FORT PECK RESERVOIR FISHERIES MANAGEMENT PLAN

FOR THE PERIOD

JANUARY 1992 TO JANUARY 1997

ADOPTED BY THE

MONTANA FISH, WILDLIFE & PARKS COMMISSION

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prepared by

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REGION 6

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FISHERIES MANAGEMENT

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1) Continue to place the major management effort on walleye.

2) Strive to increase annual stocking to 1.5 million fingerlings and up to 30 million fry per year.

3) Strive to maintain or improve the current catch rate of approximately 0.2 fish per hour and the present average size of 2.25 pounds.

4) Continue the daily limit of 5 fish and the 10 fish possession limit.

5) Sauger population is dependent wholly on natural reproduction and no stocking is planned.

Management program for the smallmouth bass fishery:

1) Continue to maintain a viable smallmouth bass fishery which is presently sustained by natural reproduction.

2) Conduct experimental fingerling plants in selected areas and evaluate success.

3) Continue present daily and possession limits of 10 fish.

Management program for the lake trout fishery:

1) Continue the high quality lake trout fishery with a goal of maintaining the average size of fish at, or above, 8 pounds, and a catch rate of 0.15 and 0.10 for spring and fall, respectively.

2) Continue spring and fall creel surveys to monitor catch rate, condition factors, and average size of lake trout.

3) Conduct supplemental stocking of lake trout if future surveys indicate need. Stocked fish will be marked to determine their contribution to the fishery and may also provide a population abundance index. Manpower and cost will be evaluated to detemine the impact to the walleye management program.

Management program for the northern pike fishery:

1) Continue to monitor population abundance and production through annual surveys.

2) Maintain, or slightly increase, populations through natural reproduction and limited stocking. When reservoir levels are not suitable for spawning, 100,000 fingerlings will be stocked annually.

Management program for the chinook salmon fishery:

1) Maintain the population at, or near, the 1989/90 levels, and thereby continue to provide the opportunity to catch "trophy sized" fish.

2) Pursue a reliable egg source to help achieve annual stocking of approximately 200,000 fingerlings. Evaluate the feasibility and costs associated with development of an egg source at Fort Peck.

Management program for the forage fish:

1) Maintain forage fish abundance and diversity by making annual water level recommendations.

2) Monitor forage fish populations to acquire information for future management decisions.

Management program for fish population estimates:

1) Continue the present annual program of trap netting, gill netting, beach seining, and spot creel surveys.

2) Secure the funding to do a major season long creel survey at least once every three to five years.

Management program for commercial fishery:

1) Closely regulate with no expansion of existing commercial fishery.

2) Utilize contractors to harvest rough fish as needed.

Management program for fishing tournaments:

1) Allow existing four tournaments to continue - three walleye and one smallmouth bass.

2) Additional tournaments will be reviewed on an individual basis, with social and biological impacts considered. Public review and input will be solicited when application for new tournaments is received.

OTHER MANAGEMENT ACTIONS

Management actions for fishing and recreational access:

1) Utilize the specific results from the questionnaire to guide future development of fishing and recreational sites with federal aid funding.

2) Provide federal agencies charged with overseeing recreational facilities with the questionnaire results to help guide future development.

3) Continue to encourage and cooperate with federal agencies in the development of recreational access.

Management actions for reservoir water levels:

1) Continue to monitor the effects of water levels on the fishery.

2) Continue to coordinate annual water level recommendations with other Missouri River basin states through the Missouri River Natural Resources Committee.

3) Continue to make annual water level recommendations to the Corps of Engineer.

II. INTRODUCTION

Fort Peck Reservoir is formed by a large earth-filled dam located on the Missouri River in the northeastern part of Montana. Completed in 1937, it is the largest body of water in the state, with 240,000 surface acres and 1,500 miles of shoreline at full pool. The reservoir is 130 miles in length and has a maximum depth of 220 feet when full. Administration of all land surrounding the reservoir is shared by the U.S. Fish & Wildlife Service and the U.S. Army Corps of Engineers. The reservoir is operated by the Corp of Engineers to provide water for power, flood control, irrigation, navigation and recreation.

The Fort Peck Reservoir fishery is managed by the Montana Department of Fish, Wildlife & Parks (Department) through the Region 6 Headquarters which is located in Glasgow, approximately 18 miles northwest of the damsite. Approximately 50 species of fish occupy the reservoir, most of which are native to the Missouri River system. Sixteen species, mostly game fish, have been introduced to develop sport fishing opportunities. The reservoir's fishery has become a bright spot on Montana's eastern plains. The reservoir's walleye fishery has been of most interest to resident anglers and in recent years has begun to attractive non-residents as well. Three walleye tournaments are currently held on an annual basis.

In 1987 the Department released a study entitled "The Net Economic Value of Fishing in Montana" which was authored by John Duffield of the University of Montana, John Loomis of the University of California (Davis), and Rob Brooks of the Department. It is interesting to note that this study values stream fishing at $122 million per year and lake fishing at $93 million per year for a total annual value of all Montana fishing of $215 million. With regard to Fort Peck Reservoir, results of this study showed that the reservoir experienced approximately 23,000 angler days per year and the Total Recreational Fishing Value of the reservoir was in excess of $500,000 per year. The Department estimates that current fishing use (1991) has increased to a level of approximatley 30,000 angler days per year which would result in a fishing value for the reservoir of just under $700,000 per year.

In recent years the Department has recognized that the public is in general much more knowledgeable on resource issues and wants to be more involved in decision making regarding the management of fish and wildlife resources. The Department feels that it must get the public involved early in the planning process to help in selecting a management program rather than simply approving one after the fact. A major goal of the process is to give the public ownership in the management of the resource. As a result, the Fisheries Division has prepared guideline documents

to assist Regional Fisheries Managers in development of Management Plans. The Department has also identified the major fisheries in the State and has initiated a program to develop five year Fisheries Management Plans for these fisheries. Fort Peck Reservoir falls into this catagory.

The planning process utilized by the Department involves several stages. The first of these is an in-house scoping phase to preliminarily identify the issues of concern. The next stage is the public scoping phase which results in a refined statement of issues. This is accomplished by holding public meetings and through use of an Advisory Committee which meets occasionally with the Department. Management alternatives are then developed by consideration of the public's desires with the Department's technical knowledge of the fishery resource. Next is the draft phase and involves the preparation of a draft of the Management Plan, review by the public, and public meetings to allow input on the draft. The last phase is the finalization and publication of the Final Management Plan.

III. BACKGROUND ON FORT PECK RESERVOIR AND FISHERY

Construction of Fort Peck Dam was started by the Corps of Engineers in 1933 with completion some seven years later in 1940. Statistics relating to the size of the dam are impressive as it is the largest embankment dam in the United States with the fifth largest man-made reservoir. The dam is also the sixth largest volume dam in the world, and the largest hydraulic fill dam in the world. The primary purposes of the dam at the time of construction were flood control and improvement of navigation on the Missouri River. Today it is looked at as a multi-purpose project regulated for flood control, navigation, power generation, irrigation, public water supply, fish and wildlife conservation, recreation and improvement of water quality.

In the reservoir's early years, little was recorded regarding the quality of its fishery. Scattered reports from oldtimers indicate sauger, perch, crappie, drum, catfish and goldeye comprised the bulk of the fishery. Over the years some sixteen species, mostly game fish, have been introduced to develop sport fishing opportunities. Walleyes and northern pike were both introduced in 1951 followed by lake trout in the mid-50's. Smallmouth bass were introduced in 1981 and chinook salmon in 1983. During the 80's new species of forage fish, such as spottail shiners and cicso were introduced.

During the late 1950's and early 1960's rising water levels inundated vegetation and produced an outstanding fishery for northern pike, crappie, and yellow perch. Management efforts to maintain this high quality fishery were continued by additional stocking and efforts to obtain suitable water levels. However, this was not successful due to reservoir operations which resulted in variable water levels.

Attempts to improve habitat to enhance the fishery have been undertaken by local sportsman's groups over the years, in the form of spawning fences and Christmas tree reefs. Due to the vastness of the reservoir, very little impact to the fishery has been realized. Cobble or rock spawning reefs have been considered to aid natural reproduction of walleye, but cost is prohibitive. Even if walleye spawning reefs could be constructed, long term effectiveness is doubtful, due to siltation and water level fluctuations.

The outstanding and varied sport fishery found in the reservoir today is the result of the success of recent management efforts by the Department. Key to this effort has been an understanding by the Department of the erratic natural reproduction which is then augmented by stocking of the various species. Also important has been the introduction and establishment of an abundant forage fish supply which has been less influenced by

water level fluctuations than were the native forage fish. Final evaluation of the management success is done by angler surveys which then allow estimates of catch rates, size of the fish, and overall angler satisfaction with the fishery.

IV. MANAGEMENT AGENCIES AND AUTHORITIES

The following agencies are involved in the management of the Fort Peck Dam and Reservoir. A brief description of their management authorities and activities is provided.

Corps of Engineers

The U. S. Army Corps of Engineers was responsible for the original construction of Fort Peck Dam and Reservoir and continues to operate the facility under authority of the Flood Control Act of 1944. Fort Peck is one of six main stem dams on the Missouri River operated by the Corps in accordance with guidelines contained in the Missouri River Master Water Control Manual. In recent years the Manual has come under question on grounds that it does not best meet the needs of the Missouri River basin. Drought conditions within the upper basin have resulted in substantial drawdown of Fort Peck Reservoir and other upper reservoirs in order to meet navigational and other downstream uses. This has affected the fishery and recreational uses of Fort Peck. In response to the drawdown, the Corps has extended boat ramps at Fort Peck to maintain recreational use.

In 1989 the Corps initiated a study of the current Water Control Plan as contained in the Master Water Control Manual which would identify alternatives to the current operating plan. Phase 1 of the study was completed in 1990 and Phase 2 is expected in late 1992.

In September 1991 the Corps released an updated Draft Master Plan for Fort Peck Dam and Reservoir. This Plan represents overall policy and management concepts applicable to Fort Peck. The broad intent of the Plan is to document policies which do the following:

1) Determine appropriate uses and levels of development of Fort Peck's resources;

2) Provide a framework within which the Operational Management Plan and Annual Management Plan can be developed and implemented; and

3) Establish a basis on which outgrants and recreational development proposals can be evaluated.

Fish and Wildlife Service

The U. S. Fish and Wildlife Service manages the 1.3 million acre Charles M. Russell National Wildlife Refuge which encompasses the entire Fort Peck project area. Simply stated, the Fish and Wildlife Service is responsible for wildlife and grazing

management while the Corps of Engineers is responsible for the balance of the Fort Peck project purposes, including recreation. The Fish and Wildlife Service management plan is set forth in a Final Environmental Impact Statement which was completed in 1985. This plan is important as it deals with access to the reservoir through the refuge.

Local Agencies

Local agencies have no management authority as regards the Fort Peck project area. The only exception is Petroleum County which leases the Crooked Creek Recreation Area northeast of Winnett. The recreation area is operated by a concessionaire.

Montana Department of Fish, Wildlife & Parks

The Department coordinates the management of fish and wildlife resources with the Fish and Wildlife Service and manages the State Parks and State Recreation Areas located on lands leased from the Federal Government. State hunting and fishing regulations apply within the Fort Peck project boundaries. The Department manages the reservoir and downstream fisheries.

Specific recreation sites managed by the Department include Duck Creek Fishing Access Site west of Fort Peck Dam, Rock Creek Fishing Access Site on the Big Dry Arm of the Reservoir, Hell Creek Recreation Area north of Jordan, and James Kipp State Park located on the Missouri River above the reservoir.

Joint Agency Efforts

A three-year project was completed in 1990 to improve access to Fort Peck Reservoir through the joint efforts of five counties, the Federal agencies, and the Department. Various local, state and federal funds were used to accomplish this work. The work included work on access roads and boat ramp facilities.

V. PUBLIC INVOLVEMENT IN THE DEVELOPMENT OF THE PLAN

The Department has attempted to involve the public in all aspects of the development of this Management Plan. These efforts are detailed below in chronological order.

Creel Survey

A reservoir-wide creel survey was conducted from April thru September 1990. The creel survey was not only important from the standpoint of angling results, but also allowed the Department to interview anglers concerning their desires for the Fort Peck fishery. An summary of the creel survey is contained in the Appendix.

Scoping Meetings

The Department held a series of scoping meetings in area communities during November and December 1990 to obtain public input on issues and problems to be addressed in the Management Plan. Meetings were held in Wolf Point, Malta, Glasgow, Jordan and Lewistown. The meetings were well advertised in the area newspapers and radio stations and anglers were advised that they could submit written comments to the Department in the event they could not attend the meetings. The input received at these meetings was excellent and a summary of the comments is contained in the Appendix.

Advisory Committee

The Department utilized the assistance of an Advisory Committee to help at several key points in the development of the Management Plan. In July 1991 the Committee reviewed the results of the Scoping Meetings input and assisted the Department in the design of a Questionnaire. In October 1991 the Committee reviewed the results of the Questionnaire and assisted the Department in an analysis of the various management alternatives.

Twenty-five individuals from area communities were selected to participate on the Advisory Committee. They represented a variety of interests ranging from anglers to chambers of commerce to federal managers of Fort Peck. A complete list of the membership of the Advisory Committee is contained in the Appendix.

Questionnaire

The fisheries management questionnaire developed with assistance from the Advisory Committee was sent to approximately 1,000 anglers on the Department's mailing list in late July 1991.

Copies were also sent to Department Regional Offices statewide and press releases to the media announced the availability of the questionnaire. In total 1,150 questionnaires were mailed with 671, or 58%, being returned.

The results of the questionnaire were extremely helpful in identifying the desires of the public and in framing the goals of the Management Plan. A summary of the results of the questionnaire is contained in the Appendix.

Public Review of Draft Plan

The availability of the Draft Plan for review was announced to the public on November 22, 1991, by means of a press release to the media and written notice to various individuals who had participated in the development of the Plan. Copies of the proposed management actions contained in the Draft were sent to the Advisory Committee and to 55 individuals who responded to the notification of its availability. Public meetings and/or open houses were held in Jordan, Miles City, Circle, Glendive, Glasgow, Malta, Lewistown and Wolf Point between December 3rd and 12th, 1991, to further allow the public to review and input the Plan.

A total of 26 anglers attended the public meetings and written comments were received from another three anglers. In general, all comments were very supportive of the Draft Plan. A summary of comments received is contained in the Appendix.

Final Plan

The Final Plan Management Plan was reviewed and considered by the Montana Fish, Wildlife & Parks Commission at their monthly meeting held on January 15, 1992, at Helena, Montana, and adopted by the Commission at that time. The availability of the Final Plan and a summary of its major provisions was announced to the public in February of 1992.

VI. FISHERIES MANAGEMENT

The fishery in Fort Peck is diverse with approximately 50 different fish species, most of which are native to the Missouri River. Sixteen species, mostly game fish, have been introduced to develop sport fishing opportunities. Managing such an array of fish species can be difficult, especially when attempting to allocate limited resources and manpower. It must be understood that fish populations and management effort cannot be expanded indefinitely, both are finite resources. Increasing effort and funding for one species, results in reduced effort and funds for another. The Department will strive to maintain the unique diversity of the Fort Peck fishery, but gamefish species must be prioritized to aid the Department in allocating its resources in the proper proportions.

The Department has analyzed fisheries management on a species by species basis and therefore this Plan will address each species individually in the following sections. Fisheries issues such as population estimates, commercial fishing and fishing tournaments are also discussed. Each section will first address the fisheries data and the resource capability, next the angler's desires, then possible management options, and lastly the recommended management actions.

Walleye/Sauger

Fisheries management efforts at present are chiefly devoted to walleye due to angler demand. Walleye were first introduced in 1951 and during the late 1960's and early 1970's an outstanding walleye fishery evolved in the Big Dry Arm of the reservoir. This was attributed to unusually good spawning conditions in Big Dry Creek. Unfortunately these conditions occur only infrequently when flows are sufficient to allow spawners access to gravel in the creek. The reservoir has very little suitable walleye spawning habitat along its shoreline.

The walleye fishery did poorly in the late 1970's and early 1980's due to lack of natural reproduction and a decline in forage fish abundance. Stocking was resumed in 1977 to address the declining walleye population. Fry and fingerling plants totaled more than 123 million and 3.5 million, respectively, by 1991. The forage fish problem was resolved by introducing spottail shiners in 1982 and cisco in 1984. Both species reproduced well and expanded their populations throughout the reservoir. As a result the average weight, condition factor, and growth rate of walleye has improved dramatically.

Presently good walleye fishing is found throughout the reservoir. Growth rates are excellent and walleye in the three to five pound class are common. During the 1990 creel survey, the reservoir-

wide catch rate for walleye was 0.17 fish per hour and the average size caught by anglers was 2.25 pounds. The future for reservoir walleye fishing looks promising, and it is believed that further enhancement can be achieved through proper management. The reservoir does not, however, provide suitable spawning habitat to sustain the population and future maintenance and expansion will depend on stocking.

Sauger are abundant in the upper Missouri Arm of Fort Peck Reservoir. As a native to Montana, they spawn well in the riverine-type habitat in the Missouri River above the reservoir. Condition of sauger also appears to be improving with availability of more forage in the upper portions of the reservoir.

Public scoping comments indicated that the majority of anglers want the Department to focus their management effort on walleyes. Concerns were expressed about the availability of sufficient walleye egg sources and some felt that more walleye hatching and rearing facilities should be constructed. Present creel limits were supported.

Results of the Questionnaire confirmed by a large margin that anglers prefer to fish for walleye and want future management to focus on walleye. A strong majority of anglers are satisfied with current walleye management, felt that the average size was good or adequate, and felt that current walleye numbers are too few.

It is apparent that the only possible Department action is to increase the walleye population through stocking. To date the maximum amount of fingerlings that have been planted in any one year has been 850,000. When the Miles City Hatchery achieves full production in their rearing ponds a total of 1.5 million fingerlings will be available for Fort Peck. A plant of this number would be consistent with recommendations set forth in applicable walleye fishery literature. A bonus are the fry obtained from surplus eggs which in some years might result in the stocking of as many as 30 million fry.

<u>Management program for the walleye/sauger fishery:</u>

1) Continue to place the major management effort on walleye.

2) Strive to increase annual stocking to 1.5 million fingerlings and up to 30 million fry per year.

3) Strive to maintain or improve the current catch rate of approximately 0.2 fish per hour and the present average size of 2.25 pounds.

4) Continue the daily limit of 5 fish and the 10 fish possession

limit.

5) Sauger population is dependent wholly on natural reproduction and no stocking is planned.

Smallmouth Bass

Smallmouth bass were first introduced into Fort Peck in 1981 and by 1983 stocking was discontinued. A total of only 125,600 fingerlings were planted during this period, yet smallmouth survived well and established rapidly. Natural reproduction has increased steadily over the years and there is presently no need to resume stocking except perhaps for select areas where populations are considered to be low. Successful natural reproduction has made smallmouths the most common fish observed during annual fall seining.

Interest of anglers as well as fishing skills appears to be growing with time as smallmouths are caught more frequently throughout the reservoir. The average weight of smallmouth taken by anglers during the 1990 creel survey was 1.9 pounds. The catch rate was 0.01 fish per hour. The state record was taken in 1990 and weighed 6.09 pounds.

Public scoping comments show that interest of anglers in smallmouths appears to be growing. Number of fish have increased and local anglers have become more familiar and more adept at catching this gamefish. Some concern has been raised about the 10 fish catch limit.

Results of the Questionnaire confirm the growing popularity of smallmouth bass. They ranked fourth in present fishing preference but second in preference if the reservoir could be managed to provide good fishing for them. Most anglers felt their size was good or adequate, but most also felt their abundance needs to be increased. Sixty two percent felt the present 10 fish limit should be retained.

The Department considered the possible option of reducing the present 10 fish limit. However, biological information indicates that very little impact to the fishery is occurring with the present daily catch limit of 10 fish.

Management program for the smallmouth bass fishery:

1) Continue to maintain a viable smallmouth bass fishery which is presently sustained by natural reproduction.

2) Conduct experimental fingerling plants in selected areas and evaluate success.

3) Continue present daily and possession limits of 10 fish.

Lake Trout

Lake trout introductions were made from 1953 to 1957 and only isolated reports of angler catches were made through the 1960's. During the 1970's populations appeared to increase through natural reproduction and catches became more common. The population appeared to stabilize during the 1980's and excellent catches contributed to expanded angler interest.

Most fishing activity for lake trout occurs during spring and fall in the vicinity of the dam. Catch rates averaged 0.15 fish per hour in the spring of 1990, and 0.10 fish per hour in the fall. The mean length was 27.1 inches and mean weight was 8.59 pounds. More fishing opportunities for lake trout are being realized by anglers during summer as more sophisticated equipment, such as down-riggers, are utilized.

Reproduction and recruitment rates for the lake trout population are not known, making it difficult to predict population status and acceptable angler harvest. Annual creel surveys indicate that catch rates have declined slightly over the last five years. Until recently, no additional stocking was considered necessary, as natural reproduction was presumed adequate to maintain the present population. However, during the recent drought years reservoir levels have steadily declined, reducing potential lake trout spawning habitat on the face of the dam. Specific sites utilized for spawning and impact of various water levels are not completely known at present, but concentrations of spawners during fall indicate that a large percentage of the population relies on the rock rip-rap along the face of the dam.

Over 340,000 lake trout eggs were taken in the fall of 1990 and 93,000 fingerlings hatched from these eggs were stocked in the reservoir in the spring of 1991. The need for future stocking is uncertain and will depend on reservoir levels in ensuing years. Stocking of lake trout from sources other than Fort Peck is not recommended, as some strains of lake trout may not spawn successfully and could damage the genetic quality of the existing lake trout population.

Continued drawdown of Fort Peck Reservoir could have serious impacts on lake trout. In addition to the loss of spawning habitat, cold water habitat necessary for lake trout survival will gradually decrease.

Public scoping comments show support for the Department's efforts to take lake trout eggs during drought years to compensate for lost spawning habitat. Anglers also appear to support the recently implemented three fish limit.

Results of the Questionnaire show that lake trout presently rank second in species preference by anglers and third in future

preference. Ninety three percent of anglers feel that the average size is good or adequate while seventy four percent feel that abundance is good or adequate. Almost all anglers feel that future management should maintain lake trout populations at, or slightly above, its present level through natural reproduction and limited stocking.

Management program for the lake trout fishery:

1) Continue the high quality lake trout fishery with a goal of maintaining the average size of fish at, or above, 8 pounds, and a catch rate of 0.15 and 0.10 for spring and fall, respectively.

2) Continue spring and fall creel surveys to monitor catch rate, condition factors, and average size of lake trout.

3) Conduct supplemental stocking of lake trout if future surveys indicate need. Stocked fish will be marked to determine their contribution to the fishery and may also provide a population abundance index. Manpower and cost will be evaluated to determine the impact to the walleye management program.

Northern Pike

Northern Pike were not found in Fort Peck Reservoir until an initial stocking occurred in 1951. A good fishery developed following rising water levels in the late 1950's and early 1960's which flooded shoreline vegetation and provided good spawning sites. However, since the mid-1960's water levels have generally not been suitable for spawning and northern pike populations have declined.

Stocking efforts were increased in the early 1970's to improve the fishery and over 1.6 million fry were planted from 1972 to 1982. Most stocking occurred in the lower portion of the reservoir from the spillway area to Duck Creek. Stocking in the Big Dry Arm was curtailed when the walleye fishery developed. No stocking of northerns occurred from 1982-1987 due to a lack of forage fish and an expanding walleye population. Since 1988 northern pike have been stocked on a very limited basis to satisfy the requests of many anglers. The introduction of spottail shiners and cisco has dramatically increased the forage base for northerns.

Results of the 1990 creel survey show that the catch rate for northerns was only 0.007 fish per hour. However, these fish averaged 30.5 inches in length and 8.25 pounds in weight.

Because of the low level of the reservoir, the stage has been set to potentially provide northerns with good spawning habitat when reservoir levels rise. Some anglers have expressed concern that continued stocking of northerns, on even a limited basis, could

eventually cause the population to explode as the reservoir refills. Large numbers of northern pike will most certainly impact other gamefish species, especially walleye.

Public scoping comments show that angler's opinions vary as to what level northern pike numbers should be managed. During the 1990 creel survey, anglers responded to a question on species preference by ranking northern pike second. Others are concerned that conditions are such that the population could explode in the near future and detrimentally impact other gamefish populations.

Results of the Questionnaire show that northern pike are ranked third in terms of what species currently prefer to fish for, and fourth in terms of future preference. The vast majority of anglers feel that the average size is currently good or adequate while seventy one percent feel abundance is good or adequate. Sixty percent would like to see populations maintained at present levels while forty percent would like to see them increase.

Management program for the northern pike fishery:

1) Continue to monitor population abundance and production through annual surveys.

2) Maintain, or slightly increase, populations through natural reproduction and limited stocking. When reservoir levels are not suitable for spawning, 100,000 fingerlings will be stocked annually.

Chinook Salmon

Chinook salmon were introduced in 1983 to add diversity and provide a trophy-type fishery to the existing sport fishery. Chinook do not reproduce naturally in the reservoir and require annual stocking to maintain the population. Initially, plants of chinook were small to prevent undue pressure on the developing cisco population and averaged 15,000 fingerlings per year from 1983 to 1985. Stocking was increased to 50,000 fingerlings in 1986, 200,000 in 1987, and 56,000 in 1988. None were stocked in 1989 and 1990 due to problems in obtaining disease-free eggs. Efforts to obtain eggs were successful in 1990 with over 100,000 procured from North Dakota, and 63,000 fingerlings were stocked in the spring of 1991.

Chinook salmon, like other predator species, appear to be utilizing cisco as forage. Average size and condition of chinook has constantly increased since their introduction in 1983. The average weight of chinook creeled in the fall of 1990 was 14 pounds and the largest caught to date was 31 pounds 2 ounces, the present state record.

Thus far, management of chinook salmon has achieved the goal of

providing a more diverse and trophy-type fishery. Maintenance and further development of this fishery is anticipated in the coming years, but problems acquiring disease-free eggs have hampered efforts to stock greater numbers. Abundance of the forage base will also influence future stocking rates. Competition with other gamefish such as walleye, northerns and lake trout must be considered in determining the size of the chinook population.

Public scoping comments show that interest in the chinook fishery is increasing, but that population size and management effort must consider the effects on other gamefish species. Many anglers would like to see the chinook fishery managed more intensively and some have suggested the construction of hatching and rearing facilities at Fort Peck. However, anglers responding to the species preference on the 1990 creel survey, ranked chinook salmon last among the other reservoir gamefish.

Results of the Questionnaire show that chinook ranked fifth, or last, among the five major gamefish in both the current preference and future preference surveys. The vast majority of anglers felt the average size of chinooks was good or adequate but fifty eight percent felt abundance was poor. However, fifty seven percent wanted the population to remain at, or near, the 1989 and 1990 level, while only thirty four percent wanted the population to increase.

Management program for the chinook salmon fishery:

1) Maintain the population at, or near, the 1989/1990 levels, and thereby continue to provide the opportunity to catch "trophy sized" fish.

2) Pursue a reliable egg source to help achieve annual stocking of approximately 200,000 fingerlings. Evaluate the feasibility and costs associated with development of an egg source at Fort Peck.

Forage Fish

Aging of the reservoir and fluctuating water levels caused a severe decline in forage fish abundance during the late 1970's and early 1980's. To augment the forage base, new species were introduced which were more suited to existing reservoir conditions.

Spottail shiners were first stocked in 1982 and rapidly established themselves throughout the shoreline areas of the reservoir. By 1987 they became the most abundant forage fish occupying shoreline habitat and have remained so since that time. Utilization of this species by gamefish has been documented.

Cisco, which prefer the deep open areas of the reservoir, have also populated the reservoir quickly. Yearlings and young-of-year have been recovered from the stomachs of all gamefish species. Large robust cisco adults were commonly observed by the fall of 1986, but since the summer and fall of 1988 average sizes have diminished. Vertical gill net sampling in 1989 thru 1991 indicated that cisco production had stabililzed, as had the size of adult and young-of-year.

Public scoping comments concerning forage fish were very few.

Results of the Questionnaire show that over forty percent of respondents feel that management of forage fish is a significant management issue on Fort Peck Reservoir.

Management program for the forage fish:

1) Maintain forage fish abundance and diversity by making annual water level recommendations.

2) Monitor forage fish populations to acquire information for future management decisions.

Fish Population Estimates

It is apparent in the above sections dealing with individual fish species that a key management tool is having good estimates or understandings as to what is happening to numbers and conditions of the various species. This information is gathered throughout the year by several different means. Creel surveys are an extremely important tool, whether they are done on a spot basis, or for a whole season such as was done in 1990. They provide information on the size and condition of the fish being taken, relative numbers of the various species, catch rates, and the degree of satisfaction, or dissatisfaction, of the anglers.

Physical sampling of fish through the use of trap nets, gill nets and beach seining is another important management tool. Annual samplings in specific areas provides an index as to changes in population numbers, reproduction, etc.

This topic was not discussed in the scoping meetings or on the Questionnaire, but was reviewed in an Advisory Committee meeting. The group felt that all of these techniques should be used on an annual basis, with a major season long creel survey occurring every two or three years, but at a minimum, every five years.

Management program for fish population estimates:

1) Continue the present annual program of trap netting, gill netting, beach seining, and spot creel surveys.

2) Secure the funding to do a major season long creel survey at least once every three to five years.

Commercial Fishing

Commercial fishing began on Fort Peck Reservoir in 1957. Montana Statutes allow the commercial harvest of fish and the Department has the authority to regulate fishing by annual rules approved by the Fish, Wildlife & Parks Commission. The Department may control the number of commercial fishing permits issued, the locations that operators fish and the species harvested. Three permits have been issued in the past with only one of them having been active in recent years. Commercial fishing activity has been limited in recent years due to poor goldeye catches and reduced economic value of other rough fish species.

Existing regulations allow the harvest of non-game species such as goldeye, buffalo, carp, river carpsucker, drum and suckers. Annual regulations presently restrict the location and type of nets fished to reduce the harvest of game fish and lessen the potential for conflicts with fishing and recreational boaters.

Public scoping comments were varied concerning commercial fishing on Fort Peck, but the majority opinion was negative. The most predominate statement was that no commercial fishing should be allowed, or should be reduced through attrition. Some individuals felt that commercial fishing should be more closely monitored. Some anglers expressed concern for harvest of sport fish, and others felt that commercial fishing could be tolerated with certain limitations.

Results of the Questionnaire showed that two out of three anglers disapprove of commercial fishing on the reservoir, although fifty percent stated that commercial fishing had never affected their fishing activities. About half of the respondents wanted the Department to utilize contractors to harvest rough fish as needed, twenty five percent would allow existing commercial fisherman who have been permitted the last five years to continue to operate with no new permits being issued, and the remaining twenty five percent want commercial fishing eliminated as soon as possible.

The Department would prefer to change the method of issuing permits to allow utilization of contracts as needed.

Management program for commercial fishery:

1. Closely regulate with no expansion of existing commercial fishery.

2. Utilize contractors to harvest rough fish as needed.

Fishing Tournaments

Rules have been adopted as directed by the 1987 Montana Legislature (HB 429) which established a state-wide policy for regulating fishing contests. However, this policy does not outline specific guidelines for tournaments on Fort Peck Reservoir. Each tournament application is reviewed by fisheries field personnel, division administrators, and the Fish, Wildlife & Parks Commission, to determine if any adverse impacts to the fisheries resource are anticipated.

Traditionally three derbies that focus mainly on walleye have been held annually. A fourth tournament, The Professional Western Trail Tournament (Cabelas In-Fisherman) was also approved for 1991. These tournaments consist of two-man teams or individuals who fish for two to three days with prizes awarded for the highest aggregate weight of walleye taken. One additional smaller tournament for smallmouth bass was also held in 1991. A lake trout tournament application in 1990 was not approved.

The Department's rules do not limit the number of derbies or participants for specific waters. The Department is planning to revise state-wide rules pertaining to fishing contests or develop a more detailed framework for tournaments. The Department does not wish to see fishing contests adversely affect gamefish populations or recreational opportunities and therefore encourages non-consumptive use of the resource. This process should provide a more detailed basis for regulating tournaments.

Public scoping comments suggest that tournament organizers conduct catch and release events, as opposed to harvest events. They also stated that contests should be held during cooler months to reduce fish mortality. Some anglers recommend that individual catch limits for tournaments should be reduced from the legal five fish limit.

Results of the Questionnaire show that two out of three respondents want to limit the number of tournaments and participants.

Management program for fishing tournaments:

1) Allow existing four tournaments to continue - three walleye and one smallmouth bass.

2) Additional tournaments will be reviewed on an individual basis, with social and biological impacts considered. Public review and input will be solicited when application for new tournaments is received.

VII. OTHER RECOMMENDED ACTIONS

There are several areas where the Department does not have specific authority, but as the recreation management agency for the State, the Department must represent the interests of the public with agencies who do have such authorities. With regard to Fort Peck Reservoir, these authorities deal with access to the reservoir and water level management of the reservoir. Each of these topics are addressed in the following sections.

Fishing and Recreational Access

Fort Peck Reservoir is the largest body of water in Montana with 240,000 surface acres and 1,500 miles of shoreline at full pool. However, access to the water for fishing and recreational boating is generally inadequate. This problem was recently addressed by the completion of a three-year project to upgrade existing access roads. Funding for boat access was made available through federal legislation which expanded excise taxes on fishing tackle and a portion of the motorboat fuel tax. During 1987 to 1990 the Department utilized a major portion of Montana's allocation to improve boat access to the reservoir. A joint effort by five counties, the Corps of Engineers, Fish & Wildlife Service, Bureau of Land Management, and the Department improved access and boat ramp facilities at the following locations:

Pines Area	- 11.5 miles; grade and gravel road
Crooked Creek	- 32.0 miles; grade and gravel road
Hell Creek	- 25.0 miles; grade and gravel road
Rock Creek	- 7.0 miles; grade, gravel road, 4 cattle guards
Duck Creek	- 0.5 miles; grade and gravel new access road, new parking area, concrete boat ramp
Fourchette	- 12.0 miles; grade and gravel road

In addition, the Corps of Engineers has installed new concrete boat ramps at Spillway Bay (Flat Lake), Rock Creek, Pines, Hell Creek, and Fourchette Creek.

Public Scoping comments suggest the predominate public concern involving recreational access was the need for additional improvements for roads and facilities. Several comments were made regarding the poor condition of roads and lack of boat ramps in the western, or upper Missouri Arm of the reservoir. Others felt that most of the existing roads throughout the reservoir needed further upgrading, with some suggesting the need to pave roads into the more remote boat ramps. Others remarked that better facilities were needed for the elderly and handicapped.

Results of the Questionnaire show that about thirty five percent of the respondents listed lack of access as a significant management issue. In addition specific detailed needs were

listed in the areas of access roads, parking, boat ramps, marina services, handicapped access, picnic facilities, RV parking, toilets, drinking water, and fish cleaning facilities.

Management actions for fishing and recreational access:

1. Utilize the specific results from the questionnaire to guide future development of fishing and recreational sites with federal aid funding.

2. Provide federal agencies charged with overseeing recreational facilities with the questionnaire results to help guide future development.

3. Continue to encourage and cooperate with federal agencies in the development of recreational access.

Reservoir Water Levels

Fort Peck Reservoir is operated by the Corps of Engineers to provide flood control, navigation, irrigation, and power production. Other authorized purposes include recreation, fish and wildlife, and downstream municipal and industrial water supply. Accomodating the variety of uses with continually varying inflows creates a vary challenging situation for the Corps. This is especially apparent when the needs of the resident fish population must also be considered. Many fish species require specific water level patterns for successful spawning and rearing.

Recommendations from the Department to enhance and maintain the Fort Peck fishery are submitted annually to the Corps. Montana requests are coordinated with other Missouri River states through the Missouri River Natural Resource Committee. Water level requests are based on existing reservoir levels and runoff forecasts. Requests may vary annually depending on the feasibility of achieving optimal conditions. In recent years the Corps has made a good effort to provide minimum discharges to benefit the fishery below the dam. However, their success in achieving recommended lake levels has been disappointing. While direct control of inflows is not feasible, control of outflows could greatly assist fisheries management, especially during critical spawning and rearing periods.

The Department has prepared recommendations as general guidelines for long term water level management of Fort Peck Reservoir to help maintain and enhance the fishery. Large reservoirs that fluctuate like Fort Peck have littoral zones which are usually unstable. This results in loss of vascular aquatic and terrestrial plants and the associated populations of phytoplankton and benthic organisms. Lack of submerged vegetation causes a decline in the overall productivity of the

entire fish population by reducing food supply, spawning habitat, and rearing cover. Submerged vegetation also provides protective cover for forage fish and young gamefish species.

With a suitable water level management plan, shoreline vegetation growth can be enhanced and overall productivity of the littoral zone improved. The following plan is submitted for this purpose:

1) The absolute minimum pool should be established at 2225 feet above mean sea level. This would prevent the excessive loss of crucial shallow water habitat. It would also prevent the dewatering of over 60% of the rock riprap on the face of the dam, which is critical lake trout spawning habitat. At this level, walleye spawning in the Big Dry Arm will migrate further upstream, facilitating egg taking operations.

2) Several successive years of static water level operation is to be avoided. Drawdown cycles should be implemented every three to four years to allow shoreline vegetation to establish and be inundated incrementally over the remainder of the cycle. If natural drawdowns during severe drought do not occur, the storage in the upper three Missouri main stem reservoirs should be operated in an unbalanced manner. This will allow periodic drawdowns and refilling to occur, encouraging shoreline regrowth and subsequent inundation.

3) Regrowth of shoreline vegetation after a drawdown should be utilized to its ultimate potential. This can be accomplished by flooding established terrestrial vegetation with a maximum of three to five feet of water annually over a period of several years in succession. The optimum period for this rise to occur is April to early June to provide spawning, rearing habitat, and cover.

4) To accomodate spring spawning fish, water levels should rise as early as possible. Mid-April is the most preferable time with a steadily rising pool through May. It is understood that in some years mountain runoff does not occur at this time, but discharges can be reduced to facilitate flooding of shoreline vegetation at the earliest date possible. A rise of two to three feet is recommended during mid-April to mid-May. If inflow conditions during drought conditions prevent this desired increase, water levels should remain stable. A drop in reservoir level during this time period should be avoided.

Public Scoping comments regarding water level management were very limited. This was probably a result of the recognition of the Corps of Engineers inability to give recreation and fish and wildlife higher priority under its current operating plan.

Results of the Questionnaire shows that reservoir water levels were the most significant management issue mentioned by

respondents.

Management actions for reservoir water levels:

1. Continue to monitor the effects of water levels on the fishery.

2. Continue to coordinate annual water level recommendations with other Missouri River basin states through the Missouri River Natural Resource Committee.

3. Continue to make annual water level recommendations to the Corps of Engineers.

VIII. APPENDIX

A. Summary of Creel Survey

B. Summary of Scoping Meetings

C. List of Advisory Committee Members

D. Summary of the Questionnaire

E. Summary of Comments on Draft Plan

(Appendix materials available upon request)