat trout overwintering in Salmon River (from Middle Fork) from overharvest during the steelhead season.
		coldwater	yield	rainbow, bull trout, whitefish	wild	special	general	Yield fishery during summer, but restricted to protect overwintering westslope cutthroat, August 31 closure.
Tributary streams from Horse Creek to North Fork	181/212	anadromous	preservation	steelhead, chinook	hatchery	closed		Protect spawning salmon and steelhead with closed seasons. Supplement tributary streams with steelhead fry and salmon subsmolts when available.
		coldwater	yield	rainbow, cutthroat, bull trout, brook trout	wild	general	general	Provide yield fishery with catch rate of 1.0 fish/hr.

Drainage: Salmon River (Horse Creek to North Fork)

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Horse Creek	30/218	anadromous	preservation	steelhead, chinook	wild	closed		Protect spawning salmon and steelhead with closed seasons. Work with USFS to protect, enhance and maintain habitat. Manage as wild only.
		coldwater	yield	rainbow, cutthroat, bull trout, whitefish	wild	general	general	Provide yield fishery with catch rate of 1.0 fish/hr.
Panther Creek	40/290	anadromous	preservation	steelhead, chinook	hatchery	closed		Re-introduce steelhead with fry plants, adult releases and smolt plants. Re-establish chinook when smolts available. Work to alleviate mine pollution.
		coldwater	yield	rainbow	hatchery	general	general	Put-and-take fishery on Panther Creek above Copper Creek.
Indian Creek	6/14	coldwater	yield	rainbow	hatchery/wild	general	general	Put-and-take fishery for hatchery rainbow with incidental catch of wild fish in lower 6 miles. Wild in upper area.
Alpine Lakes	/233	coldwater	yield/quality	rainbow, cutthroat	hatchery	general	general	Maintain catch rate of 1.5 fish/hr. Supplement populations having inadequate reproduction by aerial stocking.

SALMON RIVER

North Fork to Headwaters



vicinity map

13. SALMON RIVER - NORTH FORK TO HEADWATERS

A. Overview

The entire Salmon River drainage contains 13,600 square miles. The drainage area above the North Fork is about 6,000 square miles. Highways 93 and 75 border the river from North Fork to the headwaters. Good access is available through most of this upper reach. The headwaters of the Salmon River, upstream from Thompson Creek, are within the Sawtooth National Recreation Area (SNRA), administered by USFS.

Logging, mining, ranching, and recreation are the most important industries in the upper Salmon River drainage. The cities of Salmon and Challis are the only major population centers. Most of the terrain is steep mountains bisected by river valleys.

Historically, white sturgeon were found in the Salmon River upstream to the city of Challis. Reports of sturgeon near Challis in the late 1970s, above the city of Salmon in 1982, and near North Fork in 1984 are believed to be accurate. A 245-pound fish was caught within the city limits of Salmon about 50 years ago. The present status of white sturgeon in this reach of the Salmon River has not been ascertained. Although habitat alterations may have had some effect on this species, sufficient habitat is still available.

The upper Salmon River supports an intensive fishery for hatchery rainbow trout and residual juvenile steelhead trout. Many recreationists are attracted to the scenic beauty and recreational opportunities of the SNRA. The granitic watershed within the SNRA yields few nutrients to the upper Salmon River and the large moraine lakes. Sterile waters and a short growing season render the streams and lakes incapable of meeting the demands of large numbers of fishermen. Hatchery rainbow are released in heavily-used waters and small streams each year to sustain a fishery.

The headwaters of the upper Salmon River is one of the most important spawning areas for spring and summer chinook salmon in Idaho. At one time, large runs of sockeye salmon returned to the large moraine lakes in Stanley Basin to spawn. Currently, Redfish Lake is the only water in the State of Idaho that supports a remnant run of anadromous sockeye salmon. Several other lakes were treated with chemicals to eradicate nongame fishes. Migration barriers on the outlets of these lakes limit entry by fish migrating upstream.

Nongame fish in the upper Salmon River drainage include redside shiners, northern squawfish, suckers, dace, chiselmouth, sculpin, and lamprey eels. An occasional smallmouth bass penetrates the area from downriver; they cannot reproduce due to the low water temperatures.

B. Problems and Programs

(1) **PROBLEM** - Salmon and steelhead runs in tributary streams are not sufficient to populate the available rearing habitat.

PROGRAM - Stock steelhead fry and chinook salmon subsmolts when available into small tributaries. Supplement larger tributaries with smolt releases.

(2) **PROBLEM** - Many streams with depressed steelhead or salmon runs are inaccessible when smolts should be released.

PROGRAM - Develop a plan for plowing snow as necessary at all identified sites.

(3) **PROBLEM** - Increasing runs of anadromous steelhead have greatly increased fishing pressure leading to crowding and landowner/sportsman conflicts. Enhanced salmon runs will add to these problems.

PROGRAMS - (1) Acquire public access areas and stream bank easements to spread anglers out and reduce conflicts, and (2) develop a management plan for dealing with refuse, sanitation, and enforcement problems.

(4) **PROBLEM** - The Salmon River between North Fork and Ellis could support more opportunity and harvest of resident trout if fish were available.

PROGRAMS - (1) Investigate physical and biological parameters of the Salmon River between North Fork and Ellis and attempt to locate or develop a stock of trout that will thrive in this river reach without threatening rearing and/or migrating anadromous fish, and (2) develop a management plan to implement this program.

(5) **PROBLEM** - There are insufficient data available on the status of resident trout in many tributary streams to manage for their highest potential.

PROGRAM - Conduct surveys on tributary streams to ascertain the status of their fish populations.

(6) **PROBLEM** - The rate of return for hatchery rainbow and status of kokanee has not been assessed in the upper Salmon River and large moraine lakes.

PROGRAMS - (1) Initiate studies to assess the return of hatchery fish and angler attitudes, and (2) develop management plans for each lake.

(7) **PROBLEM** - Sockeye salmon are an important component of the historical fish community in the SNRA, but only one remnant population presently exists.

PROGRAM - Continue to acquire sockeye salmon eggs from a drainage comparable to the 900-mile return to Stanley Basin and rear them for release into the moraine lakes.

(8) **PROBLEM** - Rainbow trout from Jimmy Smith Lake have an undesirable flavor during summer months.

PROGRAM - Analyze water quality of Jimmy Smith Lake and explore the possibilities of raising the water level.

(9) **PROBLEM** - Williams Lake has been sustaining a high yield of rainbow trout from hatchery fingerling releases. Potential for a self-sustaining fishery based on spawning in Williams Lake Creek exists.

PROGRAM - Evaluate the success of spring spawning rainbow trout and work with USFS to protect the quality of spawning habitat.

(10) **PROBLEM** - Many alpine lakes with road access are unable to support fisheries demand except when stocked with hatchery rainbow.

PROGRAM - Actively support a moratorium on roads to alpine lakes.

(11) **PROBLEM** - Insufficient data are available for managing most alpine lakes.

PROGRAM - Continue to gather data on high lakes to evaluate stocking techniques, fish stock manipulation, population control techniques, and angler preferences.

(12) **PROBLEM** - Most alpine lakes have inadequate natural reproduction and require regular stocking with fry in order to maintain fishing.

PROGRAM - Refine stocking programs for alpine lakes that will provide practical, diversified, and consistent fishing opportunities.

(13) **PROBLEM** - Mountain whitefish populations are underutilized.

PROGRAM - Promote the opportunity for whitefish fishing with extended seasons during winter.

(14) **PROBLEM** - Lack of returning sockeye salmon to the moraine lakes of the Sawtooths has decreased productivity due to loss

of nutrients from carcasses. This may reduce the juvenile sockeye and kokanee populations.

PROGRAM - Determine feasibility for artificial fertilization in Alturas and Redfish lakes. Enter into agreements with the Forest Service to initiate this program.

C. Management Direction

Drainage: Salmon River, North Fork to headwaters

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
North Fork to Pahsimeroi River	60/1512	anadromous	yield	steelhead, chinook	hatchery	special	general	Provide yield fishery with bag limits to provide adequate escapement.
		coldwater	yield	rainbow, bull trout, whitefish	wild	year-round	general	Enhance fishery on wild trout in keeping with anadromous goals. Develop management plan.
		coldwater	preservation	sturgeon	wild	closed		Wild stock preservation. Maintain strict enforcement.
Pahsimeroi River to East Fork Salmon River	40/1008	anadromous	yield	steelhead, chinook	hatchery wild/hatchery	special special	general general	Provide opportunity for yield fishery.
Pahsimeroi River to Hell Roaring Creek	95/2239	coldwater	yield	rainbow, bull trout, whitefish, cutthroat	hatchery/wild	year-round	general	Put-and-take fishery with incidental harvest of wild fish. Promote whitefish fishery. Closure around the Sawtooth Hatchery weir during trapping.
Tributaries between North Fork & Hell Roaring Creek, except Morgan & Squaw creeks	204/161	coldwater	yield	rainbow, bull trout, cutthroat, whitefish	wild	general	general	Standard fishery. Maintain catch rate of 1.0 fish/hr.

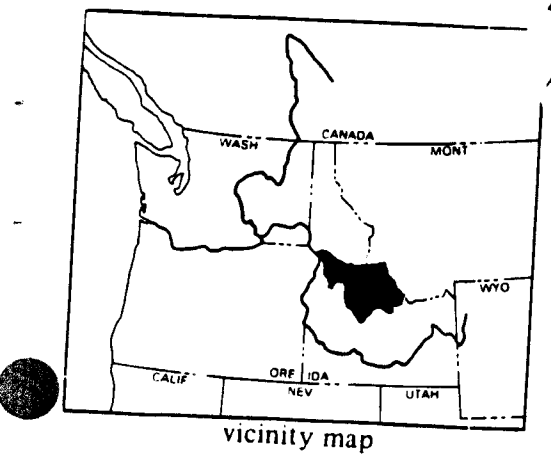
Drainage: Salmon River, North Fork to headwaters

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Morgan and Squaw creeks	32/37	coldwater	yield	rainbow, cutthroat, bull trout, brook trout	wild/hatchery	general	general	Put-and-take fishery for hatchery rainbow with additional catch of wild fish.
Hell Roaring Creek to headwaters	20/216	anadromous	preservation	chinook	wild	special	general	Reduce harassment of spawning chinook salmon. Seek remedies to summer dewatering.
Alturas Lake Creek	2/5	anadromous	preservation	chinook	wild	special	general	Reduce harassment of spawning chinook salmon. Seek remedies to summer dewatering.
Valley Creek	56/92	anadromous	preservation	chinook	wild	special	general	Reduce harassment of spawning chinook salmon. Seek remedies to summer dewatering.
		coldwater	yield	rainbow, bull trout, brook trout	wild/hatchery	special	general	Provide yield fishery which does not impact anadromous species.
Mosquito Flat Reservoir	/50	coldwater	yield	rainbow, brook trout	hatchery/wild	general	general	Acquisition of conservation pool in 1984 dictates need to develop management plan.
Bayshore Lakes	/40	coldwater	yield	rainbow	hatchery	general	general	No motors waters.
Williams Lake	/185	coldwater	yield	rainbow, bull trout	hatchery/wild	special	general	Provide yield fishery with catch rate of 0.7 fish/hr. Provide opportunity for ice fishing in Salmon vicinity.
Stanley Lake	/255	coldwater	yield	rainbow, brook trout, lake trout, kokanee	hatchery/wild	year-round	general	Put-and-take fishery with incidental take of other species. Maintain catch rate of 0.7 fish/hr.
		anadromous	preservation	sockeye	hatchery	closed	closed	Attempt restoration of sockeye run using suitable stocks.

Drainage: Salmon River, North Fork to headwaters

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Yellowbelly Lake	/240	coldwater	yield	brook trout,	wild	year-round	general	Provide year-round opportunity for brook trout with incidental catch of other species.
				rainbow,	hatchery/wild			
				cutthroat	wild			
Wallace Lake	/6	coldwater	yield	rainbow	hatchery	general	general	Put-and-take fishery.
Redfish Lake	/1500	coldwater	yield	rainbow,	hatchery/wild	general	general	Put-and-take fishery with incidental take of other species. Maintain catch rate of 0.5 fish/hr.
				bull trout,	wild			
				kokanee	wild			
		anadromous	preservation	sockeye	wild	closed	closed	Protect remnant sockeye run.
Alpine lakes	/5271	coldwater	quality	rainbow,	hatchery/wild	general	general	Maintain catch rate of 1.5 fish/hr. Supplement population with inadequate reproduction by aerial stocking on a 3-year rotation.
				golden trout,				
				brook trout,				
				cutthroat				
Alturas Lake	/1200	coldwater	yield	rainbow,	hatchery/wild	general	general	Put-and-take fishery with incidental take of other species.
				bull trout,	wild			
				kokanee	wild			
Little Redfish Lake	/40	coldwater	yield	rainbow,	hatchery/wild	general	general	Put-and-take fishery with incidental take of other species.
				bull trout,	wild			
				kokanee	wild			
Pettit Lake	/400	coldwater	yield	rainbow,	hatchery/wild	general	general	Put-and-take rainbow.
				brook trout,	wild			
				cutthroat	wild			
Perkins Lake	/10	coldwater	yield	rainbow	hatchery	general	general	Put-and-take rainbow catchables.
Iron Lake	/6	coldwater	yield	rainbow	hatchery	general	general	Fingerling rainbow plants annually.

LEMHI RIVER



vicinity map

14. LEMHI RIVER DRAINAGE

A. Overview

The Lemhi River drains 1,290 square miles of east central Idaho. The river flows through fertile agricultural land in a broad valley between two mountain ranges. There are more than 25,000 acres of land under irrigation in the valley. Ranching is the primary agricultural practice. Several thousand cattle are wintered on pasture and hay grown in the valley bottom. The intensive irrigation system consists primarily of flooding from ditches. All of the irrigation ditches are screened to prevent fish from entering. Lemhi River water is considered to be fully appropriated for irrigation. During low flow years, the stream channel is completely dewatered.

Salmon and steelhead spawn and rear in the drainage. The amount of spawning habitat has been reduced by stream alterations, but is still very significant. Resident fish biomass is dominated by mountain whitefish, but there are also large rainbow trout in the river. Hayden Creek, a major tributary to the Lemhi River, supports a spawning population of salmon and steelhead, which has been supplemented by hatchery releases. This drainage also has a population of large bull trout.

Between 1966 and 1982, a hatchery on Hayden Creek tested the rearing of steelhead trout and chinook salmon in dirt-bottom ponds. This station has potential for producing chinook salmon smolts.

B. Problems and Programs

(1) **PROBLEM** - The spawning populations of salmon and steelhead are below the potential of the drainage.

PROGRAM - Stock both salmon and steelhead smolts in the Lemhi River drainage from LSRCP hatcheries to supplement the populations. Continue to release steelhead fry and surplus adults from the Idaho Power Pahsimerol Hatchery, when available.

(2) **PROBLEM** - Returns of adult steelhead and salmon have not been commensurate with estimates of the number of wild migrants and hatchery releases.

PROGRAM - Initiate a research program to investigate the causes of low return rates for anadromous fish.

(3) **PROBLEM** - Angler opportunity for resident trout fishing is restricted due to private land ownership along the Lemhi River.

PROGRAM - Negotiate easements or purchase agreements with landowners to increase public access to the Lemhi River.

(4) **PROBLEM** - Mountain whitefish are underutilized.

PROGRAM - Increase the promotion of whitefish use during the winter fishery.

(5) **PROBLEM** - Irrigation diversions completely dewater portions of the Lemhi River during dry years. The natural flow is totally appropriated.

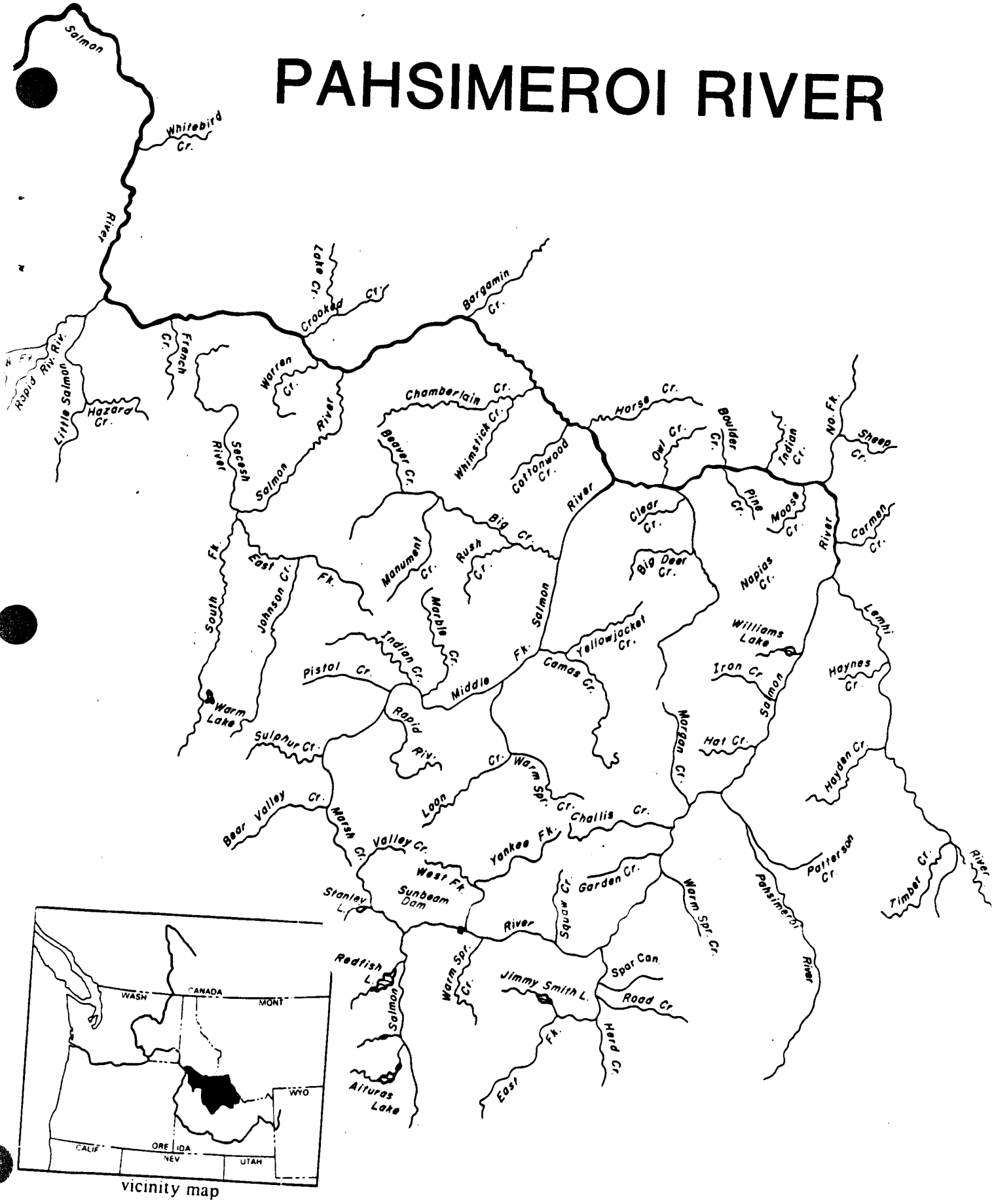
PROGRAM - Seek solutions to provide instream flows, including purchase of water rights, installation of sprinkler irrigation systems and stream improvement structures to allow passage at lower flows.

C. Management Direction

Drainage: Lemhi River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Lemhi River	270/332	coldwater	yield	rainbow, cutthroat, brook trout, whitefish, bull trout	wild	general	general	Maintain wild fishery with 1.0 fish/hr. success rate.
	61/135	anadromous	preservation	steelhead, chinook	hatchery/wild	closed	closed	Supplement wild salmon and steelhead populations with hatchery fish. Protect spawning populations with closed seasons.
Hawley Creek	10/6	coldwater	yield	rainbow, cutthroat	hatchery/wild wild	general	general	Put-and-take fishery for hatchery rainbow with incidental catch of wild fish in lower 5 miles with a catch rate of 0.5 fish/hr. Wild fishery in upper area.
Alpine Lakes	/421	coldwater	yield/quality	rainbow, cutthroat, golden trout, brook trout	hatchery/wild	general	general	Maintain catch rate of 1.5 fish/hr. Supplement populations with inadequate reproduction by aerial stocking.
Meadow Lake	/12	coldwater	yield	rainbow	hatchery	general	general	Put-and-take rainbow trout to maintain catch rate of 1.0 fish/hr.

PAHSIMEROI RIVER



vicinity map

15. PAHSIMEROI RIVER DRAINAGE

A. Overview

The Pahsimeroi River drains 845 square miles of central Idaho. Most major tributaries are dewatered in the lower ends during the irrigation season. There is intensive agricultural use of the valley, but the human population is low.

Productivity in the Pahsimeroi River is higher than most streams in the upper Salmon River drainage. The valley lies between the Lemhi and Lost River mountain ranges. Water percolates through the broad, pervious alluvial fans in the upper valley and reenters the river through ground water and springs in the lower river.

Two hatcheries are in operation on the Pahsimeroi River. Both hatcheries are owned by Idaho Power Company and spawn or rear salmon and steelhead to mitigate for impacts caused by dams on the middle Snake River. After the needs of the Idaho Power Company programs are met, surplus steelhead adults and fry are hauled out to supplement other populations in the Salmon River drainage.

Steelhead runs returning to the Pahsimeroi River steelhead facility have comprised upward of 85 percent of the steelhead population returning to the upper Salmon area. Additional smolts now being released from the East Fork and Sawtooth sites as part of LSRCP mitigation for dam-imposed losses will return additional steelhead to the Challis-Clayton-Stanley area. This steelhead fishery is extremely popular and growing and is an important and significant economic factor to the upper Salmon River communities and businesses.

B. Problems and Programs

(1) **PROBLEM** - Angler opportunity for trout fishing is restricted by private land ownership along most of the Pahsimeroi River.

PROGRAM - Initiate a program to improve fishing access through agreements, easements, purchase, and development.

(2) **PROBLEM** - There are insufficient data available on the status of the trout populations to manage for their highest potential.

PROGRAM - Initiate studies to evaluate the status of the resident trout populations.

(3) **PROBLEM** - Instream flows for the hatchery program on the Pahsimeroi River have not been determined.

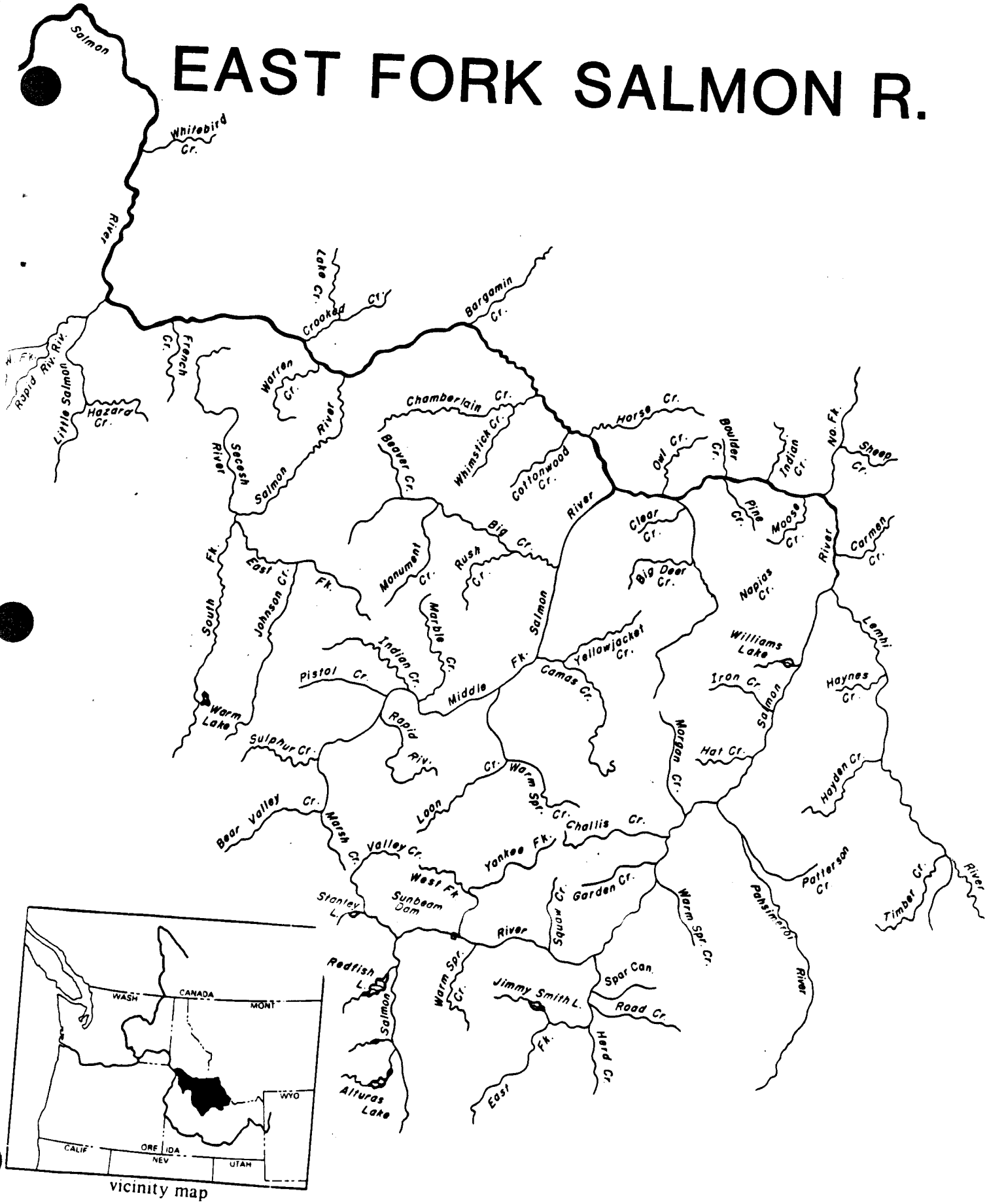
PROGRAM - Determine instream flows and develop information to show the need for this beneficial use.

C. Management Direction

Drainage: Pahsimeroi River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Pahsimeroi River and tributaries	121/134	coldwater	yield	rainbow, cutthroat, brook trout, bull trout	wild	general	general	Maintain wild fishery with catch rate of 1.0 fish/hr.
		anadromous	preservation	steelhead, chinook	hatchery	closed	closed	Protect spawning fish with closed season.
Alpine Lakes	108	coldwater	yield/quality	rainbow, cutthroat, golden trout	hatchery/wild	general	general	Maintain yield fishery with catch rate of 1.5 fish/hr. Continue to supplement populations with inadequate reproduction by aerial stocking.

EAST FORK SALMON R.



vicinity map

16. EAST FORK SALMON RIVER DRAINAGE

A. Overview

The East Fork Salmon River drains 540 square miles of central Idaho. This drainage includes numerous alpine lakes in the White Cloud Peaks. In addition to the White Clouds, the upper drainage is from the north side of the Boulder Mountains. Water yield is high in the upper river, and water quality is excellent. The lower East Fork bisects a zone of volcanic soils which are highly erosive. Insufficient vegetative cover and livestock grazing in the riparian zone contribute to the yield of water with high sediment loads, especially during spring runoff and thunder showers.

Both spring and summer chinook spawn in the East Fork drainage. This drainage is the second most important salmon spawning area in the upper Salmon River. Steelhead trout have not been abundant for many years, but large numbers of adults, smolts, and fry have been stocked since 1977 to augment the population.

A salmon and steelhead trapping and spawning facility was completed in 1984. Eggs collected from adult spawners will be transferred to other hatchery facilities for rearing primarily the Sawtooth Hatchery. Surplus adults will be released from the facility to spawn elsewhere in the drainage.

B. Problems and Programs

(1) **PROBLEM** - Poor water quality from the East Fork drainage renders the Salmon River turbid and reduces anglers' opportunities to catch salmon and steelhead.

PROGRAM - Advocate and support better land use practices to minimize soil erosion.

(2) **PROBLEM** - Mining activity in the drainage is a potential threat to the fish populations.

PROGRAM - Support state and federal water quality standards and enforcement of laws that protect aquatic and riparian habitat. Promote wider utilization of buffer strips along water courses and reclamation of old settling ponds.

(3) **PROBLEM** - Current steelhead and salmon populations are below optimum leaving much of the habitat under-seeded.

PROGRAM - Continue to release steelhead smolts and fry. Release chinook smolts from Sawtooth Hatchery when available.

(4) **PROBLEM** - Public access is limited along much of the East Fork.

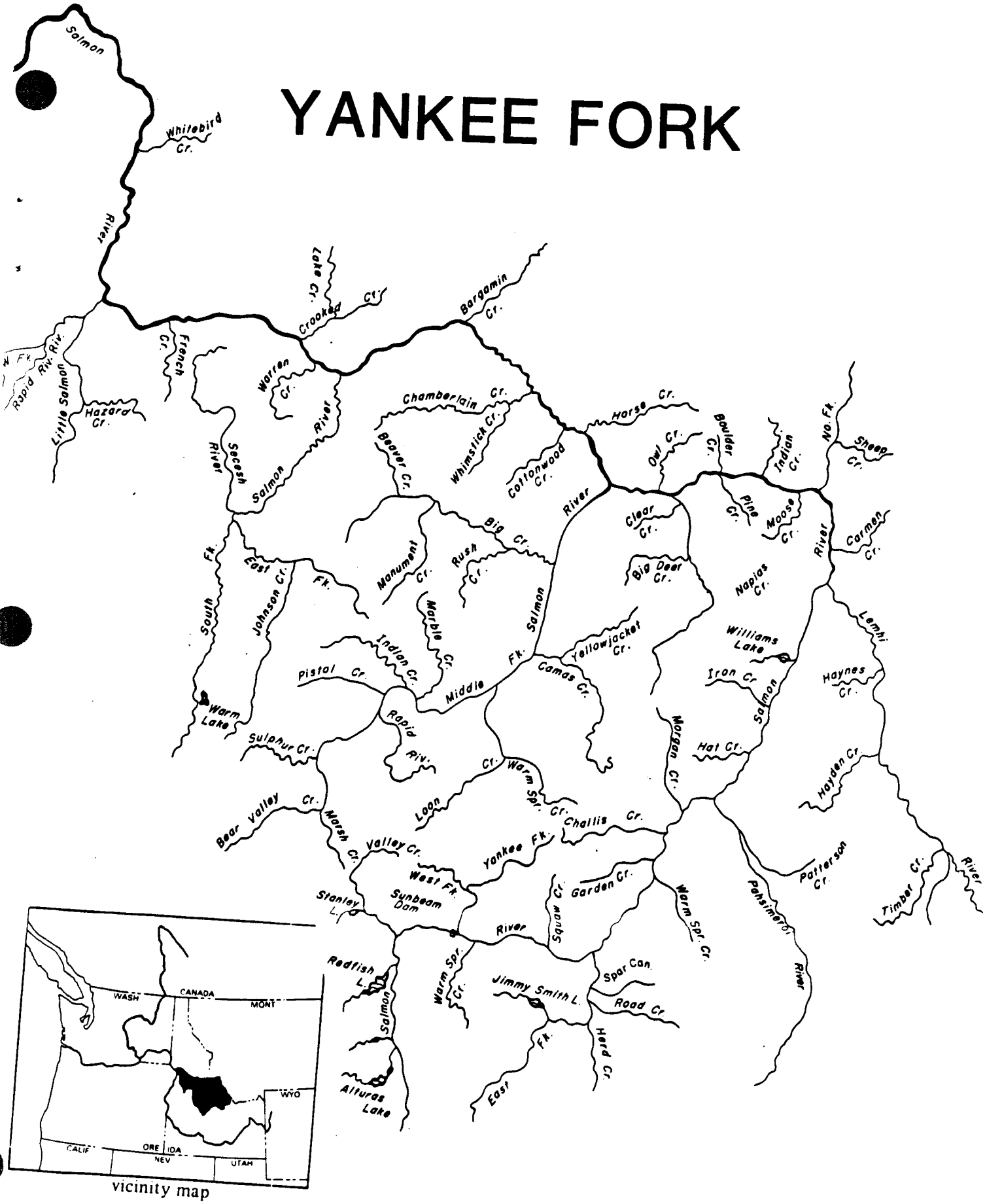
PROGRAM - Obtain public fishing access through purchase, lease, easement, or cooperative agreements with private land owners.

C. Management Direction

Drainage: East Fork Salmon River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
East Fork Salmon River and tributaries	113/138	coldwater	yield	rainbow, cutthroat, whitefish, bull trout	wild	special	general	Provide yield fishery for trout and whitefish within constraints of anadromous programs. Maintain catch rate of 1.0 fish/hr.
		anadromous	preservation	steelhead, chinook	hatchery/wild	closed	closed	Spawning area closures.
Alpine Lakes	/550	coldwater	yield/quality	cutthroat, golden trout, rainbow, brook trout	hatchery/wild	general	general	Maintain catch rates of 1.5 fish/hr. Supplement populations with inadequate reproduction by aerial stocking.
Jimmy Smith Lake	/50	coldwater	yield	rainbow	wild	year-round	general	Provide maximum fishing opportunity consistent with wild management.
Herd Lake	/20	coldwater	yield	rainbow	wild	year-round	general	Open year-round to provide additional fishing opportunity.

YANKEE FORK



vicinity map

17. YANKEE FORK SALMON RIVER DRAINAGE

A. Overview

The Yankee Fork Salmon River drains 195 square miles of central Idaho. Most of the drainage comes from granite mountains of the Idaho batholith, and the streams are very cold and infertile.

Gold was discovered in 1875, and the towns of Custer and Bonanza grew to bustling mining communities on the banks of the Yankee Fork. In the late 1800s, most of the mining was done by hand. As modern methods were developed, the miners went back and reworked old tailings. Eventually, a huge dredge was built, and about eight miles of the Yankee Fork and Jordan Creek were completely mined down to bedrock. Mining activity continues today in the drainage using modern methods, such as cyanide heap leaching, for ore extraction.

A secondary road borders the entire length of the Yankee Fork and Jordan Creek, a major tributary. The West Fork has a trail along the entire length and road access to the lower end.

In spite of all the mining activity and easy access, the Yankee Fork was an important salmon spawning stream until recent years. The principal cause of decline has been mortality of downstream migrants.

B. Problems and Programs

(1) **PROBLEM** - The spawning run of chinook salmon is far below the number desired to seed spawning areas and to take advantage of rearing capabilities.

PROGRAM - Annually stock chinook salmon subsmolts in Yankee Fork and the West Fork to restore the salmon run.

(2) **PROBLEM** - Steelhead trout populations are below the capability of the drainage to support.

PROGRAM - Continue to release steelhead fry and adults annually to seed rearing areas.

(3) **PROBLEM** - Stocking of salmon and steelhead smolts could restore fish runs more expediently than fry, adult, or subsmolt releases, but road access is blocked by snow or does not exist (West Fork) during the time fish need to be released.

PROGRAM - Explore alternative methods and costs of either plowing snow for truck access or using a helicopter to transport fish into the drainage.

(4) **PROBLEM** - The resident trout population is inadequate to meet demand.

PROGRAM - Stock hatchery rainbow trout to provide a put-and-take fishery. Start stocking fish as soon as flows decline to acceptable levels in the spring. When a significant spawning population of chinook salmon is restored, limit the releases of hatchery rainbow between late June and September, and restrict the trout fishery during the time that chinook are holding and spawning in major spawning areas.

(5) **PROBLEM** - Mining activity in the drainage continues to threaten fish populations by lowering water quality, habitat alterations, and the possibility of chemical spills.

PROGRAM - Support state and federal water quality standards and enforcement of laws that protect aquatic and riparian habitat. Promote wider utilization of buffer strips along water courses and reclamation of setting ponds.

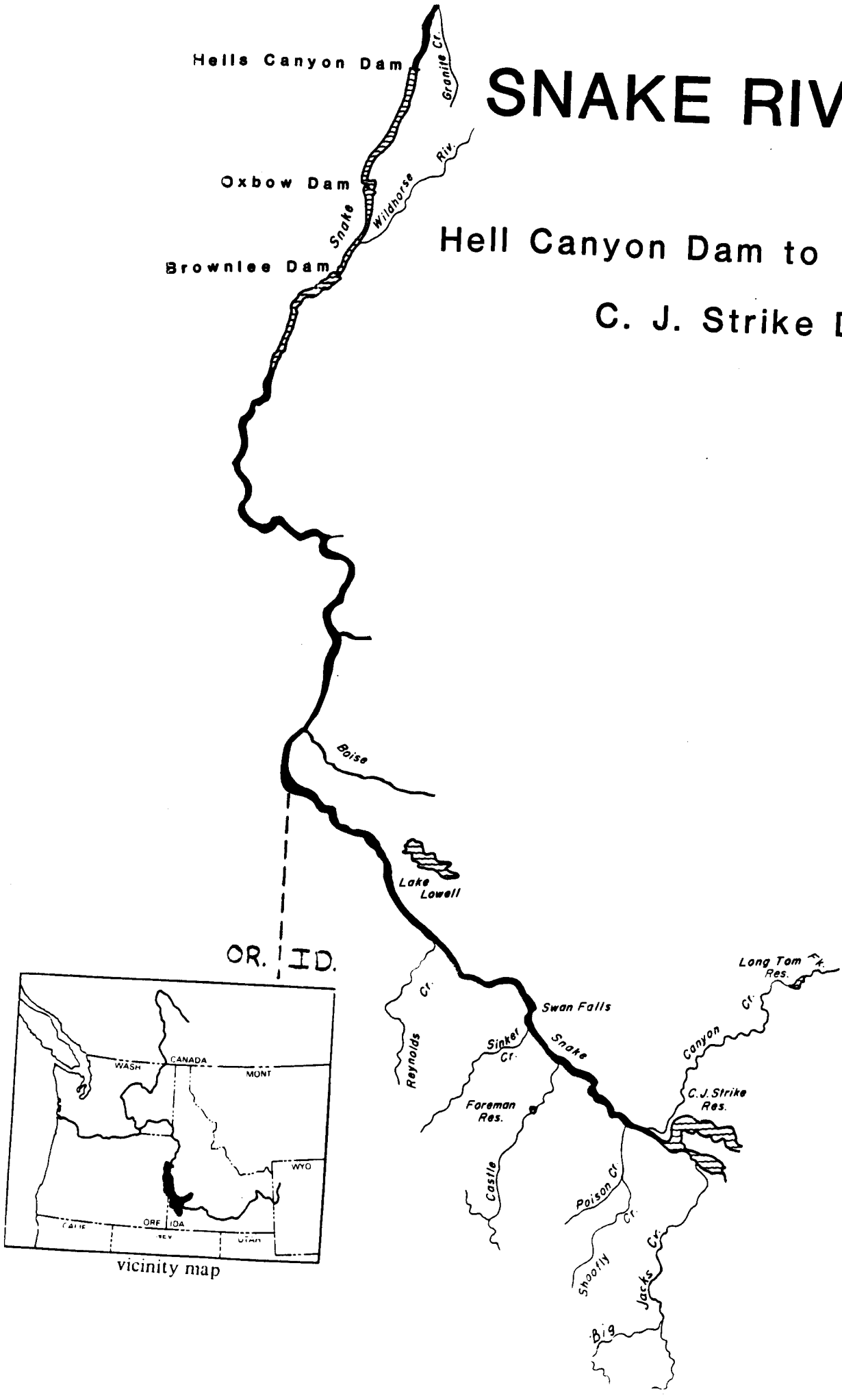
C. Management Direction

Drainage: Yankee Fork Salmon River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Yankee Fork Salmon River and tributaries to dredge ponds	113/138	coldwater	yield	rainbow, cutthroat, bull trout	hatchery wild wild	general	general	Provide catch rate of 1.0 fish/hr. with put-and-take rainbow trout fishery. Maintain general season until chinook salmon are restored. Continue to provide fishing opportunity before and after the period when salmon are holding and spawning in the river.
		anadromous	preservation	steelhead, chinook	hatchery	closed	closed	Stock steelhead trout and chinook salmon to restore the runs to the potential of the habitat. Protect spawning runs of salmon and steelhead with closed seasons.
Alpine lakes	84	coldwater	quality	rainbow, cutthroat, bull trout, golden trout, brook trout	hatchery/wild	general	general	Maintain catch rates of 1.5 fish/hr. Continue to supplement populations with inadequate reproduction by aerial stocking. Vary densities in lakes within groups to provide a range of fish size.

SNAKE RIVER

Hell Canyon Dam to C. J. Strike Dam



vicinity map

18. SNAKE RIVER DRAINAGE - 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 106 miles of river with a total of 27,400 surface acres of water. With the exception of Swan Falls, the Snake River impoundments between Hells Canyon Dam and the State Highway 51 bridge support populations of warmwater game fish. In the deeper, colder waters, one can also find coldwater species, such as rainbow trout.

Major tributaries to the Snake River between Hells Canyon Dam and C.J. Strike Dam include the Boise, Payette, Weiser, Owyhee and Malheur rivers. The Malheur drains out of Oregon and will not be discussed in this plan. The other major tributaries are covered separately in this plan under the major headings of Boise River Drainage, Payette River Drainage, Weiser River Drainage, and Owyhee 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. All small tributaries to the Snake River which are capable of supporting fish contain native redband trout (interior rainbow trout).

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. 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. Problems and Programs

(1) **PROBLEM** - Basic fish population data is still lacking or incomplete for large Snake River impoundments.

PROGRAM - Continue efforts to collect fish population data to define population structure and exploitation.

(2) **PROBLEM** - Juvenile rearing space for largemouth bass in C.J. Strike Reservoir is lacking, resulting in poor recruitment to the fishery.

PROGRAM - Place artificial structures in C.J. Strike Reservoir to increase juvenile rearing space for largemouth bass and forage species.

(3) **PROBLEM** - Crane Falls Lake has an over-abundance of sunfish, which are not readily available to predation by largemouth bass due to dense growth of rooted aquatic vegetation.

PROGRAM - Lower the water level in Crane Falls Lake during the spring spawning period to reduce production of sunfish and increase their availability as prey.

(4) **PROBLEM** - In the Snake River between Brownlee Reservoir and Swan Falls Dam, population data is outdated, especially for white sturgeon, smallmouth bass and channel catfish.

PROGRAM - Initiate a research program to evaluate the population structure of Snake River fish, especially white sturgeon, smallmouth bass and channel catfish.

C. Management Direction

Drainage: Snake River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Hells Canyon Reservoir, Oxbow Reservoir, Brownlee Reservoir	/15000	warmwater	yield	smallmouth bass, channel catfish, largemouth bass, bluegill, crappie, perch, bullhead	wild	year-round	special	Adjust regulations in 1986 to five fish, none under 12", and only two over 17" in cooperation with Oregon. Maintain catch rates at a minimum of 1.0 fish/hr. and improve population structure of black bass to a proportional stock density of 40-60 and relative stock density ($RSD_{0.5}$) of 15. Adjust regulations by 1990 if goal is not met. Promote commercial fishery for carp.
		coldwater	yield	rainbow, coho	hatchery	year-round	general	Put-and-grow with catchable rainbow trout and fingerling coho salmon when eggs are available. Provide catch rates of at least 0.5 fish/hr.
Brownlee Reservoir to C.J. Strike Dam (except Swan Falls Pool)	116/8236	warmwater	yield	channel catfish, smallmouth bass, largemouth bass, bullhead, flathead catfish, black crappie, bluegill, pumpkinseed, wemouth, perch	wild	year-round	general	Conduct basic inventory of fish populations to determine population structure of warmwater species especially smallmouth bass and channel catfish. Adjust regulations if needed to maintain catch rates of at least 1.5 fish/hr. and a proportional stock density of 40-69.
		coldwater	yield	rainbow trout, whitefish	wild	year-round		Continue efforts to improve water quality suitable for rearing of adult salmonids.

Drainage: Snake River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Brownlee Reservoir to C.J. Strike Dam (except Swan Falls Pool) (continued)		coldwater	preservation	sturgeon	wild	year-round	special	Catch-and-release. Racial preservation. Rebuild existing population by relocating sturgeon from more populous areas or artificial propagation.
Tributaries, including Wildhorse and tributaries, Indian Creek, and Brownlee Creek	110/77	coldwater	yield	rainbow, bull trout, brook trout, redband trout	wild/hatchery	general	general	Supplemental put-and-take with catchable rainbow trout. Racial preservation of redband and bull trout in selected streams.
Swan Falls Reservoir	/800	warmwater	yield	bullhead, perch	wild	year-round	general	Encourage development of a commercial carp fishery.
C.J. Strike Reservoir	/7500	warmwater	yield	largemouth bass, smallmouth bass, channel catfish, bluegill, perch, pumpkinseed, bullhead, crappie	wild/ hatchery	year-round	special	Monitor warmwater game species and adjust regulations as needed to provide catch rates of 1.5 fish/hr. and a proportional stock density of 40-60 and relative stock density ($RSD_{0.5}$) of 15 for black bass. Place habitat improvement structure to increase rearing space for juvenile black bass and forage species.
		coldwater	yield	rainbow, whitefish	hatchery/wild	year-round	general	Put-and-grow with catchable rainbow trout. No length limits. Maintain catch rates at a minimum of 0.5 fish/hr.

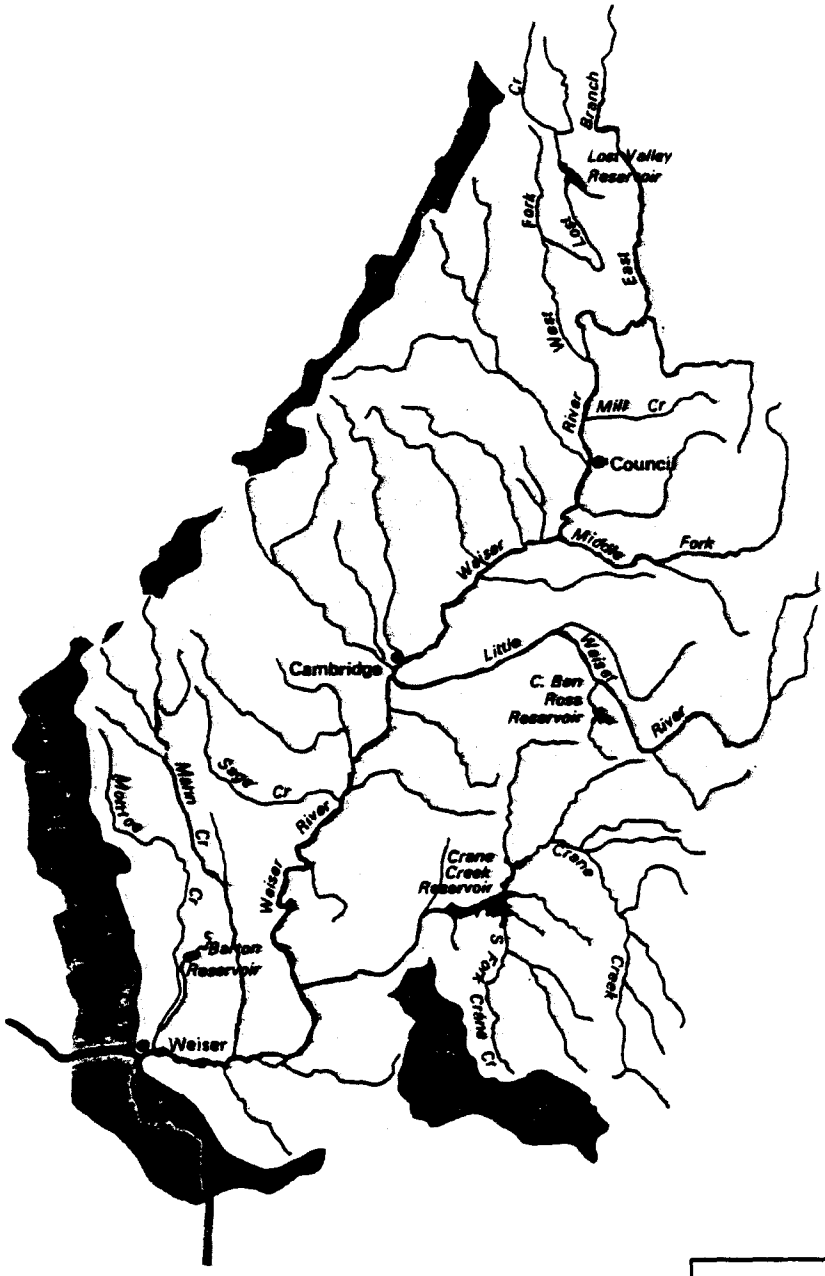
Drainage: Snake River

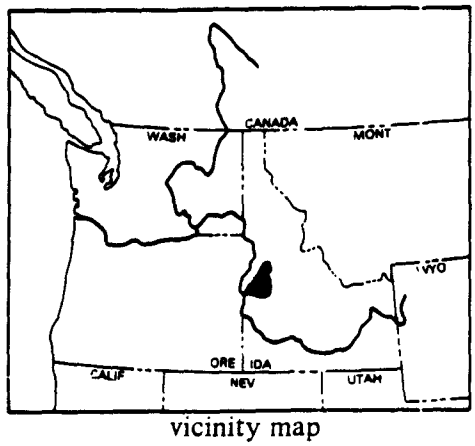
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Crane Falls	/84	warmwater	yield	largemouth bass, bluegill, pumpkinseed, crappie, bullhead	wild	year-round	general	Encourage maximum harvest of bluegill, pumpkinseed, and crappie. Drawdown lake water level during the spring spawning period to reduce spawning success of sunfish and to increase prey availability to largemouth bass. Provide catch rates of at least 1.0 fish/hr.
		coldwater	yield	rainbow	hatchery	year-round	general	Put-and-take with catchable rainbow trout. Adjust stocking rate to provide catch rates of at least 0.5 fish/hr.
Cove Arm	/80	warmwater	yield	largemouth bass, bluegill, crappie, pumpkinseed, smallmouth bass, bullhead, channel catfish	wild	year-round	general	Adjust regulations to provide catch rates of 0.5 fish/hr. and improve population structure of black bass.
		coldwater	yield	rainbow	hatchery	year-round	general	Put-and-take with catchable rainbow trout. Adjust stocking rate to maintain catch rates of 0.5 fish/hr.
Mountain Home Reservoir	/440	coldwater	yield	rainbow, perch	hatchery	general	general	Put-and-take with catchable rainbow trout. Provide catch rates of at least 0.5 fish/hr. Establish largemouth bass.
Long Tom Reservoir	/164	coldwater	yield	rainbow	hatchery	general	general	Put-and-take with catchable rainbow trout in spring when water is available. Annual dewatering prevents development of a consistent fishery.

Drainage: Snake River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Halverson Lake	/7	warmwater	yield	largemouth bass, bluegill	wild	general	special	Adjust regulations to improve population structure of largemouth bass. Provide catch rates of at least 1.0 fish/hr.
Sinker Creek Reservoir	/127	coldwater	preservation	redband	wild	general	general	Racial preservation of redband trout. Work with landowner to obtain access. Implement special regulations if needed to obtain access.
Alpine Lake	/62	coldwater	yield	rainbow, cutthroat, brook trout	hatchery	general	general	Put-and-grow with fry plants of rainbow trout and cutthroat trout. Adjust stocking rates to maintain diverse fishing opportunity and high aesthetic values. Maintain catch rate of 0.5 fish/hr.

Weiser River Basin





vicinity map

north

10 5 0 10

miles

19. 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 2,200 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 main stem storage reservoirs. Private irrigation districts have constructed four reservoirs on tributary streams. Those reservoirs, Lost Valley, C. Ben Ross, 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 Ross and Lost Valley have gone dry. The Idaho Department of Water Resources and the U.S. Army Corps of Engineers have proposed a main stem reservoir near the old Galloway diversion. This structure will provide benefits for flood control, anadromous fish water budget demands and irrigation. Manns Creek, C. Ben Ross 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, the only established population in the state. Lost Valley Reservoir has excellent potential for rainbow trout, but is currently overpopulated with yellow perch.

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 fishery of rainbow trout and smallmouth bass. Upstream from Cambridge, rainbow trout and mountain whitefish dominate the fishery. Tributaries to the Weiser which have not been heavily impacted by agricultural practices or stream alterations support excellent populations of rainbow trout.

B. Problems and Programs

(1) **PROBLEM** - Fish populations are severely reduced in the Weiser River below Galloway Dam during the irrigation season, due to irrigation withdrawals and poor water quality from irrigation return water.

PROGRAM - Seek stream resource maintenance flows which could be made available by the construction of a multipurpose impoundment near the existing Galloway Dam site. Work with SCS, IDHW and area landowners to utilize more efficient irrigation systems.

(2) PROBLEM - Stream channel alterations and riparian vegetation removal have reduced fish habitat and populations in the main Weiser River and the Little Weiser River.

PROGRAM - Work with private landowners through IDWR and CE to employ more environmentally acceptable methods to control flooding and erosion. Obtain riparian habitat below Galloway Dam to reduce loss and impacts from flooding.

(3) PROBLEM - C. Ben Ross Reservoir becomes too warm to maintain coldwater species during the late summer months.

PROGRAM - Stock rainbow trout early in the year to allow harvest prior to July 1. Improve population structure of largemouth bass.

(4) PROBLEM - Overgrazing of riparian areas on private range on the upper Weiser River has reduced fish populations.

PROGRAM - Utilize the Landowner Relations program to inform area ranchers of the damage done to the fishery resource by overgrazing and assist them in developing management programs that preserve fish habitat. Obtain easements for fencing in critical habitats.

(5) PROBLEM - Lost Valley Reservoir contains a stunted yellow perch population which has not been controlled by chemical treatments.

PROGRAM - Introduce burbot (ling) as a predator to control yellow perch numbers and to supply year-round fishery. Continue to stock rainbow trout.

(6) PROBLEM - We lack basic limnological and fish population data from Manns Creek Reservoir and C. Ben Ross Reservoir.

PROGRAM - Conduct basic investigations of limnology and fish populations in Manns Creek and C. Ben Ross reservoirs.

C. Management Direction

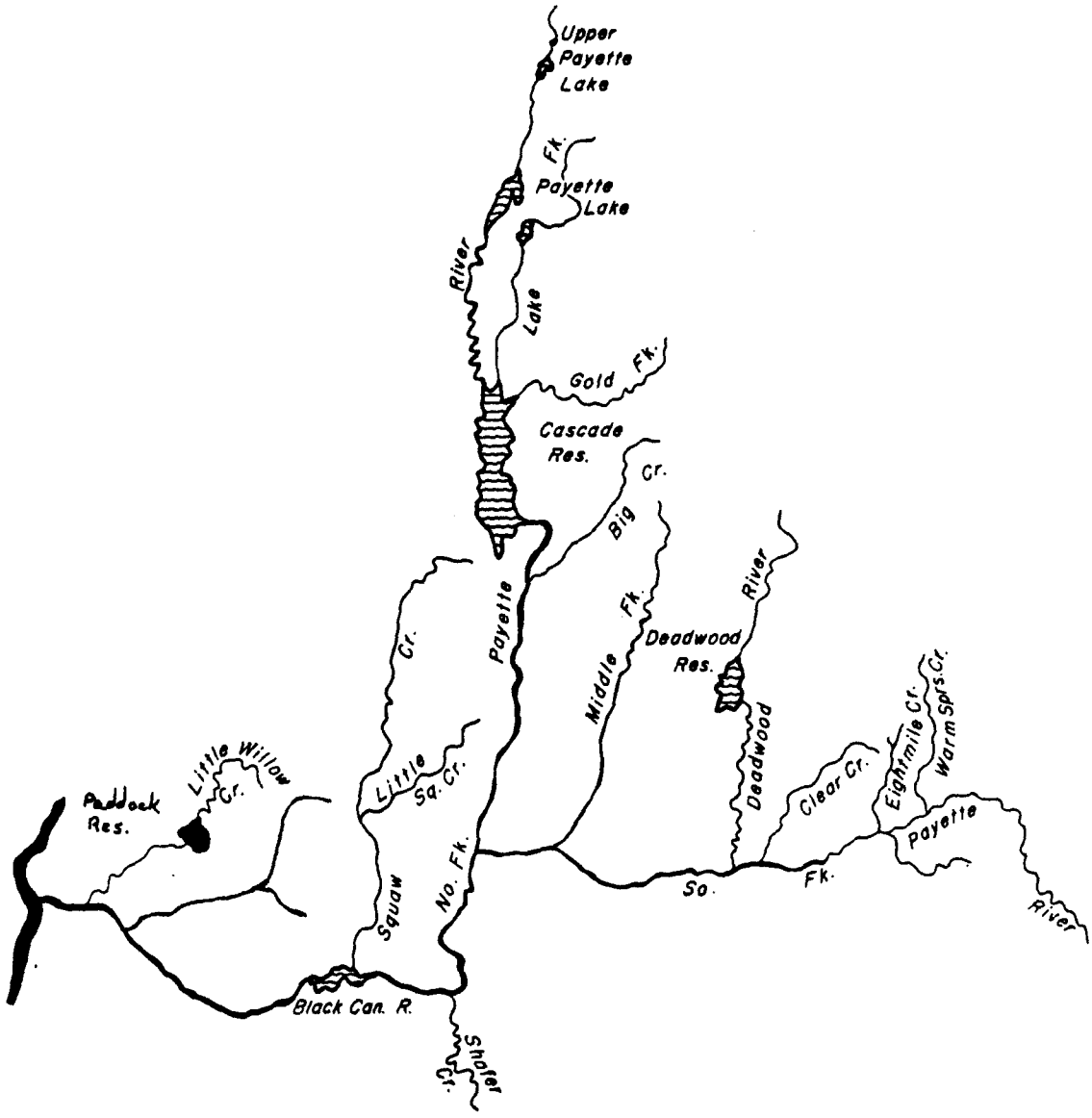
Drainage: Weiser River

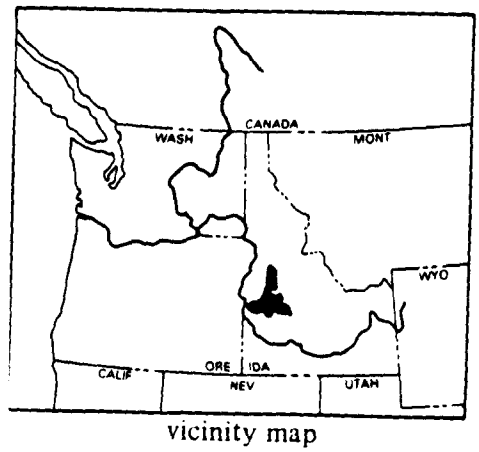
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Mouth to Galloway Dam	11/125	warmwater	yield	smallmouth bass, channel catfish, flathead catfish, bluegill, pumpkinseed	wild	year-round	general	Maintain or improve warmwater populations through flow improvements.
Mouth to Galloway Dam and tributaries	40/34	coldwater	yield	rainbow	hatchery	year-round	general	Supplemental put-and-take in roaded areas that have suitable water quality.
Galloway Dam to Cambridge	24/240	warmwater	yield	smallmouth bass	wild	year-round	general	Investigate current status of smallmouth bass populations.
		coldwater	yield	rainbow, brown trout, whitefish	hatchery	year-round	general	Supplemental put-and-take with catchable rainbow trout. Population maintenance with fingerling brown trout. Provide catch rates of at least 0.5 fish/hr.
Galloway Dam to Cambridge tributaries	69/243	coldwater	yield	rainbow	hatchery/wild	year-round	general	Put-and-take in roaded areas. Racial preservation of interior rainbow (redband) in unroaded streams.
From Cambridge upstream, including tributaries	196/320	coldwater	yield	rainbow, whitefish, brook trout, bull trout	hatchery wild wild wild	year-round	general	Supplemental put-and-take. Maintain catch rates of 0.6-1.0 fish/hr.
Mann Creek Reservoir	283	warmwater	yield	largemouth bass, crappie, bullhead	wild	year-round	general	Improve largemouth bass populations with habitat improvement and/or regulations. Investigate to determine limiting factors.

Drainage: Weiser River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Mann Creek Reservoir (continued)		coldwater		rainbow	hatchery	year-round	general	Put-and-grow with catchable rainbow trout. Stock in spring and fall. Adjust number to maintain catch rates of at least 0.5 fish/hr.
C. Ben Ross Reservoir	/353	warmwater	yield	largemouth bass, bullhead, crappie	wild	year-round	general	Improve largemouth bass populations with habitat improvement and/or regulations. Investigate to determine limiting factors.
		coldwater	yield	rainbow	hatchery	year-round	general	Put-and-take with rainbow trout. Stock in early spring only.
Crane Creek Reservoir	/3270	warmwater	yield	crappie, largemouth bass, bullhead	wild	year-round	general	Maintain white crappie populations. Improve largemouth bass populations with habitat improvement and/or regulation.
		coldwater	yield	rainbow,	hatchery	year-round	general	Put-and-take rainbow trout. Stock in early spring only.
Lost Valley Reservoir	/833	coldwater	yield	rainbow, brook trout, perch	hatchery	year-round	general	Put-and-grow with catchable rainbow trout. Introduce predators to reduce yellow perch populations.
Hornet Creek Reservoir	/32	coldwater	yield	rainbow	hatchery	year-round	general	Put-and-grow catchable or fingerling rainbow trout. Adjust stocking density to maintain catch rate of 0.5 fish/hr.

PAYETTE RIVER





vicinity map

20. 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' msl. The drainage flows in a southwesterly direction for over 175 miles where it empties into the Snake River near Payette at an elevation of 2,100' msl. 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.

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 smallmouth 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, the North Fork is very productive.

There are four major impoundments in the Payette basin, Black Canyon, Paddock Valley, Cascade and Deadwood, and several small impoundments and natural lakes with increased storage, such as big Payette Lake. Impoundments in the Payette basin primarily serve irrigation needs with flood control and recreation providing major benefits. Black Canyon on the main stem provides only marginal habitat for warmwater game species. Sand from upstream land disturbances has covered most habitat. Paddock Valley Reservoir on Big Willow Creek has one of the better populations of black crappie in the state and has the potential to be a premier fishery for largemouth bass. Cascade Reservoir on the North Fork is the most intensively-fished water in the state. Anglers fishing Cascade have the opportunity to harvest an abundance of yellow perch, coho salmon, kokanee salmon and rainbow trout.

Alpine lakes within the Payette River drainage provide anglers with a variety of fishing opportunity. Rainbow trout, cutthroat trout

and brook trout are abundant. 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. Problems and Programs

(1) **PROBLEM** - The South Fork Payette River is attractive for hydroelectric development due to its flow and gradient. Much fish habitat would be lost or degraded if hydroelectric dams were constructed.

PROGRAM - Work with IPUC, FERC, state and local government agencies and public utilities to prevent hydroelectric development on the South Fork Payette and maintain its free-flowing status. Work with Department of Parks and Recreation to obtain adequate instream flows for fish and recreation needs.

(2) **PROBLEM** - The Deadwood River below Deadwood Dam is completely dewatered during a portion of the year.

PROGRAM - Work with BR and IDWR to provide for a stream resource maintenance flow.

(3) **PROBLEM** - There are plans to build a hydroelectric project on the North Fork Payette, diverting all but 125 cfs out of the river for approximately 11.5 miles.

PROGRAM - Work with FERC and applicant to implement and monitor the effectiveness of mitigative measures to maintain 1980 catch rates in the affected reach.

(4) **PROBLEM** - Cascade Reservoir has an inadequate conservation pool (50,000 acre-feet) to maintain the existing fishery.

PROGRAM - Work to obtain congressional authorization for the recommended recreation conservation pool of 50,000 acre-feet.

(5) **PROBLEM** - Cascade Reservoir is very fertile, which stimulates algae production and increases biological oxygen demand. Winter and summer fish kills can result. Suspected nutrient sources are shoreline cattle grazing, residential sewage, municipal sewage and agricultural waste water.

PROGRAM - Work with BR, IDHW, SCS, county and city planning groups and area landowners to identify and reduce nutrient loading into Cascade Reservoir. Obtaining a minimum conservation pool will increase total oxygen content for overwinter use by fish populations.

(6) **PROBLEM** - Coho salmon planted in Cascade Reservoir tend to migrate downstream during high flow periods if water is released over the spillway. This reduces the number of fish available to anglers.

PROGRAMS - Continue to work with Boise Board of Control to minimize spillway releases. Evacuation can be accomplished in most years by droughting through deeper outlet structures. Evaluate landlocked chinook salmon to replace coho.

(7) **PROBLEM** - Payette Lake is a deep, infertile lake and cannot sustain heavy harvest of game fish. Due to its easy access and beauty, it receives moderately heavy pressure.

PROGRAM - Implement an information program to explain Payette Lake's limitations as a fishery. Support state and local governmental agency efforts to maintain high water quality. Utilize fish species, such as lake trout and kokanee, which best suit the lake's habitat to maintain a fishery with a moderate harvest. Plant catchables to augment the summer fishery.

(8) **PROBLEM** - Little Payette Lake is a fertile body of water which has historically produced good fishing. Fish growth is now limited by stunted kokanee and numerous rough fish. Fishing quality is below potential.

PROGRAM - Reduce kokanee and rough fish populations by chemical eradication and by blocking the spawning run or chemically treating spawning areas.

(9) **PROBLEM** - Yellow perch were illegally introduced into Horsethief Reservoir in 1979 or 1980. We expect this species to overpopulate and become stunted. Additionally, they will interfere with fishing for trout and limit trout growth. Yellow perch competition and predation may preclude fingerling stocking.

PROGRAM - Monitor yellow perch population to determine need and timing of chemical eradication. Restock with appropriate trout species. Implement an information program to publicize the negative impacts of illegal fish introductions.

(10) **PROBLEM** - The Payette River downstream from Black Canyon Dam is in a stable condition with large portions of the riparian zone intact. However, within the next five-year period, this land could become very attractive for development.

PROGRAM - Encourage county and city governments to adopt strong river planning ordinances to protect riparian communities.

(11) **PROBLEM** - Although kokanee numbers at Deadwood Reservoir have started to respond to efforts to reduce numbers and increase the size of individuals, the mean length of four-year-old kokanee is still below target lengths of 12-14".

PROGRAM - Continue operation of the kokanee migration barrier on the Deadwood River. Continue to allow liberal harvest of kokanee from all tributaries to Deadwood Reservoir.

(12) **PROBLEM** - Rainbow trout stocked in Deadwood Reservoir do not produce as well as cutthroat trout.

PROGRAM - Discontinue stocking rainbow trout in Deadwood Reservoir. Increase numbers of cutthroat trout planted. Continue efforts to establish a large predator, such as fall chinook.

(13) **PROBLEM** - The Deadwood River, from Deadwood Reservoir upstream, is highly accessible, has low productivity and is not supported by hatchery trout. Wild trout populations in the upper river appear depleted.

PROGRAM - Inventory fish population in the upper Deadwood River and conduct survey of angler use. Restrict harvest if needed.

(14) **PROBLEM** - Basic harvest information is lacking from Sagehen Reservoir.

PROGRAM - Conduct survey of angler use and harvest at Sagehen Reservoir.

C. Management Direction

Drainage: Payette River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Mouth to Black Canyon Dam, including drains and sloughs	72/1248	warmwater	yield	smallmouth bass	wild	year-round	general	Put-and-take with catchable rainbow trout. Population maintenance with fingerling brown trout. Provide catch rates of at least 0.5 fish/hr. Evaluate success of brown trout plants.
		coldwater		whitefish, rainbow, brown trout, largemouth bass, channel catfish, crappie, flathead catfish, bullhead				
Black Canyon Reservoir to confluence of put NF/SF Payette, streams. including tributaries	47/550	coldwater	yield	rainbow, brown trout, whitefish	hatchery/wild	year-round	general	Put-and-take with catchable rainbow trout. Population maintenance with fingerling brown trout. Supplemental and take in accessible tributary Maintain wild rainbow in unroaded areas.
Squaw Creek and Willow Creek	71/177	coldwater	yield	rainbow, whitefish, brook trout	hatchery/wild	year-round general	general	Supplemental put-and-take to maintain 0.5 fish/hr. Maintain wild trout populations in unroaded areas.
S.F. Payette River, Banks to Sawtooth wilderness boundary and tributaries	212/2465	coldwater	yield	rainbow, redband, whitefish, brook trout, bull trout, cutthroat	wild/hatchery	general	general	Supplemental put-and-take with catchable rainbow trout in roaded sections to maintain catch rates of at least 0.5 fish/hr. Maintain native stocks in unroaded streams. Inventory for limiting factors on wild fish. Develop management plan.

Drainage: Payette River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
M.F. Payette River and tributaries	23/210	coldwater	yield	rainbow, redband, whitefish, brook trout, bull trout	wild/hatchery	general	general	Supplemental put-and-take with catchable rainbow trout in roaded sections to maintain catch rates of at least 0.5 fish/hr. Maintain native stocks in unroaded sections.
Deadwood River, Mouth to Deadwood Dam and tributaries	30/150	coldwater	yield	rainbow, bull trout	wild	general	general	Maintain populations of wild trout. Access presently limits harvest.
Deadwood River, Deadwood Reservoir to headwaters	28/63	coldwater	quality	cutthroat, rainbow, whitefish, bull trout	wild	general	special	Manage for wild trout. Restrict bag limit to two trout if needed. Reduce kokanee numbers with liberal harvest and migration barrier.
Clear Creek	22/56	coldwater	yield	rainbow, bull trout	hatchery/wild	general	general	Supplemental put-and-take with catchable rainbow trout. Provide catch rates of at least 1.0 fish/hr.
S.F. Payette River, Sawtooth wilderness boundary to headwaters, including tributaries	79/71	coldwater	yield	rainbow, redband, bull trout, brook trout, cutthroat	wild	general	general	Manage for wild trout. Maintain catch rates at 1.0 fish/hr. Evaluate limiting factors for wild fish.
N.F. Payette, Banks to Smiths Ferry, including tributaries	78/270	coldwater	yield	rainbow, whitefish, coho	wild/hatchery	year-round	general	Maintain catch rate of 0.5 fish/hr. on wild trout. Put-and-take with catchable rainbow. Provide whitefish winter fishery. Supplemental put-and-take in tributaries. Develop management plan for wild trout.

Drainage: Payette River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
N.F. Payette from Smiths Ferry to Cascade Dam	74/278	coldwater	yield	rainbow, whitefish, perch, coho, bullhead	wild/hatchery	year-round	general	Supplemental put-and-take. Maintain wild rainbow below Carberton. Maintain perch fishery below Cascade Dam after IPC hydro project. Inventory and develop management plan.
N.F. Payette from Tamarack Fall Bridge to Lardo Dam	24/288	coldwater	yield	rainbow, kokanee, whitefish, brook trout, brown trout	wild/hatchery	general	general	Supplemental put-and-take fishery. Protect kokanee and rainbow spawning run. Monitor squawfish spawning run.
N.F. Payette from Payette Lake to headwaters, including Fisher Creek and other tributaries	34/31	coldwater	yield	rainbow, kokanee, brook trout	wild/hatchery	general	general	Put-and-take for rainbow. Protect kokanee spawning run. Maintain rainbow production in tributaries.
Gold Fork River and tributaries	49/98	coldwater	yield	rainbow, kokanee, brown trout	hatchery	general	general	Put-and-take for rainbow to maintain 0.5 fish/hr. Provide fish ladder at irrigation diversion for rainbow and kokanee.
Lake Fork River	37/67	coldwater	yield	rainbow, kokanee	hatchery	general	general	Put-and-take for rainbow to maintain 0.5 fish/hr. Control kokanee spawning above Little Payette Lake.
Boulder Creek	17/29	coldwater	yield	rainbow	hatchery	general	general	Put-and-take for rainbow to maintain 0.5 fish/hr.
Warmwater lowland ponds and reservoirs	/200	warmwater	yield	largemouth bass, bluegill, crappie, smallmouth bass, channel catfish	wild	year-round	general	Maintain mixed warmwater populations to provide maximum yield for "close-in" fishing. Conduct spot treatment with rotenone or salvage surplus sunfish to reduce populations.

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Drainage: Payette River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Emmett Airport Pond	/2	warmwater	wild	largemouth bass, bullhead	wild	year-round	special	Improve population structure of largemouth bass with regulations to allow a greater number of fish to achieve quality size. Increase proportional stock density to 40-60 and relative stock density for fish over 15" to 10.
Paddock Valley Reservoir	/1302	warmwater	yield	largemouth bass, crappie	wild	year-round	special	Maintain catch rates of 2.0 fish/hr. Restrict harvest of largemouth bass to obtain a proportional stock density of 40-60 and a relative stock density for fish greater than 15". Adjust regulation by 1987 if population does not respond to current regulation. Investigate the practicality of introducing bluegill sunfish as a forage item for largemouth bass.
Black Canyon Reservoir	/1100	warmwater	yield	largemouth bass, crappie, channel catfish	wild	year-round	general	Improve existing warmwater fishery by installing habitat improvement structures. Seek BR funding and volunteer labor and materials.
Valley County ponds	/1247	coldwater	trophy/ yield	rainbow, cutthroat	broodstock/ hatchery	general	trophy/ general	Develop trophy fishery for selected cutthroat or rainbow stocks and provide for spawning operation. Formulate cooperative agreements with landowners to allow public access. Remaining ponds managed for rainbow if open for public access.

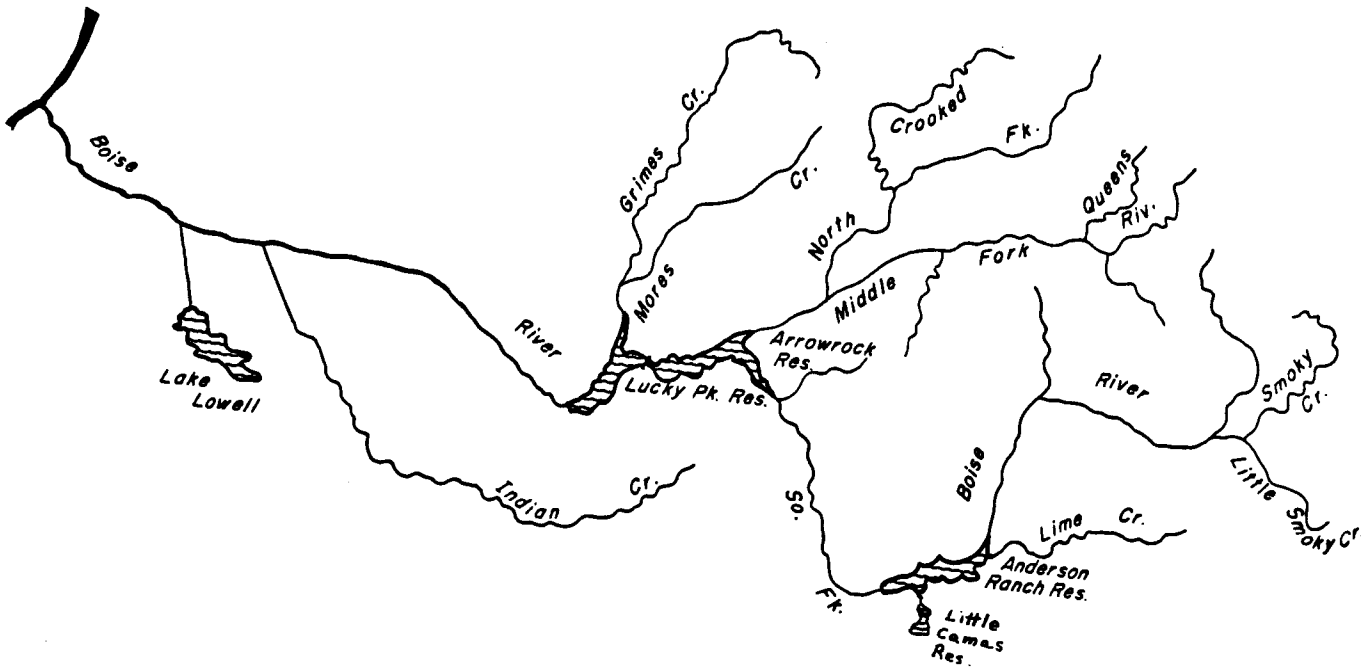
Drainage: Payette River

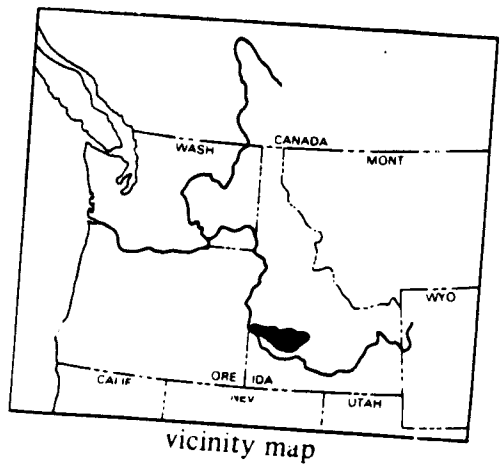
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Horsethief Reservoir	/270	coldwater	yield	rainbow, cutthroat, brook trout, perch	hatchery	general	general	Put-and-grow for rainbow and cutthroat. Monitor perch population and take appropriate management actions to reduce or eliminate perch when necessary. Stock and evaluate hatchery-catchable rainbow.
Horseshoe Bend Mill Pond	/28	warmwater coldwater	yield	largemouth bass, bluegill, rainbow	wild/ hatchery	year-round	general	Increase emphasis on warmwater management. Put-and-take with catchable rainbow trout. Stock during April or May only, to avoid warmwater temperatures.
Deadwood Reservoir	/3200	coldwater	yield	kokanee, rainbow, cutthroat, bull trout, fall chinook, whitefish	wild/ hatchery	general	general	Increase mean length of 4-year-old kokanee to 13" through continued operation of kokanee migration barrier and liberal harvest regulations. Establish large predator, such as fall chinook. Discontinue stocking of trout. Increase number of cutthroat rainbow trout planted. Put-and-grow with fingerling cutthroat. Increase catch rates to 0.5 fish/hr.
Bull trout Lake	/900	coldwater	yield	rainbow, brook trout, bull trout, kokanee	hatchery/wild	general	general	Put-and-take with catchable rainbow trout. Introduce large predator, such as fall chinook, to control brook trout numbers. Provide catch rates of at least 0.5 fish/hr.

Drainage: Payette River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Alpine Lakes	/1386	coldwater	yield	rainbow, cutthroat, greyling, golden trout, brook trout, brown trout	hatchery/wild	general	general	Put-and-grow with fingerling salmonids to provide a variety of species in backcountry areas. Stock most lakes on a three-year rotation. Provide catch rates of at least 0.5 fish/hr.
Cascade Reservoir	/28300	warmwater	yield	perch, bullhead	wild	year-round	general	Maintain catch rate of 1.0-2.0 fish/hr. for yellow perch greater than 8".
		coldwater	yield	coho, rainbow, kokanee, brown trout, chinook	hatchery	year-round	special	Put-and-grow for coho, kokanee, rainbow, chinook and brown trout to maintain catch rate of 0.5 fish/hr. Improve tributary access for spawning wild rainbow, including laddering Gold Fork diversion and providing access through road culverts on selected westside tributaries. Protect NFPR spawning run by kokanee closure regulation.
Little Payette Lake	/1450	coldwater	yield	rainbow, fall chinook, kokanee	hatchery	year-round	general	Put-and-take rainbow to maintain 0.5 fish/hr. Reduce kokanee numbers and increase average size of adults. Eradicate to eliminate nongame fish. Build migration block.
Upper Payette Lake	/400	coldwater	yield	rainbow, brook trout	hatchery/wild	general	general	Put-and-take rainbow fishery; maintain wild brook trout population.
Payette Lake	/5337	coldwater	yield	rainbow, kokanee, lake trout	hatchery/wild	year-round	general	Put-and-take rainbow. Maintain kokanee at present population density. Protect adults during spawning. Put-and-grow lake trout with fingerlings stocked annually.

BOISE RIVER





vicinity map

21. 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'. It flows in a westerly direction for about 200 miles before emptying into the Snake River near Parma at an elevation of 2,100'. 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, and one large off-stream impoundment, Lake Lowell. The four large reservoirs have a combined storage capacity of 2,276,940 acre-feet of water. The Boise River reservoirs supply water storage for flood control, irrigation, 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 and cutthroat occur in some tributary streams. Due to the heavy angling pressure exerted on these streams, catchable-size hatchery rainbow trout supplement wild populations in all accessible streams except the South Fork Boise between Arrowrock Reservoir and Anderson Ranch Dam.

The South Fork Boise River between Arrowrock Reservoir and Anderson Ranch Dam provides the only designated quality trout stream 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 and tackle restrictions.

In 1978, anglers caught an estimated 19,150 rainbow trout and released 18,059 (94 percent).

Popular reservoir fishing within the Boise River exists at Lake Lowell, Lucky Peak, Arrowrock, Anderson Ranch and Little Camas. The Lake Lowell fishery consists primarily of largemouth bass, smallmouth bass, yellow perch, black crappie, bullhead catfish 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.

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. At Anderson Ranch Reservoir, one of the more popular kokanee fisheries in southern Idaho, anglers harvested an estimated 40,000+ kokanee in 1979. 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.

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. Problems and Programs

(1) **PROBLEM** - The city of Boise and surrounding communities have grown at an extremely rapid rate and will continue to do so. As a result, land values within the Boise River flood plain have increased tremendously. New home construction, river crossings, greenbelt facilities and channel alterations threaten to remove existing riparian vegetation and will cause further loss of fishery habitat and fisherman access.

PROGRAM - Support the city of Boise and provide technical assistance for development of a Boise River Management Plan. Encourage other city and county governments to adopt or develop a similar plan to protect Boise River riparian values, fish habitat, wildlife habitat and provide long-term river stability.

(2) **PROBLEM** - During the warm summer months aquatic vegetation in many small ponds renders them unfishable.

PROGRAM - Dredge and reshape ponds to reduce buildup of rooted aquatic vegetation. Use chemical control of aquatic vegetation where dredging is not practical.

(3) **PROBLEM** - Proposed logging operations in portions of the drainage may jeopardize wild trout populations and habitat.

PROGRAM - Continue to work with USFS on various logging proposals to maintain full fishery habitat potential. Continue to work annually with USFS personnel on the long-term stream sediment monitoring studies in the upper South Fork Boise.

(4) **PROBLEM** - Smallmouth bass were recently illegally introduced into Little Camas Reservoir and could jeopardize the rainbow trout fishery.

PROGRAM - Closely monitor fish populations to determine the effect of smallmouth bass on the rainbow trout fishery. If it is determined a serious problem, eradication of the impoundment during a very low drawdown year will be considered.

(5) **PROBLEM** - Due to its close proximity to the city of Boise, Indian Creek Reservoir could be subject to a large increase in fishing pressure. As a result, the largemouth bass population in Indian Creek Reservoir could be severely reduced.

PROGRAM - Evaluate current regulations to restrict harvest of largemouth bass. Adjust regulations by 1987, if needed. Continue to provide a high yield fishery for black crappie and bluegill.

(6) **PROBLEM** - Populations of kokanee in Anderson Ranch have been subject to wide fluctuations in recent years.

PROGRAM - Conduct research on the reservoir aimed at maintaining the optimum numbers of kokanee in the impoundment.

(7) **PROBLEM** - There is a high demand for a better rainbow trout fishery in the Anderson Ranch Reservoir.

PROGRAM - Experimentally stock different genetic strains of fingerling rainbow to determine which strain does best in the reservoir.

(8) **PROBLEM** - Due to man-caused siltation creating a lack of spawning and rearing habitat in Mores Creek and Grimes Creek, those streams cannot contribute the required recruitment of juvenile kokanee to Lucky Peak Reservoir to support a fishery.

PROGRAM - Continue hatchery stocking of kokanee into Lucky Peak Reservoir. Construct a kokanee trap and egg taking station on Mores Creek for placement of kokanee back into Lucky Peak Reservoir.

(9) **PROBLEM** - The Boise River between Barber Dam and Star Diversion lacks adequate spawning and rearing habitat for rainbow trout and brown trout due to channelization and loss of riparian habitat.

PROGRAM - Place habitat improvement structure at selected sites in the Boise River to increase spawning and rearing habitat. This program will require close coordination with the U.S. Army Corps of Engineers, IDWR and the city of Boise.

(10) **PROBLEM** - We lack current management data to evaluate stocking rates, stocking densities and return to the creel of hatchery rainbow trout planted in the Boise River.

PROGRAM - Conduct survey of the Boise River to determine recreational hours of use, harvest of rainbow trout and brown trout and percent of hatchery-planted fish returned to the creel.

(11) **PROBLEM** - Small ponds within the Boise Valley are subject to extremely intense fishing pressure and are subject to overharvest of quality size largemouth bass from the population.

PROGRAM - Restrict harvest of largemouth bass in small urban ponds by implementing regulations to limit the number and size of fish in the creel.

(12) **PROBLEM** - From mid-April to mid-October, the Boise River from Star Diversion to the mouth will not support coldwater species due to poor water quality as a result of irrigation runoff returns.

PROGRAM - Continue efforts to improve lower Boise River water quality. Manage primarily for warmwater species. Stock catchable rainbow trout in early spring or late fall when water quality permits.

(13) **PROBLEM** - High sustained water releases from Lucky Peak Dam during winters with above normal snow pack displaces resident whitefish and has a negative impact on survival of whitefish eggs and juveniles.

PROGRAM - No foreseeable short-term solution. Work with the BOR and CE to obtain better runoff forecasts to remove the large peaks in flows. Investigate feasibility of providing instream habitat improvement structure for whitefish and trout.

(14) **PROBLEM** - Status and potential for wild trout management in the South Fork Boise River above Anderson Ranch, Middle Fork

Boise River and North Fork Boise River is unknown due to lack of inventory data.

PROGRAM - Conduct inventory of wild trout population structure, densities, age-growth and spawning. Develop management plan for enhancement of the wild trout.

C. Management Direction

Drainage: Boise River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
From mouth to Star	34/610	warmwater	yield	largemouth bass	wild	year-round	general	Maintain or improve warmwater fishery.
				smallmouth bass, channel catfish, crappie, bluegill,				Put-and-take with catchable rainbow trout in late fall only.
		coldwater		rainbow	wild/hatchery			
				whitefish	wild			
Star to Lucky Peak	29/508	coldwater	yield	rainbow, whitefish, brown trout	hatchery/wild	year-round	general	Put-and-take with catchable rainbow trout. Increase number, size and frequency of plantings. Population maintenance with fingerling brown trout. Supplement catchable rainbow plants with excess steelhead or hatchery broodstock as available. Provide catch rates of at least 0.5 fish/hr.
Boise River Drains	92/70	coldwater	yield	rainbow, brown trout	hatchery/wild	year-round	general	Put-and-take with catchable rainbow trout. Population maintenance fingerling brown trout. Increase number of catchable rainbow stocked in Wilson Drain. Provide catch rates of at least 0.5 fish/hr.
S.F. Boise River from Arrowrock Reservoir to Anderson Ranch Dam	28/504	coldwater	quality	rainbow, whitefish, bull trout	wild	general	special	Quality trout with restrictive regulations. Adjust regulation to maintain catch rates of at least 1.5 fish/hr. Provide winter whitefish season.

Drainage: Boise River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
S.F. Boise tributaries below Anderson Ranch Dam	77/71	coldwater	yield	rainbow, bull trout, brook trout	wild/hatchery	general	general	Supplemental put-and-take with catchable rainbow trout in roaded stream sections. Provide protection for spawning rainbow.
M.F. Boise River and tributaries, including N.F. from mouth to Sawtooth Wilderness boundary	288/1164	coldwater	yield	rainbow, whitefish, bull trout, brook trout	hatchery/wild	general	general	Supplemental put-and-take with catchable rainbow trout. Provide catch rates of at least 0.5 fish/hr. Provide winter whitefish season.
M.F. Boise and tributaries, including N.F. Boise, Sawtooth wilderness boundary upstream	112/228	coldwater	yield	rainbow, bull trout, whitefish	wild	general	general	Racial preservation. Access limited by wilderness boundary.
Lake Lowell	/10000	warmwater	yield	largemouth bass, smallmouth bass, crappie, bullhead, perch, channel catfish	wild	year-round	general	Improve black bass population structure with restrictive regulation. Establish artificial habitat. Maintain restrictive boat regulation to protect nesting waterfowl. Promote commercial fishery for carp.
Lucky Peak Reservoir	/2850	warmwater coldwater	yield	kokanee rainbow, whitefish, bull trout, smallmouth bass	hatchery/wild	year-round	general	Put-and-grow with catchable rainbow trout. Population maintenance with fingerling/fry kokanee. Increase frequency of catchable plants.

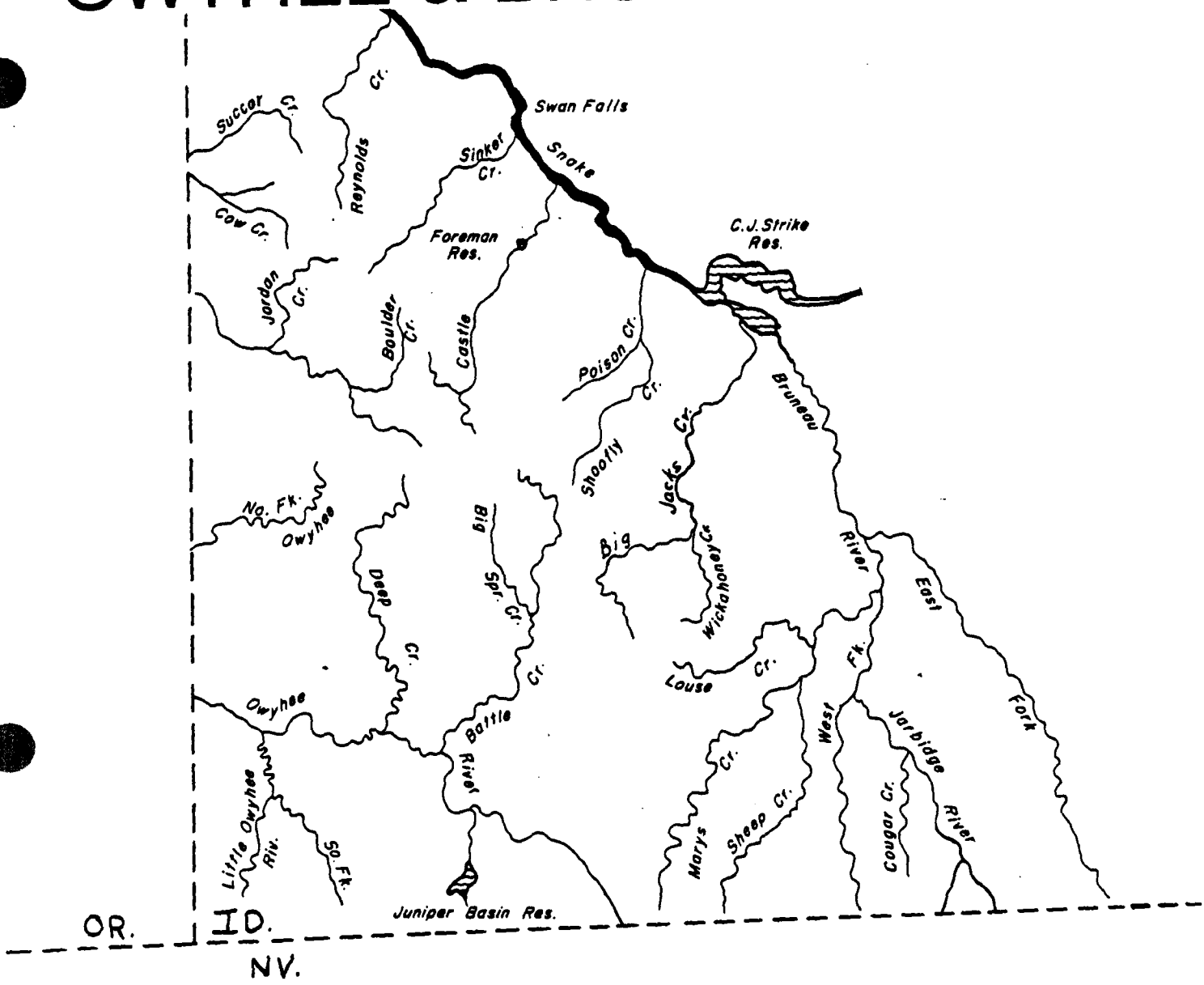
Drainage: Boise River

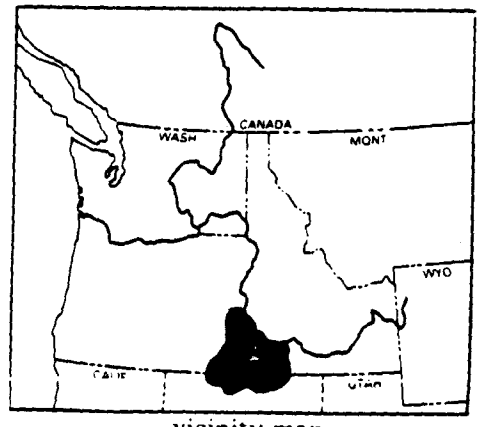
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Arrowrock Reservoir	/3100	coldwater	yield	rainbow, kokanee, bull trout	hatchery/wild	year-round	general	Put-and-take with catchable rainbow trout. Establish kokanee and smallmouth bass. Provide catch of at least 0.5 fish/hr.
Duff Lane Pond	/3	warmwater	yield	largemouth bass, bluegill, channel catfish, bullhead catfish	wild	year-round	general	Improve population structure of largemouth bass. Increase fishability with aquatic vegetation control. Improve catch rates to at least 1.0 fish/hr.
Veterans State Park Pond	/4	warmwater	yield	largemouth bass	wild/hatchery	year-round	general	Improve population structure of largemouth bass. Put-and-take with catchable rainbow trout. Stock in early spring only.
		coldwater		bluegill, channel catfish, bullhead catfish, rainbow				
Caldwell Ponds	/9	warmwater	yield	largemouth bass	wild/hatchery	year-round	general	Increase emphasis on management of warmwater species. Improve population structure of largemouth bass. Provide yield fishery for bluegill sunfish, bullhead catfish, and channel catfish. Put-end-take with catchable rainbow trout.
		coldwater		bluegill, bullhead catfish, channel catfish, rainbow				

Drainage: Boise River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Riverside Pond	/2	warmwater	yield	largemouth bass	wild/hatchery	year-round	general	Place habitat improvement structure for rearing of largemouth bass. Put-and-take with catchable rainbow trout in early spring only.
		coldwater		bluegill, rainbow				
Lake Harbor Pond (Private)	/10	warmwater	yield	largemouth bass, bluegill, channel catfish, bullhead catfish	wild	year-round	special	Maintain stable bass populations with regulations. Allow a large number of bass to reach 15 inches. Yield fishery for bluegill, channel catfish and bullhead catfish.

OWYHEE & BRUNEAU RIVERS





vicinity map

22. OWYHEE RIVER DRAINAGE, BRUNEAU RIVER, 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 river and its tributaries flow through deeply incised canyons. Elevations in the Owyhee drainage range from 8,100' in the Owyhee Mountains to 2,400' at the Snake River. The Owyhee River has an annual average discharge of 661,500 acre-feet of water at the Oregon/Idaho border.

The entire Owyhee River drainage contains excellent populations of redband trout. A BLM 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.

No cutthroat are present in the Bruneau River drainage, but bull trout and rainbow are found in good numbers. Also, populations of redband trout, which is a unique stock of fish, are found in the Bruneau River and some tributaries (above the mouth of the Jarbidge River), including Big Jacks and Little Jacks creeks. From the mouth of Bruneau upstream to the hot springs, the water quality is not suitable to support coldwater species.

B. Problems and Programs

(1) **PROBLEM** - Over-utilization of riparian vegetation by livestock grazing has severely reduced stream cover and stream bank stability and has increased sedimentation to the streams.

PROGRAM - Support efforts by BLM to protect riparian vegetation. Work with area landowners to reduce impacts to the stream by livestock.

(2) **PROBLEM** - Mining activity on Jordan Creek has removed riparian vegetation and has increased sedimentation of the stream.

PROGRAM - Work with IDL and IDWR to reduce impacts of mining operations.

(3) **PROBLEM** - Private landowners control access to many reservoirs.

PROGRAM - Work with area landowners to obtain access.

(4) **PROBLEM** - Past land abuses have caused a loss of fishery habitat.

PROGRAM - Support and cooperate with BLM efforts to improve fish habitat.

(5) **PROBLEM** - From the mouth of the Bruneau River upstream to the hot springs, water quality will not permit distribution of salmonids.

PROGRAM - No solution is available at this time. Investigate feasibility of introducing fish species into this area which will have no impact on the redband trout upstream.

(6) **PROBLEM** - Many tributaries to the Bruneau River which support redband trout have intermittent flows during the summer, and the species is sensitive to habitat degradation.

PROGRAM - Work with BLM and area landowners to prevent any degradation of stream or riparian habitat.

(7) **PROBLEM** - Hatchery stocks of rainbow trout do not adapt well to the harsh environmental conditions in the Bruneau River drainage.

PROGRAM - No hatchery rainbow trout will be stocked in the Bruneau River drainage except in the Jarbidge River. Develop a source for obtaining eggs from wild stocks of redband trout.

C. Management Direction

Drainage: Owyhee River

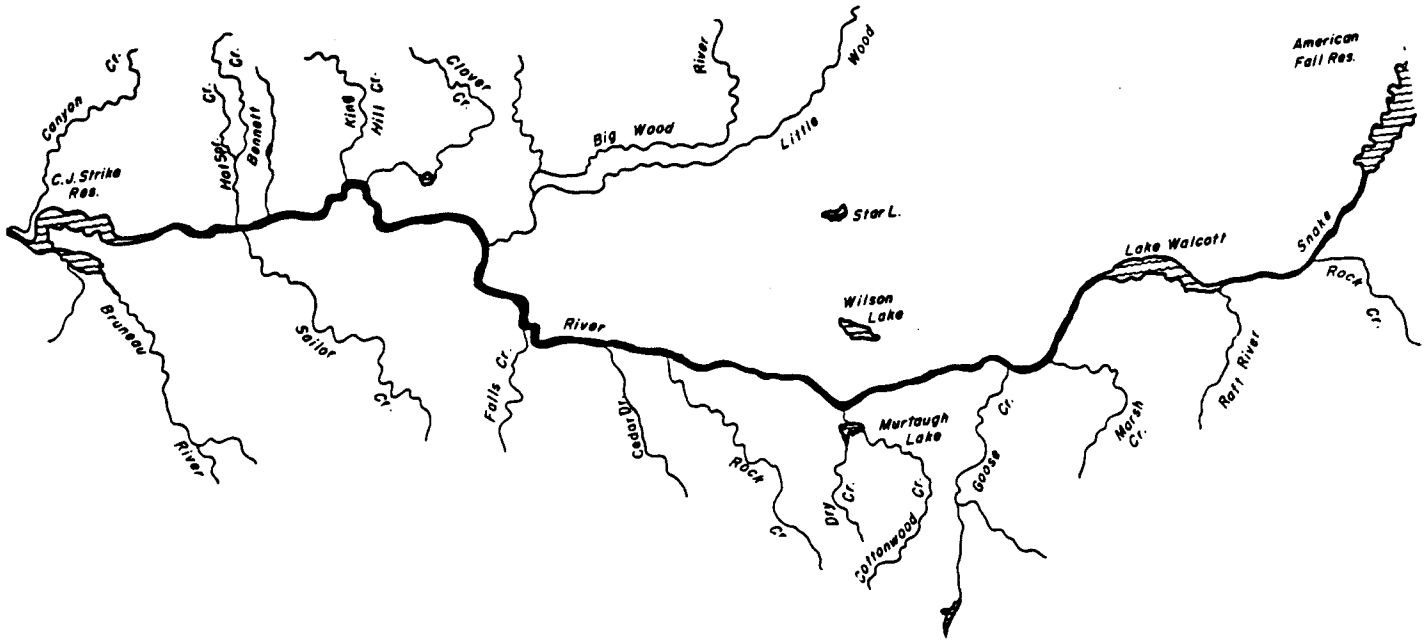
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Owyhee River and tributaries except Jordan Creek, including southside tributaries to Snake River above mouth of Boise River	495/815	coldwater	preservation/ yield	redband	wild	general	general	Racial preservtion of redband trout harvest. Harvest limited by access.
Jordan Creek	35/53	coldwater	yield	rainbow	hatchery	general	general	Supplemental put-and-take.
Graveyard Reservoir	/213	coldwater	yield	rainbow	hatchery	year-round	general	Put-and-take.
Succor Creek Reservoir (Texas Basin)	/180	coldwater	preservation/ yield	redband	wild	general	general	Racial preservation of redband trout. Implement special regulation to protect spawners if needed.
Sinker Creek Reservoir (Halet)	/127	coldwater	preservation/ yield	redband	wild	general	general	Racial preservtion of redband trout. Implement special regulation to protect spawners if needed.

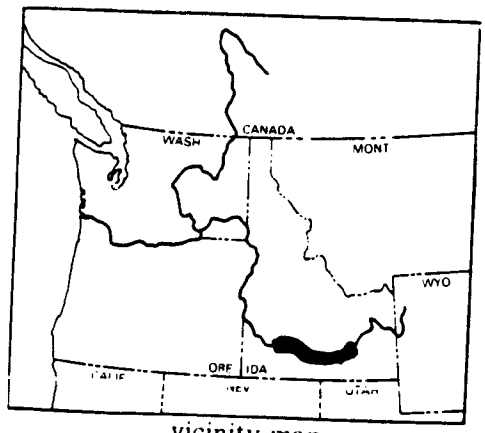
Drainage: Bruneau River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Bruneau River from backwaters of C.J. Strike Reservoir to hot springs	10/61	warmwater	yield	bullhead, channel catfish, largemouth bass	wild	year-round	general	Manage for yield fishery. Establish new stocks which will tolerate poor water quality.
Bruneau River, from hot springs to Idaho/Nevada border	54/224	coldwater	preservation/ yield	redband	wild	general	general	Emphasize racial preservation for redband trout. Access limited by rough terrain.
Jacks Creek and tributaries	60/91	coldwater	preservation/ yield	redband	wild	general	general	Emphasize racial preservation for redband trout. Access limited by rough terrain. If redband population becomes threatened, reduced limit regulation will be implemented.
E.F. Bruneau River	45/183	coldwater	quality/yield	rainbow, brook trout	wild	general	general	Manage as wild trout fishery. Bulk of stream is very inaccessible. Maintain catch rate of 1.0 fish/hr.
Tributaries to E.F. Bruneau, including Big Flat, Three and Deadwood creeks	49/59	coldwater	yield	brook trout, whitefish, rainbow	hatchery/wild	general	general	Manage as yield fishery. Maintain catch rate of 0.7 fish/hr.
Jarbridge River, including E.F. and W.F. to Idaho/Nevada border	42/113	coldwater	yield	rainbow, bull trout, whitefish	hatchery/wild wild	year-round	general	Manage as yield fishery. Monitor bull trout population to determine whether more restrictive bag limits are necessary. Maintain catch rate of 0.5 fish/hr.

SNAKE RIVER

C. J. Strike to Lake Walcott





vicinity map

23. MAIN SNAKE RIVER - C.J. STRIKE RESERVOIR TO LAKE WALCOTT

A. Overview

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 eleven of the sixty-five springs in the United States which have an average discharge exceeding 100 cfs. 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-cutthroat hybrids. The cutthroat and rainbow-cutthroat hybrids are found mainly in the area between Milner Dam and Twin Falls Dam. Many of these hybrid trout attain large sizes, some reaching weights of over six 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 and the rainbow-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 six reservoirs which are suitable in varying degrees for trout, Bliss, Upper and Lower Salmon Falls, Twin Falls, Milner and Lake Walcott. Lower Salmon Falls Reservoir in the Bell Rapids area produced an excellent rainbow fishery in the late 1970s, but the fishery declined sharply between 1982 and 1985. Many of the smaller lakes, ponds and reservoirs close to the Snake River are also highly suitable for rainbow.

White sturgeon are found in varying numbers throughout the Snake River from Shoshone Falls downstream. The best sturgeon population, however, occurs in the river section between Bliss Dam and King Hill, where they are successfully reproducing. Recent studies have shown sturgeon grow at a rapid rate in this area with some reaching lengths of over 9'. Angler interest in this species is high and they are regarded as exceptionally desirable, even though the fishery is on a catch-and-release basis.

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, 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. 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 cat was caught in May of 1982. Bullhead angling is excellent in Wilson Lake where the fish reach sizes over 2 pounds. The state record bullhead of 2 pounds 12 ounces was caught from Wilson Lake in May of 1982. Good populations of largemouth and smallmouth bass are found in the Snake River, and some waters in the Hagerman area produce good angling for high-quality bluegill.

Numerous major hydropower facilities, some of which would seriously jeopardize the existing trout and sturgeon fisheries, have been proposed on the main Snake River in this area.

B. Problems and Programs

(1) **PROBLEM** - Many of the springs along this section of the Snake River have been developed for commercial trout production.

PROGRAM - Strong efforts will continue to preserve undeveloped natural springs with significant fishery values.

(2) **PROBLEM** - Siltation from irrigation return water degrades the water quality of lower Vinyard Creek and silts over spawning gravel used by cutthroat and rainbow-cutthroat hybrid trout.

PROGRAM - Continue to work with SCS, SCD, BLM and private landowners to eliminate the siltation problem from irrigation waste water in lower Vinyard Creek.

(3) **PROBLEM** - Periodic proposals have been made by local entities to construct access trails into Vinyard Lake and Vinyard Creek. This would be highly detrimental to cutthroat and rainbow-cutthroat spawning success in the stream.

PROGRAM - Work with BLM and local government in continuing to suppress plans for access into Vinyard Lake and Vinyard Creek.

(4) **PROBLEM** - Large numbers of proposed small hydropower plants may jeopardize the fisheries resource of some tributary streams to the Snake River.

PROGRAM - Continue to work with appropriate state and federal agencies and private individuals to adequately protect the fisheries and wildlife resources through stream sections which may be affected by hydropower facilities. Special emphasis will be given to assure

satisfactory screening, upstream fish passage and sufficient instream maintenance flows.

(5) **PROBLEM** - Proposals for numerous hydropower projects in the Snake River upstream from the Loveridge Bridge would inundate some fishery habitat and convert good river fishery habitat into marginal reservoir habitat for game species.

PROGRAM - The Department will oppose any project design that would inundate or dewater any significant river habitat of white sturgeon or salmonid populations.

(6) **PROBLEM** - There is a great demand for more warmwater fishing locations in the drainage, especially near the more heavily-populated areas.

PROGRAM - Determine the feasibility of construction of ponds for warmwater fish species in the Hagerman Valley area.

(7) **PROBLEM** - There is a great demand for more warmwater fish species in Milner and other reservoirs on the Snake River and in areas near the Snake River.

PROGRAM - Plantings of adult and/or fingerling smallmouth bass will be made in Milner and Bliss reservoirs. Channel and/or blue catfish, or possibly flathead catfish, will periodically be stocked in Milner as needed. Yellow perch, bluegill and possibly other suitable species of warmwater fish will be stocked in Milner Reservoir as available. Substantial numbers of channel and/or blue catfish will be stocked in Emerald, Bray, Wilson, Murtaugh and Sand Dunes lakes and some other suitable impoundments.

(8) **PROBLEM** - Water levels in the Sand Dunes Lakes have dropped drastically since 1981 and resulted in total loss of fishery in 1986 from low oxygen levels when ice covered.

PROGRAM - Undertake pumping additional water to restore lakes to former water levels in cooperation with Department of Parks and Recreation.

(9) **PROBLEM** - The formerly excellent rainbow trout fishery in Salmon Falls Creek Reservoir in the Bell Rapids area has declined drastically the past few years.

PROGRAM - Attempt to determine the reasons for the decline of this fishery and build the fishery back up to its former level. Assess the existing trout fishery and increase stockings of catchable rainbow if studies so dictate.

(10) **PROBLEM** - A proposal for a dam at the Dike site which is approximately 7.5 river miles downstream from the Bliss Dam would inundate some of the best remaining sturgeon habitat in southern Idaho.

PROGRAM - The Department will strongly oppose construction of any dam at this site or within this stretch of the Snake River.

(11) **PROBLEM** - Developments may threaten populations of Shoshone Sculpin found in some Snake River Plain Aquifer springs draining into the Snake River.

PROGRAM - Protect the necessary habitat to ensure the survival of this species.

C. Management Direction

Drainage: Main Snake River and minor tributaries - C.J. Strike Reservoir to Lake Walcott

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Snake River from Loveridge Bridge to King Hill Bridge	26.7/3380	coldwater	trophy	sturgeon, rainbow	wild/hatchery	year-round	general	Maintain catch-and-release regulation on sturgeon unless studies indicate otherwise. Emphasize high quality sturgeon fishery and habitat protection.
	6.6/848	warmwater	yield	channel catfish, smallmouth bass, largemouth bass, perch	wild/ hatchery	year-round	general	Manage as yield fishery.
King Hill Bridge to Bliss Dam	13.3/1693	coldwater	trophy	sturgeon, rainbow, brown trout	wild/hatchery	year-round	general	Maintain catch-and-release regulation on sturgeon unless studies indicate otherwise. Emphasize high quality sturgeon fishery and protection of existing sturgeon habitat.
	0.7/89	warmwater	yield	channel catfish, smallmouth bass, perch	wild/ hatchery	year-round	general	Manage as yield fishery.
Backwaters of Bliss Pool to Lower Salmon Falls Dam	6.4/814	coldwater	trophy	sturgeon, rainbow, brown trout	wild/hatchery	year-round	general	Maintain catch-and-release regulation on sturgeon unless studies indicate otherwise.
	1.6/204	warmwater	yield	channel catfish, perch, smallmouth bass, largemouth bass	wild/ hatchery	year-round	general	Continue stockings of smallmouth bass in Bliss Pool and river above. Manage as yield fishery.

Drainage: Main Snake River and minor tributaries - C.J. Strike Reservoir to Lake Walcott

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Backwaters of Upper Salmon Falls Dam to Shoshone Falls	27.4/3482	coldwater	yield	sturgeon, rainbow, brown trout, whitefish	wild/hatchery	year-round	general	Maintain catch-and-release regulation on sturgeon unless studies indicate otherwise. Maintain Dolman Rapids as large-size trout water. Strongly oppose proposed hydropower projects which may jeopardize fisheries.
	3/387	warmwater	yield	channel catfish, largemouth bass, smallmouth bass, perch	wild/ hatchery	year-round	general	Manage as yield fishery.
Backwaters of Shoshone Falls Dam to Twin Falls Dam	1.0/109	coldwater	yield	rainbow, cutthroat	wild	year-round	general	Manage as a yield fishery with approximate catch rate of 0.5 fish/hr.
Backwaters of Twin Falls Dam to Murtaugh Bridge	11.6/422	coldwater	preservation	cutthroat, rbXct hybrid trout, rainbow	wild	year-round	general	No hatchery stockings will be made in this river section. Emphasize protection of native cutthroat and rainbow-cutthroat hybrid populations
Murtaugh Bridge to Milner Dam	8.5/309	coldwater	yield	rainbow	wild/hatchery	year-round	general	Manage as yield fishery with approximate catch rate of 0.5 fish/hr.
Backwaters of Milner Dam to Minidoka Dam	5.1/396	coldwater	yield	rainbow, brown trout	wild/hatchery	year-round	general	Manage as yield trout fishery. Substantially increase annual stockings of catchable and fingerling rainbow in Lake Walcott to improve fishery and to compensate for proposed altered flow regimes at dam. Cooperate with BR in establishing and maintaining suitable fishery flows through spillway area of dam.

Drainage: Main Snake River and minor tributaries - C.J. Strike Reservoir to Lake Walcott

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Bliss Reservoir	/254	warmwater	yield	largemouth bass, smallmouth bass, channel catfish, crappie	wild/ hatchery	year-round	general	Continue stocking of smallmouth bass in reservoir. Investigate feasibility of other warmwater species in reservoir.
Lower Salmon Falls Reservoir	/504	coldwater	yield	rainbow	hatchery/wild	year-round	general	Attempt to build the rainbow trout fishery in the Bell Rapids area to its former high quality and increase number of trout stocked if studies so indicate. Continue annual rainbow stockings in Bell Rapids area.
	/336	warmwater	yield	largemouth bass, channel catfish, crappie	wild/ hatchery	year-round	general	Conduct stockings of adult and/or fry or fingerling largemouth bass in reservoir to build up self-sustaining populations of this species. Study feasibility of black crappie introductions and stock species if studies so indicate.
Upper Salmon Falls Reservoir	/648	coldwater	yield	rainbow	wild	year-round	general	Manage as yield fishery with catch rate of 0.4 fish/hr.
		warmwater	yield	largemouth bass, bluegill, channel catfish	wild/ hatchery	year-round	general	Manage as yield fishery.
Shoshone Falls Reservoir	/60	coldwater	yield	rainbow	wild	year-round	general	Manage as yield fishery. No hatchery trout will be stocked.
Twin Falls Reservoir	/96	coldwater	yield	cutthroat, rbXct hybrid trout, rainbow	wild	year-round	general	Emphasize protection of native cutthroat and rainbow x cutthroat hybrid populations. Oppose any project which would increase size of reservoir.

Drainage: Main Snake River and minor tributaries - C.J. Strike Reservoir to Lake Walcott

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Milner Reservoir	/3000	warmwater	yield	smallmouth bass, largemouth bass	hatchery	year-round	general	Emphasize establishment of self-sustaining warmwater fish species. Increase stockings of smallmouth bass. Channel or blue and possibly flathead, catfish, yellow perch, bluegill, and possibly other suitable species of warmwater fish will be stocked as available. Improve warmwater fish habitat by placing cover structures on reservoir bottom.
Lake Walcott	/10665	coldwater	yield	rainbow, kokanee	hatchery/wild	year-round	general	Stock both fingerling and catchable rainbow on an annual basis.
	/1185	warmwater	yield	perch, bullhead	wild/hatchery	year-round	general	Closely monitor largemouth bass populations and adjust management direction to conform with findings. No fish species will be stocked which could seriously jeopardize prime trout fishery below Minidoka Dam.
Scott Pond	/1	coldwater	yield	rainbow, brown trout	hatchery	year-round	general	Plant catchable rainbow on an annual basis. Make periodic plants of brown trout fry or fingerlings. Enlarge existing pond area for trout if funds are available.
Bray Lake	/24	warmwater	yield	channel catfish, bluegill, perch	hatchery/wild	year-round	general	Reestablish catfish populations by continued stockings of channel and/or blue catfish. Attempt to establish bluegill populations. Improve warmwater fish habitat by placing cover structures on reservoir bottom.

Drainage: Main Snake River and minor tributaries - C.J. Strike Reservoir to Lake Walcott

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Pioneer (Clover Creek) Reservoir	/220	warmwater	yield	largemouth bass, bluegill	wild	year-round	general	Consider eradication of reservoir and portions of tributaries if drawn to minimum pool to eliminate extremely high carp populations.
Murtaugh Reservoir	/827	warmwater	yield	channel catfish, perch, bullhead	wild/ hatchery	year-round	general	Stock channel and/or blue catfish periodically in reservoir.
Wilson Lake	/484	warmwater	yield	bullhead, perch, channel catfish, largemouth bass	wild/hatchery	year-round	general	Stock channel and/or blue catfish in lake periodically. Continue to emphasize high quality bullhead angling in the lake.
Emerald Lake	/30	coldwater	yield	rainbow	hatchery	year-round	general	Stock regularly with catchable rainbow as needed to maintain catch rate of approximately 0.5 fish/hr.
		warmwater	yield	channel catfish, largemouth bass, bluegill	hatchery/wild	year-round	general	Continue channel and/or blue catfish stocking to increase numbers and to alleviate pressure on rainbow trout. Place habitat structures on lake bottom to enhance channel catfish population. Stock smallmouth bass to provide species diversity and improve catch rates.
Blair Trail Division Reservoir	/15	coldwater	yield	rainbow	hatchery	general	general	Put-and-take fishery.
Morrow Reservoir	/60	warmwater	yield	largemouth bass, bluegill, bullhead	wild	year-round	general	Manage as yield fishery.

Drainage: Main Snake River and minor tributaries - C.J. Strike Reservoir to Lake Walcott

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Frank Oster Lakes effluent lagoon and Riley Creek impoundments	/18	coldwater	yield	rainbow	hatchery	special	general	Season will run 3/1-10/31 annually. No motors water. Maintain catch rate of 0.5 fish/hr. with catchable rainbow.
	/11.5	warmwater	yield	largemouth bass, bluegill	wild/ hatchery	special	general	Season will run 3/1-10/31 annually. No motors water.
Goose Pond (HWMA)	/0.5	warmwater		bass, bluegill	wild	closed	closed	Maintain as bass and bluegill rearing pond with closed season year-round.
All other lakes & ponds on Hagerman WMA	/35	coldwater	yield	rainbow	hatchery	special	general	Season will run from 7/1 to 10/31. No motors water. Continue dredging operation to improve habitat in cooperation with land management personnal. Maintain catch rate of approximately 0.5 fish/hr. Maintain July 1 opener.
	/35	warmwater	yield	largemouth bass, bluegill, bullhead	wild	special	general	Continue dredging operations to improve habitat. Improve bluegill spawning habitat. No motors water. Maintain July 1 opener to build up bass and bluegill populations unless studies indicate otherwise or protection is no longer needed.
Sand Dunes Lakes	/100	warmwater	yield	largemouth bass, bluegill, channel catfish	wild/ hatchery	year-round	general	Make periodic stockings of channel and/ or blue catfish to increase numbers. Undertake necessary means to restore lakes to former water levels in cooperation with State Parks Department.

Drainage: Main Snake River and minor tributaries - C.J. Strike Reservoir to Lake Walcott

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Billingsley Creek from mouth to Tupper Grade Crossing	5.5/13.3	coldwater	yield	rainbow, brown trout	wild	general	general	Continue annual stocking of brown trout fry. Oppose 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/hr.
Billingsley Creek from Tupper Grade Crossing to Vader Grade Crossing	2.5/6	coldwater	trophy	rainbow brown trout	wild	general	special	Fly fishing only. Manage as high-quality trophy fishery. Maintain catch rate of approximately 1.0 trout/hr.
Billingsley Creek from Vader Grade Crossing to headwaters.	1.0/2.4	coldwater	trophy	rainbow	wild	general	general	Do not stock brown trout fry in this stream section. Maintain catch rate of approximately 0.5 trout/hr.
Riley Creek, mouth to Riley Creek Falls	0.4/1.4	coldwater	yield	rainbow	hatchery/wild	year-round	general	Maintain as yield fishery with catch rate of 0.5 fish/hr. Maintain instream flow throughout stream section.
	0.1/0.4	warmwater	yield	largemouth bass, bluegill, bullhead	wild	year-round	general	Maintain instream flow throughout stream section.
Riley Creek, Riley Creek Falls to headwaters	2/7.3	coldwater	yield	rainbow	wild	year-round	general	Maintain instream maintenance flow. Maintain catch rate of 0.5 fish/hr.

Drainage: Main Snake River and minor tributaries - C.J. Strike Reservoir to Lake Walcott

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Box Canyon Creek, mouth to hatchery diversion structure	0.3/1.1	coldwater	yield	rainbow	wild	general	general	Preserve aesthetic qualities of stream. Maintain adequate instream maintenance flows for aquatic life and riparian habitats.
Box Canyon Springs, from hatchery diversion structure upstream to headwaters	0.9/3.3	coldwater	yield	rainbow	wild	general	general	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	0.2/0.2	coldwater	yield	rainbow, brown trout	wild	year-round	general	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 0.5 fish/hr. Maintain adequate instream flow in all stream channels. Preserve Shoshone sculpin.
All other aquifer springs in Gooding County	10/22	coldwater	yield	rainbow	hatchery/wild	year-round	general	Manage as yield fishery. Maintain catch rate of approximately 0.5 fish/hr. Preserve quality of undeveloped aquifer springs.

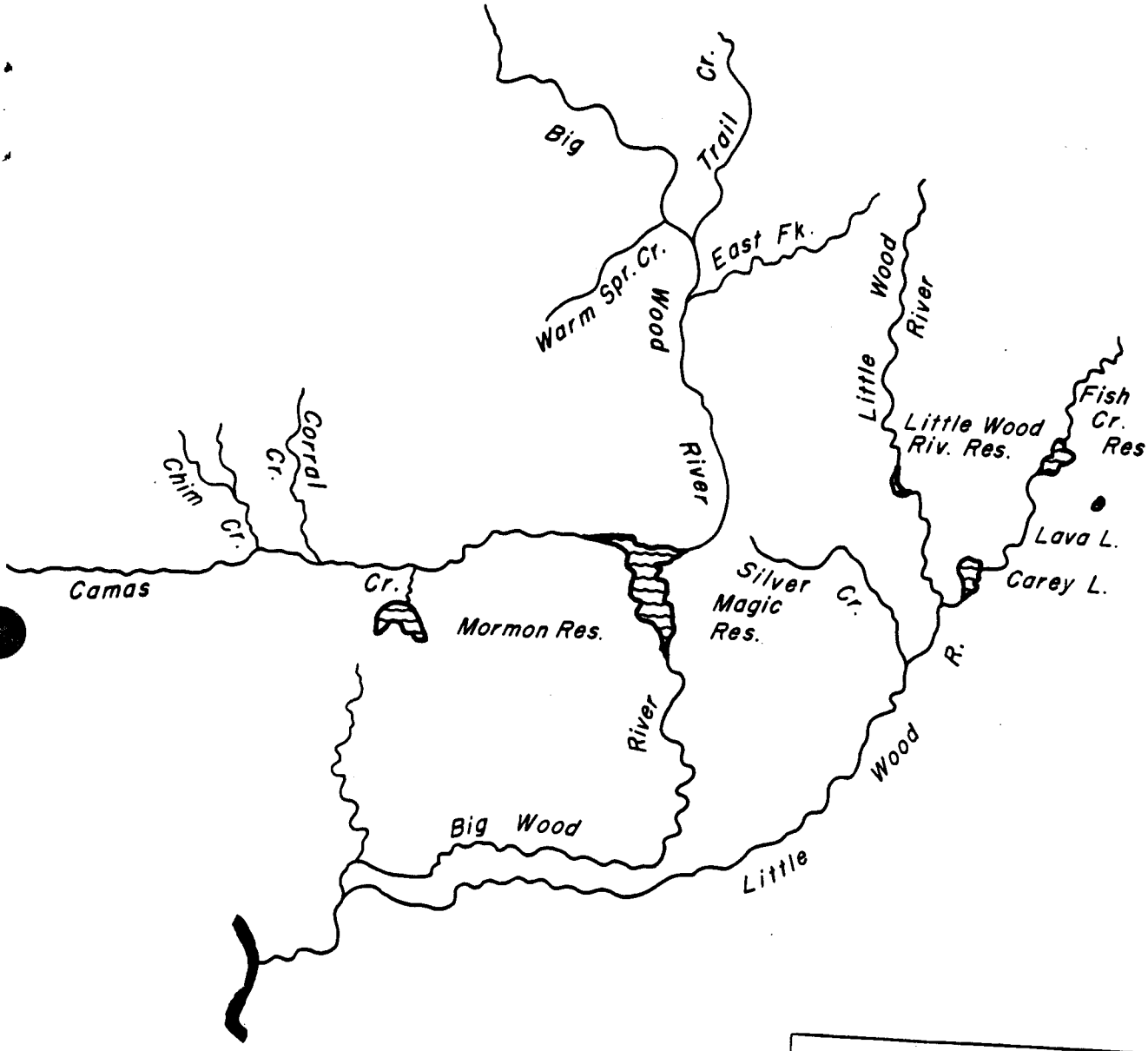
Drainage: Main Snake River and minor tributaries - C.J. Strike Reservoir to Lake Walcott

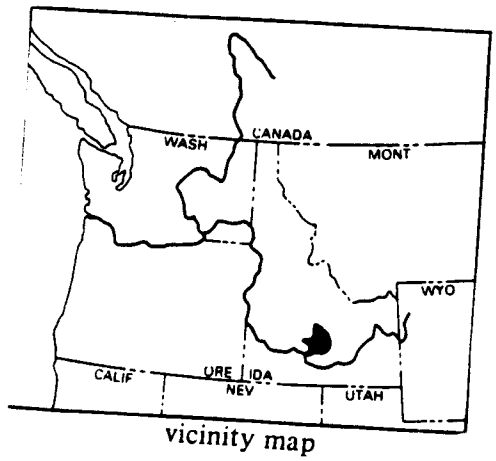
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Aquifer springs in Jerome County; Vinyard Creek	0.5/1.2	coldwater	preservation	rainbow, cutthroat, hybrid trout	wild	special	general	Preserve unique aesthetic qualities of area. Work with 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.
Scott property springs (Ellison's springs)	0.1/0.1	coldwater	yield	rainbow	hatchery	year-round	general	Manage as yield fishery.
Devil's Corral springs	1/2.4	coldwater	yield	rainbow	wild	year-round	general	Manage as yield fishery.
All other aquifer springs in Jerome County	0.2/0.1	coldwater	yield	rainbow	wild	general	general	Manage as yield fishery.
Rock Creek, from mouth to Twin Falls Highline Canal	21/38	coldwater	yield	rainbow, brown trout	hatchery/wild	year-round	general	Continue cooperation with IDHW, SCS and TFSCD on ongoing Rock Creek rural clean water project. Continue annual brown trout stockings. Assure adequate minimum instream flows and other environmental protection at proposed hydro sites. Maintain catch rate of 0.5 fish/hr.

Drainage: Main Snake River and minor tributaries - C.J. Strike Reservoir to Lake Walcott

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Rock Creek, from Twin Falls Highline Canal to headwaters	15/22	coldwater	yield	rainbow, brown trout	hatchery/wild	general	general	Continue cooperation on Rock Creek rural clean water project. Expand brown trout stockings upstream to below mouth of Fifth Fork. Maintain catch rate of approximately 0.5 fish/hr.
Cedar Draw Creek, from mouth to Twin Falls Highline Canal	12/18	coldwater	yield	rainbow	wild	year-round	general	Continue assistance with state and federal personnel on clean water project on stream. Maintain adequate minimum instream flows and other environmental protection at proposed hydro sites.
Cedar Draw Creek, from Highline Canal to headwaters	2/3	coldwater	yield	rainbow	wild	general	general	Continue assistance on ongoing clean water project.
Mud Creek	8/12	coldwater	yield	rainbow	wild	general	general	Maintain adequate minimum instream flows.
Deep Creek, from Twin Falls Highline Canal to headwaters	16/39	coldwater	yield	rainbow	wild	general	general	Manage as yield fishery. Maintain satisfactory instream flow past hydro sites.
All other streams in drainage	168/142	coldwater	yield	rainbow	wild/hatchery	general	general	Manage for yield fishery.
	28/25	warmwater	yield	smallmouth bass, largemouth bass, bluegill	wild	general	general	Manage for yield fishery.

BIG WOOD RIVER





vicinity map

24. 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. Flows from the Wood 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 Reservoir, Little Wood River Reservoir, the confluence of the Big Wood and Little Wood rivers, the Little Wood near Shoshone, the Malad River Dam and Little Wood River Dam. Additional hydropower facilities are proposed for the Malad River near State Park and Magic Dam.

This drainage contains the most highly 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 very good 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 browns are now found in the reservoir proper. Browns were recently introduced to Mormon Reservoir, but it is too soon to determine if these stockings were successful. No significant populations of wild trout are found in any of the major lakes or 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 are found in the Big Wood River between Magic Dam and the Richfield Canal, Richfield Canal proper and Silver Creek and its main tributaries. 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 plants in portions of several heavily fished streams.

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. Magic

Reservoir is the largest reservoir and receives the highest angler pressure of any water in Region 4.

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 and cutthroat trout angling. The lakes are normally stocked by helicopter every third year under a cooperative agreement with USFS. Experimental grayling plants have been made in one alpine lake in the drainage and have done very well.

B. Problems and Programs

(1) **PROBLEM** - Stream channelization is a major problem in the drainage and continues to degrade trout habitat.

PROGRAM - Intensify efforts to prevent all possible damage to the stream environments. Work closely with IDWR and other appropriate agencies to prevent detrimental channelization.

(2) **PROBLEM** - Despite Blaine County Zoning Commission efforts, construction of homes on Big Wood River flood plain areas continues to be a problem resulting in stream channel alterations and loss of riparian habitat.

PROGRAM - Continue to work with Blaine County Zoning Commission and IDWR to prohibit any further construction of homes or other developments on Big Wood River drainage flood plain areas. Oppose activities which infringe on the flood plain and threaten fish habitat.

(3) **PROBLEM** - Land use practices, such as grazing and plowing very close to the stream banks, have contributed to excessive siltation in the Silver Creek drainage in recent years.

PROGRAM - Work with nature conservancy personnel, landowners and local governments in Silver Creek drainage to curtail land use practices which contribute excessive silt loads to the streams. Encourage fencing of riparian area where practical.

(4) **PROBLEM** - Lack of fish screens on many of the major irrigation diversions off the main Big Wood River and some other streams in the drainage causes significant losses of game fish.

PROGRAM - Investigate the feasibility of screening, and screen some of the major irrigation diversions off the Big Wood River and certain other streams in the drainage.

(5) **PROBLEM** - A need exists for stream habitat improvement on portions of the Big Wood River which have been severely altered by man.

PROGRAM - Investigate the feasibility of stream habitat improvement on certain severely altered sections of the Big Wood River. Determine the priority and value of this program and initiate if high.

(6) **PROBLEM** - Water depths in Carey Lake have lessened seriously during the past ten years resulting in a decrease of warmwater fish habitat.

PROGRAM - Additional portions of Carey Lake will be dredged as funding permits.

(7) **PROBLEM** - Shiner populations have increased sharply in Thorn Creek Reservoir in the past few years and may jeopardize trout growth and survival.

PROGRAM - Periodic stockings of brown trout, or possibly chinook salmon, will be made in Thorn Creek Reservoir to determine whether they are effective in reducing shiner populations.

(8) **PROBLEM** - There is a need for new trophy or high quality trout fisheries in the area to meet the increasing demands for waters of this nature.

PROGRAMS - (1) Examine the feasibility of developing the "Wildhorse" Reservoir site for a trophy trout water if sufficient federal funding becomes available. If this project is constructed, the reservoir will be placed under special restrictive regulations; (2) If determined feasible and if funds are available, cooperate with the Bureau of Land Management in a joint project to raise the height of Thorn Creek Dam to increase the size and depth of the reservoir and alleviate the winterkill problem. The goal would be to establish a trophy or very high quality trout fishery; and (3) Negotiate with the owners of Cow Creek Reservoir near Hill City to determine if a cooperative agreement can be made whereby the Department would repair or rebuild the existing dam if public access is allowed. If a satisfactory agreement can be reached, manage the water as a trophy trout water with restrictive regulations.

(9) **PROBLEM** - Hydropower developments on the main Big Wood River and tributaries could jeopardize existing fisheries, wildlife and aquatic values.

PROGRAM - Require site-specific instream flow studies on hydro projects proposed for the main Big Wood River and other streams in the drainage with significant fisheries and wildlife values. No flows, other than the optimum flow, will be recommended for streams with high fish and wildlife values. The cumulative effects of possible

large numbers of hydro projects on the drainage should be evaluated.

(10) **PROBLEM** - Loss of trout over the spillway at Magic Reservoir is a serious problem during years of high spill.

PROGRAM - Negotiate with officials of the Big Wood River Canal Company and proposed hydroelectric developers at Magic Dam for satisfactory fish screens or other means to prevent high loss of trout over the spillway.

C. Management Direction

Drainage: Big Wood River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Big Wood River, from mouth to I-84 bridge	3/11	coldwater	yield	rainbow	hatchery/wild	general	general	Stock catchable rainbow as needed to supplement wild trout populations. Maintain catch rate of 0.5 fish/hr.
		warmwater	yield	smallmouth bass	wild	general	general	Mixed warmwater fishery.
Big Wood River, from I-84 bridge to confluence of Little Wood River	10/36	coldwater	yield	rainbow	wild	year-round	general	Yield fishery for limited wild trout population.
		warmwater	yield	smallmouth bass	wild	year-round	general	Maintain as mixed warmwater fishery.
Big Wood River, from confluence with Little Wood River upstream to Richfield Canal diversion	50/182	coldwater	yield	smallmouth bass	wild	year-round	general	Maintain wild trout fishery.
		warmwater	yield	smallmouth bass	wild	year-round	general	Maintain as smallmouth bass fishery.
Big Wood River, from Richfield Canal diversion upstream to Magic Dam	3/11	coldwater	trophy	rainbow, brown trout	wild	special	general	Trophy fishery for wild trout. Maintain catch rate of 0.5 fish/hr.
Big Wood River, from Magic Reservoir upstream to Glendale diversion	14/51	coldwater	yield	rainbow, brook trout, whitefish, brown trout	wild	special	general	Maintain limited wild trout population due to severe flow reductions during irrigation season.

Drainage: Big Wood River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Big Wood River, from Glendale diversion upstream to Hulen Meadows bridge	22/80	coldwater	yield	rainbow, brook trout, whitefish	hatchery/wild	special	general	Yield fishery for wild and hatchery trout and whitefish. Maintain catch rate of 0.5 trout/hr.
Big Wood River, from Hulen Meadows bridge upstream to mouth of North Fork	6/22	coldwater	quality	rainbow, brook trout, whitefish	wild	special	special	Wild trout water, catch-and-release. Winter whitefish season. Adjust management direction to conform with recommendations of new studies. Initiate evaluation of current management.
Big Wood River, from mouth of N.F. to headwaters	18/66	coldwater	yield	rainbow, brook trout, whitefish	hatchery/wild	special	general	Yield fishery for wild and hatchery trout and whitefish. Maintain catch rate of 0.5 fish/hr.
Richfield Canal	14/50	coldwater	trophy	rainbow	wild	year-round	general	Trophy trout fishery with catch rate of 0.2 fish/hr. Thin fish out periodically by electrofishing to maintain large size of fish.
Little Wood River, from mouth to Shoshone	19/46	warmwater	yield	smallmouth bass	wild	special	general	Maintain as smallmouth bass fishery with catch rate of 0.5 fish/hr.
Little Wood River, from Shoshone to diversion dam	17/41	coldwater	yield	rainbow, brown trout	wild	special	general	Manage as a wild rainbow and brown trout fishery.

Drainage: Big Wood River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Little Wood River, from Dietrich diversion dam to downstream boundary of "Bear Tracks" Williams State Recreation Area	10/24	coldwater	yield	rainbow, brown trout	wild	special	general	Yield brown trout and rainbow fishery with catch rate of 0.4 trout/hr. Make supplemental plantings of brown trout fry as needed. Continue to cooperate with BLM to improve stream and riparian habitat.
Little Wood River, through "Bear Tracks" Williams State Recreation Area	3/7	coldwater	quality	brown trout, rainbow	wild	special	special	Quality brown and rainbow trout fishery with catch rate of 0.7 fish/hr. Make supplemental plantings of brown trout fry as needed. Fly fishing only, catch-and-release basis as an access stipulation. Continue to cooperate with BLM to improve stream habitat.
Little Wood River, from upper boundary "Bear Tracks" Williams State Recreation Area to mouth of Silver Creek	4/10	coldwater	quality	brown trout, rainbow	wild	special	general	Quality brown and rainbow trout fishery with catch rate of 0.5 fish/hr. Make supplemental stockings of brown trout fry as needed. Continue to cooperate with BLM to improve stream and riparian habitat.
Little Wood River, from mouth of Silver Creek to canal diversions north of Carey	13/32	coldwater	yield	brown trout, brook trout, rainbow	wild	general	general	Support proposed instream flow through area to improve fishery.

Drainage: Big Wood River

Water	Miles/Acres	Fishery: Type	Fishery: Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Little Wood River, from Little Wood Reservoir to headwaters	22/53	coldwater	yield	rainbow, brook trout	wild	general	general	Maintain wild trout fishery.
Silver Creek, from mouth upstream to Highway 93	3.8/14	coldwater	yield	rainbow, brown trout, brook trout	wild	special	general	Wild trout fishery with average catch rate of 0.5 fish/hr. No motors water. Adjust management direction to conform with recommendations of scheduled new research study.
Silver Creek, from Highway 93 bridge to westside Kilpatrick bridge	2/4	coldwater	yield	rainbow, brown trout, brook trout, whitefish	wild	general	general	Maintain catch rate of 0.5 trout/hr. Adjust management direction to conform with recommendations of scheduled new research study.
Silver Creek from westside Kilpatrick bridge to confluence of Grove and Stalker creeks (including all tributaries); Sullivan L. within Nature Conservancy property	3/11	coldwater	quality	rainbow, brook trout, brown trout	wild	general	special	Catch-and-release, fly fishing only, unlawful to fish from raft or boat. Maintain catch rate of 1.0 fish/hr.
Stalker Creek from confluence with Grove Creek upstream (including tributaries within public fishing portion of Nature Conservancy property	2.5/4.5	coldwater	quality	rainbow, brook trout, brown trout	wild	general	special	Catch-and-release, fly fishing only, unlawful to fish from raft or boat. Maintain catch rate of 1.0 fish/hr.

Drainage: Big Wood River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Stelker Creek from public fishing portion of Nature Conservancy property upstream (including tributaries)	10/12	coldwater	yield	brook trout, rainbow	wild	general	general	Yield wild trout fishery; maintain 10 fish limit on brook trout. Adjust management directions if necessary to conform with new research findings.
Loving Creek, from Nature Conservancy boundary upstream to headwaters	4/6	coldwater	yield	rainbow, brook trout	wild	general	general	Yield wild trout fishery. Maintain catch rate of 0.5 fish/hr.
Grove Creek	5/9	coldwater	yield	rainbow, brook trout	wild	general	general	Yield wild trout fishery.
All other streams in Big Wood River drainage	355/355	coldwater	yield	rainbow, brown trout, brook trout	hatchery/wild	general	general	
Magic Reservoir	/3587	coldwater	yield	rainbow, brown trout, kokanee	hatchery/wild	year-round	general	Emphasize rainbow trout fishery with large annual fingerling rainbow stockings and limited catchable rainbow stockings after extreme drawdowns. Maintain overall catch rate of 1.0 trout/hr. on opening weekend of general season and 0.5 trout/hr. through remaining season. Stock largely Shasta and Hayspur genetic strain rainbow, if available, but adjust stream stockings accordingly if other studies currently underway so indicate.
	/189	warmwater	yield	perch	wild	year-round	general	Consider stocking fall chinook to determine whether they are effective in reducing perch populations.

Drainage: Big Wood River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Norman Reservoir	/2585	coldwater	yield	rainbow, chinook, brown trout	hatchery	year-round	general	Quality trout fishery; continue brown trout stockings. Experimentally stock different genetic strains of rainbow. Maintain catch rate of 0.3 fish/hr.
	/135	warmwater	yield	perch	wild	year-round	general	Continue with fall chinook stockings to determine whether this species is effective in reducing perch populations and to add variety to fisheries.
Little Wood Reservoir	/575	coldwater	yield	rainbow, brook trout	hatchery/wild	year-round	general	Experimentally stock different genetic strains of rainbow. Maintain fishery with fingerling rainbow stocking with supplemental catchable rainbow stockings after heavy drawdown years. Maintain catch rate of 1.0 fish/hr. for ice fishery and 0.5 fish/hr. in general season.
Fish Creek Reservoir	/516	coldwater	yield	rainbow, brook trout	hatchery/wild	year-round	general	Experimentally stock different genetic strains of rainbow. Maintain basic fishery with fingerling rainbow stockings and supplemental catchable plantings after extreme drawdowns or as determined desirable. Maintain catch rate of 1.5 fish/hr. for ice fishery and 0.5 fish/hr. during general season.

Drainage: Big Wood River

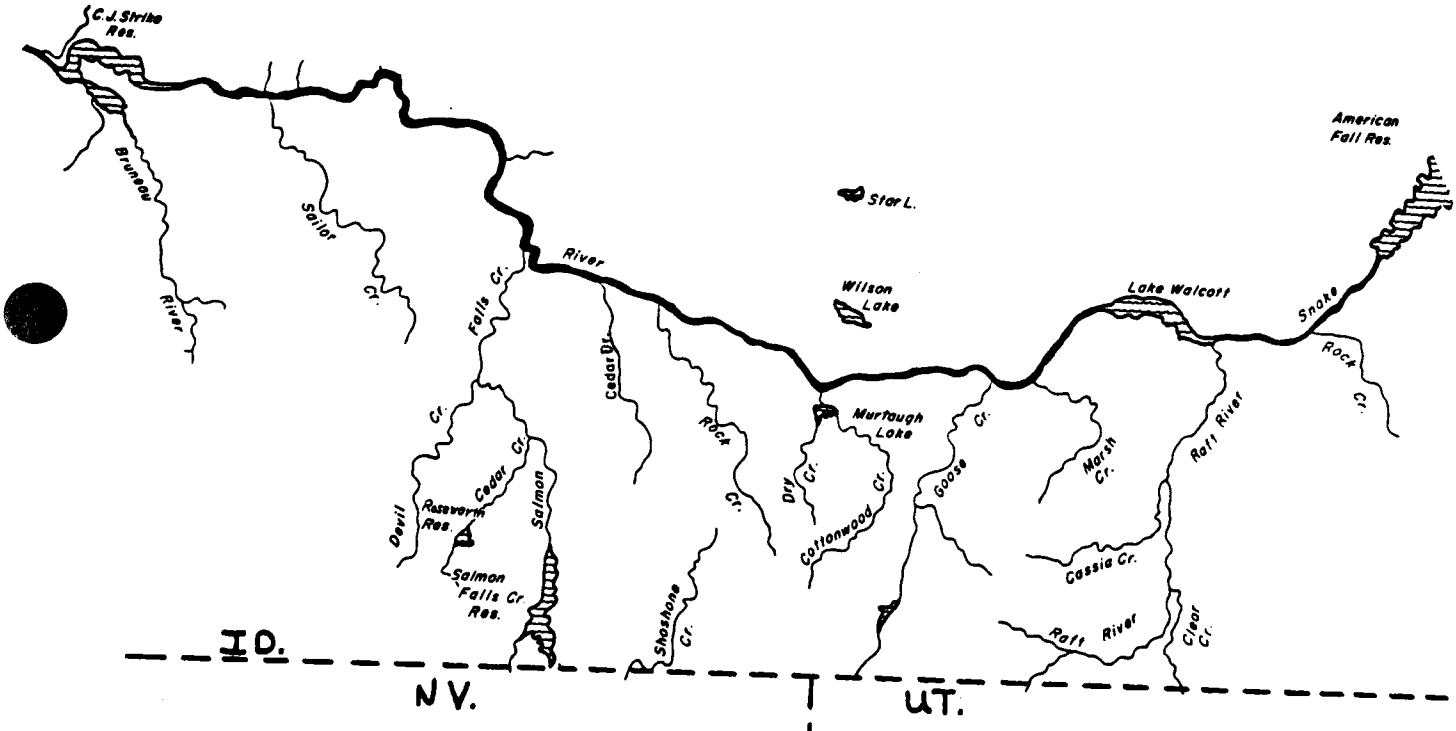
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Alpine Lakes (total of 16, 3 in Little Wood River drainage and 13 in Big Wood River drainage)	/85	coldwater	quality	brook trout, grayling, rainbow, cutthroat	hatchery/wild	year-round	general	Place emphasis on maintaining aesthetic qualities at high level and keeping desirable levels of anglers at mountain lakes. Stocking of different species in certain lakes will be continued to provide variety. Lakes will normally be stocked every 3 years through cooperation with USFS. Maintain catch rate of 0.5 trout/hr. Grayling will be stocking in Big Lost Lake in addition to trout, when available.
Thorn Creek Reservoir	/126	coldwater	yield	rainbow, brown trout, chinook	hatchery	general	general	Experimentally stock brown trout or chinook to control shiners. Investigate feasibility of raising the height of the dam in a cooperative effort with the BLM with the goal to establish trophy or high quality trout fishery.
Dog Creek Reservoir	/85	warmwater/ coldwater	yield	largemouth bass, bluegill, rainbow	hatchery/wild	year-round	general	Supplement warmwater fishery with put-and-take rainbow fishery. Continue brown trout stockings. Assess fisheries and chemically eradicate and restock if studies so indicate.
Carey Lake	/200	warmwater	yield	largemouth bass, bluegill, yellow perch, bullhead	wild	general	general	Yield warmwater fishery. Conduct fish population and limnological studies of lake to aid in assessing fisheries and to determine management direction.

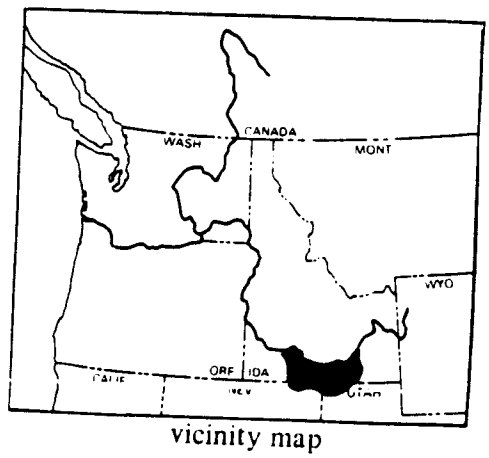
SALMON FALLS CR.

GOOSE CR.

RAFT R.

and other drainages South of the SnakeR.





vicinity map

25. SALMON FALLS CREEK, GOOSE CREEK, RAFT RIVER, AND OTHER DRAINAGES SOUTH OF THE SNAKE RIVER

A. Overview

There are three major drainages south of the Snake River between C.J. Strike Reservoir and Massacre Rocks - Raft River, Goose Creek, and Salmon Falls Creek. The three drainages have a combined drainage area of over 6,590 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 and is managed on a wild trout basis. One other reservoir, Stone, is located on Deep Creek in the Curlew Valley approximately 22 miles west of Malad City and has good rainbow trout, black crappie and largemouth bass populations.

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. Good populations of native cutthroat are found in the Raft River, Goose Creek and Salmon Falls Creek 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 the Raft River and sections of some streams in the Goose Creek drainage 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 reintroduced into the area with dramatic, excellent results.

Salmon Falls Creek Reservoir was completed in 1912 and until the spring of 1984 was considered a closed system and, as a result, 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. It currently has more different game fish species than any other reservoir in the area, including rainbow trout, brown trout, chinook salmon, kokanee, yellow perch, black crappie, channel catfish, smallmouth bass and walleye. Walleye and chinook are the two most recent additions and both species have done well. The reservoir also has extremely high nongame fish populations which provide a good 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 and an

11-pound 5-ounce fish was caught in August of 1984. Ice fishing for the species was good in the winter of 1985.

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. 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 is utilized for float trips. Easily accessible streams in the Goose Creek drainage receive very high use, primarily anglers from the Burley-Rupert area.

There are four 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 rainbow and cutthroat populations which result from fry plantings. Lake Cleveland is accessible by road and the fishery is maintained by catchable rainbow stockings.

B. Problems and Programs

(1) **PROBLEM** - A self-sustaining kokanee population needs to be established in Salmon Falls Creek Reservoir.

PROGRAM - Large numbers of intermediate spawning strain kokanee fingerlings will be planted annually in Salmon Falls Creek and above the fish migration barrier if and when the fish are available. Stockings of early spawning strains will be discontinued.

(2) **PROBLEM** - Construction of new roads and trails, or improvement of existing trails, may endanger native cutthroat populations.

PROGRAM - Strongly oppose any new road or trail construction or improvement of existing trails for off-road vehicle use near any key native cutthroat trout streams.

(3) **PROBLEM** - There is a significant public demand for more warmwater fishing in the area.

PROGRAM - Stock largemouth bass, smallmouth bass, channel catfish and bluegill in suitable selected ponds in the drainages south of the Snake River. Stock walleye in Oakley Reservoir if it is determined feasible.

(4) **PROBLEM** - Oakley Reservoir is a large reservoir with only fair game fish populations and is close to a high population area.

PROGRAM - Increase stockings of warmwater fish species. Continue channel catfish stockings and introduce smallmouth bass. Experimentally introduce other warmwater fish species which would be compatible with the Snake River and other drainages below.

C. Management Direction

Drainage: Drainages south of the Snake River - Raft River, Goose Creek

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Raft River and Goose Creek drainages, including Sublett Creek and tributaries above Sublett Reservoir	25/21	coldwater	yield	rainbow, brown trout, cutthroat	wild	general	general	Manage as wild trout fishery with emphasis on preservation of stream qualities for spawning and rearing. Continue cooperation with USFS and Sublett Irrigation District to maintain riparian vegetation and protect stream habitat. Maintain catch rate of 1.5 fish/hr.
Lake Fork Creek	5/3	coldwater	yield	rainbow, brown trout, cutthroat	wild	general	general	Manage as wild trout fishery with emphasis on preserving spawning and rearing values. Continue cooperation with USFS and local irrigation district to protect stream habitat.
Fall Creek to falls	0.5/0.25	coldwater	yield	rainbow, brown trout, cutthroat	wild	general	general	Place emphasis on preserving quality of stream habitat for spawning and rearing. Continue cooperation with USFS to preserve stream quality.
Goose Creek from headwaters to Oakley Reservoir (excluding portions of Nevada and Utah)	44/31	coldwater	yield	rainbow, cutthroat	hatchery/wild	general	general	Maintain quality of cutthroat fishery. Maintain catch rate of 0.5 fish/hr.
Big Cottonwood Creek, from Wells Ranch to Pickett Hollow	3/4	coldwater	yield	rainbow, cutthroat	hatchery/wild	general	general	Study effect of catchable trout on cutthroat population and consider termination of rainbow stockings. Maintain catch rate of 0.5 fish/hr.

Drainage: Drainage south of the Snake River - Raft River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Big Cottonwood Creek, from Pickett Hollow construc- to headwaters	12/12	coldwater	quality	cutthroat	wild	general	general	Place emphasis on cutthroat and preser- vation of stream habitat. Strongly oppose additional road or trail tion along stream. Maintain catch rate of 1.0 fish/hr.
Other streams in Raft River catch and Goose Creek drainages	361/277	coldwater	yield	brook trout, rainbow, cutthroat	hatchery/wild	general	general	Emphasize protection of native cutthroat in streams where present. Maintain rate of 1.0 trout/hr.
Salmon Falls Creek, from mouth to Salmon Falls Creek Dam	13/31	warmwater	yield	smallmouth bass	wild	year-round	general	Manage as yield fishery.
	31/75	coldwater	yield	rainbow, brown trout	hatchery	year-round	general	Maintain wild rainbow, stock brown trout to establish population in lower portion of creek.
From backwaters of Salmon Falls Creek Reservoir to Idaho/Nevada border	5/8	coldwater	yield	rainbow, brown trout	wild	year-round	general	Maintain wild trout fishery. Maintain catch rate of 0.5 fish/hr.
	2/4	warmwater	yield	smallmouth bass, channel catfish, walleye	wild	year-round	general	Maintain wild fishery.
Shoshone Creek, from Nevada border to mouth of Big Creek	10/12	coldwater	yield	rainbow, brown trout, cutthroat	hatchery/wild wild	general	general	Continue stocking brown trout to bolster populations. Maintain catch rate of 0.5 fish/hr.

Drainage: Drainages south of the Snake River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Shoshone Creek, from mouth of Big Creek to headwaters	12/14	coldwater	yield	rainbow	wild	general	general	Plant no catchables in summer months due to insufficient flows.
Big Creek from mouth to headwaters	14/17	coldwater	yield	rainbow, brown trout	hatchery/wild	general	general	Stock rainbow mainly in suitable beaver ponds. Maintain catch rate of 0.5 fish/hr.
All other streams in Salmon Falls Creek drainage	57/44	coldwater	yield	rainbow, cutthroat	wild	general	general	Emphasize protection of native cutthroat where present. Do not stock rainbow trout in waters with pure strain cutthroat trout populations. Maintain catch rate of 1.0 trout/hr.
Sublett Reservoir plants	/113	coldwater	quality	rainbow, cutthroat, brown trout, coho, chinook	wild	general	general	Manage on wild trout quality basis. Continue annual brown trout stocking until it is determined natural reproduction is sufficient. Make periodic of cutthroat. Closely monitor spawning runs of rainbow, cutthroat, and brown trout for spawning success. Maintain close cooperation and coordination with Sublett Irrigation District to assure public access. Maintain catch rate of 0.3 fish/hr.
Salmon Falls Creek Reservoir	/1700	coldwater	yield	rainbow, brown trout, kokanee, chinook	hatchery/wild	year-round	general	Emphasize species diversity. Continue annual stockings of brown trout fry or fingerlings. Stock intermediate strain of kokanee if suitable egg source can be found. Maintain catch rate of 0.5 fish/hr. on salmonids.

Drainage: Drainages south of the Snake River

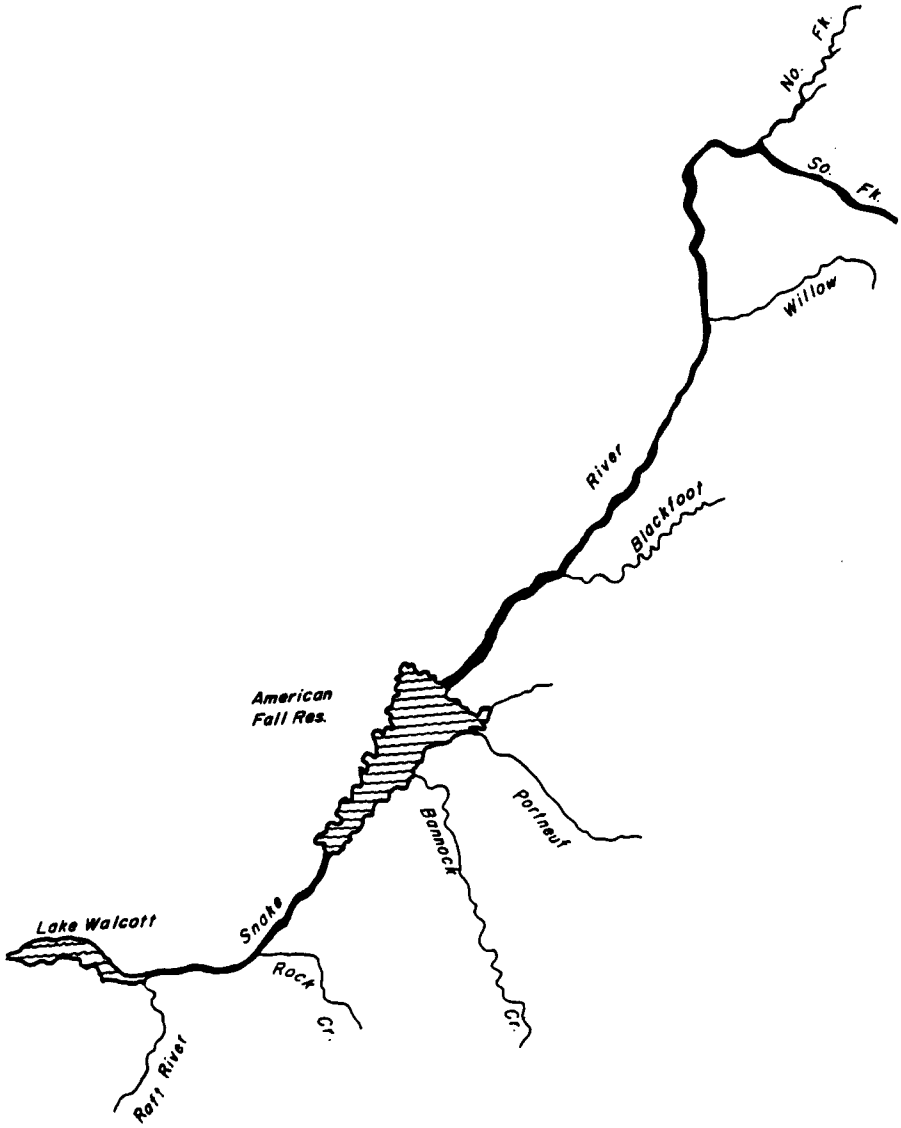
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Salmon Falls Creek Reservoir (continued)		warmwater	yield	walleye, perch, black crapie, channel catfish, smallmouth bass	wild/hatchery	year-round	general	Establish self-sustaining walleye fishery in reservoir. Monitor effect of walleye on forage fish species. If studies so dictate, experimentally stock new forage species.
Roseworth Reservoir (Cedar Creek Reservoir)	/1500	coldwater	yield	rainbow	hatchery	special	general	Continue Jan/Feb ice fishing season after good water carryover years. Emphasize rainbow in reservoir. Negotiate to assure continued public access.
Oakley Reservoir	/675	coldwater	yield	rainbow, chinook	hatchery	year-round	general	Manage as yield fishery. Continue annual fall chinook stocking and closely monitor results. Maintain catch rate of 0.5 trout and/or chinook/hr.
		warmwater	yield	channel catfish, yellow perch	hatchery	year-round	general	Manage as a yield fishery. Stock smallmouth bass and continue channel catfish stockings. Experimentally introduce other suitable warmwater species compatible with drainages below.
Stone Reservoir (Curlew Valley)	/126	coldwater	yield	rainbow	hatchery	year-round	general	Manage as yield fishery. Maintain catch rate of 0.5 fish/hr.
	/127	warmwater	yield	largemouth bass, black crappie	wild	year-round	general	Increase largemouth bass and black crappie populations.
Other lakes and reservoirs	/4	coldwater	yield	rainbow, brown trout	hatchery	general	general	Manage as yield fishery. Maintain catch rate of 0.5 fish/hr.
	/100	warmwater	yield	bullhead, largemouth bass	wild/hatchery	general	general	Stock some new waters with largemouth bass and possibly bluegill.

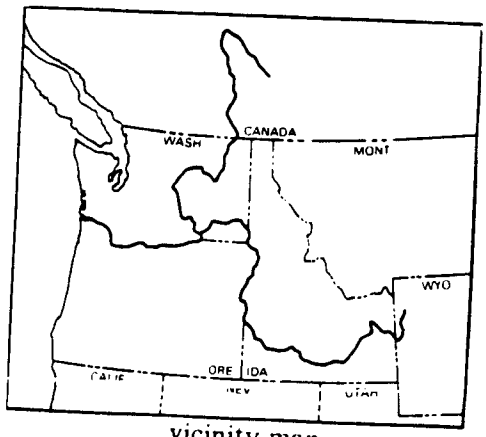
Drainage: Drainages south of the Snake River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Independence Lake #1	/6	coldwater	quality	rainbow, cutthroat	hatchery/wild	general	general	Stress quality angling with emphasis on aesthetics and desirable numbers of anglers. Stock trout every three years. Numbers will be decreased to increase size of trout. Support USFS policy of foot or horse travel only.
Independence Lake #2	/20	coldwater	quality	rainbow, cutthroat, greyling	hatchery	general	general	Stress quality angling. Greyling fry will be stocked periodically as available. Stock cutthroat every three years. Support USFS policy of foot or horse travel only.
Independence lake more #3	/6	coldwater	quality	rainbow, cutthroat	hatchery	general	general	Monitor for winterkills and stock at frequent intervals if winterkill occurs. Stress quality angling. Support USFS policy of foot or horse travel only.
Lake Clevelsnd	/6	coldwater	yield	rainbow	hatchery	general	special	Accessible by road. Stock annually with catchable rainbow. No motors water.

SNAKE RIVER

Lake Walcott to Henrys Fork





vicinity map

26. SNAKE RIVER - LAKE WALCOTT TO CONFLUENCE OF SOUTH FORK AND HENRYS FORK

A. Overview

The Snake River from Lake Walcott upstream to the confluence of the Henrys (North) and South Forks encompasses a variety of habitat types. This river section covers approximately 125 miles, of which approximately 20 miles has been flooded by American Falls Reservoir.

The river from Eagle Rock upstream to American Falls Dam, a distance of about six miles, is considered a Class I trout stream. An estimated 58,000 hours of fishing occurred in this stretch with 22,000 rainbow trout being caught during the fishing season from May 26 through the end of October. This section is also noted for the trophy-size trout caught with numerous fish taken in the 5- 10-pound class.

Trout planted in American Falls Reservoir often migrate downstream to the river in mid-summer because the reservoir water becomes warm and lacks sufficient oxygen. Releases of water through the turbines in mid-summer result in warm water and lowered oxygen levels in the tailrace. Winter storage of water in the reservoir reduces river flows, placing additional stress on its trout population.

American Falls Reservoir covers 56,000 surface acres and contains 1.7 million acre-feet of water at capacity. It is a popular fishing reservoir, with an estimated 26,000 rainbow harvested and 125,000 hours fishing during the period mid-April through early November. The reservoir is planted annually with trout in the early spring and is noted for producing nice catches. Most trout range in size from one to two pounds and virtually all are of hatchery origin. 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 also a Class I 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 I waters for 7 miles and 11 miles, respectively. These springs contain rainbow trout and mountain whitefish.

The Snake River from Tilden Bridge upstream to Idaho Falls, a distance of 43 miles, is characterized by unstable low banks consisting of small river rock. Water is diverted from the river

for irrigation at a number of different sites in this section. During the irrigation season and early fall, flows are low because of these diversions and water storage upstream. Little information is available on the fishery and its use in this segment of the Snake River.

Access to the river in this section is poor due to the large amount of adjacent private land; consequently, most access is by boat. Additional access would increase the value of this area to fishermen.

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 planted with catchable-size hatchery rainbow trout; it receives heavy fishing pressure and is open to fishing all year. McTucker Ponds are three small gravel pits covering ten 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 and bluegill. Rose Pond is located north of Blackfoot and contains rainbow trout, perch, bluegill and largemouth bass.

The Snake River from Idaho Falls to the confluence of Henrys Fork and the South Fork, a distance of 45 miles, produces occasional catches of large rainbow and cutthroat trout. The river in this section contains several small dams for irrigation and hydropower generation. These dams create migration barriers. Large brown trout (up to 10 pounds), kokanee, rainbow and cutthroat trout are caught below these barriers where they congregate while trying to move upstream. Nothing is known about the origin of these fish. 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.

Reservoirs and ponds along the Snake River in this area which support fisheries include Roberts Gravel Pond and Market Lake, both of which are owned by the Department. Roberts Gravel Pond covers 60 surface acres and contains yellow perch and crappie. It is managed as a warmwater fishery, and good catches of yellow perch occur seasonally. Market Lake contains rainbow trout, yellow perch, crappie, bullhead, largemouth bass, bluegill and chubs. Low oxygen when ice covered often results in winterkills in both Roberts Gravel Pond and Market Lake. Several unnamed gravel pits and sloughs along the Snake River contain some yellow perch. Their fishery value is unknown.

B. Problems and Programs

(1) **PROBLEM** - There is poor access to the river between the backwaters of American Falls Reservoir and the confluence of

Henrys Fork and the South Fork due to the adjacent private land.

PROGRAM - Acquire access to all river sections to improve angler utilization.

(2) **PROBLEM** - Opportunity to fish for warmwater game fish is limited.

PROGRAM - Identify, develop and improve suitable warmwater fisheries. Determine suitability of smallmouth in the Snake River and stock adequate numbers to establish a viable population.

(3) **PROBLEM** - Annual carryover of catchable-size hatchery trout in the Snake River between American Falls Reservoir and Idaho Falls is poor.

PROGRAM - Introduce strains and stocks of game fish that will exhibit good annual carryover, growth and catchability. Determine the need for fish passage to enhance wild production.

(4) **PROBLEM** - Little is known regarding the fish population and the fishery in the Snake River between the backwaters of American Falls Reservoir and the confluence of Henrys Fork and the South Fork.

PROGRAM - Initiate a research program to investigate the fishery in this area as to the fish populations present, angler effort, catch and migration patterns. Develop a management plan.

(5) **PROBLEM** - Poor overwinter survival occurs in Roberts Gravel Pond due to winter oxygen depletions.

PROGRAM - Install mechanical aeration equipment needed to eliminate oxygen depletion.

(6) **PROBLEM** - Many small abandoned gravel pits represent habitat for warmwater fisheries.

PROGRAM - Systematically sample ponds for water quality and suitability for warmwater species. Investigate availability of suitable ponds for Department purchase or public access agreements, and where possible, introduce fish to these waters.

C. Management Direction

Drainage: Snake River - Lake Walcott to confluence of South Fork and Henrys Fork

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Massacre Rocks to Eagle Rock	20/2300	coldwater	yield	rainbow, brown trout	hatchery/wild wild	year-round	general general	Stock catchable and fingerling rainbow to maintain catch rate of 0.5 fish/hr.
Tributaries, Massacre Rocks to Eagle Rock	50/52	coldwater	yield	rainbow	hatchery	general	general	Put-and-take fishery for hatchery rainbow in suitable tributaries.
Eagle Rock to American Falls Dam	6/500	coldwater	trophy	rainbow, brown trout	hatchery/wild wild	special special	general general	Maintain stocking in American Falls Reservoir as fish leave it for the river. Work to establish adequate flows for fish populations. Maintain catch rate of 0.4 fish/hr. Harvest warmwater game fish when available.
		warmwater		perch, crappie	wild	special	general	
American Falls Reservoir to Idaho Falls	97/931	coldwater	yield	whitefish, rainbow, cutthroat, brown trout	wild hatchery/wild wild wild	year-round	general	Manage yield fishery for wild and hatchery trout and whitefish. Research will evaluate present fishery in this section as to returns of catchable-size trout, location of pressure and amount. Determine suitability of smallmouth bass and introduce.
Shoshone-Bannock Reservation streams	65/152	coldwater	yield	rainbow, whitefish	wild	general	general	Work with tribe to assess fish population in streams.
Springfield Lake	66	coldwater	yield	rainbow	hatchery	general	general	Put-and-take fishery. Maintain catch rate of 0.6 fish/hr. Evaluate potential for year-round season.

Drainage: Snake River - Lake Walcott to confluence of south fork and Henrys Fork

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
McTucker Ponds	/10	warmwater	yield	bluegill, largemouth bass, yellow perch	wild	year-round	general	Maintain mixed warmwater fishery with put-and-take trout.
		coldwater	yield	rainbow	hatchery	year-round	general	Maintain mixed warmwater fishery with put-and-take trout.
American Falls Reservoir	/56000	coldwater	yield	rainbow	hatchery	year-round	general	Put-and-grow fishery. Maintain catch rate of 0.2 fish/hr. Conduct creel checks to assess fish catch and size.
Rose Pond		warmwater	yield	rainbow, yellow perch, largemouth bass	hatchery	year-round	general	Maintain mixed warmwater fishery with put-and-take trout.
		coldwater	yield	rainbow	hatchery			
Idaho Falls to South Fork	52/2652	coldwater	yield	cutthroat, brown trout, whitefish, rainbow	wild/hatchery	year-round	general	Rely on recruitment from tributaries and upstream areas. Catch rates of 0.3 fish/hr. Improve angler access. Supplemental stockings of catchable rainbow.
Roberts Gravel Pit	/25	warmwater	yield	perch, crappie, bullhead, bluegill	wild	year-round	general	Maintain as warmwater fishery. Improve habitat to increase harvest. Stock to establish wild populations.
Market Lake	/545	warmwater	yield	perch, crappie, largemouth bass, catfish, bullhead, brown trout, rainbow	wild hatchery	year-round (seasonal waterfowl nesting closure)	general	Mixed warmwater fishery. Put-and-grow fishery works well in limited area producing large trout. Evaluate established populations of warmwater fish.

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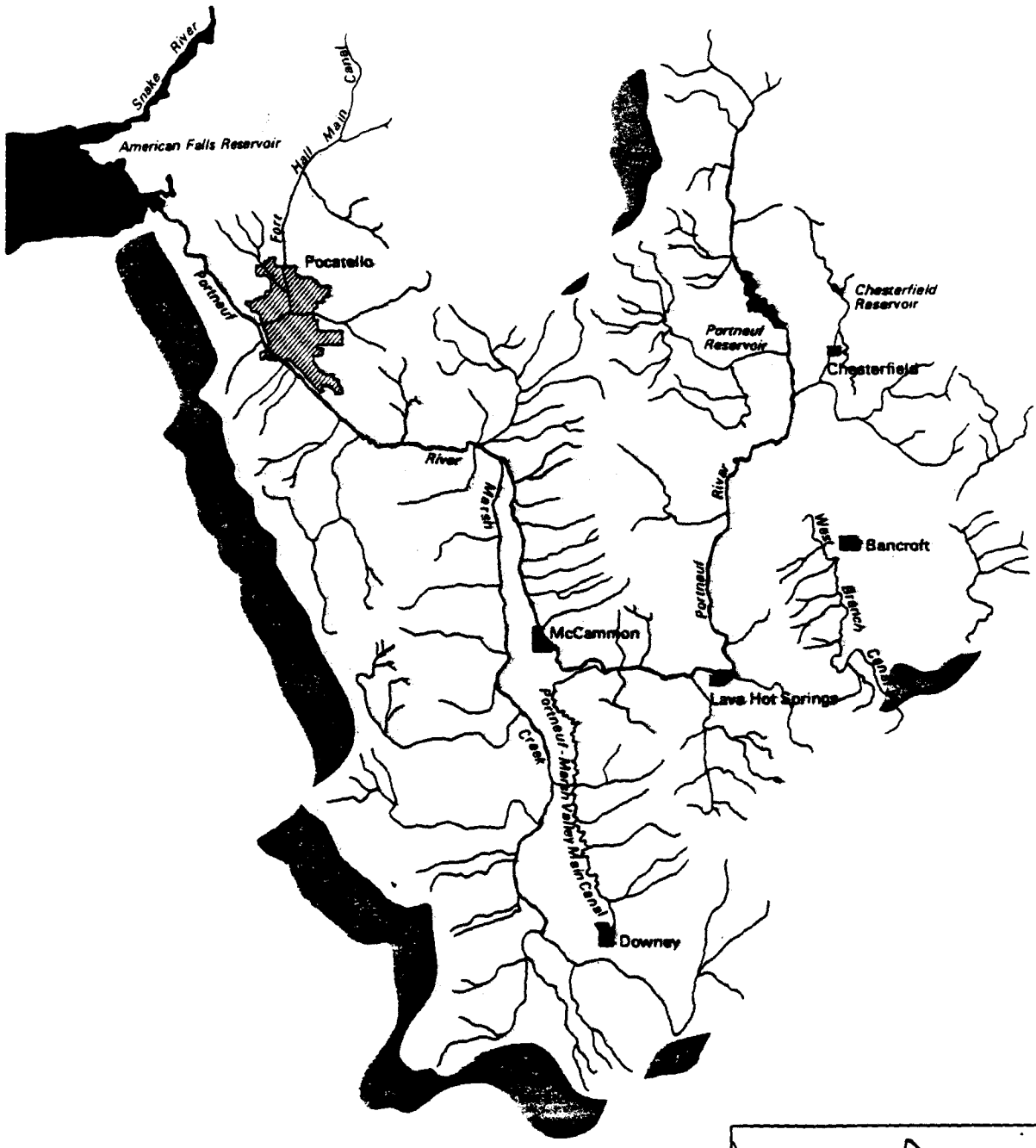
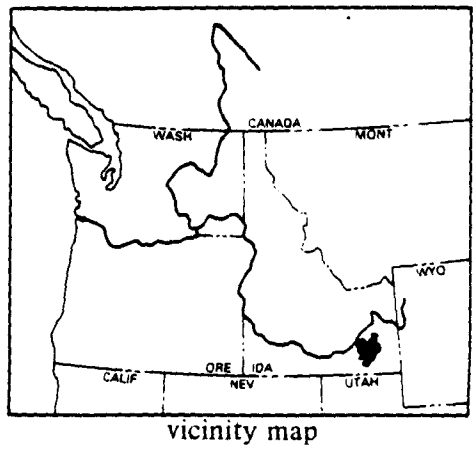
Drainage: Snake River - Lake Walcott to confluence of south fork and Henrys Fork

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Spring Creek, Taylor, Bannock, Jim, and Texas sloughs	33/135	coldwater	yield	rainbow, brown trout	hatchery	year-round	general	Put-and-grow fishery. Catch rates of 0.5 fish/hr. Conduct spot creel checks to assess catch rate, effort and size.

Portneuf River Basin





vicinity map

north

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miles

27. PORTNEUF RIVER DRAINAGE

A. Overview

The Portneuf River and its tributaries total 297 miles of stream and covers 533 acres. In addition, there are four irrigation storage reservoirs in the drainage that cover 1,705 acres.

The Portneuf River heads upstream from Chesterfield Reservoir on the Fort Hall Indian Reservation and terminates in American Falls Reservoir. The river from American Falls Reservoir upstream to Pocatello receives a considerable amount of spring water and contains a population of wild rainbow trout. From Pocatello upstream to the confluence of Marsh Creek, the river contains very few trout, receives very little fishing pressure, and is severely affected by heavy silt. 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 fish species in this area.

In the Portneuf River from the Portneuf/Marsh Valley diversion upstream to Lava Hot Springs, conditions improve and this area contains 94 percent wild rainbow trout, 5 percent brown trout, and 1 percent hatchery rainbow and wild cutthroat. From Lava Hot Springs upstream to Chesterfield Road (Kelly Road) bridge, a distance of approximately 16 river miles, the stream has an excellent wild rainbow trout population and is 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 in this area during 1979. Sampling in this area indicates the trout population is made up of 69 percent wild rainbow, 19 percent hatchery rainbow and 12 percent cutthroat.

The river in the area upstream from Lava Hot Springs contains excellent wild trout populations but it has been degraded by the loss of aquatic habitat. Specifically, willows have been removed from the riparian areas, and stream bank damage by cattle has occurred in some sections. What effects the loss of stream habitat has had on the wild trout population is unclear. The status of the wild trout population from the standpoint of mortality rates and harvest is poorly understood.

Upstream from the Chesterfield (Kelly) Road bridge to Chesterfield Reservoir, a distance of about 10 miles, the river has been extensively modified by stream channel alterations and contains few trout. From Chesterfield Reservoir upstream, the river is small and has extensive beaver activity. This area and the river near American Falls Reservoir is within the boundaries of the Fort Hall Indian Reservation.

Major tributary streams to the Portneuf River include Mink, Marsh, Rapid, Dempsey, Pebble and Toponce creeks. These tributaries serve as spawning areas for wild cutthroat trout from the Portneuf River

and juvenile rearing areas for cutthroat trout destined downstream to the river; however, trout movement and importance to the river is unknown.

Four irrigation reservoirs are located in this drainage, three of which are managed exclusively as put-and-take fisheries for catchable-size rainbow trout. These reservoirs are Hawkins, Wiregrass and Twenty-Four Mile. The lack of suitable spawning areas and annual irrigation drawdown precludes the development of any type of wild trout fishery at these waters. Trout are released in these waters before the opening of general fishing season. Planted trout grow rapidly and a high percentage are caught the first season. If water levels are favorable, some carryover occurs and the fish are caught at a much larger size (1-2 pounds) the next year.

The Highway Pond near Pocatello currently contains high water levels and provides a significant angling opportunity. It is planted annually with hatchery trout and they exhibit excellent growth and are harvested at a high rate. Due to the close proximity of this water to Pocatello and its notoriety for producing large trout, it is managed as an urban fishery.

Chesterfield Reservoir is managed differently from the other three reservoirs in the Portneuf drainage. There is a good carryover of water and fish with some trout spawning areas present. This reservoir has the potential to produce some larger size fish if water conditions are suitable. It is planted annually with catchable rainbow trout and, within the past five years, has been planted with cutthroat and brown trout. In addition, the reservoir contains a high population of nongame fish, primarily Utah chubs.

B. Problems and Programs

(1) **PROBLEM** - Poor water quality from the standpoint of silt has severely reduced trout populations in lower river sections.

PROGRAM - Attempt to develop populations of game fish that do well in a highly turbid, cool temperature environment.

(2) **PROBLEM** - Loss of habitat from the standpoint of riparian areas and stream bank erosion has reduced wild trout populations.

PROGRAM - Implement riparian fencing programs wherever possible and investigate other alternatives, such as habitat improvement and SCS programs.

(3) **PROBLEM** - The status of wild trout population caused from angler mortality rates and harvest utilization is poorly documented in the Portneuf River.

PROGRAM - Continue the annual assessment of trout numbers in selected locations. Determine the need for restricted regulations based on mortality rates and harvest of wild trout.

(4) **PROBLEM** - Diversion of water from the upper Portneuf River for hydropower or other uses would reduce trout numbers.

PROGRAM - Acquire water rights for maintenance stream flow to protect wild trout populations.

C. Management Direction

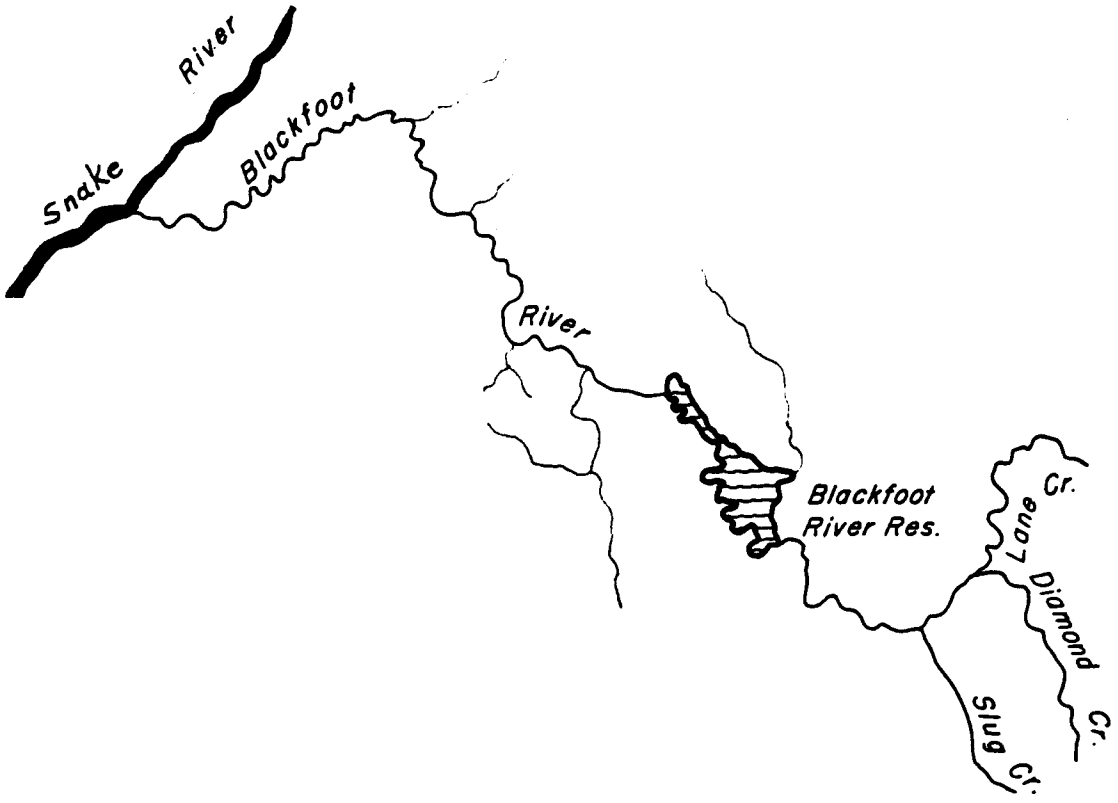
Drainage: Portneuf River

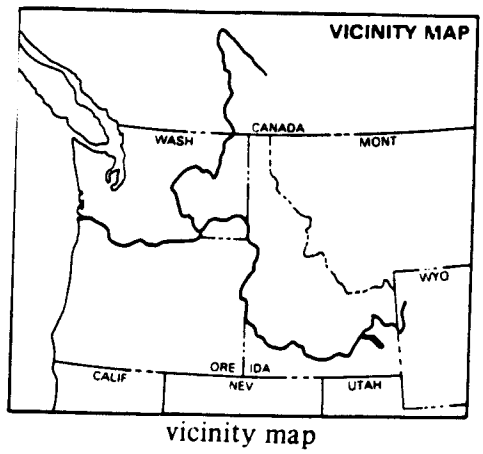
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
From American Falls Reservoir to and including Marsh Creek	166/147	coldwater	yield	rainbow, brown trout, cutthroat	wild/hatchery	year-round	general	Develop fishery for warmwater species in suitable areas. Maintain present wild trout population. Experimentally introduce blue and channel catfish.
From Marsh Creek to Portneuf/Marsh Valley canal diversion	18/90	coldwater	yield	brown trout, cutthroat	wild/hatchery	year-round	general	Population maintenance stocking of brown trout. Maintain wild cutthroat population. Continue annual evaluation of game fish population in selected locations.
Portneuf/Marsh Valley canal to Lava Hot Springs	7/34	coldwater	yield	rainbow, brown trout	wild	year-round	general	Population maintenance stocking. Continue annual evaluation of game fish populations in selected locations.
Lower Portneuf River tributaries	28/85	coldwater	yield	rainbow, brook trout, brown trout, cutthroat	wild	general	general	Maintain present wild populations in Portneuf River tributaries. Determine relationship of tributary fisheries to the river.
Lava Hot Springs to Chesterfield Road including tributaries	35/115	coldwater	quality	rainbow, cutthroat	wild/hatchery wild	general	general	Improve catch rate to 0.7 fish/hr. by increasing densities of trout through riperian habitat improvements. Initiate an evaluation program to determine other limiting factors on the wild trout. Supplemental stocking of hatchery catchables in high use areas.
Chesterfield Road to Chesterfield Reservoir		coldwater	yield	rainbow, cutthroat	wild/hatchery	general	general	Put-and-take fishery in accessible areas.

Drainage: Portneuf River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Chesterfield Reservoir	/1600	coldwater	yield	rainbow, brown trout, cutthroat	hatchery	year-round	general	Attempt to establish trophy fishery for some species of trout or put-and-grow fishery for rainbow. Maintain catch rate of 0.4 fish/hr.
Chesterfield Reservoir tributaries		coldwater	yield	cutthroat	wild	general	general	Maintain wild trout fishery.
Wiregrass, 24-Mile and Hawkins Reservoir	/105	coldwater	yield	rainbow	hatchery	general	general	Put-and-take fishery.
Highway Pond	/30	coldwater	yield	rainbow	hatchery	year-round	general	Urban fishery. Increase catch rates to 1.2 fish/hr. Continue plants of trophy-size hatchery fish.

BLACKFOOT RIVER





vicinity map

28. BLACKFOOT RIVER AND TRIBUTARIES

A. Overview

The Blackfoot River and tributaries total 346 miles of stream covering 734 surface acres. Blackfoot Reservoir covers 19,000 surface acres and contains 410,000 acre-feet of water at capacity. The Blackfoot River is the reservoir's major tributary and discharges a mean flow of 168 cfs. The river upstream from the reservoir is 35 miles long to its origin at the confluence of Lanes and Diamond creeks.

Habitat conditions generally are fair to good in the upper river and tributaries, with exceptions due to livestock grazing and irrigation water usage. 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.

Downstream from Blackfoot Reservoir the bulk of the fish caught are trout which have escaped from the reservoir and hatchery rainbow planted directly into the river. Mountain whitefish are the dominant game fish species in river sections downstream from Wolverine Creek.

The trout catch from Blackfoot Reservoir is 80 percent hatchery rainbow, 15 percent wild cutthroat and 5 percent hatchery cutthroat. Wild cutthroat make up about 90 percent of the catch from the river and tributaries upstream from Slug Creek.

Blackfoot Reservoir, the Blackfoot River upstream and its tributaries serve as integral parts 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 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 upper river indicate the wild cutthroat population is being over-exploited. The size and numbers of cutthroat caught have decreased in the past 15 years. Regulations to offset this decline were implemented starting in the 1985 fishing season. These regulations cover the river since most of the cutthroat catch occurs there and consist of a three-trout limit and a July 1 opening covering the river and tributaries upstream from Blackfoot Reservoir. An evaluation of the cutthroat population from the special regulations should be made approximately five years after implementation (during the 1990 field season).

In 1983, annual plants of Bear Lake cutthroat were started in Blackfoot Reservoir. These fish are subcatchable in size and have

been reared for one year in the hatchery. The cutthroat are treated with morpholine in the Grace Hatchery before being released and are planted in the Little Blackfoot River at its mouth. The stream is also treated with morpholine in order to home the fish back to it at the time of spawning. This planting location and morpholine treatment is an attempt to maintain the separate strains of cutthroat as they now occur.

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 planted trout. During the winter months, vegetation in the water decays, resulting in oxygen depletion and, in most years, a complete fish kill. Attempts to prevent this winterkill to date have been unsuccessful.

B. Problems and Programs

(1) **PROBLEM** - Low water flows in the Blackfoot River downstream from Blackfoot Reservoir hinder game fish populations.

PROGRAM - Attempt to acquire maintenance stream flows in the Blackfoot River downstream from Blackfoot Dam.

(2) **PROBLEM** - More information is needed regarding returns of trout planted in Blackfoot Reservoir to improve low catch rates.

PROGRAM - Continue the collection of creel census information to more adequately assess returns of planted trout. Evaluate stocking rates, sizes and timing in an attempt to increase catch rates.

(3) **PROBLEM** - The effects of the three trout July opening on the upper river and tributaries is unknown at this time.

PROGRAM - Collect data on the population of wild cutthroat in the drainage to assess the effects of the regulation.

(4) **PROBLEM** - Cool, turbid water in the lower Blackfoot River precludes the development of wild trout populations.

PROGRAM - Attempt to establish populations of trout which do well in a low temperature, highly turbid situation.

C. Management Direction

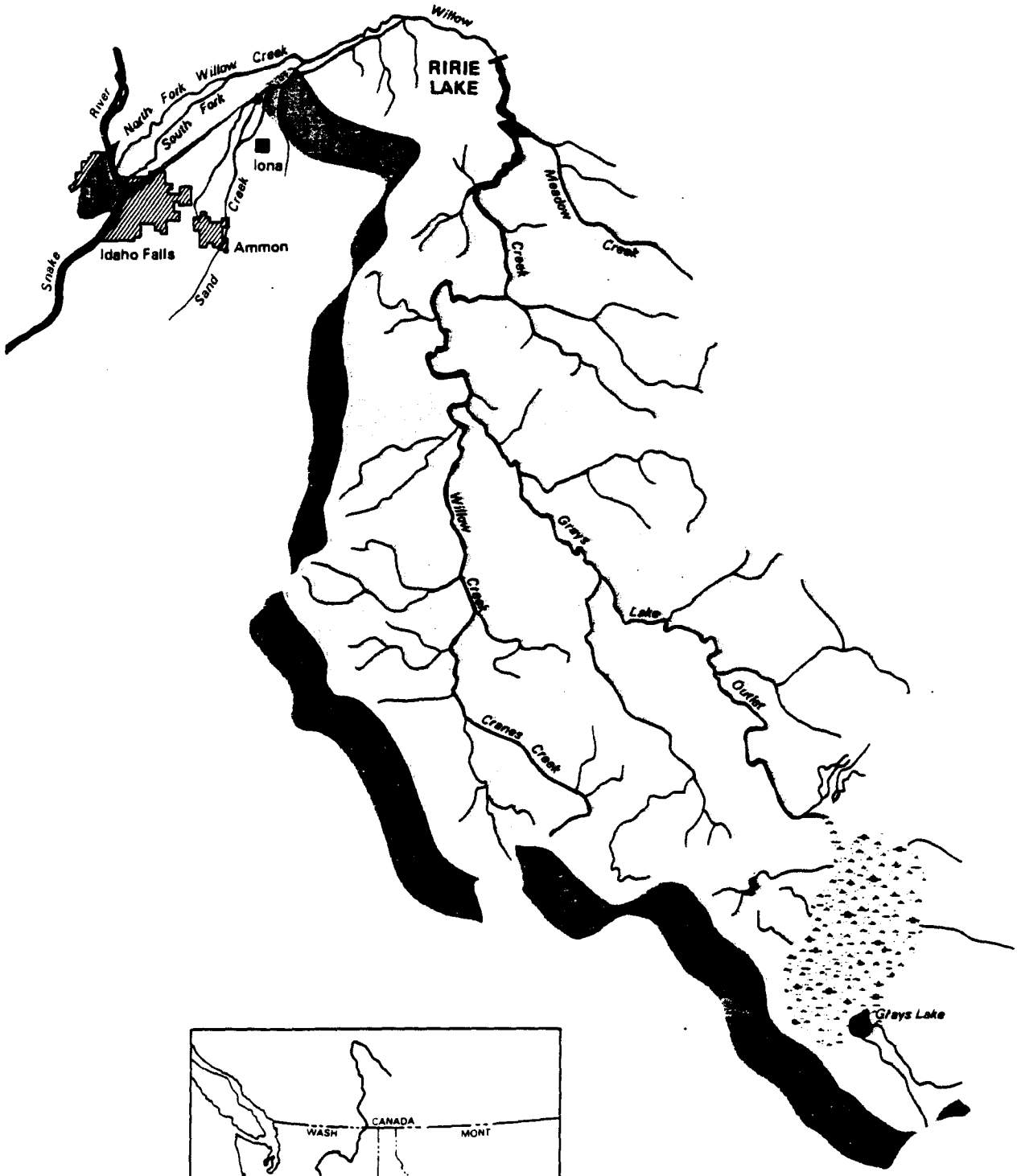
Drainage: Blackfoot River

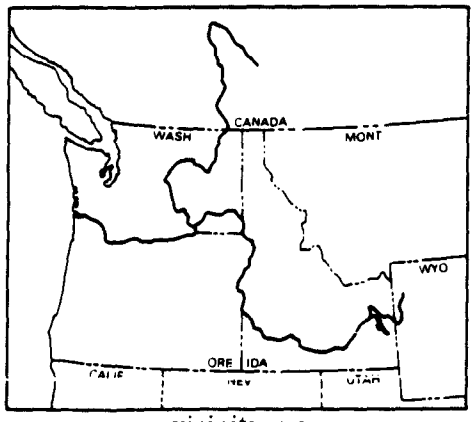
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
From mouth to equalizing reservoir	14/70	coldwater	yield	rainbow, whitefish	wild	year-round	general	Attempt to develop fishery for game species which do well in turbid, cool waters. Trout populations in this area are effected by silt concentrations and low water flows due to irrigation demands.
From equalizing reservoir to Wolverine Creek	18/86	coldwater	yield	rainbow, whitefish	wild	year-round	general	Increase utilization of whitefish.
From Wolverine Creek to Blackfoot Reservoir	34/153	coldwater	yield	rainbow, cutthroat	hatchery/wild	year-round/ general	general	Supplemental put-and-take fishery. Work with Fort Hall Irrigation Company to provide suitable flows for trout populations during late fall and winter months.
Tributaries below Blackfoot Reservoir	70/71	coldwater	yield	rainbow, brook trout, cutthroat	hatchery/wild	general	general	Put-and-take fishery for rainbow. Maintain wild cutthroat. Determine contribution to Blackfoot River fishery.
River upstream from reservoir	37/140	coldwater	quality	cutthroat	wild	special	special	Improve creel rate to 0.7 fish/hr. Increase numbers of wild cutthroat with restrictive bag limit and late opener to protect spawners. Reduce total annual mortality to 55 percent from 69 percent. Double the number of spawners in tributaries from 25 fish/mile to 50 fish/mile in trend areas.

Drainage: Blackfoot River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Tributaries upstream from Blackfoot Reservoir Dam	173/214	coldwater	quality	cutthroat, brook trout	wild	special	special	Reduce harvest and increase number of wild cutthroat trout. Continue annual creel checks during peak fishing periods to assess species of fish caught, number and sizes. Continue working with land management agencies and private companies to reduce or offset effects of phosphate mining. Evaluate spawning in tributaries.
Blackfoot Reservoir	/1900	coldwater	yield	rainbow, cutthroat	hatchery/wild	general	general	Increase catch rate of 0.3 fish/hr. by increasing stocking and continue introducing Bear Lake cutthroat stocks or other species of salmonids. Continue morphaline treatments to home-spawning Bear Lake cutthroat trout back to Little Blackfoot River.
Dike Lake	/35	coldwater	yield	rainbow	hatchery	special	special	Put-and-grow fishery. Continue attempts to reduce number of trout winter-killed by using put-and-grow restriction during certain periods.

Willow Creek Basin





vicinity map

miles

north

29. 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 CE in 1976. The reservoir has a total capacity of 100,000 acre-feet and a surface area of 1,560 acres. Water is diverted for irrigation of about 7,300 acres upstream from Ririe Reservoir, but as yet 30,000 acre-feet of the storage in Ririe is unobligated.

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 not possible, although numerous trout from irrigation ditches which flow into Willow Creek via the South Fork Snake River and annual plants of catchables 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 annually. Catch rates declined to 0.22 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 and whitefish are also present.

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 of 146,000 hours (40,000 angler days) with a catch rate of 0.64 trout/hour in 1979 gave Ririe Reservoir four times the effort and catch per acre of any other Idaho reservoir studied. This fishery is supported primarily through hatchery releases of rainbow trout and coho salmon. Minor catches of cutthroat and brown trout are also made. Steep banks and limited access restrict bank fishermen to 35 percent of the effort.

The 95 miles of streams in the drainage of Willow Creek above Ririe Reservoir are mainly in narrow canyons and contain important wild cutthroat 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 perennial and 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, daily and seasonally. Turbidity is high during the late winter and spring runoff and generally remains so until mid-summer. Cutthroat trout are dependent upon movement from upstream nursery tributaries. The SCS 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 topsoils and improve the water quality of Willow Creek above Ririe Dam.

Most tributaries of Willow Creek contain wild populations of cutthroat, brown, or brook trout. Native cutthroat trout populations are presently depressed in the drainage although viable. Overharvest of cutthroat 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 found in areas of road access where they are planted. No wild rainbow have been found in the Willow Creek drainage.

B. Problems and Programs

(1) **PROBLEM** - Nongame fish species are increasing in abundance in Ririe Reservoir.

PROGRAM - Introduce smallmouth bass as a predator to biologically control nongame species. Evaluate different strains of salmonids as predator controllers.

(2) **PROBLEM** - Dewatering of Willow Creek below Ririe Dam results in low carryover of fish and subsequent poor fishing.

PROGRAM - None. The BR has been unable to overcome the icing problem which requires the stream to be dewatered.

(3) **PROBLEM** - Research indicates large migrating cutthroat are susceptible to overharvest within the Willow Creek system.

PROGRAM - Investigate a differential harvest regulation for cutthroat trout in Willow Creek and the public acceptance of such a regulation. Eliminate fishing during spawning in major tributaries used.

(4) **PROBLEM** - A significant potential winter ice fishery could occur at Ririe Reservoir. However, the conflicts between big game wintering deer and elk herds versus angler use and the problem of impacting the summer fishery due to a large winter harvest exist.

PROGRAM - Determine if feasible boundaries exist where wildlife-angler conflicts do not occur. Determine increased stocking levels necessary to support a winter fishery.

(5) **PROBLEM** - Productivity in Ririe Reservoir may be declining, thereby affecting growth of hatchery fingerling releases.

PROGRAM - Monitor plankton populations to compare them with 1982 sampling. If plankton production is declining,

alter hatchery releases to emphasize catchable versus fingerling trout.

(6) **PROBLEM** - Angler harvest of rainbow catchables released in Willow Creek needs improvement.

PROGRAM - Redistribute releases of hatchery catchables over the season with more frequent releases and fewer fish per release.

(7) **PROBLEM** - Riparian habitat in Willow Creek and tributaries shows localized severe degradation.

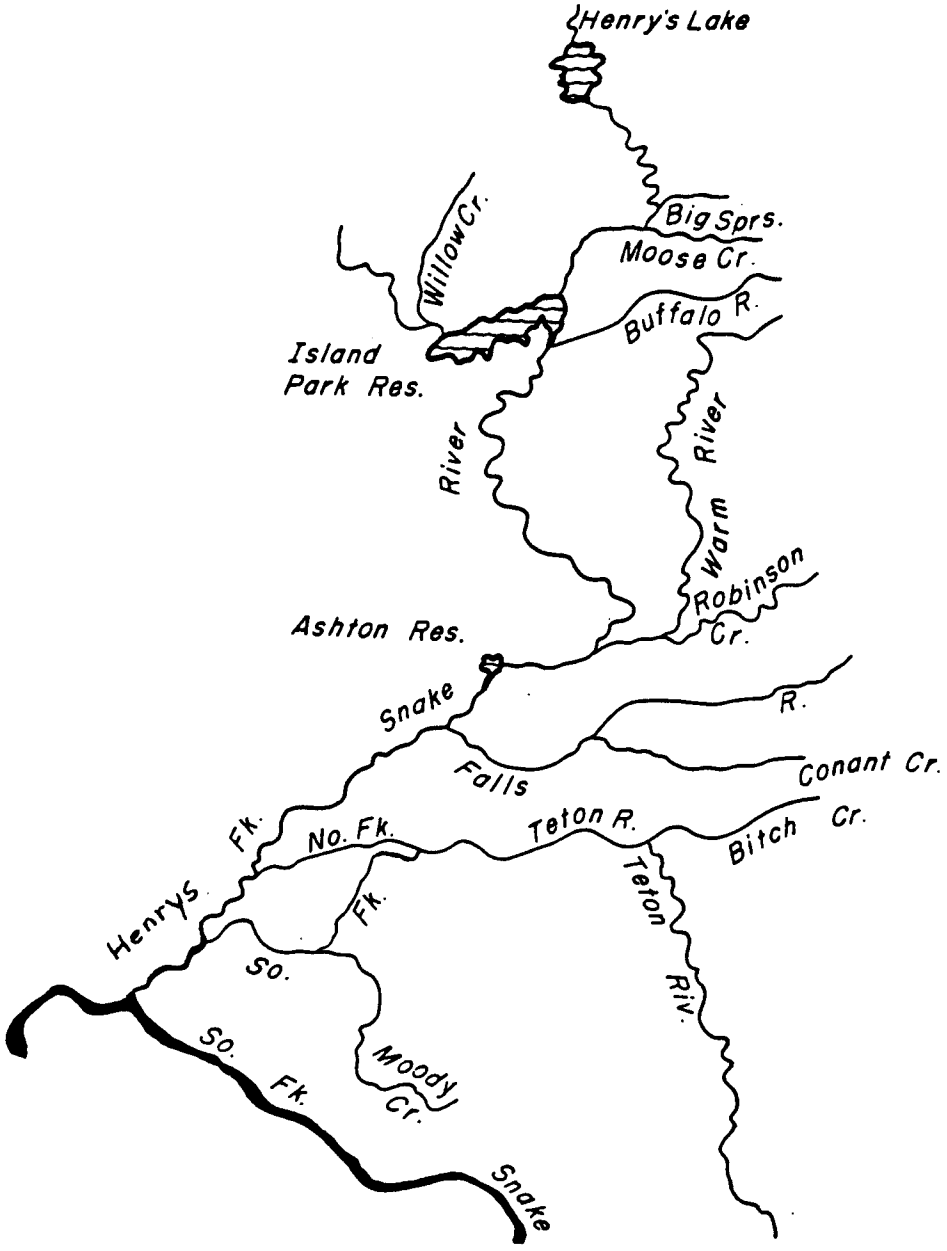
PROGRAM - Work with willing landowners and sportsmen groups to provide riparian streams, i.e., fencing exclosures to livestock or other methods of protecting riparian habitat. Work with Department of Lands to improve streams on state land.

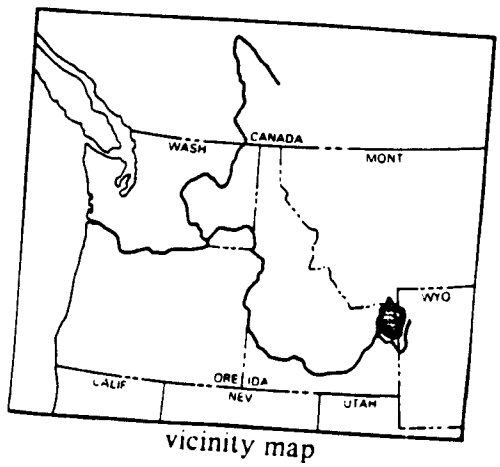
C. Management Direction

Drainage: Snake River - Willow Creek drainage

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Willow Creek, below Ririe Dam to Anderson Canal	5/23	coldwater	yield	rainbow, brown trout, cutthroat	hatchery/wild wild	year-round	general	Promote maximum harvest due to dewatering in the winter. Catch rates of 0.5 fish/hr.
Ririe Reservoir	/1470	coldwater	yield	rainbow, coho, brown trout, cutthroat, smallmouth bass	hatchery hatchery/wild wild hatchery/wild	general	general	Put-and-take fishery for rainbow. Put-and-grow for coho, chinook, and browns. Maintain catch rates of 0.6 fish/hr. with lengths of 10"-12". Evaluate suitability of other predatory species for nongame fish control.
Willow Creek, above Ririe Reservoir	38/151	coldwater	yield	cutthroat, brown trout, rainbow	wild hatchery/wild hatchery	general	general	Improve wild populations of native cutthroat by restricting harvest if needed. Put-and-grow for brown trout. Put-and-take catchables of rainbow. Catch rates of 1.0 fish/hr.
Willow Creek tributaries	113/187	coldwater	yield	brown trout, cutthroat, brook trout	wild	special	special	Maintain wild population of cutthroat in tributaries. Catch rates of 1.0 fish/hr. Delayed opener as found appropriate on selected tributaries to protect cutthroat spawners to maximize tributary production. Supplemental introductions of cutthroat fry may be used to speed recovery of underseeded area.

HENRYS FORK





vicinity map

30. 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 Teton, Fall, Warm and Buffalo rivers. Island Park Reservoir is an important component 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 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. Creel census of five miles of the lower Henrys Fork in 1980 revealed catch rates of 0.15 fish/hour for cutthroat and whitefish.

The Henrys Fork above 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 comprise 53 percent of the catch, hatchery rainbow 19 percent and brook trout 16 percent. Native cutthroat occurred in only 1 percent of the creels checked. Hybrids (rainbow-cutthroat) and whitefish made up the remaining 12 percent, although whitefish are the most numerous game fish present. Present management direction for the Henrys Fork above St. Anthony is of three types: (1) wild trout consumptive yield supplemented with hatchery fingerlings from St. Anthony to Ashton Reservoir; (2) wild trout, quality maintained by special regulation, Ashton Reservoir to Island Park Dam; and (3) consumptive yield maintained by plants of rainbow catchables from Island Park Reservoir to Big Springs.

Island Park Reservoir is a widely fluctuating irrigation reservoir with a mean surface of 7,386 acres. It provides an important reservoir fishery for rainbow, coho and kokanee, with catch rates of 0.6 fish/hour. Fishing effort in 1981 was about 71,000 hours, a decline from 176,000 hours found in 1968. The decline in effort was the result of chemical eradication of Island Park Reservoir in 1979 to eliminate Utah chubs. Once game fish populations are re-established, fishing pressure should increase.

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.

Henrys Lake is a shallow, highly productive lake covering 6,500 acres in the headwaters of the Henrys Fork of the Snake River drainage, which 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 cutthroat-rainbow hybrids. Catch rate goals are 1.0 fish/hour with management goals having a catch of about 0.6 fish/hour for cutthroat, 0.25 fish/hour for hybrid and 0.15 fish/hour for brook trout. Size goals are 20 percent of hybrids over 20", 10 percent cutthroat over 20" and 5 percent of brook trout over 20".

Large brook trout are also found in Henrys Lake, which holds the state record of 7.2 pounds. 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 the 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 two-fish limit was instituted in 1980 to protect reduced populations of cutthroat. Fishing effort in 1981 was at a low 66,000 hours. Catch rates also declined to 0.21 trout/hour in 1981.

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.

Warm River is a major tributary to Henrys Fork. Warm River base flow is provided by large springs 6 miles upstream from its confluence with 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 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 Henrys Fork.

Angler use and harvest in Warm River during 1984 equaled 8,000 hours of effort and 1.1 fish/hour. Hatchery catchable rainbow made up the majority of the harvest.

B. Problems and Programs

(1) **PROBLEM** - The small (200 kw) power dam at the mouth of the Buffalo River blocks spawning migrations of trout from Henrys Fork.

PROGRAM - Develop plans for the construction of an effective fish ladder.

(2) **PROBLEM** - There is a lack of large trout due to intense effort and harvest in Henrys Fork below Mesa Falls. Brown trout introductions have been successfully reproducing in Warm River.

PROGRAM - Continue introduction of brown trout until a self-sustaining (wild) population is established.

(3) **PROBLEM** - Little information is available on fisheries of the tributaries to the Henrys Fork (Buffalo and Fall rivers). Return to the creel on hatchery catchables in these areas is unknown.

PROGRAM - Initiate a creel census to evaluate these tributaries and their fisheries.

(4) **PROBLEM** - Rehabilitation of stream habitat and fish populations is needed in the area below the Teton River which was impacted by failure of the Teton Dam.

PROGRAM - Investigate and propose methods of re-establishing a fishery in the lower Henrys Fork in cooperation with BR.

(5) **PROBLEM** - Nongame fish may adversely affect game fish populations in Island Park Reservoir, requiring periodic fish eradication to maintain the fishery.

PROGRAM - Evaluate the use of different stocks and species of predatory salmonids along with the necessary regulation changes to control nongame species biologically.

(6) **PROBLEM** - Whitefish populations are underutilized in the Henrys Fork.

PROGRAM - Promote harvest of whitefish by emphasizing sporting and food values through education methods. Establish more winter whitefish seasons as needed.

(7) **PROBLEM** - High density of anglers is causing conflicts between angler type (waders and boaters) and a decrease in quality of the fishing experience on some portions of Henrys Fork.

PROGRAM - Determine public attitudes toward various methods of distributing angler use. Work with Harriman State Park and Targhee National Forest on development of public use areas.

(8) **PROBLEM** - Maximum size of brook trout is limited by early maturity in Henrys Lake. Canadian strains of brook trout are faster growing and later maturing in Henrys Lake.

PROGRAM - Plant late-maturing strains of brook trout for use in Henrys Lake. Take eggs from these fish at the Henrys Lake Hatchery as the spawning run develops.

(9) **PROBLEM** - The pure cutthroat gene pool in Henrys Lake is being contaminated by intermixing with hybrids.

PROGRAM - Experimentally sterilize hybrids by heat shocking of eggs. Determine merits and feasibility by evaluating the performance of these hybrids.

(10) **PROBLEM** - Irrigation diversions dewater the lower end of most tributaries during periods of peak fry movements to Henrys Lake.

PROGRAM - Obtain water rights to maintain minimum flows during period of fry movements. Evaluate success of the Targhee Creek screens and screen Howard and Duck creeks when problems are solved.

(11) **PROBLEM** - Livestock use has impacted spawning and rearing habitat resulting in reduced production in Henrys Lake tributaries and Henrys Lake outlet.

PROGRAM - Initiate stream improvement projects and riparian habitat fencing projects.

(12) **PROBLEM** - Kokanee populations in Island Park Reservoir have been depressed since the rotenone treatment of 1979.

PROGRAM - Emphasize enhancement of kokanee to Island Park system. Release a minimum of 1,000,000 fry per year in Moose Creek area.

(13) **PROBLEM** - There is limited access to Henrys Fork downstream of St. Anthony due to adjacent private land.

PROGRAM - Acquire access near St. Anthony and the Parker-Salem Bridge to improve angler utilization.

(14) **PROBLEM** - Concentrations of cutthroat spawners below Henrys Lake Dam and utilization by anglers during June create problems of illegal activities, trampling of spawning areas by anglers and poor public relations.

PROGRAM - Manage Henrys Lake outlet as a spawning and nursery area for cutthroat production to the Macks Inn area of the Henrys Fork. Create an educational area here for the life cycle needs of trout with viewing of spawners.

C. Management Direction

Drainage: Henrys Fork Snake River - mainstem

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Mouth to St. Anthony	30/1244	coldwater	yield	rainbow, whitefish, cutthroat	hatchery/wild	year-round	general	Put-and-take fishery for rainbow. Manage for cutthroat below Teton River.
St. Anthony to Fritz Bridge	10.2/423	coldwater	yield	rainbow, whitefish, brown trout	wild/hatchery	year-round	general	Manage as yield fishery supported by natural production and population maintenance stocking as needed. Maintain catch rate of 1.0 fish/hr.
Fritz Bridge to Ashton Dam	2.7/112	coldwater	yield	rainbow, whitefish, brown trout	wild	general	general	Spawning sanctuary for rainbow trout.
Ashton Dam to U.S. 20 bridge	4.2/174	coldwater	yield	rainbow, brown trout, whitefish, kokanee, cutthroat	wild/hatchery	year-round	general	Maintain wild population of rainbow and stock catchables in Ashton Reservoir to improve catch rates to 1.0 fish/hr. Kokanee are downstream drift from Island Park Reservoir.
U.S. 20 bridge to Mesa Falls	25.2/721	coldwater	yield	rainbow, whitefish, cutthroat	wild	general	general	Maintain wild populations of rainbow to provide 12" average size fish at catch rate of 1.0 fish/hr. No motors.
		coldwater	trophy	brown trout	wild/hatchery	general	general	Manage brown trout for wild population to provide fish with size of 14-18". Continue stocking brown trout as needed to establish natural population.
Lower Mesa Falls to Riverside Campground	12/288	coldwater	quality	rainbow, whitefish, brook trout	wild	general	general	Maintain 1.0 fish/hr. catch rates of wild populations of rainbow. No motors.

Drainage: Henrys Fork Snake River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Riverside Campground to Island Park Dam, except Harriman State Park	8.5/122	coldwater	quality/ trophy	rainbow, whitefish	wild	general	special	Size limits and restricted bag limit in effect to produce high catch rate of 1.2 fish/hr. and trophy fish with 5% over 18". No motors. Boating restricted except 7/15-9/15.
Harriman State Park	7.8/187	coldwater	quality/ trophy	rainbow, whitefish	wild	restricted	special	Fly fishing only as an access stipulation. Short season for waterfowl protection. Size limit to produce trophy fish and protect spawning population. Catch rate of 1.2 fish/hr. No motors.
Island Park Reservoir (up to McCrea Bridge)	12/8400	coldwater	yield	rainbow, coho, kokanee, brook trout, cutthroat	hatchery/wild	general/ winter (Jan/Feb)	general	Put-and-grow fishery for rainbow, coho and kokanee. Supplemental rainbow catchable stockings. Stock sufficient fish to maintain catch rate of 0.6 fish/hr.
Tributaries to Island Park Reservoir	45/60	coldwater	yield	rainbow, cutthroat, brook trout	wild	general	general	Maintain present fisheries with catch rate of 0.8 fish/hr.
McCrea Bridge to Henrys Lake outlet	9.3/223	coldwater	yield	rainbow, brook trout, whitefish, cutthroat, hybrids	wild/hatchery	general	general	Put-and-take fishery on catchable rainbow. Catch rates of 0.7 fish/hr. No motors water from McCrea Bridge to Macks Inn Bridge. Evaluate advisability for motor restriction above Macks Inn. Determine reasons for decline in catch rates.
Henrys Lake Outlet to Big Springs	1.7/41	coldwater	preservation/ observation	rainbow, brook trout, whitefish, cutthroat	wild	closed	closed	Spawning, rearing and fish observation area.

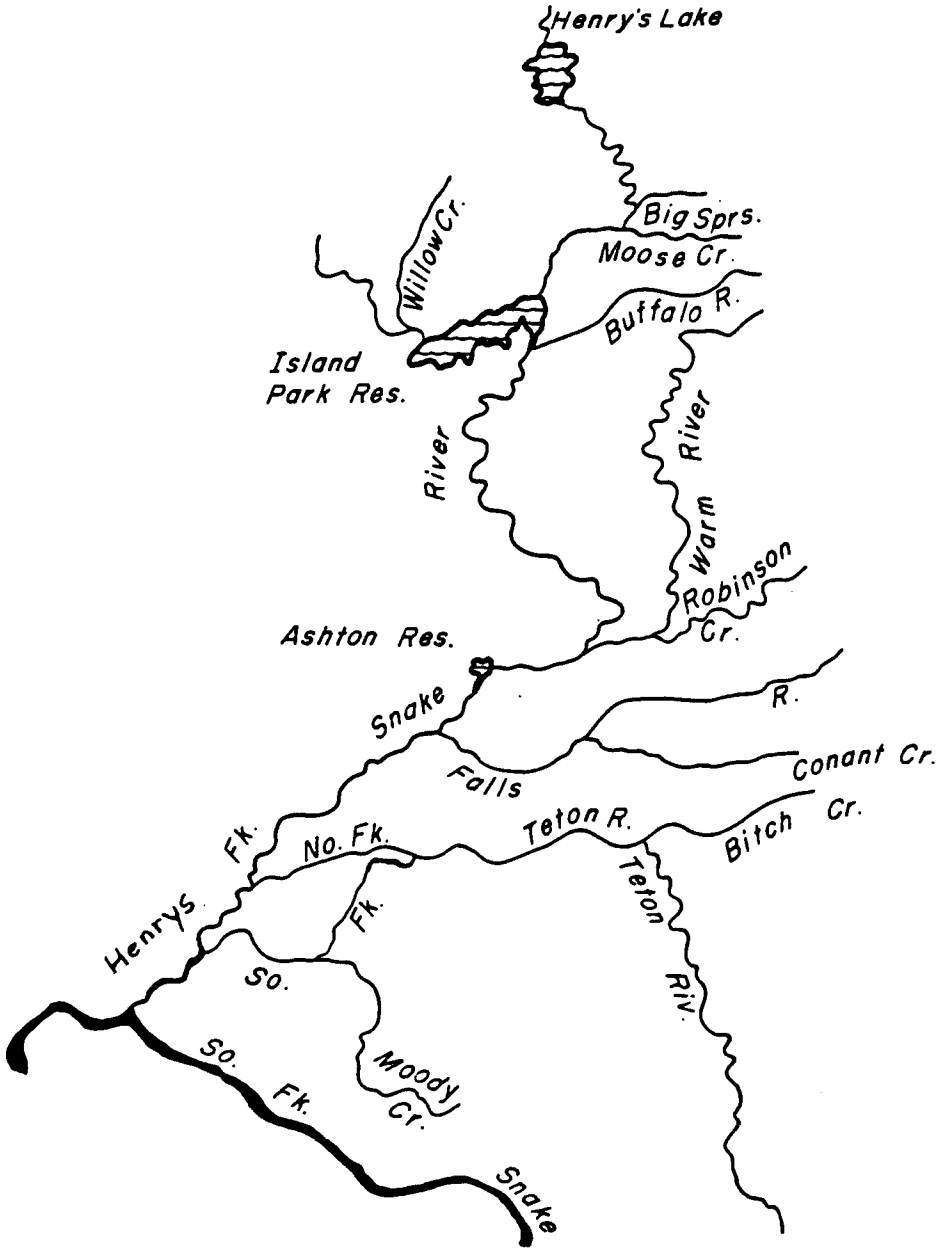
Drainage: Henrys Fork Snake River

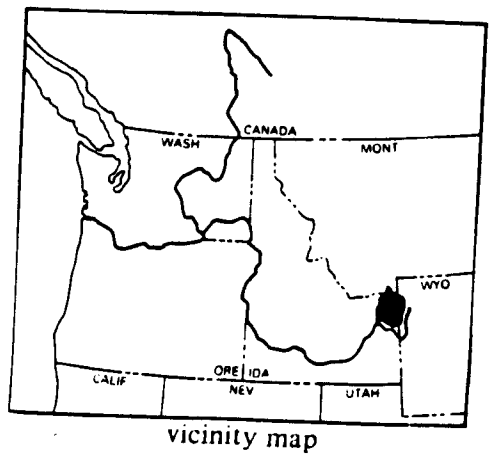
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Henrys Lake Outlet	12/84	coldwater	spawning/ observation/ yield	rainbow, brook trout, cutthroat, whitefish	wild	restricted	general	Close heavily used spawning areas below dam to protect eggs and fish. Maintain wild trout populations to provide catch rates of 1.0 fish/hr. Develop information signs on spawning and life history.
Henrys Lake	/6200	coldwater	trophy	cutthroat, brook trout, hybrids	wild/hatchery	restricted	restricted	Population maintenance stocking. Manage to produce catch rates of 1.0 fish/hr. with 0.65 cutthroat/hr., 0.20 hybrid/hr., and 0.15 brook/hr. Season and limits regulated to protect spawners and produce large fish.
Henrys Lake tributaries	13/14	coldwater	preservation	cutthroat, brook trout	wild	restricted	restricted	Manage for spawning and rearing of cutthroat and brook trout. Seek remedies to dewatering and loss of fry in irrigation ditches.
Warm River and tributaries	92/281	coldwater	yield	rainbow, brook trout, brown trout, whitefish, cutthroat	wild	general	general	Maintain wild population. Supplemental put-and-take fishery in areas of intense use. Population maintenance stocking for browns. Catch rate of 1.0 fish/hr.
Mouth of Robinson Creek to Highway 47 bridge	0.2/1.2	coldwater	preservation/ observation	rainbow, brook trout, brown trout, cutthroat	wild/hatchery	closed	closed	Spawning, rearing and fish observation area.
Moose Creek and tributaries	6/14	coldwater	yield/ preservation	rainbow, brook trout, kokanee, cutthroat	hatchery/wild	restricted	general	Put-and-take fishery. Season restriction to protect kokanee spawning in Island Park Reservoir.

Drainage: Henrys Fork Snake River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Sand Creek WMA	3/167	coldwater	yield	rainbow, brook trout	hatchery	restricted	general	Put-and-take fishery for rainbow. Put-and-grow fishery for brook and rainbow. Maintain catch rate of 0.5 fish/hr. Season restriction for protection of brook trout spawning.
Silver and Golden lakes	2/0	coldwater	preservation/ quality	rainbow	wild	closed	closed	Waterfowl closure and to protect the natural features of Harriman State Park.
Lakes and ponds	/345	coldwater	yield	rainbow, cutthroat, brook trout, grayling	wild/hatchery	general	general	Maintain present fisheries with catch rate of 0.8 fish/hr. Use put-and-grow hatchery fish in areas of no spawning.
Buffalo River and tributaries	50/150	coldwater	yield	rainbow, cutthroat, brook trout	wild/hatchery	general	general	Supplemental put-and-take. Maintain wild populations to produce catch rates of 0.7 fish/hr. Future spawning habitat for Henrys Fork rainbow trout.

TETON RIVER





vicinity map

31. TETON RIVER DRAINAGE

A. Overview

The most common species caught in the Teton River are cutthroat from the mouth upstream to Badger Creek (62 miles), wild rainbow from Badger Creek upstream to South Leigh Creek (14 miles), and brook trout from South Leigh Creek upstream (17 miles). Angling pressure has increased from 1975 through 1980 by 60 percent to 80,000 hours. Catch rates have declined by 48 percent, from 1.42 fish/hour to 0.75 fish/hour, indicating populations of game fish have declined.

Major tributaries to the Teton River include Bitch, Canyon, and Trail creeks, with Bitch Creek having important cutthroat spawning and rearing areas supporting the remaining cutthroat populations below Felt Dam.

The Teton River has been extensively modified by the failure of Teton Dam in 1976 in the area of the reservoir and river below the dam. Although the cutthroat fishery has stabilized to some degree, habitat changes have resulted in an altered ecology of the cutthroat present and 40 percent to 80 percent loss of productivity. The Teton River above Badger Creek (Teton Basin) has been isolated from the lower river since 1936 when Felt Dam was constructed. This area is presently a rainbow and brook trout fishery with cutthroat continually declining. Most tributaries are seasonally dewatered by irrigation diversions as are some portions of the Teton River near Rexburg and Teton further restricting the ability of the river to recover from the effects of the Teton Dam failure.

Research and management programs to improve the cutthroat fishery in the Teton River have been put on hold pending payment for damage to the river and fishery from the Teton flood. Because of the tenuous nature of the cutthroat in the Teton River, waiting for settlement of the claims against BR can no longer be justified. The Teton River will receive highest priority for Department research and management programs during the 1986-1990 planning period.

B. Problems and Programs

(1) **PROBLEM** - Felt Dam has blocked spawning migrations of cutthroat.

PROGRAM - Plans by Fall River Rural Electric are for construction of the ladder by 1986. Stock large numbers (1,000,000+) of cutthroat fingerlings to reestablish spawning runs.

(2) **PROBLEM** - Failure of Teton Dam extensively altered habitat below the dam and in the area of the reservoir.

PROGRAM - Investigate and propose methods of habitat improvement or fish management to improve the cutthroat fishery in this area.

(3) PROBLEM - Native cutthroat populations have declined in the Teton Basin and are in danger of being eliminated due to lack of information and management programs.

PROGRAM - Initiate a research program to assess population structure, determine reasons for the decline, and make recommendations for management. Develop an enhancement plan for the cutthroat trout.

(4) PROBLEM - Overharvest of large cutthroat in the Teton canyon may occur as effort increases.

PROGRAM - Monitor angler use and harvest on the Teton River. If overharvest is occurring, restrict harvest to maintain large cutthroat.

(5) PROBLEM - Irrigation diversion structures built in the lower Teton River since the Teton Dam failure are creating migration barriers to upstream migrant fish.

PROGRAM - Develop plans for BR to use in modifying these structures for fish passage.

(6) PROBLEM - The railroad culvert on Moody Creek is a fish passage obstacle or complete barrier.

PROGRAM - Work with the Union Pacific to develop fish access past this culvert.

(7) PROBLEM - Insufficient hatchery space is available to rear cutthroat trout to offset lost production from the Teton Dam failure.

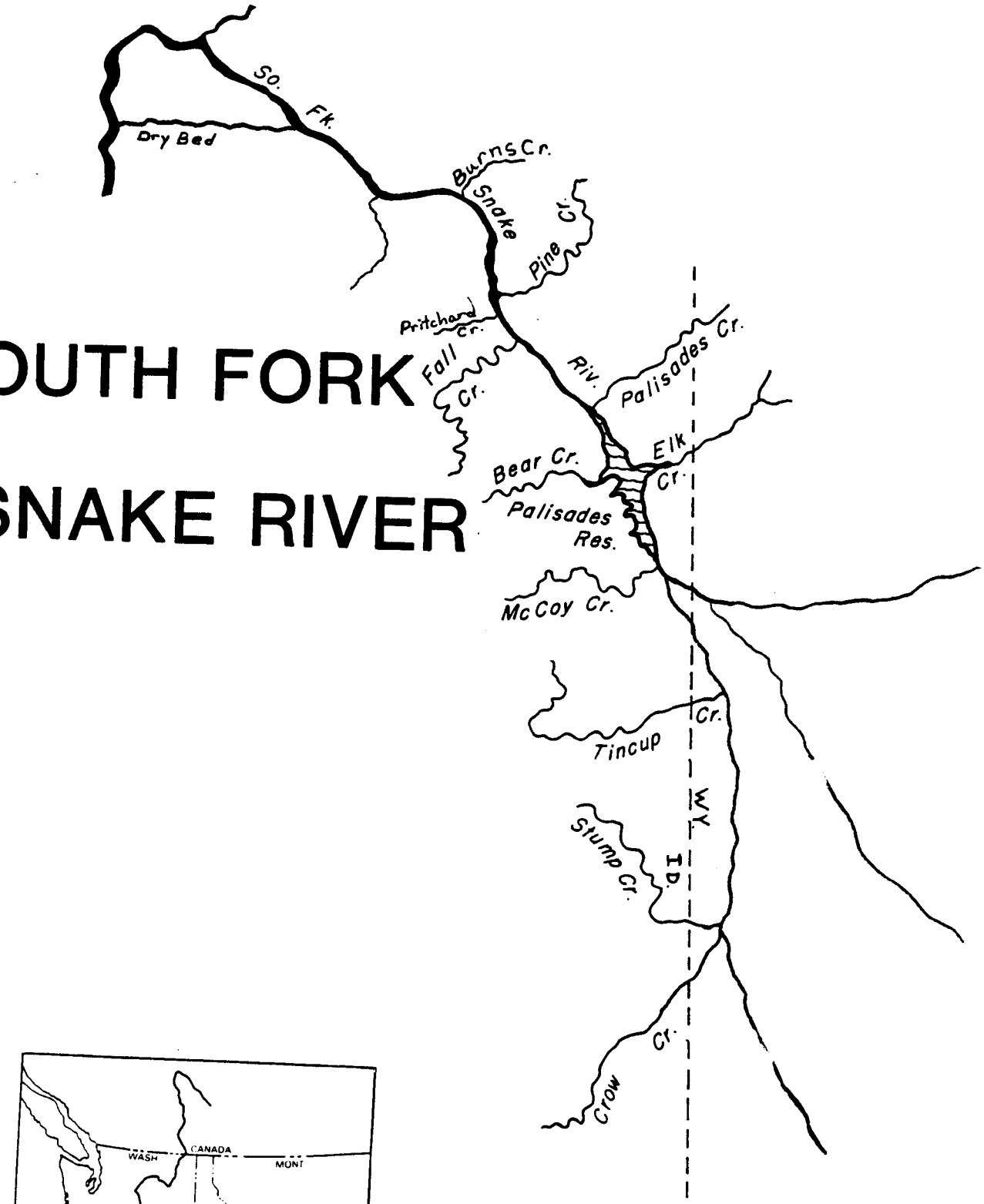
PROGRAM - Utilize BR funds to construct hatchery facilities adequate to offset this loss.

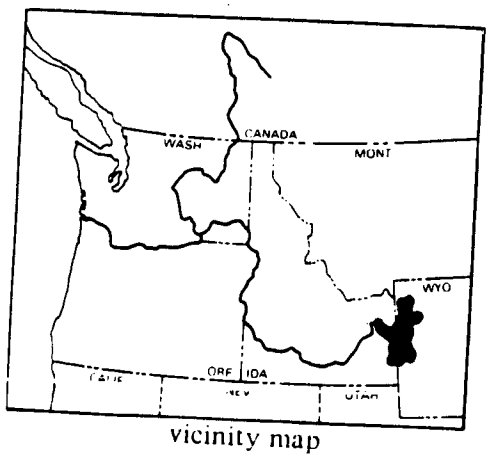
C. Management Direction

Drainage: Teton River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
From mouth to Felt Dam (including N.F.)	78/998	coldwater	preservation yield	cutthroat, whitefish, rainbow	wild/hatchery wild hatchery	general	special	Enhance native cutthroat populations. Use put-and-take rainbow catchables until cutthroat are reestablished. Improve catch rates to 1.0 fish/hr. Maintain numbers of large cutthroat. Winter whitefish season.
From Felt Dam to Trail Creek	21.7/301	coldwater	preservation yield	cutthroat, whitefish, rainbow, brook trout	wild/hatchery wild hatchery wild	general,	special	Population maintenance stocking of cutthroat. Improve catch rates of 1.0 fish/hr. Winter whitefish season.
Teton, Trail, Bitch, Badger, Moody, and Canyon creeks, and their harvest tributaries	27/151	coldwater	preservation yield	cutthroat, whitefish, brook trout	wild/hathcery wild wild	special	special	Cutthroat spawning and rearing areas. Some fingerling population maintenance stocking to establish healthy runs of cutthroat. Restricted season end is needed to protect cutthroat spawners. Catch rates of 1.0 fish/hr.
All other catch tributaries	84/199	coldwater	yield	cutthroat, brook trout, rainbow	wild	general	general	Maintain wild population. Maintain rates of 1.0 fish/hr. Spawning closures on streams identified as being used by river fish.
Packsaddle Lake	4	coldwater	yield	cutthroat	hatchery	general	general	Maintain present fishery.

SOUTH FORK SNAKE RIVER





vicinity map

32. SOUTH FORK SNAKE RIVER DRAINAGE

A. Overview

The South Fork Snake River drainage includes those portions of the Snake River above the mouth of the Henrys Fork, Palisades Reservoir, and the Salt River drainage which are in Idaho, including McCoy, Tincup, Stump, and Crow creeks.

In the South Fork Snake River and tributaries below Palisades Dam, wild cutthroat support 68 percent of the catch. Cutthroat below the dam are a mixture of both fine-spotted and Yellowstone cutthroat. Fishing effort on the south fork and tributaries below Palisades Dam was 25,000 angler days with a catch rate of 0.53 game fish/hour in 1981. Brown trout provide only a small portion of the catch (9 percent) but offer the opportunity to catch a trophy fish. The present state record of 32.1 pounds was caught in 1984 from this river.

Mountain whitefish are the most abundant game fish in the drainage, but are not extensively utilized by fishermen.

Habitat in the south fork drainage is in good condition with a few exceptions. The lower 20 miles of the river is impacted by low water during late fall and early winter due to stock water diversions. Loss of fish from the river to these diversions often creates good seasonal fisheries. One such canal, an old side channel of the river called the Dry Bed, utilized as a feeder canal, is 20 miles in length and provides adequate habitat to support a fishery. Dewatering of these canals annually in the spring for headgate maintenance results in a loss of fish and a salvage season is in effect.

Palisades Reservoir contains primarily the fine-spotted Snake River cutthroat of which 85 percent caught are hatchery fish from the Jackson National Fish Hatchery. Palisades is open year-round, providing fishing opportunity for bank, boat, and ice fishermen. Fishing effort was 43,000 angler days during 1980. Brown trout provide only 6 percent of the catch in the reservoir, but they do provide the opportunity to catch trophy-size fish. The one-time state record (25.8 pounds) was caught from Palisades Reservoir in 1972. Lake trout, kokanee, and coho have been introduced but wild populations have not developed. Large fluctuation in water levels (up to 80') may affect these open-water species.

B. Problems and Programs

(1) **PROBLEM** - Catch rates on Palisades Reservoir are low (0.3 fish/hour or less) much of the year due to inadequate stocking of fish from Jackson National Fish Hatchery and poor natural recruitment.

PROGRAM - Increase the number of cutthroat stocked from 250,000 to 500,000 (6"-8") fish. Support enlargement of

Jackson National Fish Hatchery to accommodate more production.

(2) **PROBLEM** - Irrigation diversions have curtailed natural recruitment of trout to the South Fork Snake River.

PROGRAM - Screen irrigation diversions of Palisades Creek to reduce losses of spawners and fry. After screening, remove migration barriers and obstacles.

(3) **PROBLEM** - The fisheries in the lower portions of many Salt River tributaries suffer from dewatering and loss of fish to irrigation ditches.

PROGRAM - Investigate the acquisition of water rights for instream flow uses.

(4) **PROBLEM** - Large numbers of underutilized mountain whitefish exist in the south fork drainage.

PROGRAM - Investigate methods of increasing the harvest of whitefish.

(5) **PROBLEM** - Rainey Creek is severely degraded by livestock, which limits spawning success of trout.

PROGRAM - Investigate the feasibility of fencing and revegetating the stream banks of Rainey Creek with both USFS and private entities.

(6) **PROBLEM** - Fish move freely across the Wyoming/Idaho state line in the Salt River drainage, migrating to and from Palisades Reservoir. The relationship of the Salt River drainage and Palisades Reservoir fisheries to each other is poorly understood.

PROGRAM - Develop a cooperative research program with Wyoming Game and Fish to evaluate the contribution of each state's fisheries to the others.

(7) **PROBLEM** - Dewatering of the Dry Bed during April results in losses of fish and makes it impossible to manage for a consistent fishery.

PROGRAM - Work with the irrigation district to obtain sufficient flows to maintain the fishery during periods of headgate maintenance. Get legal opinion on the legality of dewatering this side channel.

(8) **PROBLEM** - Angler awareness of special regulations on the South Fork is not total and may result in failure to attain the goals.

PROGRAM - Develop an informational sign to be displayed at several prominent locations. Have a small informational handout printed for distribution which explains the regulations and reasons for them.

C. Management Direction

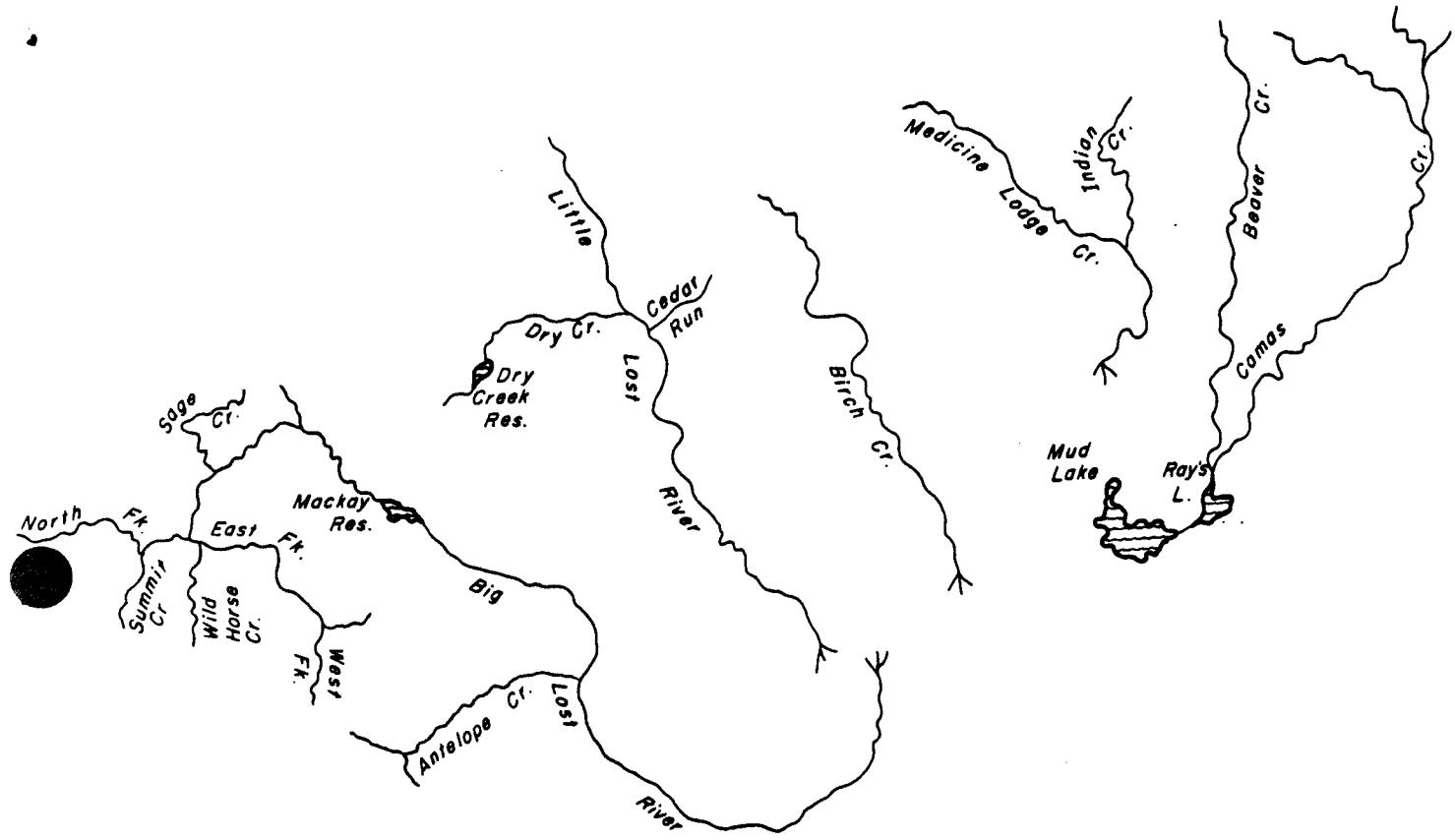
Drainage: South Fork Snake River

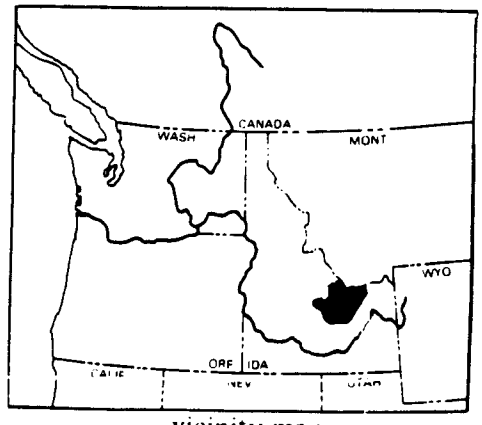
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Mouth to Heise	22.8/1072	coldwater	yield	cutthroat, brown trout, whitefish	wild	year-round	general	Manage for wild cutthroat trout. Catch rates of 0.5 fish/hr. Emphasis on whitefish harvest.
Heise to Irwin	32.8/1532	coldwater	quality	cutthroat, brown trout, whitefish	wild	general	special	Manage for wild cutthroat trout. Catch rates of 0.7 fish/hr. for cutthroat with a 20 percent larger than 16" in the population.
Irwin to Palisades Dam	7.4/348	coldwater	yield/trophy	cutthroat, brown trout, whitefish,	wild	special	general	Maintain brown trout to provide catch rate of 0.1 fish/hr. Improve cutthroat to produce catch rate of 0.4 fish/hr. on wild fish.
				lake trout	hatchery			
Palisades Reservoir	/16150	coldwater	yield	cutthroat, brown trout, lake trout	hatchery/wild wild hatchery	year-round	general	Put-and-grow fishery for cutthroat and and lake trout. Only fine-spotted Snake River cutthroat will be stocked. Brown trout are all wild fish. Maintain average size of 14" and improve catch rates to 0.5 fish/hr. with additional stocking.
Dry Bed	32/325	coldwater	yield	rainbow, cutthroat, brown trout, whitefish	hatchery wild	year-round	general	Put-and-grow fishery below Lewisville for rainbow. Brown, cutthroat, and whitefish maintained by recruitment from South Fork. Salvage season during April above Lewisville. Catch rates of 0.6 fish/hr.

Drainage: South Fork Snake River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Burns, Pine, Pritchard, and Palisades creeks	38/79	coldwater	preservation	cutthroat	wild	restricted	general	Manage for spawning and rearing habitat. Also used as areas for population maintenance stocking. Catch rate of 1.0 fish/hr.
Stump, Crow, and Tincup creeks and their tributaries	57/122	coldwater	yield	cutthroat	wild/hatchery	general	general	Population maintenance stocking areas.
All other tributaries	354/607	coldwater	yield	cutthroat, brook trout, brown trout	wild	general	general	Maintain wild populations of trout. Supplemental put-and-take fishery in Fall and Rainey creeks only. Enhance habitat and improve passage for cutthroat.
Upper and Lower Palisades lakes	/16	coldwater	quality	cutthroat	wild	general	general	Maintain catch rate of 1.0 fish/hr.

SINKS DRAINAGES





vicinity map

33. 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, 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 areas. 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, cold, wintertime air temperatures often cause streams to become icebound and leave their channels. Severe habitat degradation has occurred to most streams. Current grazing levels inhibit recovery.

Diversion into irrigation canals often dewaters the lower segment of most drainages. Productivity is generally high due to large amounts of groundwater input. Stream improvement structures to offset losses of riparian habitat due to grazing on lower Birch Creek and Summit (Little Lost River drainage) Creek have provided 100 percent to 400 percent increases in trout populations.

(1) Big Lost River

The Big Lost River is the largest tributary to the Sinks and includes Mackay Reservoir, Antelope, Summit, and Wildhorse creeks and the Copper Basin area as major waters. Estimated fishing effort in 1986 was 11,500 angler days for the drainage above Mackay Reservoir, 1,300 angler days below the reservoir, and 11,900 angler days in 1984 for Mackay 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. 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 majority of fish caught with some brook trout, kokanee and wild rainbow 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 percent of the channel. Species caught are rainbow trout, brook trout, and whitefish with catch rates of about 1.0 fish/hour. Fish from Mackay Reservoir produce an excellent fishery immediately below the dam. Wild rainbow and brook trout provide the majority of the fishery, but their numbers have declined since the mid-70s when flood control work was performed. Large numbers of fish are lost annually to irrigation canals. No fishing is allowed within the boundaries of the INEL site.

The Big Lost River drainage above Mackay Reservoir is affected by irrigation diversion on private land and overgrazing on federal land. Some bank stabilization and stream habitat improvement work has been done in the past three years. Little is currently known about the status of the fishery in this area, although the upper Big Lost drainage (which includes the Copper Basin area) is a popular recreation area.

(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 most streams of this drainage. Native cutthroat remain in only a few tributaries. No information is available on angler use and harvest. Creel checks show catch rates averaging 1.3 trout/hour over the last five years.

(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. Catch rates from 1972 to 1980 averaged 1.3 trout/hour, indicating the Birch Creek fishery is stable. Birch Creek is primarily a hatchery catchable fishery although a creel census during 1982 indicated a 46 percent wild rainbow contribution.

(4) Medicine Lodge Creek

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 percent 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.

(5) Camas Creek

The Camas Creek drainage includes Mud Lake and Beaver Creek 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. 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 checks show catch rates averaging 0.86 trout/hour and ranging up to 1.8 trout/hour in some tributaries during the last five years. The majority of the fish caught are wild rainbow.

Mud Lake originally contained large numbers of cutthroat trout. Presently, it supports a mixed warmwater fishery with yellow perch, largemouth bass, bluegill, and brown bullhead. 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 fluctuating water levels and low winter dissolved oxygen have greatly decreased the suitability for trout. High spring water levels have improved the perch and bass populations in the lake, and angler use and harvest have increased rapidly since 1982. Bluegill were planted in 1983 and 1985, and no information on success is available. Limited current angler use and harvest information is available from Mud Lake. Limiting factors for fishery development are drawdown and low dissolved oxygen when ice covered.

B. Problems and Programs

(1) **PROBLEM** - Little useful information exists for angler use and harvest, or fish populations and distribution, on streams of the Sinks drainages.

PROGRAM - Initiate creel census and fish population surveys of all the Sinks drainages.

(2) **PROBLEM** - Drawdown of Mud Lake dewaters stream habitat in Camas Creek below Bybee Wells and Independent Ditch below Buck Springs; suckers and chubs invade the Camas Creek fishery.

PROGRAM - Investigate the feasibility of a water level maintenance dam and rough fish migration block at the mouth of Camas Creek.

(3) **PROBLEM** - Livestock use has resulted in loss of riparian habitat and fish populations in large segments of all drainages on federal lands.

PROGRAM - Identify areas of overgrazing and riparian habitat damage. Develop programs to halt and reverse

trend in habitat losses with appropriate federal land management agencies (i.e., BLM and USFS).

(4) **PROBLEM** - Number of largemouth bass, bluegill, and crappie are below desired levels for a quality fishery in Mud Lake.

PROGRAM - Determine the limiting factors. Continue to supplement the lake with additional fish as they are available. Initiate creel census to determine angler use and harvest.

(5) **PROBLEM** - INEL is closed to public access. A major unscreened diversion on INEL diverts game fish from the river which are lost permanently from public waters.

PROGRAM - Initiate program to block downstream migration of game fish onto the INEL site. Funding should be provided by INEL due to their trespass and diversion activities.

(6) **PROBLEM** - Little Lost River causes damage to private property due to winter flooding which results from ice jams. United States Soil Conservation Service has initiated a flood control project whereby the lower ten miles of Little Lost River will be annually dewatered.

PROGRAM - Work with BLM and SCS to ensure adequate mitigation measures for the Little Lost River take place on Sawmill Creek to fully offset the lost productivity.

(7) **PROBLEM** - Spring Creek (tributary to Big Lost River) historically had large brook trout. Water diversions and overharvest have eliminated those stocks.

PROGRAM - Transplant brook trout from Big Lost River to Spring Creek. Determine the reasons for the decline. Initiate special regulations if overharvest is a problem.

(8) **PROBLEM** - Year-long fishery from Moore Diversion to INEL boundary may be overharvesting large, mature rainbow prior to spawning in spring.

PROGRAM - Determine the need to close fishery during February through Memorial Day. Identify spawning areas and initiate redd counts to document improvement.

(9) **PROBLEM** - There are waters which have no fisheries.

PROGRAM - Investigate water qualities in Moore gravel pond and Summit Creek Reservoir for suitability for rainbow trout introductions.

C. Management Direction

Drainage: Sinks - Big Lost River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Big Lost River to INEL boundary	5/24	coldwater	preservation	rainbow, brook trout, whitefish	wild	closed	closed	All access and fishing closed by INEL. Obtain mitigation for losses to unauthorized flood diversion by the INEL.
INEL boundary to Moore Diversion	22/106	coldwater	yield	rainbow, whitefish, brook trou' brown trout	wild/hatchery	year-round	general	Put-and-take fishery for rainbow due to dewatering. Catch rate of 0.5 fish/hr. Establish brown trout through fingerling introduction.
Moore Diversion to Mackay Dam	20/96	coldwater	yield	rainbow, whitefish	wild/hatchery	general/ whitefish	general	Maintain wild populations of trout. Supplemental put-and-take fishery in areas of intense effort and poor habitat to maintain catch rates of 1.0 fish/hr.
Mackay Reservoir	/1000	coldwater	yield	rainbow, kokanee, brook trout	hatchery	general + winter (Jan-Feb)	general	Put-and-take fishery for rainbow. Manage for catch rates of 0.8 fish/hr. on 11" fish. Use catchables as necessary to offset years of fingerling loss due to drawdown.
From Chilly Bridge, upstream, including tributaries	216/487	coldwater	yield	rainbow, brook trout, whitefish	wild/hatchery	general/ whitefish	general	Maintain wild populations of rainbow and brook trout to produce catch rates of 1.0 fish/hr. Use supplemental put-and-take stocking in heavy use areas; winter whitefish season. Evaluate return to creel of catchable plants.
All other tributaries	61/77	coldwater	yield	rainbow, brook trout	wild/hatchery	general	general	Maintain wild populations of trout to produce catch rates of 1.2 fish/hr. Use supplemental put-and-take stocking in areas of high effort. Evaluate return to the creel of catchable plants.

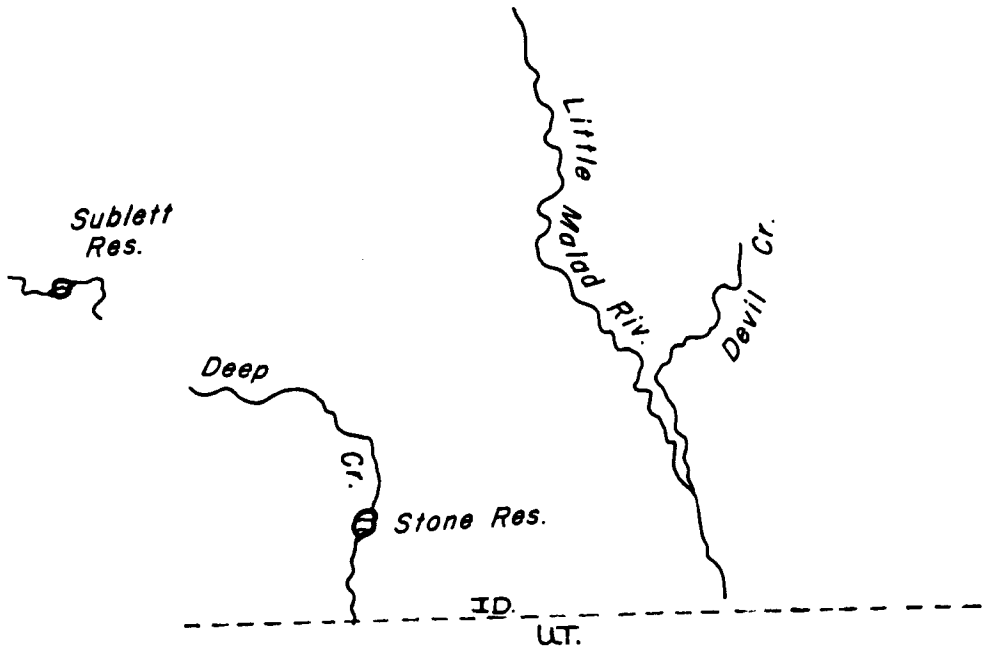
Drainage: Sinks - Little Lost, Birch Creek, and Camas Creek

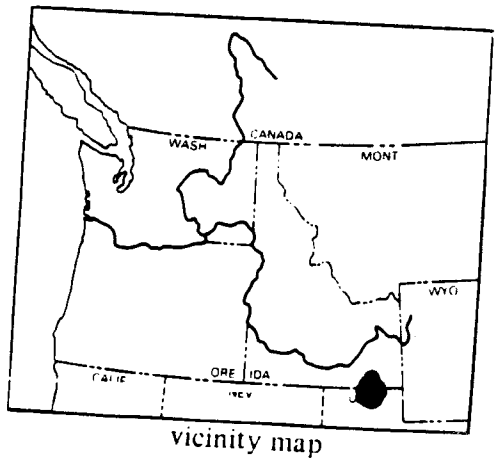
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Little Lost River and tributaries	110/180	coldwater	yield	rainbow, brook trout, bull trout	wild	general	general	Maintain wild population of rainbow and brook trout, and enhance populations of bull trout to provide catch rates of 1.2 fish/hr. Protect bull trout spawning areas as needed to maintain and improve this stock of fish. Evaluate status of bull trout.
Birch Creek and tributaries	32/6[illegible]	coldwater	yield	rainbow, brook trout	wild/hatchery	general	general	Put-and-take fishery to supplement wild populations. Maintain catch rates of 1.0 fish/hr.
Medicine Lodge Creek and tributaries	64/95	coldwater	yield	rainbow, brook trout, cutthroat	wild	general	general	Maintain populations of wild trout. Use supplemental put-and-take stocking on Medicine Lodge Creek only. Implement restrictive seasons on tributaries to protect spawners where necessary. Catch rates of 0.8 fish/hr.
Mud Lake	/7000	warmwater	yield	perch, largemouth bass, bullhead, crappie, channel catfish, bluegill	wild	year-round	general	Provide mixed warmwater fishery primarily supported by perch. Use supplemental stocking to develop self-sustaining populations. Catch rates of 1.5 fish/hr.
Camas Creek, from Mud Lake to Jefferson County line	12/79	coldwater	yield	rainbow, brown trout	hatchery	year-round	general	Put-and-take fishery using catchable rainbow and fingerling brown trout. Catch rates of 0.5 fish/hr.
Camas National Wildlife Refuge	5/600	coldwater/ warmwater	waterfowl nesting	rainbow, brook trout, bullhead, perch	wild	closed	closed	Closed for waterfowl sanctuary. Evaluate fishery in refuge waters and develop plan to allow angler utilization.

Drainage: Sinks - Camas Creek and Beaver Creek

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Remainder of Camas Creek and tributaries	65/187	coldwater	yield	rainbow, brook trout, cutthroat,	wild/hatchery	general	general	Maintain present wild trout to provide catch rates of 1.0 fish/hr. Put-and-grow fishery for browns. Identify and protect cutthroat spawning and rearing areas. Catch rates of 0.8 fish/hr.
Beaver Creek, below Stoddard Creek	27/39	coldwater	yield	rainbow, brook trout,	wild/hatchery	year-round	general	Maintain wild populations and use supplemental put-and-take stocking to provide catch rates of 0.6 fish/hr.
Beaver Creek, above Stoddard Creek, and all tributaries	13/18	coldwater	yield	rainbow, brook trout, cutthroat	wild	general	general	Provide catch rates of 1.2 fish/hr. on wild fish. Identify and protect spawning and rearing areas.
Alpine lakes	/290	coldwater	yield	rainbow, cutthroat, brook trout, golden trout, greyling hybrids	hatchery/wild	general	general	Maintain present fishery by use of hatchery fry where needed.

MALAD RIVER





vicinity map

34. MALAD RIVER DRAINAGE

A. Overview

Streams in the Malad River drainage total 83 miles and cover 86 surface acres. The Malad River's main stream is characterized by high silt concentrations, low water temperatures and low trout populations. These conditions restrict the expansion of present trout populations.

Reservoirs in the drainage cover 814 surface acres. These reservoirs are used for irrigation water storage, are drawn down during the irrigation season and refilled in the winter and spring. Two reservoirs, Daniels and Devils Creek, have a minimum pool for fish which was incorporated as part of the project. If water quality and quantity is adequate, the reservoirs are planted annually with hatchery rainbow trout; in addition, populations of spiny-rayed fishes occur in some. Collectively, these reservoirs provide a significant amount of fishing opportunity. However, little is known about the harvest of fish or fishing pressure.

Daniels Reservoir recently has been managed as a trophy trout fishery with a two fish limit. Increased numbers of Utah suckers appear to have reduced both the trout growth and catch. Consequently, this management needs to be reevaluated for alternatives to provide trophy trout.

B. Problems and Programs

(1) **PROBLEM** - Little is known regarding the fishing pressure and catch of both hatchery rainbow trout and spiny rays from most reservoirs.

PROGRAM - Evaluate fishing pressure and catch at major fishing reservoirs in the drainage.

(2) **PROBLEM** - Populations of nongame fish at Daniels Reservoir have increased. Catch rate and growth of trout at Daniels Reservoir has declined.

PROGRAM - Assess the growth and catch rates of trout and the applicability of the trophy management with bag restriction. Evaluate nongame fish numbers and the need to control them.

(3) **PROBLEM** - Reservoir drawdown reduces the populations of game fish during low water years.

PROGRAM - Work with irrigation companies to prevent drawdown to levels that affect game fish populations.

C. Management Direction

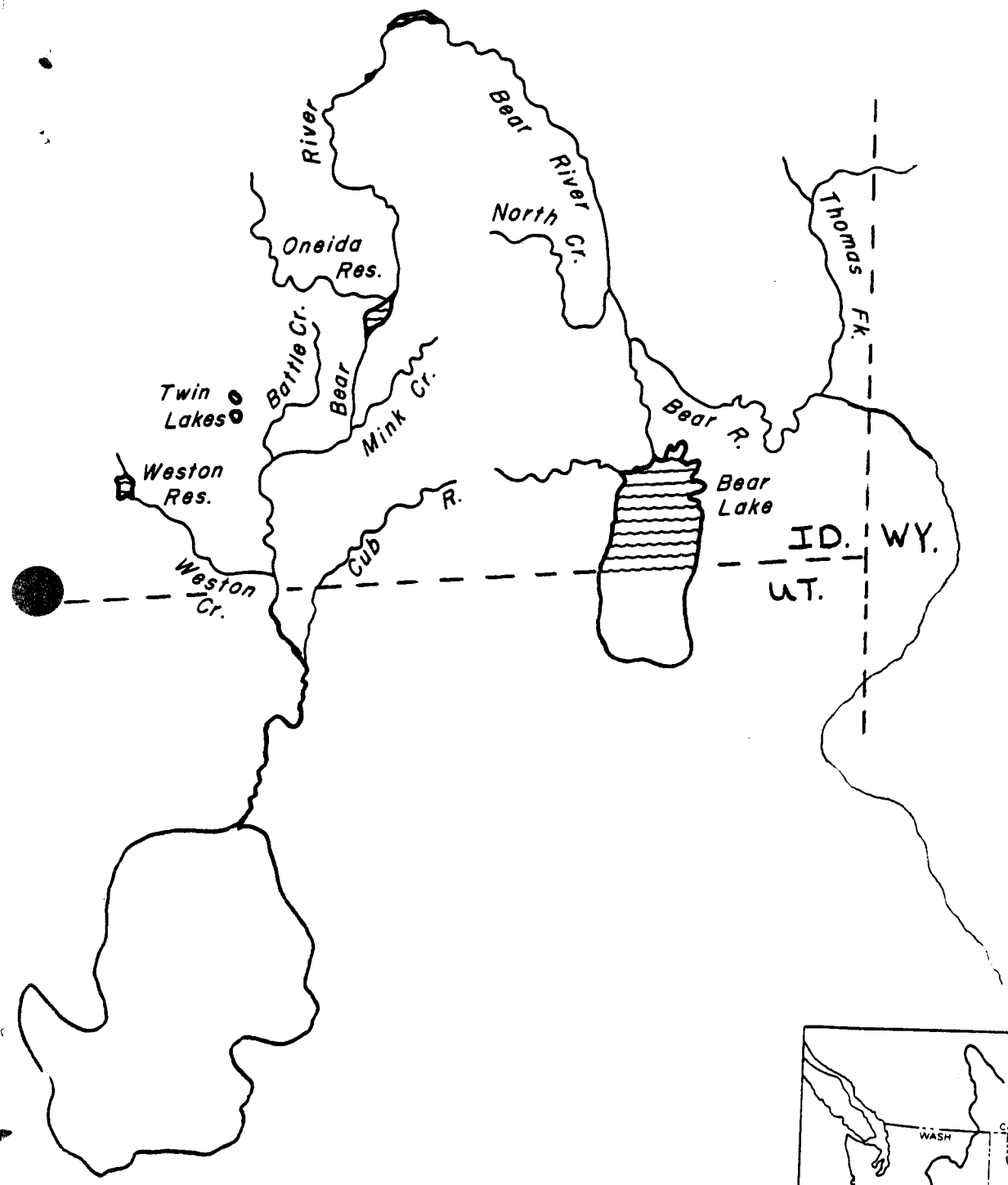
Drainage: Malad River

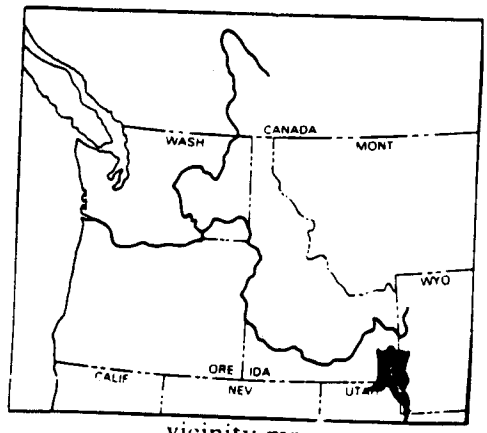
Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Malad River	10/30	coldwater	yield	rainbow	wild	general	general	Maintain mix of warmwater and coldwater species.
	8/23	warmwater	yield	brown bullhead, green sunfish				
Malad River tributaries	65/33	coldwater	yield	rainbow, cutthroat	wild	general	general	Maintain populations of wild rainbow and cutthroat in small streams.
Daniels	/375	coldwater	trophy	rainbow	hatchery	general	special	Increase catch rate from 0.2 to 0.3 fish/hr. Evaluate trophy fishery from standpoint of size of trout caught, effects of nongame fish populations on trout, and effects on fishing pressure both here and at other area reservoirs. Maintain general season fishery to spread opening weekend pressure. Eradicate nongame fish during this planning period.
Deep Creek and Devils Creek reservoirs	/322	coldwater	yield	rainbow	hatchery	general	general	Put-and-grow fishery. Maintain catch rate of 0.3 fish/hr.
Pleasantview Reservoir	/32	coldwater/ warmwater	yield	rainbow, largemouth bass	hatchery/wild	year-round	general	Maintain year-round fishing. Provide mixed catch of warmwater and coldwater fish.
Samaria Reservoir	/10	warmwater	yield	largemouth bass, green sunfish	wild	year-round	general	Maintain year-round fishing to provide catch of warmwater species.
Crowthers Reservoir	/40	coldwater/ warmwater	yield	rainbow, yellow perch,	hatchery/wild	special	general	Maintain mix of warmwater fish supplemented with catchable rainbow. Provide ice fishing season.

Drainage: Malad River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
St. Johns Reservoir	/35	coldwater/ warmwater	yield	rainbow, largemouth bass, bluegill	hatchery/wild	special	general	Maintain mix of warmwater fish supplemented with catchable rainbow. Provide ice fishing season.

BEAR RIVER





vicinity map

35. BEAR RIVER AND TRIBUTARIES

A. Overview

The Bear River and its major tributary streams are 524 miles in length. In addition, there are a number of irrigation storage reservoirs in the drainage covering 1,316 acres. Bear Lake, the largest lake in the drainage, covers 32,000 surface acres in Idaho.

Habitat for trout in the Bear River is marginal due to irrigation withdrawal and inadequate flows from reservoirs. The power facilities have generally benefited fishing as reservoirs associated with them have tended to settle out silt, thereby increasing the catch of trout downstream. The river receives the heaviest fishing pressure downstream from Alexander and Oneida Dams and in the Black Canyon area. Fish caught in these areas are primarily hatchery rainbow trout.

Main tributary streams of the Bear River include the Malad River, Thomas Fork, Bloomington, Paris, Montpelier, Georgetown, Eight-Mile, Williams, and Cottonwood creeks and the Cub River. St. Charles Creek is a major spawning stream for both rainbow and cutthroat from Bear Lake. Headwater tributaries of Thomas Fork Creek contain populations of the unique Bonneville cutthroat, and the upper ten miles of the Cub River contains wild trout populations and receives heavy fishing pressure.

Generally, tributaries to the Bear River support populations of wild trout, either rainbow, cutthroat, or eastern brook. The highest concentrations of trout are found in the middle and upstream sections. Trout populations in the lower sections are adversely affected by low summer flows as a result of irrigation demands. Catchable rainbow trout are planted in accessible streams where habitat conditions are good and returns favorable.

A number of irrigation reservoirs support viable game fish populations in the Bear River drainage. If year-to-year water levels are sufficient, they are planted with hatchery rainbow trout. In addition, a high percentage contain some type of spiny-rayed game fish population, such as bluegill, yellow perch, and largemouth bass. Fishing regulations covering them are designed to provide year-round fishing opportunity and still spread out early general season fishing pressure. Collectively, these reservoirs provide a significant amount of regional fishing opportunity. However, little is known regarding the returns to the creel of planted trout or the overall contribution of the spiny-rayed fishes.

Bear Lake which straddles the Idaho-Utah border historically contained populations of the Bear Lake cutthroat trout which matured at a large size. Due to overfishing, irrigation diversions and other factors, this population was reduced to a low level. In cooperation with the Utah Department of Natural Resources, a joint cutthroat enhancement project is being conducted at Bear Lake.

This project entails taking eggs from mature fish which ascend St. Charles and Swan Creek to spawn, raising the young fish in a hatchery for about one year then planting them back in Bear Lake. In addition, Bear Lake contains four species of endemic fish.

B. Problems and Programs

(1) **PROBLEM** - Most sections of the Bear River contain few trout because of high silt concentrations.

PROGRAM - Support improved land management practices which would lower the river silt concentration, thereby making conditions better for trout.

(2) **PROBLEM** - The Bonneville cutthroat is a unique subspecies with limited distribution in Idaho.

PROGRAMS - (1) Cooperate with USFS to protect Bonneville cutthroat habitat and (2) stock no other species of trout in waters occupied by Bonneville cutthroat.

(3) **PROBLEM** - Insufficient information is available for management of the cutthroat population and the endemic fish species at Bear Lake.

PROGRAM - Continue cooperation with the Utah Department of Natural Resources to assess both trout and endemic fish populations at Bear Lake. Initiate an early life history study of wild cutthroat in St. Charles Creek.

(4) **PROBLEM** - Irrigation diversions on St. Charles Creek may limit recruitment to Bear Lake of cutthroat.

PROGRAM - Develop plans for screening, procure funds, and construct.

C. Management Direction

Drainage: Bear River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
From Alexander to Bear Lake	33/462	coldwater	yield	rainbow, whitefish	hatchery/wild	year-round	general	Look for possible game fish species which will do well in a high turbidity/low temperature stream environment.
Bear Lake tributaries	206/574	coldwater	yield	rainbow, whitefish, cutthroat, brook trout	hatchery/wild	general	general	Maintain spawning runs and numbers of both rainbow and cutthroat in suitable tributaries. Stock catchable rainbow as needed in areas receiving heavy fishing pressure. Maintain suitable stream flows and take cutthroat eggs as needed from spawning runs.
Bear Lake to Border	46/506	coldwater	yield	whitefish, cutthroat	wild	year-round	general	Look for game fish species which will do well in high turbidity/low temperature stream environment. Support improved water quality measures.
Tributaries, Bear Lake to Border	44/69	coldwater	yield	cutthroat, whitefish	wild	general	general	Maintain pure populations of Bonneville cutthroat and populations of other game fish species.
Bear Lake	/32000	coldwater	trophy	cisco, whitefish, cutthroat, mackinaw, rainbow	wild hatchery/wild	year-round	special	Maintain tributary stream habitat and spawning runs of wild cutthroat. Increase cutthroat catch by releasing hatchery fish of the right size at the most appropriate time and place. In cooperation with Utah, continue present evaluation of the fishery. Present goals are a harvest of 15,000 fish at 0.3 fish/hr. and 2 pounds average size.

Drainage: Bear River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
St. Charles Creek	/10	coldwater	preservation yield	cutthroat, rainbow, brook	wild hatchery wild	restricted	restricted	Evaluate status of spawning. Screen irrigation diversion. Phase out rainbow catchable program. Construct new trap for intercepting spawners.
Winder, Glendale, and Lemont reservoirs	/512	warmwater/	yield	rainbow, bluegill, largemouth bass	hatchery/wild	general	general	Put-and-take fishery.
From Utah state line to Mink Creek	26/364	coldwater/ warmwater	yield	whitefish rainbow	wild/hatchery	year-round	general	Stablize water flows; encourage more whitefish harvest. Attempt to establish populations of game fish that do well in a cool temperature, highly turbid environment.
Bear River tributaries, Utah border to Mink Creek	62/85	coldwater/ warmwater	yield	whitefish, cutthroat, brook trout	wild/hatchery	general	general	Maintain catch of wild fish from tributary streams. Put-and-take fishery in areas of heavy fishing pressure.
From Mink Creek to Oneida Dam	8/112	coldwater	yield	rainbow, brown trout, whitefish	hatchery/wild	general	general	Work with the Utah Power and Light Company to stabilize water flow during peak fishing periods. Encourage more whitefish harvest.
From Oneida Dam backwaters to Black Canyon	25/425	coldwater	yield	whitefish rainbow	wild/hatchery	year-round	general	
Tributaries, Oneida to Black Canyon	63/104	coldwater	yield	rainbow, cutthroat, brook trout	hatchery/wild	general	general	Provide mix of trout species and stock catchable rainbow trout as needed.

Drainage: Bear River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Black Canyon	5/43	coldwater	yield	rainbow, cutthroat whitefish	hatchery wild	general	general	Put-and-take fishery.
From Grace to Alexander	6/108	coldwater	yield	rainbow whitefish	hatchery wild	general	general	Put-and-take fishery.
Montpelier Reservoir	/105	coldwater	yield	rainbow	hatchery	year-round	general	Put-and-take fishery.
Johnson Reservoir	/157	warmwater/ coldwater	yield	largemouth bass, perch, rainbow	wild/ hatchery	year-round	general	Maintain mix of warmwater fish supplemented with put-and-take trout fishery. Continue year-round fishing.
Weston Reservoir	/82	warmwater/ coldwater	yield	largemouth bass, perch, rainbow	wild/ hatchery	year-round	general	Maintain mix of warmwater fish population supplemented with put-and-take trout fishery. Continue year-round fishing.
Oxford and Nash reservoirs	/33	warmwater	yield	largemouth bass, perch bluegill	wild	year-round	general	Maintain fishery for warmwater fish. Continue year-round fishing. Attempt to acquire permanent access.
Twin Lakes	/200	warmwater/ coldwater	yield	largemouth bass, bluegill, rainbow	wild/	general	general	Maintain overall catch rate of 0.4 fish/hr. Provide and maintain mixed fishery for bluegill and largemouth bass. Put-and-take trout fishery. Maintain general season to spread opening weekend pressure.

Drainage: Bear River

Water	Miles/Acres	Fishery Type	Fishery Classification	Species	Hatchery/Wild	Season	Regulations	Management Direction
Foster and Treasureton reservoirs	/190	coldwater/ warmwater	yield	rainbow, perch, bass	hatchery/wild	special	special	Put-and-grow trout fishery. Provide winter ice fishing season plus general. fishing to provide angling opportunity and spread out opening weekend pressure. Increase overall catch rate at Foster Reservoir to 0.3 fish/hr. and maintain catch rate of 0.3 fish/hr. at Treasureton Reservoir.
Condie Reservoir	/118	coldwater/ warmwater	yield	rainbow, bluegill, largemouth bass	hatchery/wild	special	special	Maintain mix of warmwater game fish supplemented by catchable rainbow. Provide ice fishing season plus general season.
Alexander Reservoir	/1070	warmwater	yield	perch, walleye	wild	year-round	general	Attempt to establish a better fishery.
Oneida Reservoir	/480	warmwater	yield	perch walleye	wild	year-round	general	Continue attempts to establish better fishery by annual plants of walleye fry. Continue annual assessments of fish population by creel checks and gill netting. Continue assessment of walleye effects on yellow perch populations.
Little Valley Reservoir	/60	coldwater	yield	rainbow cutthroat	hatchery/wild	general	general	Attempt to acquire some type of permanent access to the reservoir.

Appendix 1. A list of Idaho fishes and their distribution by drainage.

Family		Species		Drainage[1]								
Common Name	Scientific Name	Common Name	Scientific Name	Origin[2]	K	P	S	Pe	Sb	Se	B	I
Lamprey	Petromyzontidae	Pacific lamprey	Entosphenus tridentatus	N		X			X			
Sturgeon	Acipenseridae	White sturgeon	Acipenser transmontanus	N	X				X			
Trout	Salmonidae	Lake whitefish	Coregonus clupeaformes	I		X						
		Coho salmon	Oncorhynchus kisutch	I					X	X		
		Sockeye salmon	Oncorhynchus nerka	N					X			
		Kokanee	Oncorhynchus nerka	N	X	X	X		X	X		
		Chinook salmon	Oncorhynchus tshawytscha	N					X			
		Bear Lake whitefish	Prosopium abyssicola	N								X
		Pygmy whitefish	Prosopium coulteri	N		X						
		Bonneville cisco	Prosopium gemmiferum	N								X
		Bonneville whitefish	Prosopium spilonotus	N								X
		Mountain whitefish	Prosopium williamsoni	N	X	X	X		X	X	X	X
		Golden trout	Salmo aguabonita	I		X	X		X	X		X
		Cutthroat trout	Salmo clarki									
		Westlope	S.C. lewisi	N	X	X	X		X			
		Yellowstone	S.C. bouvieri	N						X		X
		Bonneville	S.C. Utah	N							X	
		Bear Lake	S.C. sp.	N						X[I]	X	
		Pine spot (Snake River)	S.C. sp.	N						X		
		Rainbow trout	Salmo gairdneri	N	X[I]	X	X	X	X	X[I]	X[I]	X[I]
		Brown trout	Salmo trutta	I		X			X	X	X	
		Redband trout	Salmo sp.	N					X			
		Sunapee trout	Salvelinus alpinus	I					X			
		Brook trout	Salvelinus fontinalis	I	X	X	X	X	X	X	X	X
		Bull trout	Salvelinus confluentus	N	X	X	X		X			X
		Lake trout	Salvelinus namaycush	I		X			X	X	X	
		Arctic grayling	Thymallus arcticus	I			X		X	X		X
Pike	Esocidae	Northern pike	Esox lucius	I		X	X					

Appendix 1. Continued.

Family		Species		Drainage[1]							
Common Name	Scientific Name	Common Name	Scientific Name	Origin[2]	K	P	S	Pa	Sb	Se	B	I
Minnow	Cyprinidae	Chiselmouth	Acrocheilus alutaceus	N					X			
		Goldfish	Carassius auratus	I					X			X
		Lake chub	Couesius plumbeus	N	X							
		Carp	Cyprinus carpio	I				X	X	X	X	
		Utah chub	Gila atraria	N					X	X	X	X[I]
		Tui chub	Gila bicolor	I					X			
		Leatherside chub	Gila copei	N					X	X	X	
		Peamouth	Mylocheilus caurinus	N	X	X	X		X			
		Fathead minnow	Pimephales promelas	I						X		
		Northern squawfish	Ptychocheilus oregonensis	N	X	X	X	X	X			
		Longnose dace	Rhinichthys cataractae	N	X	X	X	X	X	X	X	X
		Leopard dace	Rhinichthys falcatus	N					X			
		Speckled dace	Rhinichthys osculus	N			X	X	X	X	X	X
		Redside shiner	Richardsonius balteatus	N	X	X	X	X	X	X	X	X
		Tench	Tinca tinca	I		X	X					
		Spottail shiner	Notropis hudsonius	I							X	
Sucker	Catostomidae	Utah sucker	Catostomus ardens	N						X	X	X
		Longnose sucker	Catostomus catostomus	N	X	X	X					
		Bridgelip sucker	Catostomus columbianus	N			X	X	X			
		Bluehead sucker	Catostomus discobolus	N						X	X	
		Largescale sucker	Catostomus macrocheilus	N	X	X	X	X	X			
		Mountain sucker	Catostomus platyrhynchus	N					X	X	X	
Catfish	Ictaluridae	Black bullhead	Ictalurus melas	I			X		X			
		Brown bullhead	Ictalurus nebulosus	I	X	X	X	X	X	X	X	
		Channel catfish	Ictalurus punctatus	I					X	X		
		Tadpole madtom	Noturus gyrinus	I					X	X		
		Flathead catfish	Pylodictis olivaris	I					X	X		
		Blue catfish	Ictalurus furcatus	I					X	X		
Trout/perch	Percopsidae	Sand roller	Percopsis transmontana	N					X	X		
Cod	Gadidae	Burbot	Lota lota	N	X						X	

Appendix 1. Continued.

Family		Species		Drainage[1]								
Common Name	Scientific Name	Common Name	Scientific Name	Origin[2]	K	P	S	Pe	Sb	Sa	B	I
Livebearer	Poeciliidae	Mosquitofish	Gambusia affinis	I						X	X	
		Guppy	Poecilia reticulata	I[3]							X	X
		Swordtail	Xiphorus helleri	I[3]							X	X
		Platy	Xiphorus ____	I[3]							X	X
Sunfish	Centrarchidae	Green sunfish	Lepomis cyanellus	I							X	
		Pumpkinseed	Lepomis gibbosus	I	X	X	X	X	X			
		Warmouth	Lepomis gulosus	I					X			
		Bluegill	Lepomis macrochirus	I					X	X	X	
		Smallmouth bass	Micropterus dolomieui	I					X			
		Largemouth bass	Micropterus salmoides	I	X	X	X	X	X	X	X	
		Black crappie	Pomoxis nigromaculatus	I	X	X	X	X	X	X	X	X
		White crappie	Pomoxis annularis	I					X			
Perch	Percidae	Yellow perch	Perca flavescens	I	X	X	X		X	X	X	X
		Walleye	Stizostedion vitreum	I					X			
Sculpin	Cottidae	Mottled sculpin	Cottus bairdi	N					X	X	X	
		Piute sculpin	Cottus beldingi	N					X	X	X	
		Slimy sculpin	Cottus cognatus	N	X	X			X			
		Shorthead sculpin	Cottus confusus	N			X		X			X
		Bear Lake sculpin	Cottus extensus	N							X	
		Shoshone sculpin	Cottus greenei	N					X			
		Wood River sculpin	Cottus leiopomus	N					X			
		Torrent sculpin	Cottus rhotheus	N	X	X	X	X	X			
Cichlids[3]	Cichlidae	Java tilapia	Tilapia mossabica	I[3]						X		X
		Zill's tilapia	Tilapia zillii	I[3]						X		X
		Convict cichlid	Cichlasoma nigrofasciatum	I[3]						X		X

[1]K = Kootenai drainage, P = Pend Oreille drainage, S = Spokane drainage, Pe = Palouse drainage, Sb = Snake River below Shoshone Falls, Sa = Snake River above Shoshone Falls, B = Bear River drainages, and I = Independent drainages.

[2]N = native and I = introduced.

[3]Confined to geothermal waters.

Appendix 2. Management and research program needs.

I. Fishery Management and Support Services

A. Computerized statewide resident fishery data base to:

1. Prevent "loss" of management data over time.

2. Provide fast retrieval of fishery data.

B. Computerized anadromous fishery data base to greatly facilitate yearly run projections and status comparisons.

C. Development of computerized fishery models for:

1. Specific, large or important fisheries, such as Pend Oreille Lake and Henrys Lake.

2. Representative fishery types, such as north Idaho largemouth bass and westslope cutthroat.

D. Fishery management and research laboratory to provide support work on:

1. Fish tagging and marking.

2. Age and growth analyses.

3. Limnology.

4. Food organism sampling.

II. Fish Stock Evaluations

A. Salmonid species and strains to provide:

1. Improved return to creel.

2. Greater fishing opportunity.

3. More effective cost:benefit ratio for hatchery rearing.

4. Better survival in degraded habitat.

5. Planktivore with good natural reproduction rate.

6. Improved survival of fingerling releases in small lakes and reservoirs.

7. Improved trout fishery in Salmon River.

8. Improved stocks in alpine lakes.

9. Piscivore for Ririe Reservoir and Island Park Reservoir.

10. Increased longevity in Willow Creek (Region 6) drainage.

11. Brown trout for Henrys Fork below Mesa Falls.

12. Late maturing brook trout for Henrys Lake (in progress).

13. Sterile cutthroat-rainbow hybrids at Henrys Lake (in progress).

14. Species tolerant of high turbidity and low temperature for Bear River.

B. Warmwater species to provide:

1. Added fishing opportunity.

2. New warmwater species for Bliss Reservoir.

3. Suitable species for Mud Lake, lower Blackfoot, portions of Snake River.

C. Forage species development for:

1. Smallmouth bass.

2. Snake River reservoirs.

III. Fishery Inventories, Surveys, Status Determinations

A. Pahsimerol River Resident Trout.

B. Hells Canyon sturgeon (in progress).

C. Snake River from Lower Salmon Falls Dam to Milner Reservoir backwaters.

D. Snake River from American Falls Reservoir to Henrys Fork/south fork confluence.

E. Teton River basin.

F. Sinks drainages.

G. White sturgeon in Salmon River.

IV. Hatchery Operations

A. Develop trout stocking guidelines manual of stocking rates for different species and strains for representative waters.

B. Determine feasibility and effectiveness of white sturgeon propagation and stocking. Initiated in 1985.

C. Research on improved husbandry and disease control.

V. New Fishery Development

A. Create new fishing reservoirs in areas of high use of limited fishing opportunity.

VI. Miscellaneous Needs

A. Update limnological knowledge of Dworshak Reservoir.

B. Reduce kokanee loss through Dworshak Dam.

C. Improve alpine lake fish population control techniques. In progress.

D. Improve anadromous fish return rates to Lemhi River.

E. Determine limnology and population dynamics for Snake River reservoirs.

F. Investigate restoration of lower Henrys Fork fishery cooperatively with Bureau of Reclamation (Teton Dam failure impact).

G. Determine respective contributions of Idaho and Wyoming to Salt River drainage and Palisades Reservoir fisheries.

Appendix 3. A list of fish species that are engangered, threatened, or of special concern in Idaho.

LEGEND

Status

E . . . . . .Endangered
T . . . . . .Threatened
SC . . . . . Of Special Concern

Threats

1. The present or threatened destruction, modification, or curtailment of its habitat or range.

2. Over-utilization for commercial, sporting, scientific, or educational purposes.

3. Disease or predation.

4. The inadequacy of existing regulatory mechanisms.

5. Other natural or manmade factors affecting its continued existence.

6. Other (peripheral, restricted range, etc.).

Definitions

1. Species includes any species, subspecies, race or form of fish which share a common spatial arrangement and interbreed when mature.

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

3. Threatened Species means 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.

4. Species of Special Concern are those whose restricted range, specific habitat requirements, and/or low population numbers makes them vulnerable to elimination or reductions from areas of the state if adverse impacts on habitat or populations occur.

A LIST OF FISH SPECIES THAT ARE ENDANGERED, THREATENED, OR OF SPECIAL CONCERN IN IDAHO.

Common Name	Scientific Name	Status	Threats	Comments
STURGEONS (family Acipenseridae)				
White sturgeon	Acipenser transmontanus	SC	1,6	Additional impoundment of present range could change status to "threatened."
CODFISHES (family Gadidae)				
Burbot	Lota lota	SC	1,6	Restricted range--Kootenai River.
TROUTS (family Salmonidae)				
Chinook salmon, "spring"	Oncorhynchus tshawytscha	SC	1,2,3,4,5	
Chinook salmon, "summer"	Oncorhynchus tshawytscha	T	1,2,3,4,5	Approaching "endangered" status.
Chinook salmon, "fall"	Oncorhynchus tshawytscha	T	1,2,3,4,5	Approaching "endangered" status.
Sockeye salmon	Oncorhynchus nerka	E	1,3,5,6	Restricted range--Redfish Lake.
Steelhead trout	Salmo gairdneri	SC	1,2,3,4,5	Some discrete river stocks may be in "threatened" status.
Redband trout	Salmo sp.	SC	6	Restricted range; status unknown.
Sunapee trout	Salvelinus alpinus aureolis Bean	SC	6	Restricted range--alpine lakes in Sawtooth Range.
Westslope cutthroat	Salmo clarki lewisi	SC	1,2	Sensitive to habitat modification and fishing.
Bonneville cutthroat	Salmo clarki Utah	SC	6	Restricted range--Preuss Creek, Giraffe Creek, Dry Creek.
Yellowstone cutthroat	Salmo clarki bouveri	SC	1,2	Sensitive to habitat modification, hybridization and over harvest.
Bear Lake cutthroat	Salmo clarki ssp.	SC	6	Restricted range--Bear Lake
Snake River (fine spot) cutthroat	Salmo clarki ssp.	SC	6	Restricted range--South Fork Snake River.
Bear Lake whitefish	Prosopium abyssicola	SC	6	Restricted range--Bear Lake.

Common Name	Scientific Name	Status	Threats	Comments
TROUTS (continued)				
(family Salmonidae)				
Bull trout (Dolly Varden)	Salvelinus confluentus	SC	6	Only native fish of this genus. Present in Idaho only as wild, native stocks.
Bonneville cisco	Prosopium gemmiferum	SC	6	Restricted range--Bear Lake.
Bonneville whitefish	Prosopium spilonotus	SC	6	Restricted range--Bear Lake.
MINNOWS				
(family Cyprinidae)				
Leatherside chub	Snyderichthys copei	SC	6	Restricted range--Wood River; status unknown.
SCULPINS				
(family Cottidae)				
Bear Lake sculpin	Cottus extensus	SC	6	Restricted range--Bear Lake.
Shoshone sculpin	Cottus greenei	SC	6	Restricted range--Snake River equifer springs; status unknown.
Wood River sculpin	Cottus leiopomus	SC	6	Restricted range--Wood River; status unknown.
TROUT-PERCHES				
(family Percopsidae)				
Sand roller	Percopsis transmontana	SC	6	Restricted range--Clearwater River near Lewiston.

Appendix 4. Warmwater Enhancement and Establishment Program - 1986-1990.

Region	Water	Number	Existing population
	Smallmouth Bass		
1	Hayden Lake	100,000	
1	St. Joe River (lower)	--	
1	Pend Oreille River	200,000	
1	Cocolala Lake	--	
1	Coeur d'Alene Lake	200,000	
2	Elk Creek Res.	15,000	
4	Milner Res.	200,000	
4	Bliss Res.	100,000	X
5	Snake River (above American Falls)	5,000	
6	Ririe Res.	--	
6	Snake River (below Idaho Falls)	--	
	Alexander Res.	100,000	
	Lower Portneuf	50,000	
	Lower Blackfoot	50,000	
	Lower Bear	50,000	
	Channel Catfish		
1	Cocolala Lake	--	
1	Hauser Lake	--	
1	Lateral Lakes	--	
2	Levee Ponds	300	
3	Lake Lowell	100,000	X
3	Swan Falls Res.	250,000	X
4	Milner Res.	200,000	
4	Murtaugh Res.	20,000	
4	Wilson Lake	20,000	
5	McTucker Ponds	1,000	
	Blue Catfish		
4	Bray Lake	25,000	
4	Milner Res.	200,000	
4	Emerald Lake	50,000	
4	Sand Dunes Res.	20,000	
5	Bear River	5,000	
5	Portneuf River	5,000	
6	Snake River	--	
	Bear River	10,000	
	Portneuf River	10,000	

Appendix 4. Continued.

Region	Water	Number	Existing population
	Bluegill		
1	Hayden Lake	--	
1	Coeur d'Alene Lake	--	
1	Cocolilala Lake	--	
4	Milner Res.	1,000	
6	Roberts Gravel Pit	--	
6	Market Lake	--	
6	Mud Lake	--	
	Crappie		
3	Crane Creek Res.	50,000	X
4	Lower Salmon Falls Res.	1,000	
4	Stone Res.	1,000	X
6	Roberts Gravel Pit	--	X
6	Mud Lake	--	
	Walleye		
4	Salmon Falls Creek Res.	3,400,000	X
5	Oneida Res.	300,000	X

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GLOSSARY

Adfluvial - Fish which rear in lakes and rivers but migrate to tributaries to spawn.

Alpine lakes - High elevation natural lakes in mountainous areas.

Anadromous fish - Salmon and steelhead, fish which spawn in fresh water and rear in the ocean.

Bonus fishery - A fishery managed to provide either greater numbers, greater sizes, or greater variety of fish to the angler.

Catchable - Fish over 6" long.

Differential harvest - To harvest different stocks of the same species at different rates.

Exotic - Species not native to Idaho.

Feral fish - Non-native fish which have acclimated to Idaho waters and have established naturally reproducing populations.

Fingerling - Fish between three and 6" long.

Fry - Fish under 3" long.

Hatchery - All fish produced in hatcheries or by other means of artificial propagation, such as hatching channels or rearing ponds.

Nongame fish - Suckers, carp, squawfish, chubs, minnows.

Policy plan - A PLAN FOR THE FUTURE MANAGEMENT OF IDAHO FISH AND WILDLIFE RESOURCES, Volume 1, "Goals, Objectives, and Policies, 1975-1990," published by the Idaho Fish and Game Commission, 1978.

Problem - A factor which will interfere with or prevent achievement of specific management goals or objectives.

Program - Action or adjustment to be taken by the Department or others to overcome problems.

Proportional Stock Density (PSD) - The PSD is the proportion of fish of quality size in a stock and is expressed as a percentage:

$$PSD = \frac{\text{number equal to or greater than minimum quality length}}{\text{number equal to or greater than minimum stock length}} \times 100$$

Recruitment - Fish becoming available for capture in a fishery, usually young fish growing into a harvestable size.

Resident fish - Nonanadromous fish, fish which spend their entire life in fresh water within or contiguous to Idaho.

Return to creel - The percentage of hatchery-reared fish caught by anglers after the fish have been released.

Salmonid - Fish of the family Salmonidae, including trout, char, salmon, and whitefish.

Stocks - A group of fish within a species which has developed particular genetic characteristics which separates it from others of its species.

Wild fish - All fish of nonhatchery origin.

ACRONYMS USED IN FISHERIES MANAGEMENT PLAN

BLM - U.S. Bureau of Land Management

BR - U.S. Bureau of Reclamation

CE - U.S. Army Corps of Engineers

DNFH - Dworshak National Fish Hatchery

FERC - Federal Energy Regulatory Commission

IDFG - Idaho Department of Fish and Game

IDHW - Idaho Department of Health and Welfare

IDL - Idaho Department of Lands

INEL - Idaho National Engineering Laboratory

IPUC - Idaho Public Utilities Commission

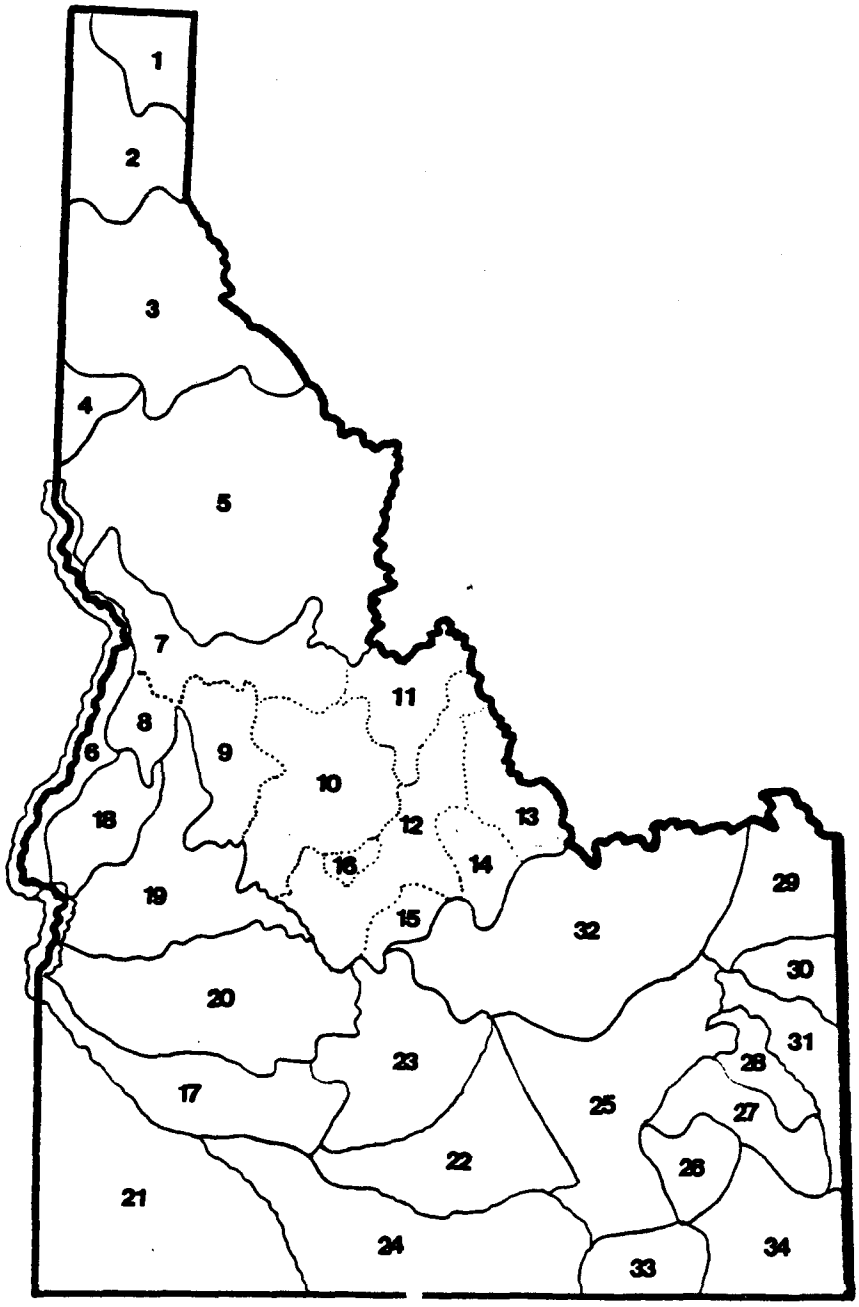
LSRCP - Lower Snake River Compensation Plan

NPPC - Northwest Power Planning Council

SCS - Soil Conservation Service

USFS - U.S. Forest Service

USFWS - U.S. Fish and Wildlife Service



Drainages used in the Idaho Fishery Management Plan