IS-42

INSTREAM FLOW PLAN

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Introduction

Significant progress has been made on attaining the major objectives outlined in the 1979 publication entitled An Action Plan for the Determination of Instream Flows. It is apparent, however, that additional planning is necessary to ensure timely implementation of instream flow protection efforts and to address immediate and chronic streamflow problems. This paper is an update on the progress related to the 1979 Action Plan and outlines short and long-term strategies for instream flow protection.

Instream Flow Program Review

Montana is one of the few western states which has the necessary legal framework to allocate a portion of its surface waters to remain instream. The 1969 Montana Legislature passed a law enabling the DFWP to file for instream rights on certain top quality trout streams; the so-called "Murphy's rights." While this act provided a measure of protection for 12 selected streams, it did nothing for the rest of the waters. Passage of the Montana Water Use Act in 1973 established the reservation process which provides the opportunity to establish instream flow reservations on all waters of the state.

The plan also directs department efforts to file for and defend existing instream rights in the statewide adjudication effort and complete necessary tasks pursuant to the Yellowstone River instream reservations. The first most extensive effort to preserve instream flows occured in the Yellowstone Basin. This effort was legislatively mandated by the 1974 Yellowstone Moratorium. Following extensive hearings the Board of Natural Resources granted the Department of Fish, Wildlife and Parks an instream allocation on December 15, 1978 amounting to 5 1/2 million acre feet of water at Sidney. Reservations were also granted in 67 tributaries of the Yellowstone.

As the Yellowstone Basin water reservation efforts were winding down, it became evident that a long-range plan was needed to provide future direction for the DFWP to protect existing and reserve additional instream flows for fish, wildlife, and recreation. In December of 1979, an action plan was completed for the determination of instream flows in Montana. We are now in the fifth year of that plan, and it would be well to review the progress we have made to date in accomplishing the objectives outlined in that document.

Our first action plan identified the basins which were: 1) particularly vulnerable to dewatering, 2) areas of high aquatic resource value, or 3) unique resources which contain features of special interest. The goal of the action plan was to guide existing department resources and obtain sufficient additional funding to accomplish the basic biological and stream profile work necessary to make instream flow determinations on the selected basins. The plan also directs department efforts to file for and defend existing instream rights in the statewide adjudication effort and complete necessary tasks pursuant to the Yellowstone River instream reservations. The reservations selected for further work on instream flows based on the above criteria were as follow:

1) Upper Clark Fork River (from the headwaters downstream to Bonner),
2) Upper Missouri River (from headwater tributaries downstream to Canyon Ferry Dam), and
3) Middle Missouri River (from Fort Benton to Fort Peck Reservoir).

Significant progress has been made on all aspects of the action plan in the last five years and is briefly summarized below. The remaining portions of this report will treat specific allocation efforts and individual basins in greater detail.

Upper Clark Fork River

The basic biological information has been collected and instream flow determinations made on selected streams in the Upper Clark Fork drainage. In addition, supplemental information on recreation use, economics, water availability, and potential irrigable lands has been or is currently being collected for use in the preparation of an instream flow application.

Upper Missouri River

The Upper Missouri River, upstream from Canyon Ferry, has had extensive field surveys done to determine the biological components of selected streams and determine necessary instream flows for maintenance of existing fisheries. With few exceptions, all of the major rivers and most of the significant tributaries have been inventoried.

Middle Missouri River

The Missouri River from Morony Dam to Fort Peck Reservoir has also been extensively studied. A DFWP planning and inventory special project was assigned to the Middle Missouri River for five years. In addition, the BLM funded a three year fishery study on the Wild and Scenic reach to specifically identify instream flow requirements for that reach of river. These efforts each produced a technical fisheries document. We have been working with the BLM and have recently finished a summary document outlining the instream flow requirements for the Wild and Scenic Missouri. The Bureau of Land Management is currently attempting to negotiate with the Reserved Right Compact Commission for a federal reserved right on the Wild and Scenic Missouri.

As a corollary to the Wild and Scenic Instream Flow Study, the BLM also funded a one-year study to determine instream flow requirements on the Marias River. This study has been completed and a report prepared. It will be most useful for determining desirable operation of Tiber Reservoir and will provide a base of useful information for any action plan for the Marias Basin.

Senate Bill 76

Information gathered as part of the instream flow action plan was used to prepare claims under provisions of Senate Bill 76. The filing deadline for claims submitted under Senate Bill 76 was April 30, 1982. At that time, the Department had submitted 473 claims for domestic, stockwater, irrigation, hatchery supply systems, and instream flows. This included 108 sections on class one fishery rivers. The statewide water adjudication process is ongoing and is expected to last for many years.

Yellowstone River

After 1978, much remained to be done in regard to maintaining the integrity of the Yellowstone Instream Flow allocations. Legal challenges had to be

met, allocations had to be substantiated and defended during review periods, and additional biological and instream flow data had to be obtained to comply with certain conditions of the order.

To comply with certain conditions established by the Board, it was necessary to develop plans and secure funding for obtaining additional streamflow information and modeling. To date, five Annual Yellowstone River Instream Flow reports have been prepared describing progress toward meeting the conditions. At the present time, we are within two years of completing the required hydrology tasks for the instream reservations. A comprehensive report is necessary for the mandatory ten year review period. In addition, a legal challenge on the Powder River has been raised by Utah International.

Summary

The last five years saw significant progress made toward obtaining the goals outlined in the 1979 Action Plan. The obvious step beyond simply determining instream flows, however, is to obtain an actual instream flow allocation, something that was implied by the 1979 Action Plan but was never specifically stated. Progress is being made in several areas to obtain instream flow allocation; however, recent events have pointed out the need for a specific and updated strategy for securing instream flow allocations. As a result, a short-term and long-term strategy is being developed. The short-term strategy involves a five-year timetable, while the long-range strategy envisions a broader range of activities over a less specific time schedule. It can be adapted to meet changes not anticipated at this time and to guide regional priorities which may not have as high a priority statewide.

Short-Term Strategies For Protection of Instream Flows (5-year plan)

This section addresses efforts needed over the next five years to defend existing and securing additional protection for instream flows. Securing additional protection involves actively seeking instream flow protection through the water reservation process in several key basins. Defending existing rights and reservations primarily involves the ongoing state water adjudication process.

Protection of Existing Department Instream Flow Rights

The protection of existing department instream flow rights is a major part of our ongoing instream flow program. The department has several types of instream flow rights. These are discussed below.

The Yellowstone River Instream Flow Reservation

On December 15, 1978 the department was granted instream flow reservations on the mainstem of the Yellowstone and on 76 of its tributary streams. The Board, in granting the order reserving water for instream flow purposes, also attached several conditions to that order. These conditions required the department to do streamflow quantifications to convert percentile flows into actual flow figures in cubic feet per second (cfs) and acre feet per month. Maintenance of the instream flow reservation in parts of the Yellowstone Basin is dependent on quantifying those flows.

There is a 10 year review period for the Yellowstone Instream flow reservations. Annual reports are prepared to meet specific conditions of the Board's order and major reports are prepared for both the 5 year and the 10 year review periods. Existing biological studies are reviewed and other information gathered as necessary to defend the need for and purpose of the instream flow reservation.

All new water permit applications in the Yellowstone basin are reviewed for their possible impact to the instream reservations. In all cases the applicants are informed of the department's instream flow reservations. Those cases where the water use permit if issued, would seriously impact the instream flow right, are objected to. the department files objections.

Statewide Water Adjudication

The statewide water adjudication is designed to adjudicate all water rights in existence prior to 1973. The department has several types of

instream flow rights which were in existence prior to 1973. The most significant of those rights are our Murphy's Rights which were authorized by an act of the 1969 Legislature and originally filed on by the department in 1970 and 1971. The Murphy's Rights were claimed ~~under~~ and must be defended in the statewide water adjudication.

Several other instream flow rights were also in existence prior to 1973. These include ~~water~~ claims to tributaries of Libby Reservoir where substantial mitigation work had been accomplished. The west fork of the Madison River has a claimed instream flow right for operation of a spawn-taking station. In addition, the department has filed on portions of the Beaverhead and the Bitterroot rivers as requested by various conservation groups under authority of Section 85-2-223. This section establishes the Department of Fish, Wildlife and Parks as the exclusive representative for public recreational use rights in the adjudication process.

The adjudication process and the resulting preliminary decrees are carefully monitored to determine their impact on the department's claimed instream flow rights. The objective is to insure accurate quantification of existing rights and adequate recognition of the department's claims.

Water Reservations

Upper Clark Fork

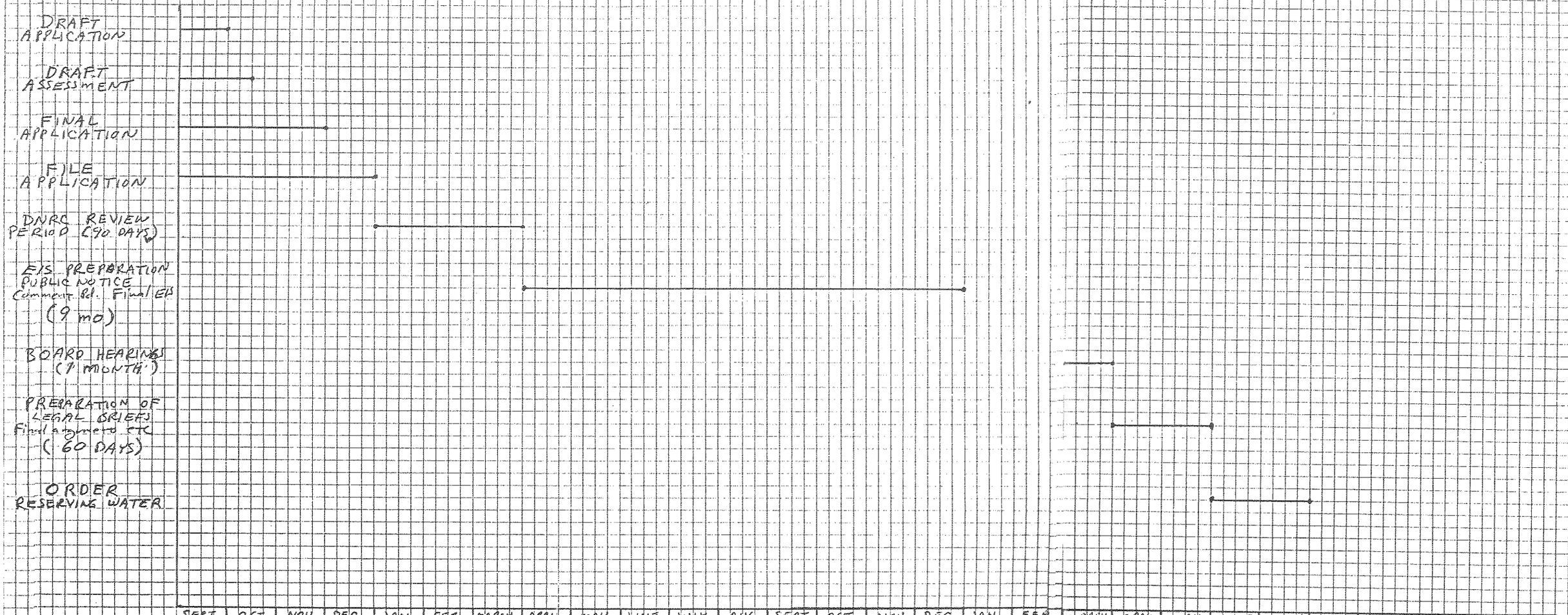
Preparation of the upper Clark Fork instream flow reservation is proceeding in a timely fashion. A draft application of the biological portion is scheduled for completion by September 1. The final will be done by December 1 and could be submitted shortly thereafter.

A tentative timetable is guiding preparation and processing of the reservation application. We are working closely with DNRC to insure the application is complete and meets all their needs.

Clark Fork Reservation
Timetable

Draft application	~~September 1~~ October 1, 1984
Final application	November 30, 1984
File application	December ~~31~~ 15, 1984
DNRC review period (90 days) for completeness and EIS determination	March 31, 1985
EIS preparation, public notice comment period final EIS, etc. (9 months)	December 31, 1985
Board hearings - March 1986 (1 month)	March 31, 1986
Preparation of legal briefs, final arguments, etc. (60 days)	May 31, 1986
Order reserving water	July 30, 1986

TIMETABLE
UPPER CLARK FORK INSTREAM FLOW RESERVATION



Upper Missouri River Basin

Portions of the Upper Missouri River basin are in a particularly vulnerable position as far as stream dewatering is concerned. The recent Canyon Ferry water rights order, although contested, allows for continued surface water depletions to occur. Several areas in the Upper Missouri Basin are already in a borderline flow condition during the irrigation season.

Because of the potential threat of continued dewatering of major top quality trout streams, it is necessary to consider an instream flow reservation effort for all or selected portions of the Missouri River Basin above Canyon Ferry. Much of the biological and instream flow work has already been completed. Items to be done include an irrigable lands assessment, a compilation and summary of recreational use and an economic evaluation of the recreational use. To the extent possible, we will utilize existing data and reports.

A timetable for completion of an instream flow application for the Upper Missouri Basin is attached. ~~Costs of preparation of the application are included; however, they may change depending on the waters to be included.~~

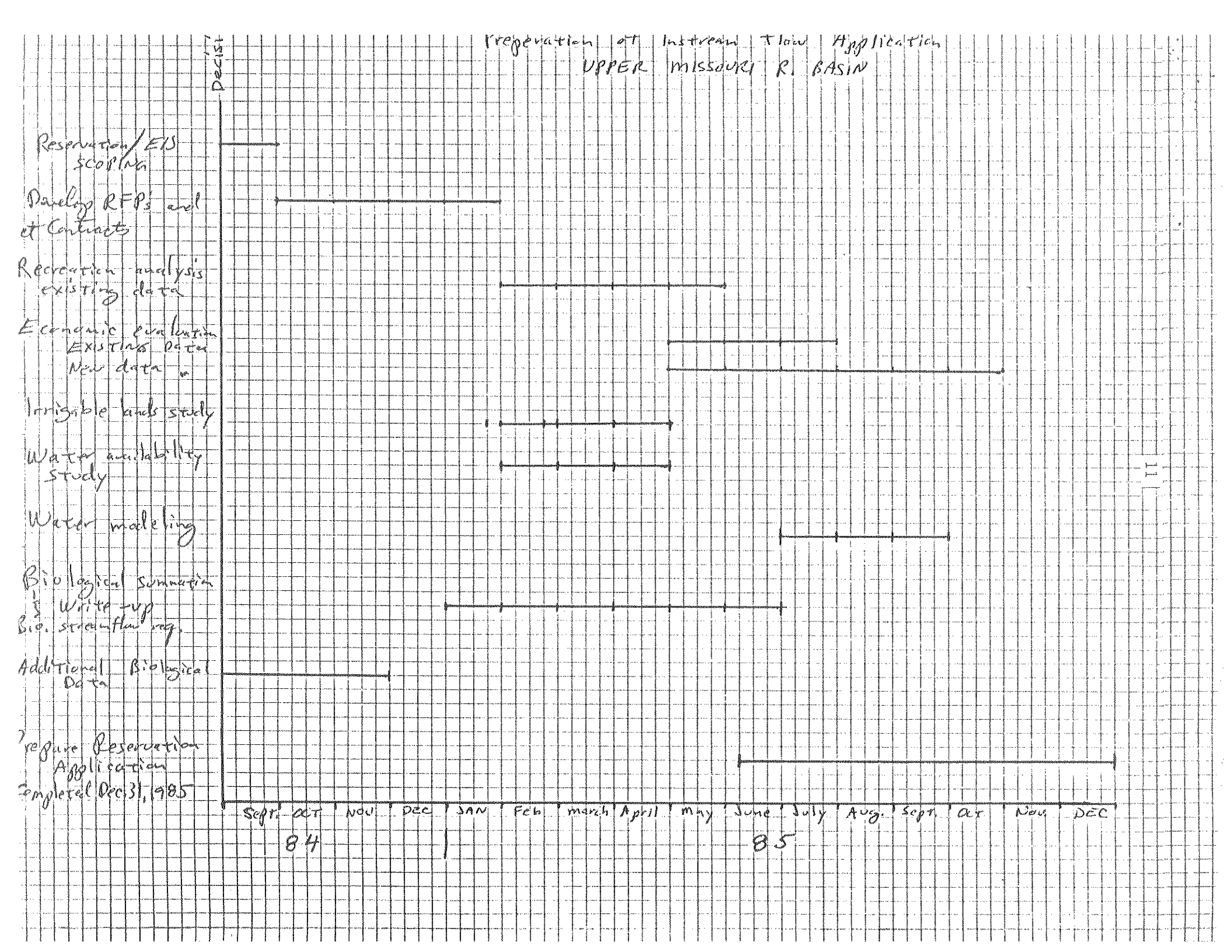
Upper Missouri Timetable

Decision .Go/no go .Reservation Boundaries -Entire basin above Canyon Ferry -Jefferson Drainage -Madison Drainage -Gallatin Drainage	By ~~September~~ October 1
Reservation/EIS Scoping - 1 month	~~September~~ October 1 - 30
Gather additional biological data 3 months	~~September~~ October, November
Develop RFP's and let contracts-4 months	October 84 through January 85
Recreation analysis study existing data (4 months)	February 85 through May 85

Upper Missouri Timetable Continued

Economic evaluation	
Existing data (3 months)	May 85 through July 85
New data (6 months)	May 85 through October 85
Irrigable lands study (3 months)	February 85 through April 85
Water availability study (3 months)	February 85 through April 85
Water modeling (3 months)	July 85 through September 85
Biological summation	
Streamflow requirements write-up, part-time over a six month period	January 85 through June 85
Prepare reservation application	June 85 through December 85
Completion date	December 31, 1985

Preparation of Instream Flow Application
UPPER MISSOURI R. BASIN



Mid-Missouri River/Reservoir Complex

Reservoir operations and conversion of these dams to power peaking continue to be major concerns in this reach of Missouri River in the forseeable future. An additional problem in this area involves our instream flow right for the Missouri River below Holter. Our "Murphy's" right is approximately 1,000 cfs below what is necessary to maintain the fishery. We should increase our claim on the Missouri. Flows from the Missouri below Holter are dependent on adequate releases from Canyon Ferry Reservoir and stable daily releases from Holter. These releases ultimately influence flows in the Wild and Scenic reach.

To maintain influence in this area, a strategy involving two approaches is necessary. First, it is necessary to develop a forum where these issues can be openly debated and effectively influenced. Second, it is necessary to keep building our database in this area. Rod developed an excellent background of data upon which we can draw; however, several follow-up study items should be carried through to completion. In addition, an adequate monitoring program should be developed to further our understanding of the area.

Since several different parties have significant and diverse interests in this reach of river, it is necessary, as a first step, to establish a forum for discussion of issues and development of acceptable solutions. Annual meetings could be scheduled where representatives from DFWP, USBR, MPC and local sportsman's groups would discuss issues, concerns, etc., and present progress reports on the past year's activities. The focus of the forum would be the fisheries of the river and reservoir and would cover such topics as reservoir operation, hydropower production, fisheries management, pollution, etc. This forum approach should be initiated in the near future while negotiated solutions can be developed and implemented over the long-term.

Strategies for Protection of Instream Flows (10-Year Plan)

In addition to the 5-year plan for streamflow protection, it is necessary to develop a broader plan for streamflow protection and enhancement. This plan will address problems less immediate, but in some cases, more chronic in nature.

Development and implementation of this plan will begin concurrently with the 5-year, but some elements have a less specific time line or may extend ten years or more into the future.

An action plan should be developed for each element of the long range plan and should include problem statements, goals, objectives, strategies, tentative time frames, etc. The major elements of a long range instream flow effort are listed and briefly described below.

Middle Clark Fork River

There are several studies initiated on the middle Clark Fork River as a result of the controversy surrounding the Champion International discharge permit. A key issue involved the adequacy of streamflows in the Clark Fork to assimilate the current and projected waste load.

Champion's temporary discharge permit as well as several other major permits are due for renewal in the spring of 1986. In addition, an EIS on the effect of the Champion discharge is scheduled for completion at about the same time.

Serious consideration should be given to preparation of an instream flow reservation for the middle Clark Fork River for fish, wildlife, and recreation, and the maintenance of water quality. The reservation issue could focus on the discharge permit renewals and the Champion EIS. The reservation would include the middle Clark Fork River and its major tributaries.

A fisheries special project has been assigned to the middle Clark Fork to direct study efforts and gather data necessary for an instream reservation on the main stem and selected tributaries. A potential time line for completion of studies and preparation of a reservation would be 1989.

Bitterroot River

The department is currently in the process of stimulating a purchase of stored water from Painted Rocks Reservoir through provisions of the Fish and Wildlife Program of the Power Planning Council. The purpose of the water purchase is to augment flows in a dewatered section of the Bitterroot River.

In the event a successful water purchase is concluded, it will be necessary to adopt a water management plan and provide for the instream protection of the purchased water. A plan for the protection of the stored water must be developed and implemented. Such a plan will require an instream flow reservation and at times a water commissioner to insure the water remains instream.

Short Form Reservation

There is a need to develop what is termed a "short form" reservation. There are several important small streams or critical tributaries to larger rivers which are in need of instream flow protection, yet there are no plans for a basin-wide water allocation effort in the forseeable future. For these situations a shortened, less expensive and generally more streamlined water reservation process would be very desirable.

Development of a short-form reservation process would involve selection of pilot stream(s) and development of procedures by completing and processing an actual reservation application. DNRC rules and regulations for water reservation applications would be examined to determine where procedures could be shortened. Criteria would be developed to assist in determining which streams would be suitable for short-form reservations.

Streams which could utilize a shortened reservation process include tributaries to the Smith River, Rock Creek, and the Big Blackfoot River; Willow Creek on the Mount Haggin property; Greeley Creek near Livingston; and the major spawning tributaries to the Kootenai River.

Dearborn River

The Dearborn River also needs streamflow protection and may be considered for a reservation. The Dearborn River faces a different sort of threat, however. The Dearborn is vulnerable because of its relatively small size; its fishery and recreational values could be seriously damaged by a major diversion or impoundment project. In the case of the Dearborn, however, a reservation is only a part of what would be necessary to maintain the river's integrity.

There is no existing fisheries database on the Dearborn. Collection of baseline data and preparation of a reservation would require a substantial effort.

Marias

A baseline fishery and instream flow study has recently been completed for the Marias River below Tiber Dam. In addition, fishery trends have been monitored in Tiber Reservoir for many years. Reservoir levels and river releases are seldom operated in a fashion to optimize fish and wildlife values.

Future reservoir operations are subject to change. Several plans are being studied to utilize Tiber Reservoir water to supplement flows in the Milk. In addition, there are several competing applications to install a hydropower facility at the dam. It is necessary to develop a strategy to effectively influence the operation of Tiber Dam to maximize in-reservoir and downstream fish, wildlife, and recreational values. Department goals for this system are in need of better focus.

Missouri River Reservoir Management

The fish and wildlife values in many parts of the Missouri River drainage are significantly affected by the operation of the mainstem and major tributary reservoirs.

Reservoir fish populations can be affected by the magnitude and timing of water level fluctuations while downstream fish populations are influenced by reservoir releases and power peaking operations at hydro facilities. It is necessary to develop a strategy to influence the operation of the dams to better reflect existing and potential fishery, wildlife and recreational values.

Such an effort could be triggered by an intensive look at Fort Peck Reservoir and the Missouri River downstream. Reservoir water levels, seasonal flow release patterns and daily flow fluctuations could be examined and recommendations developed to optimize fish and wildlife values. Since Fort Peck is the largest downstream reservoir in Montana, a case could be made for looking at the reservoir operations at the major upstream dams as well.

Tongue River/Tongue River Dam

The Tongue River is the most important tributary to the Yellowstone River in Eastern Montana. Streamflows and maintenance of fishery values in the Tongue are largely dependent on the operation of the Tongue River Dam. The dam, however, is unsafe and therefore operated in a very conservative fashion. Consequently, streamflows are often inadequate to maintain good fish populations for resident fish and adequate spawning and rearing conditions for Yellowstone River migrants.

It is necessary to define the present reservoir operations and quantify reservoir operations which would benefit the reservoir and downstream fishery. Since a strategy to reconstruct the spillway or dam will not pay for itself and therefore be subsidized by taxpayers, we must insure that the fishery resource values are not simultaneously traded-off in the process.

Anaconda Water Rights

The Anaconda Company holds substantial water rights for industrial use in Warm Springs Creek. These water rights are not currently being used by Anaconda; however, Anaconda has claimed them under SB 76. Any potential for securing all or a portion of those rights for instream flow in Warm Springs Creek should be investigated.

Musselshell River

The Musselshell River is an important but often neglected resource. It offers fine trout fishing in some of the upstream reaches, while the transition and lower reaches support warm water fish populations and may provide spawning and rearing areas for Missouri River and Fort Peck Reservoir fish. The river suffers from chronic dewatering in some areas and may be further impacted by development of hydropower at Deadman's Basin. The basin needs an action plan to identify streamflow and other problems currently impacting the fishery and riparian areas.