A PLAN FOR THE FUTURE MANAGEMENT OF IDAHO'S FISH AND WILDLIFE RESOURCES

VOLUME I

GOALS, OBJECTIVES AND POLICIES

1975 — 1990

IDAHO DEPARTMENT OF FISH AND GAME

BOISE, IDAHO

STATE OF IDAHO

JOHN V. EVANS
Governor

IDAHO FISH AND GAME COMMISSION

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BOISE, IDAHO

January 1, 1978

The Honorable John V. Evans
Governor, State of Idaho

Dear Governor Evans:

I am pleased to transmit on behalf of the Idaho Fish and Game Commission this first volume of a three-volume series comprising "A PLAN FOR THE FUTURE MANAGEMENT OF IDAHO'S FISH AND WILDLIFE RESOURCES."

Volume I, "GOALS, OBJECTIVES AND POLICIES," will be referred to as the "Policy Plan." It has been officially adopted by the Idaho Fish and Game Commission and will supersede all previous management policies. The Department of Fish and Game will actively pursue, within economic restraints, the strategies outlined in the plan.

The Policy Plan will be updated and revised every five years or more often as necessary. It is intended to serve as a detailed working document for the Department and a source of information for other agencies and the general public.

Approximately three years of work have gone into the Policy Plan. The effort has involved field and staff personnel on a statewide basis and their contribution is gratefully acknowledged.

Sincerely,

IDAHO FISH AND GAME COMMISSION

W. H. Godfrey, Jr.
Chairman

FOREWORD

Volume I, "Goals, Objectives and Policies," is the first of three volumes comprising "A Plan for the Future Management of Idaho's Fish and Wildlife Resources."

This publication will be referred to as the "Policy Plan." It was designed and prepared by the Idaho Department of Fish and Game's Bureau of Program Coordination which also supplied demand projections. Regional staff and field personnel provided habitat background information and supply projections.

Problems were defined and strategies, goals, objectives and policies developed by the Department's Bureau of Fisheries and Bureau of Wildlife. Management staff and field personnel participated in review of the plan before recommendation for adoption. Public meetings have been held throughout the State and public input has been included. The Policy Plan has been reviewed and approved by the Director of the Department and has been adopted by the Fish and Game Commission.

Preparation of the Policy Plan is based upon information available to the Department in 1976. The plan will be refined as additional and more precise information is accumulated.

The Policy Plan will be supplemented by Regional Species Management Plans for each species program. These will be in five-year increments. Regional Management Plans will be further divided into one-year Regional Species Operating Plans with appropriate objectives.

Volume II will be titled, "An Inventory of Fish and Wildlife Populations and Habitat in Idaho."

Volume III will be titled, "Management of Fish and Wildlife Areas Owned or Controlled by the Idaho Department of Fish and Gane."

ACKNOWLEDGMENTS

The Idaho Department of Fish and Game wishes to acknowledge the assistance of many individuals, agencies and private entities in addition to Department personnel who provided assistance in preparing this Plan.

Special mention should be made of the official action taken by the members of the Idaho Fish and Game Commission who approved development of a Comprehensive Fish and Wildlife Plan for Idaho. This action was taken December 17, 1971 by the following Commissioners.

Robert Kalb, Sandpoint

Paul Keeton, Lewiston

John Eaton, Cascade

Jack Hemingway, Sun Valley

Jack Alvord, Pocatello

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PLAN PURPOSES

There are two basic purposes a fish and wildlife plan should fulfill. These are: (1) to improve operating efficiency of the agency charged with responsibility for the fish and wildlife resource and, (2) to provide guidance and input to other interests whose planning and programs affect this resource.

The end result of operating efficiency is the most effective management of fish and wildlife possible. Improvement of Department efficiency has been a continuing process over many years and has taken many different forms. At the present time however, with the complexities of modern fish and wildlife management and the many different factors affecting management programs, a clear, workable plan is a necessity if a high-level of operating efficiency is to be maintained. Measurable and quantifiable goals and objectives and evaluation of progress in meeting them are essential if the most is to be obtained from available dollars and manpower.

A great deal of land and water use planning and program implementation which directly and indirectly affect fish and wildlife resources is underway. Federal and state agencies, counties and other local governments and various combinations of all of these are actively developing comprehensive land and water use plans and programs. As these interests control or can affect the vast majority of fish and wildlife habitat in the State, it is imperative that consideration for fish and wildlife be incorporated in their plans and programs.

This plan is designed to provide clear policies and strategies to guide the Department in development of future management programs. Conformance with the plan will require a critical evaluation of existing programs as to costs and benefits. It will necessitate the establishment of program priorities in order to meet established goals and objectives with available funds. Goals set forth are measurable as to attainment and objectives quantifiable. Performance in meeting goals and objectives will be monitored to provide a measure of accomplishment and a guide to plan revision, as necessary.

Problems and strategies contained in the plan will alert other interests to the habitat needs of fish and wildlife and the effects of various planned programs on this resource. Policies, goals and objectives of the Department will be displayed for consideration in comprehensive land use and other planning efforts and general public awareness. The inventory phase of the plan will provide information which can be readily utilized by other interests in developing plans and programs in which fish and wildlife are involved.

PLAN COMPONENTS

Volume 1 is composed of the following main parts

General Policies

This section presents broad policies which with certain exceptions apply to all fish and wildlife species.

Major Programs

Fish and wildlife are grouped into Major Programs as listed below. Problems, strategies and policies which apply to all species within these programs are presented.

Fish

Resident Trout — Streams
Resident Trout — Lowland Lakes, Reservoirs and Ponds
Resident Trout — Mountain Lakes
Warmwater Fish
Miscellaneous Resident Game Fish
Anadromous Fish
Nongame Fish
Amphibians
Mollusks, Crustaceans and Aquatic Insects
Species of Special Concern

Wildlife

Big Game
Upland Game
Waterfowl
Furbearers
Nongame
Species of Special Concern

Species Programs

For statewide species or groups of species programs contained within the major programs, the following subjects are treated where appropriate and where necessary information is available.

Background information concerning fish and wildlife habitat (acres, stream miles and ownership).

Supply and demand projections under current management levels and habitat trends.

Discussion of factors considered in setting goals and objectives.

Goals and objectives set for attainment by the Department.

Specific problems which will hinder the attainment of goals and objectives which are set.

Strategies to be employed in overcoming problems.

Specific policies which will set a management framework for each species program.

Appropriate fishery species programs are broken down into "Wild" and Hatchery" subprograms. Certain waterfowl species programs are divided into "Locally Produced" and "Migratory" subprograms.

PLAN INTERPRETATION

Information in this plan is presented on a statewide basis over a 15-year time span and must be viewed in that light. There will be local exceptions to many of the conclusions, projections, problems and strategies that are expressed. Interim time period and local goals and objectives may vary as adjustments are made to meet statewide goals and objectives by designated time period.

General Policies

These policies are applicable, with certain exceptions, to all fish and wildlife species regardless of individual major programs or species programs in which they may be categorized.

Major Programs

For the purposes of this plan, species are classified into major programs according to logical groupings related to planning and management. These classifications do not necessarily conform with existing statutory or Commission classifications.

Problems, strategies and policies shown are those which are applicable to all species programs within the individual major programs. Policies set forth address those subjects peculiar to the major program that are not covered in the General Policies.

Species Programs

Habitat background information contained in fish and wildlife species programs is mostly self-explanatory. Wildlife habitat acres shown in tables do not include marginal habitat and are confined to habitat on which medium to high population densities are found.

Objectives, supply, demand and success rate projections are expressed in different ways depending upon factors influencing the various programs, availability of data and ease of presentation.

There are no supply and demand data available for species in the nongame fish and wildlife programs and detailed projections are not made for these species.

Supply is expressed as the allowable or available harvest for fish and wildlife game species. For moose, sheep, goat, pronghorn antelope and anadromous fish programs, supply is also shown in hunter and angler days.

Demand is the estimated number of days hunters and anglers will spend hunting and fishing projected over time and is expressed in hunter and angler days. Demand projections are made for all resident game fish species programs and for all wildlife game species programs in which general season hunting is permitted. For moose, sheep, goat, pronghorn antelope and anadromous fish, demand presently far exceeds supply and will continue to do so into the foreseeable future. Demand projections are not made for these programs.

Latent demand was not considered in projecting demands. It is anticipated that increases in allowable harvests of fish and wildlife will be utilized by normal increased demand generated from human population growth.

The assumption has been made that, except for moose, sheep, goat, pronghorn antelope and anadromous fish, the number of days that hunters and anglers will wish to expend over the next 15 years can be accommodated. While the demand for hunting days can be met, meeting this demand may necessitate some reductions in success rates due to limited seasons, decreased bag limits, catch and release fisheries and other restrictive regulations. It is assumed that supply can meet the 1990 demand for nonconsumptive uses of fish and wildlife.

Many rather intangible factors enter into hunting and fishing satisfaction and the goals, objectives and policies adopted in this plan attempt to take all these factors into account. A basic tangible ingredient for hunter and angler satisfaction however, is a reasonable return for effort expended. All other factors being equal, the better the take of fish and game either consumptive or nonconsumptive, the more satisfied most sportsmen will be. Take per unit of effort (success rate) is used to measure how "good" hunting and fishing is. Success rates are shown as days per animal for big game species, fish per day for fish species programs and birds or animals per day for upland game and waterfowl species.

Goals for the species programs are broad-based and generally concern the relative status of fish and wildlife populations, harvests and success rates.

Objectives quantify goals by time period. The difference between projected success rates under current management levels and habitat trends and rates shown in Department objectives reflect the Department's efforts to improve hunter and angler satisfaction related to harvest. For certain species where current and projected supply far exceeds demand, detailed projections, including success rates, are shown only under Department objectives.

Problems, strategies and policies set forth address only those issues, if any, which are specific to the individual species programs and have not been previously included in the general policies or major programs.

Where individual species included are not named under a major program or species program, a species list is provided in the Appendix. A comparison of 1975 hunter and angler day use for fish and wildlife game species programs is also presented in the Appendix.

Supply and demand projections are based on available data and estimates. They are not considered to be precise in many instances but are considered to be adequate for long-range planning. Data sources for information used in plan formulation and a brief explanation of procedures and methodology used in making estimates and projections are given in the Appendix.

Funding

The effective carrying out of strategies and attainment of goals and objectives expressed in the policy plan are dependent upon adequate revenue accruing to the Department. Current revenue is not sufficient to provide for necessary programs. If additional funds are not obtained in the future, management will be forced to continue at or below current levels and it will not be possible to implement many of the actions proposed in this plan. Policies set forth in this plan will aid in developing priorities which can be applied to different levels of funding.

INTRODUCTION

Fish and wildlife have been an integral part of life in Idaho since before recorded time. Various aboriginal peoples were dependent upon these resources for survival. The lure of furs led to exploration of the State. Miners and settlers who followed the early explorers and trappers utilized fish and wildlife as a source of food and, to a lesser degree, for sport.

In more recent days, hunting and fishing have assumed a major role in satisfying the recreational needs of the citizens of Idaho and of the nation and through this role in contributing to the economy of the State. The fish and wildlife resource presently provides an estimated 6,282,565 recreational days annually involving consumptive use of game species. Gross economic values based on expenditures related to uses of this resource are currently estimated at $95,568,946. The economic value of most nongame species and nonconsumptive uses of both game and nongame species has not been measured but is considerable. Aesthetic, cultural, scientific, educational and other noneconomic values play a significant role in the life-style of a majority of Idaho residents.

Because of low human population densities and relatively little intensive development, fish and wildlife habitat in Idaho has not, until recently, been subject to adverse effects of a magnitude previously experienced in many other states. As a result, the diverse fish and wildlife populations of the State have been maintained at a relatively high level of abundance during past years.

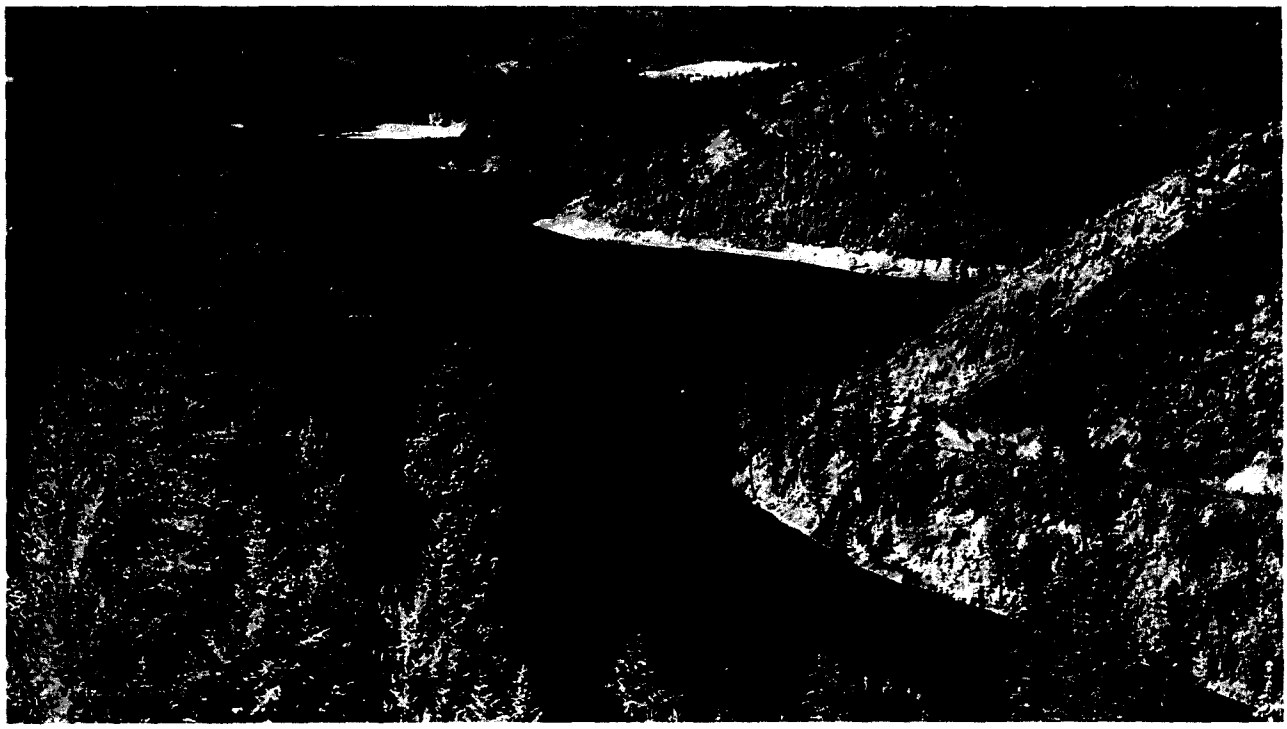
Past conditions are changing rapidly. Idaho has reached a turning point in its history. Increases in human population, natural resources exploitation and intensive agricultural and industrial development are all accelerating at a rapid rate. Conditions now existing and still evolving will result in more serious adverse impacts on fish and wildlife habitat while, at the same time, increasing demand on the resource dependent upon this habitat.

If fish and wildlife populations are to be maintained in the face of these events and future demands, additional effort and actions by several entities will be necessary. The formulation and implementation of this plan is a major part of the Idaho Department of Fish and Game's contribution to this increased effort.

Consumptive use by hunters and anglers can, and has in the past, reduced fish and wildlife populations. Harvest is a direct and dramatic factor and is the only one that can be directly adjusted and controlled by the Fish and Game Commission. Additional effort and action by the Commission alone, however, will not stem the current trend of decreasing fish and wildlife habitat and populations. Fish and wildlife habitat owned or controlled by the Department constitutes a minute fraction of the total habitat in the State. By far the greatest percentage of this habitat is owned and managed by federal and state agencies — U.S. Forest Service, Bureau of Land Management and Idaho State Department of Lands. The private sector also controls a significant portion of habitat in Idaho and actions by state and local governments and agencies can have significant impact on lands and waters necessary to fish and wildlife.

Measures must be taken by all involved entities if fish and wildlife populations are to be maintained near their present level. Legislative action establishing minimum stream flows and effective statewide land use planning is badly needed. As control of habitat, in essence, means control of fish and wildlife population abundance, it is imperative that federal and state land management agencies give full consideration to fish and wildlife in future planning and programs. Private interests must become aware of fish and wildlife needs and, where possible within economic constraints, make provisions for those needs. State and local governments and agencies must also take fish and wildlife into account in their decisions and actions.

The Idaho Department of Fish and Game is optimistic that additional awareness and consideration of habitat needs by those interests which control or affect the habitat in conjunction with improved Department programs will lead to the maintenance of fish and wildlife populations for the use and enjoyment of many future generations of Idaho citizens. It must be realized by the public, however, that even with success in maintaining fish and wildlife at current or higher levels, increased human population will mean that insofar as consumptive use is concerned, per capita share of wildlife resources must inevitably decline and regulations become more restrictive and specialized.



GENERAL POLICIES

There are approximately 82,677 square miles of land and 880 square miles of water surface in the State of Idaho. The varied climate, elevations and habitat types support a wide range of fish and wildlife species. A total of 60 species are classed as game and furbearing animals or birds and are hunted or trapped in the State. The number of game fish species amounts to 32. One amphibian is also harvested by sportsmen. Nongame species, including fish, mammals, birds, amphibians and reptiles, total 305

The basic statutory authority for the Fish and Game Commission is stated in the Idaho Code as follows:

> Section 36-103: WILDLIFE PROPERTY OF STATE — PRESERVATION. (a) Wildlife Policy. All wildlife, including all wild animals, wild birds, and fish, within the state of Idaho, is hereby declared to be the property of the state of Idaho. It shall be preserved, protected, perpetuated, and managed. It shall be only captured or taken at such times or places, under such conditions, or by such means, or in such manner, as will preserve, protect, and perpetuate such wildlife, and provide for the citizens of this state and, as by law permitted to others, continued supplies of such wildlife for hunting, fishing and trapping.
>
> (b) Commission to Administer Policy. Because conditions are changing and in changing affect the preservation, protection and perpatuation of Idaho wildlife, the methods and means of administering and carrying out the state's policy must be flexible and dependent on the ascertainment of facts which from time to time exist and fix the needs for regulation and control of fishing, hunting, trapping, and other activity relating to wildlife, and because it is inconvenient and impractical for the legislature of the state of Idaho to administer such policy, it shall be the authority, power and duty of the fish and game commission to administer and carry out the policy of the state in accordance with the provisions of the Idaho fish and game code. The commission is not authorized to change such policy but only to administer it.

For the purposes of carrying out this statutory charge, the Commission has established the following general policies which, with certain exceptions, will apply to the management of all fish and wildlife in the State.

While it is recognized that other legitimate demands exist for the use of land and water resources, it is nonetheless the responsibility of the Idaho Department of Fish and Game to be the principal proponent of the maintenance and perpetuation of wildlife in Idaho.

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

All species of fish and wildlife in the State of Idaho will be maintained for their intrinsic and ecological values as well as for their direct benefit to man.

Diversified recreational uses of fish and wildlife, both consumptive and nonconsumptive, will be provided for.

Scientific and educational use of fish and wildlife will be provided for.

The fish and wildlife resources of Idaho are of great economic importance to the State and this fact will be a consideration in the making of management and regulatory decisions.

Revenue to the Department will not be a consideration in the making of management and regulatory decisions.

Fish and wildlife management in the State of Idaho will be based on scientific knowledge and the consideration of available biological data.

Opinions of the public will be sought and given full consideration in making management and regulatory decisions.

Satisfaction which recreationists obtain from hunting, fishing and other fish and wildlife related experiences — apart from tangible benefits such as game and fish taken — is recognized as an important factor and will be considered in management and regulatory decisions.

Improvement in the conduct, qualifications and ethics of hunters and anglers as a group is recognized as essential to reduce undesirable practices which are detrimental to the image of hunting and fishing and programs to inform the public regarding the benefits of hunting and fishing, and to train sportsmen in ethics and conduct, will be continued and expanded.

The need for more attention to nonconsumptive uses of fish and wildlife for the benefit and enjoyment of people who are interested in observation, photography and similar pursuits, is recognized. Efforts will be made to develop and publicize nonconsumptive benefits of fish and wildlife programs.

The need to attract hunters or anglers to utilize fish and wildlife resources is no longer a necessity and, therefore, the Department will not undertake any national, state or local advertising to attract more hunters or anglers to Idaho or direct hunters or anglers to local "hot spots" within the State and such advertising by other entities will be discouraged by the Fish and Game Commission.

Commercialization of hunting and fishing recreation by the promotion of "fish derbies" and trophy contests will be discouraged by the Commission.

Equitable distribution and regulation of consumptive uses, regulation of non-consumptive uses and adherence to licensing measures providing revenue flow will be maintained by an active law enforcement program.

Indian Treaty Rights will be recognized in the management of fish and wildlife.

When feasible, technical assistance will be provided by the Department in alleviating damage to property by wildlife or nuisance situations created by fish and wildlife but the Department will not consider itself liable for such damage or conditions.

Introduction of native fish and wildlife species into vacant habitat is a useful management tool and will be considered when: (1) substantial benefits are anticipated; (2) sufficient and suitable habitat is available to maintain a viable population; (3) there will be no undesirable ecological effects; and (4) where necessary, approval is obtained from the appropriate land management agency or private landholders.

Human activities on Department owned or controlled land will be regulated, as necessary, to prevent damage to soil, vegetation and water quality and prevent or reduce harassment of fish and wildlife.

Hunter and angler access acquisition and/or development will be undertaken by the Department only where access to public areas are blocked by private holdings or other legal constraints or to relieve congestion in areas already accessible and will not be undertaken to increase entry into public areas where access is limited by purely physical conditions.

The keeping of wild animals, birds, fish, reptiles or amphibians in roadside zoos or similar establishments for the purpose of commercial display will not be encouraged.

The Department will advocate and support elimination or strictly controlled use of pesticides and herbicides which can result in direct or indirect mortality to fish and wildlife.

The Department will oppose legislation, planning and programs which result in significant and unwarranted fish and wildlife habitat or population losses.

Whenever significant fish and wildlife habitat or population losses occur as a result of various development programs or other actions, the Department will, where prac-

tical and legally possible, actively seek compensation for these losses under the following guidelines:

For long-term losses caused by habitat elimination or degradation, compensation by acquisition or improvement of alternate habitat will be sought rather than monetary restitution.

Monetary restitution, based on costs to replace lost resources, will be sought for losses caused by direct mortality if replacement of animals is infeasible.

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

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

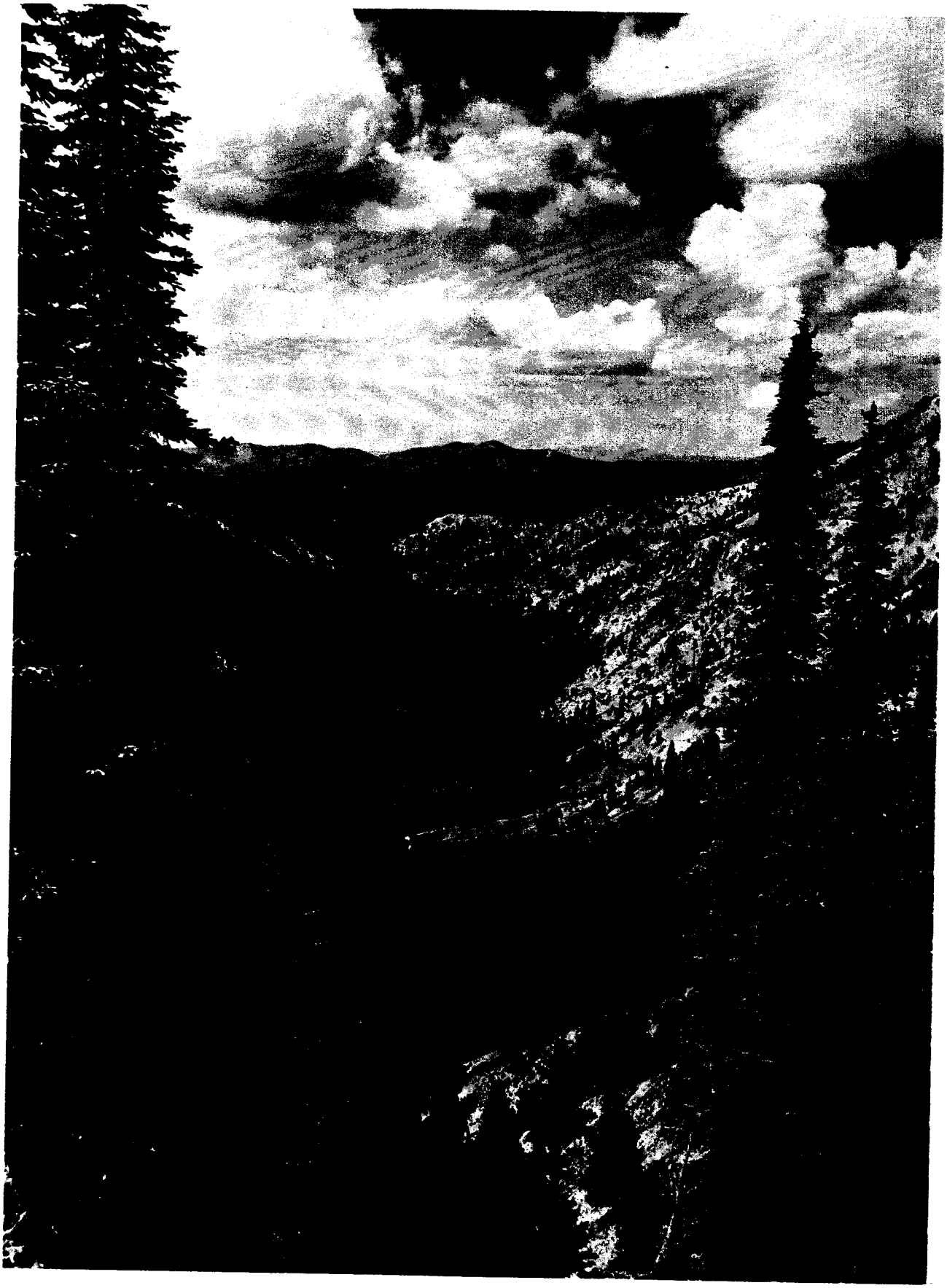
Compensation levels will be based on loss of habitat and loss of potential for wildlife production and recreation use rather than numbers of animals or days use of animals occurring at the time of loss.

Interstate agreements or compacts will be instrumented for the management of fish and/or wildlife species ranging in common with border states.

Cooperation and assistance will be provided to federal and state agencies in the development of fish and wildlife management plans.

Cooperation and assistance will be provided to private landholders, industries and associations in the development of fish and wildlife management plans, habitat manipulation and enhancement and hunter and angler access plans and programs on private lands.

POLICY PLAN
FOR
WILDLIFE



BIG GAME MAJOR PROGRAM

There are 10 species or subspecies included in the Big Game Major Program. These are: mule deer, white-tailed deer, Rocky Mountain elk, black bear, mountain lion, moose, Rocky Mountain bighorn sheep, California bighorn sheep, mountain goat and pronghorn antelope. One or more of the species or subspecies in this program are found in all geographical areas of Idaho and in nearly all types of habitat.

Because of their high recreational values, wide distribution, large size and relatively easy visibility, big game animals are of particular interest and concern to many people — both hunters and nonhunters.

Approximately 72 percent of hunters hunting in Idaho have expressed a preference for the species in this major program. Big game currently supply approximately 1,077,000 hunting days annually or 43 percent of the total hunting effort in the State. They also have high nonconsumptive observation and photography values.

PROBLEMS AND STRATEGIES

Problem — Survey data on big game populations and harvest are inadequate for making recommendations and management decisions on hunting seasons and regulations that would allow greatly intensified management.

Strategy — Increase and/or improve collection of big game population and harvest data to obtain adequate age composition, production and mortality information.

Problem — There is insufficient information regarding habitat requirements, behavior and basic ecology of big game species.

Strategy — Increase Department efforts directed toward habitat requirement and behavior research. Encourage, sponsor and support needed ecological research by other agencies and institutions.

Problem — Disturbance and harassment of big game, especially by snowmobilers, is a problem on some winter ranges.

Strategy — Work with land management agencies and snowmobile clubs to identify and protect areas with such problems and/or select other areas void of big game use for snowmobile activity. Seek legislation to give the Department authority to restrict use of snowmobiles on critical big game winter ranges.

Problem — New road construction is increasing access to big game ranges and is resulting in disturbance to big game sanctuary areas.

Strategy — Advocate preservation of critical roadless areas and closing of unneeded roads.

Problem — Much of the big game habitat is on private land and it is often difficult for hunters to obtain access.

Strategy — Identify public lands within or adjacent to large blocks of privately owned big game habitat and insure public access to these lands. Where possible, work out cooperative agreements with landowners to allow hunting. Acquire, where appropriate and practical, land to assure access.

POLICIES

Existing game management units, or portions or groups of units, modified in the future, as necessary, will be the basic geographical areas used in the development of big game management programs and regulations.

All game management units will be classified as to priority of species management and managed accordingly.

Hunting seasons and regulations for any big game species will be designed primarily to permit the take of the allowable harvest as set forth in the management plans for each unit or combination of units.

Hunting seasons on hoofed big game species will normally be set to fall within the September-November time span. Exceptions may be made in circumstances where the desirable harvest, as dictated by Unit Management Plans, cannot be achieved during this period.

Special primitive weapon hunting seasons will be provided as appropriate and will not normally overlap conventional firearms hunting seasons.

With the exception of bear and cougar, nonresident hunter participation in general hunting seasons will be limited. With the exception of moose, where participation will be confined to resident hunters only, nonresident participation in controlled hunts will be restricted to 10 percent of the total permits issued or one permit in units with less than 10 permits.

Introduction of nonnative big game species will be considered only when: (1) all available habitats with potential for supporting native big game species have been filled; (2) when substantial benefits are anticipated; (3) sufficient suitable habitat is available to maintain a viable population; (4) there will be no significant adverse effects on native wildlife; and (5) where necessary, approval is obtained from the appropriate land management agency.

It is recognized that additional road access into big game areas is no longer desirable and, in some areas, the amount of roading is already detrimental to big game habitat and hunting. Construction of additional permanent roads into big game areas will be opposed and physical and/or legal closures of all existing and future unnecessary roads within these areas on U.S. Forest Service, Bureau of Land Management and State of Idaho lands will be advocated and supported.

Control of feral horses and burros will be advocated and support given to land management agencies in developing and implementing programs to reduce competition between these animals and big game species.

The rearing and keeping of big game for the commercial purpose of allowing harvest for payment is not considered proper use of the resource and will be opposed.

The placing of salt for big game animals will be undertaken only when it can be demonstrated that such a practice will meet a management need.

MULE DEER PROGRAM

Mule deer *(Odocoileus hemionus)* are the most widely distributed big game animal in Idaho. They are found in varying degrees of abundance throughout the State and, at one time or another during the year, are present in practically all types of habitat.

MULE DEER HABITAT
By Land Ownership — 1975

Ownership	Acres
BLM	7,238,311
USFS	12,947,828
State	1,254,168
F&G	44,924
Private	6,119,661
Other	901,250
Total	28,506,142

SUPPLY AND DEMAND
Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Days Per Animal)
1960	325,000	66,000	459,000	7.0
1965	320,000	48,000	449,000	9.4
1970	300,000	72,000	567,000	7.9
1975	210,000	33,000	450,000	13.6
1980	218,000	34,000	482,000	14.2
1985	250,000	41,000	522,000	12.7
1990	262,000	45,000	563,000	12.5

DISCUSSION

During recent history, mule deer populations reached a peak in Idaho around 1960. At that time, it appeared habitat carrying capacity was exceeded over much of the available range. A program was carried out from 1960 through the early 1970's to reduce mule deer numbers to a level that could be accommodated by the steadily declining habitat. Harvests and success rates were at a high level during this period. Commencing around 1970, Idaho mule deer herds experienced a drastic decline in fawn survival. The cause of this decline in survival, which was evident in all of the western states, has not been determined to date. By the early 1970's poor fawn survival, in conjunction with harvest programs then in effect, resulted in mule deer populations being reduced well below the desired level that could fully utilize available habitat.

Major harvest adjustments to compensate, insofar as possible, for reduced fawn survival were implemented in 1975. While again the reasons are not known, it now appears that the depression in fawn survival has currently reversed itself. This improved survival in conjunction with present harvest programs and other management efforts should, under current management levels and habitat trends, provide for a steady rebuilding of mule deer numbers and harvest through 1990. Populations equaling 1960-1970 levels will not be attained however. Success rates, while initially lower, will, by 1985, improve over those currently existing.

Under the proposed management levels, additional efforts, including further refinement of harvest programs are planned. This more intensive management, coupled with a slowing of adverse habitat trends, should allow rebuilding mule deer herds to reach approximately 1970 levels by 1990. Under this proposed program, allowable harvests, while not reaching pre-1975 levels, would be higher than under current management levels. Success rates would be initially slightly lower but ultimately considerably higher than under current management.

GOALS

Rebuild mule deer numbers to approximately 1970 level.

Increase allowable harvest above the current level.

Meet post-1980 demand at greater than existing success rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Days Per Animal)
1980	243,000	33,000	482,000	14.6
1985	279,000	41,000	522,000	12.7
1990	310,000	52,000	563,000	10.8

PROBLEMS AND STRATEGIES

Problem — Fawn survival has decreased dramatically in recent years and was a major reason for declining mule deer herds.

Strategy — Continue research efforts to determine causes of decreased fawn survival.

Problem — Urban, recreational, agricultural and mining developments and reservoir and road construction are physically eliminating critical mule deer habitat. Migration barriers caused by highway construction, mining operations and reservoirs are preventing the use of some critical habitat. Harassment of mule deer resulting from increased human activity related to expanding urbanization, mining developments and conflicting recreation uses is not allowing full utilization of habitat in some areas.

Strategy — Actively participate in land and water use planning and programs at all levels of government to insure consideration of critical mule deer habitat, preservation and protection. Pursue every avenue for obtaining compensation for lost habitat and reduced use. Acquire critical mule deer habitat to insure its preservation and protection.

Problem — The quality of a significant portion of Idaho's mule deer habitat is declining at a rapid rate due to natural plant succession and detrimental land use practices.

Strategy — Actively work toward providing information which will assist federal and state land management agencies and private interests in making acceptable management decisions regarding mule deer habitat and in obtaining funding for adequate mule deer range maintenance and improvement.

Problem — In some areas, domestic livestock and elk are competing directly with deer for available forage.

Strategy — Advocate and support domestic livestock management programs on public lands which give adequate consideration to mule deer needs. Adjust elk numbers, when necessary, in units where management priority is assigned to mule deer.

Problem — In some areas, economically feasible techniques to effectively rehabilitate degraded mule deer ranges are not available.

Strategy — Continue range rehabilitation experiments on Department owned lands. Advocate, encourage and support similar experiments by other land management agencies.

Problem — Increased demand is creating overcrowded hunting conditions and overharvest in some areas.

Strategy — Manipulate hunting seasons to disperse hunting pressure and control harvest.

Problem — Different hunter interest groups prefer hunting of different types and with different weapons. There are varying preferences among the hunting public regarding management alternatives of maximum sustained harvests, quality hunting and trophy hunting.

Strategy — Intensify the Department's information and education effort to provide increased dialogue and understanding between proponents of different management philosophies and between the public and the Department. Conduct periodic, scientific samplings of public opinions and preferences regarding management philosophies. Design mule deer management programs within constraints of established goals, objectives and policies to accommodate a diversity of recreational preferences.

Problem — Mule deer depredations create landowner conflicts as do trespass and vandalism by certain portions of the hunting public.

Strategy — Furnish aid to landowners in minimizing mule deer depredations. Where possible, work out cooperative agreements with landowners to allow hunting. Intensify efforts of Department personnel to prevent trespass and vandalism.

POLICIES

It is recognized that either sex, general seasons are the most desirable type of mule deer season from the hunter's standpoint and this type of season will be authorized wherever and whenever it will achieve the management objectives of a unit or combination of units; however, in many instances, it may be necessary to initiate more selective or restrictive types of hunts, i.e. general season for males only or controlled hunts for specific numbers and/or sex, to permit a harvest and still achieve unit management objectives. Closed seasons may also be implemented for the same purpose.

Management for high sustained harvests will be employed in the more productive and accessible mule deer areas of the State to fulfill the demand for general hunting opportunity. Management for trophy hunting will be employed in some of the less productive and remote mule deer areas which cannot sustain heavy hunting pressure. Some areas will be managed for quality hunting.

Wherever possible, mule deer populations will be maintained under natural conditions by forage produced on traditional ranges. Supplemental feeding will be undertaken only in local emergency situations and only if baiting or transplanting of animals from the problem area is not feasible.

The need to acquire critical mule deer habitat in Idaho is recognized as an important part of a comprehensive mule deer management program. A land acquisition priority system will be designed and critical mule deer habitat acquired by the Department, when available and economically feasible, in accordance with this system.

Mule deer depredation will be alleviated by the Department providing, free of cost, fencing panels designed to prevent access by deer to stored livestock feed. Ownership of the panels will remain with the Department.

Uniform opening dates for contiguous and geographically similar management units or other methods, as appropriate, will be used to lessen hunter congestion.

WHITE-TAILED DEER PROGRAM

The major populations of white-tailed deer *(Odocoileus virginianus)* are found in the northern portion of the State. Lesser populations are found in central, northeastern and southwestern Idaho with the exception of the area south of the Snake River.

WHITE-TAILED DEER HABITAT
By Land Ownership — 1975

Ownership	Acres
BLM	97,552
USFS	2,830,981
State	524,808
F&G	11,211
Private	2,299,174
Other	343,848
Total	6,107,574

SUPPLY AND DEMAND

Because of their behavioral characteristics and the dense cover which comprises much of their habitat, white-tailed deer are difficult to harvest. Under foreseeable hunting pressure, full utilization of the allowable harvest is not possible for this species. Harvest projections and objectives presented in this program concern that portion of the population available for harvest rather than the full allowable harvest.

Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Days Per Animal)
1960	70,000	9,500	211,000	22.2
1965	59,000	8,000	206,000	25.8
1970	53,000	4,900	260,000	53.0
1975	56,000	7,400	206,000	27.8
1980	56,000	7,400	225,000	30.4
1985	48,000	6,200	246,000	39.7
1990	38,000	5,600	269,000	48.0

DISCUSSION

Hunter harvest has little effect upon white-tailed deer populations in Idaho. Numbers are governed almost entirely by the quantity and quality of available habitat.

Habitat requirements of white-tailed deer are quite specific and population numbers respond rather quickly to changes, either adverse or beneficial in this habitat. Populations, harvests and success rates have all fluctuated between 1960 and 1975 but, in general, show a declining trend which reflects reduced quality and quantity of habitat. Under current habitat trends, these declines are projected to continue through 1990.

Considerable potential exists for improving

white-tailed deer habitat through manipulation of logging programs. Effective implementation of the proper habitat improvement programs by responsible land management agencies and increased cooperation in this regard from private interests could reverse declining population trends and available harvests would be increased. Success rates would continue to decline because of a proportionally greater increase in demand than in population numbers but would do so much more slowly than under current habitat trends.

GOALS

Increase white-tailed deer population above the current level.

Increase harvest above the current level.

Meet future demand at reduced success rates.

OBJECTIVES

Objectives Under Proposed Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Days Per Animal)
1980	56,000	7,400	225,000	30.4
1985	59,000	8,000	246,000	30.7
1990	63,000	8,600	269,000	31.3

PROBLEMS AND STRATEGIES

Problem — Urban expansion, recreational development and road and reservoir construction are physically eliminating critical white-tailed deer habitat.

Strategy — Actively participate in land and water use planning and programs at all levels of government to insure consideration of critical white-tailed deer habitat preservation and protection. Pursue every avenue for obtaining compensation for lost habitat.

Problem — The quality of a significant portion of Idaho's white-tailed deer habitat is declining at a rapid rate due to natural plant succession and detrimental land use practices.

Strategy — Actively work toward providing information which will assist federal and state land management agencies and private interests in making acceptable management decisions regarding white-tailed deer habitat and in obtaining funding for adequate white-tailed deer range maintenance and improvement.

Problem — During deep snow conditions in northern Idaho, white-tailed deer are often particularly vulnerable to accidental death on plowed railroad tracks and roads.

Strategy — Where feasible, bait concentrations of white-tailed deer away from dangerous areas near railroads and roads. Encourage the Idaho Department of Transportation to sign all deer crossings.

Problem — Because of the wooded habitat and their proximity to human habitation and road systems, white-tailed deer are particularly vulnerable to poaching by spotlight.

Strategy — Increase coordinated enforcement effort and public information programs in order to decrease illegal kill of white-tailed deer.

Problem — There is harassment and killing of white-tailed deer during winter months by domestic and feral dogs.

Strategy — Intensify information and education programs to encourage control of dogs by their owners. Continue law enforcement efforts.

Problem — White-tailed deer depredations create landowner conflicts as do trespass and vandalism by certain portions of the hunting public.

Strategy — Furnish aid to landowners in minimizing white-tailed deer depredations. Intensify efforts of Department personnel to prevent trespass and vandalism.

POLICIES

It is recognized that either sex, general seasons are the most desirable type of white-tailed deer season from the hunter's standpoint and this type of season will be authorized wherever and whenever it will achieve the management objectives of a unit or combination of units; however, in certain instances, it may be necessary to initiate more selective or restrictive types of hunts, i.e. general season for males only or controlled hunts for specific numbers and/or sex, to permit a harvest and still achieve unit management objectives. Closed seasons may also be implemented for the same purpose.

White-tailed deer populations will be maintained under natural conditions by forage produced on traditional range. Supplemental feeding will be undertaken only in local emergency situations and only if baiting or transplanting of animals out of the problem areas is not feasible.

Uniform opening dates for contiguous and geographically similar management units or other methods, as appropriate, will be used to lessen hunter congestion.

ROCKY MOUNTAIN ELK PROGRAM

Rocky Mountain elk *(Cervus canadensis)* are found in varying degrees of abundance throughout the mountainous areas of Idaho. Major herds are present in northern, central and eastern portions of the State. Smaller populations are found in southwestern and southcentral Idaho.

ROCKY MOUNTAIN ELK HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	1,868,151
USFS	11,443,689
State	478,198
F&G	24,310
Private	2,723,748
Other	193,907
Total	16,732,003

SUPPLY AND DEMAND
Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Days Per Animal)
1960	92,000	16,500	332,000	20.1
1965	81,000	14,100	332,000	23.5
1970	67,000	14,500	430,000	29.7
1975	50,600	8,600	330,000	38.4
1980	53,000	8,500	362,000	42.6
1985	55,000	9,200	396,000	43.0
1990	59,000	9,900	433,000	43.7

DISCUSSION

Rocky Mountain elk populations have declined steadily between 1960 and 1975. Harvests have fluctuated but also show a basic decline while success rates have decreased steadily. Widespread adverse changes and reductions in suitable habitat have led to compounding adverse effects from harvest programs and from predation and other nonhunting mortalities. Major adjustments in harvest programs were made in 1975 to more nearly reconcile harvest with reduced population levels and to compensate for increased nonhunting mortalities. As a result of these adjustments, a modest increase in population numbers and allowable harvest is expected under current management levels and habitat trends. Pre-1975 levels will not be attained, however, and a proportionally greater increase in demand will result in success rates continuing to decrease.

There is an excellent potential for rehabilitating elk habitat, particularly in northern Idaho by controlled burning. Implementation of effective habitat improvement and preservation programs by the major land management agencies in coordination with additional management efforts, including further refinement of harvest programs, would allow elk populations and allowable harvests to rebuild to approximately 1965 levels. Success rates would be initially lower than under current management levels and habitat trends but would be substantially higher by 1990.

GOALS

Rebuild elk numbers to approximately 1965 level.

Rebuild allowable harvest to approximately 1965 level.

Meet 1990 demand at greater than the current success rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Days Per Animal)
1980	60,900	7,400	362,000	48.9
1985	72,600	9,200	396,000	43.0
1990	86,800	14,500	433,000	29.9

PROBLEMS AND STRATEGIES

Problem — Elk calf survival is poor in certain elk herds.

Strategy — Identify factors responsible for poor calf survival and initiate actions to increase calf survival.

Problem — Reservoir construction, mining developments and summer home developments are eliminating critical elk habitat and causing migration barriers that prevent the use of some habitat. Harassment of elk resulting from increased human activity is not allowing full use of available winter habitat in some areas.

Strategy — Actively participate in land and water use planning and programs at all levels of government to insure consideration of critical elk habitat, preservation and protection. Pursue every avenue for obtaining compensation for lost habitat or reduced use. Acquire critical elk habitat to insure its preservation and protection.

Problem — Timber harvest programs on forested lands are eliminating or disturbing areas needed by elk for sanctuary and cover and preventing full use of other available habitat.

Strategy — Propose methods such as closing logging roads after timber harvest and proper timing and duration of logging programs to minimize long-term adverse effects. Monitor elk-logging relationships and advocate changes in proposed logging plans and forest management practices, where necessary.

Problem — Growth and natural succession of fire-caused seral browse fields to less productive mature and climax vegetation is significantly reducing carrying capacity on some major elk ranges in northern and central Idaho.

Strategy — Advocate and support cooperative prescribed burning and fire management programs with the U.S. Forest Service and other land management agencies and interests to replace mature or climax vegetation with earlier seral stages.

Problem — In some areas, domestic livestock are competing with elk for forage and cover.

Strategy — Work with land management agencies to obtain adequate consideration for elk habitat in developing livestock grazing programs.

Problem — Increased demand is resulting in overcrowded hunting conditions and overharvest in some areas.

Strategy — Manipulate hunting seasons to disperse hunting pressure and control harvests.

Problem — Elk depredations create landowner conflicts as do trespass and vandalism by certain portions of the hunting public.

Strategy — Furnish aid to landowners in minimizing elk depredations. Where possible, work out cooperative agreements with landowners to allow hunting. Intensify efforts of Department personnel to prevent trespass and vandalism.

POLICIES

It is recognized that either sex, general seasons are the most desirable type of elk season from the hunter's standpoint and this type of season will be authorized wherever and whenever it will achieve the management objectives of a unit or combination of units; however, in many instances, it may be necessary to initiate more selective or restrictive types of hunts, i.e. general season for males only or controlled hunts for specific numbers and/or sex, to permit a harvest and still achieve unit management objectives. Closed seasons may also be implemented for the same purpose.

Management for trophy hunting will be employed in some of the less productive elk areas which cannot sustain heavy pressure. Some areas will be managed for quality hunting.

Wherever possible, elk populations will be maintained under natural conditions by forage produced on traditional range. Supplemental feeding will be undertaken only in local emergency situations and only if baiting or transplanting animals out of the problem area is not feasible.

The need to acquire critical elk habitat in Idaho is recognized as an important part of a comprehensive elk management program. A land acquisition priority system will be designed and critical elk habitat acquired by the Department, when available and economically feasible, in accordance with this system.

Elk depredation will be alleviated by the Department providing, free of cost, fencing panels designed to prevent access by elk to stored livestock feed. Ownership of the panels will remain with the Department.

Uniform opening dates for contiguous and geographically similar management units or other methods, as appropriate, will be used to lessen hunter congestion.

BLACK BEAR PROGRAM

With the exception of that portion of the State south of the Snake River, black bear *(Ursus americanus)* are widely distributed and relatively abundant throughout mountainous and foothill areas of Idaho. Occasional animals occur south of the Snake River.

BLACK BEAR HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	409,274
USFG	10,045,876
State	346,939
F&G	2,168
Private	2,312,383
Other	55,987
Total	13,172,627

SUPPLY AND DEMAND

Black bear, except in certain instances, are difficult to hunt and, while these animals are relatively abundant, only a small percentage of the allowable statewide harvest can be realized. This situation will be somewhat improved by increasing demand but utilization of the total black bear allowable harvest will probably not be approached in the foreseeable future. Harvest projections and objectives presented in this program are expressed as available rather than allowable harvest. The available supply of black bear will exceed demand at current success rates through 1990.

Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Days Per Animal)
1960	22,000	3,373	—	—
1965	24,000	2,861	—	—
1970	22,000	3,404	—	—
1975	23,000	2,300	81,000	35.2
1980	24,000	2,500	86,000	34.4
1985	25,000	3,000	93,000	31.0
1990	25,000	3,000	101,000	33.6

DISCUSSION

Demand and success rate data are not available for black bear prior to 1975. Past populations and harvests have fluctuated but remain relatively stable. Under current management levels and habitat trends, a slight increase in black bear populations is forecast. Demand and harvest will increase more substantially and success rates will improve above the current level.

Additional measures to increase black bear populations are not planned.

GOALS

Maintain the black bear population at essentially the current level.

Increase harvest over the current level.

Meet future demand at success rates exceeding the current rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Days Per Animal)
1980	23,000	2,500	86,000	34.4
1985	23,000	3,000	93,000	31.0
1990	23,000	3,000	101,000	33.6

PROBLEMS AND STRATEGIES

Problem — Black bear are underutilized by sport hunters in many parts of their range.

Strategy — Devise and establish regulations to encourage harvest of black bear in underharvested areas.

Problem — Under existing statutory law, hunters are not required to utilize any part of bears killed resulting in potential waste and public criticism.

Strategy — Work to have laws amended to require utilization of meat and/or hides of bear that are killed by hunters.

Problem — Black bear do, in certain instances and localities, inflict game and domestic livestock losses.

Strategy — Determine extent and localities of major black bear predation on game and domestic animals. Develop regulations to encourage sport harvest of black bear and other control methods to be applied in problem areas.

POLICIES

The black bear is recognized as a valuable big game species. It is also a predator. Priority will be given to management as a big game species. Control of predatory bear will be carried out only on a local basis and only as necessary.

Subject to regulation, hunting of black bear by dogs will be allowed except during firearms seasons for deer or elk.

Taking of cub bears or female bears with cubs at side will not be allowed during spring hunting seasons.

Control of black bear damage to domestic livestock will be carried out by the U.S. Fish and Wildlife Service under agreement and in cooperation with the Department.

Control of black bear damage to wild animals will be carried out by the Department and accomplished by sport hunting and/or other control methods as necessary.

MOUNTAIN LION PROGRAM

Mountain lion *(Felis concolor)* are found in varying degrees of abundance in most mountainous areas of the State. Major populations are found in northern and central Idaho. Numbers are low in most areas south of the Snake River.

MOUNTAIN LION HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	1,100,530
USFS	5,026,330
State	240,296
F&G	3,697
Private	852,514
Other	47,544
Total	7,270,911

SUPPLY AND DEMAND
Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Days Per Animal)
1960	1,800	83	—	—
1965	1,800	108	—	—
1970	1,800	114	—	—
1975	1,900	140	2,470	17.6
1980	1,900	160	3,190	19.9
1985	1,900	190	3,920	20.6
1990	1,900	220	4,640	21.1

DISCUSSION

Mountain lion demand and success rate data are not available prior to 1975. From 1960 to 1970, populations remained constant. The mountain lion was declared a game animal in 1972 and the consequent implementation of management for this species resulted in an increased population level by 1975. This increased level is expected to be maintained through 1990 under current management and habitat trends. Harvest has steadily increased from 1960 through 1975 and will continue to increase under current management while greater demand will result in steadily decreasing success rates.

There is predation upon deer, elk and bighorn sheep by mountain lion. In order to minimize this predation, where significant, it is planned to reduce mountain lion numbers by sport hunting and maintain the population at a lower level than currently exists. This reduction program will initially result in much greater harvests and higher success rates than have been seen in the past. After 1980, harvest will return to only slightly greater than the 1975 level. Success rates will decrease markedly below those that would occur under current management.

GOALS

Maintain mountain lion population at a reduced level from that currently existing.

Approximately double the current harvest through 1980. Maintain allowable harvests at slightly higher than the current level after 1980.

Meet demand at greater than the current success rate through 1980.

Meet demand at less than the current success rate after 1980.

OBJECTIVES
Objectives Under Proposed Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Days Per Animal)
1980	1,600	290	3,190	11.0
1985	1,600	150	3,920	26.1
1990	1,600	150	4,640	30.9

PROBLEMS AND STRATEGIES

Problem — Because of the high value and prestige of mountain lion trophies, poaching and illegal traffic in hides and skulls occurs.

Strategy — Work with other states and federal agencies to develop means to control poaching and sale of illegal trophies.

Problem — Mountain lion can, on occasion, cause damage to domestic livestock.

Strategy — Cooperate in programs to minimize damage to domestic livestock by mountain lion.

POLICIES

The mountain lion is recognized as a valuable big game species. It is also a predator. Priority will be given to management as a big game species. Control of mountain lion will be carried out only on a local basis and only as necessary.

Subject to regulation, hunting of mountain lion by dogs will be allowed except during firearms seasons for deer or elk.

Hunting mountain lion will be on an either sex basis but hunters will be encouraged to take males. Killing or capturing of spotted mountain lion kittens or female mountain lions accompanied by kittens will be prohibited.

Control of mountain lion damage to domestic livestock will be carried out by the U.S. Fish and Wildlife Service under agreement and in cooperation with the Department.

Control of mountain lion damage to wild game will be carried out by the Department. Necessary control of predation by mountain lion will be accomplished through sport hunting and live trapping and translocation.

MOOSE PROGRAM

Moose *(Alces alces)* are present in varying densities in northern, central and eastern Idaho. The greatest numbers are found in the Clearwater and upper Snake River drainages of the State.

MOOSE HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	468,299
USFS	814,970
State	111,591
F&G	14,944
Private	603,360
Other	34,674
Total	2,047,838

SUPPLY AND DEMAND

The demand for moose far exceeds supply and this species is harvested strictly on a controlled hunt basis. Demand figures are not presented for this progam. Supply is expressed in both allowable harvest and hunting days.

Past Trends — Current Status

Year	Population	Harvest	Hunting Days	Success Rate (Days Per Animal)
1960	2,100	40	410	10.3
1965	2,000	51	480	9.4
1970	2,000	81	630	7.8
1975	1,930	93	740	7.9

DISCUSSION

Populations of moose remained essentially constant from 1960 through 1970 with a slight decline between 1970 and 1975. Harvests and success rates have been steadily increased since 1960. The present harvest of moose is still a very small percentage of the total population and is largely confined to antlered animals only. Current management is rather intensive. Under current management levels and habitat trends, it is projected that moose populations will maintain essentially 1960-1970 levels. Further increases in harvests can be safely allowed and success rates increased.

New programs to increase moose numbers are not contemplated. Projections under current management levels and habitat trends reflect the Department's objectives and are presented under the objectives section.

GOALS

Maintain moose population at approximately 1960-1970 levels.

Increase harvest rates over the current level.

Increase success rates over the current level.

OBJECTIVES

Objectives Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Hunting Days	Success Rate (Days Per Animal)
1980	1,990	125	980	7.8
1985	2,030	135	1,040	7.4
1990	2,060	155	1,120	7.2

PROBLEMS AND STRATEGIES

Problem — Moose habitat is being degraded by some timber management practices, overgrazing and recreational developments.

Strategy — Work with land management agencies in planning and programming to reduce damage by timber management practices, overgrazing and recreational developments.

Problem — Moose are subject to illegal kill particularly during deer and elk hunts.

Strategy — Intensify public information and enforcement programs to minimize illegal moose kills.

Problem — Indian harvest of moose is uncontrolled and can, in certain areas, lead to reduction of moose populations below desirable levels.

Strategy — Advocate and work toward legal and/or negotiated control of Indian harvests of moose.

POLICIES

Hunting of moose will be by controlled hunts only.

The basic hunting regulations for moose will provide for the taking of antlered animals. However, limited cow harvests may be allowed when biological data indicate a harvestable surplus of cows is available.

Only one Idaho moose will be allowed an individual hunter in his lifetime.

There are two subspecies of bighorn sheep in Idaho. The Rocky Mountain bighorn *(Ovis canadensis canadensis)* and the California bighorn *(O. c. californiana)*. Major Rocky Mountain bighorn populations are found in the mountains of central Idaho, principally in the Salmon River drainage. They have been recently introduced into the Lost River and Beaverhead ranges in central Idaho and Hells Canyon on the Snake River in the southwestern portion of the State. California bighorns have recently been introduced into the Owyhee and lower Bruneau river drainages in southwestern Idaho.

BIGHORN SHEEP HABITAT
By Land Ownership, 1975

Ownership	Rocky Mountain Bighorn Acres	California Bighorn Acres
BLM	68,084	86,644
USFS	958,239	—
State	6,289	6,846
F&G	—	—
Private	13,026	1,447
Other	125	59
Total	1,045,763	94,996

SUPPLY AND DEMAND

Demand for both subspecies of bighorn sheep in this program currently exceeds supply and these animals are presently harvested on a controlled hunt basis only. Demand figures are not presented except for Rocky Mountain bighorn prior to 1975. Rocky Mountain bighorn were harvested under general hunting seasons from 1960 to 1971 except for occasional local controlled hunt areas. Supply is expressed both as allowable harvest and hunting days for California bighorn throughout and for Rocky Mountain bighorn subsequent to 1970.

Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Rocky Mountain Bighorn

Year	Population	Harvest	Demand	Hunting Days	Success Rate (Days Per Animal)
1960	1,800	62	2,710	—	43.7
1965	2,000	53	2,960	—	55.8
1970	2,500	63	4,550	—	72.2
1975	2,650	30	—	490	16.3
1980	2,880	35	—	590	16.9
1985	3,200	50	—	1,040	20.8
1990	3,750	80	—	2,080	26.0

Past Trends — Current Status

California Bighorn

Year	Population	Harvest	Hunting Days	Success Rate (Days Per Animal)
1960	—	—	—	—
1965	30	—	—	—
1970	170	1	33	33.0
1975	325	2	65	32.5

DISCUSSION

Rocky Mountain Bighorn

Populations showed an increasing trend for Rocky Mountain bighorn from 1960 through 1970. Under the general hunting season, then in effect, harvests fluctuated but remained basically stable. There was a significant increase in demand and success rates decreased below acceptable levels. Under a controlled hunt system of harvest, populations continued to increase by 1975. Harvests were reduced by approximately one-half and success rates improved dramatically. It is projected that with a continuation of present management levels and habitat trends, populations and harvests will continue to increase but success rates will decline below the current level.

Some potential exists for enhancing certain Rocky Mountain bighorn sheep ranges. If effective habitat improvement programs are implemented by responsible land management agencies and present transplantation programs continued, it would be possible to obtain greater increases in populations than under current habitat trends. Harvests could also be increased with more refined management. Success rates would still decline but at a slower rate than under current trends.

California Bighorn

Initial reintroduction of California bighorns was made in 1963. The first hunting season was held in 1969. Under current management levels and habitat trends, California bighorn populations and harvests are expected to continue to increase through 1990. Success rates will also improve over the current rates.

The present California bighorn management program includes all feasible measures to increase populations of these animals. Projections under current management levels and habitat trends reflect the Department's objectives and are presently under the objectives section.

GOALS

Increase the current population of Rocky Mountain and California bighorn sheep.

Increase the current allowable harvests of Rocky Mountain and California bighorn sheep.

Increase success rates for both subspecies over current levels.

OBJECTIVES

Rocky Mountain Bighorn
Objectives Under Proposed Management Levels and Habitat Trends

Year	Population	Harvest	Hunting Days	Success Rate (Days Per Animal)
1980	2,900	40	590	14.8
1985	3,250	55	1,040	18.9
1990	3,830	90	2,080	23.1

California Bighorn
Objectives Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Hunting Days	Success Rates (Days Per Animal)
1980	365	8	130	16.3
1985	418	14	228	16.3
1990	477	18	325	18.1

PROBLEMS AND STRATEGIES

Problem — Bighorn sheep have, in earlier years, been eliminated from presently suitable ranges by unregulated hunting, disease and human activity and developments.

Strategy — Reintroduce bighorn sheep into presently suitable ranges by trapping and transplanting existing stocks in Idaho or by obtaining stocks from out-of-state.

Problem — Bighorn sheep are normally intolerant of human activity and competition for forage by livestock, particularly domestic sheep.

Strategy — Work with federal and state land management agencies to develop plans which would provide programs minimizing excessive human disturbance and livestock competition on historic, existing and potential bighorn sheep ranges.

Problem — Bighorn sheep are particularly susceptible to disease.

Strategy — Conduct, sponsor and encourage research on bighorn sheep diseases.

Problem — Certain populations reduced by hunter harvest have not increased in the expected manner despite curtailed harvests and the presence of adequate habitat.

Strategy — Increase Department efforts toward needed research on the total effects of hunter harvest.

Problem — Regulations which restrict hunting to rams with horns of ¾ curl or larger may not result in optimum management for certain bighorn ranges and populations.

Strategy — Investigate possibility of harvesting bighorns other than rams with ¾ or larger curl horns.

Problem — Because of high value and prestige of bighorn sheep trophies, poaching and illegal traffic in bighorn heads and horns is a problem throughout the range of this species.

Strategy — Work with other states and federal agencies to develop means to control poaching and the sale of illegal trophies.

POLICIES

Bighorn sheep will, where feasible, be introduced or reintroduced into all ranges found suitable for establishing viable herds.

Populations of Rocky Mountain and California subspecies will be kept separated.

Where possible, the specialized race or ecotype historic to or best adapted to each introduction or reintroduction site will be utilized.

Hunting of bighorn sheep will be by controlled hunts only.

The basic hunting regulation for bighorn sheep will provide for the taking of mature rams. However, limited harvests of ewes and/or smaller rams may be allowed if biological data indicate sheep other than mature rams should be taken for optimum management of certain bighorn populations or ranges.

Only one Idaho bighorn sheep will be allowed an individual hunter in his lifetime.

MOUNTAIN GOAT PROGRAM

Scattered populations of mountain goat *(Oreamnos americanus)* are found throughout the State in mountainous areas with suitable habitat north of the Snake River Plain. One small population has been introduced into eastern Idaho along the South Fork of the Snake River near the Wyoming state line.

MOUNTAIN GOAT HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	119,974
USFS	4,461,706
State	64,941
F&G	—
Private	46,065
Other	16,074
Total	4,708,760

SUPPLY AND DEMAND

The demand for mountain goat far exceeds supply and this species is harvested by firearms strictly on a controlled hunt basis. Demand figures are not presented for this program. Supply is expressed both as allowable harvest and as hunting days.

Past Trends — Current Status

Year	Population	Harvest	Hunting Days	Success Rate (Days Per Animal)
1960	2,100	114	1,128	9.9
1965	2,050	214	1,924	9.0
1970	2,000	151	1,320	8.7
1975	1,915	102	1,500	14.7

DISCUSSION

Mountain goat populations have remained relatively stable from 1960 through 1970 with a moderate decline between 1970 and 1975. Harvest levels and success rates have varied depending upon the different approaches to management which were taken.

Populations are expected to rebuild to pre-1975 levels and remain stable thereafter under current management and habitat trends. Allowable harvests can be increased over the current levels but will not be set as high as pre-1975 levels. Success rates will improve over the current rate but will not approach pre-1975 rates.

Projections under current management levels and habitat trends reflect the Department's objectives and are presented under the objective section.

GOALS

Maintain mountain goat population at 1960-1970 levels.

Increase allowable harvest over the current level.

Increase success rates over the current level.

OBJECTIVES

Objectives Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Hunting Days	Success Rate (Days Per Animal)
1980	1,975	110	1,550	14.2
1985	2,025	135	1,624	12.0
1990	2,100	145	1,688	11.6

PROBLEMS AND STRATEGIES

Problem — Excessive competition by domestic sheep and pack horses for available forage occurs on some mountain goat ranges.

Strategy — Work with land management agencies to reduce or eliminate excessive competition between domestic livestock and mountain goat.

Problem — Certain populations reduced by hunter harvest have not increased in the expected manner despite curtailed harvests and the presence of adequate habitat.

Strategy — Increase Department efforts toward needed research on the total effects of hunter harvest.

POLICIES

Mountain goat will, where feasible, be introduced or reintroduced into all ranges found suitable for establishing viable herds.

Hunting of mountain goats will be on an either sex basis but hunters will be encouraged to take males only.

Hunting of mountain goat by firearms will be by controlled hunts only.

Only one Idaho mountain goat will be allowed an individual hunter in his lifetime.

PRONGHORN ANTELOPE PROGRAM

Pronghorn antelope *(Antilocapra americana)* are found scattered throughout the semi-arid areas of Idaho. Major populations are found in valleys of the Big Lost, Little Lost, Pahsimeroi and Lemhi rivers, Birch and Medicine Lodge creeks and the upper Snake River Plain in central and eastern Idaho. Smaller populations occur in parts of southwestern and southcentral Idaho. In certain localities, pronghorn range into higher elevation foothills or mountain ranges during the summer months.

PRONGHORN ANTELOPE HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	5,445,284
USFS	854,897
State	382,721
F&G	23,188
Private	2,001,223
Other	615,928
Total	9,323,241

SUPPLY AND DEMAND

Demand for pronghorn antelope far exceeds supply and this species is harvested by firearms strictly on a controlled hunt basis. Demand figures are not presented for this program. Supply is expressed both as allowable harvest and as hunting days.

Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Hunting Days	Success Rate (Days Per Animal)
1960	16,500	701	2,580	3.7
1965	16,000	977	2,780	2.8
1970	14,000	1,551	4,380	2.8
1975	13,250	1,214	5,000	4.1
1980	13,600	1,300	5,200	4.0
1985	14,250	1,500	5,400	3.6
1990	14,700	1,600	5,400	3.4

DISCUSSION

Pronghorn antelope populations declined and harvest increased during the 1960-1970 period. Success rates were relatively high. This situation, in large part, reflects a program to reduce antelope depredation on agricultural lands. Under current management programs and habitat trends, populations are expected to gradually increase over the present status with a corresponding increase in allowable harvests and success rates.

There is some potential for increasing antelope population numbers and distribution through range improvement and waterhole development programs. If existing habitat can be largely preserved, the above type programs implemented and carried out by responsible land management agencies and Department management intensified, greater increases in populations, allowable harvests and success rates can be obtained than under current conditions.

GOALS

Increase the pronghorn antelope population.

Increase allowable harvest.

Increase success rates above the current level.

OBJECTIVES

Objectives Under Proposed Management Levels and Habitat Trends

Year	Population	Harvest	Hunting Days	Success Rate (Days Per Animal)
1980	14,600	1,460	5,400	3.7
1985	15,400	1,540	5,500	3.6
1990	16,000	1,920	6,000	3.1

PROBLEMS AND STRATEGIES

Problem — Pronghorn habitat is being eliminated or migration barriers created by desert land agricultural development in some areas.

Strategy — Work with administering land management agencies to provide consideration for critical pronghorn ranges and migration corridors in areas of desert land developments.

Problem — Pronghorn are particularly susceptible to blocking of their movements, both local and migratory, by range fences and transportation systems.

Strategy — Work with federal and state land management agencies and private interests to minimize fencing in pronghorn habitat and install fences designed to allow pronghorn passage. Work with state and federal agencies on location and design to avoid or minimize impacts of highways on pronghorn.

Problem — Pronghorn can, in some localities, cause damage to agricultural land and crops.

Strategy — Provide aid to landowners in minimizing depredations and damage by pronghorn.

Problem — Habitat deterioration from overgrazing by domestic livestock is reducing capability of some areas to support antelope.

Strategy — Work with land management agencies to obtain more consideration for antelope in grazing plans.

Problem — Some otherwise suitable pronghorn range is unoccupied because water is lacking.

Strategy — Advocate and support programs by land management agencies to provide watering areas that would allow the expansion of existing pronghorn range.

Problem — Pursuing antelope with vehicles, "flock shooting" and shooting at excessive range is prevalent in antelope hunting and results in excessive crippling loss and public criticism.

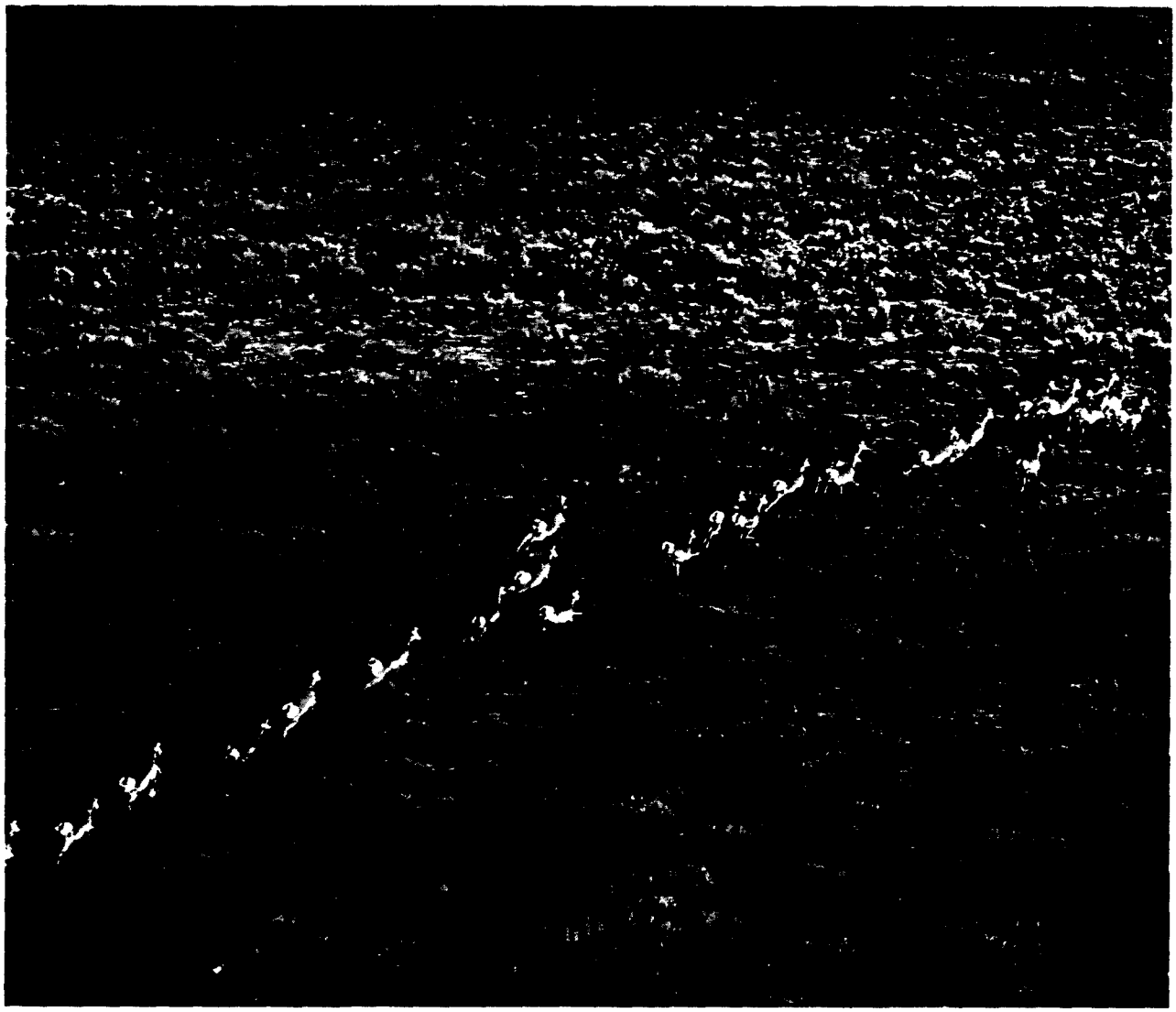
Strategy — Educate antelope hunters to detrimental aspects of flock and long-range shooting and increase enforcement efforts to prevent shooting from vehicles.

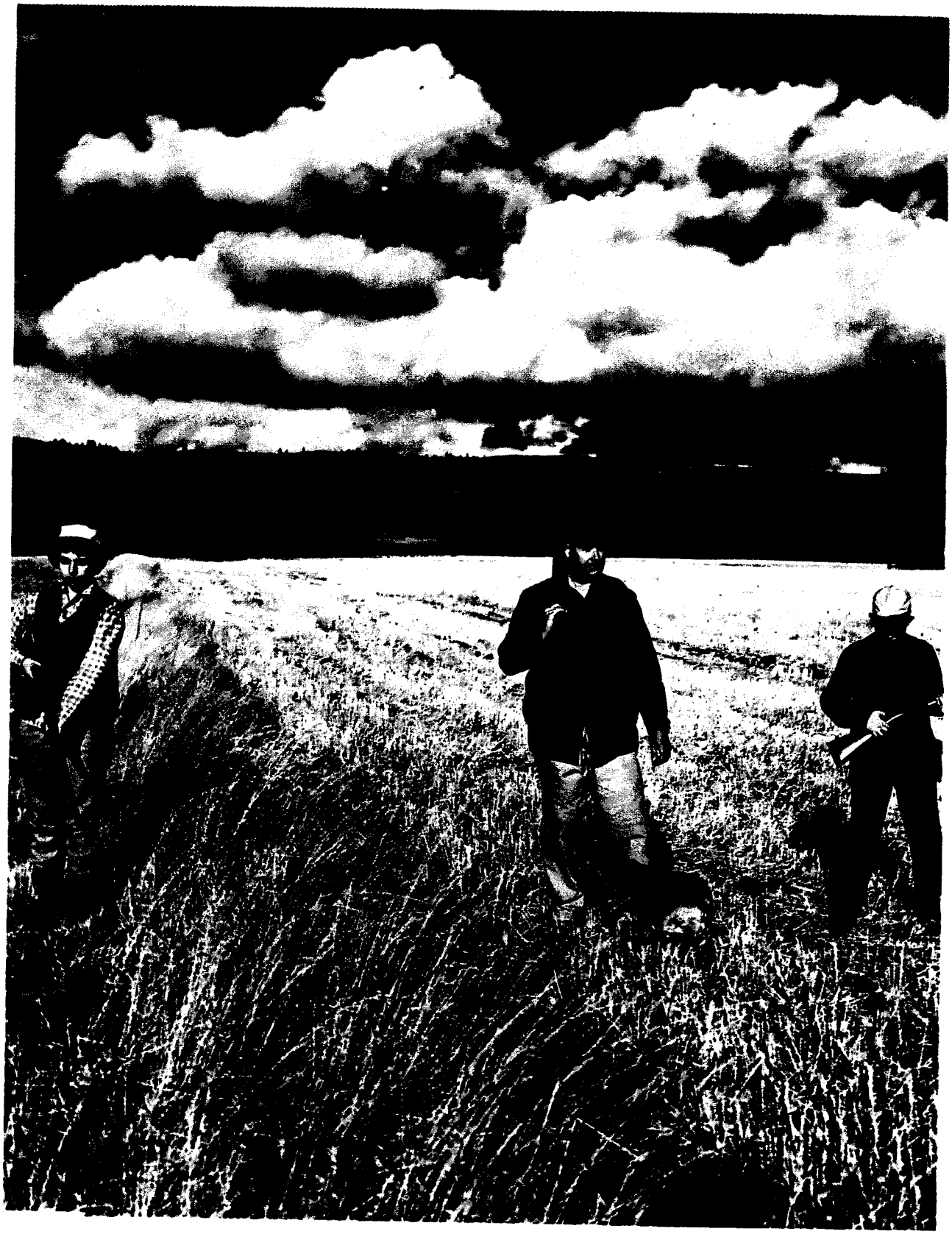
POLICIES

Pronghorn will, where feasible, be introduced or reintroduced into all ranges found suitable for establishing viable herds.

It is recognized that either sex seasons are the most desirable type of pronghorn antelope season from the hunter's standpoint and this type of season will be authorized wherever and whenever it will achieve the management objectives of a unit or combination of units; however, in certain instances, it may be necessary to initiate a more selective type of hunt, i.e. males only, to permit a harvest and still achieve unit management objectives. Closed seasons may also be implemented for the same purpose.

Hunting of pronghorn with firearms will be by controlled hunt only.





UPLAND GAME MAJOR PROGRAM

The upland game major program contains 16 species: ringneck pheasant, valley quail, mountain quail, bobwhite quail, Gambel's quail, blue grouse, ruffed grouse, spruce grouse, sage grouse, sharp-tailed grouse, Hungarian partridge, chukar partridge, Merrian's turkey, mourning dove, cottontail rabbit and pygmy rabbit. As a group, upland game occupy a wide variety of habitats throughout the State.

Approximately 21 percent of the hunters in Idaho have expressed a preference for upland game species. Upland game currently account for an estimated 916,000 days annually or 36 percent of the total hunting effort expended statewide. Many of the species have considerable aesthetic, observation and photography values. Some are commonly found in close proximity to human habitation. Others are found in wilderness areas where their lack of fear toward man makes them easily visible. Still others have mating characteristics which lead to relatively easy observation.

PROBLEMS AND STRATEGIES

Problems — Annual survey data on upland game populations and harvest are inadequate for making recommendations and management decisions on hunting seasons and regulations that would allow greatly intensified management.

Strategy — Increase and/or improve routine collection of upland game population and harvest data to obtain better age composition, production and mortality data.

Problem — There is insufficient information regarding habitat requirements and basic ecology of upland game species.

Strategy — Increase Department efforts directed toward habitat requirement research. Encourage and support needed ecological research by other agencies or institutions.

Problem — Upland game populations are subject to extreme annual and/or cyclic fluctuations due to weather, habitat conditions and breeding success. The interrelationship of these factors is largely unknown.

Strategy — Conduct or sponsor needed research to gain understanding of factors or combination of factors causing population fluctuations. If possible, develop means of more precisely predicting length and severity of population fluctuations.

Problem — Much of the upland game habitat is on private land and it is often difficult for hunters to obtain access.

Strategy — Identify public lands within or adjacent to large blocks of privately owned upland game habitat and insure public access is allowed on these lands. Where possible, work out cooperative agreements with land owners to allow hunting.

POLICIES

With the exception of Merriam's turkey, counties or groups or portions of counties will be the basic geographical area used in the development of upland game management programs and regulations.

Hunting seasons and regulations for any upland game species will be designed primarily to permit the take of the allowable harvest as set forth in the management plans for each county or combination of counties.

Adjustments in hunting season lengths, opening and closing dates, bag limits and other regulations will be employed, as necessary, to effectively meet different management objectives.

Introduction of exotic upland game species is a possible management tool but will be considered only when: (1) substantial benefits are anticipated; (2) sufficient suitable habitat is available to maintain a viable population; (3) it can be demonstrated there will not be significant adverse effects on native wildlife species; and (4) where necessary, approval is obtained from the appropriate land management agency or private landholder.

The taking of all species of upland game will be permitted by falconry under established regulations.

Ringneck pheasants *(Phasianus colchicus)* are found in varying degrees of abundance on or near farmland throughout Idaho. Habitat is marginal and populations low in the northern, central and northeastern portions of the State.

RINGNECK PHEASANT HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	1,266,711
USFS	112,799
State	165,529
F&G	16,299
Private	5,125,972
Other	304,286
Total	6,991,596

SUPPLY AND DEMAND

The basic hunting regulations for pheasant provide for the taking of cocks only. Because of the wariness and escape characteristics of these birds, it is not possible to take the full allowable harvest of cocks. Harvest projections and objectives are expressed as available rather than allowable harvests.

Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1960	1,502,000	525,000	347,000	1.5
1965	1,559,000	623,000	480,000	1.3
1970	1,176,000	471,000	370,000	1.3
1975	787,000	269,000	331,000	0.8
1980	651,000	229,000	348,000	0.7
1985	548,000	203,000	365,000	0.6
1990	468,000	173,000	384,000	0.5

DISCUSSION

Populations and harvest of ringneck pheasants were at a high level from 1960 through 1970. There was a significant decline in population, harvest and success rates by 1975 and under current management levels and habitat trends this decline is projected to continue through 1990.

Pheasants are farm oriented birds and farming practices govern almost exclusively the quality and quantity of pheasant habitat. Current trends in practically all farming practices are detrimental to pheasant habitat and populations. Losses of habitat from these changing practices far exceed gains resulting from development of new farm lands.

Because of the very high nonhunting related, natural, annual mortality rate, it is not possible to maintain or increase pheasant populations by reduced hunter harvest when habitat is declining.

If the decline in pheasant populations is to be halted, habitat will have to be provided to compensate for that being lost. Successful implementation of proposed cooperative programs with state and federal agencies which control or influence land use development and practices and with private interests could allow pheasant populations, harvests and success rate to be restored to 1970 levels by 1990.

GOALS

Restore pheasant population to the 1970 level.

Increase available harvest over the current level.

Meet future demand at greater than the current success rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1980	787,000	269,000	348,000	0.8
1985	916,000	367,000	365,000	1.0
1990	1,176,000	471,000	384,000	1.2

PROBLEMS AND STRATEGIES

Problem — Pheasant production is almost entirely dependent upon agricultural practices and recent trends in these practices have been increasingly detrimental to pheasant habitat.

Strategy — Identify and preserve public lands suitable for pheasant cover. Furnish input into new government sponsored or subsidized agricultural developments to insure consideration of existing and newly developed pheasant habitat. Explore landowner incentive programs to increase pheasant habitat on existing private holdings. Where possible, enter into cooperative agreements with agriculturally oriented state and local agencies and other entities whose actions affect pheasant habitat to provide consideration in preserving and enhancing habitat.

Problem — Urban sprawl and other developments in agricultural areas have eliminated and are continuing to eliminate pheasant habitat.

Strategy — Advocate and support local and statewide land use planning to lessen impact on existing pheasant habitat. Provide land use planning and zoning agencies with information regarding effects of developments on pheasant populations and habitat.

Problem — Crippling loss for pheasants is particularly severe because of their running and escape characteristics.

Strategy — Conduct information and education programs to encourage hunting with dogs.

Problem — Because of their proximity to human habitation, relatively large size and good eating qualities, pheasants are especially subject to poaching activity.

Strategy — Intensify Department enforcement efforts to reduce poaching.

Problem — Because of the preponderance of private land involved in pheasant hunting areas, trespass and vandalism by certain elements of the hunting public are of particular concern.

Strategy — Increase the Department's information and education efforts to address and correct this problem. Intensify efforts of Department personnel to prevent trespass and vandalism.

Problem — There are, on occasion, pheasant depredations upon agricultural crops.

Strategy — Aid will be furnished landowners in minimizing crop depredations.

POLICIES

The basic hunting regulations for pheasant will provide for the taking of cocks only. Limited hen harvests may be allowed when biological data show a harvestable surplus of wild hens is available or on game farm birds.

Hunting seasons and regulations for pheasants will be set to minimize overcrowded hunting conditions in the opening week of the season.

Pheasant populations will be maintained under natural conditions. Supplemental feeding will be confined to extreme, localized emergency conditions.

The Department will furnish day-old pheasant chicks to responsible organizations and individuals which have funds, facilities and knowledge to raise pheasants to a release age of 14 weeks.

Fall stocking of game farm reared cock pheasants will be limited to plants of fully colored cocks stocked within 14 days of the opening of a hunting season or during the hunting season.

Game farm pheasant cocks will not be stocked in areas where the average annual return to the hunter's bag falls below 50 percent of the birds stocked.

Fall stocking of game farm reared pheasants will be limited to areas of low natural production which are open to public hunting and to management areas owned or controlled by the Department.

When game farm reared pheasants are available, the Department will supply licensed dog field trials with up to 125 pheasants if such trials are held in acceptable habitat between April 15 and May 15. The Department will be reimbursed for any game farm reared pheasants accidentally killed during such trial. The use of these birds will be controlled by the Department to insure humane treatment.

QUAIL PROGRAM

This program contains four species of quail: valley *(Lophortyx californicus)*, mountain *(Oreortyx pictus)*, bobwhite *(Colinus virginanus)* and Gambel's *(Lophortyx gambelii)*. Most of the remnant populations of bobwhite quail are found in farmland and adjacent river bottoms in southwest Idaho. Mountain quail are present along watercourses primarily in the southcentral and southwestern portions of the State. A small population of Gambel's quail is found only along the Lemhi River in central Idaho. The range of valley quail extends up the Snake River and lower tributaries from Lewiston to southcentral Idaho. Valley quail are by far the most numerous and widely distributed species in the State inhabiting farmland, foothills and canyon areas.

Mountain, bobwhite and Gambel's quail make up a small proportion of the quail harvest in Idaho. Programs will be implemented, as necessary, to maintain present populations of bobwhite and Gambel's quail and to increase numbers of mountain quail. Supply and demand projections and objectives are presented for valley quail only.

QUAIL HABITAT
By Land Ownership, 1975

Ownership	Valley Quail Acres	Mountain Quail Acres	Bobwhite Quail Acres	Gambel's Quail Acres
BLM	952,752	4,711	96,203	11,909
USFS	129,084	26,520	99,615	2,740
State	86,720	4	3,885	663
F&G	503	—	—	—
Private	917,866	220	13,521	65,493
Other	13,281	—	—	—
Total	2,100,206	31,455	213,224	80,805

SUPPLY AND DEMAND

Due to their wide distribution, the type of habitat they are found in and the inaccessibility of much of this habitat, it is not possible to take the full allowable harvest of valley quail. Harvest projections and objectives are presented as available rather than allowable harvest.

Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1960	254,000	38,200	32,700	1.2
1965	559,000	89,400	44,100	2.0
1970	640,000	109,000	52,800	2.1
1975	669,000	127,000	65,500	1.9
1980	648,000	122,000	68,800	1.8
1985	627,000	118,000	72,200	1.6
1990	610,000	113,000	75,800	1.5

DISCUSSION

While there have been normal fluctuations in statewide numbers, valley quail populations have increased rather dramatically since 1960. Under current management levels and habitat trends, it appears peak populations were reached in 1975 and a gradual decline in population, harvest and hunter success are projected through 1990. At current success rates, demand will exceed supply by 1980.

Valley quail populations respond very favorably to improvements in habitat. Implementation of cooperative habitat preservation and improvement programs with state and federal agencies and private interests would allow a continuing increase in valley quail populations. Future increased demand could then be met while maintaining essentially the current success rate.

GOALS

Maintain the current population of bobwhite and Gambel's quail.

Increase populations of mountain and valley quail.

Increase available harvest of valley quail.

Meet future demand for valley quail at essentially. the current success rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1980	711,000	134,000	68,800	1.9
1985	749,000	143,000	72,200	2.0
1990	794,000	151,000	75,800	2.0

PROBLEMS AND STRATEGIES

Problem — Riparian habitat is extremely important to the maintenance of all quail species and this habitat is being reduced by land clearing and development, construction of flood control levees, channel straightening, herbicide applications, overgrazing and road construction.

Strategy — Establish liaison and work closely with government agencies carrying out, sponsoring or subsidizing construction programs and practices that can reduce riparian habitat to minimize elimination of this habitat and, where possible, mitigate for losses sustained.

Problem — Valley quail are very susceptible to large scale winterkill during prolonged, extremely severe winter conditions.

Strategy — Monitor wintering valley quail populations to the degree possible and, where feasible, take measures to prevent complete elimination of populations over broad areas.

Problem — Mountain quail populations have disappeared from much of their former range during the past ten years.

Strategy — Attempt to more precisely determine the status, distribution and ecological relationships of mountain quail populations and make management adjustments, as necessary, to preserve or increase populations.

Problem — Valley quail have increased in many habitats where mountain quail populations have declined. Chukars have been introduced into mountain quail habitat. There is a possibility of interspecific competition adversely affecting mountain quail.

Strategy — Sponsor and/or encourage research to establish comparative habitat requirements of chukar and valley and mountain quail and determine if interspecific competition is taking place.

POLICIES

Where hunting of a quail species is allowed, season lengths will coincide with any chukar and Hungarian partridge seasons in the same area.

Valley quail will not be introduced into any habitat determined suitable as existing or potential mountain quail habitat.

Quail populations will be maintained under natural conditions. Supplemental feeding will be confined to extreme, localized emergency conditions.

Known habitat for bobwhite and Gambel's quail in Idaho is considered to be marginal. Populations of these species will be maintained in the State for their intrinsic value but no major programs to increase their populations or expand their range will be undertaken.

FOREST GROUSE PROGRAM

This program relates to three species of grouse: blue *(Dendragapus obscurus)*, ruffed *(Bonasa umbellus)* and spruce *(Canachites canadensis)*. These species, as a group, are found in mountainous and foothill areas throughout the State, with the exception of the Owyhee Mountains in southwestern Idaho.

FOREST GROUSE HABITAT
By Land Ownership, 1975

Ownership	Blue Grouse Acres	Ruffed Grouse Acres	Spruce Grouse Acres
BLM	1,067,032	338,626	105,265
USFS	8,682,672	7,241,204	3,705,975
State	234,430	467,437	30,040
F&G	1,995	5,697	—
Private	1,379,557	2,639,237	131,902
Other	81,304	231,834	489
Total	11,446,990	10,924,035	3,973,671

SUPPLY AND DEMAND

On a statewide basis, the supply of forest grouse currently exceeds demand. This surplus will continue to exist through 1990.

Forest grouse are widely distributed and a great deal of their habitat is largely inaccessible. The actual harvest falls far short of the allowable harvest. Harvest projections and objectives, consequently, reflect available harvest rather than allowable harvest.

Past Trends — Current Status

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1960	2,125,000	106,000	82,200	1.3
1965	1,700,000	118,000	95,400	1.2
1970	1,600,000	133,000	129,000	1.0
1975	2,005,000	166,000	170,000	1.0

DISCUSSION

Populations of forest grouse typically fluctuate on a more or less cyclic basis. Allowing for these fluctuations, past populations have been relatively stable and this trend is expected to continue through 1990. Due to growing demand, past harvest levels have steadily increased. Increasing demand and harvests are projected to continue through 1990 with success rates remaining constant.

Major additional efforts to increase forest grouse numbers on a statewide basis are not planned. Projections under current management levels and habitat trends reflect the Department's objectives and are presented under the objectives section.

GOALS

Maintain the population of forest grouse at essentially the current level.

Increase harvest.

Meet future demand at the current success rate.

OBJECTIVES

Objectives Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1980	2,013,000	175,000	178,000	1.0
1985	2,002,000	182,000	187,000	1.0
1990	1,925,000	196,000	196,000	1.0

PROBLEMS AND STRATEGIES

Problem — Overgrazing by domestic livestock is seriously degrading blue grouse nesting and rearing areas.

Strategy — Identify important blue grouse nesting and rearing areas and obtain consideration for protecting and enhancing these areas in federal, state and local planning and programs.

POLICIES

Forest grouse hunting seasons shall run concurrently and bag limits will be in the aggregate for all species.

Sage grouse *(Centrocercus urophasianus)* and sharp-tailed grouse *(Pedioecetes phasianellus)* are found in semi-arid and high plateau areas of southern Idaho south of the main Salmon River. Sage grouse are found on predominantly sagebrush lands while sharp-tailed grouse habitat is largely grass land with interspersed brush.

SAGE AND SHARP-TAILED GROUSE HABITAT
By Land Ownership, 1975

Ownership	Sage Grouse Acres	Sharp-tailed Grouse Acres
BLM	5,871,191	435,890
USFS	1,305,559	152,353
State	633,849	106,027
F&G	18,703	17,061
Private	3,823,622	1,323,850
Other	1,038,908	122,049
Total	12,691,832	2,157,230

SUPPLY AND DEMAND
Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

SAGE GROUSE

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1960	153,000	15,200	13,100	1.2
1965	244,000	24,400	25,100	1.0
1970	380,000	70,800	56,300	1.3
1975	311,000	57,800	58,000	1.0
1980	333,000	65,000	60,900	1.1
1985	356,000	71,200	63,900	1.1
1990	355,000	74,300	67,100	1.1

SHARP-TAILED GROUSE

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1960	26,000	1,000	800	0.8
1965	26,000	1,600	1,400	0.9
1970	28,000	3,300	3,000	0.9
1975	29,000	3,000	3,100	1.0
1980	30,000	4,000	3,700	1.1
1985	31,000	6,000	4,800	1.1
1990	32,000	6,000	5,500	1.1

DISCUSSION

SAGE GROUSE

There have been annual fluctuations but sage grouse populations have generally shown an increasing trend since 1960 with a peak around 1970. A decline below peak levels was evident by 1975. It is projected that populations will gradually rebuild through 1990 under current management levels and habitat trends. These increasing populations and greater demand will result in larger harvests while maintaining essentially current success rates.

If adequate consideration is given by federal and state land management agencies to preserving and enhancing existing sage grouse habitat and more refined management implemented, rebuilding of sage grouse populations can be accelerated. This would result in greater harvest and success rates than would be possible under current management levels and habitat trends.

SHARP-TAILED GROUSE

Populations of this bird are at a low level but have been slowly increasing and under current management levels and habitat trends this gradual increase in both population and harvest is expected to continue through 1990. A proportionate increase in demand will maintain success rates at approximately the current level.

Sharp-tailed grouse have strict habitat requirements and respond very favorably to improvements in and additions to this habitat. If existing habitat can be protected and the proper vegetative manipulation programs implemented by federal and state land management agencies, it would be possible with more intensive management to accelerate increases in sharp-tailed grouse populations. Larger populations would result in increased harvest and success rates over current levels.

GOALS

Increase populations of sage and sharp-tailed grouse.

Increase allowable harvest for both species.

Meet future demand for both species at greater than the current success rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Habitat Trends

SAGE GROUSE

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1980	333,000	69,100	60,900	1.1
1985	359,000	77,400	63,900	1.2
1990	425,000	94,900	67,100	1.4

SHARP-TAILED GROUSE

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1980	32,000	6,000	4,000	1.5
1985	36,000	9,000	5,900	1.5
1990	39,000	10,000	6,800	1.5

PROBLEMS AND STRATEGIES

Problem — Sage grouse habitat and migration routes are being reduced or eliminated by desert land agricultural development, overgrazing by domestic livestock and land management programs converting sagebrush lands to grass.

Strategy — Identify breeding, nesting, rearing, wintering and migration areas, maintain liaison with federal and state land management agencies to insure consideration for preserving and enhancing sage grouse habitat and migration routes in land management and development planning and programs.

Problem — Expansion of sage grouse into otherwise suitable, presently unoccupied habitat is limited in some areas by lack of water.

Strategy — Develop and cooperate with land management agencies in developing water sources in potential sage grouse habitat presently lacking water.

POLICIES

Where hunting of both sage grouse and sharp-tailed grouse is allowed in the same area, seasons on both species will be concurrent.

Supplemental winter feeding of sage grouse and sharp-tailed grouse is not feasible and will not be undertaken.

Chukar partridge *(Alectoris graeca)* are mainly found in foothill and canyon areas throughout central and southern Idaho. There is considerable overlap in Hungarian and chukar partridge ranges. Hungarian partridges *(Perdix perdix)*, however, are also commonly found in agricultural areas.

CHUKAR AND HUNGARIAN PARTRIDGE HABITAT
By Land Ownership, 1975

Ownership	Chukar Partridge Acres	Hungarian Partridge Acres
BLM	2,850,914	2,200,120
USFS	1,563,583	532,958
State	300,154	340,058
F&G	6,324	6,675
Private	1,942,845	3,756,511
Other	190,423	693,412
Total	6,854,243	7,529,734

SUPPLY AND DEMAND

Because of the inaccessibility of much of their habitat, full utilization of the allowable harvest for chukar and Hungarian partridge is not possible. Harvest projections and objectives are expressed as available rather than allowable harvest.

Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

CHUKAR PARTRIDGE

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1960	211,000	33,000	27,000	1.2
1965	916,000	143,000	63,500	2.2
1970	1,081,000	167,000	82,500	2.0
1975	802,000	125,000	82,900	1.5
1980	799,000	125,000	87,000	1.4
1985	798,000	126,000	91,400	1.4
1990	787,000	127,000	95,900	1.3

HUNGARIAN PARTRIDGE

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1960	227,000	38,000	51,000	0.8
1965	535,000	89,000	70,000	1.3
1970	320,000	53,000	49,000	1.1
1975	409,000	68,000	71,000	1.0
1980	395,000	67,000	74,000	0.9
1985	382,000	68,000	78,000	0.9
1990	367,000	66,000	82,000	0.8

DISCUSSION

CHUKAR PARTRIDGE

These birds steadily increased in numbers after the first successful introduction, apparently reached a statewide peak around 1970 and declined by 1975. It is projected that under current management levels and habitat trends populations will continue to decline. Increased demand will result in harvest levels remaining essentially constant while success rates drop. At current success rates, demand will exceed supply by 1985.

There is considerable potential for increasing chukar distribution and numbers over the current status. Existing marginal chukar habitat can be improved and new habitat made available by an accelerated program of developing new watering sources in otherwise suitable habitat which presently has no water or has inadequate supplies. Successful implementation of this type program through cooperation with federal and state land management agencies should allow an increase over the current levels of the chukar population, harvest and success rate.

HUNGARIAN PARTRIDGE

Hungarian partridge populations have fluctuated during past years but were at a relatively high level in 1975. A gradual decline in populations, harvests and success rates from the present plateau is predicted through 1990 under current management levels and habitat trends. Loss of suitable farm habitat through changing farming practices and elimination of grassland habitat through new farm and other developments is the primary reason for this decline. Cooperative programs undertaken with federal and state land management agencies and private interests to improve rangeland and agricultural habitat for other game bird species will be of incidental benefit to Hungarian partridge. It should be possible to obtain a relatively modest increase in the Hungarian partridge population. Increasing demand should result in greater harvests and a slight increase in success rates.

GOALS

Increase chukar and Hungarian partridge populations.

Increase chukar and Hungarian partridge available harvests.

Meet future demand for both species at greater than the current success rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Habitat Trends

CHUKAR PARTRIDGE

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1980	828,000	145,000	87,000	1.7
1985	868,000	166,000	91,400	1.8
1990	982,000	173,000	95,900	1.8

HUNGARIAN PARTRIDGE

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1980	409,000	70,000	74,000	0.9
1985	435,000	83,000	78,000	1.1
1990	472,000	93,000	82,000	1.1

PROBLEMS AND STRATEGIES

Problem — Expansion of chukar into otherwise suitable, presently unoccupied habitat may be limited in some areas by lack of water.

Strategy — Encourage land management agencies to develop water sources in potential chukar habitat presently lacking water.

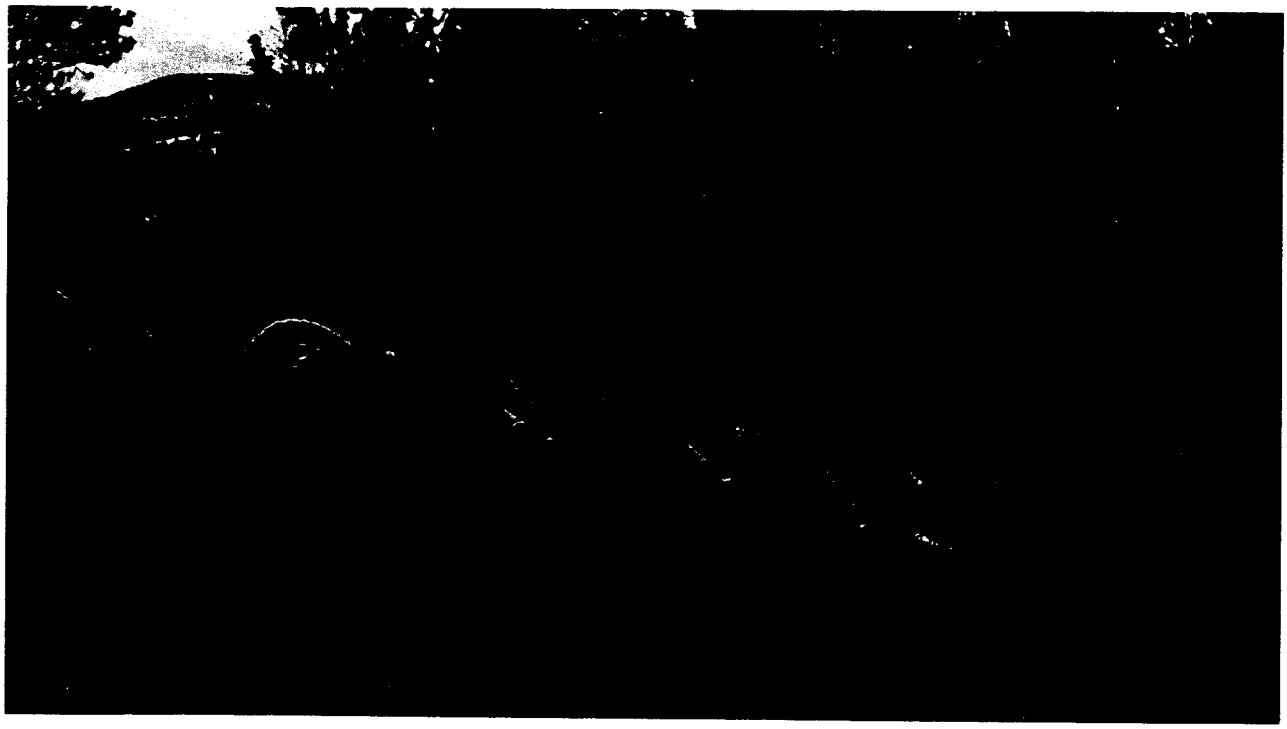
POLICIES

When hunting of both chukar and Hungarian partridge is allowed in the same areas, hunting seasons will be concurrent.

Chukar and Hungarian partridge hunting seasons will coincide with quail seasons in the same areas.

Supplemental winter feeding of chukar and Hungarian partridge is not considered feasible and will not be undertaken.

Release of game farm chukars will be only for the purposes of introducing or reintroducing chukars into suitable vacant habitat or the disposal of excess game farm brood stock.



WILD TURKEY PROGRAM

The wild turkey introduced into Idaho is the Merriam's turkey *(Meleagris gallopavo merriami).* Several small flocks have been established in central, southwestern and northern Idaho.

WILD TURKEY HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	372,190
USFS	188,551
State	48,112
F&G	—
Private	211,637
Other	65,369
Total	885,859

SUPPLY AND DEMAND

Because of their relatively low numbers, scattered distribution and wariness, wild turkeys are extremely difficult to harvest. It is not possible to take the full allowable harvest. Harvest projections and objectives reflect available rather than allowable harvests.

Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1960	—	—	—	—
1965	500	—	—	—
1970	3,500	45	300	0.15
1975	2,700	16	1,000	0.02
1980	2,000	30	1,050	0.03
1985	2,000	30	1,100	0.03
1990	2,000	35	1,150	0.03

DISCUSSION

The present wild turkey population has resulted from introductions initially made in 1961. Additional introductions, transplants and natural reproduction apparently brought the population to a peak in 1970. Under current management levels and habitat trends, populations and harvests are projected to remain stable but below peak levels through 1990.

With an accelerated transplant program and additional consideration given to improvement of turkey habitat in logging and grazing programs, it should be possible to increase populations, harvests and hunter success.

GOALS

Increase the wild turkey population.

Increase available harvest.

Meet future demand at increased success rates.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1980	4,000	60	1,500	0.04
1985	4,500	65	1,550	0.04
1990	5,000	70	1,650	0.04

PROBLEMS AND STRATEGIES

Problem — Wild turkeys are extremely difficult to hunt and harvest.

Strategy — Establish regulations that will encourage hunting and harvest of wild turkey.

Problem — Wild turkeys may tend to remain in the location where introduced and can cross with domestic flocks and lose their natural wildness.

Strategy — Establish hunting seasons that will help disperse flocks and keep them wild.

Problem — Acceptable stocks of wild turkey for further introduction are limited.

Strategy — Identify existing established resident flocks and trap and transplant from these flocks as production allows. Attempt to obtain additional transplants from other states.

Problem — Timber management practices, domestic livestock overgrazing and road construction can adversely affect turkey habitat.

Strategy — Work with land management agencies to insure consideration of turkey habitat in land use planning and programs.

POLICIES

Existing game management units or groups or portions of such units modified in the future, as necessary, will be the basic geographical areas used in the development of wild turkey management programs and regulations.

Harvest of turkey in spring hunts will be confined to bearded male birds only. Harvest of turkey in fall hunts will be either sex.

Only Merriam's turkey will be stocked in Idaho.

Stocking of Merriam's turkey will only be from wild trapped stocks.

Game farm or otherwise artificially reared birds will not be stocked in Idaho.

Merriam's turkey populations will be maintained under natural conditions. Supplemental feeding will be confined to extreme, localized emergency conditions.

DOVE PROGRAM

The mourning dove *(Zenaidura macroura)* is the only dove species present in Idaho. Both nesting and migrating populations are found in various types of habitat. It is the only game bird which successfully nests in all 44 counties of the State.

Mourning doves fall under the jurisdiction of the Migratory Bird Treaty Act. Under this Act, harvest regulations and management are primarily the responsibility of the U.S. Fish and Wildlife Service.

MOURNING DOVE HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	7,737,856
USFS	3,765,420
State	828,135
F&G	41,961
Private	10,201,752
Other	1,693,805
Total	24,268,929

SUPPLY AND DEMAND

Supply currently exceeds demand for mourning dove. This situation is projected to persist through 1990.

Past Trends — Current Status

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1960	4,000,000	112,000	34,000	3.3
1965	4,300,000	198,000	58,400	3.4
1970	4,500,000	224,000	70,100	3.2
1975	4,872,000	247,000	84,400	2.9

DISCUSSION

There is a very large nesting and rearing population of doves in Idaho. Many of these birds leave the State in the fall prior to the time it is possible to open the hunting season under the federal regulation framework. Because of the large number of birds involved and the timing of the hunting season, full utilization of the allowable harvest is not possible. Harvest projections and objectives reflect this situation. While the basic situation will not change in the foreseeable future, it is anticipated that increasing demand will result in increased harvests and success rates.

Mourning dove populations have gradually increased from 1960 through 1975. It is projected that under current management levels and habitat trends, populations will remain at the 1970-1975 level through 1990.

No major measures to increase dove numbers are being considered. Projections, under current management levels and habitat trends, reflect the Department's objectives and are presented in the objectives section.

GOALS

Maintain approximately the current population level.

Increase harvest.

Meet future demand at slightly greater than the current success rate.

OBJECTIVES

Objectives Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1980	4,872,000	254,000	88,500	2.9
1985	4,547,000	275,000	92,900	3.0
1990	4,547,000	303,000	97,600	3.1

PROBLEMS AND STRATEGIES

Problem — Mourning dove hunting opportunity is limited because the peak of migration out-of-state occurs prior to September 1, the earliest opening date for dove hunting seasons allowed under the Migratory Bird Treaty Act.

Strategy — Within the framework required by the Migratory Bird Treaty Act, set dove hunting seasons to maximize hunter opportunity.

Problem — Mourning dove riparian nesting habitat is being reduced by land clearing, vegetation control, flood control measures and impoundments.

Strategy — Work with state and federal agencies conducting and sponsoring projects and programs that can reduce nesting habitat to minimize loss of this habitat.

Problem — Because of the necessary early opening of the dove hunting season there are increased conflicts between private landholders and hunters due to unharvested crops and fire danger. There is also some poaching of other game bird species for which hunting seasons are closed at the time of the dove season.

Strategy — Improve landholder-hunter relationships through increased information and education programs. Intensify enforcement efforts during dove seasons.

Problem — There is some feeling in the State that the mourning dove should be classified as a song bird and not hunted.

Strategy — Fully inform the public as to factors involved in mourning dove population dynamics.

POLICIES

The mourning dove will continue to be classed as a game bird and hunted in Idaho.

COTTONTAIL AND PYGMY RABBIT PROGRAM

Cottontail rabbits *(Sylvilagus nuttalli)* are widely distributed in most nonmountainous areas except in the northern portion of the State. The range of the pygmy rabbit *(Sylvilagus idahoensis)* is primarily restricted to sagebrush areas of southern Idaho.

COTTONTAIL AND PYGMY RABBIT HABITAT
By Land Ownership, 1975

Ownership	Cottontail Rabbit Acres	Pygmy Rabbit Acres
BLM	3,720,445	319,276
USFS	1,168,621	299,586
State	469,912	79,714
F&G	14,802	319
Private	4,010,471	300,644
Other	783,420	15,373
Total	10,167,671	1,014,912

SUPPLY AND DEMAND

The supply of cottontail currently exceeds demand and will continue to do so through 1990.

Cottontail and pygmy rabbits are widely distributed and much of their habitat is inaccessible. Harvest objectives reflect available rather than allowable harvest.

Past Trends — Current Status

Year	Population	Harvest	Demand	Success Rate (Animals Per Day)
1960	1,500,000	66,600	43,700	1.5
1965	900,000	33,000	29,400	1.1
1970	2,350,000	120,000	71,700	1.7
1975	1,097,000	50,500	49,100	1.0

DISCUSSION

Cottontail and pygmy rabbit populations fluctuate on an approximate 10-year cycle. Allowing for these cyclic fluctuations, populations have remained essentially stable from 1960 through 1975 and, under present management levels and habitat trends, are projected to maintain past and present levels through 1990.

With increasing numbers of hunters, some additional interest in cottontail and pygmy rabbit hunting is foreseen and harvests and success rates should increase over past and present levels.

There are no new measures being considered to increase cottontail and pygmy rabbit populations. Projections under current management levels and habitat trends reflect the Department's objectives and are presented under the objectives section.

GOALS

Maintain past and present population trends.

Increase harvest.

Meet future demand at increased success rates.

OBJECTIVES

Objectives Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Animals Per Day)
1980	2,351,000	118,000	72,800	1.6
1985	1,097,000	72,500	54,100	1.3
1990	2,351,000	130,000	74,900	1.7

PROBLEMS AND STRATEGIES

Problem — Cottontail rabbits can be carriers of diseases which are transmittable to humans.

Strategy — Adequately inform the public, particularly the hunting public, as to potential dangers of disease and means of avoiding these dangers.

POLICIES

Where hunting of both species is allowed, cottontail rabbit and pygmy rabbit hunting seasons will be the same and bag limits in the aggregate.

Hunting seasons for cottontail and pygmy rabbits will begin no earlier than September 1 and will, except for falconry regulations, close no later than the last day of February.

WATERFOWL MAJOR PROGRAM

A total of 27 species are in the Waterfowl Major Program including 22 species of ducks, 3 species of geese, coot and Wilson's snipe.

Waterfowl, as a group, are found throughout the State in water and wetland habitats.

A preference for waterfowl hunting has been expressed by 7 percent of hunters in Idaho. Approximately 519,000 hunting days annually are currently supplied by waterfowl or 21 percent of the total statewide hunting effort. Species in this program have significant observation value. Their habits of concentrating in large numbers in localized areas while feeding and resting make them highly visible. They can also be readily attracted to protected areas.

All of the birds in this major program are hunted in Idaho. Waterfowl fall under the provisions of the Migratory Bird Treaty Act. Regulation of harvest is the responsibility of the U.S. Fish and Wildlife Service. Harvest projections and objectives presented in the individual species programs are conditional depending upon future federal regulations.

PROBLEMS AND STRATEGIES

Problem — The bulk of the waterfowl population occurring in Idaho during hunting season is produced in areas outside of the State.

Strategy — Cooperate fully with the U.S. Fish and Wildlife Service, agencies in other states, wildlife organizations and Canadian wildlife agencies in programs to protect waterfowl and preserve and enhance their habitat in areas outside Idaho.

Problem — Valuable waterfowl habitat in the form of wetlands is being drained in Idaho for agricultural and other developments.

Strategy — Advocate and support programs to preserve wetlands. Obtain input into land use planning and programs to insure consideration for protection and enhancement of wetland waterfowl habitat.

Problem — Waterfowl are susceptible to significant disease mortality because of their habits of concentrating in localized areas.

Strategy — Provide input into water regulation programs to obtain consideration for water manipulation to minimize the occurrence of conditions which contribute to spread of waterfowl diseases. Monitor waterfowl populations for occurrence of disease. Disperse waterfowl concentrations where necessary to prevent spread of disease.

Problem — Hunting areas open to the general public are decreasing.

Strategy — Develop hunting areas on Department lands. Advocate providing of adequate hunting areas on federal refuges. Identify public lands within or adjacent to large blocks of privately owned waterfowl habitat and insure public access is allowed on these lands. Develop cooperative hunter access programs with private landowners, where possible.

POLICIES

Nonnative waterfowl species will not be introduced into Idaho.

Within the framework provided by the U.S. Fish and Wildlife Service, adjustments of hunting season lengths and opening and closing dates will be made, as necessary, to effectively meet different management requirements.

The taking of all species of waterfowl by falconry will be permitted under established regulations.

Use of nonlead shot in the hunting of waterfowl will be endorsed only in local areas where adverse effects from lead shot have been documented.

Maximized waterfowl hunting on federal refuges will be advocated where it does not conflict with the primary purposes of the refuge.

DUCK PROGRAM

There are 22 species of ducks found in Idaho at different times of the year (see Appendix B). The mallard is the most common duck in the State and the species most preferred by hunters.

Birds in this program are distributed throughout the State in water and wetland habitats. Ducks also use agricultural land for feeding.

This program contains two subprograms. One deals with locally produced ducks which nest and rear in Idaho and the other treats migratory birds which pass through the State in spring and fall or overwinter in the State.

Approximately 6,579,402 acres in Idaho are considered to be duck habitat either resting, rearing or feeding.

DUCK HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	347,313
USFS	210,265
State	552,237
F&G	15,665
Private	5,165,997
Other	287,925
Total	6,579,402

SUPPLY AND DEMAND
Past Trends — Current Status — Projected Potential Under Current Management Levels

Subprogram	Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
Locally Produced	1960	280,000	33,600	13,600	2.5
	1965	140,000	16,800	4,900	3.4
	1970	280,000	33,600	22,000	1.0
	1975	282,000	33,800	22,400	1.5
	1980	280,000	33,800	23,400	1.4
	1985	279,000	35,000	24,500	1.4
	1990	279,000	36,400	25,800	1.4

Subprogram	Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
Migratory	1960	4,500,000	368,000	218,000	1.7
	1965	3,000,000	234,000	104,000	2.3
	1970	4,500,000	615,000	353,000	1.7
	1975	4,493,000	549,000	357,000	1.5
	1980	4,493,000	555,000	375,000	1.5
	1985	4,460,000	535,000	394,000	1.4
	1990	4,200,000	504,000	413,000	1.2

DISCUSSION

LOCALLY PRODUCED SUBPROGRAM

Allowing for normal fluctuations, the number of ducks produced in Idaho have remained relatively constant since 1960. Harvests have varied depending upon population levels and the number of hunters. Success rates have generally decreased as demand increased. It is projected that under current management levels and habitat trends, essentially this same situation will persist through 1990. Populations and success rates will decrease slightly while demand and harvest will show a slight increase.

If existing wetland production habitat can be preserved and nesting and rearing conditions enhanced, it should be possible to improve on the current situation and provide increased populations, harvests and success rates through 1990.

MIGRATORY SUBPROGRAM

Resting and feeding habitat in Idaho is currently adequate to support migratory ducks passing through or overwintering in the State. These conditions are not expected to change significantly through 1990. Numbers of migratory birds present in the State are now and will be in the future dependent upon production success in out-of-state areas, primarily in Canada. Except for annual fluctuations, numbers of migratory ducks have shown a generally stable trend. Harvests generally increased and success rates decreased as demand grew larger. Because of continuing habitat losses, populations are expected to decrease under current management levels and habitat trends. With growing demand, harvests and success rates will show a corresponding decrease.

Additional improvements in out-of-state production habitat is foreseen. More intensive management programs by out-of-state agencies are also anticipated. The Idaho Department of Fish and Game will cooperate fully in these increased management efforts. Hopefully, these additional efforts will keep pace with ongoing habitat losses and the numbers of migratory ducks entering Idaho will remain at approximately their present level. As demand continues to grow, there will be relatively modest increases in harvest and decreases in success rates.

GOALS

LOCALLY PRODUCED SUBPROGRAM

Increase population numbers.

Increase allowable harvest.

Meet demand at success rates exceeding the current rate.

MIGRATORY SUBPROGRAM

Maintain population numbers.

Increase harvest.

Meet future demand at slightly less than the current success rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Subprogram	Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
Locally Produced	1980	307,000	38,100	23,400	1.6
	1985	341,000	42,800	24,500	1.8
	1990	373,000	48,100	25,800	1.9
Migratory	1980	4,493,000	555,000	375,000	1.5
	1985	4,493,000	579,000	394,000	1.5
	1990	4,493,000	593,000	413,000	1.4

PROBLEMS AND STRATEGIES

Problem — Ducks are susceptible to lead poisoning in localized areas by ingestion of lead shot.

Strategy — Conduct studies to determine areas where use of lead shot contributes significantly to lead poisoning in ducks and adjust regulations as necessary to prevent mortalities.

Problem — There is considerable illegal killing of ducks particularly after legal shooting hours.

Strategy — Intensify Department enforcement efforts and cooperative enforcement programs with the U.S. Fish and Wildlife Service.

Problem — Ducks sustain a high percentage of crippling loss during hunting.

Strategy — Conduct public education programs to encourage use of retrievers and discourage long-range shooting.

Problem — Certain species of ducks can cause crop damage in some localities.

Strategy — Cooperate in programs to alleviate crop depredations by ducks.

POLICIES

Duck populations will be maintained under natural conditions. Supplemental feeding will be confined to extreme localized emergency conditions.

Acquisition and development of habitat for the primary purpose of duck production and hunting areas is recognized as a viable part of a comprehensive duck management program. A land acquisition priority system will be designed and duck habitat acquired by the Department, when available and economically feasible, in accordance with this system.

GOOSE PROGRAM

This program relates to three species of geese: Canada *(Branta canadensis)*, snow *(Anser carulescens)* and Ross' *(Anser rossii)*. Snow and Ross' geese are not abundant and are generally present only for brief periods during the fall and spring migrations. Habitat acres, supply and demand projections and goals and objectives are presented for Canada geese only.

Geese are found throughout the State in water, wetland and agricultural habitats. The largest breeding and migratory populations are found in southwest and southeast Idaho.

This program contains two subprograms. One deals with geese which nest and rear in Idaho and the other treats migratory birds which pass through the State in spring and fall or overwinter in the State.

There are an estimated 5,224,371 acres that are considered to be either resting, rearing or nesting goose habitat in Idaho.

GOOSE HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	87,843
USFS	156,179
State	420,357
F&G	13,742
Private	4,356,554
Other	189,696
Total	5,224,371

SUPPLY AND DEMAND
Past Trends — Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Subprogram	Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
Locally Produced	1960	15,000	2,800	10,400	0.3
	1965	15,000	3,000	10,400	0.3
	1970	13,000	4,000	13,300	0.3
	1975	18,000	2,200	20,000	0.1
	1980	19,000	3,200	22,400	0.1
	1985	21,000	2,600	22,600	0.2
	1990	23,000	3,900	23,700	0.2

Subprogram	Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
Migratory	1960	93,000	14,500	64,300	0.2
	1965	95,000	18,500	65,600	0.3
	1970	85,000	26,600	86,600	0.3
	1975	135,000	22,300	91,000	0.2
	1980	142,000	23,000	94,800	0.2
	1985	149,000	24,100	99,400	0.2
	1990	156,000	26,700	104,000	0.3

DISCUSSION

LOCALLY PRODUCED SUBPROGRAM

Geese produced in Idaho supply a substantial portion of the total goose population available to goose hunters in the State. A major effort to create new and improve existing nesting and rearing habitat is currently underway. An intensive management program is also in effect. Locally produced geese have increased in numbers since 1970. Harvests have fluctuated but have shown an increasing trend. Significantly increased demand after 1970 has resulted in a reduction in success rates. Substantial increases in populations and harvests over the current level will continue through 1990 under current management levels and habitat trends. A relatively modest increase in demand is expected and success rates will improve slightly.

Lack of suitable nesting and rearing habitat is the major limiting factor for local production of Canada geese. These birds respond very favorably to improvements in existing habitat or creation of new habitat of this type and there is still an excellent potential for further increases in locally produced goose numbers. Expansion of current habitat programs and more refined management can result in much greater local production than under current conditions.

MIGRATORY SUBPROGRAM

Adequate resting and feeding habitat will be available to accommodate migratory geese entering Idaho into the foreseeable future. Migratory Canada goose populations are dependent upon out-of-state production primarily in Canada, principally Alberta. Numbers of migratory geese, while fluctuating, have demonstrated an increasing trend since 1960. Harvests have varied according to management approaches. Under current management levels and out-of-state habitat trends, it is projected that migratory goose populations and harvests will continue to increase over the current level through 1990. Greater demand will result in success rates remaining essentially the same as at present.

Further improvement in out-of-state production habitat and more intensive cooperative management with out-of-state agencies is anticipated. This should provide for greater numbers of migratory geese entering Idaho with larger harvests and improved success rates over what would be possible under current conditions.

GOALS

LOCALLY PRODUCED SUBPROGRAM

Double the current production of locally produced Canada geese by 1990.

Increase allowable harvest.

Meet future demand at greater than the current success rate.

MIGRATORY SUBPROGRAM

Increase the population of migratory Canada geese.

Increase allowable harvest.

Meet future demand at greater than the current success rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Subprogram	Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
Locally Produced	1980	24,000	4,100	22,400	0.2
	1985	30,000	5,100	22,600	0.2
	1990	36,000	6,100	23,700	0.3
Migratory	1980	150,000	25,500	94,800	0.3
	1985	158,000	26,800	99,400	0.3
	1990	164,000	27,900	104,000	0.3

PROBLEMS AND STRATEGIES

Problem — Canada goose production areas are not being fully utilized due to lack of or decline in suitable nesting sites and brooding areas.

Strategy — Provide nesting sites by artificial means and purchase and improve brooding areas.

Problem — Canada geese are especially vulnerable to nesting losses caused by stream flow fluctuations.

Strategy — Obtain input into water planning and flow regulation programs and advocate and support cooperative water programs which will minimize goose nesting losses. Install goose nesting platforms along streamcourses utilized by nesting geese.

Problem — Canada geese are particularly susceptible to predator losses on island nesting habitat.

Strategy — Determine areas of significant predation losses and provide for localized predator control programs, as necessary, or devise measures to minimize losses.

Problem — Geese sustain a high percentage of crippling loss during hunting.

Strategy — Conduct public information programs to discourage long-range shooting.

Problem — Geese can cause crop damage in some localities.

Strategy — Cooperate in programs to minimize crop depredation by geese.

POLICIES

State regulations will be established and development of federal regulations advocated to protect nesting geese from undue human disturbance.

Goose populations will be maintained by natural food. Supplemental feeding will be confined to extreme localized emergency conditions.

Acquisition and development of habitat for the primary purpose of goose production, resting and hunting is recognized as a viable part of a comprehensive goose management program. A land acquisition priority system will be designed and goose habitat acquired by the Department, when available and economically feasible, in accordance with this system.

COOT PROGRAM

Coots *(Fulica americana)* are found in water and wetland habitats throughout the State. Populations are primarily migrant.

COOT HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	138,924
USFS	84,106
State	220,894
F&G	6,166
Private	2,066
Other	115,170
Total	567,326

SUPPLY AND DEMAND

Currently there is a statewide surplus of coot. This surplus will continue through 1990.

Past Trends — Current Status

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1960	260,000	12,000	7,600	1.3
1965	260,000	9,300	6,200	1.5
1970	260,000	22,800	14,400	1.6
1975	261,000	30,300	22,700	1.3

DISCUSSION

A large population of coot is available to hunters in Idaho. However, because of low hunter demand, the allowable harvest is not approached. It is not anticipated that hunter demand will significantly increase and supply will continue to far exceed demand through 1990.

Additional measures to increase the coot population are not being considered. Projections under current management levels and habitat trends reflect the Department's objectives and are presented under the objectives section.

GOALS

Maintain the coot population at essentially the current level.

Increase harvest.

Increase success rates over the current level.

OBJECTIVES

Objectives Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1980	261,000	35,000	22,800	1.5
1985	262,000	40,000	23,300	1.7
1990	262,000	40,000	23,300	1.7

POLICIES

No major program to increase populations or distribution of coot will be undertaken.

WILSON'S SNIPE PROGRAM

The Wilson's snipe *(Capella gallinago)* is a shorebird and is found adjacent to water bodies and in wetland habitats throughout the State.

WILSON'S SNIPE HABITAT
By Land Ownership, 1975

Ownership	Acres
BLM	69,462
USFS	42,053
State	110,447
F&G	3,133
Private	1,033,200
Other	57,585
Total	1,315,880

SUPPLY AND DEMAND

There is currently a statewide surplus of Wilson's snipe. This surplus will continue to exist through 1990.

Past Trends — Current Status

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1960	200,000	1,500	—	—
1965	190,000	2,000	—	—
1970	180,000	2,500	1,200	2.1
1975	176,000	4,400	6,000	0.7

DISCUSSION

Despite the presence in Idaho of relatively large numbers of Wilson's snipe, there is a low hunter demand for these birds. Because of this low demand, the allowable harvest has not been approached in past years. While hunter interest and harvests are expected to increase, it is not anticipated that the basic situation will change by 1990 and supply will continued to exceed demand.

New measures to increase Wilson's snipe populations are not contemplated.

Projections under current management levels and habitat trends reflect the Department's objectives and are presented under the objectives section.

GOALS

Maintain the Wilson's snipe population at essentially the current level.

Increase harvest.

Meet future demand at greater than the current success rates.

OBJECTIVES

Objectives Under Current Management Levels and Habitat Trends

Year	Population	Harvest	Demand	Success Rate (Birds Per Day)
1980	176,000	5,900	6,000	1.0
1985	176,000	6,500	6,600	1.0
1990	176,000	7,300	6,600	1.1

POLICIES

No major programs to increase the population or distribution of snipe will be undertaken.

FURBEARER MAJOR PROGRAM

There are eight species in this major program: beaver *(Castor canadensis)*, muskrat *(Ondatra zibethica)*, mink *(Mustela vison)*, marten *(Martes americana)*, red fox *(Vulpes fulva)*, bobcat *(Lynx rufus)*, lynx *(Lynx canadensis)* and raccoon *(Procyon lotor)*. Beaver, muskrat and mink are found throughout the State in aquatic habitats. Martens are present in forested areas primarily in northern, central and northeastern Idaho. The red fox is found throughout most portions of the State usually associated with agricultural and adjacent lands, foothills and mountain meadow areas. Bobcat are widespread throughout the State and occur in many types of habitat. Typically, lynx are present in forested areas, primarily in the northern and central portions of the State. Distribution of raccoon is statewide in agricultural, valley and foothill lands.

Furbearers in this program make a considerable contribution to the economy of the State. Value of pelts from these species was $491,230 in 1975-76.

Raccoon are sometimes hunted with dogs for sport. The red fox can be of nonconsumptive observation value. It commonly resides in areas near human habitation and its habit of feeding in open meadows and fields makes it readily visible.

GOALS

Develop programs to meet demand within constraints necessary to insure the maintenance of viable furbearer populations in Idaho.

OBJECTIVES

Develop an inventory of all furbearer habitat and relative population abundance by 1980.

PROBLEMS AND STRATEGIES

Problem — Riparian habitat is extremely important to the maintenance of certain species and this habitat is being reduced by land clearing, development and drainage, construction of flood control levees, channel straightening, herbicide applications and overgrazing.

Strategy — Establish liaison and work closely with government agencies carrying out, sponsoring or subsidizing programs and practices that can reduce riparian habitat to minimize elimination of this habitat and, where possible, mitigate for losses sustained.

Problem — Fur prices dictate the level of trapping and hunting participation and harvest. A rapid and significant increase in fur prices can lead to rapid changes in the status of furbearer populations.

Strategy — Monitor fur price trends. Take preventative measures against possible overharvest.

Problem — Bobcat and lynx have just recently been removed from the statutory predator list and placed under control of the Department of Fish and Game. Populations are currently at low levels due to past uncontrolled harvest.

Strategy — Develop trapping seasons which allow for increase in these populations. Implement other protective measures as necessary.

Problem — There are differing opinions on red fox management among different groups of people in different localities. Some people advocate trapping and hunting and others wish red fox maintained only for their aesthetic and rodent reduction values.

Strategy — Determine prevailing attitudes in localities where there are differences of opinion on red fox management and give full consideration to these attitudes.

Problem — Beaver and muskrat can cause damage to agricultural lands and man-made facilities.

Strategy — Set regulations to encourage taking of beaver and muskrat in potential high damage areas. The Department will furnish aid in alleviating damage in localized areas.

Problem — Red fox and bobcat can, on occasion, be predators on small, domestic farm and game animals.

Strategy — Set regulations to encourage taking of fox and bobcat in areas where damage to small farm animals occurs.

POLICIES

Both general and controlled seasons will be used, as necessary, in establishing beaver trapping seasons.

Beaver which cause damage and cannot be taken under established trapping seasons will be controlled by Department personnel.

Payment of bounties will not be used as a means of controlling red fox, lynx, bobcat or raccoon populations where control may be necessary.

NONGAME WILDLIFE MAJOR PROGRAM

This major program includes 2 species of hoofed mammals, 11 carnivores, 50 noncarnivores, 25 raptors, 38 waterbirds and 113 passerine and miscellaneous birds. It also includes 23 species of reptiles. Nongame wildlife of one species of another are found throughout Idaho in all types of habitat.

Public awareness of these animals has increased dramatically in recent years. They make a definite and significant aesthetic contribution to the State of Idaho. Utilization in the forms of observation, photography, educational and scientific study is growing steadily. Many species also furnish recreational hunting opportunities.

Nongame wildlife provide an economic benefit to the State. Expenditures related to sport hunting are a factor. Value of nongame pelts taken is significant. Nonconsumptive uses, such as observation and photography also involve considerable expenditures at the present time. There is potential for a very large increase in monetary values related to nonconsumptive uses.

PROBLEMS AND STRATEGIES

Problem — There is insufficient information regarding nongame distribution, abundance, habitat requirement and ecology.

Strategy — Sponsor or encourage and support needed distribution, abundance, habitat requirement and ecological research by other agencies and institutions.

Problem — Present revenues derived primarily from licenses for hunting of game species are insufficient to support needed nongame research and management programs.

Strategy — Explore additional sources of revenue other than license sales and, if found desirable and feasible, promote the authorization of such sources.

POLICIES

Nongame populations will be managed to maintain desired predator-prey relationships where there is sufficient knowledge and understanding of these relationships.

HOOFED MAMMAL PROGRAM

The only wild hoofed mammals not presently hunted in the State of Idaho are the caribou *(Rangifer tarandus)* and bison *(Bison bison)*. Caribou are found only in the extreme northern Panhandle adjacent to the Canadian border where a small herd migrates into Idaho from Canada during the winter months. An occasional bison strays into northeastern Idaho.

GOALS

Maintain the caribou population in Idaho at approximately the present level.

OBJECTIVES

Maintain a population of approximately 30 caribou through 1990.

PROBLEMS AND STRATEGIES

Problem — Wintering habitat for caribou is being reduced through logging practices.

Strategy — Obtain input into U.S. Forest Service planning and programs to insure that critical caribou habitat is preserved and, if possible, enhanced.

Problem — Caribou migrate between British Columbia and Idaho and are under Department jurisdiction only part of the year.

Strategy — Work closely with British Columbia Department of Wildlife to develop and maintain a cooperative management program.

Problem — Powerline construction is a potential problem for caribou.

Strategy — Work with agencies concerned to provide for location of powerline routes where they will not adversely affect caribou habitat.

Problem — Bison cause damage to agricultural lands.

Strategy — Cooperate with other agencies and local interests in efforts to prevent damage by bison.

POLICIES

Programs will not be undertaken to expand the size of the caribou population or range beyond that necessary to insure survival of the herd in Idaho.

No programs will be undertaken to establish a permanent, resident wild population of bison in Idaho.

Bison causing damage will be removed or herded from problem areas. Elimination of problem bison will be undertaken only as a last resort.

CARNIVOROUS MAMMAL PROGRAM

There are 11 nongame species in this program. These species include: grizzly bear *(Ursus horribilis)*, wolf *(Canis lupus)*, coyote *(Canis latrans)*, kit fox *(Vulpes velxo)*, wolverine *(Gulo luscus)*, otter *(Lutra canadensis)*, badger *(Taxidea taxus)*, striped skunk *(Mephitis mephitis)*, spotted skunk *(Spilogale putorius)*, short-tailed weasel *(Mustela erminea)* and long-tailed weasel *(Mustela frenata)*. In the aggregate, nongame carnivores are found throughout the State in many different habitat types.

The only species that furnishes a significant amount of recreational hunting is the coyote. In addition to firearms hunting, coyote are sometimes hunted with dogs for sport.

Currently, some of the most valuable pelts in the State come from this group. For those species not protected, value of pelts taken amounted to $96,544 in 1975-76.

One trait these species have in common is that they can all be considered predacious to a greater or lesser extent.

Predatory animals occupy an important niche in the ecosystem under natural predator-prey relationships. Neither predator nor prey populations are endangered although major fluctuations in populations can occur. When these relationships are disturbed by man through his impact on either predator or prey species or the introduction of new prey species, such as domestic livestock, severe conflicts can arise. Of the species in this program, the coyote is considered to be the most serious predator on domestic livestock.

In certain instances, predation can have adverse effects on game populations. These instances normally involve situations where other stresses or conditions have put individual game animals or groups of animals in a disadvantaged position or where there exists a disproportionate ratio between predator and prey species.

GOALS

Develop programs, as necessary to insure the maintenance of viable populations of all nongame carnivores in Idaho.

Develop, in cooperation with federal agencies, programs to decrease predation losses on domestic livestock and game species, as necessary.

OBJECTIVES

Develop an inventory of all nongame carnivore habitat and relative population abundance by 1980.

Determine predator-prey relationships for all major game and predator species by 1990.

Plan systematic, local predator control programs, as necessary, by 1990.

PROBLEMS AND STRATEGIES

Problem — The Department has no regulatory authority over coyote, skunk and weasel.

Strategy — Work to have state law amended so as to provide that all wildlife species in the State are subject to Department regulations.

Problem — Sudden and significant increases in fur prices can lead to overharvest of certain species.

Strategy — Monitor fur prices and affected populations and attempt to predict harvest trends and manage accordingly.

Problem — Much of the nongame carnivore habitat is on private land and it is often difficult for hunters to obtain access.

Strategy — Identify public lands within or adjacent to large blocks of privately owned nongame carnivore habitat and insure public access is allowed on these lands. Where possible, work out cooperative agreements with landowners to allow hunting.

Problem — Predation by animals in this program

can, in certain circumstances, have adverse effects on game populations.

Strategy — Where need is determined, local control efforts will be supported by the Department.

Problem — Animals in this program can cause damage to domestic farm animals.

Strategy — On a local area or individual animal basis, the Department will support and lend assistance to federal agencies which, under agreement with the Department, are controlling damage by predatory animals.

Problem — Damage by predators to both domestic livestock and wild game is difficult to evaluate.

Strategy — Conduct or sponsor research to determine predator-prey relationships and develop methodology for quantifying predator damage.

POLICIES

Nonnative, carnivorous nongame species will not be introduced into the State of Idaho.

Control of predatory animal damage to domestic livestock will be carried out by the U.S. Fish and Wildlife Service under agreement and in cooperation with the Department. The Department will contribute funds to the Cooperative Predator Control Program administered by the U.S. Fish and Wildlife Service for this purpose.

Determination of the need and development of programs for control of predation on wildlife populations is solely the province of the Department.

Programs to control predation on wildlife populations will be carried out by the U.S. Fish and Wildlife Service upon request of and under agreement with the Department and according to Department direction.

The Department will contribute and designate funds to be used by the U.S. Fish and Wildlife Service for control programs which are specifically requested by the Department for wildlife related control programs only.

Programs for control of predation on wildlife species will be directed at specific problem areas or particular situations involving individual animals or groups of animals.

Control of nuisance situations caused by animals in this program which do not involve predation on domestic livestock will be the province of and undertaken by the Department on a complaint basis only. Department sponsored bounty systems will not be incorporated into any control program involving carnivorous nongame animals.

NONCARNIVOROUS MAMMAL PROGRAM

This program includes bats, shrews, moles, pikas, hares, chipmunks, marmots, ground squirrels, tree squirrels, nutria, rats, mice, pocket gophers and porcupine. A total of 50 species are involved in all (see Appendix C). As a group, the species in this program are found throughout Idaho in practically all types of habitat.

Many of these animals are readily visible in and adjacent to human habitation during certain periods of the year and are of high aesthetic and observation value. Hares, chipmunks, ground squirrels, tree squirrels and marmots are of particular value in this regard.

Most of the animals in this program fulfill an important function as major prey species for avian and mammalian predators. Many of them also furnish a significant amount of sport hunting recreation. Some species can cause damage to agricultural lands, crops and developments.

GOALS

Develop programs, as necessary, to insure the maintenance of viable populations of all noncarnivorous, nongame mammals in Idaho.

Develop programs to decrease depredations on agricultural lands, as necessary.

OBJECTIVES

Develop an inventory of all noncarnivorous, nongame mammal habitat and relative population abundance by 1980.

Determine prey relationships to major game and furbearer species by 1990.

Develop plans to protect necessary prey relationships to major game and furbearer species by 1990.

PROBLEMS AND STRATEGIES

Problem — The Department has no regulatory authority over jack rabbits.

Strategy — Work to have state law amended so as to provide that all wildlife species in the State are subject to Department regulations.

Problem — Noncarnivorous, nongame populations are subject to major population fluctuations and cycles which are not fully understood at this time.

Strategy — Support and encourage research to determine cause and effect of major population fluctuations and make management adjustments, as necessary.

Problem — Predator-prey relationships are not fully understood at this time.

Strategy — Support and encourage research to increase knowledge of predator-prey relationships involving certain species.

Problem — Diseases which can be transmitted to humans or disease vectors are commonly carried by several species in this group.

Strategy — Adequately inform the public, particularly the hunting public, as to potential dangers and means of avoiding these dangers.

Problem — Some of the species, such as nutria, ground squirrels, moles, pocket gophers and hares, can cause damage to human facilities, agricultural, forest and range lands due to their burrowing and feeding habits.

Strategy — Support control measures, as necessary and desirable, where other wildlife species will not be adversely affected.

POLICIES

Nonnative, noncarnivorous, nongame species will not be introduced into the State of Idaho.

The present range of nutria will not be extended.

Control of noncarnivorous, nongame animals, except tree squirrels, causing damage to human facilities will be carried out by the U.S. Fish and Wildlife Service under agreement and in cooperation with the Department or by local control districts under applicable state and federal regulations.

There will be no hunting or trapping seasons established for tree squirrels and those animals will be protected at all times except when control of nuisance or damage causing animals is necessary.

Control of nuisance or damage causing tree squirrels will be the province of the Department.

Department sponsored bounty systems will not be incorporated into any control program involving noncarnivorous, nongame species.

RAPTOR PROGRAM

Eagles, hawks and owls are included in this program. A total of 25 species are treated (see Appendix D).

These raptors, in the aggregate, are found either as residents or migrants in most types of habitat throughout the State. Idaho has a relative abundance and diversity of raptor species. The southwestern portion of the State contains some of the largest breeding concentrations of raptors in the world.

Birds of prey are becoming extremely popular with an increasing portion of the general public and have significant aesthetic, observation, educational and scientific values. They are also highly prized by participants in the sport of falconry. Raptors can, under certain circumstances, exert a significant influence on control of small prey species such as rabbits, hares and rodents.

Under the Migratory Bird Treaty Act, raptors are subject to federal law as well as state regulation and are completely protected.

GOALS

Develop programs to maintain or increase raptor numbers in Idaho.

OBJECTIVES

Have all powerlines equipped, as necessary, to prevent electrocution mortality to susceptible raptors by 1990.

Develop an inventory of all raptor habitat and relative population abundance by 1980.

Develop falconry regulations that will insure no adverse effects on raptors by 1980.

PROBLEMS AND STRATEGIES

Problem — There is a lack of information on raptor population dynamics and habitat requirements.

Strategy — Sponsor and encourage research to increase knowledge of population dynamics and habitat requirements.

Problem — Key nesting and hunting habitats for some raptors are being eliminated by agriculture and other development and associated activities.

Strategy — Obtain input into land use planning and programs to insure consideration of known critical raptor habitats.

Problem — Due to their hunting and nesting habits, some of the larger birds of prey are subject to electrocution by powerlines and the number of powerlines in Idaho will increase significantly in future years.

Strategy — Insure that all new powerlines are designed to prevent mortalities. Work toward having old powerlines modified, as necessary, to prevent mortalities.

Problem — Historically, there has been a negative attitude toward raptors because of their predacious characteristics.

Strategy — Increase educational efforts to inform the public and present birds of prey in proper perspective.

Problem — Illegal shooting, trapping and poisoning of raptors is prevalent.

Strategy — Increase effort and effectiveness in enforcement of regulations protecting raptors.

Problem — Certain raptors and their eggs are highly prized and of considerable monetary value and are subject to illegal collection and sale.

Strategy — Suppress information detailing certain raptor nesting sites and increase enforcement efforts to prevent illegal collection and traffic in raptors and eggs.

POLICIES

Nonnative raptors which are threatened or endangered on their native range may be introduced into Idaho if there is probability of reproducing populations being established that will not have significant adverse effects on native wildlife species.

Falconry is a valid use of certain birds of prey and will be permitted in Idaho under regulation.

Detailed site descriptions of raptor nesting areas will not be made public by the Department. Other state and federal agencies will be urged to suppress detailed nest location descriptions.

Land acquisition and control of public activities on acquired land to protect critical raptor habitats is recognized as a tool in raptor management and will be undertaken as necessary and feasible.

The Snake River Birds of Prey Natural Area in southwestern Idaho, including adjacent lands as found necessary, should be managed for the primary purpose of maintaining and increasing raptor populations.

WATER BIRDS PROGRAM

Birds in this program are all associated with water, marsh or shore habitats. They include herons, egrets, ibis, bitterns, cranes, rails, shore birds, swans, loons, grebes, pelican, cormorant, gulls, terns, kingfisher and dipper. A total of 38 species are involved (see Appendix E).

As a group, these birds are present throughout Idaho wherever water or water associated habitat is found.

All birds in this program are subject to federal regulation under the Migratory Bird Treaty Act. They are completely protected by both federal law and state regulation.

Because of their high degree of visibility, interesting habits and the tendency of most of them to gather in feeding, nesting or migrating concentrations, water associated birds are extremely valuable from aesthetic, observation and educational standpoints. They lend themselves particularly well to group observation of varied types and can be readily utilized to satisfy the increasing demand for opportunity to view birdlife in its natural habitat.

GOALS

Develop programs, as necessary, to insure the maintenance of existing water associated bird populations in Idaho.

Establish a reproducing whooping crane population in Idaho.

Meet the demand for nonconsumptive recreational, educational and scientific uses.

OBJECTIVES

Develop an inventory of all water bird habitat and relative population abundance by 1980.

Develop, by 1980, programs for Department owned or managed water and wetlands which take into consideration habitat management to increase populations of water associated nongame birds.

Develop, by 1985, a program for measuring public participation, demand and preferences for nonconsumptive uses of birds in this program.

Cooperate with the U.S. Fish and Wildlife Service research program employing sandhill cranes as foster parents for whooping cranes in Idaho by 1990.

PROBLEMS AND STRATEGIES

Problem — Increasing amounts of wetland areas are being drained for agricultural or other development.

Strategy — Advocate and support programs to preserve existing and create new wetland areas. Obtain input into land use planning efforts to insure consideration of wetland preservation.

Problem — There is considerable illegal hunting of nongame, water associated birds.

Strategy — Increase public knowledge of the protected status of birds in this program. Increase enforcement efforts.

Problem — Sandhill cranes can cause damage to agricultural crops.

Strategy — Support and cooperate in programs to alleviate damage by sandhill cranes.

POLICIES

Establishment of a reproducing whooping crane population in Idaho is recognized as beneficial from a state, national and international standpoint and will be supported by the Department. Other nonnative, nongame water associated birds will not be introduced into Idaho.

Alleviation of agricultural depredations by sandhill cranes will be the primary responsibility of the U.S. Fish and Wildlife Service and shall be carried out by that agency with cooperation from the Department.

PASSERINE AND MISCELLANEOUS NONGAME BIRD PROGRAM

A total of 113 species are in this program. Included are the turkey vulture, goatsuckers, swifts, hummingbirds, woodpeckers, sapsuckers, cuckoo and 99 species of passerine birds (see Appendix F). In the aggregate, these species are the most numerous and widely distributed birds in Idaho and are commonly found throughout the State.

Passerine birds (generally defined as perching song birds) comprise over 50 percent of the total bird species in Idaho.

Birds in this program are extremely valuable from an aesthetic and observation standpoint. Most of them are readily visible and available for observation. Many species are commonly found in urban areas and near other human habitation. As a group, they support the bulk of the rapidly growing recreational activity of "bird watching."

All birds in this program with the exception of the starling, house sparrow and feral pigeon, are included in the Migratory Bird Treaty Act and are protected by federal law and state regulation.

GOALS

Develop programs, as necessary, to insure the maintenance of existing passerine and miscellaneous nongame bird populations in Idaho.

Meet the demand for nonconsumptive recreational, educational and scientific uses.

OBJECTIVES

Develop an inventory of all passerine and miscellaneous nongame bird habitat and relative population abundance by 1980.

Develop, by 1980, programs for Department owned or managed waters and lands which take into consideration habitat management to increase populations of passerine and miscellaneous nongame birds.

Develop, by 1985, a program for measuring public participation, demand and preferences regarding nonconsumptive uses of birds in this program.

PROBLEMS AND STRATEGIES

Problem — Agricultural development, impoundments, levee construction, overgrazing and logging practices are eliminating habitat for certain species of birds in this program.

Strategy — Obtain input into land use planning and programs to insure consideration for preservation or enhancement of critical habitat.

Problem — Starlings can cause damage to agricultural crops and livestock feeds.

Strategy — Support programs to minimize damage caused by starling populations.

Problem — There is considerable illegal hunting of passerine and miscellaneous nongame birds.

Strategy — Increase public knowledge of the protected status of birds in this program. Increase enforcement efforts.

POLICIES

No nonnative passerine or similar bird species will be introduced into Idaho.

Alleviation of damage by starlings will be the province of the U.S. Fish and Wildlife Service.

Programs to reduce starling populations in Idaho will be supported if it can be demonstrated that there will be no adverse effects on other wildlife species.

The crow will be hunted in Idaho under federal and state regulation.

REPTILE PROGRAM

There are 23 species of reptiles in this program (see Appendix G). One or more of these species are found in all geographical areas of Idaho.

Reptiles can be considered of aesthetic, educational and scientific value. Except for the desert lizards, they are generally not readily observable.

GOALS

Develop programs, as necessary, to insure the maintenance of existing reptile populations in Idaho.

Meet observation, educational and scientific demands for species in this program.

OBJECTIVES

Develop an inventory of all reptile habitat and relative population abundance by 1980.

PROBLEMS AND STRATEGIES

Problem — There is insufficient information regarding habitat requirements and basic ecology of reptiles.

Strategy — Sponsor, encourage and support needed habitat requirement and ecological research by other agencies and institutions.

Problem — There is general adverse public reaction to reptiles stemming largely from misinformation.

Strategy — Educate the public on ecological value of reptiles to prevent unnecessary killing.

POLICIES

No nonnative reptiles will be introduced into Idaho.

SPECIES OF SPECIAL CONCERN

Species of special concern are those species whose restricted range, specific habitat requirements and/or low population numbers make them vulnerable to elimination from the State if adverse impacts on populations or habitat occur. Based on present knowledge of these factors, a total of 22 wildlife species — 9 mammals, 8 birds and 5 reptiles — are classified in this category. As species and habitat inventories are completed and additional studies conducted, further knowledge will become available and these classifications will be revised as necessary.

This classification will be developed as a basis for preparing, in conjunction with other state and federal wildlife agencies, a State list of endangered or threatened species.

MAMMALS

WOLF

There have been infrequent and scattered reports of wolf sightings in Idaho. Information is too limited at this time to estimate the total number of wolves that may be in the State.

The wolf is classified as "endangered" under the Endangered Species Act and is completely protected by federal law and Commission regulation.

RECOMMENDATIONS

If possible, obtain funds under the Endangered Species Act and attempt to establish wolf population estimates and locations in the State. Existing wilderness and roadless areas which may support wolves should be preserved.

GRIZZLY BEAR

Remnant populations of grizzly bear are found in the northern portion of the State and in northeastern Idaho adjacent to Yellowstone National Park. Population numbers are low.

The grizzly bear is classed as a "threatened" species under the Endangered Species Act and is protected by both federal law and Commission regulation.

RECOMMENDATIONS

Existing wilderness and roadless areas that presently support, or may in the future support, grizzly bear should be preserved. Location of grizzly bear in Idaho should be determined and regulations modified, as necessary, to insure protection of these animals. Critical habitat should be defined and identified in cooperation with federal agencies and the interagency Grizzly Bear Study.

BOBCAT

The Bobcat has recently been removed from the statutory predator list and placed under Department control. Prices of bobcat pelts have increased dramatically in the past several years and there has been a corresponding increase in harvest. This species is extremely susceptible to trapping and due to high pelt prices and past uncontrolled harvest, certain populations have been considerably reduced.

RECOMMENDATIONS

Develop trapping seasons which allow for an increase in the bobcat population. Implement other protective measures, as necessary.

CARIBOU

Caribou in Idaho are confined to a very restricted area in the extreme northern portion of the State. They are protected by Commission regulation but are vulnerable to elimination in Idaho if habitat in this small area should be adversely affected.

RECOMMENDATION

Every effort should be made to protect and preserve existing caribou habitat.

LYNX

Small numbers of lynx are found in Idaho. These animals have recently been removed from the statutory predator list and placed under control of the Department. Pelt prices for lynx have been increasing significantly and past uncontrolled harvest has considerably reduced certain populations.

RECOMMENDATIONS

Develop trapping seasons which will allow for an increase in the lynx population. Implement other protective measures, as necessary.

FISHER

Fishers were apparently eliminated from Idaho during earlier years. They have recently been reintroduced into the State by the Department and are protected by Commission regulation. Forested, wilderness type habitat is a requirement of this species. While reproduction of introduced animals is occurring, current numbers of these animals are still low. They are vulnerable to elimination if adverse impacts on populations or habitat should occur.

RECOMMENDATION

Existing wilderness and roadless areas which may support fisher should be preserved.

KIT FOX

Kit fox are presently very rare in Idaho and they are protected by Commission regulation. Their presence is apparently confined to arid areas in extreme southern portions of the State. Low population numbers and restricted range of this small fox make it vulnerable to elimination in the State if adverse impacts on populations or habitat should occur.

RECOMMENDATION

Location of kit fox populations should be determined and necessary protective measures taken to insure protection of habitat and remaining populations.

IDAHO GROUND SQUIRREL

This small species of ground squirrel, found only in Idaho, occurs exclusively in Washington and Adams counties. The restricted range of this squirrel makes it vulnerable to extinction if adverse impacts on habitat or populations should occur.

RECOMMENDATIONS

Monitor populations and habitat conditions. Take measures, as necessary, to insure habitat or populations are not adversely affected.

WOLVERINE

Only a remnant population of wolverine remains in timbered areas of the State. They are protected under Commission regulation. Because of their low numbers, they are vulnerable to elimination if adverse impacts on populations or habitat should occur.

RECOMMENDATION

Existing wilderness and roadless areas which may support wolverine should be preserved.

BIRDS

WHOOPING CRANE

In 1975, a program was initiated to establish a whooping crane population in eastern Idaho. Whooping crane eggs were placed in greater sandhill crane nests. The eggs were hatched and young whoopers raised by the substitute parents. A total of six whooping cranes survived, migrated south with their sandhill crane foster parents and will hopefully return to Idaho. The whooping crane is protected under the Endangered Species Act and classed as "endangered." It is one of the rarer birds in the world.

RECOMMENDATIONS

The whooping crane transplant program should be continued. The Grays Lake National Wildlife Refuge and adjacent areas should be protected and managed to enhance production and survival of whooping cranes.

SHARP-TAILED GROUSE

Huntable populations of sharp-tailed grouse are present in Idaho. These populations, however, are confined by strict habitat requirements to relatively small areas. The specific grass-shrub habitat required by sharp-tailed grouse is limited and susceptible to adverse impacts by overgrazing and agricultural and other developments. Removal or alteration of this limited habitat could result in a reduction of sharp-tailed grouse to token numbers or complete elimination from the State.

RECOMMENDATION

All possible measures should be taken to protect, preserve, enhance and expand existing sharp-tailed grouse habitat.

TRUMPETER SWAN

Trumpeter swan both nest and winter in a limited area in northeastern Idaho. While no longer endangered or threatened, total numbers are still relatively small and production in Idaho should be encouraged. Adverse impacts on its rather limited range could reduce or eliminate its occurrence in the State.

RECOMMENDATION

Trumpeter swan nesting and wintering areas in Idaho should be protected and enhanced to encourage production and maintain a trumpeter swan population in the State.

BOBWHITE QUAIL

Bobwhite quail were never abundant in Idaho but, at one time, had fairly wide distribution through the southwestern portion of the State and as far north as Lewiston. Habitat and populations have been steadily declining and, at the present time, remnant populations are, for all practical purposes, restricted to local areas of suitable habitat in southwestern Idaho. Populations are stable in these areas and limited hunting is allowed. If remaining habitat is significantly reduced, bobwhite could be vulnerable to elimination from the State.

RECOMENDATIONS

All possible measures should be taken to protect and preserve remaining bobwhite quail habitat. Populations should be watched closely and additional protective measures taken, if necessary.

MOUNTAIN QUAIL

Populations of mountain quail are presently sufficient to justify limited hunting of this species. Mountain quail have disappeared from much of their former range in recent years, however. Reasons for this situation are not fully understood. Knowledge is lacking on habitat requirements and remaining distribution. It is possible that mountain quail populations could become restricted to limited areas and vulnerable to elimination by adverse impacts on those areas.

RECOMMENDATION

Mountain quail populations should be watched closely and protective measures taken, as necessary, until research can determine the statewide population status of this species and they can be managed accordingly.

GAMBEL'S QUAIL

The Gambel's quail range in Idaho is restricted to one relatively small area on the Lemhi River drainage. This quail is presently hunted and the population has remained stable. Because of its extremely limited distribution and dependence on riparian habitat, however, it could be eliminated if this habitat were destroyed or significantly reduced.

RECOMMENDATION

All possible measures should be taken to protect and preserve existing Gambel's quail habitat.

FERRUGINOUS HAWK

This hawk is present in Idaho in limited numbers. Its resident range is restricted to sagebrush areas in the Snake River Plains. The bulk of its habitat is contained in an area proposed for extensive agricultural development. Due to its limited numbers and the threat to its habitat, this species is vulnerable to elimination from the State.

RECOMMENDATION

The exact nature and extent of habitat requirements for the ferruginous hawk should be determined and sufficient sagebrush habitat left intact to meet its needs.

PRAIRIE FALCON

Idaho has one of the world's largest nesting concentrations of prairie falcons in the Snake River Birds of Prey Natural Area. Prairie falcons are protected by both federal law and Commission regulation. Populations in Idaho are healthy but, in view of reduced numbers elsewhere, every effort should be made to protect and enhance the Idaho populations.

RECOMMENDATIONS

The Snake River Birds of Prey Natural Area, including adjacent areas, as found necessary, should be preserved and managed to enhance prairie falcon production. Location of other possible nesting concentrations should be determined and protected.

PEREGRINE FALCON

There are only a few known breeding pairs of peregrine falcons in Idaho. These birds are classified as "endangered" under the Endangered Species Act and are protected by federal law and Commission regulation.

RECOMMENDATIONS

Protect nest sites from human depredation and harassment. Support and cooperate in efforts to increase peregrine falcon numbers including possible introduction of nonresident birds.

REPTILES

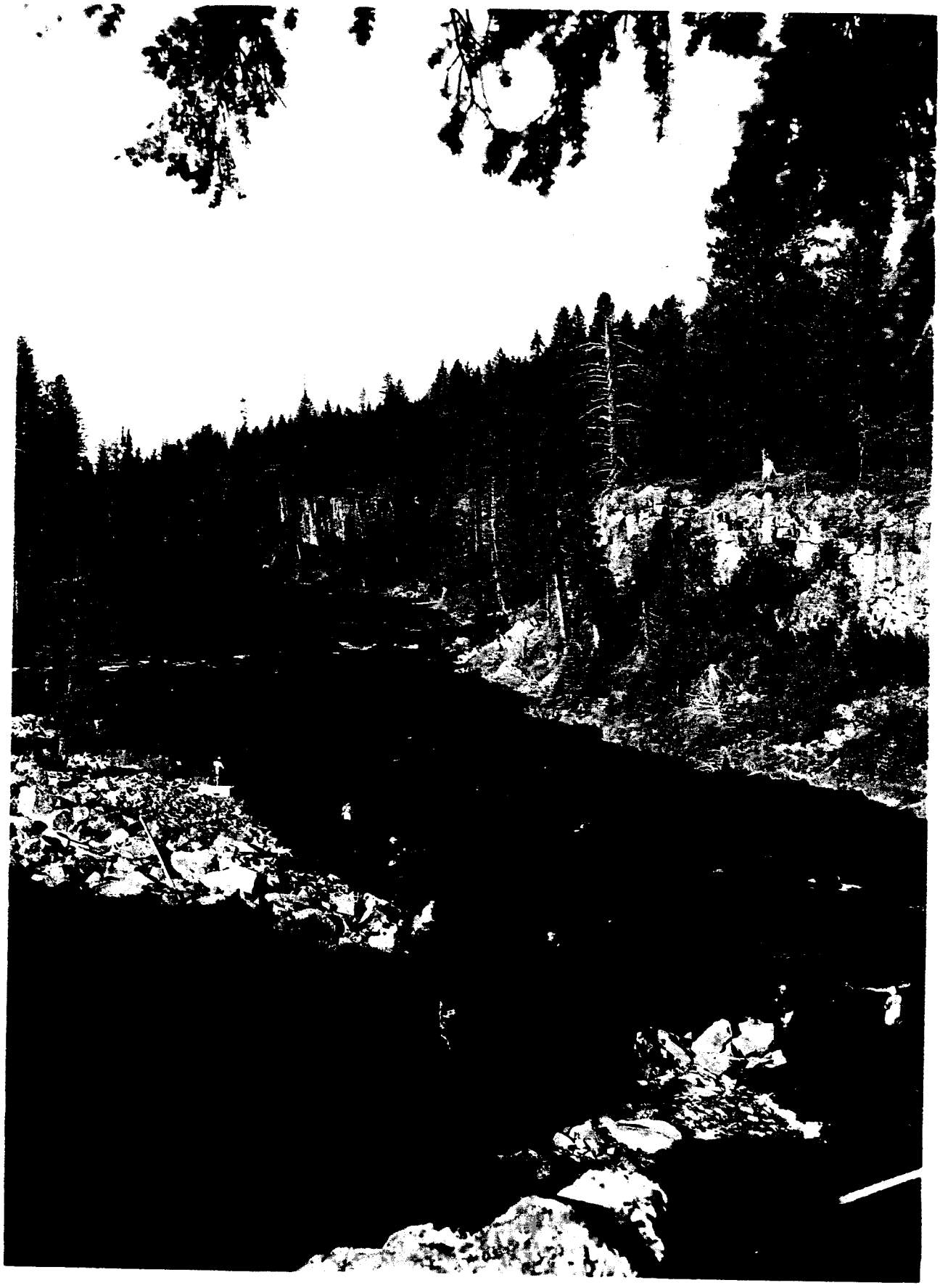
Based on reported occurrence, five of the 23 species of reptiles in Idaho are presently considered rare. These are all snakes and include the following species: western ring-necked snake, eastern ring-necked snake, long-nosed snake, western ground snake and the night snake.

While considered rare, little is actually known about the distribution and relative abundance of these snakes in Idaho. Until such time as additional knowledge is available to more precisely determine their population status, they should be protected, where possible, to insure they are not eliminated from the State.

RECOMMENDATIONS

Studies should be conducted to more precisely determine distribution and population status of these reptiles. If necessary and possible, interim protective measures should be taken pending acquisition of further knowledge. Long-term protective measures based on study results should be taken, as necessary, to insure maintenance of these species in Idaho.

POLICY PLAN
FOR FISH



RESIDENT TROUT MAJOR PROGRAM — STREAMS

Included in the resident trout major program for streams are six species and races of fish: rainbow trout, Snake River cutthroat trout, Westslope cutthroat trout, brook trout, Dolly Varden trout and brown trout. Some of these species or races are found in all geographical areas of the State at all elevations where there is sufficient water of suitable quality and adequate food and cover.

This program is the most highly preferred by Idaho anglers and furnishes the major portion of the fisherman days recreational use in the State. Surveys have determined that approximately 44 percent of both resident and nonresident anglers in Idaho prefer fishing for trout species in streams. An estimated 1,800,000 fisherman days or 48 percent of the State total are expended in this pursuit.

PROBLEMS AND STRATEGIES

Problem — Segments of the angling public prefer and strongly advocate different types of fisheries and the use of different fishing gear and methods.

Strategy — Intensify the Department's information and education effort to provide increased dialogue and understanding between proponents of different management philosophies and between the public and the Department. Conduct periodic, scientific samplings of public opinions and preferences regarding management philosophies. Within constraints of established goals, objectives and policies, design management programs to accommodate a diversity of recreational preferences.

Problem — Basic ecological information on wild trout species is lacking in most waters.

Strategy — Sponsor or encourage and support needed ecological research projects.

Problem — Better management data are needed regarding angler distribution, harvest and catch rates.

Strategy — Develop programs for data collection on angler distribution, harvest and catch rates.

Problem — Public access to streams across private land is declining.

Strategy — Continue purchase and development of stream access sites across private land.

Problem — The impact of native or introduced fish diseases and parasites is unknown.

Strategy — Encourage research by colleges and universities on status of disease organisms and parasites in trout populations. Investigate feasibility of establishing an inspection/clearance system on fish and egg importations.

Problem — Prime stream habitat is being eliminated by reservoir construction and water diversion.

Strategy — Participate in water planning and management efforts by state and federal agencies and advocate alternative sites and programs for storing and diverting water that will allow the preservation of prime stream habitat.

Problem — Lack of fish screens on diversions from important trout streams results in loss of large numbers of game fish to the fishery.

Strategy — Advocate and support screening of major diversions where significant losses of trout are known to occur.

Problem— Population levels are suppressed in some streams from competition with other fish species.

Strategy — Where feasible, carry on management or control programs to reduce competitive fish species.

Problem — Stream habitat is being degraded by siltation resulting from poor logging practices, road construction, overgrazing of watersheds and irrigation return flows. Various forms of chemical and mineral pollution, channel alterations, overgrazing and trampling of streambanks and lack of maintenance flows are also contributing to reduced stream habitat quality.

Strategy — Actively participate in land and water use planning at all levels of federal, state and local governments to insure consideration of stream habitat quality. Encourage and support land and water use programs which will reduce stream degradation. Support state and federal water quality standards and enforcement of pollution controls. Advocate and support more effective administration of "stream protection" laws. Explore possibility of land acquisition or obtaining "conservation easements" to protect critical waters.

Problem — Illegal transplanting of undesirable fish species often negates chemical rehabilitation as a tool for management of resident trout species.

Strategy — Increase information, education and enforcement efforts to reduce illegal transportation and release of undesirable fish species in streams.

POLICIES

Native wild stocks of resident trout will receive priority consideration in all management decisions involving resident fish.

Management of resident trout will provide stream angling experiences including: fisheries for wild fish only, wild fish supplemented by hatchery fish, catchable-size hatchery fish and trophy fish of wild or hatchery origin. Quality fishing areas will also be provided.

Fishing regulations will be developed to meet goals, objectives and policies for various species programs and may include: differing season lengths, fishing methods, bag limits (including catch and release), size limits and gear restrictions.

Restrictions on various types of fishing gear or methods will be established only to meet goals, objectives and policies for different species programs or as a condition of public access on private land or park properties and will not be established to accommodate particular user groups.

Where obvious surpluses of fish occur or when fish populations are going to be eliminated through factors beyond the Department's control and usual gear and fishing methods cannot adequately harvest these fish, unusual means of harvest, including netting, spearing and snagging or unrestricted methods or gear may be authorized.

All resident trout streams or sections thereof will be designated as "wild" or "hatchery supported" and managed accordingly.

Nonnative fish species or strains will not be introduced into streams or stream sections designated as "wild" until adequate study has been made as to their desirability.

Releases of hatchery fish will not be made in streams or stream sections classified as "wild."

Hatchery fish will not be released in a stream during periods of excessive or inadequate flow or questionable water quality.

Hatchery fish (of any size) will be stocked only in those waters where they will contribute to fishing by the general public or juvenile anglers.

Certain small stream sections or spring areas may be closed to all fishing and set aside as observation areas only.

Proposed chemical control programs to eliminate undesirable fishes and proposed changes in major species management of a particular water will be presented in public meetings and news media prior to final consideration and action by the Fish and Game Commission.

RAINBOW TROUT PROGRAM — STREAMS

Rainbow trout *(Salmo gairdneri)* are the most abundant and widely distributed trout species in the State. They are present in all geographical areas and are found at all elevations wherever suitable water is available.

Estimated miles and acres of current rainbow trout habitat, by subprogram, are shown below. Based on stream miles, habitat ownership is approximately 70 percent public and 30 percent private.

STREAM HABITAT, 1975

Subprogram	Miles	Acres
Wild Fish	9,791	43,182
Hatchery	4,535	63,335
Total	14,326	106,517

SUPPLY AND DEMAND
Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1975	1,138,000	511,000	2.2
	1980	1,456,000	553,000	2.6
	1985	1,392,000	596,000	2.3
	1990	1,331,000	645,000	2.1
Hatchery	1975	1,493,000	737,000	2.0
	1980	1,493,000	809,000	1.8
	1985	1,493,000	890,000	1.7
	1990	1,493,000	980,000	1.5

DISCUSSION

WILD FISH SUBPROGRAM

Statewide, there is currently a surplus supply of wild rainbow trout in streams. This surplus is primarily composed of small fish in minor streams which, at the present time, receive limited fishing pressure. Elimination and degradation of wild rainbow trout stream habitat has occurred in the past and will continue into the future under existing management levels and habitat trends. Demand will exceed the maximum potential for supply at current catch rates after 1985.

If current adverse trends in land and water management can be slowed, it should be possible with more intensive management to maintain success rates that, while decreasing over time, would still be considerably higher than present rates.

HATCHERY SUBPROGRAM

Under existing management levels and monetary restraints on increased hatchery production, demand will exceed supply at current success rates by 1980.

Proposed increases in efficiency related to hatchery production and utilization of stocked hatchery fish should allow current catch rates to be maintained through 1990.

GOALS

WILD FISH SUBPROGRAM

Increase allowable harvest potential.

Meet demand at success rates exceeding the current rate.

HATCHERY SUBPROGRAM

Increase allowable harvest potential.

Maintain success rates at the current level.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1980	1,620,000	553,000	2.9
	1985	1,647,000	596,000	2.8
	1990	1,714,000	645,000	2.7
Hatchery	1980	1,618,000	809,000	2.0
	1985	1,780,000	890,000	2.0
	1990	1,960,000	986,000	2.0

PROBLEMS AND STRATEGIES

Problem — Resident rainbow trout are indistinguishable from juvenile steelhead and often inhabit the same waters leading to possible conflicts in resident and anadromous fish programs.

Strategy — Conduct, sponsor and encourage research to determine effects of juvenile steelhead catch on steelhead stocks and, if necessary, develop regulations or other measures to prevent conflicts in programs.

Problem — Higher return to the creel of hatchery rainbow is desirable.

Strategy — Conduct research on hatchery fish brood stock sources, quality, survival and harvest and develop stocking procedures which will increase the proportion of hatchery stocked rainbow trout which are caught.

Problem — Hatchery rainbow trout production costs are increasing rapidly.

Strategy — Improve hatchery efficiency (cost/lb. of fish) through continued hatchery research, improved design, operation and disease control.

Problem — Impacts of hatchery rainbow on wild native stocks are largely unknown.

Strategy — Conduct research programs to determine impacts of hatchery rainbow on wild native stocks and develop stocking practices to prevent any adverse effects.

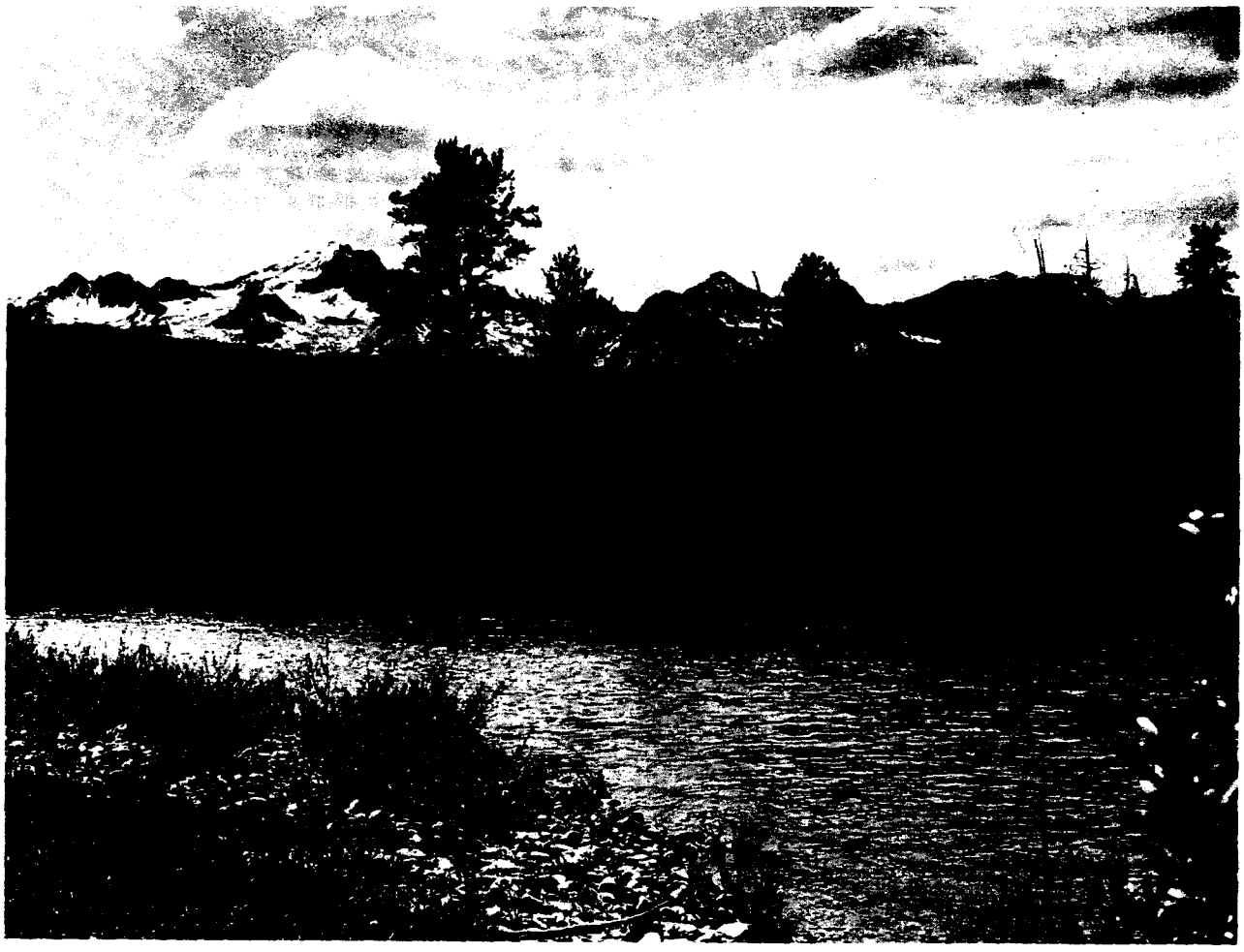
POLICIES

Streams receiving catchable-size hatchery rainbow will be catalogued on the basis of return to the creel and a stream priority stocking program developed.

Hatchery rainbow will not be released in a stream (unless harvest occurs prior to the critical summer period) if diurnal surface water temperatures exceed a range of 75 degrees to 80 degrees Fahrenheit during summer months.

Stream stocking of hatchery rainbow six inches and under in length will be undertaken only for experimental purposes, in barren or recently rehabilitated (chemically treated) streams, or in streams where survival and growth is comparable with wild rainbow.

Stocking dates or sites for catchable-size hatchery rainbow trout will not be publicized.



SNAKE RIVER CUTTHROAT TROUT PROGRAM — STREAMS

Snake River cutthroat trout *(Salmo clarki)* were originally found throughout the Snake River drainage generally above Shoshone Falls. Major populations are still confined to the same area. Introductions into other streams have been largely unsucessful and resulted in only marginal populations.

Current habitat, by subprogram, is shown in the table below. Ownership of habitat is approximately 68 percent public and 32 percent private based on stream miles.

STREAM HABITAT, 1975

Subprogram	Miles	Acres
Wild Fish	3,042	33,824
Hatchery	334	748
Total	3,376	34,572

SUPPLY AND DEMAND
Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1975	362,000	164,000	2.2
	1980	452,000	186,000	2.4
	1985	428,000	207,000	2.0
	1990	412,000	232,000	1.8
Hatchery	1975	22,000	10,000	2.2
	1980	22,000	11,000	2.0
	1985	22,000	13,000	1.7
	1990	22,000	14,000	1.6

DISCUSSION

WILD FISH SUBPROGRAM

Under current management levels and habitat trends, Snake River cutthroat trout populations and harvest will decline rather steadily once the present surplus is utilized. Demand will exceed supply at current success rates after 1980.

With more intensive management and improvement in habitat trends, it should be possible to reverse the situation and provide increased harvests and success rates.

HATCHERY SUBPROGRAM

Cutthroat trout are difficult to raise in hatcheries and hatchery fish do not adapt well to streams outside their original range. A relatively minor portion of the total cutthroat fishery is hatchery supported. A proportionately moderate expansion of the hatchery fingerling production program should make it possible to keep pace with increasing demand and maintain current success rates.

GOALS

WILD FISH SUBPROGRAM

Increase allowable harvest potential.

Meet demand at success rates exceeding the current rate.

HATCHERY SUBPROGRAM

Increase allowable harvest potential.

Maintain success rates at the current level.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1980	503,000	186,000	2.7
	1985	539,000	207,000	2.6
	1990	605,000	232,000	2.6
Hatchery	1980	24,000	11,000	2.2
	1985	29,000	13,000	2.2
	1990	31,000	14,000	2.2

PROBLEMS AND STRATEGIES

Problem — Sources of cutthroat eggs for hatchery production are limited.

Strategy — Develop reliable egg sources from cutthroat populations in Idaho waters.

Problem — Cutthroat readily hybridize with introducted rainbow trout and populations can lose their pure cutthroat characteristics.

Strategy — Reduce rainbow trout plantings to a minimum in waters which have good cutthroat populations. Set aside stream sections under the "wild" classification which contain relatively pure cutthroat strains and set management direction to maintain these populations.

Problem — Impacts of hatchery cutthroat on wild cutthroat stocks are largely unknown.

Strategy — Conduct research programs to determine impacts of hatchery cutthroat on wild native stocks and develop stocking procedures, as necessary, to prevent any adverse effects.

POLICIES

Certain streams will be set aside for maintenance of genetically pure wild cutthroat populations.

Cutthroat programs will not be supported by hatchery reared fish of catchable-size.

Snake River cutthroat introductions will not be expanded in streams outside their present range.

WESTSLOPE CUTTHROAT TROUT PROGRAM — STREAMS

Westslope cutthroat *(Salmo clarki)* are an indigenous race of cutthroat in the Salmon and Clearwater river drainages and in northern Idaho drainages which flow into the Columbia River. Current populations are confined to their original distribution.

There are an estimated 5,204 miles and 35,210 acres of stream habitat containing Westslope cuttroat trout in the State. Habitat ownership is approximately 82 percent public and 18 percent private.

SUPPLY AND DEMAND
Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Harvest	Demand	Success Rate (Fish Per Day)
1975	315,000	190,000	1.7
1980	308,000	200,000	1.5
1985	288,000	211,000	1.4
1990	268,000	222,000	1.2

DISCUSSION

Westslope cutthroat habitat, populations and harvest are in a declining state and will continue to decline under current management levels and habitat trends.

Preservation of existing, quality Westslope cutthroat habitat and more intensive management of this habitat should allow future demand to be met at approximately the same success rate that presently exists.

Due to the difficulty of raising Westslope cutthroat in hatcheries and poor survival of hatchery fish in streams, there is no established hatchery program presently in operation or planned for the future. If problems associated with hatchery rearing and stream survival can be overcome, regular supplementation of wild stocks in certain streams will be considered.

GOALS

Increase allowable harvest potential.

Meet demand at approximately the current success rate.

OBJECTIVES
Objectives Under Proposed Management Levels and Improved Habitat Trends

Year	Harvest	Demand	Success Rate (Fish Per Day)
1980	321,000	200,000	1.6
1985	377,000	211,000	1.8
1990	397,000	222,000	1.8

PROBLEMS AND STRATEGIES

Problem — Populations of Westslope cutthroat are limited and highly susceptible to changes in aquatic environment and could be severely reduced by adverse impacts on remaining habitat.

Strategy — Endorse and promote land use practices which protect or enhance cutthroat habitat and especially the maintenance of wilderness environments.

Problem — Some Westslope cutthroat populations are adfluvial and stream populations are subject to adverse impacts in lake habitat.

Strategy — Develop coordinated stream and lake management programs, where necessary.

Problem — Westslope cutthroat trout are easily caught and vulnerable to overfishing.

Strategy — Develop management programs and regulations to protect Westslope cutthroat from overharvest.

Problem — Westslope cutthroat readily hybridize with hatchery rainbow and other cutthroat strains and lose their racial characteristics.

Strategy — Develop management programs to minimize the occurrence of Westslope cutthroat hybridization.

Problem — There is no reliable egg source for hatchery production of Westslope cutthroat.

Strategy — Attempt to develop reliable egg sources from Westslope cutthroat populations in Idaho waters.

Problem — Westslope cutthroat are difficult to raise in hatcheries.

Strategy — Conduct research to obtain knowledge necessary to establish an efficient Westslope cutthroat hatchery rearing program.

POLICIES

Certain waters will be set aside for maintenance of genetically pure Westslope cutthroat populations.

Westslope cutthroat will be stocked in streams only when a viable naturally reproducing population can be expected to result from such stocking.

OTHER TROUT PROGRAM — STREAMS

This program includes Dolly Varden trout *(Salvelinus malma)*, brook trout *(Salvelinus fontinalis)* and brown trout *(Salmo trutta)*. Originally, Dolly Varden were found in all accessible streams draining into the Columbia River. Their distribution is still restricted to the same waters. Except for a small population in the Little Lost River drainage, they are not present in the Snake River drainage above Shoshone Falls.

Brook trout have been introduced into all geographical areas of the State. They are generally found in smaller streams. The brown trout is also an introduced fish and major populations have been established in several portions of Idaho.

Estimated miles and acres of current habitat for species in this program are shown in the table below. Based on stream miles, approximately 64 percent of this habitat is in public ownership and 36 percent is privately owned.

STREAM HABITAT, 1975

Subprogram	Miles	Acres
Wild Fish	6,758	42,346
Hatchery	296	3,516
Total	7,054	45,862

SUPPLY AND DEMAND
Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1975	518,000	185,000	2.8
	1980	701,000	204,000	3.4
	1985	720,000	223,000	3.2
	1990	718,000	248,000	2.9
Hatchery	1975	3,000	3,000	1.0
	1980	3,000	5,000	0.6
	1985	3,000	6,000	0.5
	1990	3,000	7,000	0.4

DISCUSSION

WILD FISH SUBPROGRAM

Although shortages may exist in certain waters there is currently a statewide surplus of brook and Dolly Varden trout in this program. Under statewide projected demands and current management levels and habitat trends, this surplus will steadily decrease and will disappear after 1990.

With a slowing of adverse habitat trends and more intensive management, it should be possible to improve on this situation and maintain consistently higher success rates through 1990. Distribution and population numbers of brown trout are expected to increase as ongoing and planned introduction programs are fully carried out.

HATCHERY SUBPROGRAM

The hatchery supported subprogram is a minor part of the other trout program. At current management levels, demand will exceed supply at current success rates by 1980.

A proposed expansion of the brown trout fingerling hatchery production program will allow a substantial increase over current success rates that can be maintained through 1990.

GOALS

WILD FISH SUBPROGRAM

Increase allowable harvest potential.

Meet demand at success rates exceeding the current rate.

HATCHERY SUBPROGRAM

Increase allowable harvest potential.

Meet demand at success rates approximately double the current rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1980	818,000	204,000	4.0
	1985	901,000	223,000	4.0
	1990	959,000	248,000	3.9
Hatchery	1980	10,000	5,000	2.0
	1985	12,000	6,000	2.0
	1990	14,000	7,000	2.0

PROBLEMS AND STRATEGIES

Problem — In many streams, Dolly Varden and brook trout are underutilized by anglers.

Strategy — Provide for regulations encouraging the harvest of Dolly Varden and brook trout in waters where they are underutilized.

Problem — Brook trout, in small streams, tend to overpopulate and become stunted when not heavily harvested.

Strategy — Where feasible and desirable, chemically eradicate stunted populations of brook trout and restock with other trout species.

Problem — Brown trout are difficult for anglers to catch.

Strategy — Manage brown trout to furnish reproducing populations in heavily fished waters and to provide trophy fish.

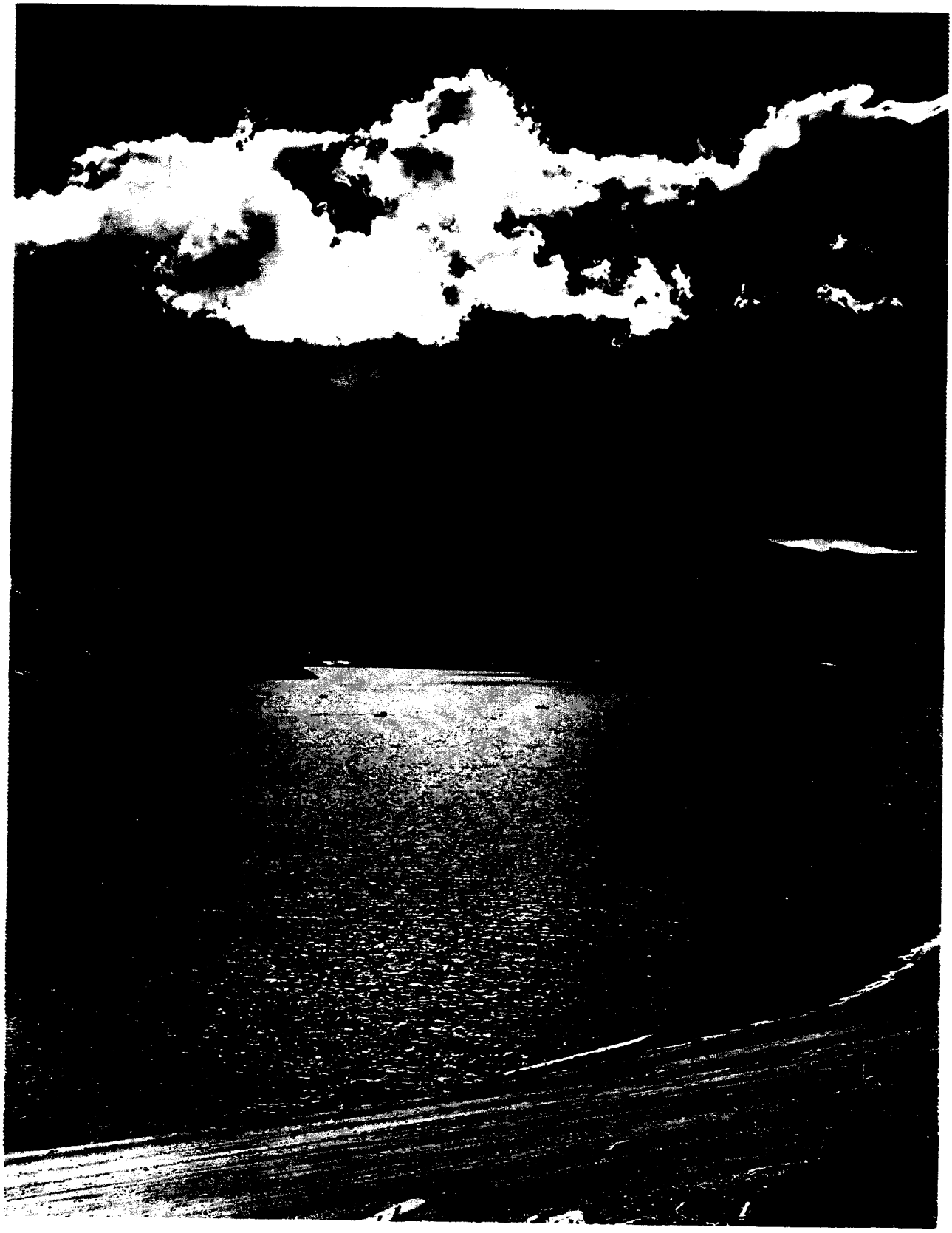
POLICIES

Brook trout will not be planted in streams presently supporting or potentially capable of supporting fishable populations of other trout species or spawning populations of anadromous fish.

Brown trout, brook trout and Dolly Varden will be stocked in streams only when a viable wild population can be expected to result from such stocking.

The present range of Dolly Varden in Idaho will not be expanded.

Brown trout, brook trout and Dolly Varden programs will not be supported by hatchery reared fish of catchable size.



RESIDENT TROUT MAJOR PROGRAM
LOWLAND LAKES, RESERVOIRS AND PONDS

A total of 10 species and races of trout, char and resident salmon are included in the resident trout major program for lowland lakes, reservoirs and ponds. These are: rainbow trout, Snake River cutthroat trout, Westslope cutthroat trout, Bear Lake cutthroat trout, brook trout, Dolly Varden trout, brown trout, lake trout (mackinaw), kokanee and coho.

Some member of this group is present in all geographical areas of the State wherever there is sufficient water of suitable temperature and quality. The lake, reservoir and pond fishery for species in this program is the second most popular in the State. Some 21 percent of the resident and nonresident anglers express preference for this fishery. Approximately 1,143,000 angler days are expended annually. This amounts to 30 percent of the State total.

PROBLEMS AND STRATEGIES

Problem — Basic knowledge of ecology, limnology and population dynamics is lacking, particularly on large bodies of water.

Strategy — Conduct, sponsor and encourage research programs on important fisheries regarding ecology, limnology and population dynamics.

Problem — Management data are lacking for many waters regarding angler use and harvest.

Strategy — Refine existing programs and develop new programs for data collection on angler use, harvest and catch rates.

Problem — Spawning streams are being degraded by siltation, logging debris, stream channel alteration, overgrazing, water diversion and pollution.

Strategy — Obtain input into land and water use planning and program development by involved federal and state agencies and advocate plans and programs which will reduce spawning stream degradation.

Problem — Competition with other fish species (both game and nongame) lowers survival of resident trout to unacceptable levels in some lakes and reservoirs.

Strategy — Continue with an active control program on undesirable fish species with various fish toxicants to reduce competition and improve survival of resident trout. Continue research on biological and physical controls of undesirable fish species.

Problem — Some productive lakes, reservoirs and ponds are subject to winterkill.

Strategy — Continue study and experimentation to find efficient and economical methods of preventing winterkill in productive waters.

Problem — The impact of native or introduced fish diseases and parasites is unknown.

Strategy — Encourage research by colleges and universities on status of disease organisms and parasites in lake, reservoir and pond trout populations.

Problem — Reservoir drawdown often adversely affects fish populations and restricts fisherman access.

Strategy — Work with appropriate agencies and/or organizations to provide minimum storage for fish and improve access to lakes and reservoirs during low water situations.

Problem — Algae blooms during summer months may promote disagreeable flavors in fish flesh.

Strategy — Manipulate seasons or establish "catch and release" regulations to avoid fish harvest during periods of poor flesh palatability.

Problem — Spawning runs are vulnerable to illegal fishing activities which may reduce desired escapement.

Strategy — Increase management and enforcement efforts on spawning streams to enhance and protect spawning runs.

Problem — Illegal transplanting of undesirable fish species often negates chemical rehabilitation as a tool for management of resident trout species.

Strategy — Increase information, education and enforcement efforts to reduce illegal transportation and release of undesirable fish species in lakes and reservoirs.

Problem — There is a conflict in angler preferences as to major species management on some waters. Angler preferences on many waters are unknown.

Strategy — Conduct public opinion surveys in order to more accurately determine and satisfy angler preferences.

Problem — On some waters, there are conflicts between fishing and other forms of water-based recreation.

Strategy — Develop and support regulations to minimize conflicts between fishing and other forms of water-based recreation.

POLICIES

Management of resident trout in lakes and reservoirs will provide angling experiences including wild fish, wild fish supplemented with hatchery reared fish, fisheries maintained entirely with fry or fingerling plants of hatchery reared fish, fisheries maintained with catchable-size hatchery fish, trophy-size fish of wild or hatchery origin and winter ice fishing.

Fishing regulations will be developed to meet goals, objectives and policies for various species programs and may include: differing season lengths, fishing methods, bag limits (including catch and release), size limits and gear restrictions.

Restrictions on various types of fishing gear or methods will not be made to accommodate particular user groups and will be done only to meet established goals, objectives and policies for different species programs or as conditions of public access on private land or park properties.

Where obvious surpluses of fish occur or when fish populations are going to be eliminated through factors beyond the Department's control and usual gear and fishing methods cannot adequately harvest these fish, unusual means of harvest including netting, spearing and snagging or unrestricted methods and gear may be authorized.

Certain lakes will be designated as "wild" and managed accordingly.

Releases of hatchery fish will not be made in lakes designated as "wild."

Hatchery fish (of any size) will be stocked only in those waters where they will contribute to fishing by the general public or juvenile anglers.

Proposed chemical control programs to eliminate undesirable fishes and proposed changes in major species management of a particular water will be presented in public meetings and news media prior to final consideration and action by the Fish and Game Commission.

RAINBOW TROUT PROGRAM
LOWLAND LAKES, RESERVOIRS AND PONDS

Almost all Idaho lowland lakes, reservoirs and ponds with suitable water temperatures contain rainbow trout *(Salmo gairdneri)* in varying degrees of abundance.

Acres of rainbow trout habitat, by subprogram, are shown in the table below. An estimated 91 percent of this habitat is in public ownership and 9 percent is privately owned.

LOWLAND LAKE, RESERVOIR AND POND HABITAT, 1975

Subprogram	Acres
Wild Fish	117,421
Hatchery	373,768
Total	491,189

SUPPLY AND DEMAND
Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1975	39,000	63,000	0.6
	1980	43,000	69,000	0.6
	1985	41,000	73,000	0.5
	1990	39,000	77,000	0.5
Hatchery	1975	1,199,000	644,000	1.8
	1980	1,199,000	706,000	1.7
	1985	1,199,000	773,000	1.5
	1990	1,199,000	849,000	1.4

DISCUSSION

WILD FISH SUBPROGRAM

There are relatively few lowland lakes, reservoirs and ponds in Idaho that presently support reasonably pure populations of wild rainbow trout. While there is, at this time, a small harvestable surplus of these fish, increasing demand will overcome supply at current success rates after 1980.

Waters which can be feasibly converted to support pure wild fish populations are limited. Preservation and more intensive management of existing wild fish waters should allow supply to keep pace with demand at essentially current success rates.

HATCHERY SUBPROGRAM

At the present level of hatchery production, demand will exceed supply at current success rates by 1980. Monetary restraints will limit future hatchery production. However, proposed increases in efficiency related to production and utilization of stocked fish should allow current catch rates to be maintained through 1990.

GOALS

WILD FISH SUBPROGRAM

Increase allowable harvest potential.

Meet demand at essentially the current success rate.

HATCHERY SUBPROGRAM

Increase allowable harvest potential.

Maintain success rates at the current level.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1980	47,000	69,000	0.6
	1985	46,000	73,000	0.6
	1990	45,000	77,000	0.5
Hatchery	1980	1,271,000	706,000	1.8
	1985	1,391,000	773,000	1.8
	1990	1,528,000	849,000	1.8

PROBLEMS AND STRATEGIES

Problem — Drawdown of reservoirs for irrigation, power demands and flood control drastically reduces carrying capacity for fish, particularly during "dry" years and may completely eliminate reservoir fish populations.

Strategy — Reduce level of hatchery stocking during years when extreme reservoir drawdown can be predicted. Supplement reservoir fisheries with catchable-size rainbow following extreme drawdowns the previous year.

Problem — There is emigration of fish during heavy spill released from reservoirs.

Strategy — Delay stocking of fish until spill from reservoirs has diminished.

Problem — Juvenile Kamloops are harvested before reaching trophy size.

Strategy — Regulate harvest in Kamloops rearing areas to minimize take of juvenile fishes.

Problem — Hatchery rainbow trout production costs are increasing rapidly.

Strategy — Improve hatchery production efficiency (cost/lb. of fish) through continued hatchery research and improved design, operation and disease control.

Problem — Higher return to the creel of hatchery rainbow is desirable.

Strategy — Conduct research on hatchery fish survival and harvest and develop stocking procedures which will increase the percent catch of hatchery stocked rainbow trout.

Problem — Contribution of progeny from presently utilized Kamloops hatchery brood stock has not been satisfactory.

Strategy — Experiment with wild or new stocks to improve genetics of available Kamloops hatchery brood fish.

Problem — Impacts of hatchery rainbow on wild native stocks is largely unknown.

Strategy — Conduct research programs to determine impacts of hatchery rainbow on wild native stocks and develop stocking practices to prevent any adverse effects.

POLICIES

Kamloops rainbow trout populations will be managed to direct harvest at adult age classes and to maximize the size and weight of these age classes.

Management of the Lardo strain of Kamloops in lakes will be emphasized and management priority will be assigned to this strain of rainbow trout where it presently occurs or is introduced in lakes.

Lakes and reservoirs receiving catchable-size hatchery rainbow will be catalogued on the basis of return to the creel and a lake, reservoir and a pond priority stocking program developed.

Hatchery rainbow fingerling will not be stocked in lakes and reservoirs during periods of the year when seasonal lows in plankton populations occur.

Hatchery rainbow will not be released in lakes and reservoirs if bottom water temperatures exceed 75 degrees F.

Stocking dates or sites for catchable-size hatchery rainbow will not be publicized.

Where reasonably similar costs and returns to the creel can be anticipated, stocking of hatchery fingerling will take preference over stocking of hatchery catchable-size rainbow trout.

SNAKE RIVER CUTTHROAT TROUT PROGRAM
LOWLAND LAKES, RESERVOIRS AND PONDS

The original distribution of the Snake River cutthroat trout *(Salmo clarki)* in a lake environment was confined to Henrys Lake in northeastern Idaho. Henrys Lake cutthroat have since been introduced into lowland lakes and reservoirs throughout the State.

Estimated acres of habitat for Snake River cutthroat trout are shown in the following table. Ownership of habitat is approximately 98 percent public and 2 percent private.

LOWLAND LAKE, RESERVOIR AND POND HABITAT, 1975

Subprogram	Acres
Wild Fish	65,343
Hatchery	72,461
Total	137,804

SUPPLY AND DEMAND
Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1975	32,000	87,000	0.4
	1980	35,000	98,000	0.4
	1985	36,000	111,000	0.3
	1990	37,000	125,000	0.3
Hatchery	1975	126,000	116,000	1.1
	1980	126,000	130,000	1.0
	1985	126,000	144,000	0.9
	1990	126,000	162,000	0.8

DISCUSSION

WILD FISH SUBPROGRAM

Current management levels should provide for future demand being met at only slightly less than current success rates.

There is potential for converting additional waters to production of reasonably pure wild populations. Under this proposed program, demand would be met at slightly higher than current success rates.

HATCHERY SUBPROGRAM

At current management and production levels, demand will exceed supply at current success rates by 1980.

Increased efficiencies in cutthroat hatchery production and return to the creel of stocked fish should allow current success rates to be maintained through 1990.

GOALS

WILD FISH SUBPROGRAM

Increase allowable harvest potential.

Meet demand at slightly higher than the current success rate.

HATCHERY SUBPROGRAM

Increase allowable harvest potential.

Meet demand at the current success rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Subprogram	Year	harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1980	49,000	98,000	0.5
	1985	52,000	111,000	0.5
	1990	53,000	125,000	0.4
Hatchery	1980	143,000	130,000	1.1
	1985	158,000	144,000	1.1
	1990	178,000	162,000	1.1

PROBLEMS AND STRATEGIES

Problem — It is difficult to maintain pure cutthroat trout strains and races.

Strategy — Develop management programs to reduce intermixing of cutthroat races and strains.

Problem — Sources of Snake River cutthroat eggs for hatchery production are limited.

Strategy — Develop additional sources of brood stock and selectively breed fish to maintain stock integrity.

Problem — Impact of hatchery cutthroat on wild native stocks is largely unknown.

Strategy — Conduct research programs to determine impacts of hatchery cutthroat on wild native stocks and develop stocking practices to prevent any adverse effects.

POLICIES

Certain waters will be managed to insure maintenance of genetically pure Snake River cutthroat trout stocks and to provide an adequate egg source for Snake River cutthroat.

Snake River cutthroat trout will not be introduced into lowland lakes or reservoirs containing significant populations of Westslope cutthroat trout.

The Idaho Department of Fish and Game will not undertake any programs to support Snake River cutthroat trout fisheries in lakes, reservoirs and ponds by hatchery fish raised to catchable size.

The present distribution of Snake River cutthroat trout will not be expanded in northern Idaho drainages outside the Snake River drainage.

WESTSLOPE CUTTHROAT TROUT PROGRAM
LOWLAND LAKES, RESERVOIRS AND PONDS

Westslope cutthroat trout *(Salmo clarki)* is a race of cutthroat indigenous primarily to lakes of northern Idaho drainages outside the Snake River drainage. Currently, major populations are found in large lakes and reservoirs throughout the northern portion of the State.

There are an estimated 143,949 acres of lake and reservoir habitat containing Westslope cutthroat trout in the State. Approximately 78 percent of this habitat is in public ownership and 22 percent is privately owned.

SUPPLY AND DEMAND
Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Harvest	Demand	Success Rate (Fish Per Day)
1975	18,000	12,000	1.5
1980	14,000	13,000	1.1
1985	11,000	14,000	0.8
1990	11,000	15,000	0.7

DISCUSSION

WILD FISH SUBPROGRAM

Under current management levels and habitat trends, wild populations of Westslope cutthroat along with harvest and success rates are presently in a declining state and will continue to decline through 1990.

With more intensive management and the slowing or reversal of adverse habitat trends in certain waters, it should be possible to meet future demand and still maintain essentially the current success rates.

HATCHERY SUBPROGRAM

There is presently no hatchery program for Westslope cutthroat in lakes, reservoirs and ponds. It is anticipated that such a program will be feasible and implemented by 1980. If successful, this program will provide a significant addition to the existent fishery.

GOALS

WILD FISH SUBPROGRAM

Increase allowable harvest potential.

Meet future demand at essentially the current success rate.

HATCHERY SUBPROGRAM

Implement a hatchery stocking program.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1980	18,000	13,000	1.4
	1985	23,000	14,000	1.6
	1990	22,000	15,000	1.5
Hatchery	1985	25,000	25,000	1.0
	1990	27,000	27,000	1.0

PROBLEMS AND STRATEGIES

Problem — Some Westslope cutthroat populations are adfluvial and lake populations are subject to adverse impacts in stream habitat.

Strategy — Develop coordinated stream and lake management programs, where necessary. Advocate and support protection and rehabilitation of spawning streams by controlling interests.

Problem — Westslope cutthroat trout have a relatively low reproduction rate, are readily caught and can be easily overfished in some waters.

Strategy — Develop regulations, as necessary, to protect wild Westslope cutthroat trout brood stocks.

Problem — There is no reliable egg source for hatchery production of Westslope cutthroat.

Strategy — Attempt to develop reliable egg sources from Westslope cutthroat populations in Idaho waters.

POLICIES

Certain waters will be set aside for maintenance of genetically pure Westslope cutthroat populations.

Westslope cutthroat programs in lakes, reservoirs and ponds will not be supported by hatchery fish raised to catchable size.

BEAR LAKE CUTTHROAT TROUT PROGRAM
LOWLAND LAKES, RESERVOIRS AND PONDS

The Bear Lake cutthroat *(Salmo clarki)* is the only trout native to Bear Lake. Early introductions of the Yellowstone and other races of cutthroat and rainbow trout have resulted in an unknown degree of hybridization. The Bear Lake cutthroat, however, is recognized as an ecologically distinct race, exhibiting fast growth and large size. Bear Lake cutthroat habitat in Idaho is confined to the Idaho portion of Bear Lake. This is public water.

SUPPLY AND DEMAND
Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Harvest	Demand	Success Rate (Fish Per Day)
1975	400	6,000	0.1
1980	400	6,000	0.1
1985	400	7,000	0.1
1990	400	8,000	0.1

DISCUSSION

The Bear Lake cutthroat is a very desirable fish which is adapted to the environment of Bear Lake. It has been managed on a wild fish basis by the Idaho Department of Fish and Game. Utah, however, initiated a hatchery supported program in 1973. This program will be joined by Idaho and a cooperative effort undertaken to increase the presently depressed population in the lake through artificial propagation.

GOALS

HATCHERY SUBPROGRAM

Increase Bear Lake cutthroat population and harvest.

Meet future demand at increased success rates.

Build spawning runs and hatchery production to a threshold level that will provide 3,000,000 eggs annually for a production of 75,000 pounds of cutthroat at Mantua (Utah) hatchery.

OBJECTIVES
Objectives Under Proposed Management Levels and Improved Habitat Trends

Year	Harvest	Demand	Success Rate (Fish Per Day)
1980	900	6,000	0.2
1985	1,400	7,000	0.2
1990	2,000	8,000	0.3

PROBLEMS AND STRATEGIES

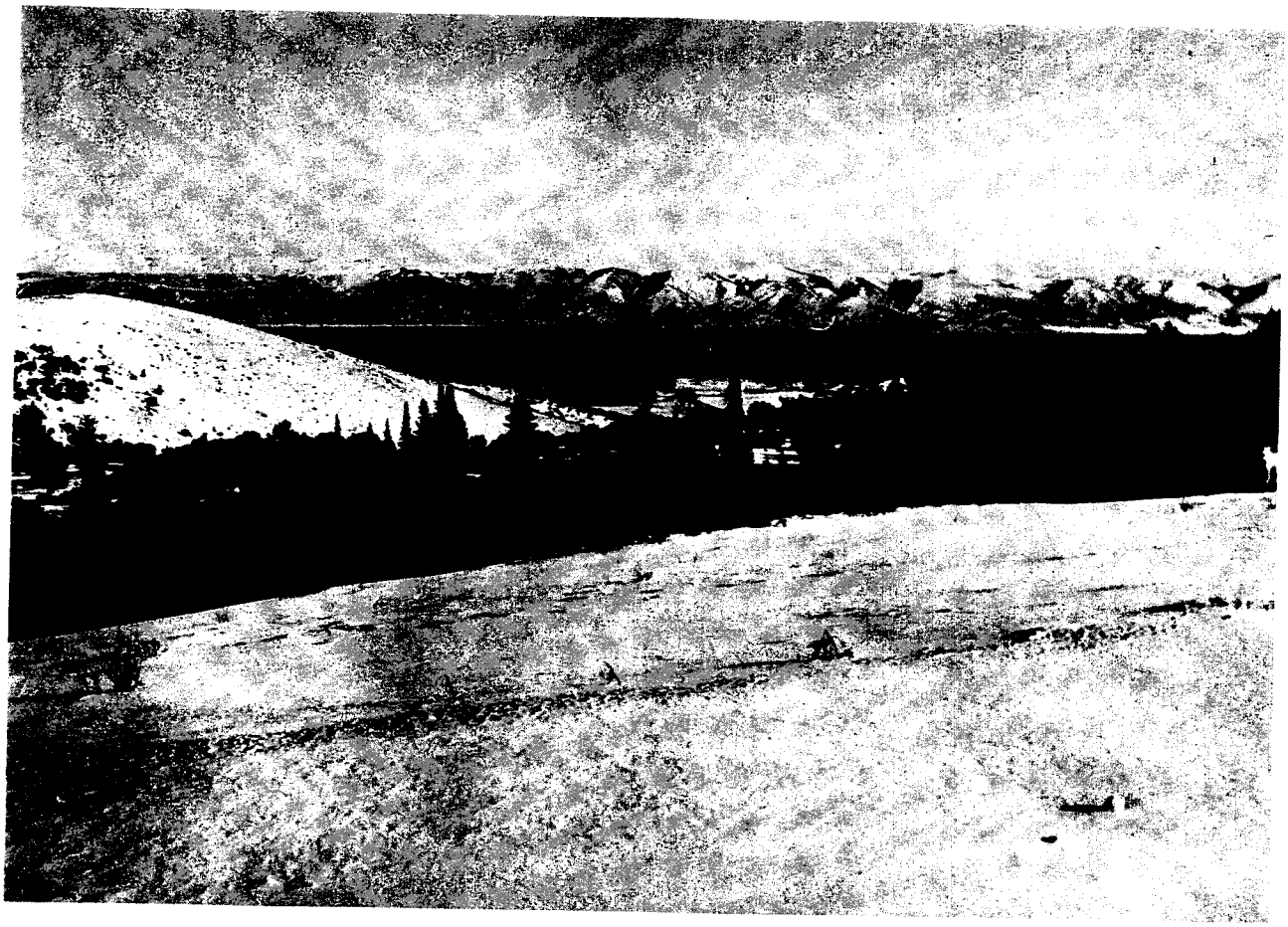
Problem — Spawning tributaries to Bear Lake are limited and degraded resulting in Bear Lake cutthroat populations being maintained at a low level.

Strategy — Develop spawning runs into St. Charles and Swan Creek for trapping and egg taking. Supplement wild stocks with hatchery production.

POLICIES

Priority in management decisions will be given to Bear Lake cutthroat over other salmonid species within spawning streams.

A cooperative agreement will be made with Utah Department of Wildlife Resources to develop management plans and establish financial participation by Idaho Department of Fish and Game in a share of the annual operation costs of the Mantua hatchery.



OTHER TROUT PROGRAM
LOWLAND LAKES, RESERVOIRS AND PONDS

This program includes brook trout *(Salvelinus fontinalis)*, brown trout *(Salmo trutta)*, Dolly Varden *(Salvelinus malma)* and lake trout *(Salvelinus namaycush)*. Brook trout are found in many lowland lakes, reservoirs and ponds with suitable water temperatures throughout the State. Populations of Dolly Varden are confined to waters in the Snake River drainage below Shoshone Falls and northern Idaho lakes which drain into the Columbia River. Brown trout are stocked in several southern Idaho reservoirs. Existing populations of lake trout are confined to Priest Lake in northern Idaho, Payette Lake in southwestern Idaho, Palisades Reservoir in northeastern Idaho and Bear Lake in the southeastern portion of the State.

The table below shows acres of lowland lake, reservoir and pond habitat for fish in this program. Ownership of these waters is approximately 99 percent public and 1 percent private.

LOWLAND LAKE, RESERVOIR AND POND HABITAT, 1975

Subprogram	Acres
Wild Fish	193,697
Hatchery	4,172
Total	197,869

SUPPLY AND DEMAND
Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1975	59,000	33,000	1.8
	1980	81,000	35,000	2.3
	1985	81,000	37,000	2.2
	1990	81,000	42,000	2.0
Hatchery	1975	6,000	3,000	2.0
	1980	6,000	4,000	1.5
	1985	6,000	5,000	1.2
	1990	6,000	6,000	1.0

DISCUSSION

WILD FISH SUBPROGRAM

Certain waters may have existing shortages but on a statewide basis there is presently a surplus of trout species in this program.

Under current management levels and habitat trends, this surplus will decrease somewhat but supply will still exceed demand at current success rates through 1990.

With more intensive management and improvement in habitat it should be possible to meet increasing future demand at even higher success rates.

HATCHERY SUBPROGRAM

Hatchery production of trout species in this program is presently a minor subprogram. At present production and stocking levels, demand will exceed supply and success rates will steadily decline after 1975.

It is proposed and should be possible to expand the present subprogram to keep pace with increasing demand and maintain current success rates while meeting this demand.

GOALS

WILD FISH SUBPROGRAM

Increase allowable harvest potential.

Meet future demand at greater than the current success rate.

HATCHERY SUBPROGRAM

Increase allowable harvest potential.

Meet future demand at the current success rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1980	83,000	35,000	2.4
	1985	83,000	37,000	2.2
	1990	84,000	42,000	2.0
Hatchery	1980	8,000	4,000	2.0
	1985	10,000	5,000	2.0
	1990	12,000	6,000	2.0

PROBLEMS AND STRATEGIES

Problem — Brook trout, in small lakes and ponds, tend to overpopulate and become stunted.

Strategy — Develop regulations to encourage harvest of brook trout in underharvested waters, where necessary. Where feasible and desirable, chemically eridicate stunted populations of brook trout and restock with other trout species.

Problem — Degradation of spawning streams by land use practices impact lake populations.

Strategy — Actively participate in land and water use planning at all levels of federal, state and local governments to insure consideration of stream habitat quality. Advocate and support land and water use programs which will reduce stream degradation.

Problem — Dolly Varden must use streams for spawning and are vulnerable to illegal fishing for extended periods in northern Idaho streams.

Strategy — Maintain effective enforcement and management programs to minimize illegal take of Dolly Varden brood stock in spawning streams.

POLICIES

Brook and Dolly Varden trout will not be expanded in range to new waters if they will seriously compete and conflict with other established trout or anadromous fish programs.

Lake and Dolly Varden trout in lakes and reservoirs will be managed to harvest adult age classes.

KOKANEE AND RESIDENT COHO PROGRAM
LOWLAND LAKES, RESERVOIRS AND PONDS

With the exception of the Bear River drainage, kokanee *(Oncorhynchus nerka)* are found in certain lakes and reservoirs in all geographical areas of the State. Experimental stocking of resident coho *(Oncorhynchus kisutch)* has been carried out in a wide variety of waters. Most of these programs were unsuccessful. Significant resident coho populations are presently being maintained by annual stocking only in Cascade Reservoir in southwestern Idaho and Island Park Reservoir in the southeastern portion of the State. Supply and demand projections and goals and objectives presented in this program are confined to kokanee only.

The table below depicts acres of kokanee and coho habitat by subprogram. Approximately 99 percent and 1 percent of the waters are publicly and privately owned, respectively.

LOWLAND LAKE AND RESERVOIR HABITAT, 1975

	Kokanee	Coho
Subprogram	Acres	Acres
Wild Fish	153,000	—
Hatchery	69,445	37,794
Total	222,445	37,794

SUPPLY AND DEMAND
Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1975	594,000	142,000	4.2
	1980	601,000	149,000	4.0
	1985	607,000	162,000	3.7
	1990	611,000	169,000	3.6
Hatchery	1975	152,000	37,000	4.1
	1980	152,000	39,000	3.9
	1985	152,000	41,000	3.7
	1990	152,000	44,000	3.4

DISCUSSION

WILD FISH SUBPROGRAM

Under current management levels and habitat trends, demand for kokanee will exceed supply at current success rates by 1980 and decline steadily thereafter.

There is considerable potential for reversing this situation if improved water management programs can be worked out with controlling agencies. Improved habitat conditions in conjunction with more intensive management could allow future demand to be met at increasing rather than decreasing success rates.

HATCHERY SUBPROGRAM

The hatchery supported subprogram for kokanee is not a major part of the total statewide program. It is, however, extremely important in certain waters. At present hatchery production levels, demand will exceed supply at current success rates by 1980.

It should be possible even under foreseeable constraints to expand hatchery production to keep pace with demand and maintain current success rates through 1990.

GOALS

WILD FISH SUBPROGRAM

Increase allowable harvest potential.

Meet future demand at success rates exceeding the current rate.

HATCHERY SUBPROGRAM

Increase allowable harvest potential.

Meet future demand at the current success rate.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Subprogram	Year	Harvest	Demand	Success Rate (Fish Per Day)
Wild Fish	1980	808,000	149,000	5.4
	1985	951,000	162,000	5.9
	1990	1,094,000	169,000	6.5
Hatchery	1980	160,000	39,000	4.1
	1985	168,000	41,000	4.1
	1990	180,000	44,000	4.1

PROBLEMS AND STRATEGIES

Problem — In some waters, kokanee tend to overpopulate and become stunted.

Strategy — Develop management programs, as necessary, to regulate kokanee numbers in lowland lakes and reservoirs.

Problem — Due to growth and spawning characteristics, kokanee are available for harvest during only a relatively short time in their life-cycle.

Strategy — Develop harvest regulations to increase the harvest of kokanee where needed. Where feasible, introduce late spawning strains of kokanee to increase availability during the last year of the life-cycle.

Problem — Reliable egg sources for hatchery production of kokanee are presently lacking.

Strategy — Develop reliable early and late spawning kokanee egg sources in Idaho waters.

Problem There is a conflict of opinions among the fishing public as to whether or not kokanee should be commercially harvested in certain waters.

Strategy — Accurately determine public preferences regarding commercial fishing of kokanee.

Problem — In many waters, kokanee are difficult for anglers to catch during mid-summer months.

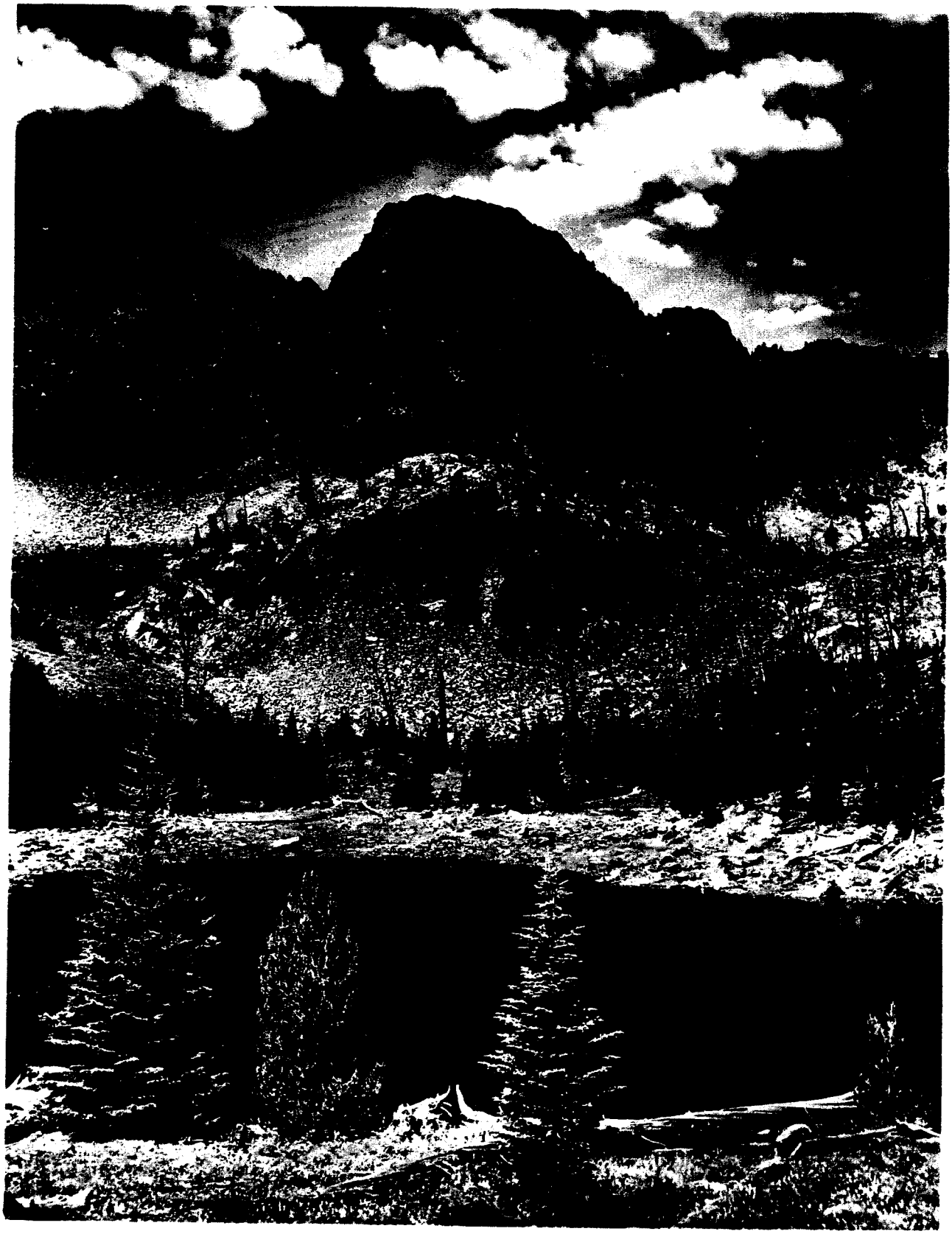
Strategy — Conduct information and education programs to inform anglers of techniques for harvesting kokanee during mid-summer.

Problem — Yearling coho in reservoirs tend to emigrate when there are large early water releases.

Strategy — Adjust seasons to allow for a major harvest of fish prior to migration.

POLICIES

The resident coho program in Idaho will not be expanded to additional waters.



RESIDENT TROUT MAJOR PROGRAM
MOUNTAIN LAKES

There are seven species or races of fish included in the mountain lakes resident trout major program. These include: rainbow trout *(Salmo gairdneri)*, Snake River cutthroat trout *(Salmo clarki)*, Westslope cutthroat trout *(Salmo clarki)*, brook trout *(Salvelinus fontinalis)*, California golden trout *(Salmo aguabonita)*, Dolly Varden trout *(Salvelinus malma)* and Arctic grayling *(Thymallus arcticus)*.

Some of these fish are found in all geographical areas of Idaho. There are an estimated 16,000 acres of mountain lake habitat in the State. This habitat is contained almost exclusively within public lands. Some 9 percent of Idaho resident and nonresident anglers express a preference for this fishery. Approximately 273,000 angler days are spent in high mountain lake angling. This amounts to 7 percent of total angler days in the State.

SUPPLY AND DEMAND
Current Status — Projected Potential Under Current Management Levels and Habitat Trends

Year	Harvest	Demand	Success Rate (Fish Per Day)
1975	720,000	273,000	2.6
1980	1,204,000	283,000	4.3
1985	1,338,000	302,000	4.4
1990	1,439,000	322,000	4.5

DISCUSSION

Mountain lakes are stocked exclusively with hatchery fry and a breakdown into "wild fish" and "hatchery supported" subprograms is not considered meaningful.

A statewide surplus presently exists for fish in this major program. Under current management levels and habitat trends, supply will continue to exceed demand at current success rates through 1990.

With some improvement in habitat and a relatively modest expansion of current programs, it will be possible to meet future demand at even higher success rates than would occur under current conditions.

GOALS

Increase allowable harvest potential.

Meet future demand at improved success rates.

OBJECTIVES
Objectives Under Proposed Management Levels and Improved Habitat Trends

Year	Harvest	Demand	Success Rate (Fish Per Day)
1980	1,386,000	283,000	4.9
1985	1,523,000	302,000	5.0
1990	1,650,000	322,000	5.1

PROBLEMS AND STRATEGIES

Problem — Shallow, productive lakes are subject to periodic winterkill of fish.

Strategy — Develop mountain lake inventory programs to collect data on physical features, fish populations and fish survival.

Problem — Overpopulation of stunted brook trout or other fish species preclude establishment of a preferred fishery in some lakes.

Strategy — Where feasible, employ chemical rehabilitation (partial or complete) of lakes containing stunted or undesirable fish populations.

Problem — High angler use on some lakes has reduced size and numbers of fish and caused environmental damage to trails, adjacent alpine meadows and lake shorelines. Use of trail machines and 4-wheel drive vehicles, domestic livestock grazing and timber cutting conflict with aesthetic values of mountain lake settings.

Strategy — Discontinue publication of maps, articles and information on specific lakes to reduce "people" impact and maintain aesthetic and fishing quality. Maintain close liaison with the U.S. Forest Service and recommend guidelines to control angler use, livestock grazing, off-road vehicles, trail development and timber practices in mountain lake areas.

Problem — Better management data are needed regarding angler distribution, harvest and catch rates.

Strategy — Develop programs for data collection on angler distribution, harvest and catch rates.

Problem — There is a lack of expression by anglers as to species preference in mountain lakes.

Strategy — Conduct opinion surveys to determine angler species preferences.

Problem — Better data are needed to determine optimum stocking rates (fish per surface area) and stocking frequencies for individual lakes.

Strategy — Conduct research to determine optimum stocking rates and frequency as related to lake productivity.

Problem — Reliable egg sources are lacking for golden trout, Westslope cutthroat trout and grayling.

Strategy — Attempt to establish reliable egg sources in-state or out-of-state for these species.

POLICIES

Lakes which "winterkill" with a frequency greater than once in four years will not be stocked.

The Department of Fish and Game will not publish maps, articles or detailed information on specific lakes or lake basins.

A diversity of suitable species and management objectives will be maintained in the development of stocking programs.

Some barren lakes will be held "in reserve" for future stocking of a particular species or scientific study.

WARMWATER GAME FISH MAJOR PROGRAM

A total of 13 species are contained in this program as follows: channel catfish *(Ictalurus punctatus)*, brown bullhead *(Ictalurus nebulosus)*, flathead catfish *(Pylodictis olivaris)*, black crappie *(Poxomis nigromaculatus)*, bluegill *(Lepomis macrochirus)*, green sunfish *(Lepomis cyanellus)*, pumpkinseed *(Lepomis gibbosus)*, largemouth bass *(Micropterus salmoides)*, smallmouth bass *(Micropterus dolomieui)*, warmouth *(Lepomis gulosus)*, yellow perch *(Perco flavescens)*, walleye *(Stizostedion vitreum)* and northern pike *(Esox lucius)*. With the exception of channel and flathead catfish, smallmouth bass, green sunfish, walleye and northern pike, these species are widely distributed in low elevation waters in all areas of the State.

Smallmouth bass have been introduced into several reservoirs in northern and southwestern Idaho. Major stream populations of black crappie, channel catfish, flathead catfish and smallmouth bass are found in the main Snake River below Shoshone Falls and the lower portions of the Snake River tributaries in this reach. Walleye have been experimentally introduced into Salmon Falls Creek and Oneida Narrows reservoirs in southern and southeastern Idaho, respectively, and Mud Lake in northeastern Idaho. Northern pike have recently been illegally introduced into the Coeur d'Alene River drainage in northern Idaho.

The table below shows estimated warmwater fish habitat in the State by miles and acres. Based on stream miles, ownership is approximately 50 percent public and 50 percent private.

A preference for this fishery has been expressed by some 6 percent of resident and nonresident anglers.

As a group, warmwater fish account for an estimated 468,000 angler days or 12 percent of the total angler days expended in Idaho.

WARMWATER GAME FISH
Stream, Lowland Lake, Reservoir and Pond Habitat, 1975

Streams		Lowland Lakes Reservoirs and Ponds
Miles	Acres	Acres
1,935	44,868	349,844

SUPPLY AND DEMAND

Some local areas may be lacking warmwater game fishing opportunity but on a statewide basis, supply presently far exceeds demand for these species and will continue to do so through 1990.

Current Status

Year	Harvest	Demand	Success Rate (Fish Per Day)
1975	1,454,000	468,000	3.1

DISCUSSION

It is projected that under current management levels and habitat trends, populations and harvest of warmwater game fishes will steadily increase over the next fifteen years. There is presently no hatchery supported subprogram and none is contemplated in the foreseeable future. Current habitat trends, while detrimental to most coldwater fish species, favor the creation of additional warmwater game fish habitat. Current management levels are adequate to provide for utilization of new habitat as it becomes available.

As no major additional measures to increase warmwater game fish populations are being considered, projections under current management levels and habitat trends reflect the Department's objectives for this program and are presented under the objectives section.

GOALS

Increase harvest.

Meet future demand at increased success rates.

OBJECTIVES

Objectives Under Current Management Levels and Habitat Trends

Year	Harvest	Demand	Success Rate (Fish Per Day)
1980	2,066,000	506,000	4.0
1985	2,860,000	539,000	5.3
1990	4,418,000	598,000	7.4

PROBLEMS AND STRATEGIES

Problem — Most of the warmwater fish species are prone to overpopulate and become stunted in smaller lakes and reservoirs.

Strategy — Where possible, develop management programs to control warmwater fish population numbers.

Problem — In most waters of the State, these species, as a group, are greatly underutilized by Idaho anglers.

Strategy — Develop regulations to encourage harvest of warmwater game fish species. Conduct information and education programs to encourage greater utilization of warmwater game fish by Idaho anglers.

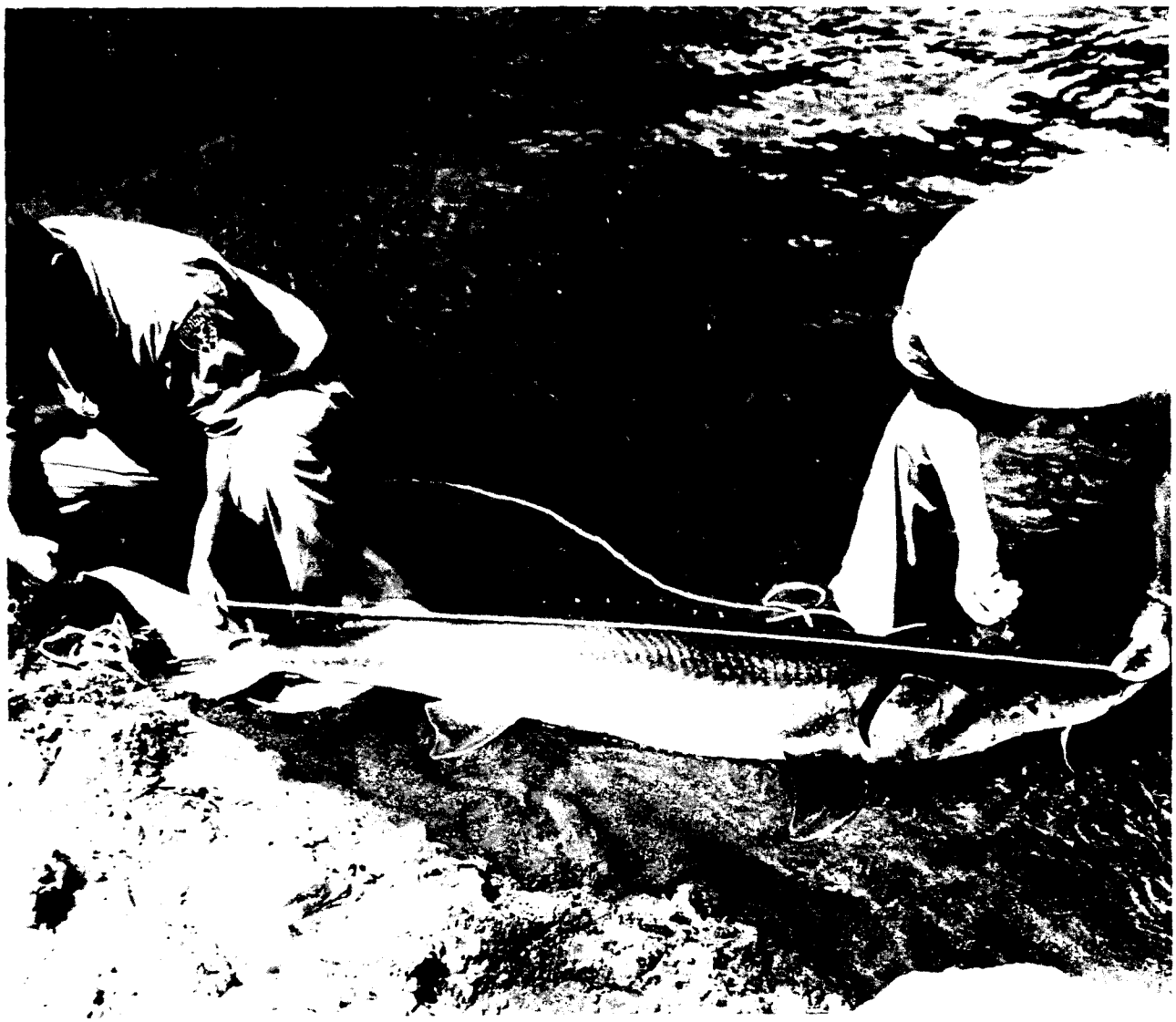
Problem — Information on the life history and ecology of various warmwater game fish species is lacking.

Strategy — Conduct and sponsor research to obtain life history and ecological information on warmwater game fish.

POLICIES

Warmwater game fish species will not be introduced into waters where they adversely affect goals and objectives set for resident trout or anadromous fish.

The present distribution of northern pike will not be extended and related species, such as muskellunge and pickerel, will not be introduced into waters of the State.



MISCELLANEOUS RESIDENT GAME FISH MAJOR PROGRAM

A total of eight species are contained in this program: six species of whitefish, white sturgeon and ling. Mountain whitefish and Bonneville cisco are the only fish in this group that furnish a significant amount of angler days use.

There are diverse problems, strategies and policies for species in this major program and they are addressed separately under the individual species programs.

WHITEFISH PROGRAM

There are six species in this program: mountain whitefish *(Prosopium williamsoni)*, pygmy whitefish *(Prosopium coulteri)*, Great Lakes whitefish *(Coregonus clupeaformis)*, Bear Lake whitefish *(Prosopium abyssicola)*, Bonneville whitefish *(Prosopium spilonotus)*, and Bonneville cisco *(Prosopium gemmiferum)*. Mountain whitefish are found in streams, lakes and reservoirs throughout Idaho. They are one of the most widely distributed and abundant resident game fishes in the State. Pygmy whitefish are found in Pend Oreille and Priest lakes in northern Idaho. A small population of Great Lakes whitefish is also present in Pend Oreille Lake. The Bear Lake whitefish, Bonneville whitefish and Bonneville cisco are endemic in Bear Lake in the southeastern part of the State.

Other than mountain whitefish and Bonneville cisco, species in this group do not provide for a great deal of angler use. There is a significant winter dipnet fishery on shoreline spawning concentrations of Bonneville cisco. Great Lakes whitefish are rarely taken by sport anglers. Other species are taken only incidentally. Habitat acres, supply and demand projections and goals and objectives presented for this program are confined to mountain whitefish only.

Approximate miles and acres of mountain whitefish habitat are shown in the table below. Based on stream miles, habitat ownership is approximately 67 percent public and 33 percent private.

MOUNTAIN WHITEFISH
Stream, Lowland Lake and Reservoir Habitat, 1975

Streams		Lowland Lakes Reservoirs and Ponds
Miles	Acres	Acres
6,678	78,832	211,465

SUPPLY AND DEMAND

A statewide surplus of mountain whitefish presently exists. This surplus is projected to continue under present management levels and habitat trends.

Current Status

Year	Harvest	Demand	Success Rate (Fish Per Day)
1975	309,000	91,000	3.4

DISCUSSION

Current habitat trends, in most instances, tend to favor the production of mountain whitefish and these fish are not popular with a large segment of the angling public.

There are no major additional measures to increase mountain whitefish populations contemplated. Projections under current management levels and habitat trends reflect the Department's objectives for this program and are presented under the objectives section.

GOALS

Increase harvest.

Meet future demand at higher than the current success rate.

OBJECTIVES

Objectives Under Current Management Levels and Improved Habitat Trends

Year	Harvest	Demand	Success Rate (Fish Per Day)
1980	660,000	100,000	6.6
1985	693,000	110,000	6.3
1990	754,000	120,000	6.3

PROBLEMS AND STRATEGIES

Problem — Except for a few local areas, mountain whitefish are greatly underutilized by Idaho anglers and are in direct competition with other salmonids.

Strategy — Develop regulations and information and education programs to encourage harvest of mountain whitefish and undertake control programs, where practical and desirable.

Problem — Basic information on life history, ecology and utilization of whitefish is lacking.

Strategy — Conduct and sponsor research to obtain needed life history, ecological and harvest information on whitefish.

Problem — Bear Lake whitefish, Bonneville whitefish and Bonneville cisco are not under the exclusive jurisdiction of the Department as Bear Lake lies in both Idaho and Utah.

Strategy — Work with the Utah Fish and Game Department to develop coordinated management programs for these species.

POLICIES

Programs will not be undertaken to increase the range or population of mountain whitefish in Idaho.

Where necessary and desirable to control or reduce populations of mountain or Great Lakes whitefish in conflict with other salmonid programs, the Commission will liberalize sport seasons, limits, gear, method of take, authorize commercial seasons or allow chemical treatment or other means of control by authorized personnel.

WHITE STURGEON PROGRAM

White sturgeon *(Acipenser transmontanus)* in Idaho are found in free-flowing portions of the main Snake River system upstream to Shoshone Falls and the extreme lower portion of the Salmon River in central Idaho. They are also present in the Kootenai River in northern Idaho. Consumptive harvest of sturgeon is restricted. Catch and release regulations are in effect in the Snake River drainage and only two fish per year can be taken in the Kootenai River. Angler days expended are relatively low.

An estimated 394 miles and 29,962 acres of streams are considered to be sturgeon habitat in Idaho. Based on stream miles, ownership of this habitat is approximately 65 percent public and 35 percent private.

SUPPLY AND DEMAND

Demand will far exceed supply through 1990.

DISCUSSION

Reservoir construction with the subsequent loss of habitat and past consumptive fishing on remaining sturgeon stocks have reduced sturgeon populations to a low level in the Snake River drainage. The avoidance of further habitat loss from dam construction and water diversion in conjunction with current catch and release regulations should allow the sturgeon population to rebuild to levels where a limited fishery will be possible after 1985.

Restrictive regulations currently in effect appear to be adequately protecting mature sturgeon brood stock in the Kootenai River. Current harvest is only a few fish. If adverse effects do not arise from recently implemented water regulation programs or if cooperation can be obtained in modifying these programs, as necessary, it should be possible to maintain current populations and harvest through 1990.

GOALS

Increase sturgeon population and provide a limited consumptive harvest of sturgeon in the Snake River drainage.

Maintain current population and harvest of sturgeon in the Kootenai River.

OBJECTIVES

Provide an annual harvest of 100 sturgeon in the Snake River drainage by 1990.

Provide for the annual harvest of 10 sturgeon from the Kootenai River through 1990.

PROBLEMS AND STRATEGIES

Problem — White sturgeon in Idaho maintain viable populations only in free-flowing stream sections. Impoundments on the Snake River have drastically reduced sturgeon habitat, particularly spawning and food producing areas.

Strategy — Work to prevent further impoundment of white sturgeon habitat in Idaho.

Problem — White sturgeon have a very low reproductive rate and are subject to overharvest.

Strategy — Establish regulations to protect sturgeon brood stock.

Problem — Proposed diversion of water from the Snake River could degrade or eliminate remaining sturgeon habitat in this stream.

Strategy — Obtain input into state and federal planning and programs to insure consideration of adequate Snake River flows to maintain existing sturgeon habitat in the Snake River.

Problem — Life history and ecological data on sturgeon are lacking.

Strategy — Conduct and sponsor research to obtain life history and ecological information on white sturgeon.

POLICIES

Remaining white sturgeon habitat in Idaho should be preserved in a free-flowing condition.

There shall be no consumptive harvest of white sturgeon in the Snake River drainage until it can be demonstrated that stocks are sufficient to support such a harvest without reducing the long-term supply of brood fish.

LING PROGRAM

The Kootenai River is the only water in Idaho in which ling *(Lota lota)* are present. There are an estimated 72 miles and 6,819 acres of ling habitat in the Kootenai River. This habitat is primarily in private ownership. Utilization of ling is relatively minor.

SUPPLY AND DEMAND

Supplies of ling are limited. Demand, however, is not high and is not expected to significantly increase. Supply should be adequate to meet demand through 1990.

DISCUSSION

Ling populations in the Kootenai River appear to be stable. If adverse effects do not arise from recently implemented water regulation programs or if cooperation can be obtained in modifying these programs, as necessary, it should be possible to maintain the current population and harvest through 1990.

GOALS

Maintain the current population and harvest of ling in the Kootenai River.

OBJECTIVES

Provide for an annual harvest of 100 ling through 1990.

PROBLEMS AND STRATEGIES

Problem — Ling are not readily caught by sport anglers.

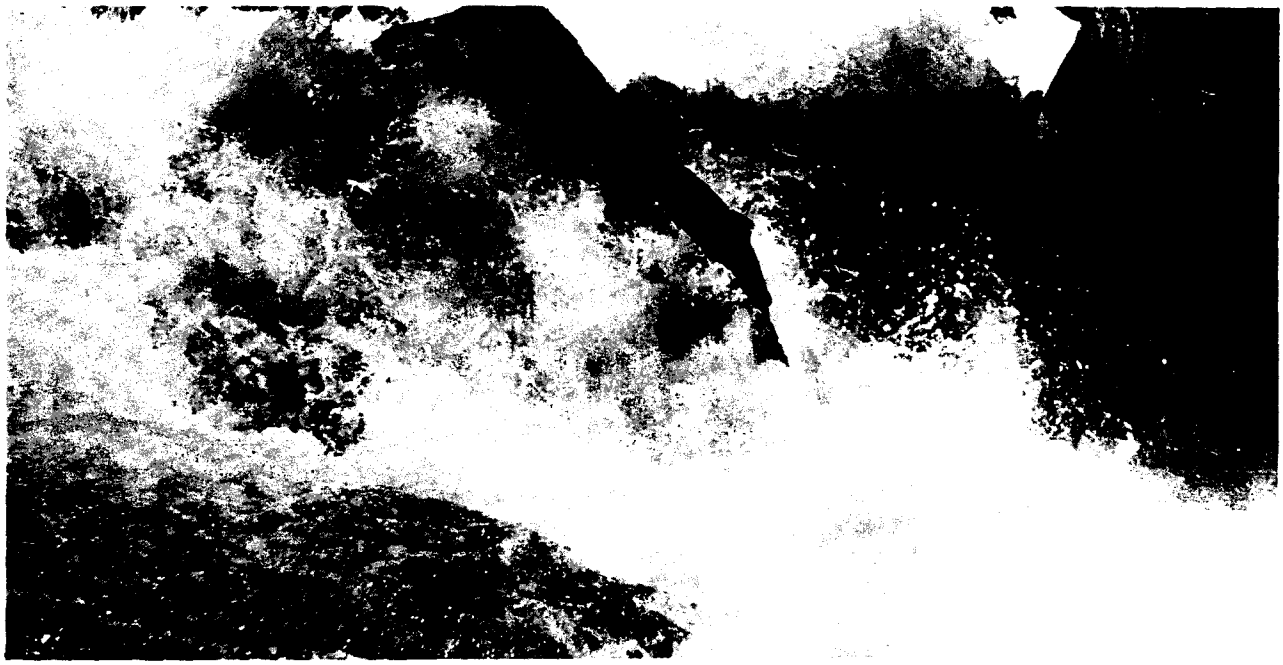
Strategy — Implement regulations which will assure reasonable harvest of ling by sport anglers.

Problem — Habitat requirements and information on status of ling is lacking, particularly as concerns possible future changes in river flows.

Strategy — Conduct or sponsor research on ling habitat requirements.

POLICIES

Ling habitat in the Kootenai River should be preserved in a free-flowing condition.



ANADROMOUS FISH MAJOR PROGRAM

This major program relates to six species and races of salmon and steelhead: spring chinook, summer chinook, fall chinook, sockeye salmon, coho and summer steelhead.

Anadromous fish distribution in Idaho is confined to the Salmon and Clearwater river drainages and the main Snake River drainage upstream to Hells Canyon Dam.

The fishery for anadromous fish is one of the most popular in the State with 14 percent of the anglers in Idaho expressing a preference for these fish. Past trends have demonstrated that participation in this fishery is proportional to the size of the runs entering the State. Demand currently exceeds supply and will continue to do so into the foreseeable future. Demand figures are not presented in this major program. Supply is expressed in both allowable harvest and angler days.

In recent years, fishing for anadromous fish in Idaho has been severely curtailed because of reduced runs entering the State. During 1975, there were no consumptive fishing seasons open in Idaho for any species of anadromous fish. There is a major potential for increasing recreational fishing opportunity in Idaho if runs of anadromous fish can be restored to higher levels.

Because of their large size and their migration and spawning habits, anadromous fish are highly visible at certain times of the year. They contribute a significant amount of aesthetic value in the wild and observation value both in the wild and in hatcheries.

Goals and objectives presented for individual programs within this major program are subject to change once coordinated regional planning, now underway for anadromous fish, is finalized and agreed upon. Ultimate goals and objectives will be directed at greater run sizes than set forth in this 15-year plan.

Various hatchery subprograms are presently underway. Other major hatchery efforts have been authorized and proposed. Because of the current state of flux involving future hatchery operations, individual species programs under this major program are not presented by wild fish and hatchery subprograms at this time. A coordinated plan will be developed for meshing existing and future hatchery subprograms and presented at a later date.

PROBLEMS AND STRATEGIES

Problem — Severe losses of juvenile and adult salmon and steelhead migrants occur at lower Snake and Columbia river dams.

Strategy — Continue to advocate and support development and implementation of structural improvements, water management programs and hatchery mitigation programs by responsible development and water management agencies that will reduce or replace losses of juvenile and adult salmon and steelhead at dams.

Problem — Nitrogen supersaturation and other diseases cause significant losses of juvenile and adult salmon and steelhead.

Strategy — Continue to advocate and support structural and water management improvements by responsible development and water management agencies that will reduce nitrogen supersaturation and minimize migration stresses which contribute to disease mortalities.

Problem — Jurisdiction over migrating salmon and steelhead is divided among three states — Idaho, Oregon and Washington. Overlap in timing of various races and species of anadromous fish into the Columbia River results in conflicts between various user groups and complicates segregation and protection of Snake River stocks.

Strategy — Continue participation in interstate hearings and promotion of a tri-state compact and coordinated regional management of Columbia River anadromous fish.

Problem — Information is not complete on downriver harvest of salmon and steelhead as related to impacts on Idaho stocks.

Strategy — Continue to participate in interstate coordinated research programs to establish the impact of downstream harvest on Idaho runs.

Problem — Ocean survival, distribution and utilization of Idaho anadromous fish stocks is not known.

Strategy — Actively participate in coordinated research programs to determine ocean survival, distribution and utilization of Idaho salmon and steelhead stocks.

Problem — There is a lack of information on harvest of salmon and steelhead by Indians in the State of Idaho and the impacts on local runs.

Strategy — Expand monitoring and evaluate effects related to in-state Indian harvests.

Problem — Stream habitat in many areas is being degraded by siltation, various forms of pollution, channel alterations, overgrazing of streambanks, diversion of water and lack of maintenance flows.

Strategy — Maintain close liaison with U.S. Forest Service, Bureau of Land Management and other state and federal agencies involved in land and water use programs and encourage, advocate and support implementation and enforcement of programs which will reduce stream degradation. Support state and federal water quality standards and enforcement of pollution controls.

Problem — Population levels are suppressed in some streams from competition with other fish species.

Strategy — Where feasible and desirable, carry out management or control programs to reduce competitive fish species.

Problem — Basic knowledge of anadromous fish ecology and interaction with other fishes is lacking on most streams.

Strategy — Conduct research programs on important salmon and steelhead waters regarding ecology and population dynamics.

POLICIES

With the exception of fall chinook, coho and sockeye, wild salmon and steelhead populations will receive priority consideration in all fishery management decisions.

Remaining anadromous fish stream habitat in Idaho should be preserved in a free-flowing condition.

SPRING CHINOOK PROGRAM

Spring chinook *(Oncorhynchus tshawytscha)* are found in accessible and suitable waters throughout the Salmon and Clearwater river drainages. Because of decisions to dam the mid-Snake River, spring chinook runs originally present in this river reach were translocated to the Salmon River. Decisions to further dam the mid-Snake River have since been reversed.

Essentially all of the salmon sport harvest in Idaho is presently supplied by spring chinook.

There are an estimated 2,393 miles and 22,598 acres of spring chinook habitat in Idaho waters most of which is in public ownership. It is not anticipated there will be major reductions in this habitat by 1990. There could be adverse effects on the quality of habitat, however, if water and land use planning and management programs do not give spring chinook habitat adequate consideration.

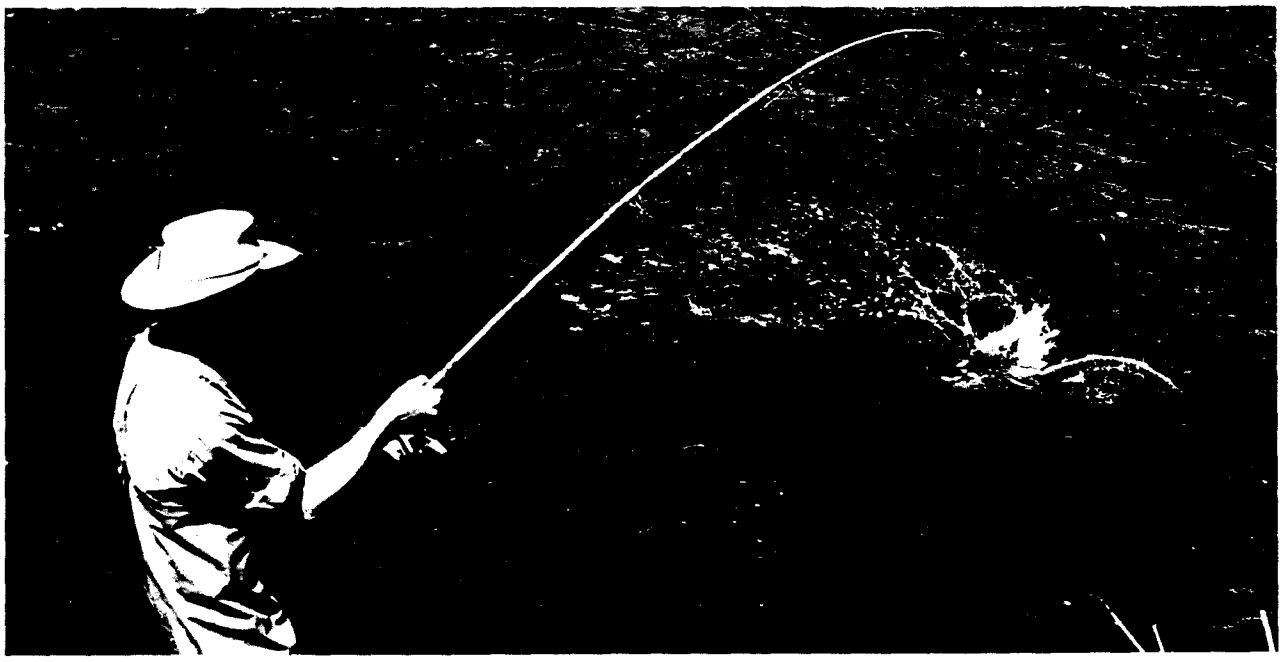
SUPPLY AND DEMAND

Demand will exceed supply through 1990.

DISCUSSION

Spring chinook runs are presently at a very low level. Under current trends, spring chinook numbers will continue to decline and could cease to exist in Idaho. The depressed level of these runs is primarily due to adverse effects on juvenile and adult migrants which have resulted from construction of Columbia and lower Snake river dams and elimination of habitat by mid-Snake River dams.

Currently authorized and proposed dam structural modifications, water management, hatchery mitigation and coordinated management programs should allow Idaho runs to be rebuilt to levels that existed prior to dam construction in the lower and mid-Snake River.



GOALS

Rebuild spring chinook runs entering Idaho to the 1960 level.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Year	Run Size (Lower Granite Dam)	Harvest	Angler Days	Success Rate (Fish Per Day)
1975	16,000	—	—	—
1980	45,000	9,000	60,000	0.15
1985	65,000	15,000	65,000	0.23
1990	85,000	20,000	70,000	0.29

PROBLEMS AND STRATEGIES

Problem — Information is not complete on the optimum timing, location and size for releases of hatchery reared spring chinook.

Strategy — Continue research to determine optimum smolt release procedures to provide for greatest return of adult fish.

Problem — Kidney disease is a major hatchery problem at Rapid River spring chinook hatchery.

Strategy — Maintain present program of kidney disease control. Apply new control measures as they become available.

Problem — Impacts of hatchery reared fish on wild stocks are not fully known.

Strategy — Conduct research to determine impacts of hatchery reared spring chinook on wild stocks.

Problem — Varying water conditions which affect catch rates make it difficult to meet harvest objectives.

Strategy — Provide the capability to monitor harvests and make timely adjustments of seasons, as necessary.

POLICIES

The spring chinook run which was translocated from the middle Snake River will be reestablished in the middle Snake River.

Certain streams or stream sections shall be classified and managed primarily for hatchery supported runs of spring chinook.

Certain streams or stream sections shall be classified and managed primarily for preservation and production of wild runs of spring chinook.

Releases of hatchery reared spring chinook will not be made in streams classified for priority management of wild spring chinook.

SUMMER CHINOOK PROGRAM

Runs of summer chinook *(Oncorhynchus tshawytscha)* are limited primarily to the South Fork of the Salmon River drainage, the upper Salmon River drainage and Big Creek, a tributary of the Middle Fork of the Salmon River. Some of the chinook reintroduced into the Clearwater River drainage were from summer run stocks.

At one time, summer chinook provided a majority of the chinook sport harvest in Idaho. Total runs were larger than spring chinook runs and the fishery was not affected by varying water conditions because of later timing of the runs. Currently, summer chinook runs are at a very low level. There has not been a fishing season in Idaho on these fish since 1964.

There are an estimated 716 miles and 11,151 acres of summer chinook habitat in Idaho waters. Practically all of this habitat is in public ownership. It is not anticipated there will be major reductions in summer chinook habitat by 1990. There could, however, be adverse effects on the quality of habitat if water and land use planning and management programs do not give summer chinook habitat adequate consideration.

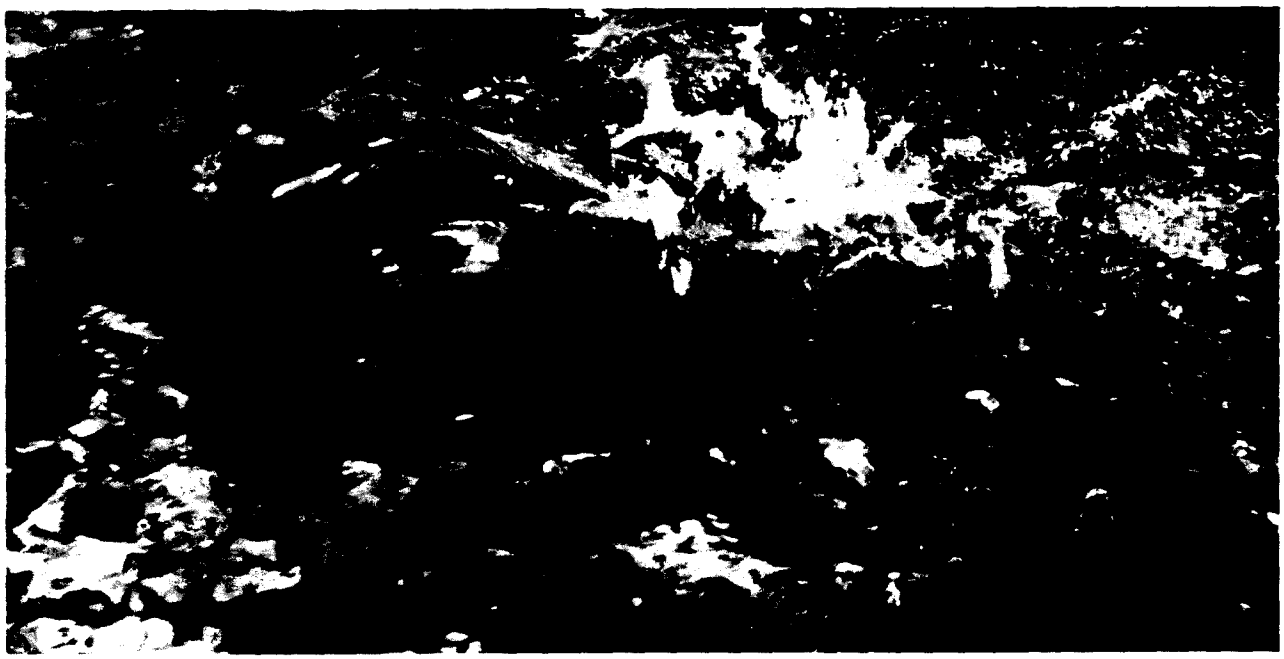
SUPPLY AND DEMAND

Demand will exceed supply through 1990.

DISCUSSION

Summer chinook in Idaho are presently on the verge of elimination. In addition to dam related losses there has been significant habitat impairment in the primary production areas of the South Fork and main Salmon rivers.

Remedial measures involving structural modifications to dams and water management, hatchery mitigation and coordinated management programs have been authorized or proposed. Implementation of these measures in conjunction with preservation and restoration of existing habitat would allow summer chinook runs in Idaho to be rebuilt to fishable levels.



GOALS

Rebuild summer chinook runs in Idaho to levels that will provide for sport harvest of these fish.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Year	Run Size (Lower Granite Dam)	Harvest	Angler Days	Success Rate (Fish Per Day)
1975	8,000	—	—	—
1980	18,000	—	—	—
1985	24,000	4,000	25,000	0.17
1990	30,000	7,000	30,000	0.23

PROBLEMS AND STRATEGIES

Problem — Summer chinook are more seriously affected by adverse downriver passage conditions than spring chinook and the reasons for this differential mortality are not known.

Strategy — Continue to conduct, sponsor and support research efforts to more precisely determine mortality factors affecting summer chinook.

Problem — Primary summer chinook habitat in Idaho has been severely degraded.

Strategy — Work with state and federal agencies to preserve and restore summer chinook habitat.

Problem — There has been little experience in producing hatchery reared summer chinook.

Strategy — Continue experimental summer chinook hatchery production programs.

POLICIES

Spring chinook runs will not be substituted for depleted summer chinook runs.

Existing wild summer chinook runs will be supplemented with hatchery reared summer chinook where feasible, except in the Middle Fork of the Salmon River drainage.

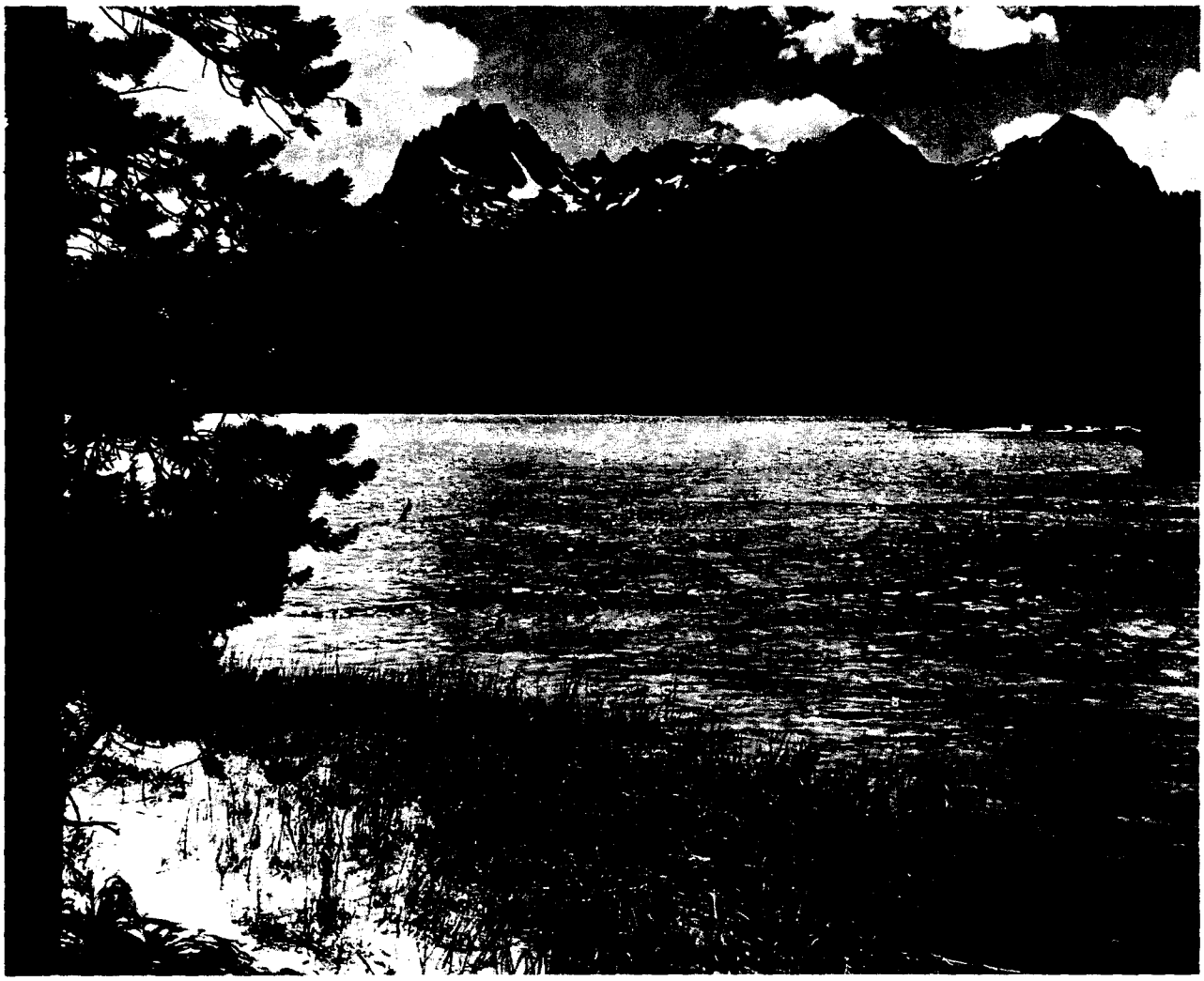
FALL CHINOOK, COHO AND SOCKEYE SALMON PROGRAM

The fish this program relates to all have a rather limited distribution in Idaho. Fall chinook *(Oncorhynchus tshawytscha)* distribution is confined to the main Snake River below Hells Canyon Dam. A remnant coho *(Oncorhynchus kisutch)* population is present in the same river reach. Sockeye *(Oncorhynchus nerka)* are found in Redfish Lake in the upper Salmon River drainage.

There are an estimated 677 miles and 20,518 acres of fall chinook, coho and sockeye salmon habitat in Idaho waters. The bulk of this habitat is in public ownership. It is not anticipated there will be major habitat reductions by 1990. There could be, however, adverse effects on the quality of habitat if water and land use planning and management programs do not give fall chinook, coho and sockeye salmon habitat adequate consideration.

SUPPLY AND DEMAND

Demand will exceed supply for fall chinook through 1990. Potential demand for sockeye salmon and coho is negligible.



DISCUSSION

None of the fish in this program presently provides a significant amount of angler days use although there is potential in this regard for fall chinook. Primary program emphasis for fall chinook, coho and sockeye will be on assuring the future survival of remnant populations for their intrinsic and aesthetic and observation values. Proposed improvements in Columbia and Snake River fish passage conditions will benefit these fish.

OBJECTIVES

Reestablish a run of 5,000 fall chinook over Lower Granite Dam by 1990.

Maintain an average annual run of 1,500 coho past Lower Granite Dam on the lower Snake River.

Reestablish a run of 1,000 sockeye salmon into Redfish Lake by 1990.

GOALS

Increase the Snake River fall chinook run to a level where limited sport harvest will be possible.

Maintain coho numbers at a level that will assure survival of runs into Idaho.

Increase the sockeye salmon run in Redfish Lake to numbers which will assure the survival of the run.

PROBLEMS AND STRATEGIES

Problem — As a result of dam related conditions, fall chinook have reached such low numbers the future survival of these runs is jeopardized.

Strategy — Maintain egg banks and take other actions, as possible, to preserve a source of Snake River fall chinook stocks until remedial measures for dam related problems and hatchery mitigation programs become effective.

Problem — It has not been possible to rear Snake River fall chinook in hatcheries in Idaho.

Strategy — Maximize fish passage improvements and wild fish survival. Supplement the run with Idaho Snake River strain of fall chinook held in lower Columbia River hatcheries.

Problem — Coho are not readily taken by anglers in upstream fresh waters.

Strategy — No coho fishery program will be maintained in Idaho.

Problem — The sockeye run into Redfish Lake has reached such low numbers it is very vulnerable to elimination.

Strategy — Augment the Redfish Lake sockeye run with hatchery reared fish.

POLICIES

The mitigation for fall chinook which once spawned above Hells Canyon Dam will be by substitution of an equal number of spring chinook.

Programs will not be undertaken to increase the existing distribution of sockeye, coho or fall chinook in Idaho.

SUMMER STEELHEAD PROGRAM

Summer steelhead *(Salmo gairdneri)* are found in all accessible and suitable waters of the Salmon and Clearwater river drainages and the Snake River drainage below Hells Canyon Dam. These fish supply the majority of anadromous fish angling opportunity in Idaho waters when runs are of sufficient size for fishing. They are available to the angler for approximately eight months out of the year.

Runs of summer steelhead are presently in a depressed state. There was no fishing for these fish in Idaho during 1975.

An estimated 3,358 miles and 27,930 acres of streams are considered to be summer steelhead habitat in Idaho. This habitat is mostly in public ownership. It is not anticipated there will be major reductions in habitat by 1990. Quality of habitat could be adversely affected, however, if water and land use planning and management programs do not give summer steelhead habitat adequate consideration.

SUPPLY AND DEMAND

Demand will exceed supply through 1990.

DISCUSSION

The depressed level of summer steelhead runs entering Idaho waters is primarily due to adverse effects resulting from dam construction. Dams constructed in the Columbia and lower Snake rivers have caused both direct and indirect mortalities on juvenile and adult migrants. Mid-Snake River dams have blocked fish access to summer steelhead habitat. If current trends continue, summer steelhead will decline until only remnant runs remain or these fish are eliminated from Idaho waters.

Programs already authorized or proposed which involve structural modifications to dams, hatchery mitigation, water management and coordinated management programs should allow Idaho runs to be rebuilt to levels that existed prior to dam construction in the lower and mid-Snake River.

GOALS

Rebuild summer steelhead runs entering Idaho to the 1960 level.

OBJECTIVES

Objectives Under Proposed Management Levels and Improved Habitat Trends

Year	Run Size (Lower Granite Dam)	Harvest	Angler Days	Success Rate (Fish Per Day)
1975	14,500	—	—	—
1980	45,000	15,000	85,000	0.18
1985	65,000	20,000	90,000	0.22
1990	85,000	30,000	95,000	0.32

PROBLEMS AND STRATEGIES

Problem — Resident rainbow trout are indistinguishable from juvenile steelhead and often inhabit the same waters leading to possible conflicts in resident and anadromous fish programs.

Strategy — Conduct, sponsor and encourage research to determine effects of juvenile steelhead angler harvest on steelhead stocks and, if necessary, develop regulations or other measures to prevent conflicts in programs.

Problem — Information is not complete on the optimum timing, location and size for releases of hatchery reared summer steelhead smolts.

Strategy — Continue research to determine optimum smolt release procedures to provide for greatest return of adult fish.

Problem — Impacts of hatchery reared fish on wild stocks are not fully known.

Strategy — Conduct research to determine impacts of hatchery reared summer steelhead on wild stocks.

Problem — Varying water conditions in the spring of the year which affect catch rates make it difficult to meet harvest objectives.

Strategy — Provide the capability to monitor spring harvest and make timely adjustments of seasons as necessary.

POLICIES

The summer steelhead run which was translocated from the middle Snake River will be reestablished in the middle Snake River.

When summer steelhead runs are insufficient to allow a consumptive fishery, fall season "catch and release" fisheries may be established.

Certain stream or stream sections will be classified and managed primarily for hatchery supported runs of summer steelhead.

Certain streams or stream sections will be classified and managed primarily for preservation and production of wild runs of summer steelhead.

Release of hatchery reared summer steelhead will not be made in streams classified for priority management of wild summer steelhead.

Certain streams or stream sections will be classified and managed primarily for early run ("A") or late run ("B") summer steelhead.

NONGAME FISH MAJOR PROGRAM

This program includes 7 species of sculpins, 5 suckers, 14 minnows, tadpole madtom, sandroller and 1 species of lamprey (see Appendix H). With the exception of high mountain lakes and some high elevation headwater streams, one or more nongame species in this program are found in most waters of the State. Miles and acres of nongame fish habitat are classified in the table below. Based on stream miles, approximately 56 percent of this habitat is publicly owned and 44 percent privately owned. Current utilization of nongame fish by sport anglers is insignificant. There are commercial fisheries on carp, suckers and Utah chub. Commercial use is for the fresh food market and processed and unprocessed animal and fish food products.

NONGAME FISH
Stream, Lowland Lake, Reservoir and Pond Habitat, 1975

Streams		Lowland Lakes Reservoirs and Ponds
Miles	Acres	Acres
9,535	87,162	430,072

SUPPLY AND DEMAND

The supply of nongame fish as a group is expected to far exceed demand through 1990.

DISCUSSION

There is a tremendous potential for expanded use, both sport and commercial, of many species in this major program. Increased sport use is dependent upon greater acceptance of nongame fish by the angling public. Expansion of existing commercial fisheries is dependent upon more favorable economics. While increased use of nongame fish would be desirable, for a number of reasons, it is not anticipated that changes in angler preferences or commercial fishery economics, within the next 15 years, will be of a magnitude to provide for adequate harvest of nongame fish.

Without adequate sport or commercial harvests and under current habitat trends, certain nongame fish populations will continue to increase and will have to be controlled, where necessary and feasible, to prevent undue competition with and suppression of game fish populations.

GOALS

Develop programs to maintain nongame fish populations in balance with game fish populations.

OBJECTIVE

Inventory nongame fish habitat and relative population abundance by 1980.

PROBLEMS AND STRATEGIES

Problem — Some nongame species are in competition with and suppress game fish populations.

Strategy — Where necessary and feasible, eradicate or reduce populations of nongame fish by chemical toxicants or other suitable means as available. Encourage commercial harvest of nongame fish species.

Problem — Current trends in aquatic habitat changes favor production of most nongame fish species over game fish species.

Strategy — Obtain input into water planning and management programs to minimize habitat changes which favor production of nongame fish.

Problem — Nongame fish species are greatly underutilized by Idaho sport anglers.

Strategy — Develop regulations and information and education programs to encourage harvest of surplus nongame fish species.

POLICIES

No nonnative, nongame fish species will be introduced into Idaho waters except Gambusia.

Native nongame fish species will not the introduced into waters other than those where they are presently found.

Nongame fish populations currently found in Idaho waters will, where feasible and desirable, be controlled whenever they are in competition with game fish species.

Where feasible and desirable, the Commission will authorize commercial fishing for certain nongame fish species.

AMPHIBIAN MAJOR PROGRAM

There are 15 species of amphibians including salamanders, toads and frogs found in Idaho (see Appendix I). As a group, amphibians are found throughout the State in aquatic, marshland and other habitat reasonably near water or damp areas.

One species — the bullfrog — is taken by sport anglers. Aquatic amphibians serve as food for game fishes. They are also of significant value in nonconsumptive uses such as nature and scientific studies.

Estimates on the amount of bullfrog habitat in the State and supply and demand projections for this species are not available at the present time.

GOALS

Increase bullfrog population, as necessary, to provide for a continuing fishable population.

Maintain current population levels of all other species of amphibians.

OBJECTIVE

Inventory amphibian habitat and relative population abundance by 1985.

PROBLEMS AND STRATEGIES

Problem — More information is needed on distribution, population levels and habitat requirements of amphibians in Idaho.

Strategy — Encourage research to obtain additional habitat, biological and ecological data on Idaho amphibians.

Problem — There are no estimates on sportsman demand and harvest of bullfrogs.

Strategy — Obtain bullfrog demand and harvest information in conjunction with fishery surveys.

MOLLUSK, CRUSTACEAN AND AQUATIC INSECT MAJOR PROGRAM

Mollusks, crustaceans and aquatic insects are extremely valuable as a food source for game fish. The freshwater shrimp, Gammarus, is of particular importance in producing trophy-size game fish. Crayfish and freshwater clams are occasionally harvested for human consumption. Many of the species in this program contribute significantly to educational programs.

Some crustaceans are parasitic on game fish and can be considered detrimental.

GOALS

Expand distribution and populations of freshwater (Gammarus) shrimp.

Maintain existing populations of all other species of mollusks, crustaceans and aquatic insects.

OBJECTIVE

Determine population status of mollusks, crustaceans and aquatic insects in major fish producing waters by 1990.

PROBLEMS AND STRATEGIES

Problem — Status of mollusks, crustaceans and aquatic insects populations is largely unknown.

Strategy — Conduct, sponsor and encourage research to determine population status of mollusks, crustaceans and aquatic insects in major fish producing habitats.

Problem — Siltation, chemical pollution, water diversion and water fluctuations are reducing mollusk, crustacean and aquatic insect populations.

Strategy — Actively participate in land and water use planning at all levels of federal, state and local governments to insure consideration of stream, lake, reservoir and other habitat for mollusks, crustaceans and aquatic insects.

SPECIES OF SPECIAL CONCERN

Species of special concern are those whose restricted range, specific habitat requirements and/or low population numbers make them vulnerable to elimination from the State if adverse impacts on habitat or populations occur. A total of 15 fish species or races and 2 amphibian species in Idaho are classified as meriting special concern at this time. Additional species or races may be included in this classification or other revisions made as further knowledge becomes available.

This classification will be developed as a basis for preparing, in conjunction with other state and federal wildlife agencies, a state list of endangered and threatened species.

FISH

SALMON AND STEELHEAD

Runs of all species and races of salmon and summer steelhead in Idaho are currently at a low level. There is concern that if these runs remain at this level for many more years, reproductive capability could be lost and the runs eliminated from the State.

Adverse fish passage conditions at dams and reservoirs in the lower Columbia and Snake rivers is the primary cause of presently reduced salmon and steelhead runs into Idaho. Means are now available to improve passage conditions and replace remaining losses. The question of maintaining salmon and steelhead runs into Idaho revolves around the timeliness with which these corrective and mitigative measures are implemented.

Of particular concern are summer chinook populations which are at very low levels throughout their range. There are also three species of salmon in the State which have limited distribution and could be eliminated by local adverse effects on populations or habitat. Sockeye salmon are found only in Redfish Lake in central Idaho. Status is not definitely known and may be approaching elimination. Fall chinook and coho are limited to the main Snake River below Hells Canyon Dam. Fall chinook numbers are dangerously low and only a remnant coho population is present.

RECOMMENDATIONS

Implementation of available measures to improve fish passage for salmon and steelhead and to replace losses should commence at once. Special emphasis should be given to maintaining, protecting and enhancing habitat supporting anadromous fish in Idaho.

RED-BANDED TROUT

This unique fish has just recently been discovered in some desert streams of southwestern Idaho. Taxonomic classification has not been finalized as yet but it appears to be related to the California golden trout. Its restricted distribution and vulnerability of its desert stream habitat make it susceptible to elimination from state waters.

RECOMMENDATIONS

Work with land and water management agencies or other interests which control or can affect red-banded trout habitat to preserve this habitat. Protect populations from overharvest, as necessary.

WHITE STURGEON

Adverse impacts from impoundment, water diversion and regulation on the relatively restricted remaining sturgeon habitat in the Snake and Kootenai rivers could result in elimination of this species from the State.

RECOMMENDATION

Water planning and programs should give full consideration to maintain existing sturgeon habitat.

SCULPINS

There are two endemic species of sculpins in Idaho — the Wood River sculpin which is present in the Big Wood River and the Shoshone sculpin which is found in Riley and Billingsly creeks in the Hagerman Valley. The Bear Lake sculpin is present in both Idaho and Utah but is found only in Bear Lake. The restricted ranges of these sculpin makes them vulnerable to extinction if there should be adverse impacts on populations or habitat.

RECOMMENDATION

Habitat should be protected to insure the survival of these species.

FINE-SPOTTED CUTTHROAT TROUT

The range for this race of Snake River cutthroat is confined to its native waters of the South Fork Snake River drainage and Blackfoot Reservoir into which it has been introduced. Hybridization with other Snake River cutthroat races and deteriorating habitat could eliminate it from Idaho waters unless special measures are taken.

RECOMMENDATIONS

Remaining fine-spotted cutthroat trout habitat should be protected and enhanced where possible. Certain waters should be set aside and managed to preserve racial characteristics of this fish.

LING

The Kootenai River is the only Idaho water in which ling are found. This restricted distribution makes the ling vulnerable to elimination from the State if there should be adverse impacts on its limited habitat.

RECOMMENDATION

Ling habitat in the Kootenai River should be protected.

WHITEFISH

There are three endemic species of whitefish in Bear Lake — the Bear Lake whitefish, Bonneville whitefish and Bonneville cisco. Cisco are presently harvested by anglers and populations are stable. The restricted range of all three of these whitefish, however, makes them vulnerable to extinction if there should be adverse impacts on populations or their habitat.

RECOMMENDATIONS

In coordination with the Utah Fish and Game Department, populations should be protected, as necessary. Habitat in Bear Lake should be maintained to insure the survival of these species.

AMPHIBIANS

Based on known distribution, two species of amphibians can be considered rare in Idaho. The rough-skinned newt is found only in Latah and Shoshone counties. The wood frog has been found in the extreme northern portion of the State and they are apparently few in number.

The restricted distribution of these amphibians makes them somewhat vulnerable to elimination from Idaho if adverse impacts on habitat or populations should occur.

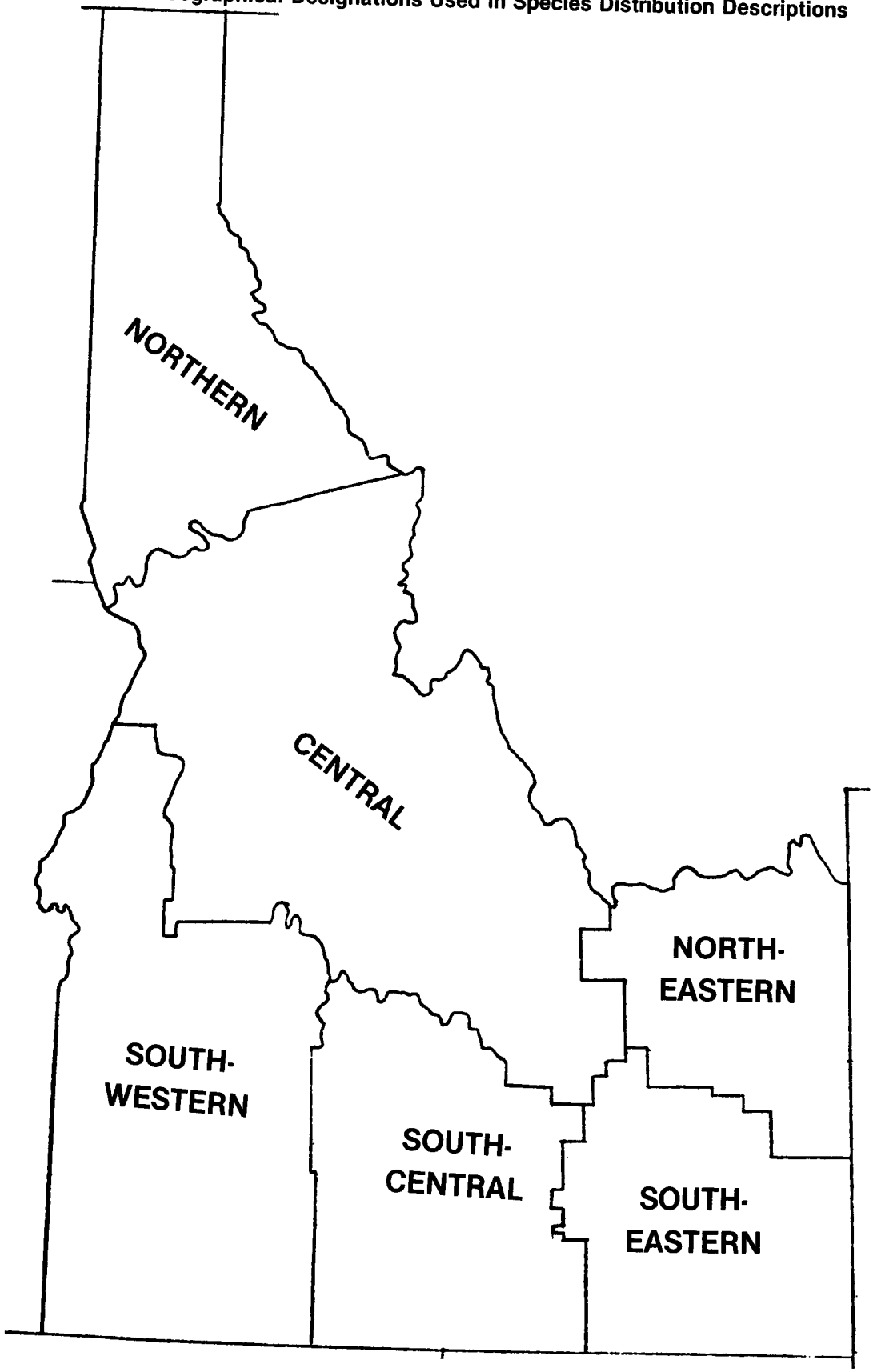
RECOMMENDATIONS

Studies should be conducted to more precisely determine population status and habitat requirements of these amphibians. Where possible, short-term and long-term protective measures should be taken, as necessary, to maintain existing populations.

APPENDIX

APPENDIX A

Idaho Geographical Designations Used in Species Distribution Descriptions



APPENDIX B

SPECIES LIST — DUCK PROGRAM

(does not include species of only casual or accidental occurrence in Idaho)

Mallard *(Anas platyrhynchos)*
Gadwall *(Anas strepera)*
American widgeon *(Mareca americana)*
Green-winged teal *(Anas carolinensis)*
Blue-winged teal *(Anas discors)*
Cinnamon teal *(Anas cyanoptera)*
Shoveler *(Spatula clypeata)*
Pintail *(Anas acuta)*
Wood duck *(Aix sponsa)*
Redhead *(Aythya americana)*
Canvasback *(Aythya valisineria)*
Lesser scaup *(Aythya affinis)*
Greater scaup *(Aythya marila)*
Ring-necked duck *(Aythya collaris)*
American goldeneye *(Bucephala clangula)*
Barrow's goldeneye *(Bucephala islandica)*
Bufflehead *(Bucephala albeola)*
Ruddy duck *(Oxyura jamaicensis)*
Harlequin duck *(Histrionicus histrionicus)*
Hooded merganser *(Lophodytes cucullatus)*
American merganser *(Mergus merganser)*
Red-breasted merganser *(Mergus serrator)*

APPENDIX C

SPECIES LIST — NONCARNIVOROUS MAMMAL PROGRAM

Nutria *(Myocastor coypus)*
Porcupine *(Erethizon dorsatum)*
Pika *(Ochotona princeps)*
Snowshoe hare *(Lepus americanus)*
White-tailed jackrabbit *(Lepus townsendii)*
Black-tailed jackrabbit *(Lepus californicus)*
Red squirrel *(Tamiasciurus hudsonicus)*
Flying squirrel *(Glaucomys sabrinus)*
Fox squirrel *(Sciurus niger)*
Yellow-bellied marmot *(Marmota flaviventris)*
Least chipmunk *(Eutamias minimus)*
Yellow pine chipmunk *(Eutamias amoenus)*
Red-tailed chipmunk *(Eutamias ruficaudus)*
White-tailed antelope squirrel *(Citellus leucurus)*
Golden-mantled ground squirrel *(Citellus lateralis)*
Columbian ground squirrel *(Citellus columbianus)*
Townsend's ground squirrel *(Citellus townsendii)*
Idaho ground squirrel *(Citellus brunneus)*
Richardson's ground squirrel *(Citellus richardsonii)*
Uinta ground squirrel *(Citellus armatus)*
Belding's ground squirrel *(Citellus beldingi)*
Northern pocket gopher *(Thomomys talpoides)*
Ord's kangaroo rat *(Dipodomys ordii)*
Bushy-tailed wood rat *(Neotoma cinerea)*
Western harvest mouse *(Reithrodontomys megalotis)*
Heather mouse *(Phenacomys intermedius)*
Montane meadow mouse *(Microtus montanus)*
Long-tailed meadow mouse *(Microtus longicaudus)*
Richardson's meadow mouse *(Microtus richardsoni)*
Sagebrush mouse *(Lagurus curtatus)*
Gapper's red-backed mouse *(Clethrionomys gapperi)*
Northern grasshopper mouse *(Onychomys leucogaster)*
Western jumping mouse *(Zapus princeps)*
Deer mouse *(Peromyscus maniculatus)*
Pinyon mouse *(Peromyscus truei)*
Cinereous shrew *(Sorex cinereus)*

Vagrant shrew *(Sorex vagrans)*
Dusky shrew *(Sorex obscurus)*
Water shrew *(Sorex palustris)*
Little brown bat *(Myotis lucifugus)*
Yuma bat *(Myotis yumanensis)*
Long-eared bat *(Myotis evotis)*
Long-legged bat *(Myotis volans)*
California bat *(Myotis californicus)*
Small-footed bat *(Myotis subulatus)*
Silver-haired bat *(Lasionycteris noctivagans)*
Western pipistrelle *(Pipistrellus hesperus)*
Big brown bat *(Eptesicus fuscus)*
Hoary bat *(Lasiurus cinereus)*
Townsend's big-eared bat *(Plecotus townsendii)*

APPENDIX D

SPECIES LIST — RAPTOR PROGRAM

Golden eagle *(Aquila chrysaetos)*
Bald eagle *(Haliaeetus leucocphalus)*
Osprey *(Pendion haliaetus)*
Prairie falcon *(Falcon mexicanus)*
Peregrine falcon *(Falco peregrinus)*
Gyrfalcon *(Falco rusticolus)*
Pigeon hawk *(Falco columbarius)*
Sparrow hawk *(Falco sparverius)*
Goshawk *(Accipiter gentilis)*
Sharp-shinned hawk *(Accipiter striatus)*
Cooper's hawk *(Accipiter cooperii)*
Red-tailed hawk *(Buteo jamaicensis)*
Swainson's hawk *(Buteo swainsoni)*
Rough-legged hawk *(Buteo lagopus)*
Ferruginous hawk *(Buteo regalis)*
Marsh hawk *(Circus cyaneus)*
Barn owl *(Tyto alba)*
Screech owl *(Otus asio)*
Great horned owl *(Bubo virginianus)*
Snowy owl *(Nyctea scandiaca)*
Burrowing owl *(Speotyto cunicularia)*
Great gray owl *(Strix nebulosa)*
Long-eared owl *(Asio otus)*
Short-eared owl *(Asio flammeus)*
Saw-whet owl *(Aegolius acadicus)*

APPENDIX E

SPECIES LIST — WATER BIRD PROGRAM

(does not include species of only casual or accidental occurrence in Idaho)

Whistling swan *(Olor columbianus)*
Trumpeter swan *(Olor buccinator)*
Killdeer *(Charadrius vociferus)*
Long-billed curlew *(Numenius americanus)*
Spotted sandpiper *(Actitis macularia)*
Solitary sandpiper *(Tringa solitaria)*
Pectoral sandpiper *(Erolia melanotos)*
Baird's sandpiper *(Erolia bairdii)*
Least sandpiper *(Erolia minutilla)*
Western sandpiper *(Ereunetes mauri)*
Short-billed dowitcher *(Limnodromus griseus)*
American avocet *(Recurvirosta americana)*
Greater yellowlegs *(Totanus melanoleucus)*
Lesser yellowlegs *(Totanus flavipes)*
Black-necked stilt *(Himantopus mexicanus)*
Wilson's phalarope *(Steganopus tricolor)*
Willet *(Catoptrophorus semipalmatus)*
Sora *(Porzana carolina)*
Eared grebe *(Podiceps caspicus)*
Western grebe *(Aechmorphorus occidentalis)*
Pied-billed grebe *(Podilymbus podiceps)*
White pelican *(Pelecanus erythrorhynchos)*
California gull *(Larus californicus)*
Ring-billed gull *(Larus delawarensis)*
Franklin's gull *(Larus pipixcan)*
Forster's tern *(Sterna forsteri)*
Common tern *(Sterna hirundo)*
Caspian tern *(Hydroprogne caspia)*
Black tern *(Chlidonias niger)*
Greater sandhill crane *(Grus canadensis)*
Whooping crane *(Grus americana)*
Double-crested cormorant *(Phalacrocorax auritus)*
Great blue heron *(Ardea herodias)*
Snowy egret *(Leucophoyx thula)*
Black-crowned night heron *(Nycticorax nycticorax)*
American bittern *(Botaurus lentiginosus)*
Belted kingfisher *(Megaceryle alcyon)*
Dipper *(Cinclus mexicanus)*

APPENDIX F

SPECIES LIST — PASSERINE AND MISCELLANEOUS NONGAME BIRD PROGRAM
(does not include species of only casual or accidental occurrence in Idaho)

Turkey vulture *(Cathartes aura)*
Poor-will *(Phalaenoptilus nuttallii)*
Common nighthawk *(Chordeiles minor)*
Broad-tailed hummingbird *(Selasphorus platycercus)*
Rufous hummingbird *(Selasphorus rufus)*
Calliope hummingbird *(Stellula calliope)*
Red-shafted flicker *(Colaptes cafer)*
Yellow-bellied sapsucker *(Sphyrapicus varius)*
Pileated woodpecker *(Dryocopus pileatus)*
Lewis' woodpecker *(Asyndesmus lewis)*
Hairy woodpecker *(Dendrocopos villosus)*
Downy woodpecker *(Dendrocopos pubescens)*
Northern three-toed woodpecker *(Picoides tridactylus)*
Eastern kingbird *(Tyrannus tyrannus)*
Western kingbird *(Tyrannus verticalis)*
Say's phoebe *(Sayornis saya)*
Traill flycatcher *(Empidonax traillii)*
Olive-sided flycatcher *(Nuttallornis borealis)*
Western wood pewee *(Contopus sordilulus)*
Horned lark *(Eremophila alpestris)*
Vaux's swift *(Chaetura vauxi)*
Violet-green swallow *(Tachycineta thalassina)*
Tree swallow *(Iredoprocne bicolor)*
Bank swallow *(Riparia riparia)*
Rough-winged swallow *(Stelgidopteryx ruficollis)*
Barn swallow *(Hirundo rustica)*
Cliff swallow *(Petrochelidon pyrrhonota)*
Gray jay *(Perisoreus canadensis)*
Steller's jay *(Cyanocitta stelleri)*
Black-billed magpie *(Pica pica)*
Common raven *(Corvus corax)*
Common crow *(Corvus brachyrhynchos)*
Pinyon jay *(Gymnorhinus cyanocephala)*
Clark's nutcracker *(Nucifraga columbiana)*
Black-capped chickadee *(Parus atricapillus)*
Mountain chickadee *(Parus gambeli)*
Chestnut-backed chickadee *(Parus rufescens)*
Plain titmouse *(Parus inornatus)*

White-breasted nuthatch *(Sitta carolinensis)*
Red-breasted nuthatch *(Sitta canadensis)*
Pygmy nuthatch *(Sitta pygmaea)*
Brown creeper *(Certhia familiaris)*
House wren *(Troglodytes aedon)*
Winter wren *(Troglodytes troglodytes)*
Long-billed marsh wren *(Telmatodytes palustris)*
Canyon wren *(Catherpes mexicanus)*
Rock wren *(Salpinctes obsoletus)*
Catbird *(Dumetella carolinensis)*
Sage thrasher *(Oreoscoptes montanus)*
Robin *(Turdus migratorius)*
Varied thrush *(Ixoreus naevius)*
Hermit thrush *(Hylocichla guttata)*
Swainson's thrush *(Hylocichla ustulata)*
Water pipit *(Anthus spinoletta)*
Veery *(Hylocichla fuscescens)*
Mountain bluebird *(Sialia currucoides)*
Townsend's solitaire *(Myadestes townsendi)*
Golden-crowned kinglet *(Regulus satrapa)*
Ruby-crowned kinglet *(Regulus calendula)*
Bohemian waxwing *(Bombycilla garrula)*
Cedar waxwing *(Bombycilla cedrorum)*
Northern shrike *(Lanius excubitor)*
Loggerhead shrike *(Lanius ludovicianus)*
Starling *(Sturnus vulgaris)*
Solitary vireo *(Vireo solitatius)*
Red-eyed vireo *(Vireo olivaceus)*
Warbling vireo *(Vireo gilvus)*
Orange-crowned warbler *(Vermivora celata)*
Virginia's warbler *(Dendroica virginiae)*
Black-throated gray warbler *(Dendroica nigrescens)*
Northern waterthrush *(Seiurus noveboracensis)*
American redstart *(Setophagaa ruticilla)*
Yellow warbler *(Dendroica petechia)*
Audubon's warbler *(Dendroica auduboni)*
Townsend's warbler *(Dendroica townsendi)*
MacGillivray's warbler *(Oporornis tolmiei)*
Yellowthroat *(Geothlypis trichas)*
Yellow-breasted chat *(Icteria virens)*
Wilson's warbler *(Wilsonia pusilla)*

House sparrow *(Passer domesticus)*
Bobolink *(Dolichonyx oryzivorus)*
Western meadowlark *(Sturnella neglecta)*
Yellow-headed blackbird *(Xanthocephalus xanthocephalus)*
Red-winged blackbird *(Agelaius phoeniceus)*
Brewer's blackbird *(Euphagus cyanocephalus)*
Bullock's oriole *(Icterus bullockii)*
Common grackle *(Quiscalus quiscala)*
Brown-headed cowbird *(Molothrus ater)*
Western tanager *(Piranga ludoviciana)*
Black-headed grosbeak *(Pheucticus melanocephalus)*
Evening grosbeak *(Hesperiphona vespertina)*
Lazuli bunting *(Passerina amoena)*
Lark bunting *(Calamospiza melanocorys)*
Cassin's finch *(Carpodacus cassinii)*
House finch *(Carpodacus mexicanus)*
Black rosy finch *(Leucosticte atrata)*
Pine siskin *(Spinus pinus)*
American goldfinch *(Spinus tristis)*
Red crossbill *(Loxia curvirostra)*
White-winged crossbill *(Loxia leucoptera)*
Green-tailed towhee *(Chloruraa chlorura)*
Rufous-sided towhee *(Pipilo erythrophthalmus)*
Savannah sparrow *(Passerculus sandwichensis)*
Grasshopper sparrow *(Ammodramus savannarum)*
Vesper sparrow *(Pooecetes gramineus)*
Lark sparrow *(Chondestes grammacus)*
Chipping sparrow *(Spizella passerina)*
Brewer's sparrow *(Spizella breweri)*
White-crowned sparrow *(Zonotrichia leucophrys)*
Fox sparrow *(Passerella iliaca)*
Song sparrow *(Melospiza melodia)*
Gray-headed junco *(Junco caniceps)*
Oregon junco *(Junco oreganus)*

APPENDIX G

SPECIES LIST — REPTILE MAJOR PROGRAM

Rubber boa *(Charina bottae)*
Western ring-necked snake *(Diadophis amabilis)*
Eastern ring-necked snake *(Diadophis punctatus)*
Racer *(Coluber constrictor)*
Desert striped whipsnake *(Masticophis taeniatus)*
Pine snake *(Pituophis melanoleucus)*
Long-nosed snake *(Rhinocheilus lecontei)*
Western garter snake *(Thamnophis elegans)*
Common garter snake *(Thamnophis sirtalis)*
Western ground snake *(Sonora semiannulata)*
Night snake *(Hypsiglena torquata)*
Western rattlesnake *(Crotalus viridis)*
Collared lizard *(Crotaphytus collaris)*
Leopard lizard *(Crotaphytus wislizeni)*
Western fence lizard *(Sceloporus occidentalis)*
Sagebrush lizard *(Sceloporus graciosus)*
Side-blotched lizard *(Uta stansburiana)*
Western skink *(Eumeces skiltonianus)*
Western whiptail *(Cnemidophorus tigris)*
Northern aligator lizard *(Gerrhonotus coeruleus)*
Desert horned lizard *(Phrynosoma platyrhinos)*
Short-horned lizard *(Phrynosoma douglassi)*
Painted turtle *(Chrysemys picta)*

APPENDIX H

SPECIES LIST — NONGAME FISH MAJOR PROGRAM

Pacific lamprey *(Entosphenus tridentatus)*
Chiselmouth *(Acrocheilus alutaceus)*
Goldfish *(Carassius auratus)*
Carp *(Cyprinus carpio)*
Utah chub *(Gila atraria)*
Lake chub *(Hybopsis plumbea)*
Peamouth *(Mylocheilus caurinus)*
Northern squawfish *(Ptychocheilus oregonensis)*
Longnose dace *(Rhinichthys cataractae)*
Leopard dace *(Rhinichthys falcatus)*
Speckled dace *(Rhinichthys osculus)*
Redsided shiner *(Richardsonius balteatus)*
Tui chub *(Gila bicolor)*
Leatherside chub *(Snyderichthys copei)*
Tench *(Tinca tinca)*
Utah sucker *(Catostomus ardens)*
Longnose sucker *(Catostomus catostomus)*
Bridgelip sucker *(Catostomus columbianus)*
Largescale sucker *(Catostomus macrocheilus)*
Mountain sucker *(Pantostoeus platyrhynchus)*
Tadpole madtom *(Noturus gyrinus)*
Sand roller *(Percopsis transmontana)*
Mottled sculpin *(Cottus bairdi)*
Piute sculpin *(Cottus beldingi)*
Malheur sculpin *(Cottus bendirei)*
Shoshone sculpin *(Cottus greenei)*
Columbia sculpin *(Cottus hubbsi)*
Wood River sculpin *(Cottus leiopomus)*
Torrent sculpin *(Cottus rhotheus)*

APPENDIX I

SPECIES LIST — AMPHIBIAN MAJOR PROGRAM

Pacific tree frog *(Hyla regilla)*
Swamp cricket frog *(Pseudacris nigrita)*
Bullfrog *(Rana catesbeiana)*
Wood frog *(Rana sylvatica)*
Leopard frog *(Rana pipiens)*
Spotted frog *(Rana pretiosa)*
Tailed frog *(Ascaphus truei)*
Western toad *(Bufo boreas)*
Woodhouse's toad *(Bufo woodhousei)*
Western spadefoot *(Scaphiopus hammondi)*
Pacific giant salamander *(Dicamptodon ensatus)*
Long-toed salamander *(Ambystoma macrodactylum)*
Tiger salamander *(Ambystoma tigrinum)*
Rough-skinned newt *(Taricha granulosa)*
Van Dyke's salamander *(Plethodon vandykei)*

APPENDIX J

Comparative, 1975 Hunter and Angler Use by Major Program and Species Program

WILDLIFE

Major Program	Days	Percent of Major Programs	Percent of Grand Total
Big Game	1,077,265	43	
Upland Game	915,600	36	
Waterfowl	518,700	21	
Nongame (no data)	—	—	
Total	2,511,565	100	40

FISH

Resident Trout — Streams	1,800,000	48	
Resident Trout — Lowland Lakes, Reservoirs and Ponds	1,143,000	30	
Resident Trout — Mountain Lakes	273,000	7	
Warmwater Game Fish	468,000	12	
Miscellaneous Resident Game Fish	91,000	2	
Anadromous Fish (no current fishery)	—	—	
Nongame Fish (no data)	—	—	
Total	3,775,000	99	60
GRAND TOTAL FISH AND WILDLIFE	6,286,565		100

APPENDIX J

SPECIES PROGRAMS — WILDLIFE

BIG GAME

Species Program	Days	Percent of Species Programs
Mule Deer	450,000	42
White-tailed Deer	206,000	19
Elk	330,000	31
Bear	81,000	7
Mountain Lion	2,470	Trace
Moose	740	Trace
Bighorn Sheep	555	Trace
Mountain Goat	1,500	Trace
Pronghorn Antelope	5,000	Trace
Total	1,077,265	99

UPLAND GAME

Pheasant	331,000	36
Quail	65,600	7
Forest Grouse	170,000	19
Sage — Sharp-tailed Grouse	61,100	7
Chukar — Hungarian Partridge	153,900	17
Turkey	1,000	Trace
Mourning Dove	84,000	9
Cottontail — Pygmy Rabbit	49,000	5
Total	915,600	100

WATERFOWL

Ducks	379,400	73
Goose	111,000	21
Coot	22,700	4
Wilson's Snipe	6,000	1
Total	519,100	99
GRAND TOTAL WILDLIFE	2,511,965	

SPECIES PROGRAMS — FISH

RESIDENT TROUT — STREAMS

Species Program	Days	Percent of Species Programs
Rainbow	1,248,000	69
Snake River Cutthroat	174,000	10
Westslope Cutthroat	190,000	11
Other Trout	188,000	10
Total	1,800,000	100

RESIDENT TROUT — LOWLAND LAKES, RESERVOIRS AND PONDS

Rainbow	707,000	62
Snake River Cutthroat	203,000	18
Westslope Cutthroat	12,000	1
Bear Lake Cutthroat	6,000	Trace
Other Trout	36,000	3
Kokanee and Resident Coho	179,000	16
Total	1,143,000	100
GRAND TOTAL FISH	2,943,000	

APPENDIX K

Data and Information Sources Used in Plan Preparation

Annual Upland Game Bird Reports. Idaho Department of Fish and Game, 1960-1975.

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APPENDIX L

Methodology and Procedures Used in Arriving at Estimates and Projections for Species Programs

Wildlife population and harvest estimates and projections were arrived at using a variety of available data and information. Different methodologies and procedures were used in arriving at estimates depending upon the type of data available. Methods used in estimating allowable harvest and projections for resident fish programs were more standardized as were those used in projecting anadromous fish run sizes and harvests.

Procedures for development of demand figures also varied depending upon available data. Trend data are not available on the average number of days expended per hunter or angler by species except for upland game and waterfowl. Where available, days per hunter trend data have been used in projecting demand. Where not available, an assumption has been made (until adequate data are obtained) that average number of days expended per hunter or fisherman will, in future years, remain the same as at present. Under this assumption, with certain exceptions, demand will generally increase as human population increases.

Beginning in approximately 1970, human population numbers in Idaho and hunter and angler numbers have, in many cases, deviated drastically from pre-1970 trends. It was not felt that available trend data prior to 1970 were representative in estimating future conditions and use of these type data was confined to the period 1970-1975, inclusive.

Demand does fluctuate in response to major changes in fish and wildlife populations, regulations, and economic considerations. Sufficient data are not available for most fish and wildlife species, however, to correlate the various factors involved in fluctuating demand. Except for game bird programs, no attempt was made to adjust demand projections to factors other than those related to increasing human population. It is felt that while fluctuations in demand will occur as a result of various other factors, these fluctuations will, in the long term, be submerged by the effects of human population increases. For the purposes of long-range planning, increasing human populations will, in most instances, be the dominant factor in determining future demand.

A brief, more detailed description of methodologies and procedures used in making estimates and projections by major species categories follows.

BIG GAME

Habitat — Habitat acreages and land ownership were obtained from the Department's "SEARCH" storage and retrieval system.

Populations — Past and current populations were estimated by regional wildlife managers and were based upon aerial count data, ground observations and harvest figures. Population projections are based upon past population-habitat relationships, harvest levels and analysis of herd production as related to projected herd composition.

Supply — Past and current harvest estimates were obtained from the Department's "Big Game Hunter Questionnaire, 1960-1975." Harvest projections are based primarily on the percent of the projected population that can be harvested while meeting population objectives.

Demand — Past demand figures are estimates based on tag sales and current hunter effort data. Current demand is taken from the "Big Game Hunter Questionnaire, 1960-1975." Projected demand is based upon human population projections for Idaho, present nonresident tag quotas and present hunter effort figures.

UPLAND GAME

Habitat — Habitat acreages and land ownership were obtained from the Department's "SEARCH" storage and retrieval system.

Populations — Past and current population estimates were made primarily by applying known and estimated harvest rates (average percent of population harvested) to documented harvest figures. In some cases available birds per square mile data, trend route data and other miscellaneous information were used. Population projections were based on past documented and observed relationships between habitat, harvest and populations.

Supply — Past and current harvest estimates were based on the Department's "Game Bird Hunter Questionnaire, 1960-1975." Projected harvests were derived primarily by applying current harvest rates and projected demand to projected upland game population figures.

Demand — Past and current demand figures are taken from the Department's "Game Bird Hunter Questionnaire, 1960-1975." Demand projections are based on relationships between past trends in human population numbers, numbers of hunters and upland game populations.

WATERFOWL

Habitat — Habitat acreages and land ownership were obtained from the Department's "SEARCH" storage and retrieval system.

Populations — Past and current population numbers are based primarily on systemized aerial and ground counts of waterfowl populations. Certain other observations as to waterfowl numbers were also used in estimating these populations. Projected populations are based on past documented and observed habitat-population relationships.

Supply — Past and current harvest numbers are based on the Department's "Game Bird Hunter Questionnaire, 1960-1975." Harvest projections stem primarily from application of current harvest rates and projected demand to projected waterfowl population numbers.

Demand — Past and current demand figures were obtained from the Department's "Game Bird Hunter Questionnaire, 1960-1975." Projections of future demand are derived from relationships between past trends in human population numbers, hunter numbers and waterfowl numbers.

RESIDENT FISH

Habitat — Basic data for miles and acres of habitat and ownership of habitat were taken from the Department's "Idaho Fisheries Habitat Inventory, 1966." These data were updated to reflect 1975 conditions.

Supply — Current harvest numbers were obtained by projecting data contained in "An Economic Analysis of Idaho Sport Fisheries, 1969." Demand figures obtained from this study were projected to 1975 levels by using appropriate factors related to fishing license sales. Angler days demand was then converted to fish harvested by using known and estimated species and area catch rates (fish per day). The 1980 through 1990 estimates of allowable harvests were obtained by relating the updated habitat-harvest ratios to predicted future habitat conditions.

Demand — Current demand was obtained by updating demand estimates in "An Economic Analysis of Idaho Sport Fisheries, 1969" in the same manner described for current harvest under "Supply." Future demand is based on Idaho human population increases and ratios between resident and nonresident anglers.

ANADROMOUS FISH

Habitat — Habitat miles and acres are taken from the Department's "Inventory of Salmon and Steelhead Resources, Harvest, Use and Demand, 1974."

Populations — Projected run sizes are based on documented past run sizes as related to fish passage and habitat conditions and past experiences in hatchery production and return of hatchery fish.

Supply — Harvest projections are derived from the percentage of projected runs it is possible to harvest and still obtain adequate spawning escapement.

Demand — Past data have demonstrated that demand in Idaho is proportional to run sizes entering state waters. Demand has been calculated using past run size-angler effort ratios.

DEFINITIONS

For the purpose of this plan, the following definitions will apply to words and terms used. Additional definitions are contained in the text.

Adfluvial — refers to races of fish which spend a portion of their life in lakes but return to streams to spawn.

Allowable Harvest — the maximum legal hunter or angler harvest that may be taken and, in conjunction with nonhunting and nonangling mortalities, still allow the maintenance of fish and wildlife populations at desired levels.

Anadromous Fish — fish that spend a portion of their life in the ocean and ascend into freshwater streams or lakes to spawn.

Available Harvest — that portion of the allowable harvest it is possible to take when the full allowable harvest cannot be utilized due to inaccessibility of populations, characteristics of species sought or other factors.

Catchable-size Fish — hatchery produced fish over six inches in length.

Compensation — full replacement of fish and wildlife populations or habitat lost through development or other activities.

Consumptive Use — a use which reduces an animal to possession and permanently removes it from its population.

Controlled Hunting Season — a hunting season in which the number of participants is limited through Fish and Game Commission regulation.

Critical Habitat — habitat necessary to accomplish the management objectives of maintaining or achieving specified wildlife population levels.

Current — refers to the year 1975.

Current Habitat Trends — actions now in progress and continuing into the foreseeable future under existing programs, regulations and policies governing land and water uses which impact fish and wildlife habitat.

Current Management Level — management with 1975 programs, regulations and policies.

Days Use (angler, hunter, recreation, etc.) — the number of man days expended utilizing the fish and wildlife resource or segments of this resource.

Demand — the number of days hunters and anglers will spend hunting and fishing, projected over time and expressed in hunter and angler days.

Fingerling — a fish over 3 inches and up to and including 6 inches in length.

Fish Habitat Ownership — in the case of streams, refers to land ownership adjacent to streams. In the case of lakes, reservoirs and ponds, refers to ownership of waters.

Fry — a fish 3 inches or less in length.

Furbearer — wildlife species whose harvest is regulated by establishment of trapping seasons which prohibit year-round harvest.

Game Species (Fish) — all species and races of fish found in Idaho except those listed under the Nongame Fish Major Program of this plan (see Appendix H).

Game Species (Wildlife) — any wildlife species whose harvest is regulated by the establishment of hunting seasons and bag limits.

Geographic Area — geographic areas of Idaho (see map Appendix A.)

General Hunting Season — a hunting season which is open to all who wish to participate and in which all legal methods of take are allowed.

Goal — a statement of a desired accomplishment made in such a manner as to allow determination of success or failure in achieving the accomplishment.

Harvest — the reducing of fish or wildlife to possession either permanently or temporarily. Includes nonconsumptive harvest (temporary possession) in the case of fish.

Hatchery Fish — fish produced in hatcheries or by other artificial means such as spawning, hatching and rearing channels or hatching boxes.

Hatchery Program (Waters) — where fish populations are wholly sustained or supplemented by routine stocking of hatchery fish.

Hunter — a person who seeks to reduce wildlife to possession by hunting or trapping.

Hunter and Angler Effort — average number of days spent hunting or fishing for a given species per hunter or angler per year.

Improved Habitat Trends — future actions under different and/or additional programs, regulations and policies governing land and water uses which would minimize or eliminate presently occurring adverse effects on fish and wildlife habitat.

Land Acquisition — the placing of land under Department of Fish and Game control by fee title purchase, easement, lease, license or agreement.

Latent Demand — additional user demand that would be generated if persons not now hunting or fishing would start participating in those sports as a result of greatly increased fish and wildlife populations, allowable harvests and success rates.

Man Day — all or any part of a day spent in use of the fish and wildlife resource.

More Intensive Management — management with expansion of existing and/or different programs, regulations and policies than those currently in force which would allow greater use of the fish and wildlife resource while still maintaining desirable populations levels.

Mountain Lakes — small, high elevation lakes, generally above 5,000 feet, that are not accessible by road.

Native Fish and Wildlife Species — those species occurring naturally in Idaho and which have not been introduced directly or indirectly by man.

Nonangling Mortalities — all mortalities to fish populations which are caused by other than legal angling.

Nonconsumptive Use — a use which does not involve the taking of fish and wildlife.

Nongame Species (Fish) — carp, suckers, chubs, squawfish and minnows listed under the Nongame Fish Major Program of this plan (see Appendix H).

Nongame Species (Wildlife) — wildlife which are completely protected or which, with the exception of the crow, are subject to year-round harvest without restriction on numbers taken.

Nonhunting Mortalities — all mortalities to wildlife populations which are not caused by legal hunting.

Objective — a quantified goal statement which provides a target for accomplishment in a specific time period.

Policy — a definite course selected from among alternatives to govern future decisions and actions.

Populations (Fish and Wildlife) — preseason total fish and wildlife numbers of a given species or group of species.

Pre-1975 — refers to the period 1960 through 1970.

Primitive Weapon — firearms loaded through the muzzle with black powder or equivalent and long bows.

Priority Management — selection of a species or group of species for priority consideration in management decisions to insure that efforts directed at other species will not adversely affect the species for which management priority has been assigned.

Problem — any obstacle which stands in the way of achieving a goal or objective.

Regional Species Management Plan — a 5-year plan developed by region and by species which includes, where applicable, species management priorities, management direction, management and research programs and recommended regu-

lation frameworks. Alternatives will be prepared and public hearings held on major or controversial changes in species priority, management direction, regulation framework or programs.

Regional Species Operating Plan — an annual plan developed by region and by species which will include annual increments of program authorization, budgeting and regulations necessary to carry out Regional Species Management Plans.

Resident Fish — fish that spend their entire lifecycle in fresh water in or contiguous to Idaho.

Quality Fishery — a fishery in designated wild fish waters which yields wild fish either consumptively or nonconsumptively and in which angler densities are directly or indirectly controlled by regulation, access or other factors.

Quality Hunt — a hunt in which all legal methods of take are permitted, which is held in surroundings where human disturbance or evidence of same is minimal, and in which access and participation are limited through natural factors or Commission regulation.

Snake River Cutthroat Trout — all races of cutthroat trout, including hybrids, found in Idaho with the exception of the Westslope and Bear Lake cutthroat trout.

Strategy — a broad, nonspecific statement of an approach to resolve problems.

Success Rate — harvest per unit of hunting or angling effort or unit of hunting or angling effort per harvest. Includes nonconsumptive take for angling.

Supply — the allowable or available harvest for fish and wildlife game species. In those programs where demand far exceeds supply, it is expressed as the number of hunting or angling days that can be provided.

Take — synonymous with harvest and includes nonconsumptive harvest for fish.

Trophy Fishery — a fishery which yields fish predominately larger than a norm for the general area in which the fishery takes place.

Trophy Hunt — a hunt in which harvest is restricted by Fish and Game Commission regulation to some class of animals generally considered to be of exceptional standard.

Wild Fish — all fish of nonhatchery origin.

Wild Fish Program (Waters) — where wild fish, either indigenous or introduced, are present and are not supplemented by routine stocking of hatchery fish.