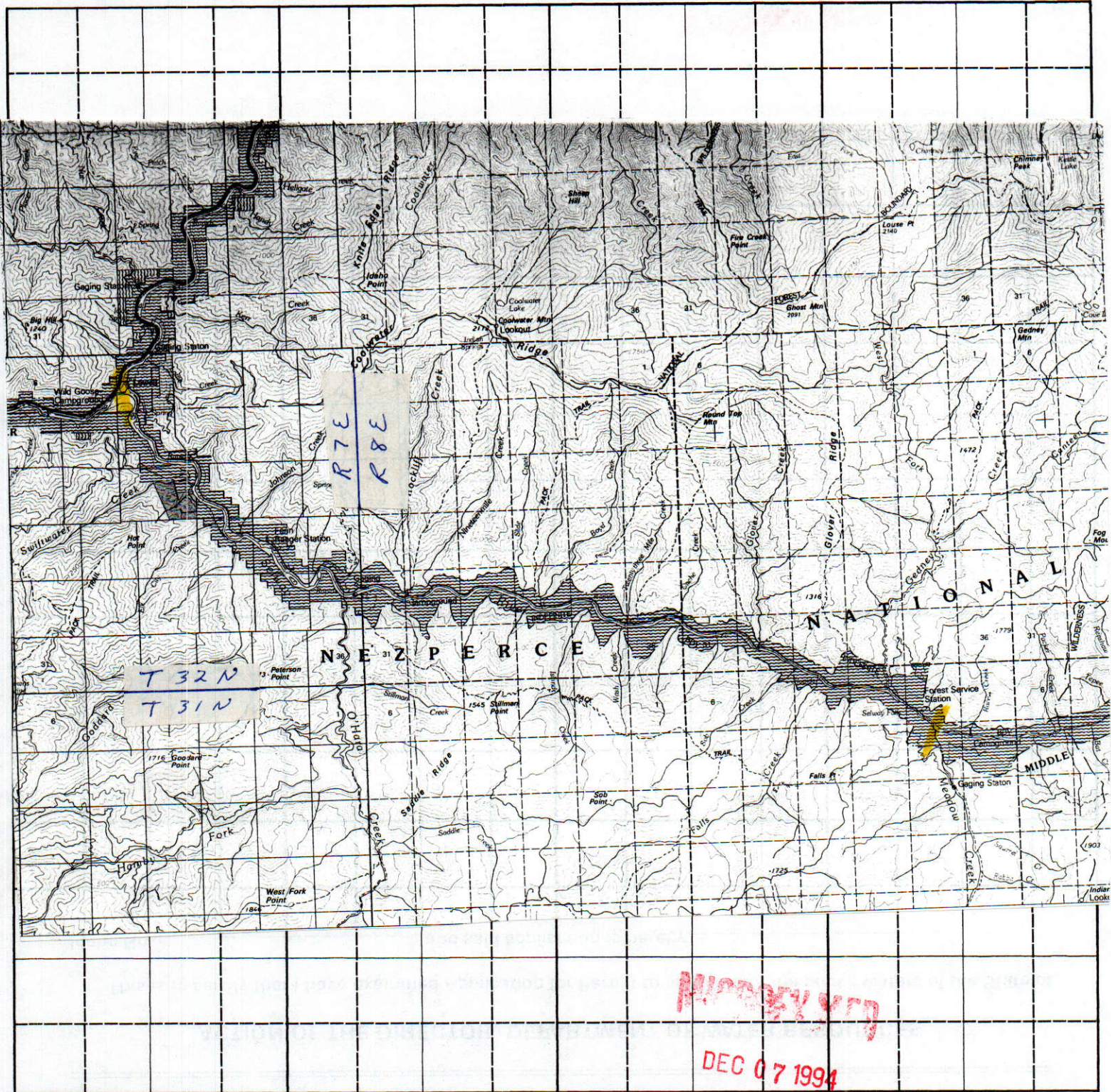


13. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



Scale: 2 inches equal 1 mile.

BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

William S. Platts
(Applicant)

NOTICE OF HEARING FOR APPLICATION FOR MINIMUM STREAMFLOW

Notice is hereby given that the Idaho Water Resources Board submitted an application for permit to appropriate water to the Department of Water Resources, proposing to appropriate water for a minimum streamflow in the Selway River, a tributary of Middle Fork, Clearwater River. The application is further described as follows:

Source: Selway River
Application No.: 81-07160
Proposed Priority: July 30, 1992
Amount and Period of Use: 1500.0 cfs from 3/1 through 7/31
760.0 cfs from 8/1 through 2/29
Purpose of Minimum Flow: Protection of fish and wildlife habitat, aquatic life and recreational values.
Proposed Reach: From the confluence of the Selway River with Meadow Creek in the NWNE, S11, T31N, R9E, downstream to the confluence with the Lochsa River in the NWSW, S4, T32N, R7E, Idaho County.

The Department of Water Resources will hold a public hearing at the Clearwater Motel, Hwy. 12, Kamiah, Idaho at 1:00 p.m. on September 20, 1994 for the purpose of hearing evidence in regard to the application. The hearing will be held pursuant to the provisions of Section 42-1503, Idaho Code. In addition, the hearing officer will receive informal testimony from the public beginning at 7:00 p.m. in the evening at the same location.

Any party who wishes to formally appear in the proceeding for the purpose of presenting evidence or cross examining witnesses should file a notice of appearance with the Director of the Department of Water Resources, Statehouse Mail, Boise, ID 83720, five (5) days prior to the hearing. Other parties may informally present their views and comments without filing a notice of appearance. Written informal views and comments may also be submitted to the Department of Water Resources prior to the hearing.

Any hearing scheduled will be conducted in a facility which meets the accessibility requirements of

the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise the department ten (10) days prior to the hearing. The hearing will be conducted by Norm Young, Idaho Dept. of Water Resources, Statehouse Mail, Boise, ID 83720, telephone (208) 327-9200.

If issued, this permit will be subject to all prior water rights.
JEITH HIGGINSON
Director, Idaho Dept. of Water Resources.

I, Linda Capps McBuire being first duly sworn upon oath, depose and say that I am Print Clerk of the TIMES-NEWS, published daily, at Twin Falls, Idaho, and do solemnly swear that a copy of the notice of advertisement, as per clipping attached, was published in the regular and entire issue of said newspaper, and not in any supplement thereof, for three consecutive weeks, commencing with the issue dated September 1, 19 94, and ending with the issue dated September 15, 19 94.

And I do further certify that said newspaper is a consolidation, effective February 16, 1942, of the Idaho Evening Times, published theretofore daily except Sunday, and the Twin Falls News, published theretofore daily except Monday, both of which newspapers prior to consolidation had been published under said names in said city and county continuously and uninterruptedly during a period of more than twelve consecutive months, and said TIMES-NEWS, since such consolidation, has been published as a daily newspaper except Saturday, until July 31, 1978, at which time said newspaper began daily publication under said name in said city and county continuously and uninterruptedly.

And I further certify that pursuant to Section 60-108 Idaho Code, Thursday of each week has been designated as the day on which legal notice by law or by order of any court of competent jurisdiction within the state of Idaho, to be published weekly, will be published; and that at the head of the editorial column of said combined newspapers, and in each issue thereof, Thursday is announced as the day on which said legal notices will be published.

STATE OF IDAHO
COUNTY OF TWIN FALLS

On this 28 day of Sept. in the year of 1994, before me, a Notary Public, personally appeared Linda Capps McBuire, known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.

Debra R. Feltman
Notary Public for Idaho
Residing at Twin Falls, Idaho. 5/19/2000
My commission expires:

DEC 07 1994
117.44

**NOTICE OF HEARING FOR
APPLICATION FOR MINIMUM
STREAMFLOW**

Notice is hereby given that the Idaho Water Resource Board submitted an application for permit to appropriate water to the Department of Water Resources, proposing to appropriate water for a minimum streamflow in the Selway River, a tributary of Middle Fork, Clearwater River. The application is further described as follows:

Source: Selway River

Application No.: 81-07160

Proposed Priority: July 30, 1992

Amount and Period of Use: 1500.0 cfs from 3/1 through 7/31

760.0 cfs from 8/1 through 2/29

Purpose of Minimum Flow: Protection of fish and wildlife habitat, aquatic life and recreational values

Proposed Reach: From the confluence of the Selway River with Meadow Creek in the NWNE, S11, T31N, R9E, downstream to the confluence with the Lochsa River in the NWSW, S4, T32N, R7E, Idaho County

The Department of Water Resources will hold a public hearing at the Clearwater Motel, Hwy. 12, Kamiah, Idaho at 1:00 p.m. on September 20, 1994 for the purpose of hearing evidence in regard to the application. The hearing will be held pursuant to the provisions of Section 42-1503, Idaho Code. In addition, the hearing officer will also receive informal testimony from the public beginning at 7:00 p.m. in the evening at the same location.

Any party who wishes to formally appear in the proceeding for the purpose of presenting evidence or cross examining witnesses should file a notice of appearance with the Director of the Department of Water Resources, Statehouse Mail, Boise, ID 83720, Five (5) days prior to the hearing. Other parties may informally present their views and comments without filing a notice of appearance. Written informal views and comments may also be submitted to the Department of Water Resources prior to the hearing.

Any hearing scheduled will be conducted in a facility which meets the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise the department ten (10) days prior to the hearing. The hearing will be conducted by Norm Young, Idaho Dept. of Water Resources, Statehouse Mail, Boise, ID 83720, telephone (208) 327-7900. If issued, this permit will be subject to all prior water rights.

R. KEITH HIGGINSON

Director, Idaho Dept. of Water Resources

A-31-S14

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO
County of Idaho - ss.

RECEIVED

OCT 03 1994

Andrew J. McNab, being first duly sworn, says he is the Publisher of the IDAHO COUNTY FREE PRESS, a weekly newspaper published and issued weekly at Grangeville, Idaho county, State of Idaho, and is of general circulation in said county and state, that the said notice, of which the one hereto attached is a true copy, was published in said paper for three weeks, being published three times, the first publication being on the 31st day of August, 19 94, and the last publication on the 14th day of September, 19 94; and that the said notice was published in the newspaper proper and not a supplement; that said newspaper has been continuously and uninterruptedly published in said county during a period of seventy-eight consecutive weeks prior to the publication of said notice or advertisement.

88.44

STATE OF IDAHO }
COUNTY OF } IDAHO

On this 14th day of September in the year of 1994, Before me, a Notary Public, personally appeared Andrew J. McNab, known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.

Norman Young
Notary Public for Idaho
Residing at Grangeville, ID
My commission expires: 10-8-99

DEC 07 1994

OCT 11 1994

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO)
) ss.
 County of Clearwater)

Bonnie M. Bessent

being first duly sworn, on oath, deposes and says:

That I am and at all times herein mentioned have been a citizen of the United States and of the State of Idaho, over 21 years of age, and that I am not a party to nor interested in the above entitled proceeding; that I am and at all times herein mentioned have been the Editor, Foreman, of THE CLEARWATER TRIBUNE: that said Clearwater Tribune is a newspaper of general circulation, printed and published weekly at Orofino, in the County of Clearwater and State of Idaho; that the Clearwater Tribune has been continuously and uninterruptedly published in Clearwater County, Idaho, during the period of seventy-eight consecutive weeks prior to the first publication of attached copy of:

Application for Minimum Streamflow

That Streamflow

of which the annexed is a full, true and correct printed copy, was published in the regular and entire issue of said newspaper, and not in any supplement thereof, for a full period of two consecutive issue commencing on the 1st day of September 1994 and ending on the 8th day of September 1994

Bonnie M. Bessent

STATE OF IDAHO)
)
 COUNTY OF CLEARWATER)

On this 12th day of September in the year of 1994, before me, a Notary Public, personally appeared

Bonnie M. Bessent
 known or identified to me to be the person whose name subscribed to the within instrument, and being by me duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same

Janice A. Finke
 Notary Public for Idaho

Resident at Orofino, Idaho

My commission expires: 5/13/99

**NOTICE OF HEARING
 FOR APPLICATION FOR
 MINIMUM STREAMFLOW**

Notice is hereby given that the Idaho Water Resource Board submitted an application for permit to appropriate water to the Department of Water Resources, proposing to appropriate water for a minimum streamflow in the Selway River, a tributary of the Middle Fork, Clearwater River. The application is further described as follows:

Source: Selway River

Application No.: 81-07160

Proposed Priority: July 30, 1992

Amount and Period of Use:

1500.0 cfs from 3/1 to 7/31

760.0 cfs from 8/1 to 2/29

Purpose of Minimum Flow:

Protection of fish and wildlife habitat, aquatic life and recreational values

Proposed Reach: From the

confluence of the Selway River With Meadow Creek in the NWNE, S11, T31N, R9E, downstream to the confluence with the Lochsa River in the NWSW, S4, T32N, R7E, Idaho County

The Department of Water Resources will hold a public hearing at the Clearwater Motel, Hyw, 12., in Kamiah, Idaho at 1:00 p.m. on September 20, 1994 for the purpose of hearing evidence in regard to the application. The hearing will be held pursuant to the provisions of Section 42-1503, Idaho Code. In addition, the hearing officer will also receive informal testimony from the public beginning at 7:00 p.m. in the evening at the same location.

Any party who wishes to formally appear in the proceeding for the purpose of presenting evidence or cross examining witnesses should file notice of appearance with the Director of the Department of Water Resources, Statehouse Mail, Boise, ID 83720, five (5) days prior to the hearing. Other parties may informally present their views and comments without filing a notice of appearance. Written informal views and comments may also be submitted to the department of Water Resources prior to the hearing.

Any hearing scheduled will be conducted in a facility which meets the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise the department ten (10) days prior to the hearing. The hearing will be conducted by Norm Young, Idaho Dept. of Water Resources, Statehouse Mail, Boise, Id 83720, telephone (208) 327-7900

DEC 07 1994

Affidavit of Publication

RECEIVED

OCT 05 1994

STATE OF IDAHO, }
County of Idaho, } ss.

I, ROBERT E. WHERRY, being first duly sworn, depose and say that I am the Publisher of the COTTONWOOD CHRONICLE, a weekly newspaper, published and issued weekly at Cottonwood, Idaho County, State of Idaho, which is of general circulation in said county and state, that the said notice, of which the one hereto is attached is a true copy, was published in said newspaper

for 3 weeks being published 3

times, the first publication being on the 1st

day of September, 19 94, and the last

publication on the 15th day of

september, 19 94; and that the said

notice was published in the newspaper proper and not in a supplement; that said newspaper has been continuously and uninterruptedly published in said county during a period of seventy-eight (78) consecutive weeks prior to the first publication of said notice or advertisement.

Robert E. Wherry

STATE OF IDAHO, }
County of Idaho, }

On this 29th day of September in the year of

1994, before me, a Notary Public, personally appeared Robert E.

Wherry, known or identified to me to be the person whose

name subscribed to the within instrument, and being by me first duly sworn,

declared that the statements therein are true and acknowledged to me that he

executed the same.

Notary Public for Idaho

Residing at Cottonwood

My commission expires: 12/94

NOTICE OF HEARING FOR APPLICATION FOR MINIMUM STREAMFLOW

Notice is hereby given that the Idaho Water Resource Board submitted an application for permit to appropriate water to the Department of Water Resources, proposing to appropriate water for a minimum streamflow in the Selway River, a tributary of the Middle Fork, Clearwater River. The application is further described as follows:

Source: Selway River

Application No.: 81-07160

Proposed Priority: July 30, 1992

Amount and Period of Use: 1500.0 cfs from 3/1 through 7/31

760.0 cfs from 8/1 through 2/29

Purpose of Minimum Flow: Protection of fish and wildlife habitat, aquatic life and recreational values

Proposed Reach: From the confluence of the Selway River with Meadow Creek in the NWNE, S11, T31N, R9E, downstream to the confluence with the Lochsa River in the NWSW, S4, T32N, R7E, Idaho County

The Department of Water Resources will hold a public hearing at the Clearwater Motel, Hwy. 12, Kamiah, Idaho at 1:00 p.m. on September 20, 1994 for the purpose of hearing evidence in regard to the application. The hearing will be held pursuant to the provisions of Section 42-1503, Idaho Code. In addition, the hearing officer will also receive informal testimony from the public beginning at 7:00 p.m. in the evening at the same location.

Any party who wishes to formally appear in the proceeding for the purpose of presenting evidence or cross examining witnesses should file a notice of appearance with the Director of the Department of Water Resources, Statehouse Mail, Boise, ID 83720, five (5) days prior to the hearing. Other parties may informally present their views and comments without filing a notice of appearance. Written informal views and comments may also be submitted to the Department of Water Resources prior to the hearing.

Any hearing scheduled will be conducted in a facility which meets the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or

OCT 07 1994

**NOTICE OF
HEARING FOR
APPLICATION FOR
MINIMUM STREAMFLOW**

Notice is hereby given that the Idaho Water Resource Board submitted an application for permit to appropriate water to the Department of Water Resources, proposing to appropriate water for a minimum streamflow in the Selway River, a tributary of Middle Fork, Clearwater River. The application is further described as follows:

Source: Selway River

Application No.: 81-07160

Proposed Priority: July 30, 1992

Amount and Period of Use: 1500.0 cfs from 3/1 through 7/31

760.0 cfs from 8/1 through 2/29

Purpose of Minimum Flow: Protection of fish and wildlife habitat, aquatic life and recreational values

Proposed Reach: From the confluence of the Selway River with Meadow Creek in the NWNE, S11, T31N, R9E, downstream to the confluence with the Lochsa River in the NWSW, S4, T32N, R7E, Idaho County

The Department of Water Resources will hold a public hearing at the Clearwater Motel, Hwy. 12, Kamiah, Idaho at 1:00 p.m. on September 20, 1994 for the purpose of hearing evidence in regard to the application. The hearing will be held pursuant to the provisions of Section 42-1503, Idaho Code. In addition, the hearing officer will also receive informal testimony from the public beginning at 7:00 p.m. in the evening at the same location.

Any party who wishes to formally appear in the proceeding for the purpose of presenting evidence or cross examining witnesses should file a notice of appearance with the Director of the Department of Water Resources, Statehouse Mail, Boise, ID 83720, five (5) days prior to the hearing. Other parties may informally present their views and comments without filing a notice of appearance. Written informal views and comments may also be submitted to the Department of Water Resources prior to the hearing.

Any hearing scheduled will be conducted in a facility which meets the accessibility requirements of the Americans with Disabilities Act. If you require

special accommodations in order to attend, participate in or understand the hearing, please advise the department ten (10) days prior to the hearing. The hearing will be conducted by Norm Young, Idaho Dept. of Water Resources, Statehouse Mail, Boise, Id 83720, telephone (208) 327-7900.

If issued, this permit will be subject to all prior water rights.

R. KEITH HIGGINSON
Director, Idaho Dept.
of Water Resources

Published: Aug 31, Sept 7, 14, 1994

RECEIVED

DEC 07 1994

The map shows the Clearwater River watershed. The main river is the Clearwater River, which flows from the north to the south. The South Fork Clearwater River joins it from the east. The Selkirk River joins the main river from the north. Other tributaries include O'Hara Cr., Meadow Creek, and Clear Cr. The town of Kamiah is located on the Clearwater River. A red line highlights a section of the Selkirk River, which is labeled 'Study Area' with arrows pointing to it from both sides.

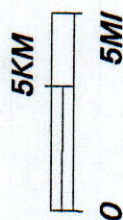
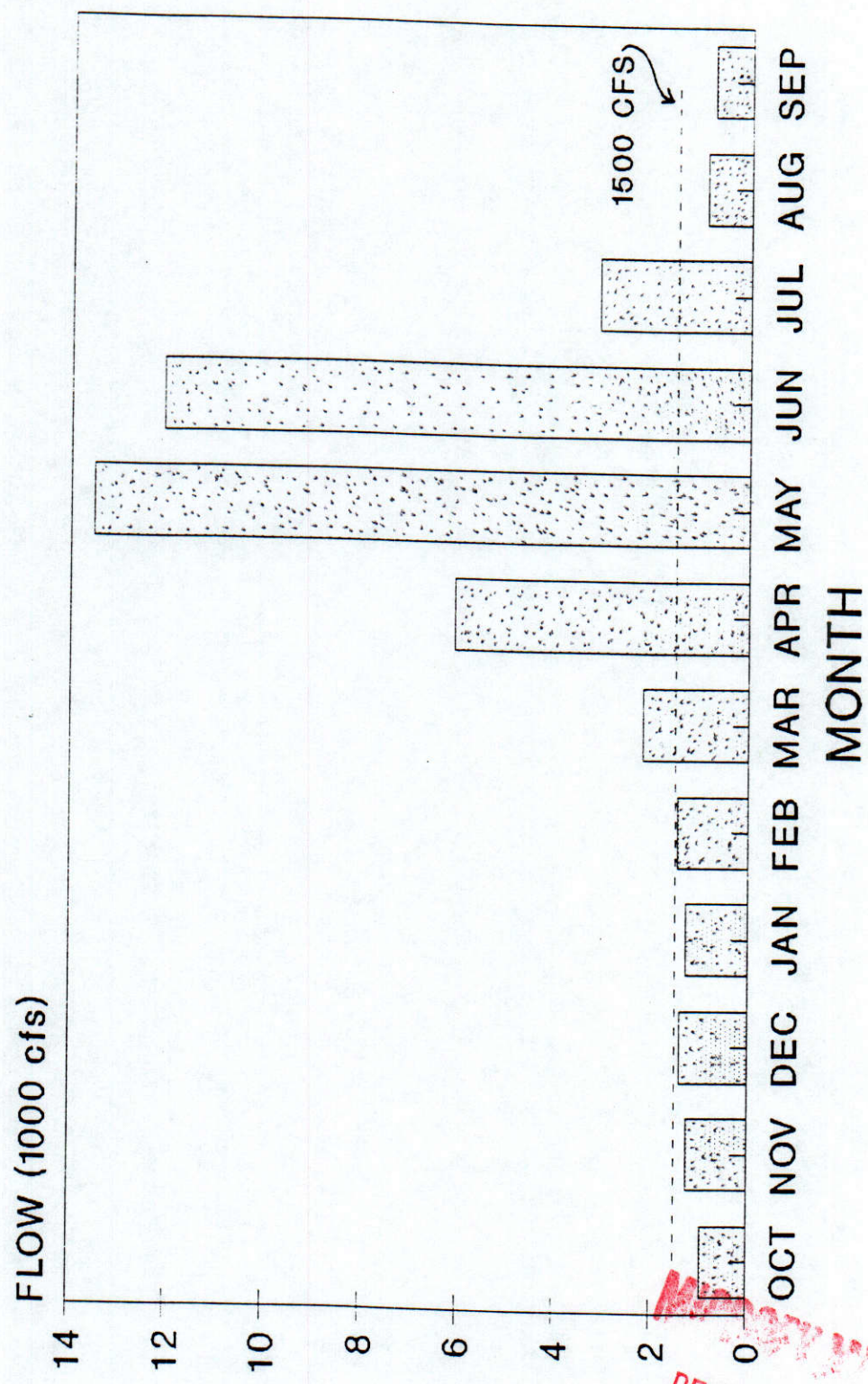


Exhibit
IWRB#6

SELWAY RIVER NR LOWELL (1930-90)



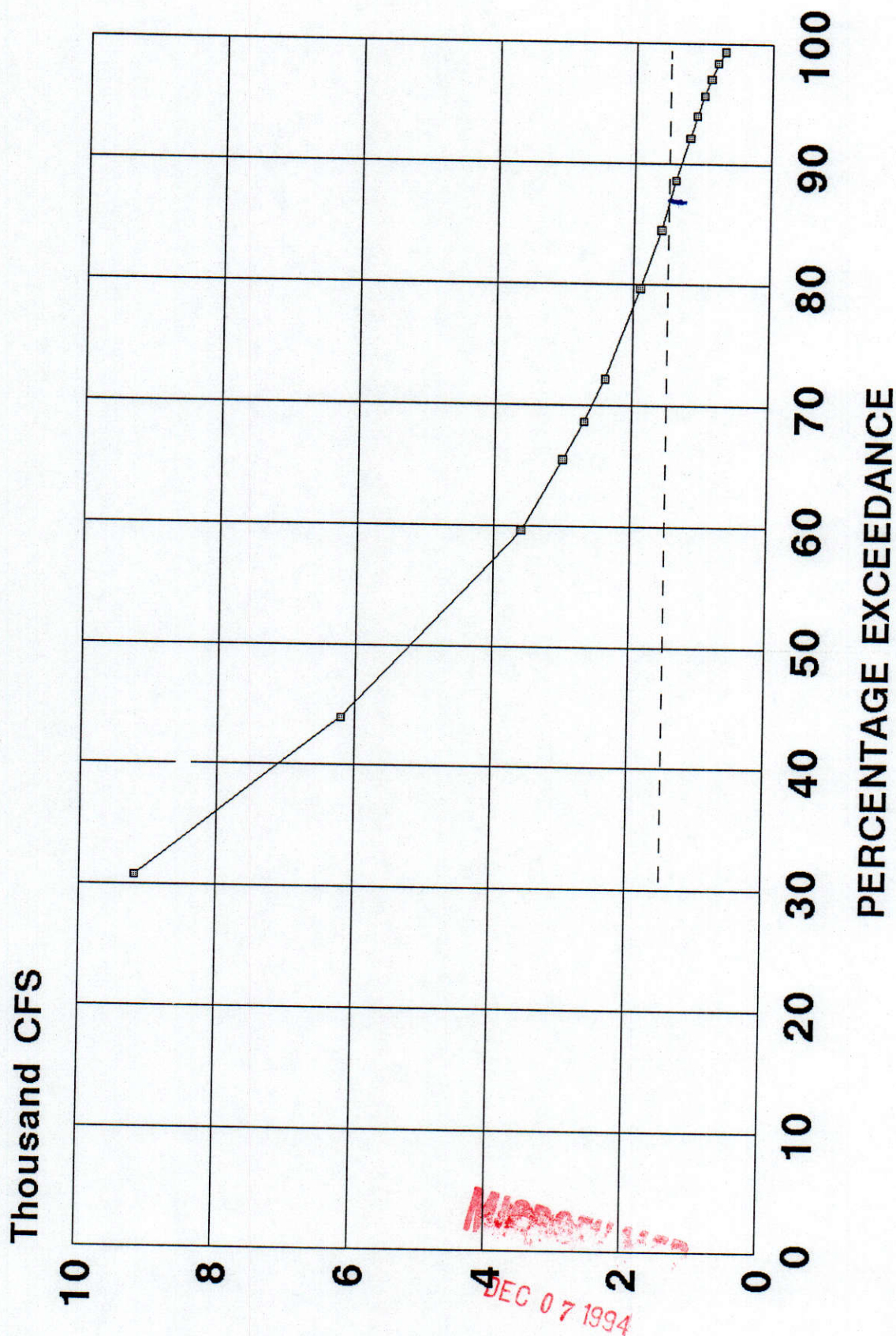
█ Average Monthly Flow --- Instream Flow

Average Annual Flow = 3750 CFS

DEC 07 1994

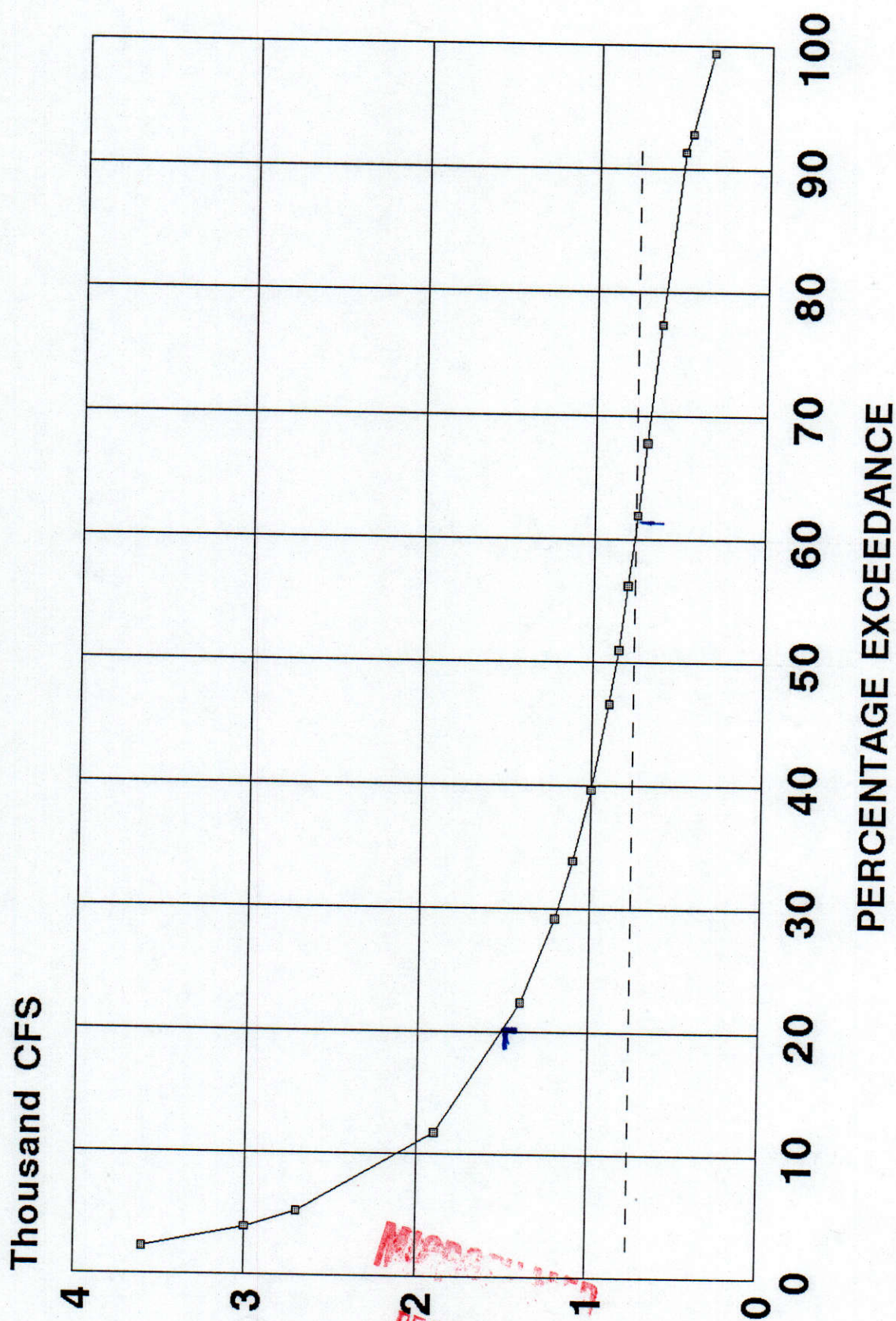
Exhibit
IWRB #7

FLOW DURATION CURVE
SELWAY RIVER NEAR LOWELL
MARCH-JULY



FLOW DURATION CURVE
SELWAY RIVER NEAR LOWELL
AUGUST-FEBRUARY

Exhibit
IWRB #8



SELWAY RIVER NR LOWELL

SUMMARY HYDROGRAPH PERIOD OF RECORD 1930-90

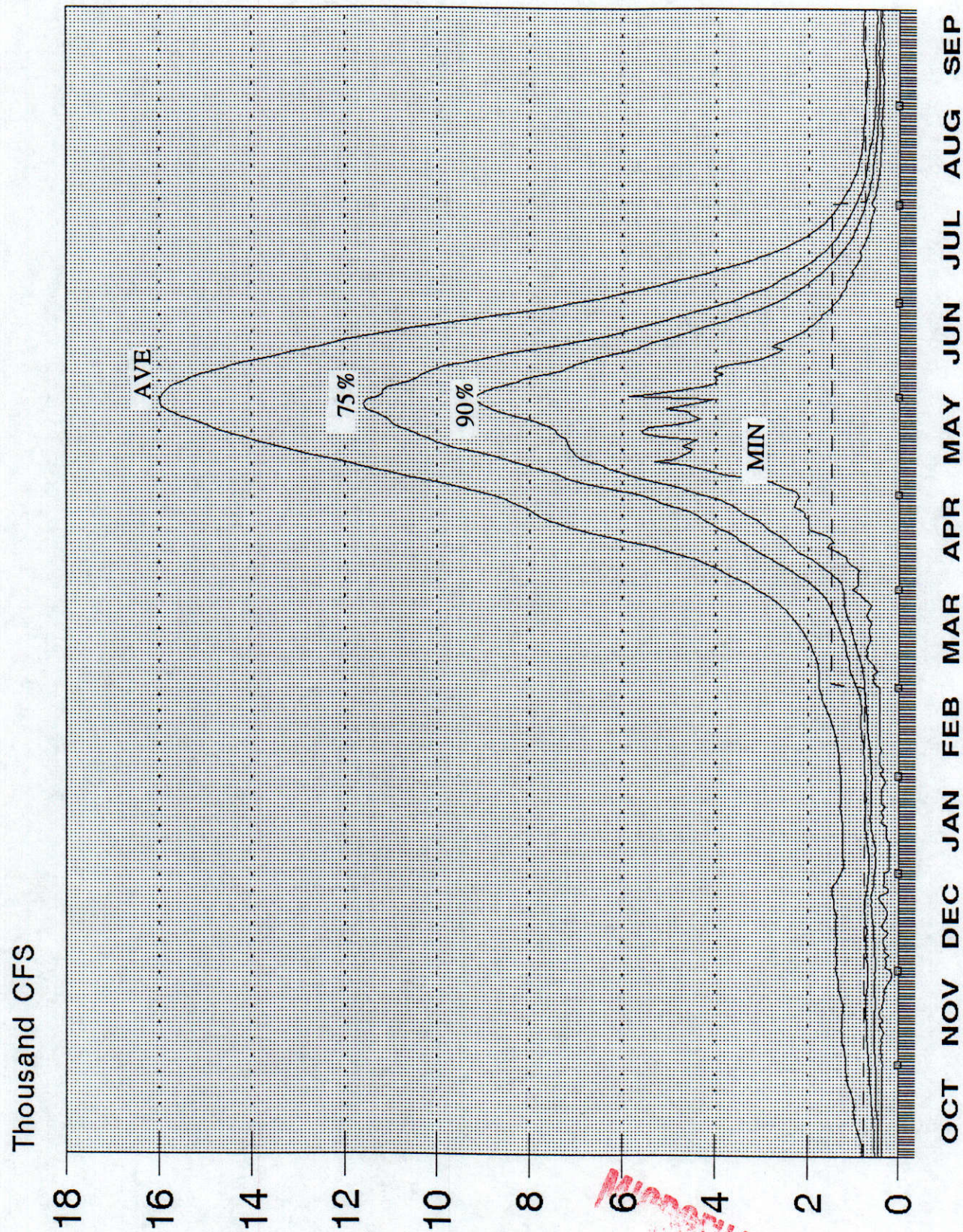
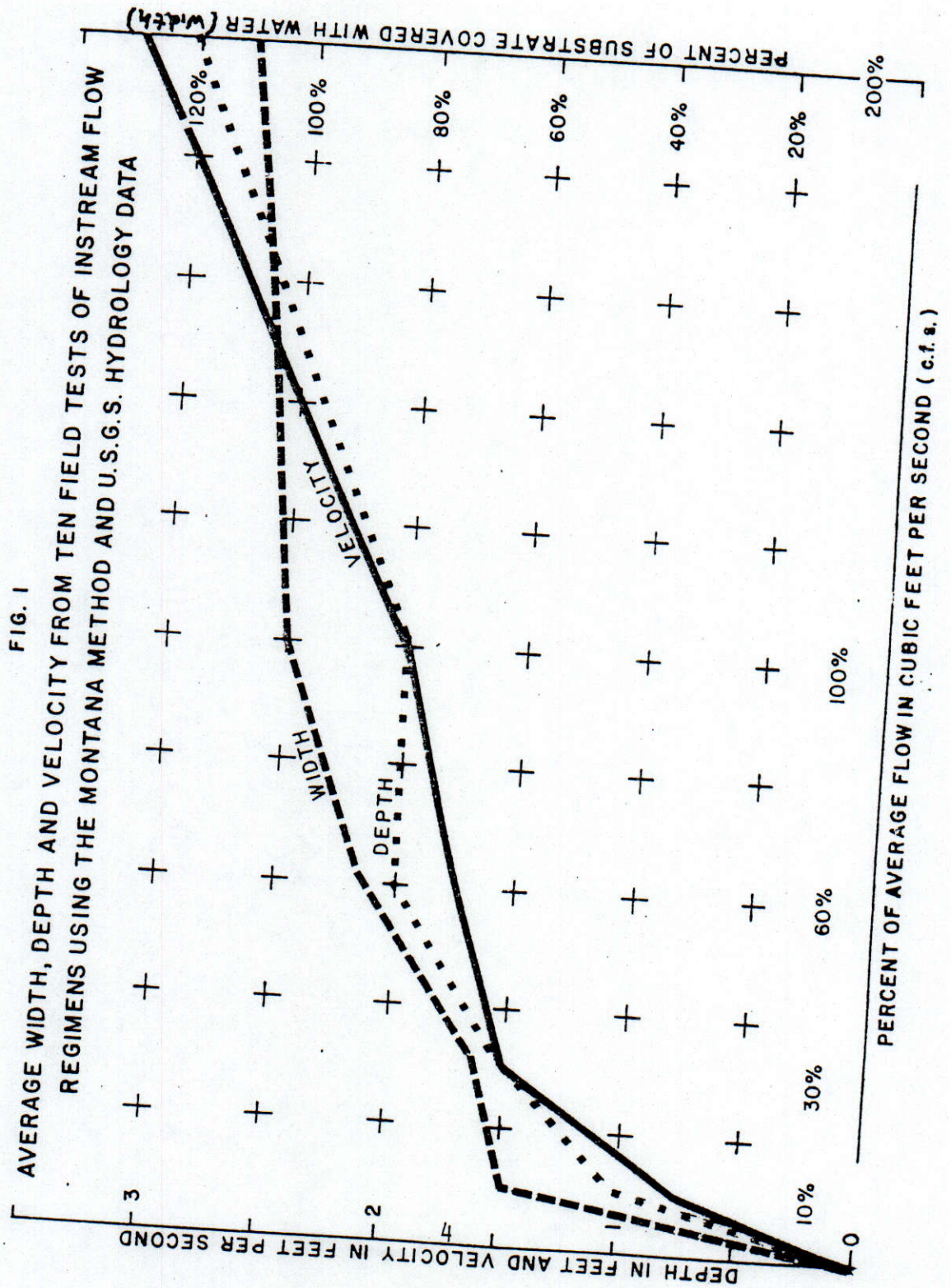


Exhibit
IWRB #9

DEC 07 1994



RECEIVED

DEC 07 1994

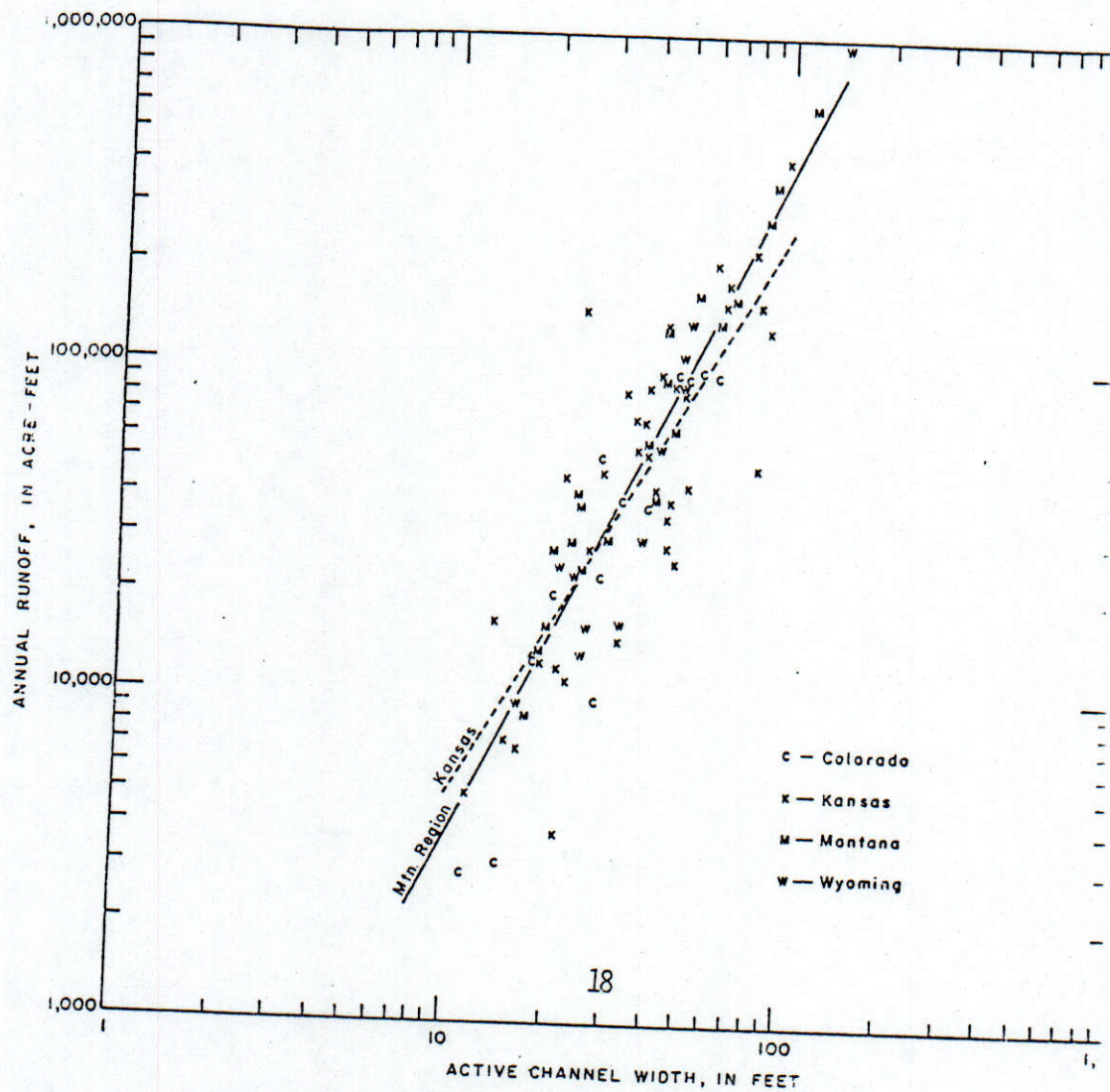
Fig. 2



Missouri River below Holter Dam, Montana, showing differences between flows of 3,000 cfs (55% of the average flow) and 2,000 cfs (37% of the average flow). The vertical drop was 7 inches. Flows reduced about midnight will clearly reveal differences in wetted substrate when photographed the next morning (photographic "regression analysis").

MRBS Photo #9000
by Don Tennant 6/10/70

Fig. 3



Correlation between average flow and channel width for streams in the mountain and plains regions of Colorado, Kansas, Montana and Wyoming

MICROFILMED
DEC 07 1994

Fig. 4

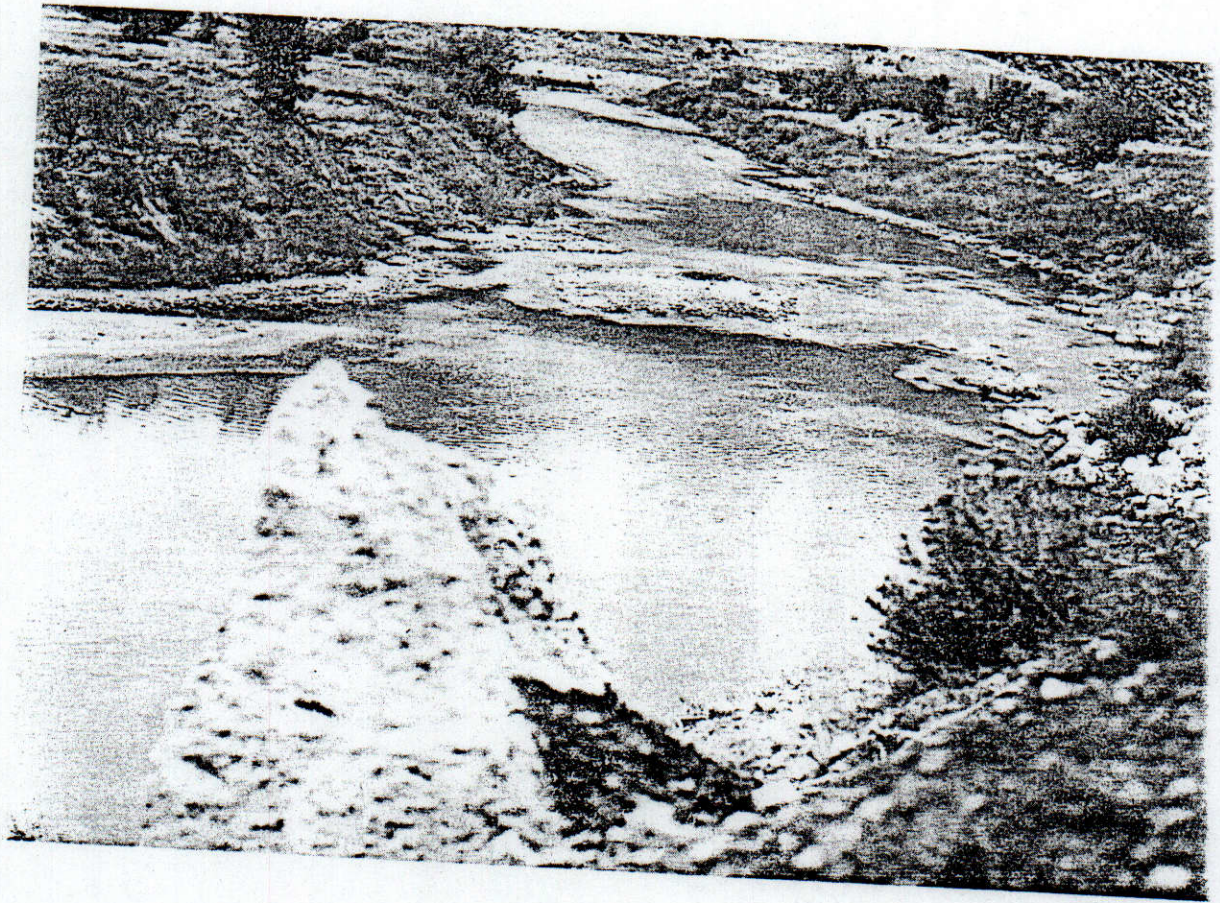


Republican River below Hardy Bridge, Nebraska, showing a flow of 42 cf (10% of the average flow). Water depths were adequate to provide some fish cover, living space, movement and for fishing. Temperatures were within tolerable limits. This is a minimum instantaneous flow recommended to sustain short-term survival habitat for most aquatic life forms.

MRBS Photo #7159
by Don Tennant 7/10/64

RECEIVED
DEC 07 1994

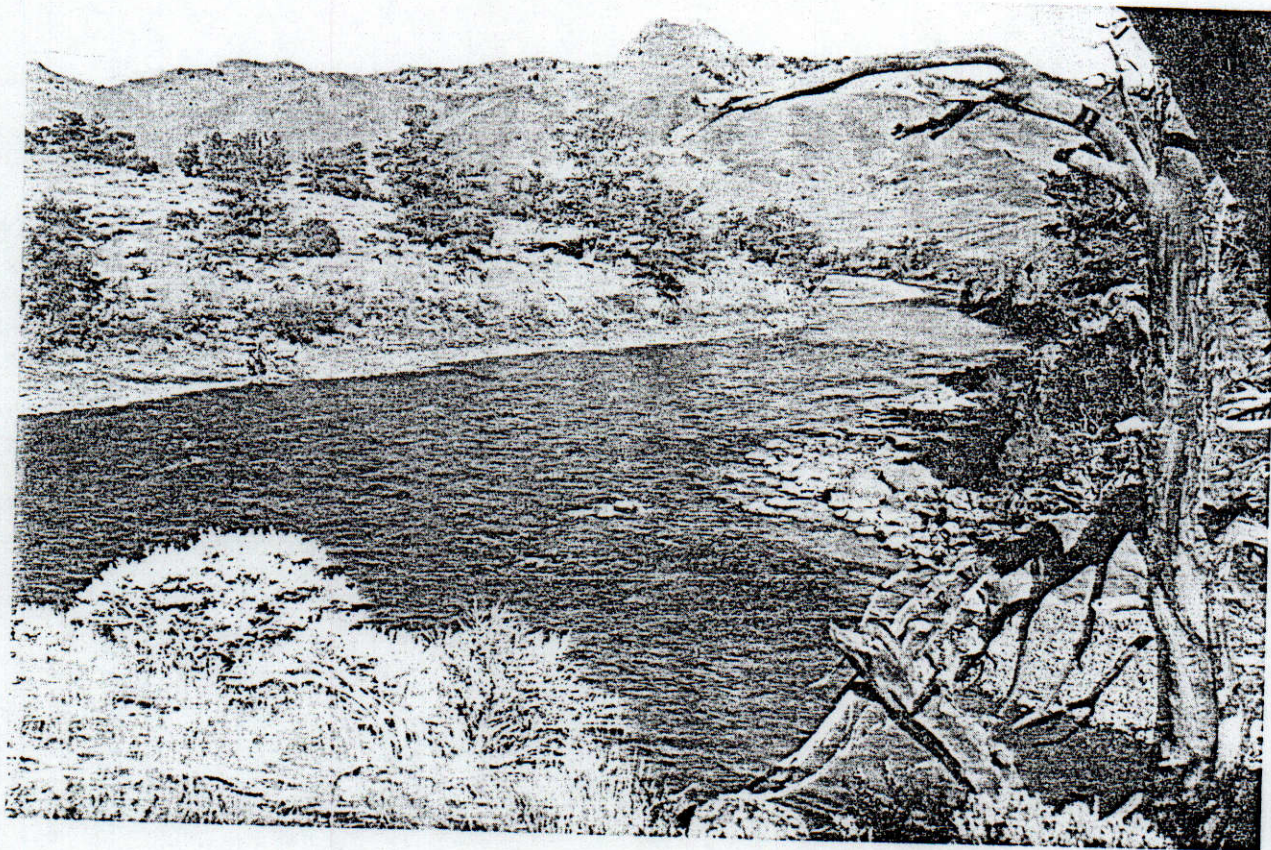
Fig. 5



Bighorn River below Boysen Dam, Wyoming, showing a flow of 400 cfs (30% of the average flow). Water depth was adequate for trout movement, spawning incubation and winter survival in most run and pool areas for a distance of 45 car miles downstream. This is a base flow recommended to sustain good survival habitat for most aquatic life forms.

MRBS Photo #8542-B
by Don Tennant 10/2/68

Fig. 6



North Fork Shoshone River near Wapiti, Wyoming, showing a flow of 456 cfs (approximately 60% of the average flow). Water widths, depths and velocities very good for fish and fishing in all riffles, runs and pools. This is a base flow recommended to provide excellent to outstanding habitat for most aquatic life forms during their primary periods of growth and for the majority of recreational uses.

FWS Photo #6-1-68
by Don Tennant 9/29/72

State of Idaho
Department of Water Resources

WATER RIGHT LICENSE

WATER RIGHT NO. 81-07160

Priority: July 30, 1992

Minimum Instream Flow: 1500.00 CFS

This is to certify, that STATE OF IDAHO
IDAHO WATER RESOURCE BOARD
STATEHOUSE
BOISE ID 83720

has complied with the terms and conditions
of the permit, issued pursuant to Application for Permit dated July 30, 1992; and
has submitted Proof of Beneficial Use on August 16, 1995. A minimum stream flow in

SELWAY RIVER

tributary to CLEARWATER RIVER, MIDDLE FORK

has been established as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE</u>
MINIMUM INSTREAM FLOW	03/01 to 07/31	1500.00 CFS
MINIMUM INSTREAM FLOW	08/01 to 02/29	760.00 CFS

LOCATION OF MINIMUM STREAM FLOW REACH:

Beginning of Stream Flow Reach
End of Stream Flow Reach

NWNE , Sec. 11, Township 31N, Range 09E
SWNWSW , Sec. 4, Township 32N, Range 07E
IDAHO County

CONDITIONS OF APPROVAL AND REMARKS

1. Use of water under this right shall be non-consumptive.
2. This minimum stream flow shall be subject to future domestic and stockwater development from the Selway River and its tributaries including groundwater for use within the Selway River Basin where such domestic and stockwater use is within the limitations of Section 42-111, Idaho Code.
3. Specifically, because of the generalization inherent within the application of the Tennant method, the director retains jurisdiction, as described herein, to review and amend any and all parameters of this right. The Board, upon receiving a request, or upon its own initiative, may petition the director for an amendment to the right. The petition must set forth any significant change in circumstances and evidence of the public interest supporting the proposed amendment. The director will notify the general public and specific persons or known interested parties of the proposed change, and conduct a hearing for the purpose of determining whether the right should be amended in the public interest. The burden of proof at the hearing shall be upon the persons or parties seeking the amendment to establish that the amendment of the right would be in the public interest. An amendment cannot increase the flow rate.

OCT 16 1995

State of Idaho
Department of Water Resources**WATER RIGHT LICENSE**

WATER RIGHT NO. 81-07160

CONDITIONS OF APPROVAL AND REMARKS

4. Use of water under this right shall recognize and allow the continued beneficial diversion of water under any prior existing water right established by diversion and application to beneficial use or by an application, permit, or license on file or issued by the director under the provisions of Chapter 2, Title 42, Idaho Code, with a priority of water right date earlier than 7/30/1992.
5. Upon further finding and order of the director that gauging stations are required to maintain the approved minimum flows on Selway River, such measuring devices shall be permanently installed and maintained as specified by the director.
6. This minimum stream flow is for the protection of fish and wildlife habitat, aquatic life and recreational values.
7. This minimum stream flow begins at the confluence with Meadow Creek in the NWNE, S11, T31N, R9E, and ends approximately 19 miles downstream at the confluence with the Lochsa River in the SWNWSW, S4, T32N, R7E.

This license is issued pursuant to the provisions of Section 42-219, Idaho Code. Witness the seal and signature of the Director, affixed at Boise, this 5TH day of OCTOBER, 1995.


Acting for KARL J. DREHER, Director

RECEIVED
OCT 16 1995

RECEIVED

AUG 16 1995

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

Department of Water Resources

PROOF OF BENEFICIAL USE

The Idaho Department of Water Resources considers this form a statement that the permit holder(s) has/have completed all development that will occur under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below. This form must be accompanied by a license examination fee, when necessary, or be accompanied by a completed field examination report prepared by a certified water right examiner who has been appointed by the department.

1. Permit No. 81-07160 Telephone No. 208-327-7910
2. Name(s) of Permit Holder(s): Idaho Water Resource Board
3. Mailing Address: 1301 N. Orchard St., PO Box 83720-0098, Boise, ID 83720-0098
4. Source of Water: Selway River If **GROUNDWATER** (well), Date Drilled: mo. _____ / yr. _____
 - a. Well Driller: _____ Drilling Permit Number: _____ - _____ - _____
 - b. **OPTIONAL:**
Pump Horsepower: _____ Pressure (psi): _____ Dynamic pumping level (ft): _____
5. Use(s) (as authorized by the water right permit):
Domestic (No. of households): _____ Stockwater (No. and type of stock): _____
Irrigation (No. of acres): _____ Other: Minimum Stream Flow
6. Total rate of diversion and/or volume for which proof is submitted: 1500 cfs OR _____ acre feet
7. Measuring Device Requirement: (refer to the approval conditions on your permit and respond accordingly)
(This question is not optional. Please check either yes or no. Proofs returned not checked accordingly, will be considered incomplete)

Measuring Device:	Is a measuring device required?	Yes _____ or No <u>X</u>
	Has the measuring device been installed?	Yes _____ or No <u>X</u>
Flow Measurement Port:	Is a flow measurement port required?	Yes _____ or No <u>X</u>
	Has the measurement port been installed?	Yes _____ or No <u>X</u>
8. Fee Enclosed: \$ N/A (See Fee Schedule on back of the instructions for filing proof of beneficial use)
9. Person to contact to accompany the Department representative during field examination of the water system.
Name: _____ Telephone Number: _____
Address: _____
10. The information given on this form is my true statement of the extent to which the above numbered permit has been developed and I relinquish any undeveloped portion of the permit to the State of Idaho.

Signature of permit holder: Charles Page
(include your title, if on behalf of company or organization)

Date: 6-1-95

OCT 16 1995

State of Idaho
Department of Water Resources
Permit To Appropriate Water

NO. 81-07160

Proposed Priority: July 30, 1992

Minimum Stream Flow:

1500.00 CFS

This is to certify, that **STATE OF IDAHO**
IDAHO WATER RESOURCE BOARD
STATEHOUSE
BOISE ID 83720

has applied for a minimum stream flow in:

SELWAY RIVER

tributary of **CLEARWATER RIVER, MIDDLE FORK**

and a permit is **APPROVED** as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>MINIMUM FLOW</u>
MINIMUM INSTREAM FLOW	03/01 to 07/31	1500.00 CFS
MINIMUM INSTREAM FLOW	08/01 to 02/29	760.00 CFS
	Totals	1500.00 CFS

STREAM FLOW REACH:

Beginning of Stream Flow Reach
End of Stream Flow Reach

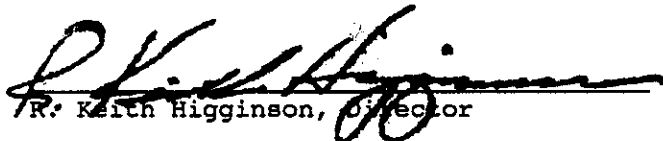
NWNE , Sec. 11, Township 31N, Range 09E
SWNWSW , Sec. 4, Township 32N, Range 07E
IDAHO County

CONDITIONS/REMARKS:

1. Proof of construction of works and application of water to beneficial use shall be submitted on or before **March 1, 1999**.
2. See conditions of approval listed in Recommended Order dated 10/31/94.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code.
Witness the signature of the Director, affixed at Boise, this

6th day of December, 1994.


/s/ Keith Higginson, Director

RECEIVED

DEC 07 1994

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR)
PERMIT NO. 81-07160 (SELWAY RIVER))
TO ESTABLISH A MINIMUM STREAM FLOW)
IN THE NAME OF THE IDAHO WATER)
RESOURCE BOARD)
_____)

FINAL ORDER ADOPTING
RECOMMENDED ORDER

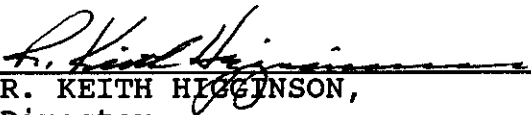
WHEREAS, a Recommended Order in the above-captioned matter has been issued and a copy served on the parties;

WHEREAS; more than twenty-one days have passed since the service of the Recommended Order; and,

WHEREAS; no exception to that Recommended Order has been received,

IT IS, THEREFORE, HEREBY ORDERED that said Recommended Order be adopted and issued as the Final Order, and Application for Permit No. 81-07160 is APPROVED.

Dated this 6TH day of December, 1994.



R. KEITH HIGGINSON,
Director

RECORDED

DEC 07 1994

**BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO**

**IN THE MATTER OF APPLICATION FOR)
PERMIT NO. 81-07160 (SELWAY)
RIVER) TO ESTABLISH A MINIMUM)
STREAM FLOW IN THE NAME OF THE)
IDAHO WATER RESOURCE BOARD)**

**RECOMMENDED
ORDER**

On September 20, 1994, the Idaho Department of Water Resources (department) conducted a hearing to determine whether an application for permit to appropriate water, numbered in the department records as 81-07160, should be approved or rejected. The application by the Idaho Water Resource Board (Board) seeks to establish a minimum stream flow in the Selway River, located in Idaho County.

Notice of the application for minimum stream flow and the hearing was published locally in the Idaho County Free Press, the Cottonwood Chronicle and Clearwater Tribune and statewide in newspapers published in Lewiston, Boise, Twin Falls, and Idaho Falls. Letters were sent to the holders of water rights from the Selway River and tributaries advising them of the application and the hearing. Department staff presented information at the hearing explaining the Board's application for permit. Idaho Department of Fish and Game staff provided testimony in favor of approval of the application. No individual, organization, or agency requested to participate as a full party in the proceeding, but several individuals and representatives of organizations appeared and presented their views and comments as public witnesses.

The hearing record was left open until October 3, 1994, for submission of written public interest comments. Eight letters were received, all supporting approval of the application. The evidence having been taken, and the record having closed, the hearing officer, as a representative of the director of the Department of Water Resources, proposes the following Findings of Fact, Conclusions of Law, and Order:

FINDINGS OF FACT

1. Application for permit No. 81-07160 proposes establishment of a minimum stream flow as follows:

Rate of Flow	1500 cubic feet per second (cfs) from March 1 through July 31; 760 cfs from August 1 through February 29
--------------	---

DEC 07 1994

Location	Selway River, commencing at the confluence with Meadow Creek in the NW1/4NE1/4, Section 11, Township 31 North, Range 9 East, Boise Meridian, downstream approximately 19 miles to the confluence with the Lochsa River in the SW1/4NW1/4SW1/4 Section 4, Township 32 North, Range 7 East, Boise Meridian.
Purpose	In-stream use for the protection of fish and wildlife habitat, aquatic life, and recreational values.
Priority Date	July 30, 1992

2. The Board asked the Idaho Department of Fish and Game (Fish & Game) for specific data regarding the Selway River which could be used to determine the flow rate or rates needed for a minimum stream flow for the requested purposes.

3. While Fish & Game has not specifically studied the Selway River to determine the minimum stream flow required to protect public instream values, a study conducted by Donald L. Tennant, a fisheries biologist employed by the U.S. Fish and Wildlife Service, concluded, after analyzing several western streams, that the percentage of the average annual flow in the stream is related to the quality of the fish and aquatic habitat and the riparian health of the stream. Tennant's study was submitted as IWRB Exhibit #11. The study contains a table, marked IWRB Exhibit #5, which lists the quality of various percentages of the mean annual flow as that flow relates to the stream habitat and environmental resources.

4. The Board's requested flow rate for the March through July period is forty percent of the mean annual flow. In accordance with Tennant's summary table (IWRB Exhibit #5), this flow rate is needed to provide "good" stream flow conditions and to prevent degrading instream habitat conditions during a critical part of this period (April through July). During the remainder of the year, the flow rate requested is less than an optimum flow rate as defined by Tennant. The board determined that a stream flow rate which could result in stream habitat degradation would be less than the minimum desirable flow rate.

5. Flow data for the Selway River has been measured at a site approximately 7 1/2 miles upstream from the lower end of the requested minimum stream flow reach for the period 1930 through 1993. The flow data are summarized graphically by the exhibits marked IWRB 6, 7, 8 and 9. Forty percent of the mean annual flow is sustainable during the months of March through July. Forty percent of the mean annual flow is not sustainable for the months

DEC 07 1994

August through February. As a result the minimum stream flow requested for the August through February period was reduced to 760 cfs, which is the average monthly flow for the month (September) with the lowest average flows.

6. Statistical analysis of the available flow data indicates that for the March through July period the requested flow of 1500 cfs has been met or exceeded 87 percent of the time during the 64 year period of record (IWRB Exhibit #7). A similar analysis indicates that the 750 cfs flow rate has been met or exceeded 61 percent of the time during the August through February period (IWRB Exhibit #8).

7. The Selway River and tributaries provide important habitat for spawning, rearing, and migration of three species of anadromous fish. These include the spring chinook salmon and the steelhead trout, which have been petitioned or designated as threatened or endangered species. The Selway River is important habitat for one-half of the fish species native to Idaho, including the bull trout, which has been petitioned for classification as a threatened or endangered species and the west slope cutthroat trout, which is a species of special concern in Idaho.

8. The Selway River is heavily used for public and commercial recreational rafting and kayaking. Commercial rafting companies operating out of the local communities and using the requested minimum flow reach contribute significantly to the local economy.

9. The reach of the Selway River for which the minimum flow is requested provides important wildlife habitat for species such as the bald eagle, listed as endangered, and the harlequin duck, listed as a species of special concern in Idaho.

10. The land through which the Selway River flows is almost entirely in public ownership (Federal or state).

11. The records of the department list 38 water right permits, licenses and claims from Selway River and tributaries including ground water, for a total of 218.86 cfs. Of this total, rights totalling 215 cfs are non-consumptive uses for hydropower and fish propagation uses. There are no unapproved pending applications for permit seeking to appropriate water within the basin. One permit, No. 81-7166 for 0.19 cfs, has been issued having a priority date later in time than that of application for minimum stream flow permit No. 81-7160.

12. Eight letters were submitted commenting on the application for minimum stream flow. All eight supported approval of the application, but most encouraged the board to apply for an additional 2000 cfs during the peak rafting season of May through July.

DEC 07 1994

13. Public witness testimony was received from three individuals and representatives of interest groups. All the testimony favored approval of the application for minimum stream flow. Several witnesses said that approval should be conditioned to allow continued development of small diversions for uses such as domestic and stockwater. The limited amount of private land in the Selway River Basin will insure that these small uses do not significantly reduce stream flows even during low flow periods.

CONCLUSIONS OF LAW

1. Section 42-1501, Idaho Code, provides that stream flow preservation for the protection of fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, navigation, and water quality, when made pursuant to the minimum stream flow statutes, is in the public interest and is declared to be a beneficial use of such water.

2. Section 42-1503, Idaho Code, sets forth the criteria to be considered by the department in reviewing an application for minimum stream flow:

Upon the conclusion of the hearings and completion of any investigation conducted by the director, he shall enter his findings in writing approving the application in full, or in part, or upon conditions or rejecting said application. Approval of any such application must be based upon the findings that such appropriation of minimum stream flow:

- (a) will not interfere with any vested right, permit, or water right application with priority of right earlier than the date of receipt in the office of the director of a complete application for appropriation of minimum stream flow filed under provisions of this act;
- (b) is in the public, as opposed to the private interest;
- (c) is necessary for the preservation of fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, navigation, transportation, or water quality of the stream;
- (d) is the minimum flow or lake level and not the ideal or most desirable flow or lake level; and
- (e) is capable of being maintained as evidenced by records of stream flows and water levels and the existing or future establishment of necessary gauging stations and bench marks.

3. Any right acquired under this application is for instream nonconsumptive use and is subject to all vested water rights, permits, or water right applications having dates of priority earlier than the filing date of the application set forth in the Findings of Fact.

4. Tennant's method is not an exact method for determining a minimum stream flow, but is an estimate of the minimum flow necessary to sustain stream habitat values. As a result, any approval of the minimum stream flow should be flexible enough to allow downward adjustment if further studies show the quantities approved are excessive. The minimum stream flow decision should be conditioned to allow for adjustments as may later be found to be proper.

5. Development potential is limited in the Selway River basin because of the public ownership of nearly all the land. However, a limited amount of additional use for domestic and stockwater is anticipated and should not be prevented by the establishment of a minimum stream flow.

6. The minimum stream flow is in the public interest.

7. The flow sought is necessary for the preservation of fish and wildlife habitat, aquatic life, and recreation values.

8. The minimum stream flow sought for both periods of the year is the minimum flow and is not the ideal or most desirable flow.

9. The minimum flows sought are capable of being maintained as evidenced by flow records.

10. The minimum stream flows sought will not interfere with any vested water right, permit, or water right application.

ORDER

IT IS HEREBY ORDERED that application for permit No. 81-07160 is APPROVED subject to the following conditions:

1. This minimum stream flow shall be subject to future domestic and stockwater development from the Selway River and its tributaries including ground water for use within the Selway River Basin where such domestic and stockwater use is within the limitations of Section 42-111, Idaho Code.

2. Specifically, because of the generalization inherent within the application of the Tennant method, the director retains jurisdiction, as described herein, to review and amend any and all parameters of this permit and any subsequent license. The Board, upon receiving a request, or upon its own initiative, may petition

the director for an amendment to the permit or license. The petition must set forth any significant change in circumstances and evidence of the public interest supporting the proposed amendment. The director will notify the general public and specific persons or known interested parties of the proposed change, and conduct a hearing for the purpose of determining whether the permit or subsequent license should be amended in the public interest. The burden of proof at the hearing shall be upon the persons or parties seeking the amendment to establish that the amendment of the permit or license would be in the public interest. An amendment cannot increase the flow rate.

3. Use of water under this permit shall recognize and allow the continued beneficial diversion of water under any prior existing water right established by diversion and application to beneficial use or by an application, permit, or license on file or issued by the director under the provisions of Chapter 2, Title 42, Idaho Code, with a priority of water right date earlier than July 30, 1992, for application for permit No. 81-07160.

4. Use of water under this permit shall be nonconsumptive.

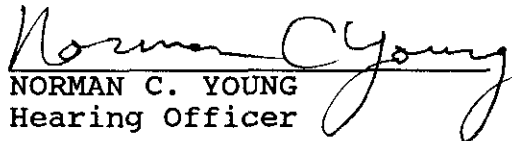
5. Upon further finding and order of the director that gauging stations are required to maintain the approved minimum flows on Selway River, such measuring devices shall be permanently installed and maintained as specified by the director.

6. Proof of instream beneficial use of the minimum stream flow may be submitted immediately upon legislative approval of the permit, but shall be submitted no later than March 1, 1999.

7. The reach of Selway River for which the requested minimum flows are established is as follows:

Selway River, commencing at the confluence with Meadow Creek in the NW1/4NE1/4, Section 11, Township 31 North, Range 9 East, Boise Meridian, downstream approximately 19 miles to the confluence with the Lochsa River in the SW1/4NW1/4SW1/4 Section 4, Township 32 North, Range 7 East, Boise Meridian.

DATED this 31st day of October, 1994.


NORMAN C. YOUNG
Hearing Officer

DEC 07 1994

ATTACHMENT TO APPLICATION FOR PERMIT
TO APPROPRIATE A MINIMUM STREAM FLOW

14. Provide evidence that the appropriation will not interfere with any vested water right, permit, or water right application of earlier date of priority.

The appropriation is junior to rights, permits or applications with earlier dates of priority. As a
nonconsumptive instream use, this appropriation can have no impact on any water user downstream
except to help insure water availability.

15. Provide evidence to show that the appropriation would be in the public interest as opposed to private interest.

The appropriation will be held by the Water Resource Board rather than a private entity. The
appropriated water will preserve river values for the benefit and enjoyment of all citizens of the state.

16. Provide evidence or justification that the appropriation is necessary for the purposes shown in Item 4.

The appropriation is for 40% of the mean annual flow for the period of March through July. The
request for the rest of the year is for the average monthly flow for September, the lowest month for
the period of record. This flow is approximately 20% of the mean annual flow.

17. Provide evidence that the minimum flow or lake level is minimum and not the ideal or most desirable flow or lake level.

The requested flows are based on the Montana Method which utilized field studies to identify riverine
conditions at varying flow rates. The optimum flow for fish, wildlife, recreation, and related environ-
mental resources ranges from 60% to 100% of the mean annual flow value.

DEC 07 1994

18. Provide evidence that the flow or lake level requested is capable of being maintained as evidenced by records of stream flows and water levels.

A flow of 1500 cfs is less than the average monthly flow for the requested period of use. The flow of 760 cfs is the lowest average monthly flow of the year for the period of record.

19. Describe the location of existing gaging stations that can be used in the administration of this appropriation.

The USGS gage at Lowell is 7.6 miles upstream from the confluence with the Lochsa River.

20. Do you intend to install additional gaging stations? Describe the location.

No.

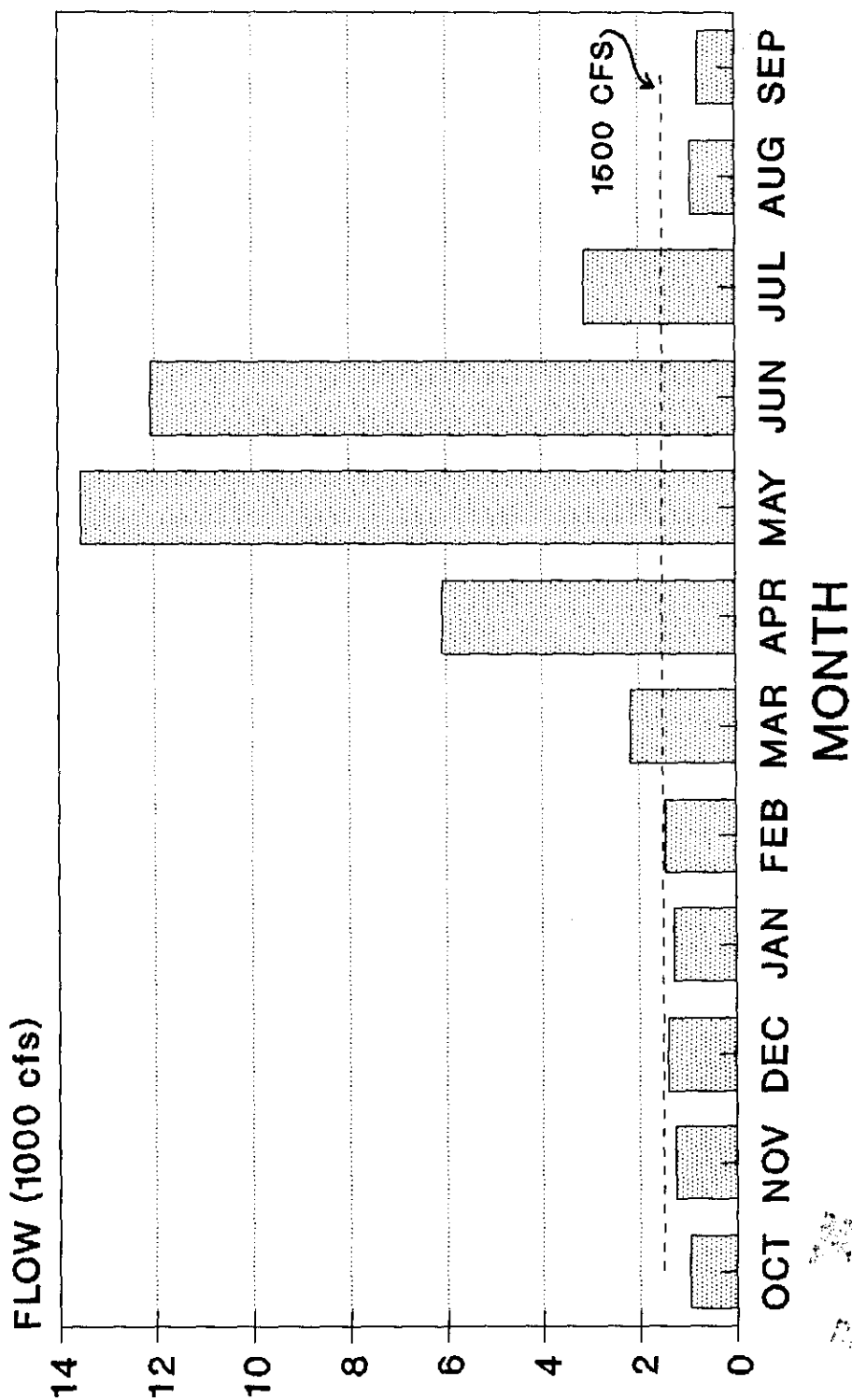
21. List any additional remarks related to this minimum stream flow application.

The flow request provides a "good" minimum flow for April to July, a "fair" to "poor" flow for August to September, a "good" flow for October through February, and an "outstanding" flow for March.

Following consultation with the Division of Environmental Quality and Departments of Fish & Game and Parks & Recreation, the Water Resource Board may amend this application to more accurately reflect the necessary minimum flow based on new data provided by the above or other agencies.

DEC 6 7 1994

SELWAY RIVER NR LOWELL (1930-90)



REC 07 1994

Table 1

Instream Flow Regimens for Fish, Wildlife, Recreation and Related
Environmental Resources

Narrative Description of Flows ^{1/}	Fisheries Classification ^{2/}	Recommended Base Flow Regimens	
		Oct.-Mar.	: Apr.-Sept.
Flushing or Maximum	--	200% of the average flow ^{3/}	
Optimum Range	--	60%-100% of the average flow ^{4/}	
Outstanding	I	40%	60%
Excellent	II	30%	50%
Good	III	20%	40%
Fair or Degrading	IV	10%	30%
Poor or Minimum	--	10%	10%
Severe Degradation	--	10% of average flow to zero flow	

^{1/}Most appropriate description of the general condition of the streamflow for all the parameters listed in the title of this paper.

^{2/}Roman numeral ratings for Fisheries Classification Systems like those developed for the States of Idaho, Montana, West Virginia, Wyoming, and the Delaware River Basin Comprehensive Study by the U.S. Fish and Wildlife Service. ^{5, 11, 14, 19, 26} The base flow regimens outlined above in columns 3 and 4 to maintain the respective designated classes, are judged to be as reliable and valid as the classification systems themselves. These recommended flows generally apply very well to both cold and warm water streams. Regimens should be reversed or altered to fit different hydrologic cycles, like the Salmonid streams on the West Coast, or to favor species like the fall spawning brown trout. Flows may be refined further by specifically matching them to vital periods of the life cycle of fishes, like migration, spawning, incubation, growth, etc. Use of the Montana Method on spring creeks or streams that have a very uniform flow year-around may provide unprecedented low-flow regimens at the minimum or base flow levels.

^{3/}The average flow will usually fill the active stream channel approximately 1/3 full or to the line of permanent terrestrial vegetation, while 3 times the average flow will often fill the active channel approximately to the point of spilling out on the first bench of the flood plain.¹⁵ Twice the average flow will produce effective depths and velocities within the stream channel for moving silt, sediment and other bed load material without doing extensive damage to the banks and riparian vegetation. Twice the average flow is a good maximum flow recommendation as well as a good flushing flow (Fig. 1).

^{4/}Optimum is a nebulous term; however, this flow range covers that definition best for all the parameters of this paper collectively.

RECEIVED

JUL 30 1992

Department of Water Resources

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

Ident. No. 81-7160

To appropriate the public waters of the State of Idaho

1. Name of applicant Idaho Water Resource Board Phone 327-7910

Post office address Statehouse Mail, Boise, ID 83720

2. Source of water supply Selway River which is a tributary of Middle Fork Clearwater River, instream flow from the confluence with Meadow Creek in the

3. Location of point of diversion is 1/4 of NW 1/4 of NE 1/4, Govt. Lot

Sec. 11 Township 31 N Range 9 E B.M. Idaho County; additional

points of diversion if any downstream to the confluence with the Lochsa River in the SW 1/4 of NW 1/4 of SW 1/4, Sec. 4, T 32 N, R 7 E, B.M.

4. Water will be used for the following purposes:

Amount 1500cfs for instream purposes from Mar. 1 to July 31 (both dates inclusive)
(cfs or acre-feet per annum) Feb. 20 - per t/con J. Beal

Amount 760cfs for instream purposes from Aug. 1 to April 30 (both dates inclusive)
(cfs or acre-feet per annum) 2/24/93 pms

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)

5. Total quantity to be appropriated is (a) 1500 cubic feet per second and/or (b) _____ acre feet per annum

6. Proposed diverting works:

a. Description of ditches, flumes, pumps, headgates, etc. None.

b. Height of storage dam _____ feet; active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet; period of year when water will be diverted to storage: _____ to _____ inclusive.

c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.

d. Is ground water with a temperature of greater than 90°F being sought? _____

7. Time required for the completion of the works and application of the water to the proposed beneficial use is 5 years (minimum 1 year).

DEC 07 1994

8. Description of proposed uses (if irrigation only, go to item 9):

- a. Hydropower; show total feet of head and proposed capacity in KW. _____
- b. Stockwatering; list number and kind of livestock. _____
- c. Municipal; show name of municipality. _____
- d. Domestic; show number of households. _____
- e. Other; describe fully. A minimum stream flow for the protection of fish and wildlife habitat, aquatic life, and recreational values.

9. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- b. If water is used for other purposes, place a symbol of the use (example: *D* for *Domestic*) in the corresponding place of use below. See instructions for standard symbols.

TWP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

Total number of acres to be irrigated _____

10. Describe any other water rights used for the same purposes as described above. _____

11. a. Who owns the property at the point of diversion? _____

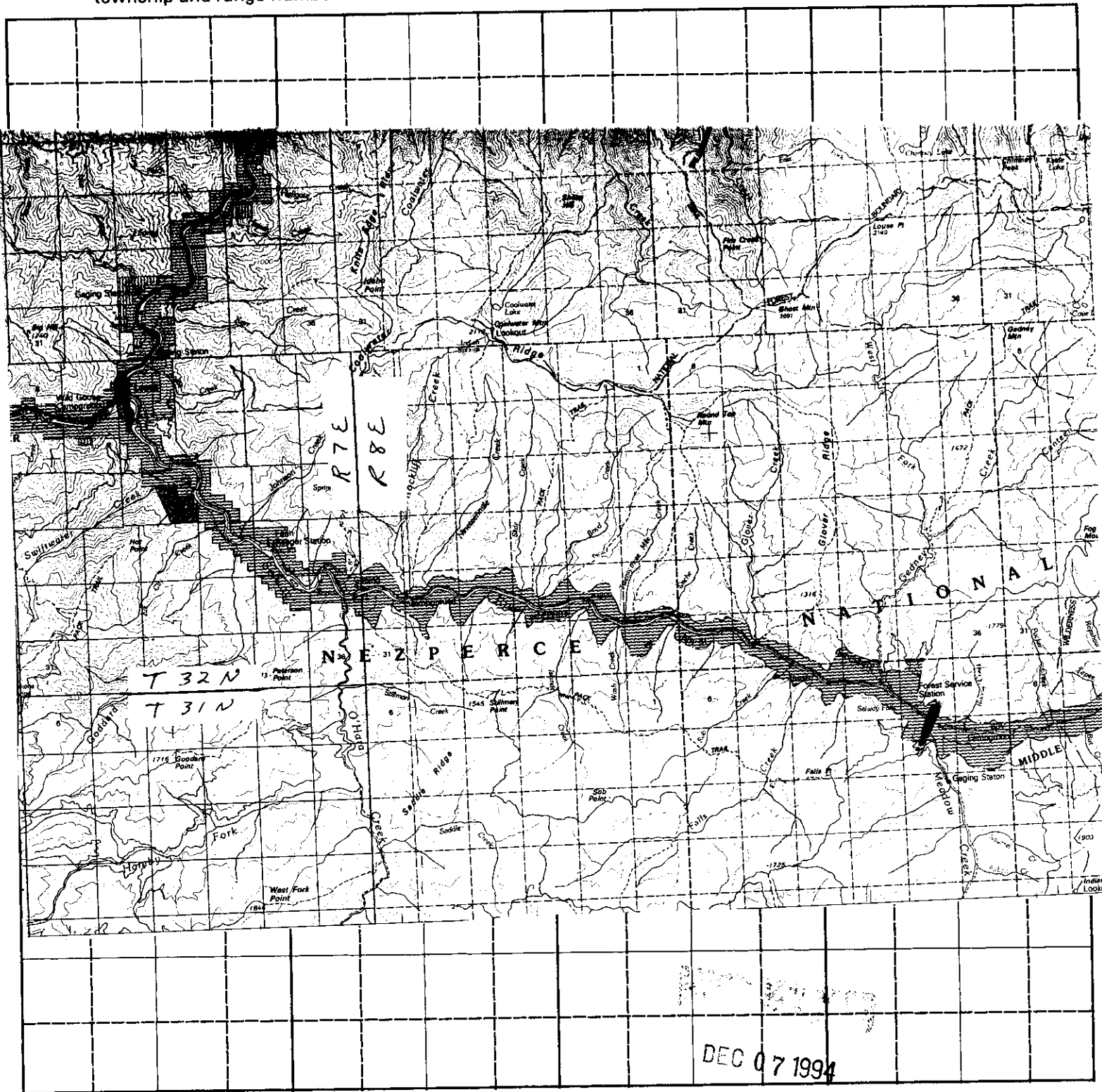
b. Who owns the land to be irrigated or place of use? _____

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing. _____

12. Remarks: The affected reach is approximately 19 miles long.

DEC 07 1994

13. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



Scale: 2 inches equal 1 mile.

BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

William S. Platts
(Applicant)

Received by [Signature] Date 8/3/92 1-30-92 Time 12:30 PM 8:33 AM Preliminary check by _____
Fee \$ _____ Received by _____ # _____ Date _____
Publication prepared by _____ Date _____ Published in _____
Publication approved _____ Date _____

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. _____, and said application is hereby _____.

1. Approval of said application is subject to the following limitations and conditions:

- a. SUBJECT TO ALL PRIOR WATER RIGHTS.
- b. Proof of construction of works and application of water to beneficial use shall be submitted on or before _____, 19 ____.
- c. The rate of diversion, if water is to be used for irrigation under this permit, when combined with all other water rights for the same land shall not exceed 0.02 cubic feet per second for each acre of land.
- d. The water right acquired under this permit if for hydropower purposes shall be junior and subordinate to all rights to the use of water, other than hydropower, within the State of Idaho that are initiated later in time than the priority of this permit and shall not give rise to any right or claim against any future rights to the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this permit.
- e. Other:

RECEIVED

DEC 07 1994



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000

Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

October 5, 1995

STATE OF IDAHO
IDAHO WATER RESOURCE BOARD
STATEHOUSE
BOISE ID 83720

RE: WATER RIGHT NO. 81-07160

Dear Water Right Holder(s):

Enclosed is a copy of the Water Right License issued on the above referenced permit. If you have any questions, please contact me within 10 days of receipt of this license.

Sincerely,

Shelley W. Keen
Water Rights Supervisor

SK:rl

Enclosure

RECEIVED

OCT 16 1995

RIGHT NO. 81-07160

Proof of beneficial use rec'd 8/16/95

If yes, has data been reviewed and a determination made that minimum flow is capable of being maintained? Yes No N/A

Data submitted fully complies with permit condition
(i.e. # of years of flow data sufficient) NA

Name Standardized
Total cfs & div. capacity listed as highest flow
P/D(s) beginning and ending descriptions listed
Use flows defined for entire year
P/U left blank (description in remarks)
Remarks/non-standard conditions
 Non-consumptive
 Watermaster control
 Jurisdiction retains to amend
 Description of reach(es)
 All other applicable permit conditions
 carried forward

Comments/adjustments _____

Printed license hand-edited

**ANALYSIS SHEET
FOR
PROOF OF BENEFICIAL USE**

Permit No. 81-07160 Reviewed by [Signature] Date 8-17-95

GENERAL CONSIDERATIONS

yes Name same as permit?
yes Address same as permit?
yes Proof timely received?
If not, complete calculation below.

TYPES OF USE

minimum flow

Correct Uses? yes

SOURCE OF WATER

☒ Surface water source

☐ Ground water source

☐ Drilling permit required?

☐ Copy in the file? Drilling Permit No. _____

☐ Amount paid for permit

☐ Well log in the file?

_____ Correct?

LICENSE EXAMINATION FEE

no Required?

☐ Amount Submitted

☐ Correct?

MEASURING DEVICE

no Required?

☐ Installed?

☐ Waiver requested?

PRIORITY CALCULATION

Date proof received	_____	_____
Date proof due	_____	- _____
No. of days late	_____	= _____
Priority Date	_____	+ _____
New Priority Date	_____	_____

DEFICIENCIES OR ACTION ITEMS

Proof acceptable

DATA ENTRY

New Address [X] Proof Made 8/16/95



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000

Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

August 17, 1995

IDAHO WATER RESOURCE BOARD
1301 N ORCHARD ST
P O BOX 83720
BOISE ID 83720-0098

PROOF ACKNOWLEDGEMENT LETTER

RE: PERMIT NOS. 81-07160, 81-07161, 81-07162, 96-08764

Dear Permit Holder:

The department acknowledges receipt of the proof of beneficial use forms submitted for the above referenced permits.

The next step in the process of recommending a minimum stream flow is for the department to review the information submitted and make a recommendation.

Sincerely,

JULIE L. YARBROUGH
Senior Secretary

c: IDWR - Region

NOTED
OCT 16 1995



State of Idaho
DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

January 10, 1995

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

Senator Jerry Twiggs
Senate Pro Tem
Statehouse Mail
Boise, ID 83720

RE: Water Right Applications for Permit for Minimum Streamflow
Nos. 81-07160, Selway River; 81-07161, Lochsa River; 81-
07162, Clearwater River, Middle Fork; and Water Right
Application for Permit for Minimum Lake Level Maintenance
No. 96-08764, Gamble Lake

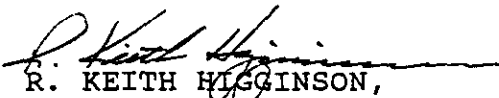
Dear Senator Twiggs:

Enclosed please find copies of the above referenced applications for permit. Enclosed with the applications are the decisions and orders which conclude the administrative processing of the applications.

As you are aware, Section 42-1503, Idaho Code, requires that the applications be reviewed by the legislature. As defined by statute, each application "(i) shall not become finally effective until affirmatively acted upon by concurrent resolution of the Idaho Legislature; or (ii) except that if the legislature fails to act prior to the end of the regular session to which the application was submitted, the application shall be considered approved."

This letter constitutes submittal of the applications to the legislature for approval. Please advise me if you desire further information or presentation on the nature of the applications.

Sincerely,


R. KEITH HIGGINSON,
Director

RKH:sc

Enclosures

cc: Legislative Council

1995
JAN 16 1995



State of Idaho
DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

January 10, 1995

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

Representative Michael K. Simpson
Speaker of the House
Statehouse Mail
Boise, ID 83720

RE: Water Right Applications for Permit for Minimum Streamflow
Nos. 81-07160, Selway River; 81-07161, Lochsa River; 81-
07162, Clearwater River, Middle Fork; and Water Right
Application for Permit for Minimum Lake Level Maintenance
No. 96-08764, Gamble Lake

Dear Representative Simpson:

Enclosed please find copies of the above referenced applications for permit. Enclosed with the applications are the decisions and orders which conclude the administrative processing of the applications.

As you are aware, Section 42-1503, Idaho Code, requires that the applications be reviewed by the legislature. As defined by statute, each application "(i) shall not become finally effective until affirmatively acted upon by concurrent resolution of the Idaho Legislature; or (ii) except that if the legislature fails to act prior to the end of the regular session to which the application was submitted, the application shall be considered approved."

This letter constitutes submittal of the applications to the legislature for approval. Please advise me if you desire further information or presentation on the nature of the applications.

Sincerely,


R. KEITH HIGGINSON,
Director

RKH:sc

Enclosures

cc: Legislative Council

[Faint circular stamp, possibly "RECEIVED" or "FILED"]
JAN 10 1995



State of Idaho
DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

December 6, 1994

RE: In the matter of Application for Permit No. 81-07160 in the name of Idaho Water Resource Board

Dear Interested Party:

The accompanying order is a "final order" issued by the department pursuant to section 67-5246 or 67-5247, Idaho Code.

Section 67-5246 provides as follows:

- (1) If the presiding officer is the agency head, the presiding officer shall issue a final order.
- (2) If the presiding officer issued a recommended order, the agency head shall issue a final order following review of that recommended order.
- (3) If the presiding officer issued a preliminary order, that order becomes a final order unless it is reviewed as required in section 67-5245, Idaho Code. If the preliminary order is reviewed, the agency head shall issue a final order.
- (4) Unless otherwise provided by statute or rule, any party may file a petition for reconsideration of any order issued by the agency head within fourteen (14) days of the issuance of that order. The agency head shall issue a written order disposing of the petition. The petition is deemed denied if the agency head does not dispose of it within twenty-one (21) days after the filing of the petition.
- (5) Unless a different date is stated in a final order, the order is effective fourteen (14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:
 - (a) the petition for reconsideration is disposed of; or
 - (b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

RECEIVED
DEC 07 1994

(6) A party may not be required to comply with a final order unless the party has been served with or has actual knowledge of the order. If the order is mailed to the last known address of a party, the service is deemed to be sufficient.

(7) A nonparty shall not be required to comply with a final order unless the agency has made the order available for public inspection or the nonparty has actual knowledge of the order.

(8) The provisions of this section do not preclude an agency from taking immediate action to protect the public interest in accordance with the provisions of section 67-5247, Idaho Code.

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a final order within fourteen (14) days of the service date of this order. The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See section 67-5243(4) Idaho Code.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, any party aggrieved by a final order or orders previously issued in a matter before the department may appeal the final order and all previously issued orders in the matter to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken,
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days a) of the service date of the final order, b) of an order denying petition for reconsideration, or c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration, whichever is later. See section 67-5273, Idaho Code. The filing of an appeal to district court does not in itself stay the effectiveness or enforcement of the order under appeal.

Sincerely,


R. KEITH HIGGINSON,
Director

RKH:sc
Enclosure

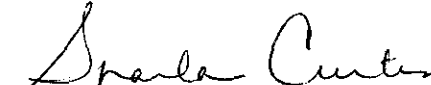
07 1984

CERTIFICATE OF MAILING

I hereby certify that on the 7th day of December, 1994, I mailed a true and correct copy, postage prepaid, of the Final Order Adopting Recommended Order to the parties listed below:

Idaho Water Resource Board
Statehouse Mail
Boise ID 83720

Dallas Burkhalter
Cindy Robertson
Pat Cole
State of Idaho
Dept. of Fish & Game
P.O. Box 25
Boise, ID 83707-0025



Sharla Curtis
Secretary

DEC 07 1994



State of Idaho
DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

November 5, 1994

RE: In the matter of Application for Permit No. 81-07160 in the
name of Idaho Water Resource Board

Dear Interested Party:

The accompanying order is a "recommended order" issued by the department pursuant to section 67-5243, Idaho Code. The provisions of this order will not become effective until the Director issues a final order in this matter.

Each party to these proceedings who appeared at the hearing may file a petition for reconsideration, briefs and exceptions to the recommended order and may request oral argument before the Director of the department as further described below:

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a recommended order with the hearing officer issuing the order within fourteen (14) days of the service date of the order. The hearing officer will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243 (3), Idaho Code.

EXCEPTIONS AND BRIEFS

Within twenty-one (21) days after (a) the service date of this recommended order, (b) the service date of a denial of a petition for reconsideration from this recommended order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this recommended order, any party may in writing support or take exceptions to any part of a recommended order and may file briefs in support of the party's position on any issue in the proceeding. Written briefs in support of or taking exceptions to the recommended order shall be filed with the Director. Opposing parties within have twenty-one (21) days to respond.

DEC 07 1994

ORAL ARGUMENT

The Director may schedule oral argument in the matter before issuing a final order. Oral argument on exceptions to a recommended order shall be heard at the discretion of the Director. If oral arguments are to be heard, the Director will, within a reasonable time, notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the recommended order shall be served on all other parties to these proceedings in accordance with Rules of Procedure 302 and 303.

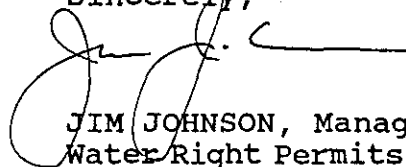
FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The agency may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

APPEAL OF FINAL ORDER TO DISTRICT COURT

A party aggrieved by a final order of the Director is entitled to judicial review in compliance with sections 67-5271 through 67-5279, Idaho Code.

Sincerely,



JIM JOHNSON, Manager
Water Right Permits Section

JJ:sc
Enclosure

DEC 07 1994



IDAHO FISH & GAME

600 South Walnut / Box 25
Boise, Idaho 83707-0025

Cecil D. Andrus / Governor
Jerry M. Conley / Director

October 3, 1994

RECEIVED

OCT 03 1994

Department of Water Resources

Mr. Norman Young
Idaho Department of Water Resources
1301 North Orchard Street
STATEHOUSE MAIL
Boise, ID 83720

RE: Minimum streamflow information for the Lochsa, Selway, and Middle Fork
Clearwater rivers

Dear Mr. ^{Norm}Young:

I have attached a copy of the 1991 Regional Fishery Management Investigations report prepared by the fishery staff from our Lewiston office. The report contains our most recent information on fishery resources in the Lochsa and Selway rivers. I have also included information on angler use in these rivers that I received from Tim Cochnauer, Regional Fishery Manager in our Lewiston office. If I can provide any additional information for you, please let me know.

Sincerely,
Cindy Robertson
Cindy Robertson
Staff Fishery Biologist

Attachments

CR:tlv

DEC 07 1994

JOB PERFORMANCE REPORT

State of: Idaho

Name: REGIONAL FISHERY MANAGEMENT
INVESTIGATIONS

Project: F-71-R-15

Title: Region 2 Rivers and Streams
Investigations

Subproject: 2-c

Period Covered: July 1, 1990 to June 30, 1991

ABSTRACT

During the first week of August 1990, fisheries personnel snorkeled 27 transects in the mainstem Selway River between White Cap Creek and Race Creek. Cutthroat trout numbers declined to 10.5/transect from 17.1/transect in 1988. Approximately 19% of the cutthroat trout observed in 1990 were estimated to be greater than 305 mm (12 inches) in length.

Snorkeling transects were established in the Little North Fork of the Clearwater River. Cutthroat trout densities were found to be as consistently low as seen in 1988.

Two hundred catchable-size rainbow trout were tagged with \$5 reward tags and stocked in the lower Lochsa and Selway rivers. The estimate of the minimum return rate was 4.5% (9/200).

Authors:

Tim Cochnauer
Regional Fisheries Manager

Ed Schriever
Regional Fisheries Biologist

DEC 07 1994

OBJECTIVES

1. Estimate return rate of catchable rainbow trout stocked in lower Lochsa and Selway rivers.
2. Develop five-year database on selected streams.
3. Evaluate hatchery-reared channel catfish planted in the Hells Canyon reach of the Snake River.

METHODS

Established snorkel transects in the Selway River were snorkeled to provide an annual index of relative numbers. In 1988, 9,180 hatchery-reared channel catfish were planted at Pittsburg Landing in the Hells Canyon section of the Snake River. All of these fish were adipose fin clipped.

During 1987-89, Department personnel tagged (Floy tags) 116 channel catfish ranging in total length from 30.6 cm to 68.4 cm (12.0 to 26.9 inches) in the Snake River.

A total of 40 transects were snorkeled in 1988 and 1990 in the mainstem Little North Fork from Minnesaka Creek upstream to Canyon Creek (Table 1). In addition, ten tributaries were snorkeled for fish densities in 1990. These surveys were the first to be conducted and will be used in combination with 1991 data to provide baseline information about fish populations in this drainage.

In the lower Lochsa and Selway rivers, we tagged 200 rainbow trout with \$5 reward floy anchor tags to estimate return-to-the-creel in the lower Lochsa and Selway rivers. We considered the tag return rates to be a minimum estimate of fish exploitation. Factors such as increased mortality of tagged fish, lost tags, or failure to return a captured tag negatively bias return estimates.

We stocked fish twice in each river, once on July 15, 1990, and again on August 16, 1990. The July 15 plants were 1,000 fish each and the August 16 plants were 1,500 fish each. We tagged a random sample of 50 fish from each plant. Lengths of all marked fish were recorded. The average size of marked fish was not noticeably different between plant dates or plant locations (Table 2.)

We scatter-planted fish throughout the lower 20 miles of both rivers. We posted signs at common information sites along both rivers. The signs included information on tagged fish and the tag return deposit boxes. We placed tag return drop boxes at the Selway Ranger Station and Three Rivers Resort in Lowell, Idaho. Drop boxes were locked and included information envelopes for tag deposit and angler data on tag number, fish size, catch location and date, angler name, and address.

Table 1. Summary of fish densities, determined by snorkeling, in the Little North Fork Clearwater River, 1988 and 1990.

Stream	Date	Relative Location	Fish densities/100 ²		
			Rainbow	Cutthroat	Total trout
Adair Creek	9/90	Lower stream section	1.14	0.0	1.14
	7/91	Lower stream section	0.0	3.67	3.67
Bear Creek	8/90	Lower stream section	24.5	0.0	24.5
Canyon Creek	8/90	Lower stream section	0.36	1.63	1.99
Foehl Creek	8/90	Lower stream section	0.45	2.26	2.71
	8/91	Lower stream section	6.78	0.56	7.24
Larkin Creek	8/90	Lower stream section	11.6	0.0	11.6
Montana Creek	9/90	Lower stream section	0.0	0.76	0.76
	7/91	Lower stream section	0.0	17.05	17.05
Rutledge Creek	9/90	Lower stream section	9.84	0.0	9.84
	7/91	Lower stream section	0.0	9.57	9.57
Sawtooth Creek	8/90	Lower stream section	2.80	3.92	6.72
	8/91	Lower stream section	0.0	0.0	0.0
Spotted Louis Creek	9/90	Lower stream section	1.81	5.42	7.23
	7/91	Lower stream section	0.0	21.3	21.3
Twin Creek	9/90	Lower stream section	0.0	0.0	0.0
	7/91	Lower stream section	0.0	10.79	10.79
Mainstem pools above Bear Creek	8/88	22 pools upstream to Canyon Creek	0.44	0.15	0.59
	8/90	9 pools upstream to Canyon Creek	0.71	1.14	1.85
	8/91	3 pools upstream of Foehl Creek	0.0	1.39	1.39
Mainstem pools below Bear Creek	8/88	9 pools downstream to Minnesaka Creek	0.16	0.18	0.34

Table 2. Length frequency distribution of rainbow trout tagged and stocked in lower Lochsa and Selway rivers in July and August, 1990.

Length (mm)	Total	Lochsa Jul 15	Selway Jul 15	Lochsa Aug 16	Selway Aug 16
140	1	1	0	0	0
145	1	0	1	0	0
150	0	0	0	0	0
155	1	0	1	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	4	2	2	0	0
175	0	0	0	0	0
180	0	0	0	0	0
185	1	1	0	0	0
190	2	1	1	0	0
195	7	1	5	0	1
200	7	1	1	2	3
205	30	3	5	15	7
210	20	7	2	5	6
215	24	6	5	6	7
220	18	7	1	7	3
225	16	6	4	2	4
230	18	3	5	5	5
235	14	3	4	3	4
240	5	3	1	0	1
245	8	1	3	2	2
250	7	3	2	1	1
255	4	0	3	0	1
260	5	0	4	0	1
265	0	0	0	0	0
270	0	0	0	0	0
275	0	0	0	0	0
280	0	0	0	0	0
285	2	1	0	0	1
290	0	0	0	0	0
295	3	0	0	0	3
300	2	0	0	2	0
Total	200	50	50	50	50
Ave. mm	220.1	216.6	219.3	219.0	225.6

RESULTS

Minimum estimated return was 4.5% (9/200). The average number of days at large for tagged fish was 30.6 (range 2 to 86 days). The average time at large for returns from the July 15 plant was 44.6 days and 13.0 days for the August 16 plant.

Three returns came from the Selway River and six returns came from the Lochsa River. Five tags were returned from the July 15 release and four tags were returned from the August 16 release. Six tags were returned by Idaho resident anglers and two were returned by non-residents (Table 3).

Hook and line sampling in May 1989 resulted in the capture of 29 channel catfish, 10 of which were marked by an adipose fin clip. The adipose fin-clipped catfish, from the 1988 plant of 9,180 fish, ranged in total length from 27.5 cm to 38.6 cm (10.8 to 15.2 inches).

None of the tagged channel catfish were returned by anglers during the 1987-90 fishing seasons.

Numbers of cutthroat trout counted in snorkel transects decreased in most sections of the Selway River during 1990 (Table 4). Overall, numbers decreased from 17.1 cutthroat trout per transect in 1988 to 10.5 cutthroat trout in 1990. Sections exhibiting the major decreases were from Bear Creek to Moose Creek (21.8 to 7.4) and from Halfway Creek to Three Link Creek (30.0 to 3.0) (Table 4). The percentage of cutthroat trout estimated to be greater than 305 mm (12 in) in snorkel transects showed an overall decrease (Table 5).

Personnel caught, measured, and released 816 cutthroat trout from White Cap Creek to Race Creek in 1990. These fish ranged from 119 mm to 415 mm (4.7-16.7 inches) in total length and averaged 261 mm (10.3 inches). In 1990, 30% of the cutthroat trout caught were over 305 mm (12 inches) compared to 24% in 1988 (Table 6). Comparison of cutthroat trout counted in snorkel transects and cutthroat trout caught by angling are given in Table 7.

Counts of juvenile steelhead trout decreased somewhat throughout the river sections sampled, even though three of four transects below Moose Creek showed higher numbers (Table 8).

As in previous years, juvenile chinook salmon numbers remained low in the mainstem Selway River transects. We counted a total of 13 juvenile chinook salmon in 27 transects. No adult chinook salmon were observed in the 1990 transects.

Mountain whitefish were less than in previous years (Table 9).

Table 3. Summary of reward tag returns on catchable trout stocked in lower Lochsa and Selway rivers, 1990.

Tag #	River	Size at stocking	Stocking date	Capture date	Days at large	Angler residency
R01003	Selway	260	Jul 15	Aug 4	20	R
R01026	Selway	256	Jul 15	Oct 9	86	NR
R01064	Lochsa	230	Jul 15	Sep 9	56	R
R01072	Lochsa	235	Jul 15	Sep 3	50	R
R01075	Lochsa	242	Jul 15	Jul 26	11	NR
R01093	Selway	235	Aug 16	Sep 15	30	UNK
R01163	Lochsa	226	Aug 16	Aug 18	2	R
R01172	Lochsa	205	Aug 16	Aug 28	12	R
R01188	Lochsa	300	Aug 16	Aug 24	8	R
Ave.:					30.6*	

*Average days at large for stocking date: Jul 15 = 44.6 days
Aug 16 = 13.0 days

DEC 07 1994

Table 4. Average number of cutthroat counted in snorkel transect in the Selway River (unroaded portion) from White Cap Creek to Race Creek, 1973 to 1978, 1980, 1982, 1984, 1986, 1988, and 1990. (ND = no data)

Stream section	1973	1974	1975	1976	1977	1978	1980	1982	1984	1986	1988	1990
White Cap Creek to Running Creek	4.2	3.4	6.8	7.2	10.8	7.4	13.2	11.2	11.0	15.2	13.3	6.75
Running Creek to Bear Creek	7.2	4.8	6.6	6.2	18.6	10.6	18.6	11.2	17.4	19.2	11.6	16.4
Bear Creek to Moose Creek	5.3	7.5	5.0	6.0	17.4	19.6	16.0	16.2	19.4	21.4	21.8	7.4
<u>Weighted means:</u>												
White Cap Creek to Moose Creek	5.6	5.2	6.1	6.5	15.4	12.5	16.2	12.8	16.3	18.8	15.7	10.4
Moose Creek to Halfway Creek	6.0	9.0	5.6	8.0	24.0	19.7	14.3	19.5	28.3	21.7	18.5	10.5
Halfway Creek to Three Links Creek	3.0	7.4	7.0	9.5	20.0	22.0	29.0	21.0	23.0	32.5	30.0	3.0
Three Links Creek to Jim's Creek	5.0	4.3	8.0	6.5	11.0	16.0	22.0	23.5	18.5	34.7	20.0	12.25
Jim's Creek to Race Creek	ND	2.5	1.2	5.7	7.5	3.5	12.3	18.0	14.0	14.5	14.8	11.0
<u>Weighted means:</u>												
Moose Creek to Race Creek	3.6	5.9	5.3	7.4	15.3	13.8	18.0	21.1	20.5	24.3	18.7	9.85

Table 5. Percent of cutthroat over 305 mm (12 inches) counted in snorkel transects in the Selway River (unroaded portion) from White Cap Creek to Race Creek, 1973 to 1978, 1980, 1982, 1984, 1986, 1988 and 1990. (ND = No data)

Stream section	Percent over 305 mm (12 inches)											
	1973	1974	1975	1976	1977	1978	1980	1982	1984	1986	1988	1990
White Cap Creek to Running Creek	9.5	16.7	11.8	22.2	22.6	16.2	13.2	8.9	15.9	21.3	24.5	29.6
Running Creek to Bear Creek	11.1	8.3	18.2	16.2	21.5	20.8	11.8	10.7	20.7	14.6	22.4	15.9
Bear Creek to Moose Creek	<u>34.4</u>	<u>15.5</u>	<u>8.0</u>	<u>25.0</u>	<u>25.0</u>	<u>21.4</u>	<u>9.9</u>	<u>15.0</u>	<u>22.7</u>	<u>18.7</u>	<u>22.9</u>	<u>16.2</u>
Overall percent:												
White Cap Creek to Moose Creek	18.9	12.7	13.0	20.6	21.8	22.3	11.5	12.0	20.6	17.8	23.2	15.6
Moose Creek to Halfway Creek	8.3	ND	3.6	17.5	12.5	13.6	18.6	17.9	22.1	22.7	21.6	9.5
Halfway Creek to Three Links Creek	19.0	16.2	19.0	26.3	17.5	15.9	17.2	23.8	26.1	22.7	26.7	33.0
Three Links Creek to Jim's Creek	23.3	5.8	12.5	38.5	27.5	25.0	27.3	22.3	28.4	24.0	23.7	16.3
Jim's Creek to Race Creek	<u>ND</u>	<u>10.0</u>	<u>50.0</u>	<u>11.8</u>	<u>26.5</u>	<u>35.7</u>	<u>4.1</u>	<u>11.1</u>	<u>30.4</u>	<u>15.5</u>	<u>13.6</u>	<u>46.7</u>
Overall percent:												
Moose Creek to Race Creek	17.3	8.0	13.0	21.3	18.9	19.4	17.6	19.9	29.7	21.9	21.0	19.6

Table 6. Percent of cutthroat trout by 50.8 mm (2 inch) size groups sampled in the Selway River by angling, 1975 to 1978, 1980, 1982, 1984, 1986, 1988, and 1990.

Length (mm)	1975	1976	1977	1978	1980	1982	1984	1986	1988	1990
102 to 151	8.7	2.2	8.7	0.8	4.6	2.8	4.2	2.4	12.4	0.1
152 to 202	31.3	16.4	20.9	20.7	13.6	19.0	22.2	15.8	14.0	22.7
203 to 253	27.0	24.8	24.5	15.7	22.2	25.2	28.2	23.3	25.1	16.5
254 to 304	21.0	35.7	27.0	34.1	30.7	31.2	24.7	27.1	24.3	26.2
305 to 355	11.2	18.4	17.0	23.2	25.3	18.9	16.8	28.0	21.0	25.7
356 to 405	0.8	2.5	1.3	5.1	3.4	2.3	3.8	3.1	3.0	4.7
Over 405	ND	ND	0.6	0.4	0.2	0.6	ND	0.3	0.2	0.5
Total # of cutthroat measured	233	238	229	470	352	549	429	322	506	816

Table 7. Comparison of cutthroat counted in snorkel transects and cutthroat by angling in the Selway River between White Cap Creek and Race Creek, 1975 to 1978, 1980, 1982, 1984, 1985, 1988 and 1990.

Year	Counted in snorkel transects		Total CT measured	Caught by angling	
	Average # of CT counted/ transect	% of CT >305 mm in transects		Average CT total length (inches)	% of CT caught >305 mm
1990	10.5	19	816	10.2	31
1988	17.1	22	506	9.8	24
1986	21.5	20	322	10.4	32
1984	18.3	23	429	9.8	21
1982	16.1	16	549	10.0	22
1980	17.0	14	352	10.4	29
1978	13.0	19	470	10.3	27
1977*	15.4	20	229	9.5	19
1976	7.1	21	238	10.2	22
1975	5.7	13	233	9.4	12
1974	5.5	10			
1973*	4.4	18			

*Extremely low flows

DEC 97 1994

Table 8. Average number of juvenile steelhead counted in snorkel transect in the Selway River (unroaded portion) from White Cap Creek to Race Creek, 1973 to 1978, 1980, 1982, 1984, 1986 and 1990.

Stream section	Percent over 305 mm (12 inches)											
	1973	1974	1975	1976	1977	1978	1980	1982	1984	1986	1988	1990
White Cap Creek to Running Creek	1.2	1.1	5.0	4.0	0.8	3.6	5.0	7.4	10.5	5.5	3.8	4.0
Running Creek to Bear Creek	2.2	3.2	7.0	2.2	2.0	0.8	3.4	6.0	14.4	3.8	4.4	4.0
Bear Creek to Moose Creek	<u>4.3</u>	<u>3.7</u>	<u>11.0</u>	<u>13.0</u>	<u>3.3</u>	<u>3.4</u>	<u>9.0</u>	<u>19.8</u>	<u>17.2</u>	<u>11.8</u>	<u>18.2</u>	<u>15.6</u>
<u>Weighted means:</u>												
White Cap Creek to Moose Creek	2.7	2.6	7.7	5.7	1.9	2.6	5.9	11.1	14.3	7.1	9.1	8.4
Moose Creek to Halfway Creek	27.5	17.8	17.8	13.2	5.3	22.0	9.7	40.3	43.8	23.7	22.5	34.3
Halfway Creek to Three Links Creek	14.0	17.4	25.3	19.5	9.5	12.0	19.0	28.0	31.0	21.0	35.0	42.0
Three Links Creek to Jim's Creek	19.3	8.8	32.5	23.5	24.7	18.7	18.9	24.2	26.7	28.7	31.8	41.0
Jim's Creek to Race Creek	<u>1.8</u>	<u>6.2</u>	<u>6.7</u>	<u>4.3</u>	<u>10.5</u>	<u>5.8</u>	<u>9.8</u>	<u>10.0</u>	<u>13.0</u>	<u>15.0</u>	<u>12.3</u>	<u>3.3</u>
<u>Weighted means:</u>												
Moose Creek to Race Creek	15.8	12.8	19.2	13.8	12.0	14.9	13.5	29.6	28.1	21.6	23.2	22.5

Table 9. Average number of whitefish counted in snorkel transects in the Selway River (unroaded portion) from White Cap Creek to Race Creek, 1973 to 1978, 1980, 1982, 1984, 1986, 1988, and 1990.

Stream section	1973	1974	1975	1976	1977	1978	1980	1982	1984	1986	1988	1990
	Percent over 305 mm (12 inches)											
White Cap Creek to Running Creek	35.2	31.1	8.4	17.8	32.8	9.4	15.8	18.8	23.2	22.2	17.3	22.75
Running Creek to Bear Creek	39.2	36.4	15.0	6.5	77.8	17.4	17.6	21.2	37.4	30.6	24.2	36.8
Bear Creek to Moose Creek	<u>31.1</u>	<u>34.2</u>	<u>11.8</u>	<u>9.0</u>	<u>51.3</u>	<u>16.6</u>	<u>19.0</u>	<u>30.2</u>	<u>44.2</u>	<u>31.6</u>	<u>29.6</u>	<u>10.2</u>
<u>Weighted means:</u>												
White Cap Creek to Moose Creek	34.9	33.9	11.7	10.9	44.9	12.1	17.6	23.4	35.8	28.6	24.1	21.7
Moose Creek to Halfway Creek	48.8	31.5	32.4	16.6	69.5	40.3	32.0	43.8	46.2	41.0	44.7	47.3
Halfway Creek to Three Links Creek	17.7	31.4	27.0	16.0	65.0	67.0	27.0	47.0	60.0	38.5	70.0	12.0
Three Links Creek to Jim's Creek	23.8	19.0	41.0	19.5	49.7	46.0	38.3	59.0	50.0	50.7	35.0	27.3
Jim's Creek to Race Creek	<u>5.2</u>	<u>16.8</u>	<u>18.7</u>	<u>2.0</u>	<u>41.0</u>	<u>20.5</u>	<u>20.0</u>	<u>21.0</u>	<u>32.5</u>	<u>19.7</u>	<u>22.3</u>	<u>8.8</u>
<u>Weighted means:</u>												
Moose Creek to Race Creek	23.0	21.5	29.3	13.3	50.4	39.6	28.8	47.9	44.2	35.9	36.8	26.5

DEC 07 1994

DISCUSSION

Rainbow trout in this evaluation averaged 220 mm (8.66 inches, 4.4 per pound). Fish size ranged from 140 mm to 300 mm and was normally distributed (Table 2). In this distribution, 34% (68/200) of the fish ranged from 230 mm to 300 mm.

Evaluation of return rate by size group indicates that fish smaller than 230 mm returned at a rate almost seven times lower than fish 230 mm to 300 mm long. Return rates on fish ranging from 230 mm to 300 mm long were three times higher than for fish smaller than 249 mm (Table 10).

Region 2 requests for catchable trout call for fish to average 250 mm long (9.88 inches, 3 per pound). Assuming fish stocked met the requested average size of 250 mm, it is reasonable to expect a length frequency distribution similar to Table 2, shifted 30 mm larger.

Using a shifted length frequency distribution corresponding to the requested size fish (average 250 mm), 91% (183/200) would be 230 mm and larger. A 10.3% return (Table 10) would return 19 fish, a 2.7 fold increase over the smaller fish used in this evaluation (220 mm average length).

The cost-benefit analysis suggests that if larger fish do return at a higher rate, planting fish that average 250 mm long is 69% more cost effective than fish averaging 220 mm long (Table 11).

This is not to suggest that the 10.3% return, even as a minimum estimate, is adequate to justify continuing this stocking program. However, if the return rate based on size is a real relationship and would apply in a system where return rates were favorable, the same benefit ratio (69% reduction in cost per fish caught) would apply.

We recommend discontinuing the stocking program in the lower Lochsa and Selway rivers. We recommend adopting management options more suited for wild/natural trout management in these rivers.

RECOMMENDATIONS

1. Discontinue stocking catchable rainbow trout in lower Lochsa and Selway rivers. Manage for wild fish.

Table 10. Comparison of return rate, by size group, on reward tagged rainbow trout stocked in lower Lochsa and Selway rivers, 1990.

Size (mm)	Number stocked	Number returned	Percent return
140-229	132	2	1.5
140-239	164	5	3.0
140-249	177	6	3.4
230-300	68	7	10.3
240-300	36	4	11.1
250-300	23	3	13.0
140-300	200	9	4.5

Table 11. Cost/benefit analysis of stocking \$1,000 of fish at average length of 220 mm and 250 mm with factored return rate of 10.8% on fish >230 mm and 1.5% on fish ≤229 mm.

#kg	(#lbs)	Average length	Fish/kg (fish/lb)	Number fish	# Fish >230 mm	10.8% return	# Fish <229 mm	1.5% return	Total fish	Cost/fish (dollars)
454	(1000)	220	9.7/(4.4)	4,400	1,496	154	2,904	44	198	5.05
454	(1000)	250	6.6/(3.0)	3,000	2,730	281	270	4	285	3.51

NOV 07 1994

Subject: Fisherman use of the Lochsa, Selway, and M.F. Clearwater rivers

1. Lochsa River: The most recent information we have is from the late 1970's and the early 1980's. In the lower Lochsa River, angler use was 6,000 to 9,000 hours annually.
2. Selway River: We have no specific use information on the lower Selway River, however we expect angler use to be similar to that of the lower Lochas River, 6,000 to 9,000 hours annually.
3. M.K. Clearwater River: Again, we have no specific angler use information. Because of the spring steelhead fishery, we expect use to be in the 5,000 hour range annually.

DEC 07 1994

SEP 19 1994

September 16, 1994

John Beal
Idaho Department of Water Resources
1301 N Orchard
Boise, ID 83706

Dear Mr. Beal,

I am writing to comment on minimum streamflows on the Lochsa, Selway and Middle Fork Clearwater Rivers.

I am president of River Odysseys West, a rafting company and Idaho corporation, that has been running trips on these three rivers since 1984. Adequate stream flows for recreational purposes are critical for our business as well as the pleasure of the over 600 people that float with us each year on these three rivers.

Specifically, I would ask the following:

Lochsa River - Your request of 1,140 cfc from March 1 to July 31 is minimal. I would like to see an additional 2000 or more from May 1 to July 1 to protect recreational boating opportunities. Of course the river typically has much greater flows than this during the May 1 to July 1 period and it is these flows which provide the adrenaline pumping whitewater that brings boaters from all over the country.

Selway River - In addition to your request for 1500 cfs from March 1 to July 31 I would ask for another 2000 cfc from May 1 to July 1. Again recreational boating is very popular during these naturally occurring high water periods.

Middle Fork Clearwater - The minimum you've requested from March 1 to July 31 is fine for recreational boating on this section, however I can't believe that such small flows wouldn't have an impact on fish and wildlife values. Normally the river would have a much greater flow from April 15th on than you have requested.

In your considerations should be the economic values of high water flows on the three rivers. There are a number of businesses in the area that greatly benefit from the many recreational boaters that float these rivers. These include the many gas stations in the area, the Three Rivers Resort at Lowell, the Wilderness Motel at Lowell, the cafes in Syringa, etc.

DEC 07 1994

River Odysseys West, Inc. • Remote Odysseys Worldwide, Inc.

P.O. Box 579 • Coeur d'Alene, Idaho 83816-0579 USA • Telephone (208) 765-0841 • Fax: (208) 667-6506

My business alone contributes significantly to the local economy. Our operation on the above three rivers, which we base out of the Three Rivers Resort in Lowell, grosses over \$70,000 in direct receipts for river trips. Much of this (about 35%) is spent in the very local economy as wages for our guides and drivers. Much of it is also spent at the local grocery stores in Kamiah, Kooskia and Grangeville. With the trickle down effect, each dollar has a big impact on these local communities.

In addition to my company, there are four other rafting outfitters that conduct trips on the Lochsa. Several of these would have at least the same economic impact as ROW does.

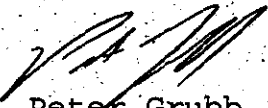
In the debate over water use, these three rivers certainly have more value as free-flowing, non-diverted waterways, with a natural ebb and flow providing the whitewater excitement that is such a popular pasttime for many Americans, than they would have if the water was diverted or in any way impeded.

I urge you to lobby hard for all your requested minimum stream flows and to request even higher figures, as suggested above.

It is critical to protect the fish, wildlife, and recreational values of these spectacularly beautiful river corridors and the associated riparian zones.

If I may provide any further information, please let me know.

Sincerely,



Peter Grubb
President

DEC 07 1994

John Beal
Idaho Dept. of Water Resources
1301 N. Orchard
Boise, ID 83706

RECEIVED September 13, 1994
SEP 19 1994
Department of Water Resources

Dear John Beal and Members of the Idaho Water Resource Board:

I am writing to give you my comments on your minimum lake level request of 2,081.1 feet above sea level for Gamble Lake, of 2,281.43 feet above sea level for Beaver Lake and on your streamflow requests for a minimum of 2,640 cfs from March 1 - July 31 and 1,323 cfs from Aug 1 through Feb. 28 for the Middle Fork of the Clearwater, for 1500 cfs from March 1 to July 31 and 760 cfs from August 1 to Feb. 28 for the Selway River and for 1,140 cfs from March 1 to July 31 and 563 cfs from Aug 1 to Feb 28 for the Lochsa River. I wholeheartedly support these requests and I would like to see an additional 1,000 to 2,000 cfs from May 1 through July 1 to allow for non-motorized recreational boating during these months. As an Idaho citizen and an outdoors-person I think it is essential to protect the health and abundance of wildlife as well as the water quality of rivers and lakes in this state. These places not only afford wonderful recreational experiences for humans in the area, they are absolutely necessary for the protection and preservation of Idaho wild life, human life and wetlands and must be protected from excess diversion.

Thank you

Roxane George

Roxane George

PO Box 9970

Moscow, ID 83843

DEC 07 1994

RECEIVED

SEP 19 1994

John Beal

Idaho Dept. of Water Resources

1301 N. Orchard

Boise, ID 83706

Department of Water Resources Ginnia + Ken Lagergren

Box 1241

Hailey, ID 83333

9/16/94

Subject: Minimum Streamflow + Lake Level Hearings

Lochsa River: We support the requested 1140 CFS from March 1 to July 31, and 563 CFS from Aug 1 to Feb. 28.

In addition we request another 2000 CFS from May 1 to June 15 for recreational boating.

Selway River: We support the requested 1500 CFS from March 1 to July 31, and 760 CFS from Aug 1 to Feb. 28.

Again, we ask for an additional 2000 CFS from May 1 to June 15 for recreational boating.

My husband and I have enjoyed countless trips to the areas of these rivers to kayak in these unforgettable waters. It is, hands down, our favorite place to come to boat for at least a week at a time. This is our favorite place to vacation each year, coming from home in Hailey.

In our view it is imperative that the water flows in these rivers be protected for the good of the Wildlife (who were there first!) and then for recreational boaters, who have been enjoying these rivers for decades.

LEWISTON TRIBUNE
9-20-94

Hearings at Kamiah to discuss stream-flow applications

KAMIAH — Minimum stream flow applications for the Lochsa and Selway rivers and the Middle Fork of the Clearwater will be the focus of hearings before the Idaho Water Resources Department today at Kamiah.

The first session begins this morning at 9 at the Clearwater Motel along U.S. Highway 12.

The hearing will review an application for a minimum flow of 2,640 cubic feet of water per second in the Clearwater's Middle Fork from March 1 through July 31. From Aug. 1 to Feb. 28, the minimum stream flow would be 1,323 cfs.

The affected stretch of the Middle Fork would be from the confluence of the Selway and Lochsa downstream to the South Fork of the Clearwater River at

Kooskia.

At 1 p.m., an application for the Selway is the focus. The application calls for a minimum flow of 1,500 cfs from March 1 to July 31 and 760 cfs from Aug. 1 to Feb. 29.

The petition covers the Selway from Meadow Creek downstream to its confluence with the Lochsa at Lowell.

The Lochsa hearing will begin at 3 p.m. on a proposal to set a minimum flow of 1,140 cfs from March 1 through July 31 and 563 cfs from Aug. 1 through Feb. 29.

The reach of river affected would be from Boulder Creek downstream to the Selway at Lowell.

The minimum streamflows are intended to protect fish and wildlife and could limit future water uses that could drop the river flows below those levels.

Minimum stream flows are junior to all previously granted water rights and cannot affect water rights, permits or applications with earlier priority dates, according to the water department.

SEP 27 1994



RECEIVED

SEP 26 1994

Department of Water Resources

Kootenai Environmental Alliance

P.O. Box 1598 Coeur d'Alene, ID 83816-1598

September 23, 1994

Mr. John Beal
Idaho Department of Water Resources
1301 N. Orchard
Boise, ID 83701

Dear Mr. Beal:

I realize that the date is past for commenting on minimum stream flows. I just returned from an extended trip and somehow missed the announcements before leaving. I hope you will consider our comments even though they are late.

In general, Kootenai Environmental Alliance supports your suggested minimum stream flows for the streams in northern Idaho listed below. These minimum flows are needed to adequately support fish and wildlife. We would favor additional water in the Spring, however, to support recreational boating on the Rivers. Stream by stream these are the recommendations developed by KEA, with our additions highlighted.

- * Middle Fork Clearwater River from the confluence of the Lochsa and Selway Rivers downstream to the confluence with the South Fork of the Clearwater:

We support the requested minimum of 2,640 cfs from March 1 through July 31 and 1,323 cfs from August 1 through February 28. **An additional 1,000 cfs from May 1 through July 1 would protect recreational boating on the River.**

- * Lochsa River from the confluence with Boulder Creek downstream to the confluence with the Selway River:

We support your request of 1,140 cfs from March 1 to July 31 and 563 cfs from August 1 to February 18. **An additional 2,000 cfs from May 1 to June 15 would protect recreational boating on the River.**

- * Selway River from the confluence with Meadow Creek downstream to the confluence with the Lochsa River:

We support the request for 1,500 cfs from March 1 to July 31 and 760 cfs from August 1 through February 28. **An additional 2,000 cfs from May 1 through June 15 would protect recreational boating on the River.**

DEC 07 1994

Beal, Page 2

We also support your requests for minimum water levels on Gamble (2,081.1 feet) and Beaver (2,281.43 feet) Lakes. These levels will protect and fish and wildlife values, foster waterfowl production and safeguard wetlands while protecting the beauty of the lakes.

Again, we apologize for this late submission. We would appreciate being added to your mailing list so that we may get notices of future hearings in a timely fashion. The full address is:

Kootenai Environmental Alliance
P.O. Box 1598
Coeur d'Alene, ID 83816-1598

Thank you for your consideration in this matter.

Respectfully,



George Brabb
President

DEC 07 1994

RECEIVED
SEP 19 1994
Department of Water Resources

PAM AUNAN
P. O. Box 234
Sandpoint, Idaho 83864
208-263-9341

Idaho Water Resource Board
John Beal
Idaho Dept of Water Resources
1301 Orchard
Boise, Idaho 83706

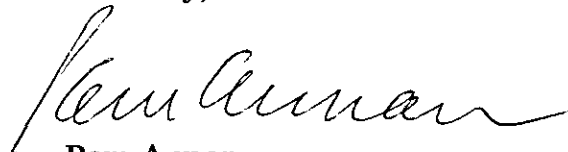
Ladies and Gentlemen,

Wildlife and fish values must be protected on ALL Idaho streams and rivers. I support free running undiverted clean water. This is submitted as part of the procedural record for MINIMUM streamflow for the

SELWAY RIVER - I support the requested minimum of 1,500 cfs from March 1 through July 31 and 760cfs or more from Aug 1 through Feb 28. I would like to see more: free running water of an additional 2,000 cfs from May 1 through June 15 to protect recreational boating plus keeping water temperatures lower for fish survival.

Thank you for considering public input.

Sincerely,



Pam Aunan

DEC 07 1994

Affidavit of Publication

RECEIVED

STATE OF IDAHO

COUNTY OF TWIN FALLS

SS.

OCT 04 1994

No 26352

I, Linda Capps McBuire being first duly sworn upon oath, depose and say that I am Christie Clark of the TIMES-NEWS, published daily, at Twin Falls, Idaho, and do solemnly swear that a copy of the notice of advertisement, as per clipping attached, was published in the regular and entire issue of said newspaper, and not in any supplement thereof, for three consecutive weeks, commencing with the issue dated September 1, 19 94, and ending with the issue dated September 15, 19 94.

And I do further certify that said newspaper is a consolidation, effective February 16, 1942, of the Idaho Evening Times, published theretofore daily except Sunday, and the Twin Falls News, published theretofore daily except Monday, both of which newspapers prior to consolidation had been published under said names in said city and county continuously and uninterruptedly during a period of more than twelve consecutive months, and said TIMES-NEWS, since such consolidation, has been published as a daily newspaper except Saturday, until July 31, 1978, at which time said newspaper began daily publication under said name in said city and county continuously and uninterruptedly.

And I further certify that pursuant to Section 60-108 Idaho Code, Thursday of each week has been designated as the day on which legal notice by law or by order of any court of competent jurisdiction within the state of Idaho, to be published weekly, will be published; and that at the head of the editorial column of said combined newspapers, and in each issue thereof, Thursday is announced as the day on which said legal notices will be published.

STATE OF IDAHO
COUNTY OF TWIN FALLS

On this 28 day of Sept. in the year of 1994, before me,
a Notary Public, personally appeared Linda Capps McBuire
known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.

Shirley R. Feltman
Notary Public for Idaho
Residing at Twin Falls, Idaho.
My commission expires: 5/19/2000

NOTICE OF HEARING
FOR APPLICATION FOR
MINIMUM STREAMFLOW
Notice is hereby given
that the Idaho Water Re-
sources Board submitted
an application for permit to
appropriate water to the
Department of Water Re-
sources, proposing to ap-
propriate water for a mini-
mum streamflow in the
Selway River, a tributary
of Middle Fork, Clearwater
River. The application is
further described as fol-
lows:

Source: Selway River
Application No.: 81-
07160

Proposed Priority: July
30, 1992

Amount and Period of
Use: 1500.0 cfs from
3/1 through 7/31
760.0 cfs from 8/1
through 2/29

Purpose of Minimum
Flow: Protection of fish
and wildlife habitat,
aquatic life and recre-
ational values.

Proposed Reach: From
the confluence of the
Selway River with
Meadow Creek to the
NWNE, S11, R9E, down-
stream to the confluence with the
Lochesa River in the
NWSW, S4, T32N,
R7E, Idaho County.

The Department of Water
Resources will hold a pub-
lic hearing at the Clearwa-
ter Motel, Hwy. 12, Kam-
iah, Idaho at 1:00 p.m. on
September 20, 1994 for
the purpose of hearing evi-
dence in regard to the ap-
plication. The hearing will
be held pursuant to the
provisions of Section 42-
202, Idaho Code.

Any party who wishes to
formally appear in the pro-
ceeding for the purpose of
presenting evidence or
cross-examining witnesses
should file a notice of ap-
pearance with the Director
of the Department of Wa-
ter Resources, Statehouse
II, Boise, ID 83720, five
days prior to the hear-
ing. Other parties may in-
formally present their
views and comments with-
out filing a notice of ap-
pearance. Written, informal
views and comments may
also be submitted to the
Department of Water Re-
sources prior to the hear-
ing.

Any hearing scheduled
will be conducted in a fa-
cility which meets the ac-
cessibility requirements of
the Americans with Dis-
abilities Act. If you re-
quire special accomoda-
tions in order to attend,
participate in or under-
stand the hearing, please
advise the department ten
days prior to the hear-
ing.

The hearing will be
conducted by Norm
Ljung, Idaho Dept. of Wa-
ter Resources, Statehouse
II, Boise, ID 83720,
telephone (208) 327-
1010.

If issued, this permit will
be subject to all prior wa-
rants.

KEITH HIGGINSON
Director, Idaho Dept. of
Water Resources.

DEC 07 1994

117.44

Notice is hereby given that the Idaho Water Resources Board submitted an application for permits to appropriate water to the Department of Water Resources proposing to appropriate water in a tributary stream of the Snake River, a tributary of Snake River, Clearwater River. The application is for the following: as follows:

OCT 03 1994

Reference No. 81-97180
 Reported Date: July 30, 1962
 Address and Period of Life: 1509.0 etc
 with 81 through 7721
 1509.0 etc from 81 through 2/29
 Purpose of Mission: Study, Evaluation of
 fish and wildlife habitat, especially the water
 resources of the area.

Referred to the Committee from the Conference
of the Senate, First Hill Session, March
in the House, 67th Term, RYE.
Committee to the Conference with the
Lobbying Board, 68th Term, 69th Term,
RYE, and 70th Term.

The Department of Water Resources will hold a public hearing at the Community Room, Room 12, North, State St. 130 p.m. on September 20, 1988 for the purpose of hearing evidence in support to the application. The hearing will be held pursuant to the provisions of Article 42, Title 1, Chapter 1, Section 1, of the Code of the County of Santa Clara. The hearing shall be held pursuant to the provisions of Article 42, Title 1, Chapter 1, Section 1, of the Code of the County of Santa Clara. The hearing shall be held pursuant to the provisions of Article 42, Title 1, Chapter 1, Section 1, of the Code of the County of Santa Clara. The hearing shall be held pursuant to the provisions of Article 42, Title 1, Chapter 1, Section 1, of the Code of the County of Santa Clara.

Any party who wishes to formally request to be considered for the position of a member of the cross country committee should send a letter of interest to the Director of the Department of Water Resources, Sanderson Hall, Suite 1D 20722, Five 157 West Park, P.O. Box 10000, Denver, Colorado 80202. Please include your name and telephone number along with a letter of appointment. Written information, plans and documents may also be submitted to the Department of Water Resources under the Freedom of Information Act.

[illegible]

Director, Idaho Dept. of Water Resources

A-91-914

On this 14th day of September in the year of 1994,
Before me, a Notary Public, personally appeared _____

One web

Notary Public for Idaho
Residing at Grangeville, ID
My commission expires: 10-8-99

DEC 07 1994

Affidavit of Publication

RECEIVED

OCT 05 1994

STATE OF IDAHO, }
County of Idaho, } ss.

I, ROBERT E. WHERRY, being first duly sworn, depose and say that I am the Publisher of the COTTONWOOD CHRONICLE, a weekly newspaper, published and issued weekly at Cottonwood, Idaho County, State of Idaho, which is of general circulation in said county and state, that the said notice, of which the one hereto is attached is a true copy, was published in said newspaper

for 3 weeks being published 3

times, the first publication being on the 1st

day of September, 1994, and the last

publication on the 15th day of

september, 1994; and that the said

notice was published in the newspaper proper and not in a supplement; that said newspaper has been continuously and uninterruptedly published in said county during a period of seventy-eight (78) consecutive weeks prior to the first publication of said notice or advertisement.

Robert E. Wherry

STATE OF IDAHO, }
County of Idaho, }

On this 29th day of September in the year of

1994, before me, a Notary Public, personally appeared Robert E.

Wherry, known or identified to me to be the person whose

name subscribed to the within instrument, and being by me first duly sworn,

declared that the statements therein are true and acknowledged to me that he

executed the same.

Notary Public for Idaho

Residing at Cottonwood

My commission expires: 12/94

NOTICE FOR MINIMUM STREAM FLOW

Notice is hereby given that the Idaho Water Resource Board submitted an application for permit to appropriate water to the Department of Water Resources, proposing to appropriate water for a minimum streamflow in the Selway River, a tributary of the Middle Fork, Clearwater River. The application is further described as follows:

Source: Selway River

Application No.: 81-07160

Proposed Priority: July 30, 1992

Amount and Period of Use:
1500.0 cfs from 3/1 through 7/31

760.0 cfs from 8/1 through 2/29

Purpose of Minimum Flow:
Protection of fish and wildlife habitat, aquatic life and recreational values

Proposed Reach: From the confluence of the Selway River with Meadow Creek in the NWNE, S11, T31N, R9E, downstream to the confluence with the Lochsa River in the NWSW, S4, T32N, R7E, Idaho County

The Department of Water Resources will hold a public hearing at the Clearwater Motel, Hwy. 12, Kamiah, Idaho at 1:00 p.m. on September 20, 1994 for the purpose of hearing evidence in regard to the application. The hearing will be held pursuant to the provisions of Section 42-1503, Idaho Code. In addition, the hearing officer will also receive informal testimony from the public beginning at 7:00 p.m. in the evening at the same location.

Any party who wishes to formally appear in the proceeding for the purpose of presenting evidence or cross examining witnesses should file a notice of appearance with the Director of the Department of Water Resources, Statehouse Mail, Boise, ID 83726, five (5) days prior to the hearing. Other parties may informally present their views and comments without filing a notice of appearance. Written informal views and comments may also be submitted to the Department of Water Resources prior to the hearing.

Any hearing scheduled will be conducted in a facility which meets the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or

OCT 07 1994

The Idaho Statesman

P.O. BOX 40, BOISE, IDAHO 83707

RECEIVED

SEP 19 1994

TRANSIENT
208-327-7900

LEGAL ADVERTISING INVOICE

Amount Due
\$132.48

Account Number Order No.: 841801		Identification Idaho Department of Water Resources Selway River	
Ordered By R. Keith Higginson	P.O. Number	Rate NT	Run Dates September 1, 8 & 15, 1994
Idaho Dept. of Water Resources 1301 North Orchard Street Statehouse Mail Boise, Idaho 83720-9000		Estimated Inches	Real Inches
		# Affidavits 1	Legal Number 8363

LEGAL NOTICE

NOTICE OF HEARING FOR APPLICATION FOR MINIMUM STREAMFLOW

Notice is hereby given that the Idaho Water Resource Board submitted an application for permit to appropriate water to the Department of Water Resources, proposing to appropriate water for a minimum streamflow in the Selway River, a tributary of Middle Fork, Clearwater River. The application is further described as follows:

Source: Selway River
Application No.: 81-07160
Proposed Priority: July 30, 1992
Amount and Period of Use:
1500.0 cfs from 3/1 to 7/31
760.0 cfs from 8/1 to 2/29
Purpose of Minimum Flow:
Protection of fish and wildlife habitat, aquatic life and recreational values.
Proposed Reach: From the confluence of the Selway River with Meadow Creek in the NWNE, S11, T31N, R9E, downstream to the confluence with the Lochsa River in the NWSW, S4, T32N, R7E, Idaho County

The Department of Water Resources will hold a public hearing at the Clearwater Motel, Hwy. 12, Kamiah, Idaho at 1:00 p.m. on September 20, 1994 for the purpose of hearing evidence in regard to the application. The hearing will be held pursuant to the provisions of section 42-1503, Idaho Code. In addition, the hearing officer will also receive informal testimony from the public beginning at 7:00 p.m. in the evening at the same location.

Any party who wishes to formally appear in the proceeding for the purpose of presenting evidence or cross examining witnesses should file a notice of appearance with the Director of the Department of Water Resources, Statehouse Mail, Boise, ID 83720, five (5) days prior to the hearing. Other parties may informally present their views and comments without filing a notice of appearance. Written informal views and comments may also be submitted to the Department of Water Resources prior to the hearing.

Any hearing scheduled will be conducted in a facility which meets

LINDA PORTER

_____, being duly sworn, deposes and says: That she is the Principal Clerk of The Idaho Statesman, a daily newspaper printed and published at Boise, Ada County, State of Idaho, and having a general circulation therein and which said newspaper has been continuously and uninterruptedly published in said County during a period of twelve consecutive months prior to the first publication of the notice, a copy of which is attached hereto; that said notice was published in The Idaho Statesman in conformity with Section 60-108, Idaho Code as amended, for three

~~Ex~~ consecutive weekly ☐ consecutive daily ☐ single ☐ odd skip

insertion(s) beginning with the issue of September 1, 19 94

and ending with the issue of September 15, 19 94

Linda Porter

STATE OF IDAHO)

ss.

COUNTY OF ADA)

On this 15th day of SEPTEMBER in the year of 1994, before me, a Notary Public, personally appeared LINDA PORTER, known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that she executed the same.

Linda Porter
Notary Public for Idaho
Residing at Boise, Idaho

My commission expires: 11-22-99

Proof of Publication
The Post-Register

RECEIVED

SEP 21 1994

Department of Water Resources

State of Idaho, }
County of Bonneville } ss

I, S. BOB BRIGHT or TED DELEZENE, first being duly sworn, depose and say: That I am the Production Supervisor or Asst. Prod. Supervisor of The Post Company, a corporation of Idaho Falls, Bonneville County, Idaho, publishers of The Post-Register, a newspaper of general circulation, published daily, except Saturday, at Idaho Falls, Idaho; said Post-Register being a consolidation of the Idaho Falls Times, established in the year 1890, The Idaho Register, established in the year 1880 and the Idaho Falls Post, established in 1903, such consolidation being made on the 1st day of November, 1931, and each of said newspapers have been published continuously and uninterruptedly, prior to consolidation, for more than seventy-eight (78) weeks and said Post-Register having been published continuously and uninterruptedly from the date of such consolidation, up to and including the last publication of notice hereinafter referred to.

That the notice, of which a copy is hereto attached and made a part of this affidavit, was published in said Post-Register for Three consecutive weeks, first publication having been made on the 31st day of August, 1994, last publication having been made on the 14th day of September, 1994, and that the said notice was published in the regular and entire issue of said paper on the respective dates of publication, and that such notice was published in the newspaper and not in a supplement.

Subscribed and sworn to before me, this 14th day of September, 1994...

[Signature]
Notary Public

My commission expires July 1, 1997...

B10

DEC 07 1994

**NOTICE OF
HEARING FOR
APPLICATION FOR
MINIMUM STREAMFLOW**

Notice is hereby given that the Idaho Water Resources Board submitted an application for permit to appropriate water to the Department of Water Resources, proposing to appropriate water for a minimum streamflow in the Selway River, a tributary of Middle Fork, Clearwater River. The application is further described as follows:

Source: Selway River

Application No.: 81-07160

Proposed Priority: July 80, 1992

Amount and Period of Use: 1500.0 cfs from 3/1 through 7/31

760.0 cfs from 8/1 through 2/29

Purpose of Minimum Flow: Protection of fish and wildlife habitat, aquatic life and recreational values

Proposed Reach: From the confluence of the Selway River with Meadow Creek in the NWNE, S11, T31N, R9E, downstream to the confluence with the Lochsa River in the NWSW, S4, T32N, R7E, Idaho County

The Department of Water Resources will hold a public hearing at the Clearwater Motel, Hwy. 12, Kamiah, Idaho at 1:00 p.m. on September 20, 1994 for the purpose of hearing evidence in regard to the application. The hearing will be held pursuant to the provisions of Section 42-1503, Idaho Code. In addition, the hearing officer will also receive informal testimony from the public beginning at 7:00 p.m. in the evening at the same location.

Any party who wishes to formally appear in the proceeding for the purpose of presenting evidence or cross examining witnesses should file a notice of appearance with the Director of the Department of Water Resources, Statehouse Mail, Boise, ID 83720, five (5) days prior to the hearing. Other parties may informally present their views and comments without filing a notice of appearance. Written informal views and comments may also be submitted to the Department of Water Resources prior to the hearing.

Any hearing scheduled will be conducted in a facility which meets the requirements of the Idaho Administrative Code, Title 42, Chapter 1, Section 1-101, and the Idaho Administrative Code, Title 42, Chapter 1, Section 1-102.

special accommodations in order to attend, participate in or understand the hearing, please advise the department ten (10) days prior to the hearing. The hearing will be conducted by Norma Young, Idaho Dept. of Water Resources, Statehouse Mail, Boise, Id 83720, telephone (208) 327-7900.

If issued, this permit will be subject to all prior water rights.

R. KEITH HIGGINSON
Director, Idaho Dept.
of Water Resources

Published: Aug 31, Sept 7, 14, 1994

DEC 07 1994

TRIBUNE PUBLISHING COMPANY, INC.
The Lewiston Morning Tribune
505 C St., P.O.Box 957
Lewiston, Idaho 83501
(208) 743-9411

Date 09/15/94 INVOICE NO. 509935
Account No. 964770
Description 509935NOTICEOFHEARINGF
Times 3 Lines 41

LEGAL ADVERTISING INVOICE

SOLD TO: ID DEPT OF WATER RESOURCES
1301 N ORCHARD ST
BOISE ID 83720

Tab. Lines 52
\$ 133.66

RECEIVED
SEP 10 1994

NOTICE: This is an invoice of Purchase made by you. Statement will be rendered the first of the month.
Please Retain This Invoice as Your Statement Will Refer to Invoice by No. Only.

AFFIDAVIT OF PUBLICATION

OF IDAHO, ss.
of Nez Perce

I, Karen J. Lewis, being duly sworn, deposes and says, I am
a Clerk of the Tribune Publishing Company, a corporation
existing under and by virtue of the laws of the
State of Idaho, publishers of the LEWISTON MORNING TRIBUNE,
a newspaper of general circulation published at Lewiston, Nez Perce County,
Idaho, and that the said Lewiston Morning Tribune is an established newspaper
which has been published regularly and issued regularly at least once a day
for more than 21 consecutive years next immediately preceding the first
publication of this notice, and has been so published uninterrupted for
the period of time set forth above; that the 509935NOTICEOFH attached hereto and which is made
a part of this affidavit was published in the said Lewiston Morning Tribune,
on the 09/01, or once a WEEK
consecutive WEEK, the first publication thereof being on
1/94, and the last publication thereof being on
5/94, and said 509935NOTICEOFH was so published in the
entire issue of said newspaper and was not in a supplement
and was so published in every issue and number of the said
newspaper during the period and times of publication as set forth above.

Karen J. Lewis

TESTED AND SWORN BEFORE ME THIS THE 16

September 1994

Sheral M. Santy

Notary Public in and for the State of Idaho,
residing at Lewiston, therein
Commission Expires 6-6-97

DEC 07 1994

RECEIVED
SEP 16 1994
Department of Water Resources

September 13, 1994

John Beal
Idaho Department of Fish and Game
1301 N. Orchard
Boise, ID 83706

RE: Minimum Stream Flows, Clearwater Drainage

Dear John,

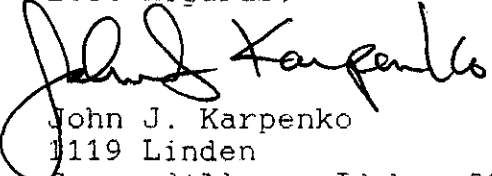
I am writing to you regarding the proposed minimum stream flows for the Clearwater Drainage. I am a fisherman and river paddler and use the Clearwater River Drainage each Spring, Summer, and Fall. This river drainage offers some of the last opportunities to catch undammed runoff and ocean run fish. These activities are interdependent, and require maintaining adequate stream flows. Please count me in as a river user and advocate of preserving the small portion of quality river segments remaining.

I support the Idaho Water Resource Board (IWRB) requested minimum stream flow of 2,640 cfs 3/1-7/31 and 1,323 cfs 8/1-2/28 for the middle Clearwater and ask that you request an additional 1000 cfs 5/1 - 7/1 for recreational boating.

Additionally, I support the requested 1,140 cfs 3/1 -7/31 and 563 cfs 8/1 -2/28 for the Lochsa River. Please request an additional 2,000 cfs 5/1 - 6/15 for recreational boating, for the Lochsa.

Finally, I would like to go on record as supporting the IWRB requested 1,500 cfs for 3/1 - 7/31 and 760 cfs for 8/1 -2/28 for the Selway River. Again, please request an additional 2,000 cfs from May 1 -June 15 for recreational boating opportunities.

Best Regards,


John J. Karpenko
1119 Linden
Coeur d'Alene, Idaho 83814

REC-7-713

HEARING NOTES -

Instream Flow hearings - 9/20/94 - KAMIAH
81-07160 SELWAY RIVER

HEARING OFFICER - Norm Young
IWRB - John Beal
Fish & Game - Cindy Robertson
Jody Bestrom
Public -
- Nez Perce representatives

Hearings
Exhibits
filmed here!

OPENING -

John Beal -

- Read Board's opening statement
- Submitted IWRB exhibits 1 thru 11
- Submitted draft ownership map
- Explained that 760 cfs was to go 2/1 to 2/29
- Reviewed application
- Explained a few things about exhibit #4
- 40% of use would be for the bridge
- 2nd range would be 760 cfs requested
- 3rd range would be 1200 cfs requested
- 4th range would be 1200 cfs requested
- 5th range would be 1200 cfs requested
- 6th range would be 1200 cfs requested
- 7th range would be 1200 cfs requested
- 8th range would be 1200 cfs requested
- 9th range would be 1200 cfs requested
- 10th range would be 1200 cfs requested
- 11th range would be 1200 cfs requested
- 12th range would be 1200 cfs requested
- 13th range would be 1200 cfs requested
- 14th range would be 1200 cfs requested
- 15th range would be 1200 cfs requested
- 16th range would be 1200 cfs requested
- 17th range would be 1200 cfs requested
- 18th range would be 1200 cfs requested
- 19th range would be 1200 cfs requested
- 20th range would be 1200 cfs requested
- 21st range would be 1200 cfs requested
- 22nd range would be 1200 cfs requested
- 23rd range would be 1200 cfs requested
- 24th range would be 1200 cfs requested
- 25th range would be 1200 cfs requested
- 26th range would be 1200 cfs requested
- 27th range would be 1200 cfs requested
- 28th range would be 1200 cfs requested
- 29th range would be 1200 cfs requested
- 30th range would be 1200 cfs requested
- 31st range would be 1200 cfs requested
- 32nd range would be 1200 cfs requested
- 33rd range would be 1200 cfs requested
- 34th range would be 1200 cfs requested
- 35th range would be 1200 cfs requested
- 36th range would be 1200 cfs requested
- 37th range would be 1200 cfs requested
- 38th range would be 1200 cfs requested
- 39th range would be 1200 cfs requested
- 40th range would be 1200 cfs requested
- 41st range would be 1200 cfs requested
- 42nd range would be 1200 cfs requested
- 43rd range would be 1200 cfs requested
- 44th range would be 1200 cfs requested
- 45th range would be 1200 cfs requested
- 46th range would be 1200 cfs requested
- 47th range would be 1200 cfs requested
- 48th range would be 1200 cfs requested
- 49th range would be 1200 cfs requested
- 50th range would be 1200 cfs requested
- 51st range would be 1200 cfs requested
- 52nd range would be 1200 cfs requested
- 53rd range would be 1200 cfs requested
- 54th range would be 1200 cfs requested
- 55th range would be 1200 cfs requested
- 56th range would be 1200 cfs requested
- 57th range would be 1200 cfs requested
- 58th range would be 1200 cfs requested
- 59th range would be 1200 cfs requested
- 60th range would be 1200 cfs requested
- 61st range would be 1200 cfs requested
- 62nd range would be 1200 cfs requested
- 63rd range would be 1200 cfs requested
- 64th range would be 1200 cfs requested
- 65th range would be 1200 cfs requested
- 66th range would be 1200 cfs requested
- 67th range would be 1200 cfs requested
- 68th range would be 1200 cfs requested
- 69th range would be 1200 cfs requested
- 70th range would be 1200 cfs requested
- 71st range would be 1200 cfs requested
- 72nd range would be 1200 cfs requested
- 73rd range would be 1200 cfs requested
- 74th range would be 1200 cfs requested
- 75th range would be 1200 cfs requested
- 76th range would be 1200 cfs requested
- 77th range would be 1200 cfs requested
- 78th range would be 1200 cfs requested
- 79th range would be 1200 cfs requested
- 80th range would be 1200 cfs requested
- 81st range would be 1200 cfs requested
- 82nd range would be 1200 cfs requested
- 83rd range would be 1200 cfs requested
- 84th range would be 1200 cfs requested
- 85th range would be 1200 cfs requested
- 86th range would be 1200 cfs requested
- 87th range would be 1200 cfs requested
- 88th range would be 1200 cfs requested
- 89th range would be 1200 cfs requested
- 90th range would be 1200 cfs requested
- 91st range would be 1200 cfs requested
- 92nd range would be 1200 cfs requested
- 93rd range would be 1200 cfs requested
- 94th range would be 1200 cfs requested
- 95th range would be 1200 cfs requested
- 96th range would be 1200 cfs requested
- 97th range would be 1200 cfs requested
- 98th range would be 1200 cfs requested
- 99th range would be 1200 cfs requested
- 100th range would be 1200 cfs requested

Today Brostrom - Fishery Biologist @ Coeur d'Alene
- Reef statement - submitted for record
- Miss & General as old record
- New Yukon flow $\div 2 \times$ average - 5.53 p
- April thru June every year -

DEC 07 1994

Clearwater Motel, Kamiah

Check Box If
You Wish To
Comment

[illegible]



September 13, 1994

RECEIVED

SEP 15 1994

Department of Water Resources

Norm Young
Idaho Department of Water Resources
1301 N. Orchard
Boise, ID 83706

Dear Mr. Young:

Idaho Rivers United, a statewide river conservation group dedicated to preserving, protecting, and enhancing our water resources and riverine environments, is pleased to comment on proposed Minimum Streamflows and Lake levels for three North Idaho rivers and two lakes.

SPECIFIC RECOMMENDATIONS

Middle Fork Clearwater River - No. 81-07162

We support the requested minimums of 2,640 CFS from March 1 through July 31 and 1,323 CFS from August 1 to February 28/29. This flow regime, based on Tennants method (aka Montana method) will provide the bare minimum for survival of fish and wildlife species, habitat and maintenance of water quality.

We recommend that the Idaho Water Resource Board file a supplemental application immediately to appropriate an additional 1,000 CFS from May 1 through July 1 to protect the minimum needed for safe recreational float boating, kayaking and canoeing. This recommendation is based on personal experience and information obtained from "Idaho Whitewater, the Complete River Guide", by Don McClaran and Greg Moore, 1989.

Selway River - No. 81-07160

We support the requested minimums of 1,500 CFS from March 1 to July 31 and 760 CFS from August 1 to February 28/29. This flow regime, based on Tennants method (aka Montana

EXECUTIVE DIRECTOR

Wendy L. Wilson
Boise

BOARD OF DIRECTORS

Gail Aler
Gooding

Bill Davidson
Pocatello

Maria Eschen, Ph.D.
Boise

Alan Hamilton
Eagle

M. Keene Huettl, Ed.D.
Pocatello

Bruce Johnstone
Boise

Mary McGown, Ph.D.
Boise

Jerry Myers
Salmon

Dr. Charles Pezeshki
Troy

Gerald Sahke
Idaho Falls

Tom Stuart

Wale Szczepanowski

Curtis Webb
Twin Falls

DEC 07 1994

method) will provide the bare minimum for survival of fish and wildlife species, habitat and maintenance of water quality.

We recommend that the Idaho Water Resource Board file a supplemental application immediately to appropriate an additional 2,000 CFS from May 1 to June 15 to protect the minimum needed for safe recreational float boating, kayaking and canoeing. This recommendation is based on personal experience and information obtained from "Idaho Whitewater, the Complete River Guide ", by Don McClaran and Greg Moore, 1989.

Lochsa River - No. 81-07161

We support the request for minimum flows of 1,140 CFS from March 1 through July 31 and 563 CFS from August 1 through February 28/29. This flow regime based on Tennants method will provide the bare minimum necessary for survival of fish and wildlife and to protect water quality.

We recommend that the Idaho Water Resource Board file a supplemental application immediately to appropriate an additional 2,000 CFS to maintain the minimum needed for safe recreational float boating, kayaking and canoeing. This recommendation is based on personal experience (I am a licensed river guide on this river reach) and information obtained from "Idaho Whitewater, the Complete River Guide ", by Don McClaran and Greg Moore, 1989.

Gamble Lake and Beaver Lake

We support the minimum lake level request for Gamble Lake of 2,081.1 feet above sea level and 2,281.43 feet above sea level for Beaver Lake. Minimum lake levels for these two small lakes will protect fish and wildlife values, foster waterfowl production, safeguard wetlands, and preserve the lake's beauty. These small lakes provide valuable habitat relatively free from mans influence.

RECEIVED
JUL 10 1994

GENERAL COMMENTS

Idaho Rivers United and our members wholeheartedly support efforts by the Idaho Water Resource Board to legally recognize the value of instream flows and lake protection. Meeting surface water ecological needs is a key ingredient for sustainable water resource management. The Board, in its capacity, appears to be fulfilling its obligation and duty to protect public trust values for all the citizens of Idaho. We appreciate their continued efforts and will support them in those efforts.

In the future we'd like the board to consult with us, the Idaho Whitewater Association and the Idaho Dept. of Parks and Recreation to discuss recreational flow needs. Tennants method does not adequately address those needs. In many cases we have data or recommendations available for minimum flow levels needed for recreational float boating, kayaking and canoeing. The Idaho Outfitters and Guide Association is also an excellent resource on rivers which they offer commercial services. Including these seasonal flow requirements in the initial request to appropriate the state's waters will prevent the need for an additional request (as we have recommended).

We remain curious how the the Department and IWRB will mesh these minimum flow requests with competing requests by the Nez Perce Nation who have claimed these waters. The US Forest Service has presumably filed federal reserved water rights claims since all three river segments are federally designated Wild and Scenic Rivers. These requests will be senior to the boards' request.

Although this may raise a question of state sovereignty, we hope the board will err on the side of protection even if it is overlapping between Tribal claims and federal claims.

Thank you for the opportunity to comment on this very important issue.

Sincerely,

Marti L. Bridges
Marti L. Bridges
Water Policy Director

DEC 07 2004

RECEIVED

SEP 12 1994

Department of Water Resources

September 10, 1994
3200 Thomas Lane
Coeur d'Alene, Idaho 83814
(208) 664-1809

John Beal
Idaho Department of Water Resources
1301 N. Orchard
Boise, ID 83706

Since I will be unable to attend the North Idaho Minimum Streamflow Hearings in Kamiah on September 20, I would like to give written comments on the proposals.

I was born and raised in Idaho and have lived here all of my life. In those 43 years, I have watched the stream flows on too many rivers get sucked down for one reason or another with no regards for the health of the fish and wildlife that depend on minimum stream flows for survival. Protecting these stretches of river is at least a start in the protection of fish and wildlife over economic interests.

The request for additional protection for recreational boating is also a worthwhile endeavor that will help protect the rivers for boating and add money to the local economies of the surrounding communities and in Idaho in general.

Middle Fork Clearwater River:

I support the requested minimum of 2,640 from March 1 through July 31 and 1,323 from August 1 through February 28. These flows will provide the minimum needed for fish and wildlife values.

As a recreational boater I would also ask you to apply for an additional 1000 cfs from May 1 through July 1 to protect recreational boating.

Selway River:

Please support the request for 1500 cfs from March 1 to July 31, and 760 cfs from August 1 to February 28 to protect fish and wildlife values.

Also, please ask for an additional 2000 cfs from May 1 to June 15 to help protect recreational boating.

Lochsa River:

I am in support of your request of 1,140 cfs from March 1 to July 31 and 563 cfs from August 1 to February 28 to protect fish and wildlife values.

Please apply for an additional 2000 cfs from May 1 to June 15 to protect recreational boating opportunities.

Sincerely,

Rozanne Evans

Rozanne Evans

DEC 07 1994

Rivers

USER: SCURTIS

LINE2LINE2LINE2LINE2LINE2LINE2LIN
LINE3LINE3LINE3LINE3LINE3LINE3LIN
LINE4LINE4LINE4LINE4LINE4LINE4LIN
LINE5LINE5LINE5LINE5LINE5LINE5LIN

USER: SCURTIS

LINE2LINE2LINE2LINE2LINE2LINE2LIN
LINE3LINE3LINE3LINE3LINE3LINE3LIN
LINE4LINE4LINE4LINE4LINE4LINE4LIN
LINE5LINE5LINE5LINE5LINE5LINE5LIN

81-02003
CHAS STREIT

KOOSKIA ID 83539

81-02007
STATE OF IDAHO
DEPT OF FISH & GAME
BOX 25
BOISE

ID 83720

81-02011
STATE OF IDAHO
DEPT OF FISH & GAME
BOX 25
MISSOULA

MT 59807

81-02012
STATE OF IDAHO
DEPT OF FISH & GAME
BOX 25
BOISE

ID 83720

81-02020
STATE OF IDAHO
DEPT OF FISH & GAME
BOX 26
BOISE

ID 83720

81-02022
GEORGE M. MATTESON
P.O. BOX 1
GRANGEVILLE

ID 83530

81-02028
US DEPT OF INTERIOR
FISH & WILDLIFE SERVICE
PO BOX 3737
PORTLAND

OR 97208

81-02031
L. W. SLASOR
STAR RT. BOX 2
KOOSKIA

ID 83538

81-04001
FRANCIS J. HULSEIN
STAR RT. BOX 20
KOOSKIA

ID 83539

81-04003
EARL K. MONROE
STAR RT.
KOOSKIA

ID 83539

81-04009
EUNICE N. BUNNEL
STAR RT.
KOOSKIA

ID 83539

81-04011
LOYD PURYEAR
STAR RT. 1 BOX 103
KOOSKIA

ID 83539

81-04016
JACK C. KIRKLAND
ROUTE 1, BOX 48
KOOSKIA

ID 83539

81-04019
J. C. HOEGER
THREE CREEK RANCH
KOOSKIA

ID 83539

81-04021
G. W. SCHMIDT
BOX 141
KOOSKIA

ID 83539

81-04022
JOHN F. SCHURBON
STAR RT.
KOOSKIA

ID 83539

81-04023
JOSEPH SCHWARTZ
STAR RT. BOX 41
KOOSKIA

ID 83529

81-04024
BARNY BENTON
STAR RT. BOX 45
KOOSKIA

ID 83539

81-04026
ERNEST W. BOHN
STAR RT. BOX 69
KOOSKIA

ID 83539

DEC 07 1994

WAYNE L. MONTGOMERY
RT. 1 BOX 54A
KOOSKIA ID 83539

81-04127
OLIN R. COOLEY
RT. 1 BOX 53B
KOOSKIA ID 83539

81-04129
PAULA LYONS
RT. 1 BOX 80
KOOSKIA ID 83539

81-04138
HOWARD W. DAUGHERTY
RT. 2 BOX 123
KAMIAH ID 83536

81-07000
V. H. RUCKMAN
KNUTSON BLDG.
NEZ PERCE ID 83543

81-07001
JOE L. ROBERTS
STAR RT. BOX 25
KOOSKIA ID 83539

81-07003
MRS. J. P. BUNNEL
STAR RT.
KOOSKIA ID 83539

81-07006
HUGH H. HELPMAN, JR.
STAR RT. BOX 45A
KOOSKIA ID 83539

81-07007
GEORGE RENSINK, JR.
STAR RT. BOX 110
KOOSKIA ID 83539

81-07010
EMMETT E. REYNARSON
BOX 83
KOOSKIA ID 83539

81-07012
ANTHONY E. SCHINNER
KOOSKIA ID 83539

81-04030
ROBERT HENDRICKSON
RT. 1 BOX 14
KOOSKIA ID 83539

81-04031
ROBERT G. HENDRICKSON
RT. ~~dup~~ BOX 14
KOOSKIA ID 83539

81-04032
NEAL PARSELL
STAR RT.
KOOSKIA ID 83539

81-04034
DORRENCE PFEFFERKORN
STAR RT.
KOOSKIA ID 83539

81-04037
FRANK HAWKINS
1208 8TH ST.
LEWISTON ID 83501

81-04039
FLOYD L. WELBORN
WINCHESTER ID 83555

81-04040
FLOYD WELBORN
WINCHESTER ID 83555

81-04041
SYRINGA LAND & TIMBER CO.
STAR RT.
KOOSKIA ID 83539

81-04042
ROBERT GRIFFITHS
P.O. BOX 6015
SAN JOSE CA 95150

81-04052
US DEPT OF AGRICULTURE
FOREST SERVICE
FEDERAL BUILDING
MISSOULA MT 59807

81-04122
RALPH W. KING
722 LINDEN ST.
LEWISTON ID 83501

DEC 07 1994

HAROLD L. DUGGER
RT. 1 BOX 37
KOOSKIA

ID 83539

OWEN H. SMITH
P.O. BOX 211
KOOSKIA

ID 83539

81-07019
IVAN L. HENDREN
ROUTE 1, BOX 49
KOOSKIA

ID 83539

81-07048
MARSHALL E. CROCKER
RT. 1 BOX 49A
KOOSKIA

ID 83539

81-07021
FRANK LEMOS
RT. 3
BUHL

ID 83316

81-07049
JUANITA BUNNEY
STAR RT. BOX 23A
KOOSKIA

ID 83539

81-07025
J. WARD GREENE
STAR RT. 2 BOX 315
KOOSKIA

ID 83535-0000

81-07050
MAX E. MOREFIELD
612 PARK AVE.
LEWISTON

ID 83501

81-07030
MILES H. ENGLE
STAR ROUTE
KOOSKIA

ID 83539

81-07054
PHYLLIS SAXTON
C/O DUANE SAXTON
131 SNAKE RIVER AVE.
LEWISTON

ID 83501

81-07032
JOE R. DUNN
C/O ED BONHAM
RT. 1 BOX 180
KOOSKIA

ID 83539

81-07055
TONY L. SCHINNER
STAR RT. BOX 30
KOOSKIA

ID 83539

81-07034
RONALD WILSON
RT. 1 BOX 43
KOOSKIA

ID 83539

81-07056
J. W. FAIRLEY
P.O. BOX 748
OROFINO

ID 83544

81-07035
WAYNE C. GRAY
RT. 1 BOX 46
KOOSKIA

ID 83539

81-07061
BARNEY BENTON
HCR 75 BOX 45
KOOSKIA

ID 83539

81-07038
LEO RENCEHAUSEN
RT. 1 BOX 81A
KOOSKIA

ID 83539

81-07061
DOUG BENTON
HCR 75 BOX 45
KOOSKIA

ID 83539

81-07040
L. W. SLASOR
KOOSKIA

ID 83538

81-07064
JAMES A. CRAWFORD
RT. 1 BOX 98A
KOOSKIA

ID 83539

81-07041
BEN L. SMITH
RT. 1 BOX 36B
KOOSKIA

ID 83539

81-07067
OTTO BRAMMER
RT. 2 BOX 30
LENORE

ID 83541

DEC 67 1984

81-07072
DONALD F. PETTY
STAR RT. BOX 43
KOOSKIA

ID 83539

JAMES R BRANNER
HC 75 BOX 5A
KOOSKIA

ID 83539

81-07075
HARVEY D. THOMPSON
STAR RT. 1 BOX 108
KOOSKIA

ID 83539

81-07126
C & B MINING CLAIMS PARTNERSHIP
P.O. BOX 192
GRANGEVILLE

ID 83530

81-07084
GENE R. ALFORD
RT. 1 BOX 49
KAMIAH

ID 83536

81-07136
CLEO CASTELLANOS
4649 CROCKETT BENCH RD
OROFINO

ID 83544

81-07089
HAROLD T. BOLANDER
HC 75 BOX 108A
KOOSKIA

ID 83539-0000

81-07140
LEE A. TUDDER
P.O. BOX 1
CLARKSTON

WA 99403

81-07095
WALTER T. SHRINER
104 DOGWOOD ST.
CROSSETT

AR 71635

81-07142
VERLE PFEFFERKORN
RT. 1 BOX 99
KOOSKIA

ID 83539

81-07103
ORVAL SYRON
HCR 75 BOX 112A
KOOSKIA

ID 83539-0000

81-07142
DORRENCE PFEFFERKORN
HC 75 BOX 140
KOOSKIA

ID 83539

81-07106
STEPHEN M. WEAVER
HCR 75 BOX 37
KOOSKIA

ID 83539

81-07148
RUTH MC COMBS
HCR 75 BOX 29
KOOSKIA

ID 83539

81-07113
PAUL RAYMOND THOMPSON
RT 1 BOX 55B
KOOSKIA

ID 83539

81-07150
ROBERT C THOMAS
RT 1 BOX 39C
KOOSKIA

ID 83539

81-07117
HAROLD A. THOMAS, JR.
HC 75 BOX 94
KOOSKIA

ID 83539-0000

81-07154
STATE OF IDAHO
DEPT OF FISH & GAME
PO BOX 45
BOISE

ID 83720

81-07118
STATE OF IDAHO
DEPT OF FISH & GAME
PO BOX 25
BOISE

ID 83707

81-07157
EUGENE H TENNIES
HCR 75 BOX 32
KOOSKIA

ID 83539

81-07119
STATE OF IDAHO
DEPT OF FISH & GAME
PO BOX 25
BOISE

ID 83707

81-07159
EUGENE H TENNIES
HCR 75 BOX 32
KOOSKIA

ID 83539

DEC 07 1994

81-07161
STATE OF IDAHO
IDAHO WATER RESOURCE BOARD
STATEHOUSE
BOISE ID 83720

81-07162
STATE OF IDAHO
IDAHO WATER RESOURCE BOARD
STATEHOUSE
BOISE ID 83720

81-07163
RICHARD A THOMPSON
HCR 75 BOX 117
KOOSKIA ID 83539

DEC 67 1964

Rep. June E. Judd
2105 College
St. Maries ID 83861

Kenneth E. Hungerford
2005 Orch Ave.
Moscow ID 83843

Senator Bruce L. Sweeney
Box 604
Lewiston ID 83501

Mike Satterwhite
327 Skyline Drive
Lewiston ID 83501

Rep. Paul C. Keeton
902 Cedar
Lewiston ID 83501

Clearwater County Commissioner
Box 586
Orofino ID 83544

Rep. Dan Mader
387 Reservoir Drive
Lewiston ID 83501

Idaho County Commissioners
Courthouse
Grangeville ID 83530

Dan Picard
Water Resource Department
Nez Perce Tribe of Idaho
P.O. Box 365
Lewiston ID 83540

Lewis County Commissioners
Courthouse
Nezperce ID 83543

Chris Hardy
Natural Resources Department
Coeur d'Alene Tribe
Rt. 1
Plummer ID 83851

Nez Perce County Commissioners
Box 896
Lewiston ID 83501

Guy Hopkins
Kootenai Tribe of Idaho
P.O. Box 1269
Bonners Ferry ID 83805

Senator Mary Lou Reed
10 Giesse Road
Coeur d'Alene ID 83814

Susan Martin
U. S. Fish & Wildlife Service
4696 Overland Road, Room 576
Boise ID 83705

Senator Marguerite McLaughlin
704 Floyd Ave.
Orofino ID 83544

Cindy Robertson
IF&G
Statehouse Mail
Boise ID 83720

Rep. Charles D. Cuddy
12640 Hartford Ave.
Orofino ID 83544

Clearwater

DEC 07 1994

Mina King
Nezperce National Forest
Route 2 Box 475
Grangeville ID 83530

Dave F. Rydalch
Route 2, Box 108
St. Anthony ID 83445

give to Bill Graham for USFS

Mary Luckachick
IP&R
Statehouse Mail
Boise ID 83720

Marti Bridges
Idaho Rivers United
P.O. Box 633
Boise ID 83701

Gwen Burr
ID Dept Health & Welfare-DEQ
2110 Ironwood Parkway
Coeur D'Alene ID 83814

James Caswell
Clearwater National Forest
12730 Highway 12
Orofino ID 83544

BRETT SWIFT
LEWIS & CLARK LAW SCHOOL
10015 SW TERWILLIGER BLVD
PORTLAND OR 97219

DEC 07 1994

DAVID I SEY
KOOSKIA ID 83539

81-02004

NIELS HANSEN
KOOSKIA ID 83539

81-02005

81-02006
B. F. CRESSLER
KOOSKIA ID 83539

81-02014
DON MC COMBS
KOOSKIA ID 83539

81-02015
EARL CLEGHORN
KOOSKIA ID 83539

81-02019
ROY T LITTLE
KOOSKIA ID 83539

81-02030
CHARLES J STRITE
KOOSKIA ID 83539

81-07033
LOIS HENDREN
STITES ID

DEC 07 1994



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000

Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

August 22, 1994

Times News
Box 548
Twin Falls, ID 83301

Gentlemen:

Enclosed you will find legal notices which we wish to have published in your newspaper. We have inserted the required publication dates. If you cannot publish the notices on the proposed dates, please contact me immediately.

In order to receive payment, an affidavit of publication must be submitted to the Department along with the publication bill. Please direct the affidavit of publication and bill to my attention.

Sincerely,

SHARLA CURTIS
Secretary

Enclosures

DEC 6 1994



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000

Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

August 22, 1994

Post Register
Box 1800
Idaho Falls, ID 83401

Gentlemen:

Enclosed you will find legal notices which we wish to have published in your newspaper. We have inserted the required publication dates. If you cannot publish the notices on the proposed dates, please contact me immediately.

In order to receive payment, an affidavit of publication must be submitted to the Department along with the publication bill. Please direct the affidavit of publication and bill to my attention.

Sincerely,

SHARLA CURTIS
Secretary

Enclosures

RECEIVED
AUG 23 1994

910 07 1651



State of Idaho
DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

August 22, 1994

Idaho County Free Press
Box 267
Grangeville, ID 83530

Gentlemen:

Enclosed you will find legal notices which we wish to have published in your newspaper. We have inserted the required publication dates. If you cannot publish the notices on the proposed dates, please contact me immediately.

In order to receive payment, an affidavit of publication must be submitted to the Department along with the publication bill. Please direct the affidavit of publication and bill to my attention.

Sincerely,

A handwritten signature in cursive script that reads "Sharla Curtis".

SHARLA CURTIS
Secretary

Enclosures

DEC 07 1994



State of Idaho
DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

August 22, 1994

The Idaho Statesman
Box 40
Boise, ID 83707

Gentlemen:

Enclosed you will find legal notices which we wish to have published in your newspaper. We have inserted the required publication dates. If you cannot publish the notices on the proposed dates, please contact me immediately.

In order to receive payment, an affidavit of publication must be submitted to the Department along with the publication bill. Please direct the affidavit of publication and bill to my attention.

Sincerely,

A handwritten signature in cursive script that reads "Sharla Curtis".

SHARLA CURTIS
Secretary

Enclosures

07 1994



State of Idaho
DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

August 22, 1994

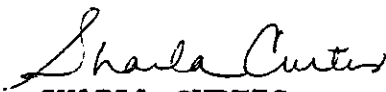
Lewiston Morning Tribune
Box 957
Lewiston, ID 83501

Gentlemen:

Enclosed you will find legal notices which we wish to have published in your newspaper. We have inserted the required publication dates. If you cannot publish the notices on the proposed dates, please contact me immediately.

In order to receive payment, an affidavit of publication must be submitted to the Department along with the publication bill. Please direct the affidavit of publication and bill to my attention.

Sincerely,


SHARLA CURTIS
Secretary

Enclosures

DEC 07 1994



State of Idaho
DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

August 22, 1994

Cottonwood Chronicle
Box 157
Cottonwood, ID 83522

Gentlemen:

Enclosed you will find legal notices which we wish to have published in your newspaper. We have inserted the required publication dates. If you cannot publish the notices on the proposed dates, please contact me immediately.

In order to receive payment, an affidavit of publication must be submitted to the Department along with the publication bill. Please direct the affidavit of publication and bill to my attention.

Sincerely,

A handwritten signature in cursive script that reads 'Sharla Curtis'.

SHARLA CURTIS
Secretary

Enclosures

A faint, rectangular stamp or mark, possibly a date stamp, located at the bottom center of the page.

DEC 07 1994



State of Idaho
DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

August 22, 1994

Clearwater Tribune
Box 71
Orofino, ID 83544

Gentlemen:

Enclosed you will find legal notices which we wish to have published in your newspaper. We have inserted the required publication dates. If you cannot publish the notices on the proposed dates, please contact me immediately.

In order to receive payment, an affidavit of publication must be submitted to the Department along with the publication bill. Please direct the affidavit of publication and bill to my attention.

Sincerely,

SHARLA CURTIS
Secretary

Enclosures

DEC 07 1994

**NOTICE OF HEARING FOR
APPLICATION FOR MINIMUM STREAMFLOW**

Notice is hereby given that the Idaho Water Resource Board submitted an application for permit to appropriate water to the Department of Water Resources, proposing to appropriate water for a minimum streamflow in the Selway River, a tributary of Middle Fork, Clearwater River. The application is further described as follows:

Source: Selway River

Application No.: 81-07160

Proposed Priority: July 30, 1992

Amount and Period of Use: 1500.0 cfs from 3/1 through 7/31
760.0 cfs from 8/1 through 2/29

Purpose of Minimum Flow: Protection of fish and wildlife habitat, aquatic life and recreational values

Proposed Reach: From the confluence of the Selway River with Meadow Creek in the NWNE, S11, T31N, R9E, downstream to the confluence with the Lochsa River in the NWSW, S4, T32N, R7E, Idaho County

The Department of Water Resources will hold a public hearing at the Clearwater Motel, Hwy. 12, Kamiah, Idaho at 1:00 p.m. on September 20, 1994 for the purpose of hearing evidence in regard to the application. The hearing will be held pursuant to the provisions of Section 42-1503, Idaho Code. In addition, the hearing officer will also receive informal testimony from the public beginning at 7:00 p.m. in the evening at the same location.

Any party who wishes to formally appear in the proceeding for the purpose of presenting evidence or cross examining witnesses should file a notice of appearance with the Director of the Department of Water Resources, Statehouse Mail, Boise, ID 83720, five (5) days prior to the hearing. Other parties may informally present their views and comments without filing a notice of appearance. Written informal views and comments may also be submitted to the Department of Water Resources prior to the hearing.

Any hearing scheduled will be conducted in a facility which meets the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise the department ten (10) days prior to the hearing. The hearing will be conducted by Norm Young, Idaho Dept. of Water Resources, Statehouse Mail, Boise, Id 83720, telephone (208) 327-7900.

If issued, this permit will be subject to all prior water rights.

R. KEITH HIGGINSON

Director, Idaho Dept. of Water Resources

Published in Cottonwood Chronicle, The Idaho Statesman, Lewiston Morning Tribune, Clearwater Tribune and Times News on 9/1, 9/8 and 9/15/94; published in Post Register and Idaho County Free Press on 8/31, 9/7 and 9/14/94.

DEC 07 1994

*Exhibit
IWRB #1*

SELWAY RIVER

WATER RIGHT NUMBER 81-07160

SOURCE: SELWAY RIVER

APPLICANT: IDAHO WATER RESOURCE BOARD

DATE FILED: JUNE 30, 1992

MINIMUM STREAM FLOW REACH:

**BEGINNING AT THE CONFLUENCE WITH
MEADOW CREEK - SECTION 11, T. 31 N., R. 09 E.,
AND EXTENDING DOWNSTREAM
APPROXIMATELY 19 MILES TO THE
CONFLUENCE WITH THE LOCHSA RIVER IN
SECTION 4, T. 32 N., R. 07E., IDAHO COUNTY**

PERIOD: RATE OF FLOW

MARCH 1 TO JULY 31: 1,500 CFS

AUGUST 1 TO FEBRUARY 29: 760 CFS

PURPOSE:

**INSTREAM FLOW FOR THE PROTECTION OF
FISH AND WILDLIFE HABITAT, AQUATIC LIFE,
AND RECREATIONAL VALUES.**

DEC 07 1994

Middle Fork Clearwater, Lochsa and Selway Rivers - Minimum Streamflows

Exhibit 2
IWRB
#2

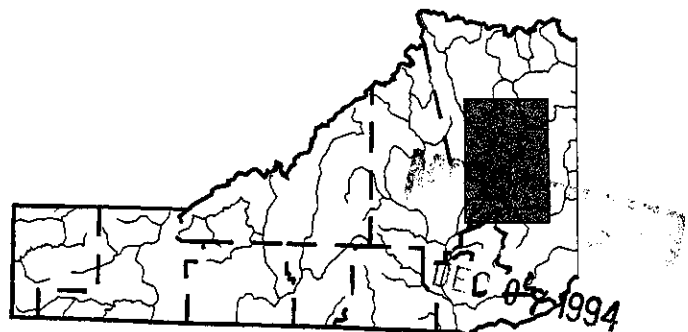
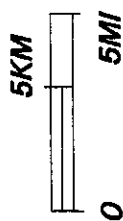
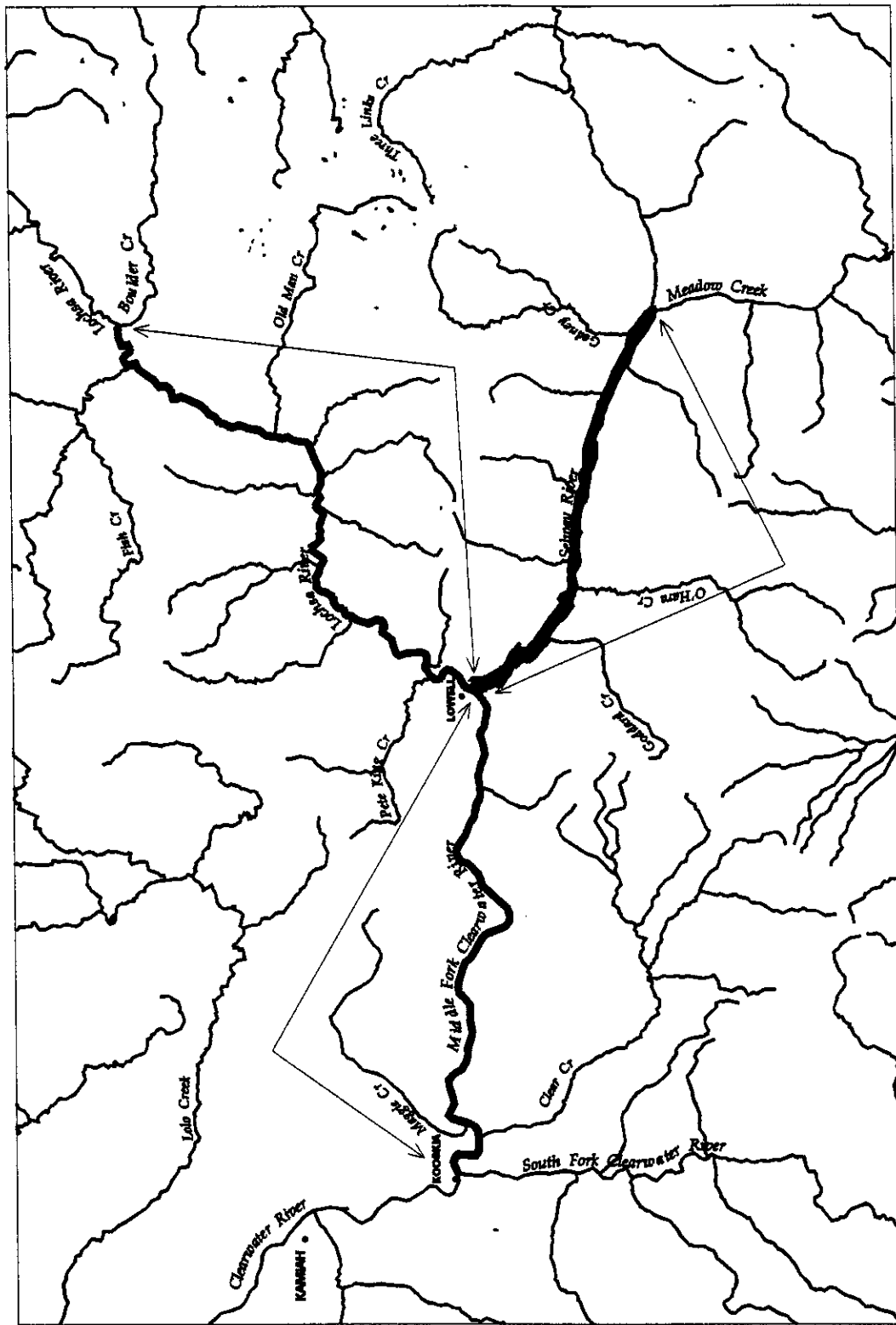


Exhibit
IWRB #3

SELWAY WATER RIGHT SUMMARY

IN MINIMUM STREAM FLOW REACH

(8) 200.51 CFS

ON TRIBUTARIES THAT FLOW INTO REACH

(8) 15.22 CFS

TRIBUTARIES UPSTREAM OF REACH

(7) 2.61 CFS

TOTAL GROUNDWATER RIGHTS

(4) 0.31 CFS

TOTAL SPRING RIGHTS

(11) 0.21 CFS

TOTAL

(38) 218.86 CFS

Water Rights larger than 0.30 CFS:

One for fish propagation for 200.0 CFS in minimum stream flow reach.

Two for fish propagation tributary to reach. Each for 5.0 CFS.

One for power, tributary to reach for 5.0 CFS.

Water Right 81-7166 Source - Groundwater

Priority Date 8/16/93 Amount - 0.19 CFS

RECEIVED
DEC 07 1994

*Exhibit
I WRB # 3.A*

Water Rights in Selway River Drainage

Includes Selway River, Tributaries, Groundwater and Springs

July, 1994

81-02001
81-02007
81-02008
81-02009
81-02011
81-02012
81-02020
81-02021
81-02022
81-02023
81-02036
81-04017
81-04022
81-04026
81-04029
81-04032
81-04042
81-04044
81-04045
81-04046
81-04047
81-04048
81-04049
81-04050
81-04051
81-04052
81-04053
81-04062
81-04140
81-07054
81-07056
81-07066
81-07067
81-07111
81-07117
81-07124
81-07140
81-07166

DEC 07 1994

Exhibit
IWRB#4

IN DEFENSE OF IDAHO'S WATER

A Report to Governor Cecil D. Andrus

September 1991

RECEIVED
DEC 07 1994

Exhibit
I WRB#5

Instream Flow Regimens for Fish, Wildlife, Recreation and Related Environmental Resources

Narrative Description of Flows ^{1/}	Fisheries Classification ^{2/}	Recommended Base Flow Regimens	
		Oct.-Mar.	Apr.-Sept.
Flushing or Maximum	--	200% of the average flow ^{3/}	
Optimum Range	--	60%-100% of the average flow ^{4/}	
Outstanding	I	40%	60%
Excellent	II	30%	50%
Good	III	20%	40%
Fair or Degrading	IV	10%	30%
Poor or Minimum	--	10%	10%
Severe Degradation	--	10% of average flow to zero flow	

^{1/}Most appropriate description of the general condition of the streamflow for all the parameters listed in the title of this paper.

^{2/}Roman numeral ratings for Fisheries Classification Systems like those developed for the States of Idaho, Montana, West Virginia, Wyoming, and the Delaware River Basin Comprehensive Study by the U.S. Fish and Wildlife Service.^{3, 11, 14, 19, 26} The base flow regimens outlined above in columns 3 and 4 to maintain the respective designated classes, are judged to be as reliable and valid as the classification systems themselves. These recommended flows generally apply very well to both cold and warm water streams. Regimens should be reversed or altered to fit different hydrologic cycles, like the Salmonid streams on the West Coast, or to favor species like the fall spawning brown trout. Flows may be refined further by specifically matching them to vital periods of the life cycle of fishes, like migration, spawning, incubation, growth, etc. Use of the Montana Method on spring creeks or streams that have a very uniform flow year-around may provide unprecedented low-flow regimens at the minimum or base flow levels.

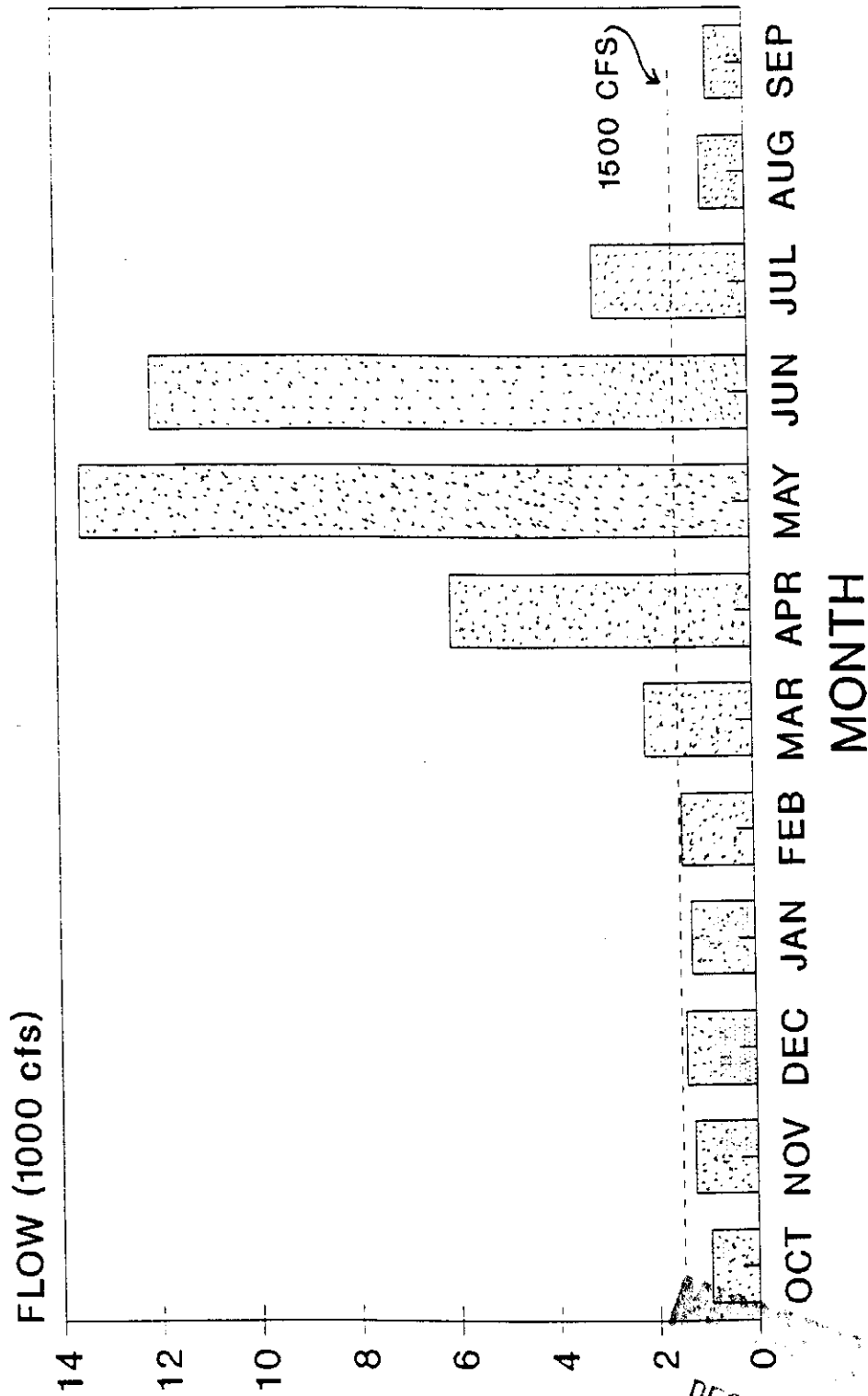
^{3/}The average flow will usually fill the active stream channel approximately 1/3 full or to the line of permanent terrestrial vegetation, while 3 times the average flow will often fill the active channel approximately to the point of spilling out on the first bench of the flood plain.¹⁵ Twice the average flow will produce effective depths and velocities within the stream channel for moving silt, sediment and other bed load material without doing extensive damage to the banks and riparian vegetation. Twice the average flow is a good maximum flow recommendation as well as a good flushing flow (Fig. 1).

^{4/}Optimum is a nebulous term; however, this flow range covers that definition best for all the parameters of this paper collectively.

DEC 07 1994

Exhibit
IWRB#6

SELWAY RIVER NR LOWELL (1930-90)



█ Average Monthly Flow --- Instream Flow

Average Annual Flow = 3750 CFS

DEC 07 1994

FLOW DURATION CURVE SELWAY RIVER NEAR LOWELL MARCH-JULY

Exhibit
IWRB #7

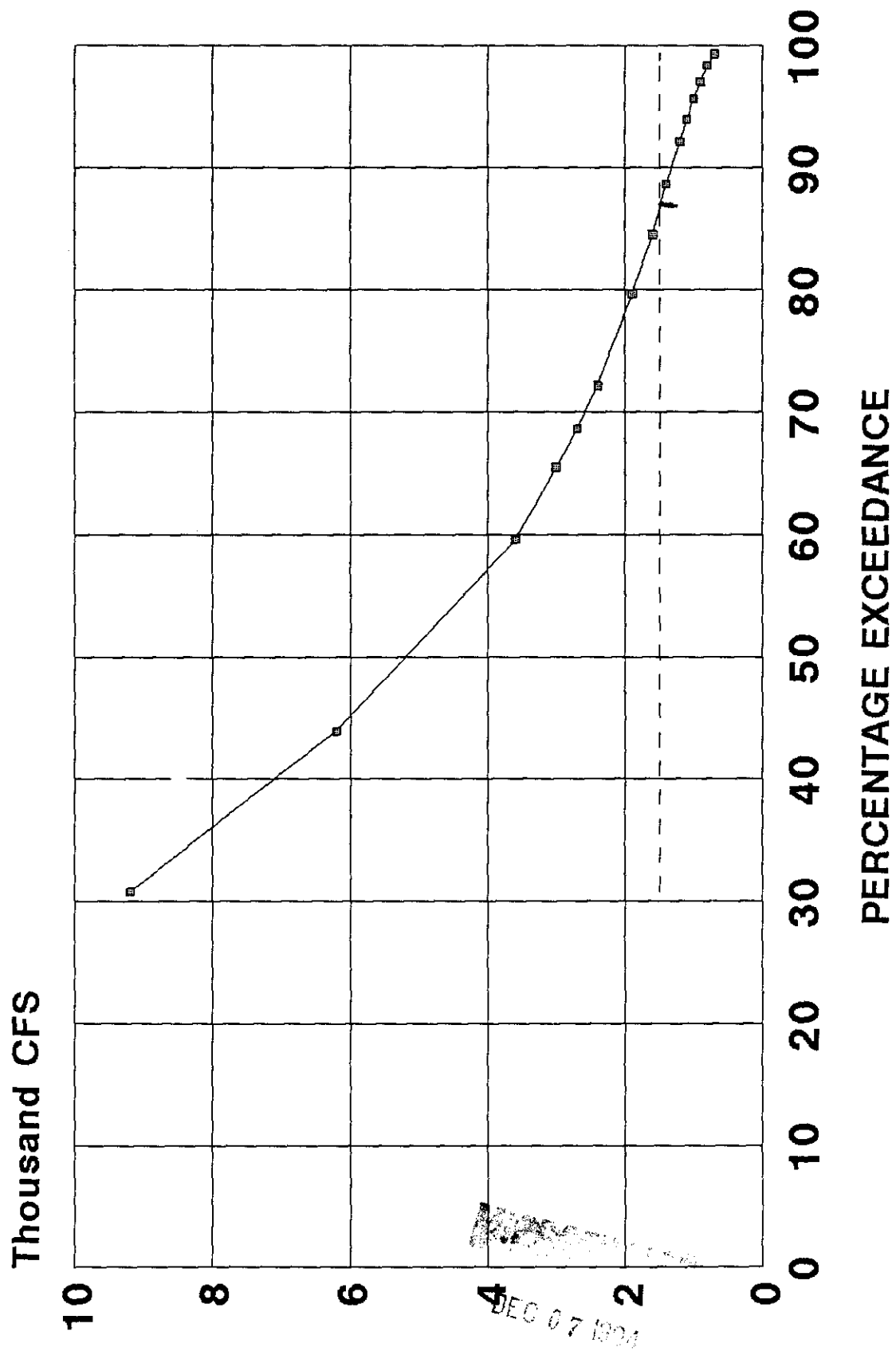
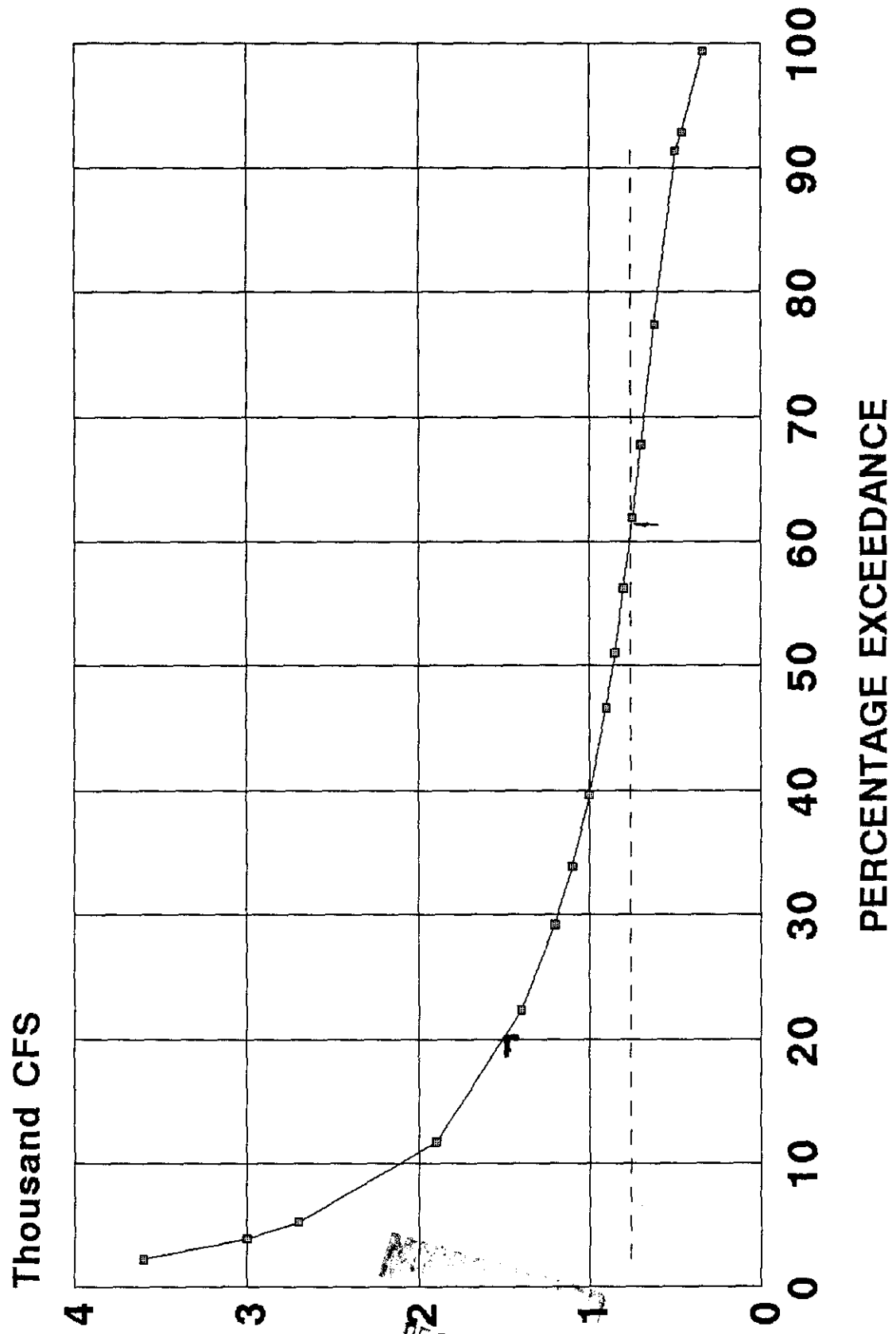


Exhibit
IWRB #8

FLOW DURATION CURVE
SELWAY RIVER NEAR LOWELL
AUGUST-FEBRUARY



PERIOD 1930-93

SELWAY RIVER NR LOWELL

SUMMARY HYDROGRAPH PERIOD OF RECORD 1930-90

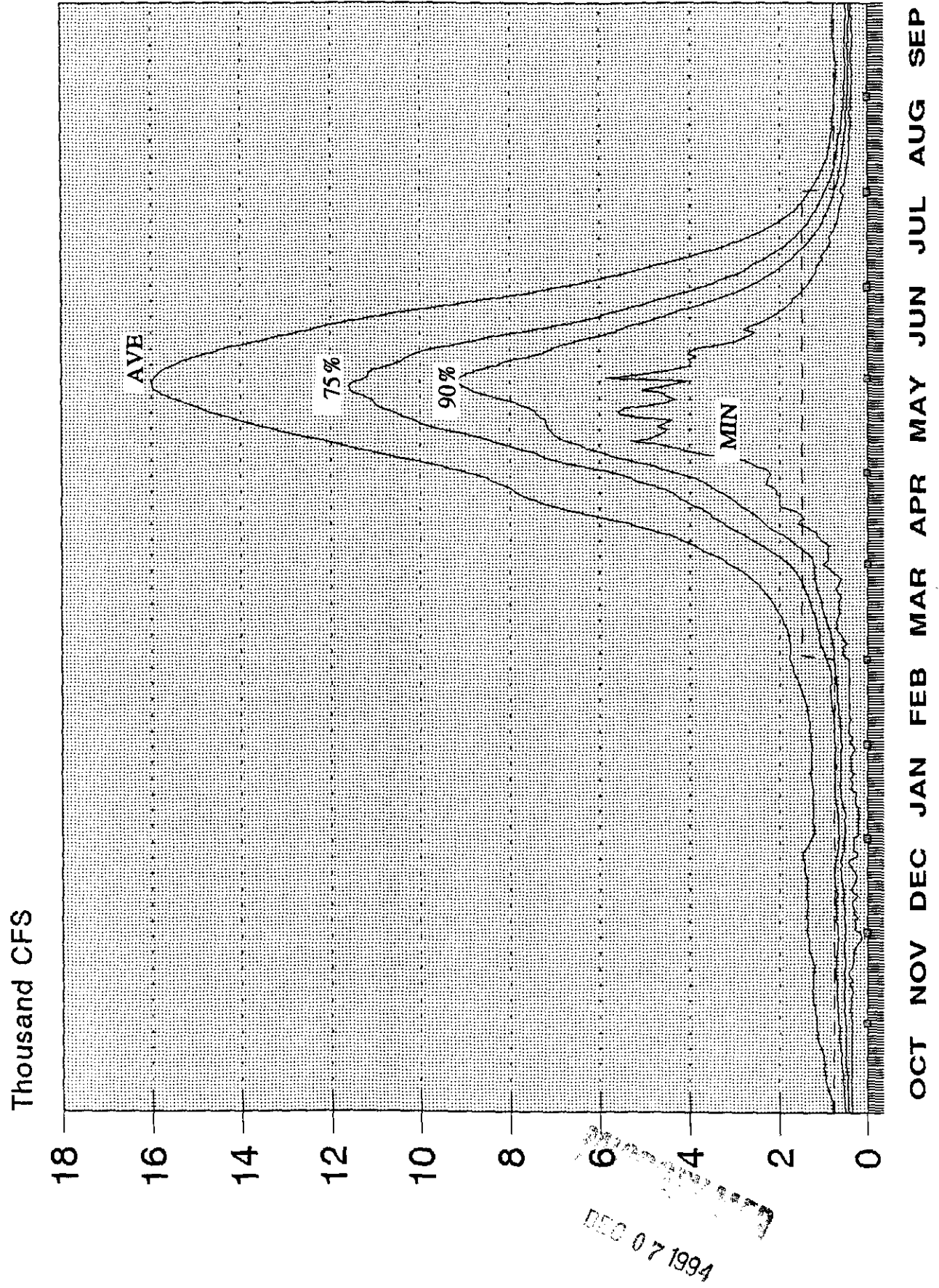


Exhibit
IWRB
#10

IN DEFENSE OF IDAHO'S WATER

A Report to Governor Cecil D. Andrus

September 1991

DEC 07 1994

IN DEFENSE OF IDAHO'S WATER

A Report to Governor Cecil D. Andrus

Prepared by

**Ray Rigby
John Rosholt
Scott Reed
A. Kenneth Dunn
Brian Donesley
Reed Hansen
Gene Gray
J. D. Williams
R. Keith Higginson**

September 1991

DEC 6 7 1994

Quantity: The base flow could be designated in several ways such as the average minimum flow for the past 20 years or quantity necessary to sustain game fish, i.e., maintenance flow.

Purpose: The recognized minimum instream beneficial uses in Idaho Code, §42-1502.

This blanket trust reservation would protect the largest part of existing flows for instream uses in state. It could not be categorized as discriminatory or an impediment to interstate commerce under Sporhase v. Nebraska. By definition and obvious to everyone, the beneficial instream uses are the natural uses right there in that particular stream or river.

The trust reservation need not preclude future diversions for water development purposes for agricultural, irrigation, power or municipal or domestic uses. The trust designation on the Payette, Coeur d'Alene, Pend Oreille and Priest Lakes has not blocked or impeded the granting of water rights for all of those purposes since 1925. Adoption of the wording in the Swan Falls trust reservation could provide such legislative direction as long as the door was not open to a Sporhase type attack.

Limitation of the trust reservation to North Idaho should allay any fears of water users in the Snake River and upper Salmon River drainages. The trust water designation is entirely justified geographically. In terms of dominant running water utilization, Idaho through its entire history has been a divided state.

Recommendations

1) It is recommended that Idaho place a great deal more emphasis and effort (financial and staff) into comprehensive water resources planning which considers the present and potential future uses of Idaho's water. This would demonstrate the need of conserving the resource for future use within the state.

A water planning effort has been ongoing in the state since creation of the IWRB in 1965. A first state water plan, a policy document, was adopted by the Board in 1976. This plan has been reviewed and updated by the Board every five years since that time.

It is this committee's recommendation that these planning efforts be greatly enhanced and that a goal be made that Idaho have in place a completed and approved comprehensive water plan for at least two-thirds of the state's river basins by the year 2000. Particular attention and priority should be given to those streams which potentially could be threatened for water export.

DEC 07 1994

2) The Governor should consider recommending to the Legislature the appropriation in trust of a portion of the unappropriated waters of streams in north Idaho to preserve the flows required to protect instream values. The Departments of Water Resources, Fish and Game and Parks and Recreation should be asked to study these northern streams and recommend the quantities to be preserved in this manner to protect these uses.

II. California v. FERC

The history of hydropower development in the United States is marked by the continued tension between the federal government and states over regulation of water resources. Initially, the tension centered on the need for authority from the federal government to construct a project which could potentially impinge on navigation. At the turn of the century, hydropower development was stymied because no single federal agency had authority to permit interference with the navigational servitude. This led to an extended debate in Congress on how federal authorization would be granted. This debate ultimately resulted in enactment of the Federal Power Act (FPA) in 1920.

During the debate leading up to the FPA there was no dispute that the states regulated the use of water for hydropower purposes. Indeed, the Congress specifically recognized state regulation of use of water for hydropower purposes in section 27 of the FPA, which provides:

Nothing herein shall be construed as affecting or intending to affect or in any way interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein.

The Congressional history is replete with statements indicating that section 27 means what it says: that state control of water use remains undisturbed. The intent of Congress is also reflected in the fact that for more than 40 years after enactment of the FPA, FERC and its predecessor expressly recognized that states regulated the use of water for hydropower purposes.

Despite the apparent clarity of Congress' intent to leave regulation of water for hydropower to the states, the recent decision of the United States Supreme Court in California v. Federal Energy Regulatory Commission, 495 U.S. ___, 110 S.Ct. 2024, 109 L.Ed.2d 474 (1990) (the "Rock Creek" case) reaches just the opposite conclusion. In that decision, the Court held that the Federal Power Act authorizes the Federal Energy Regulatory Commission (FERC) to establish bypass flows for federally licensed hydropower facilities that preempt requirements set in the water right for that same project issued under

Recommendations

1) The Group recommends that the state continue to participate in discussions of the issue of potential endangered species listing for salmon with other entities in the Northwest. Our effort should be geared toward reaching the goal of fishable salmon in Idaho while protecting the ability of the state to utilize its water resources for multiple purposes. It is noted that the legislature approved some funding through the Governor's office to allow the various state agencies to participate in these regional water and fishery discussions. Idaho needs to aggressively assert its position that the problem of survival of the salmon in the Snake River basin will not be resolved by placing the burden upon the state of Idaho and its citizens.

2) The state needs a coordinated effort through the Governor's office to respond to the other activities in the region which will impact on Idaho's water resources. These include those items listed in the early part of this section. It will particularly be important that the state influence the decisions made in relicensing the power projects of the Idaho Power Company in Hells Canyon and elsewhere along the Snake River to assure that the benefits gained from prior license conditions and the Swan Falls Agreement are not lost.

Summary

The Water Defense Group has been pleased to respond to Governor Andrus' request that it consider and make recommendations of actions which need to be taken to protect Idaho's valuable water resources. We hope that this paper which has discussed the issues originally presently to the Group by the Governor will be helpful to officials of the state whose responsibility it is to represent Idaho and her interests.

We have recommended the following:

1) Idaho should place a great deal more emphasis and effort (financial and staff) into comprehensive water resources planning which considers the present and potential future uses of Idaho's water. This would demonstrate the need of conserving the resource for future use within the state. It should be Idaho's goal to have in place a completed and approved comprehensive water plan for at least two-thirds of the state's river basins by the year 2000. Particular attention and priority should be given to those streams which potentially could be threatened for water export. Under Section 10 of the FPA, FERC is required to consider state comprehensive water plans in its licensing decisions. Since FERC does little or no comprehensive planning, a well-crafted state water plan should provide the record necessary for the state to successfully argue for water uses consistent with the state long term needs. Additionally, under section 210 of the Public Utility Regulatory Policies Act of 1978, PURPA benefits cannot be extended by FERC to a hydroelectric project on

any segment of a natural watercourse designated by the state as a natural or recreational river.

2) The Governor should consider recommending to the Legislature the appropriation in trust of a portion of the unappropriated waters of streams in north Idaho to preserve the flows required to protect instream values. The Departments of Water Resources, Fish and Game and Parks and Recreation should be asked to study these northern streams and recommend the quantities to be preserved in this manner to protect these uses.

3) The Water Defense Group recommends that the State of Idaho support the legislation drafted by the Idaho Department of Water Resources and the Idaho Attorney General's Office and introduced in the House of Representatives by Rep. Richard Stallings and Rep. Larry LaRocco as H.R. 649 and in the Senate by Senator Craig and Senator Symms as S. 106 to correct the Supreme Court's misinterpretation of the FPA. The bill clarifies that the FPA is not intended to preempt state authority to regulate the use of water by hydropower facilities.

4) There should be a central clearing house for state agency comments to the FERC. Although state agencies have attempted to some extent to coordinate their comments in FERC proceedings, a formal process for participation in the process would enhance the state's ability to influence the FERC decision-making process and to avoid conflicting state positions.

5) Minimum flow water rights should be established for all river reaches in Idaho as expeditiously as practical. These minimum flows will serve as a means of ensuring that FERC-established conditions recognize and protect other state interests.

6) The state should continue to discuss with other entities in the Northwest the issues of listing salmon stocks as endangered species. It will also be important for the state to continue participating in efforts to recover declining salmon stocks to insure that the state's interests in both its anadromous fisheries and water resources are protected.

7) The state needs a coordinated effort through the Governor's office to respond to all activities in the region and state which will impact on Idaho's water resources. For example, it will particularly be important for the state to participate in the FERC relicensing process for hydropower projects along the Snake River to assure that the state's right to regulate its water resources is protected.

200.631.
Ten.

Exhibit
I WRB #11

RECEIVED

JUL 1 1975

Department of Water Resources

INSTREAM FLOW REGIMENS
FOR
FISH, WILDLIFE, RECREATION
AND
RELATED ENVIRONMENTAL RESOURCES

DATE	
TIME	
BY	<i>WR</i>
REMARKS	

By

DONALD L. TENNANT
U.S. FISH AND WILDLIFE SERVICE
711 CENTRAL AVENUE
BILLINGS, MONTANA 59102

1975

ST. WATER PLG. BUREAU		
✓	Snake River	<i>DM</i>
✓	Bear	<i>DM</i>
✓	Panhandle	<i>DM</i>
✓	RBPU	<i>DM</i>

07 1994

ACKNOWLEDGEMENT

*Dedicated to all the scientists who helped develop the
"Montana Method" for prescribing instream flows to protect
our natural, free-flowing aquatic environment.*

*May this work serve them and their colleagues well in
future efforts to preserve and enhance this vital resource.*

D. L. Tennant

DEC 07 1994

TABLE OF CONTENTS

Instream Flow Regimens for Fish, Wildlife, Recreation, and Related Environmental Resources

Introduction	1
Method	2
Results	7
Conclusions	17
Recommendations	25
References	28

LIST OF TABLES

Table 1	3
Table 2	8
Table 3	12

LIST OF FIGURES

Fig. 1	4
Fig. 2	6
Fig. 3	18
Fig. 4	20
Fig. 5	22
Fig. 6	24

DEC 07 1934

INTRODUCTION

Natural, free-flowing streams are one of the world's most beautiful and valuable resources. Before the coming of Christ, the Roman Emperor Justinian said: "By the law of nature certain things are common property; for example, the air, running water, and the sea." America's late Senator Norris said: "The streams that are flowing downhill were given us by a creator. They do not belong to any special interest or to any individual. They belong to the people and ought to be utilized for the benefit of all of them."

Few streams in the United States have escaped degradation from altered flows by some kind of man-made, "water development" project. Some recognition is finally being given to instream flow regimens to protect the natural environment. Scientists from many disciplines are seeking reliable, practical methods for determining streamflow requirements to protect fishes, waterfowl, furbearers, reptiles, amphibians, mollusks, aquatic invertebrates, and related life forms from all the various people competing for our Nation's water.

With the help of several hydrologists and many state and federal biologists, I have developed a quick, easy method for determining ? flows to protect the aquatic resources, in both warmwater and cold-water streams. This methodology evolved over the past 17 years from my work on hundreds of streams in the states north of the Mason-Dixon Line between the Atlantic Ocean and the Rocky Mountains. My work has been cited in a score of publications and is best known as the "Montana Method."

DEC 67 1994

ABSTRACT

Describes the "Montana Method," a quick, easy methodology for determining flows to protect the aquatic resources in both warmwater and coldwater streams based on their average flow. With this method, biologists do their analysis with the aid of hydrological data provided by the U.S. Geological Survey. Detailed field studies were conducted on 11 streams in 3 states between 1964 and 1974, testing the "Montana Method." This work involved physical, chemical, and biological analyses of 38 different flows at 58 cross-sections on 196 stream-miles, affecting both coldwater and warmwater fisheries. Reports or publications on 6 study streams are available. Numerous black and white photos and 35 mm. slides were taken of all the flow stages studied at each cross-section. The studies were all planned, conducted, and analyzed with the help of state fisheries biologists. Results reveal that the condition of the aquatic habitat is remarkably similar on most of the streams carrying the same portion of the average flow. Similar analyses of hundreds of additional flow regimens near U.S.G.S. gages in 21 different states during the past 17 years substantiated this correlation on a wide variety of streams. Running waters studied ranged from small precipitous brooks high in the Rocky Mountains to large, low-gradient rivers and streams out on the prairies of mid-America or along the coastal plains. Results are consistent from stream to stream or state to state, and it is impossible to get a zero flow recommendation using this method. Ten percent (10%) of the average flow is a minimum instantaneous flow recommended to sustain short-term survival habitat for most aquatic life forms. Thirty percent (30%) of the average flow is recommended as a base flow to sustain good survival habitat for most aquatic life forms. Sixty percent (60%) of the average flow is recommended to provide excellent to outstanding habitat for most aquatic life forms during their primary periods of growth and for the majority of recreational uses. Thirty pages illustrated with tables, graphs, and photos.

RECEIVED
DEC 07 1994

METHOD

The Montana Method is so brief it can be typed on a 3" x 5" card. It can be applied rapidly to many segments of thousands of streams by referring to Table 1 of this paper and surface water records of the U.S. Geological Survey (U.S.G.S.). 1/

The following intensive use of this method will produce a factual, conclusive, streamflow study on any stream. First, determine the average annual flow of the stream at the location(s) of interest (listed as AVERAGE DISCHARGE by U.S.G.S. and hereinafter called average flow). If the average flow isn't published by the U.S.G.S., they can quickly calculate it for you. Visit the stream and observe, photograph, sample, and study flow regimens approximating 10%, 30%, and 60% of the average flow. Other flows can be studied, but these three regimens will cover a flow range from about the minimum to near the maximum that can normally be justified and recommended to protect the natural environment on most streams (fig. 1).

If the flow is not controlled, study U.S.G.S. records for flow patterns, then go to the field and check their gage(s) until you can view and study natural flows approximating 10%, 30%, and 60% of the average flow.

If flows are controlled, begin by having the highest flow you wish to study released first, then regulate so that each succeeding lower flow will begin the following midnight. Photos taken early the next morning

1/ Water Resources Data for (name of state), Part 1. Surface Water Records, United States Department of the Interior, Geological Survey.

Table 1

Instream Flow Regimens for Fish, Wildlife, Recreation and Related
Environmental Resources

Narrative Description of Flows ^{1/}	Fisheries Classification ^{2/}	Recommended Base Flow Regimens	
		Oct.-Mar.	: Apr.-Sept.
Flushing or Maximum	--	200% of the average flow ^{3/}	
Optimum Range	--	60%-100% of the average flow ^{4/}	
Outstanding	I	40%	60%
Excellent	II	30%	50%
Good	III	20%	40%
Fair or Degrading	IV	10%	30%
Poor or Minimum	--	10%	10%
Severe Degradation	--	10% of average flow to zero flow	

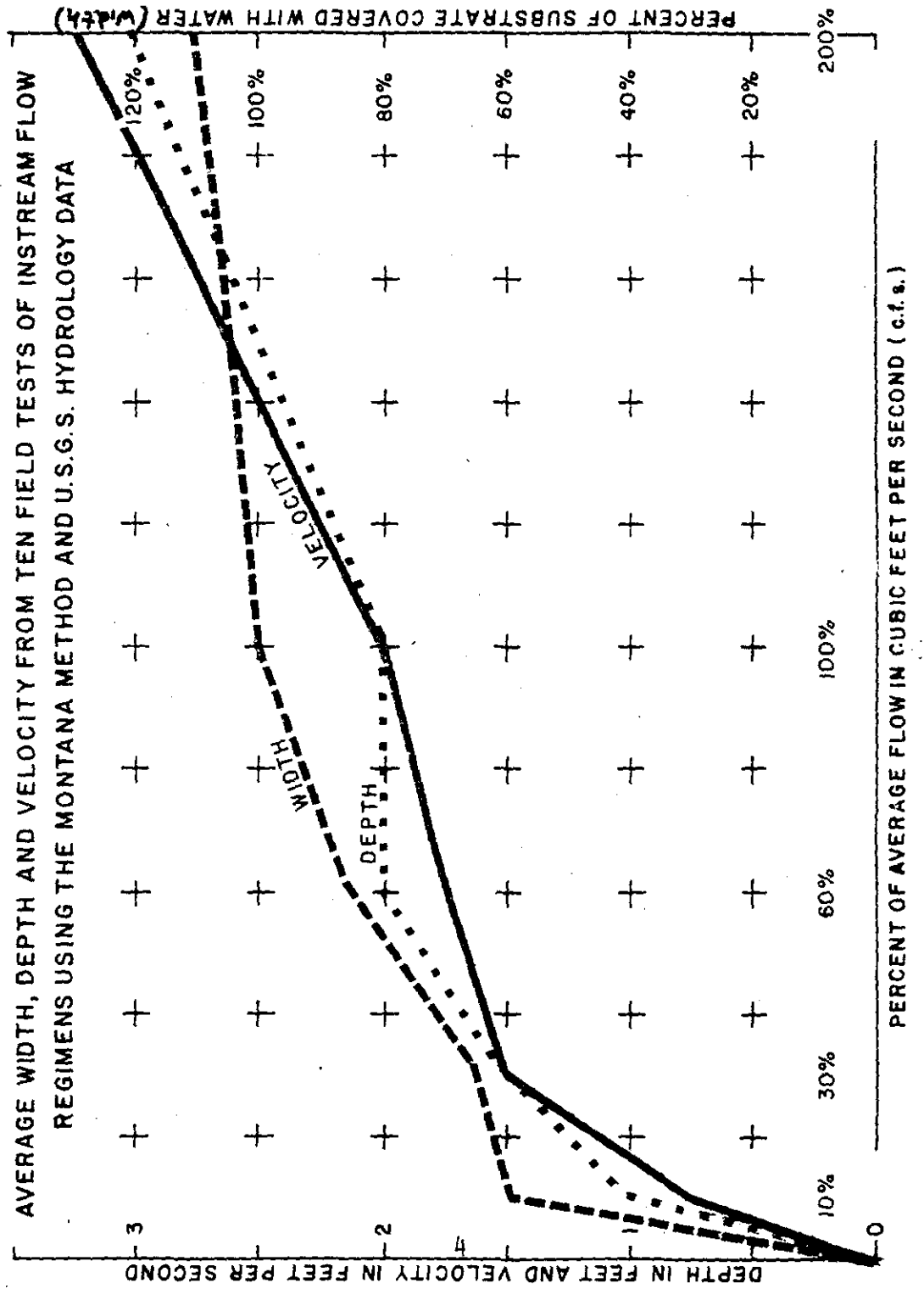
^{1/}Most appropriate description of the general condition of the streamflow for all the parameters listed in the title of this paper.

^{2/}Roman numeral ratings for Fisheries Classification Systems like those developed for the States of Idaho, Montana, West Virginia, Wyoming, and the Delaware River Basin Comprehensive Study by the U.S. Fish and Wildlife Service. 5, 11, 14, 19, 26 The base flow regimens outlined above in columns 3 and 4 to maintain the respective designated classes, are judged to be as reliable and valid as the classification systems themselves. These recommended flows generally apply very well to both cold and warm water streams. Regimens should be reversed or altered to fit different hydrologic cycles, like the Salmonid streams on the West Coast, or to favor species like the fall spawning brown trout. Flows may be refined further by specifically matching them to vital periods of the life cycle of fishes, like migration, spawning, incubation, growth, etc. Use of the Montana Method on spring creeks or streams that have a very uniform flow year-around may provide unprecedented low-flow regimens at the minimum or base flow levels.

^{3/}The average flow will usually fill the active stream channel approximately 1/3 full or to the line of permanent terrestrial vegetation, while 3 times the average flow will often fill the active channel approximately to the point of spilling out on the first bench of the flood plain.¹⁵ Twice the average flow will produce effective depths and velocities within the stream channel for moving silt, sediment and other bed load material without doing extensive damage to the banks and riparian vegetation. Twice the average flow is a good maximum flow recommendation as well as a good flushing flow (Fig. 1).

^{4/}Optimum is a nebulous term; however, this flow range covers that definition best for all the parameters of this paper collectively.

FIG. 1



072 07 1994

will reveal the difference in exposed substrate or wetted perimeter (fig. 2). This is photographic "regression analysis." An 8 - 10 hour interval will normally be sufficient to negate any appreciable differences in flow levels due to bank storage.

Pictures may be the best data you will collect for selling your recommendations to the general public, administrators of construction agencies managing water development projects, and judges or juries adjudicating water laws. Black and white photographs and 35 mm. slides of key habitat types (e.g., riffles, runs, pools, islands and bars) from elevated vantage points like bridges and high stream banks will give results superior to ground level shots or photos from aircraft high above the stream. Record appropriate, vital information on all photographs and slides as soon as they are received.

U.S.G.S. monthly measurements cover a variety of flows at most of their stream gage or cable crossings. Obtain cross-sectional data on width, depth, and velocity measurements from the local U.S.G.S. field office for flow regimens under study. Use this information to plot and compare water widths, depths, and velocities to known requirements for aquatic resources. U.S.G.S. will make specific cross-sectional measurements of width, depth, and velocity at any point on a stream for a reasonable fee. With the proper experience, equipment, and plenty of time, others can make the necessary cross-sectional measurements. Study both the average daily streamflow regimen tables and previous historic low-flow data published by U.S.G.S. to learn the base flow patterns of the climatic year and help determine and justify your final recommendations.

Fig. 2



Missouri River below Holter Dam, Montana, showing differences between flows of 3,000 cfs (55% of the average flow) and 2,000 cfs (37% of the average flow). The vertical drop was 7 inches. Flows reduced about midnight will clearly reveal differences in wetted substrate when photographed the next morning (photographic "regression analysis").

MRBS Photo #9000
by Don Tennant 6/10/70

Recommend the most appropriate and reasonable flow(s) that can be justified to provide protection and habitat for all aquatic resources.

RESULTS

Detailed field studies were conducted on 11 streams in 3 states between 1964 and 1974 testing the Montana Method (Table 2). This work involved physical, chemical, and biological analyses of 38 different flows at 58 cross-sections on 196 stream miles, affecting both coldwater and warmwater fisheries. Reports or publications on 6 study streams are available as indicated in Table 2. Numerous black and white photos and 35 mm. slides were taken of all the flow stages studied at each cross-section. The studies were all planned, conducted, and analyzed with the help of state fisheries biologists. These studies reveal that the condition of the aquatic habitat is remarkably similar on most streams carrying the same portion of the average flow.

Width, depth, and velocity are physical instream flow parameters vital to the well-being of aquatic organisms and their habitat. Sixteen-hundred measurements of these parameters for 48 different flows on 10 of the streams cited in Table 2 show that they all increase with flow and that changes are much greater at the lower levels of flow (fig.1). Width, depth, and velocity all changed more rapidly from no flow to a flow of 10% of the average, than at any point thereafter. Ten percent (10%) of the average flow covered 60% of the substrates, depths averaged 1 foot, and velocities averaged 3/4 foot per second. Studies show that these are critical points or the lower limits for

Table 2

DETAILED STUDIES OF INSTREAM FLOW REGIMENS USING THE MONTANA METHOD

Name of Stream	State	Date	Miles Studied	Number of Stations	Different Flows	Parameters Studied (1)	Type of Fishery (2)	Reference
Republican R.	Nebraska	1964	40	3	4	W,D,V,S,B,C,T,F	WM	25
Wind-Bighorn R.	Wyoming	1968	50	10	3	W,D,S,B,C,T,F	CW & WM	24
Marias R.	Montana	1968	67	9	3	W,D,V,S,B,C,T,F	CW & WM	
Missouri R.	Montana	1970	15	8	4	W,D,V,S,B,C,I,F	CW & WM	
Blacks Fork R.	Wyoming	1971	16	4	3	W,D,V,S,C,I	CW	31
Shoshone Creek	Wyoming	1971	1	2	9	W,D,V,S,B,C,F	CW	
Ruby R.	Montana	1971	1	4	3	W,D,V,S,B,C,F	CW	10
W. Fk. Bitterroot	Montana	1971	1	5	3	W,D,V,S,B,C,F	CW	10
W. Rosebud R.	Montana	1971	3	3	4	W,D,V,S,B,C,F	CW	10
N. Platte R.	Wyoming	1974	2	10	2	W,D,V,S,B,C,F	CW & WM	
Totals			196	58	38			

(1) Parameters Studied -- W=Width, D=Depth, V=Velocity, S=Substrate & Sidechannels, B=Bars & Islands, C=Cover
M=Migration, T=Temperature, I=Invertebrates, F=Fishing & Floating, E=Esthetics & Natural Beauty

(2) Type Fishery -- WM=Warmwater, CW=Coldwater

the well-being of many aquatic organisms, particularly fishes. This substantiates the conclusion that this is the area of most severe degradation or that 10% is a minimum short-term survival flow at best. Flows from 30% to 100% of average result in a gain of 40% for wetted substrate, average depth increases from 1½ to 2 feet, and average velocities rise from 1½ to 2 feet per second. These are within good to optimum ranges for aquatic organisms, however, it requires 3 to 10 times the amount of water needed for a short-term minimum or good base flow, and gains or benefit-cost ratios may become questionable. Increasing flow from 100% of average to 200% of average (doubled) only increases average wetted substrate by 10%, average depth increases from 2 to 3 feet, and average velocity rises from 2 to 3½ feet per second. Velocities averaging 3½ feet per second are probably too high for the general well-being of most aquatic organisms but good for moving sediment, bedload, and white water boating. In all 11 field tests of the Montana Method, water depth appeared adequate for aquatic organisms whenever velocities were satisfactory.

Analyses of hundreds of additional flow regimens near U.S.G.S. gages in 21 different states during the past 17 years substantiate these correlations between similar flows on a wide variety of streams. Running waters studied ranged from small precipitous brooks high in the Rocky Mountains, to large, low-gradient rivers out on the prairies of mid-America and streams along the coastal plains. This phenomenon of nature is documented with hundreds of black and white photographs and 35 mm. slides that are registered and filed with the U.S. Fish and Wildlife Service (FWS) in Billings, Montana; Grand Island, Nebraska; and Denver, Colorado.

The average flow of a stream (or any given portion or percent of the average flow) is a composite manifestation of the size of the draina area, geomorphology, climate, vegetation, and land use. These relat ships have also been evaluated and reported by other biologists and hydrologists. 8, 13, 15, 16, 18, 29, 31

Use of the Montana Method has produced over 100 separate streamflow recommendations to protect fish, wildlife, and environmental resource in more than 70 reports issued by the FWS.²⁰ The recommendations were made with the aid of district fishery biologists from 11 different states, endorsed by both the Directors of their state Fish and Game Departments and the Director of the FWS and generally accepted by various construction agencies. This work occurred on at least 30 warmwater streams and 70 coldwater streams.

Many of our recommendations were not adopted, since providing stream-flow for fish, wildlife, and environmental preservation or enhancement is not a legal beneficial use of water in most of the country, especially the 17 western states.⁹ Administrators managing water development projects have generally been willing to regulate flow regimens for instream flow studies and provide minimum flows necessary to protect these resources when there is plenty of water. However, these resources are the first to suffer when water is short. 6, 9, 24, 25, 27

In 1970, the project managers of the U.S. Bureau of Reclamation, U.S. Corps of Engineers, and the Montana Power Company were requested to identify the minimum flows that they recognized solely for the

protection of fish, wildlife, and the aquatic environment, downstream from dams under their jurisdiction.²¹ These agencies control the operation of 23 major dams in Montana and Wyoming. Table 3 compares their replies to previous FWS recommendations and mean and minimum flows of record.

The agencies reported minimum flows for fish, wildlife, and environmental protection which ranged from zero (four instances) to 38% of the average flow. The 38% flow was the result of fish and wildlife interests getting 500 cubic feet per second (cfs) released below Kortes Dam on the North Platte River in Wyoming. Congress reauthorized the operation of that project, which took about 10 years and is the only known accomplishment of its kind in the U.S.A.

Twelve of the 21 flows accepted by the agencies were less than 10% of the average flow of record, which is inadequate to sustain the normal life cycles of either warmwater or salmonid fishes.

Federal and state biologists analyzed flows and made flow recommendations on 12 of the streams involved. However, flows accepted by the agencies agreed with these recommendations in only 3 instances.

In 10 of 20 cases, the minimum natural inflow of record to the regulating reservoir exceeded their recognized release for the conservation of fish, wildlife, and the aquatic environment downstream below the dams. All flow recommendations should stipulate that outflow from dams should at least equal inflow when managing agencies cannot release the flow regimens requested to protect the environment. Project

Table 3
Minimum Instantaneous Flows for Fish, Wildlife, and Aquatic Environment Below Dams
in the Missouri River Basin in Montana and Wyoming - 1970

Dam & Agency	Minimum Flow for Fish Recognized by Construction Agency	% of Mean Flow	Mean Flow of Record	FWS Recommended Min. Flow	% of Mean Flow	Minimum Reservoir Inflow or Natural Flow of Record
Seminole (BR)	---		1279 cfs			70 cfs
Kortes (BR)	500 cfs	38%	1300 cfs	500 cfs	38%	70 cfs
Pathfinder (BR)	0 cfs	0%	1423 cfs			70 cfs
Alcova (BR)	---		1500 cfs			70 cfs
Gray Reef (BR)	330 cfs	22%	1500 cfs	330 cfs	22%	70 cfs
Glendo (BR)	0 cfs	0%	1680 cfs			170 cfs
Guernsey (BR)	0 cfs	0%	1710 cfs			170 cfs
Boysen (BR)	100 cfs	7%	1350 cfs	250-400 cfs	19-30%	42 cfs
Buffalo Bill (BR)	15 cfs	1%	1256 cfs	350 cfs	28%	41 cfs
Heart Mountain (BR)	200 cfs	16%	1256 cfs	350 cfs	28%	41 cfs
Yellowtail (BR)	1000 cfs	29%	3500 cfs	1000 cfs	29%	179 cfs
Clark Canyon (BR)	25 cfs	8%	324 cfs	250 cfs	77%	69 cfs
Barretts Div. (BR)	25 cfs	6%	405 cfs	200 cfs	29%	69 cfs
Hebgen (MP)	50 cfs	5%	969 cfs	400 cfs	41%	200 cfs
Ennis (MP)	200 cfs	12%	1675 cfs			275 cfs
Holter (MP)	1000 cfs	19%	5289 cfs	2000 cfs	38%	747 cfs
Moroney (MP)	1500 cfs	20%	7362 cfs			1760 cfs
Ft. Peck (CE)	3000 cfs	32%	9292 cfs			1120 cfs
Gibson (BR)	50 cfs	6%	850 cfs	270 cfs	32%	60 cfs
Sun River Div. (BR)	100 cfs	12%	852 cfs	270 cfs	32%	47 cfs
Sherburne (BR)	0 cfs	0%	200 cfs			0 cfs
St. Mary's Div. (BR)	25 cfs	3%	790 cfs			16 cfs
Fresno (BR)	25 cfs	6%	430 cfs			0 cfs
Tiber (BR)	100 cfs	11%	880 cfs	250 cfs	28%	10 cfs

1/ Outflow directly into Kortes

2/ Outflow directly into Gray Reef

3/ A Canal to Milk River - Canada

DEC 07 1994

managers often reminded us that there were no legal requirements for providing any water specifically for the conservation or enhancement of fish, wildlife, and environmental resources. Water agencies "sell" their projects by declaring that their operation will moderate the extreme high and low flows that occur naturally. Just the opposite was true on $\frac{1}{2}$ of these projects. Our analysis did not include scores of existing, smaller projects under the programs of the U.S. Forest Service and the U.S. Soil Conservation Service, most of which did not recognize or provide any minimum flows for fish, wildlife, or the environment.

The Montana Method has been used by the FWS while conducting major comprehensive type studies that required quick, consistent streamflow recommendations for fish, wildlife, and the aquatic environment on numerous streams, covering extensive geographic areas.^{1, 2, 3, 4, 28} It has also been very useful for prescribing streamflows on large rivers where data are difficult to obtain using other procedures.

The Montana Method has virtues other than being quick and easy to use. It assures consistency from stream to stream or state to state. You always know the portion of the total streamflow requested and will never get a zero flow recommendation like some other methods produce (e.g., use of 7-day or 3-day minimum or historic minimum flow criteria). In 1970, I evaluated 7-day minimum flow criteria input for the Upper Missouri, Yellowstone, Kansas, and Platte-Niobrara Sub-Basins of the Missouri River Basin Comprehensive Study. I found that these criteria resulted in zero flow in 86 of 305 instances, or about 28% of the time.²²

In 236 of 305 cases (77%), the 7-day minimum flow was less than 10% of the average flow, which I consider in the range of severe degradation for most elements of the aquatic environment. Criteria for 3-day minimum flows would be worse yet, and recommending the meager, alltime, historic minimum flow would be unthinkable. That would be like prescribing a person's alltime worst health condition as a recommended level for a portion of his future well-being.

Avoid recommending vacillating flow regimens specifically for fishes coincidental with monthly (m.a.f.) or daily (d.a.f.) average flows because there are too many unknown, degrading effects on the life cycles of many other organisms in the aquatic environment and other uses of water to justify frequent ebb and flow changes in most streams. Quarterly variations in flow regimens might approximate climatic hydrology and be appropriate. The Montana Method can easily be modified to suit the individual convictions of any biologist or the monthly or daily hydrological variations of any given stream. I usually recommend variation in flow regimens for 6-month periods (e.g., columns 3 and 4 of Table 1) that mimic nature and coincide most naturally with the so-called climatic year used by the U.S.G.S. and the U.S. National Weather Service. This offers the following distinct advantages:¹² a) Stages of ground water are more nearly uniform on October 1 in most inland sections of the United States than on any other date, leading in general to fairly reliable comparisons of annual rainfall-runoff relations because of the relatively small errors due to annual differences in the ground-water table on that date; b) In the arid and semi-arid parts of the country, September 30 usually marks the end of the irrigation season and in humid regions

it approximates the end of the growing season; c) There is a minimum probable error due to the effect of ice in the records of winter flow if the discharge for the winter period (November to April) is computed together at one time; d) The winter or base flow period coincides with reduced metabolic functions and decreased demands for vital life elements by most aquatic organisms (e.g., oxygen, food, removal of waste products, and increased tolerance to pollution); e) A low flow winter period matches the downstream migration habits of many fishes (warmwater and coldwater), when they travel to deeper more permanent water to spend the winter. This is also the spawning and incubation season for most salmonids, when they naturally seek less water by moving into headwater or tributary streams and onto redds in shoal or shallow riffle areas; and f) Higher summer flow regimens provided by this method coincide with the frost-free, recreation season and the major growth period for most aquatic plants and animals, when their requirements for dissolved gases, space, food, and removal of septic waste products are naturally higher (the attendant increased width, depth, and velocities in the stream all serve to enhance the availability of elements vital to these recreation uses and critical life functions). These phenomena may be seasonally reversed for anadromous fishes using the coastal streams of Alaska, the Canadian Provinces, and our west coast states and flow regimens should be adjusted accordingly.

Using the Montana Method, it is easy to adjust to above or below normal water years and maintain stream flows that are appropriate portions of monthly, quarterly, or annual instream supplies of water. This helps fish, wildlife, and aquatic resources share surpluses and

shortages of water equitably with other users.

With the Montana Method, U.S.G.S measures the hydraulic characteristics of the stream and biologists interpret the biological response. This saves considerable precious time that biologists can use on a more complete ecological analysis of streamflow needs. U.S.G.S. is recognized nationwide for its expertise in making reliable streamflow measurements, and their results are less apt to be questioned by water resource development agencies and more likely to withstand the scrutiny of adversaries in a court of law.¹² This method is applied to hundreds of thousands of streamflow records that have been published by U.S.G.S. since 1888 on most of the perennial streams in America. In 1972 alone, there were nearly 24,000 active, surfacewater gaging stations in the United States.¹⁷ U.S.G.S. employs more than 2,000 professional hydrologists, working out of 220 different locations to measure streamflow parameters on our Nation's lotic waters.¹² These scientists maintain and use several million dollars worth of specialized supplies and equipment specifically for this purpose.⁷

There is significant hydrological and biological evidence that the Montana Method can also be used successfully on streams throughout the world. 6, 8, 10, 13, 15, 16, 18, 23, 24, 25, 27, 29, 30, 31

U.S.G.S. is considering the revision of streamflow data programs for most of the states.²³ The majority of existing gages may be discontinued under its future program. Techniques like measuring channel geometry, interpolation from a known flow to an unknown flow, and correlations with adjacent streams will be used to provide streamflow

information at any point on any stream. Simple channel geometry measurements have produced average flow data as accurate as 10 years of continuous gage records.¹³ The standard errors were lowest for mountain regions and in competition with 5 to 10 years of gaged records for the plains region. There is very little variation when results are compared between channel width and average flow (fig.3). Mean annual discharge is one of the few criteria that will be routinely provided by this future program. Therefore, the Montana Method can still be used with this new program, since it is based primarily on knowledge of the mean annual discharge or average flow. The ability to provide the average flow at any point on any stream would actually facilitate the use of the Montana Method in the future.

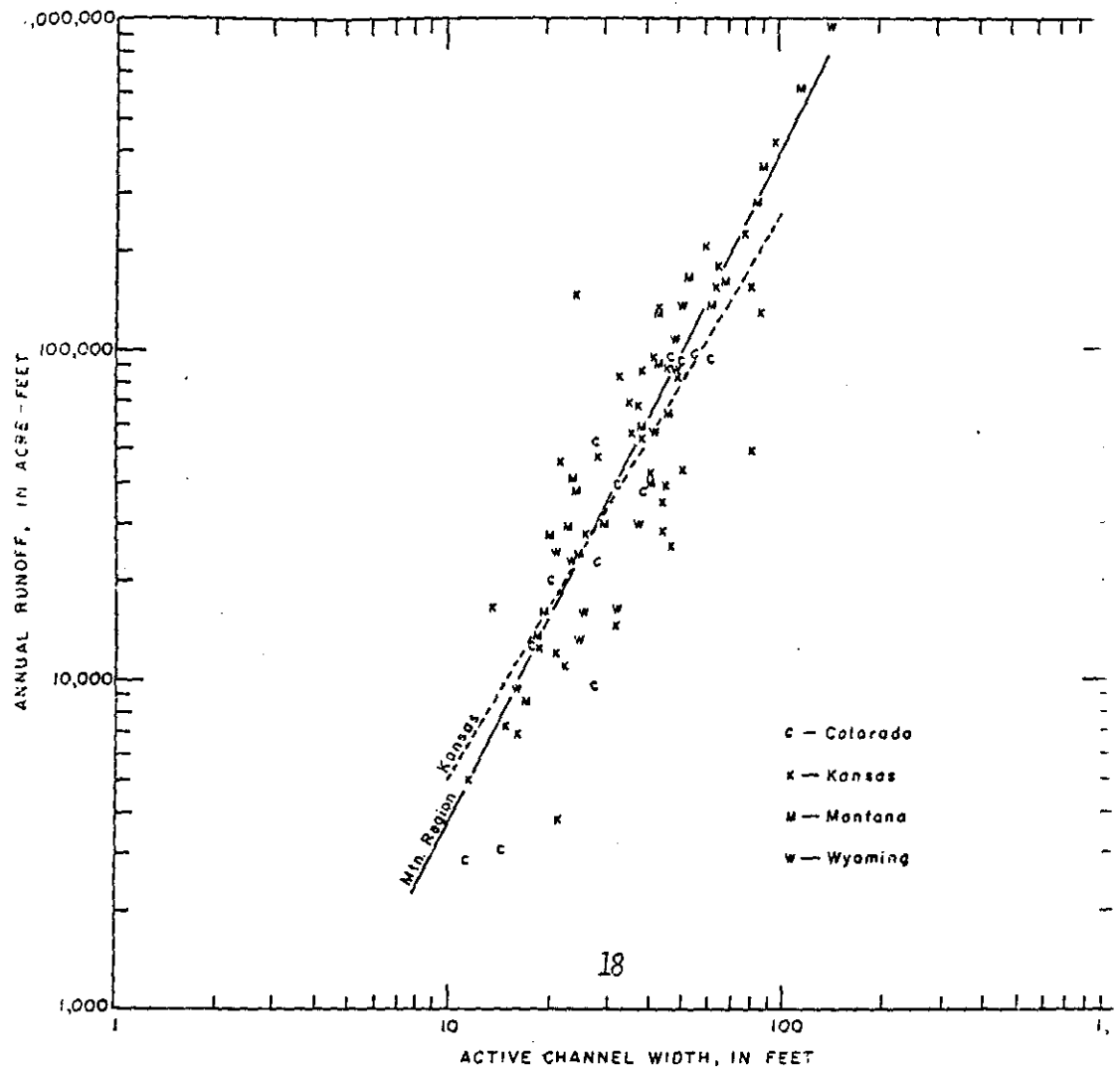
Adopting the metric system would not require conversion tables or other problems since this method is based on percentages of the average flow however it is expressed.

CONCLUSIONS

The following conclusions on flows are the result of frequent observations and detailed analyses of flows from a wide variety of streams over a large geographical area of the United States

DEC 07 1994

Fig. 3



Correlation between average flow and channel width for streams in the mountain and plains regions of Colorado, Kansas, Montana and Wyoming

NOV 1979
DEC 07 1994

Ten percent (10%) of the average flow (fig. 4): This is a minimum instantaneous flow recommended to sustain short-term survival habitat for most aquatic life forms. Channel widths, depths, and velocities will all be significantly reduced and the aquatic habitat degraded (fig. 1). The stream substrate or wetted perimeter may be about $\frac{1}{2}$ exposed, except in wide, shallow riffle or shoal areas where exposure could be higher. Most side channels will be severely or totally dewatered. Most gravel bars will be substantially dewatered, and islands will usually no longer function as wildlife nesting, denning, nursery, and refuge habitat. Streambank cover for fish and fur animal denning habitat will be severely diminished. Many wetted areas will be so shallow they no longer will serve as cover, and fish will generally be crowded into the deepest pools. Riparian vegetation may suffer from lack of water. Large fish may have difficulty migrating upstream over many riffle areas. Water temperature may become a limiting factor, especially in the lower reaches of the stream in July and August. Invertebrate life will be severely reduced. Fishing will often be very good in the deeper pools and runs since fish will be concentrated. Many fishermen prefer this level of flow! However, fish may be vulnerable to overharvest. Floating is usually difficult even in a canoe or rubber raft (stream with an average flow of more than 100 cfs). Natural beauty and stream esthetics are badly degraded. Most streams carry less than 10% of the average flow at times, so even this low level of flow will occasionally provide some enhancement over a natural flow regimen.

Fig. 4



Republican River below Hardy Bridge, Nebraska, showing a flow of 42 cf (10% of the average flow). Water depths were adequate to provide some fish cover, living space, movement and for fishing. Temperatures were within tolerable limits. This is a minimum instantaneous flow recommended to sustain short-term survival habitat for most aquatic life forms.

MRBS Photo #7159
by Don Tennant 7/10/64

20 DEC 07 1994

Thirty percent (30%) of the average flow (fig. 5): This is a base flow recommended to sustain good survival habitat for most aquatic life forms. Widths, depths, and velocities will generally be satisfactory (fig. 1). The majority of the substrate will be covered with water, except for very wide, shallow riffle or shoal areas. Most side channels will carry some water. Most gravel bars will be partially covered with water and many islands will provide wildlife nesting, denning, nursery, and refuge habitat. Streambanks will provide cover for fish and wildlife denning habitat in many reaches. Many runs and most pools will be deep enough to serve as cover for fishes. Riparian vegetation should not suffer from lack of water. Large fish should have no trouble moving over most riffle areas. Water temperatures are not expected to become limiting in most stream segments. Invertebrate life is reduced but not expected to become a limiting factor in fish production. Water quality and quantity should be good for fishing, floating, and general recreation, especially with canoes, rubber rafts, and smaller shallow draft boats (streams with an average flow of more than 100 cfs). Stream esthetics and natural beauty will generally be satisfactory.

Fig. 5

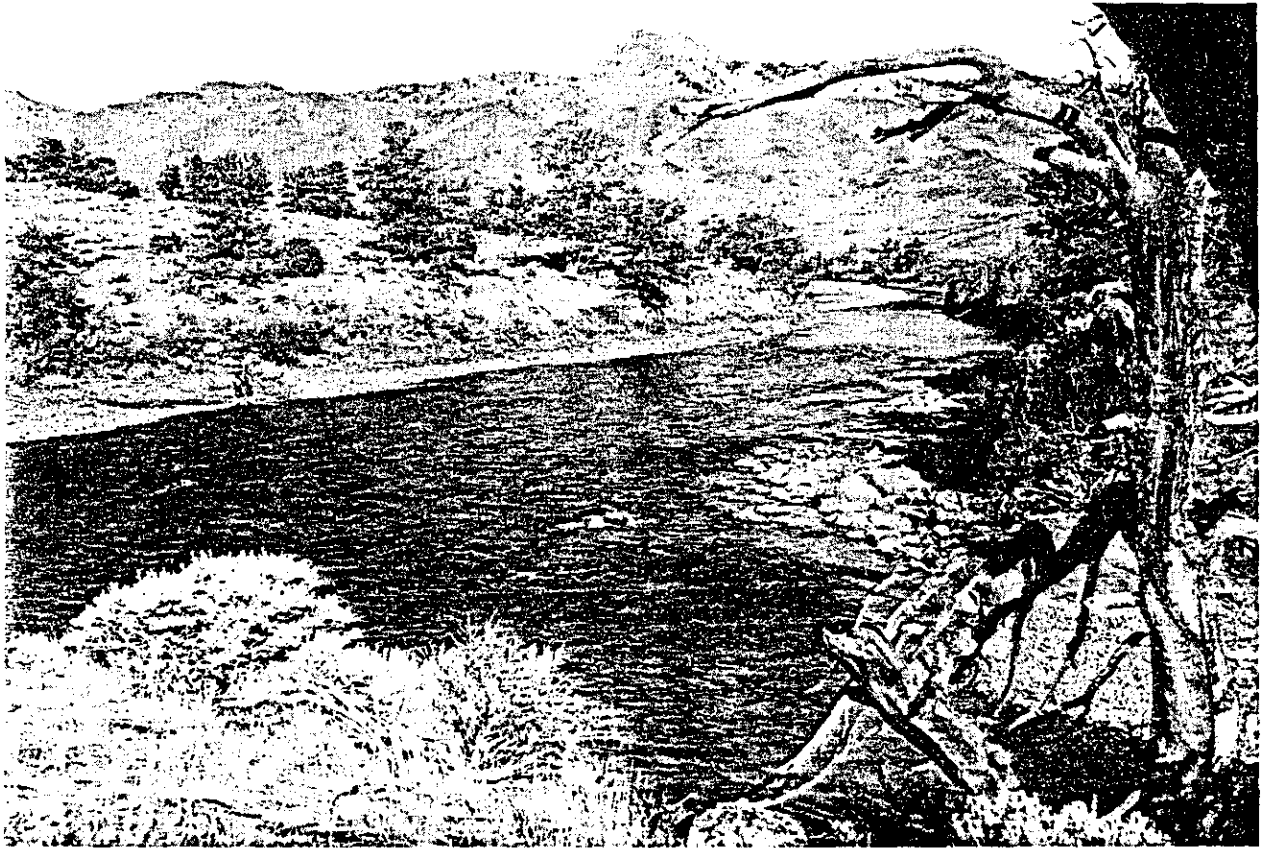


Bighorn River below Boysen Dam, Wyoming, showing a flow of 400 cfs (30% of the average flow). Water depth was adequate for trout movement, spawning incubation and winter survival in most run and pool areas for a distance of 45 car miles downstream. This is a base flow recommended to sustain good survival habitat for most aquatic life forms.

MRBS Photo #8542-B
by Don Tennant 10/2/68

Sixty percent (60%) of the average flow (fig. 6): This is a base flow recommended to provide excellent to outstanding habitat for most aquatic life forms during their primary periods of growth and for the majority of recreational uses. Channel widths, depths, and velocities will provide excellent aquatic habitat (fig. 1). Most of the normal channel substrate will be covered with water, including many shallow riffle and shoal areas. Side channels that normally carry water will have adequate flows. Few gravel bars will be exposed, and the majority of islands will serve as wildlife nesting, denning, nursery, and refuge habitat. The majority of streambanks will provide cover for fish and safe denning areas for wildlife. Most pools, runs, and riffles will be adequately covered with water and provide excellent feeding and nursery habitat for fishes. Riparian vegetation will have plenty of water. Fish migration is no problem in any riffle areas. Water temperatures are not expected to become limiting in any reach of the stream. Invertebrate life forms should be varied and abundant. Water quality and quantity should be excellent for fishing and floating canoes, rafts, and larger boats, and general recreation (stream with an average flow in excess of 100 cfs). Stream esthetics and natural beauty will be excellent to outstanding.

Fig. 6



North Fork Shoshone River near Wapiti, Wyoming, showing a flow of 456 cfs (approximately 60% of the average flow). Water widths, depths and velocities very good for fish and fishing in all riffles, runs and pools. This is a base flow recommended to provide excellent to outstanding habitat for most aquatic life forms during their primary periods of growth and for the majority of recreational uses.

FWS Photo #6-1-68
by Don Tennant 9/29/72

A flow of 2 to 3 times the average flow is often best for kayaks and whitewater canoeing. A flow of this magnitude is also preferable for larger boats with inboard or outboard motors, like those many people use on the annual Missouri and Yellowstone River floats held in June and July in Montana.

RECOMMENDATIONS

1. Request "instantaneous flows" to prevent flow releases from dams and diversion structures that are averaged over a day, month, or year, which permits erratic releases or even no flow at times.
2. Recommend that dual or multiple outlets to all dams be designed and constructed so that minimum flows of an appropriate temperature and quality to protect the aquatic environment can be by-passed at all times, including drawdowns for safety inspections and emergency repairs.
3. Insist that costs for providing of instream flows to protect the aquatic environment downstream below dams be project costs, including costs for unforeseen emergency repairs and routine maintenance over the life of the project.
4. Justify only that portion of a stream flow required to fulfill specific instream needs. If fish need a flow of 100 cfs in a segment of stream where there are already legal requirements of 25 cfs for municipal water, 15 cfs for irrigation water transport, and 10 cfs for a U.S. Environmental Protection Agency water quality requirement, you logically and legally should only have to justify a flow of 50 cfs

(the additional increment necessary to provide 100 cfs). Planners of water development projects may ask you to justify and apply cost/benefit ratios for fish to the 100 cfs flow because this makes their "project purpose" look more favorable on a comparable cost/benefit basis.

5. Stipulate that the downstream flow will not be less than the inflow to impoundments, whenever operators of water development projects cannot provide specific flow requirements. Make this an integral part of every flow regimen recommendation, preferably part of the same sentence.

6. Reduced releases to a stream should not exceed a vertical drop of 6 inches in 6 hours (equal to 2 feet in 24 hours). Fluctuations greater than this may significantly degrade aquatic resources.

7. Request that maximum flows released from dams not exceed twice the average flow. Prolonged releases of clear water greater than this will cause severe bank erosion and degrade the downstream aquatic environment.

8. Use "undepleted" U.S.G.S. hydrology data for flow recommendations that relate to the stream in its pristine conditions (e.g., before dams, diversions, pumps, etc.). Otherwise, recommendations from the Montana Method may relate to depleted stream conditions and result in less than ideal flows.

9. Avoid recommending minimum instantaneous stream flow regimens less than 10% of the average flow since they will result in catastrophic degradation to fish and wildlife resources and harm both the aquatic

and riparian environments (fig. 1). Encourage lawmakers to pass legislation that would prevent diversions or regulation at dams, whenever it would reduce streamflow below this level. If water development projects cannot make it on 90% of the water carried by a stream, use of the remaining 10% probably won't justify their projects. Philosophically, it is a crime against nature to rob a stream of that last portion of water so vital to the life forms of the aquatic environment that developed there over eons of time.

Handwritten:
I have been thinking about this for a long time.
Before I was a lawyer.

REFERENCES

1. Anonymous. 1967. Black Hills Area Resources Study, A Resources Study Prepared by the Departments of Agriculture and Interior, 225 pp.
2. Anonymous. 1971. Fish and Wildlife Tentative Needs and Problems Upper Missouri River Tributaries Sub-basin. The Missouri River Basin Comprehensive Framework Study. Missouri Basin Inter-Agency Committee, 94 pp.
3. Anonymous. 1971. Fish and Wildlife Tentative Needs and Problems Yellowstone River Basin. The Missouri River Basin Comprehensive Framework Study. Missouri Basin Inter-Agency Committee, 99 pp.
4. Anonymous. 1973. Western United States Water Plan. Reports of the State Study Teams for Montana and Wyoming.
5. Bailey, Randy E., O.E. Maughan and R.A. Whaley. 1974. Stream Classification System for West Virginia., Symposium on Trout Habitat Research and Management in the Southern Appalachians. Cullowhee, North Carolina, 10 pp.
6. Banks, Roger R.L. and J.W. Mullan, Bureau of Sport Fisheries and Wildlife and R.W. Wiley and D.J. Dufek, Wyoming Game and Fish Department. 1974. The Fontenelle Green River Trout Fisheries Considerations in Its Enhancement and Perpetuation, Including Test Flow Studies of 1973. United States Department of the Interior, Fish and Wildlife Service, 125 South State Street, Salt Lake City, Utah, 37 pp.
7. Barnes, Harry H. 1975. Information on United States Geological Survey Streamflow Measurements. Letter of personal correspondence, 3 pp.
8. Baxter, G. 1961. River Utilization and the Preservation of Migratory Fish Life. Proc. Inst. of Civ. Eng., 18:225-44.
9. Dewsnap, Richard L. 1971. Legal Protection of Instream Water Values. National Water Commission, Arlington, Virginia, 58 pp.
10. Elser, A.A. 1972. A partial evaluation and application of the "Montana Method" of determining streamflow requirements. In proceedings, Instream Flow Requirement Workshop, Pacific Northwest River Basins Commission, Portland, Oregon, pp. 3-8.
11. Fish Division, Wyoming Game and Fish Commission. 1971. Wyoming Stream Fishery Classification.
12. Grover, C.N. and A.R. Harrison. 1966. Streamflow Measurements, Records and Their Uses. Dover Publications, Inc., New York, 363 pp.

REFERENCES
(continued)

13. Hedman, E.R. and W.M. Kastner. 1974. Progress Report on Stream-flow, Characteristics as Related to Channel Geometry of Streams in the Missouri River Basin. Open-File Report, U.S. Geological Survey, 24 pp. and personal letter.
14. Idaho Fish and Game Department. 1968. Idaho Stream Classification.
15. Leopold, Luna B., J.P. Miller and M.G. Wolman. 1974. Fluvial Processes in Geomorphology. W.H. Freeman and Company, San Francisco, pp. 198-332.
16. Leopold, Luna B. and T. Maddock, Jr. 1953. The Hydraulic Geometry of Stream Channels and Some Physiographic Implications. U.S. Geological Survey Professional Paper 252, 19 pp.
17. Pauszek, F.H. 1973. Digest of the 1972 Catalog of Information on Water Data. U.S. Geological Survey Water Resource Investigations 63-73, 83 pp.
18. Rantz, S.E. 1964. Stream Hydrology Related to the Optimum Discharge for King Salmon Spawning in the Northern California Coast Ranges. U.S. Geological Survey, Water Supply Paper (1779-AA), 16 pp.
19. Stream Classification Committee. Revised 1965. A Classification of Montana Fishing Streams.
20. Tennant, Donald L. 1957-1975. Ecological Service Studies and Reports - Major Fish and/or Wildlife Input. Unpublished list of RBS and ES reports, 3 pp.
21. Tennant, Donald L. 1970. Minimum Instantaneous Streamflow to Protect Fish, Wildlife and the Aquatic Environment. Unpublished memorandum in the Area Office files of the U.S. Fish and Wildlife Service, Billings, Montana, 3 pp.
22. Tennant, Donald L. 1970. Minimum Stream Flows - National Environmental Policy Act of 1969 (P.L. 90-190) and Executive Order 11514. Unpublished memorandum in the Area Office files of the U.S. Fish and Wildlife Service, Billings, Montana, 2 pp.
23. United States Department of the Interior, Geological Survey. A Proposed Streamflow Data Program for (state).
24. U.S. Fish and Wildlife Service. 1961. Initial Follow-up Report, Boysen Unit, Wyoming, 21 pp. Illus.
25. U.S. Fish and Wildlife Service. 1966. Kansas River Basin - Republican River, Nebraska - Fishery Study of Experimental Flows, 28 pp. Illus.

REFERENCES
(continued)

26. U.S. Fish and Wildlife Service. 1959. Report on the Comprehensive Survey of the Water Resources of the Delaware River Basin - Appendix J.
27. United States Department of the Interior, Fish and Wildlife Service. 1966. Fishery Study of Experimental Flows Between Kortess Dam and Pathfinder Reservoir, 25 pp. illus.
28. Water Resources Council, Washington, D.C. 1975. National Assessment of Water and Related Land, Phase I - Nationwide Analysis (In Press).
29. Wesche, Thomas A. 1973. Parametric Determination of Minimum Stream Flow for Trout. Water Resources Institute, University of Wyoming, 102 pp.
30. Whelan, Donald E. and R.K. Wood. 1962. Low-Flow Regulations as a Means of Improving Stream Fishing. Proceedings of the Sixteenth Annual Conference, Southeastern Association of Game and Fish Commissioners, Charleston, South Carolina, pp. 375-386.
31. Wiley, R.W. 1972. Blacks Fork River Volume Flow Observations. Wyoming Game and Fish Commission Administrative Report #0472-08-6602, pp. 1-17.