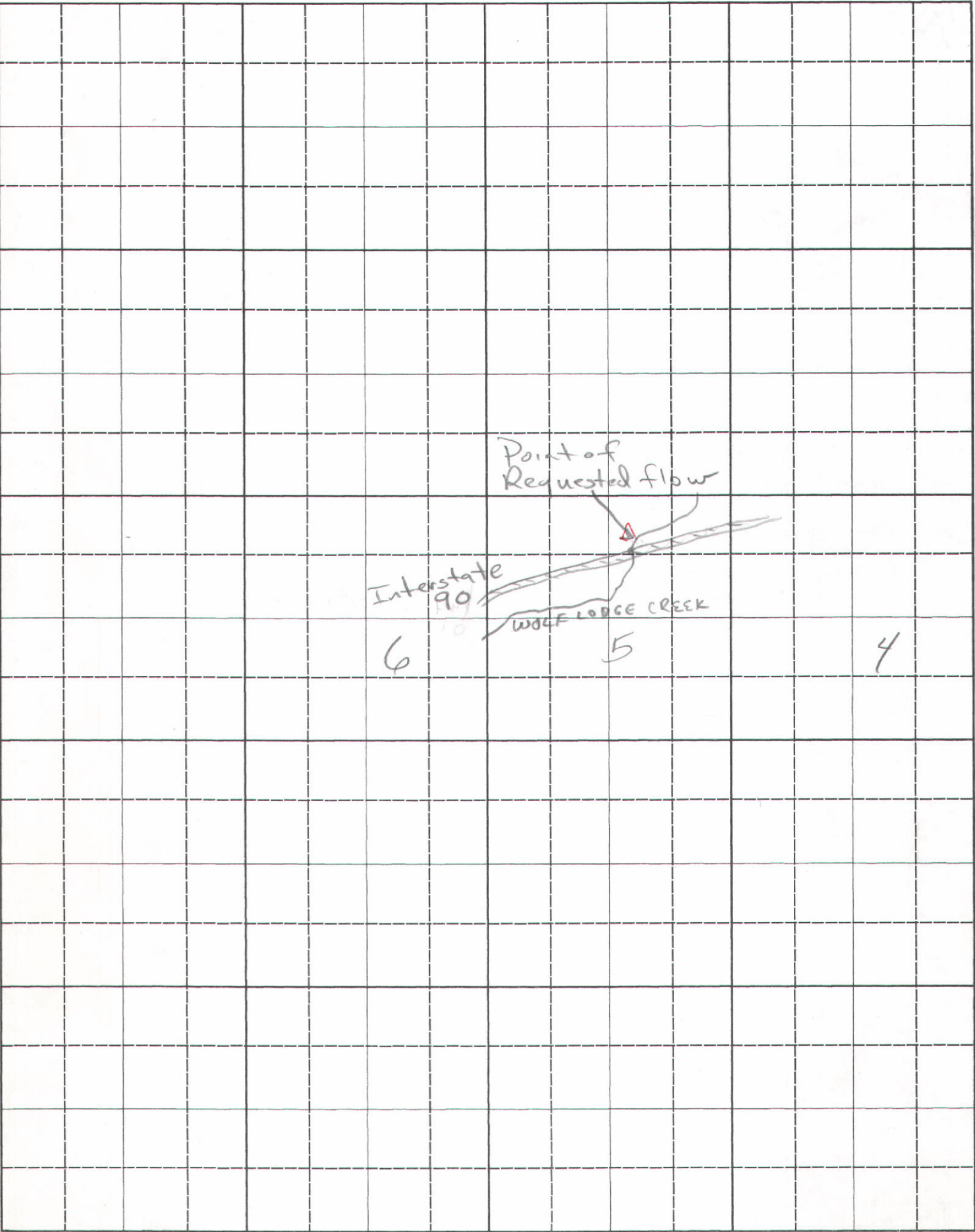


11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



T 49 N.

Scale: 2 inches equal 1 mile.

R 2 W.

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.

[Signature]
(Applicant)

AFFIDAVIT OF PUBLICATION

NOTICE OF APPLICATION FOR WATER RIGHTS

Notice is hereby given that the following application(s) have been submitted for permit to appropriate the public waters of the State of Idaho: NOTICE OF APPLICATION FOR MINIMUM STREAM FLOW

Notice is hereby given that the Idaho Water Resource Board has on September 13, 1978, submitted one (1) application for permit to the Department of Water Resources proposing the appropriation of water to preserve the minimum streamflow from Wolf Lodge Creek, tributary to the Coeur d'Alene River which is further described as follows:

APPLICATION NO. 95-7874

SOURCE: Wolf Lodge Creek
POINT OF MINIMUM
STREAMFLOW: NWNE, Sec. 5,
T49N, R2W, B.M., Kootenai County

RATE OF FLOW: 30 cubic feet per second

SEASON OF USE: January 1 to December 31.

USE: To maintain trout spawning and rearing habitat.

The Director of the Department of Water Resources will hold a public hearing on the application at 1:30 p.m., on Thursday, August 2, 1979, at the Idaho Department of Water Resources Northern Region Office, 4055 Government Way, Coeur d'Alene, Idaho, for the purpose of hearing evidence in regard to the applications. The hearing will be held pursuant to the provisions of Sec. 42-1503, Idaho Code.

If issued, these permits will be subject to all prior water rights. Any party who wishes to formally appear in this proceeding for the purpose of presenting evidence or cross examining witnesses should file a notice of appearance with the Director, Department of Water Resources, Statehouse, Boise, Idaho, five (5) days prior to the hearing. Other parties will be given an opportunity to informally present their views and comments without the necessity of filing a notice of appearance.

C. STEPHEN ALLRED
Director

If issued, the permit(s) will be subject to all prior water rights. Protests against the granting of any permit must be filed with the Director of the Idaho Department of Water Resources, 4055 Gov't Way, Coeur d'Alene, Id, 83814 on or before AUGUST 1, 1979.

C. STEPHEN ALLRED
Director

STATE OF IDAHO,
County of Kootenai,

ss.

Coral Hedge

being first duly sworn
upon oath deposes and says:

1. I am now and at all times hereinafter mentioned was a citizen of the United States, resident of the State of Idaho, over the age of twenty-one years and not a party of the above entitled action.

2. I am now and at all times hereinafter mentioned was the printer (principal clerk) of the "Coeur d'Alene Press," a newspaper printed and published daily except Sunday in Coeur d'Alene, Kootenai County, Idaho, and having a general circulation in said county.

3. The

Notice

of which the annexed is a printed copy, was published in the regular issue of said newspaper for 2 consecutive Weeks, commencing on the 5 day of July, 1979, and ending on the 12 day of July, 1979, and such publication was made as often during said period as said daily newspaper was regularly issued.

4. That said newspaper has been continuously and uninterruptedly published in said Kootenai County, during a period of more than seventy-eight consecutive weeks immediately prior to the first publication of said notice.

Coral Hedge

Subscribed and sworn to before me this 12 day of July, 1979.

LEADER

26.64

7/17/79

Robert M. Mankley

Notary Public for the State of Idaho,
residing at Coeur d'Alene, Idaho.

MICROFILMED



Exhibit No. 1. Chinook salmon from Lake Coeur d'Alene.

MICROFILMED
AUG 11 1994



Exhibit No. 2. Westslope cutthroat trout produced in
Wolf Lodge Creek drainage.

MISSOURI
AUG 11 1994



Exhibit No. 3. Typical stream habitat in lower Wolf Lodge Creek.

WOLF LODGE CREEK
AUG 11 1994

Table 3.

Monthly staff gage and discharge measurements for Wolf Lodge Creek, June 1982-October 1985.

Date	Wolf Lodge Creek	
	Staff gauge (ft)	Discharge (cfs)
06/15/82	1.40	22.23
07/22/82	1.17	11.17
08/30/82	1.04	5.01
09/24/82	1.02	4.29
07/18/83	1.86	61.70
07/26/83	---	---
08/31/83	---	---
09/01/83	1.22	7.87
09/09/83	---	---
10/26/83	---	---
11/08/83	1.42	19.22
10/15/84	2.00	6.40
11/14/84	2.21	19.54
01/03/85	2.05	---
01/06/85	2.04	---
01/13/85	2.03	---
01/20/85	2.05	---
01/25/85	2.06	11.47
02/03/85	2.36	---
02/17/85	2.04	---
03/27/85	2.57	78.80
04/20/85	3.25	---
05/01/85	3.05	---
05/18/85	3.12	---
06/05/85	2.56	40.06
06/14/85	2.62	---
07/02/85	2.33	---
07/22/85	2.18	---
08/27/85	2.11	---
09/19/85	2.25	---
10/17/85	2.10	6.15
10/25/85	2.15	7.40

RECEIVED
AUG 11 1994

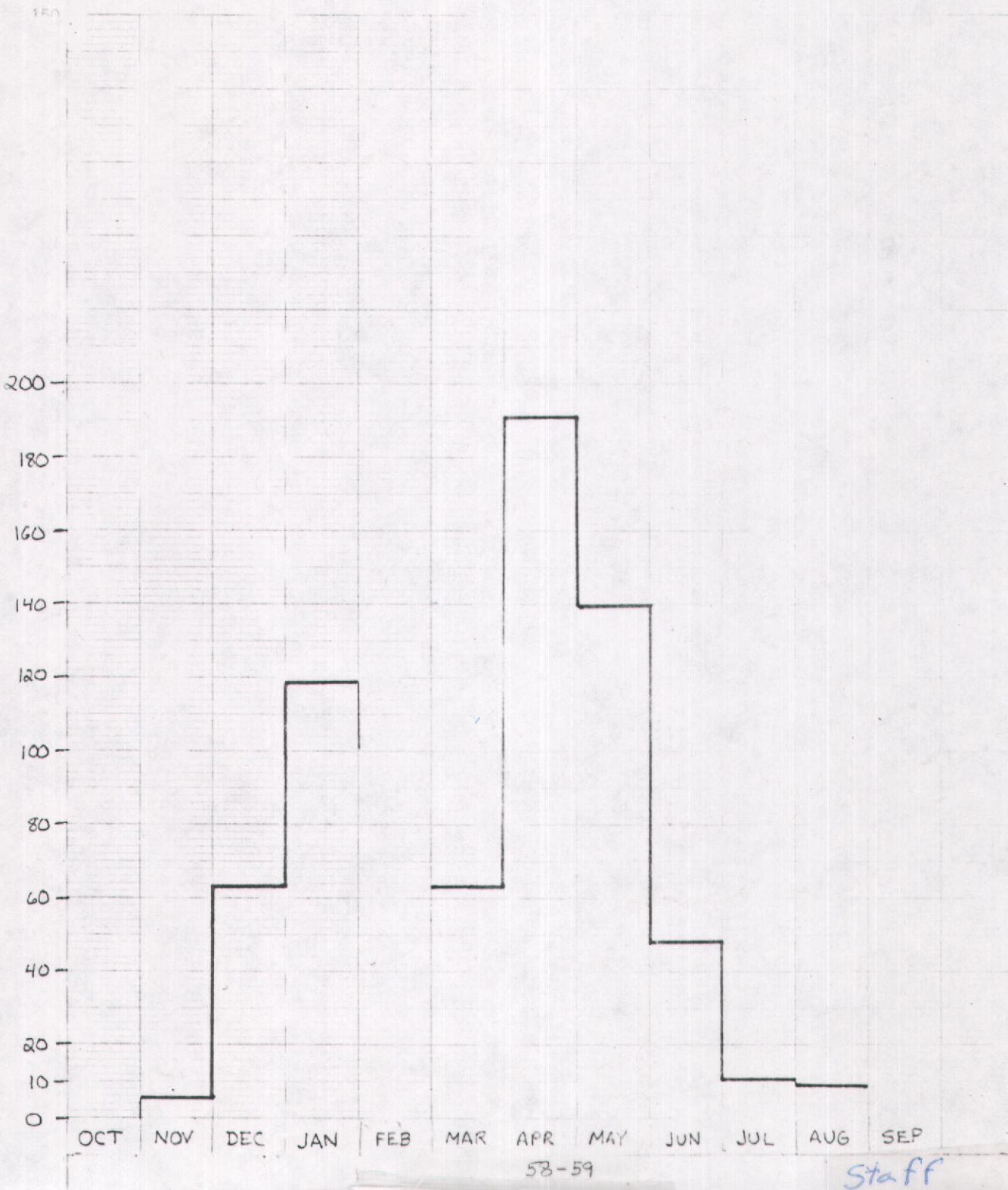
FIGURE 1. WOLF LODGE CREEK ESTIMATED MONTHLY DISCHARGE;
AS DETERMINED FROM ONE MEASUREMENT PER MONTH. (D.A. = 39 sq. mi.)

WATER YEAR 1959

46 3093

K&E 1 YEAR BY MONTHS X 1.0 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

DISCHARGE (CFS)



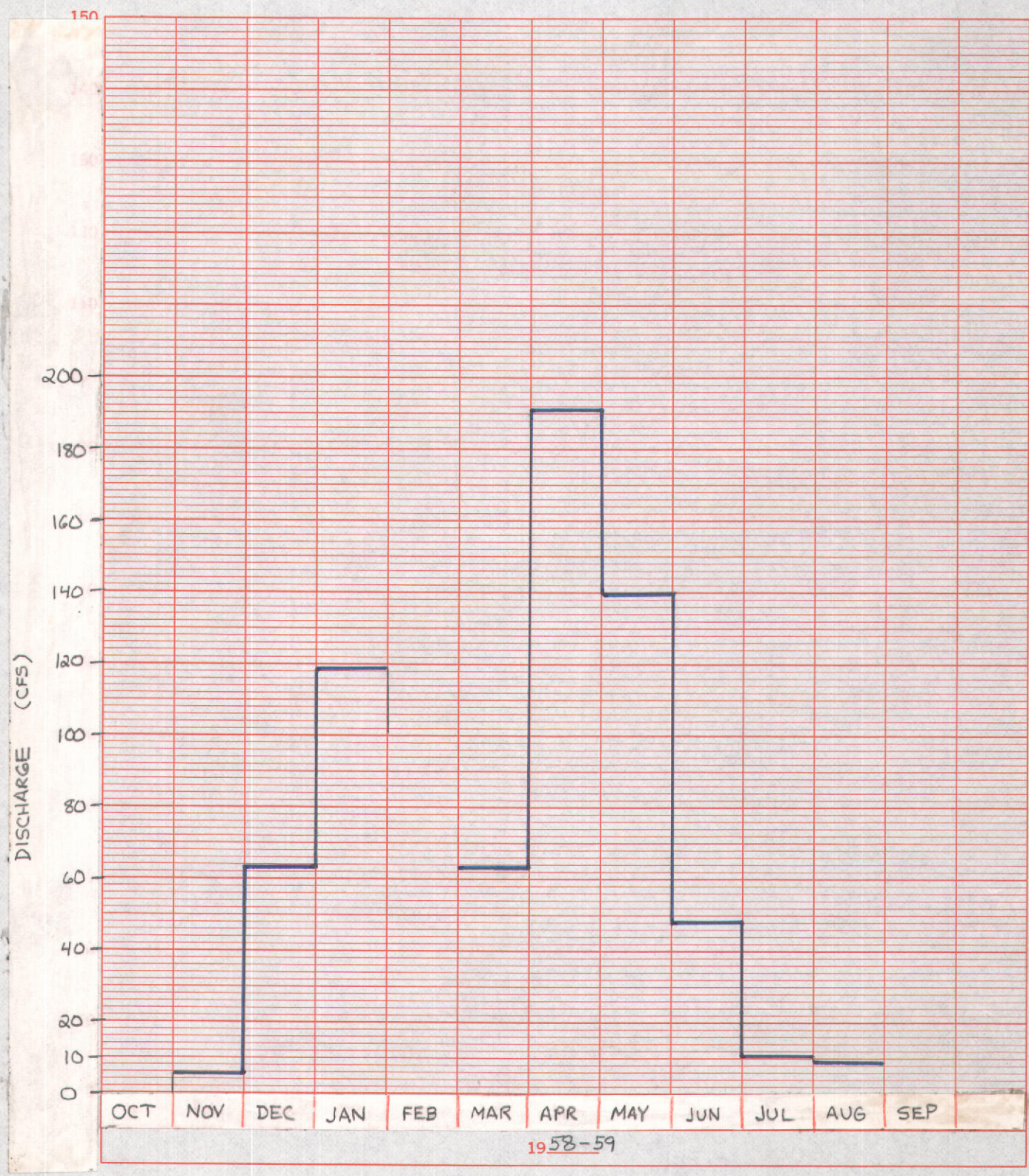
58-59

Staff
Ex #3

FIGURE 1. WOLF LODGE CREEK ESTIMATED MONTHLY DISCHARGE,
AS DETERMINED FROM ONE MEASUREMENT PER MONTH. (D.A. = 39 SQ. MI.)
WATER YEAR 1959

46 3093

K+E 1 YEAR BY MONTHS X 150 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

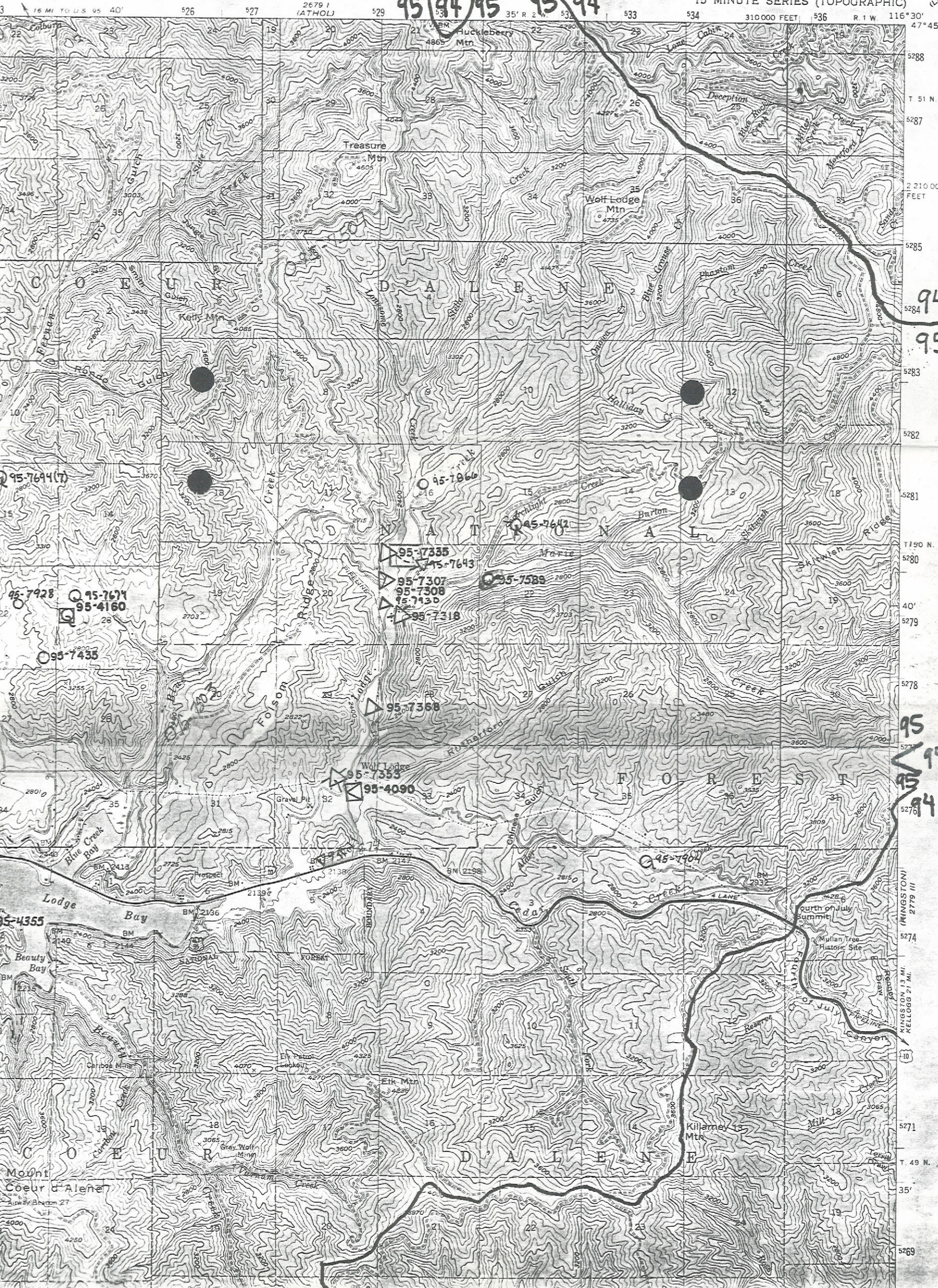


1958-59

LANE QUADRANGLE
IDAHO-KOOTENAI CO.
15 MINUTE SERIES (TOPOGRAPHIC)

279 IV
(LAKEVIEW)

95/94/95 95/94



95-7507

95-4231
95-4330

95-7699
95-7299
95-4147
95-7694(7)
95-4162
95-4124
95-4146
95-4128
95-7437
95-7642
95-7652

95-7866

95-7437

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95-7385

95-7529

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95-7600

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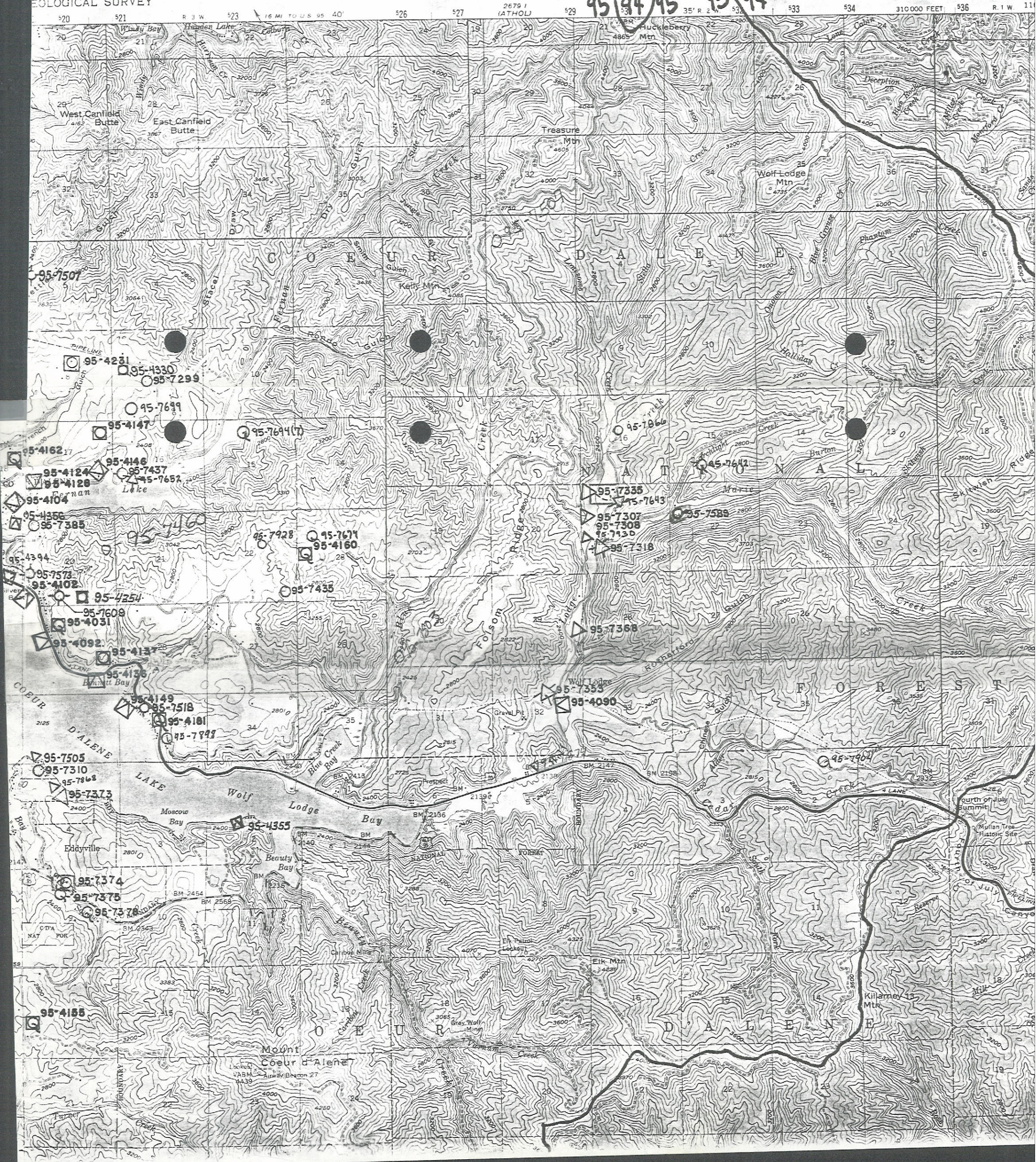
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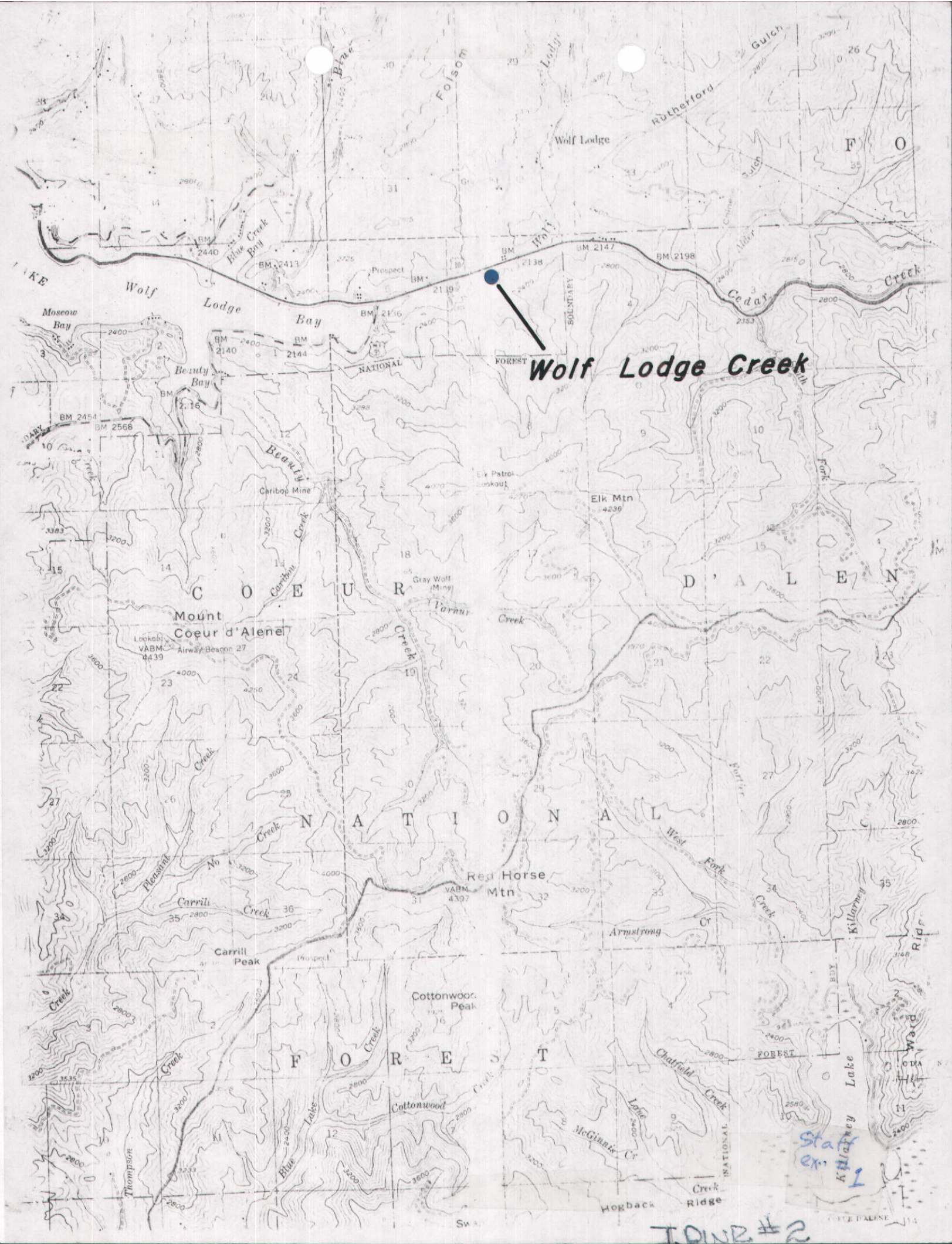
95-7375

95-7378

95-4155

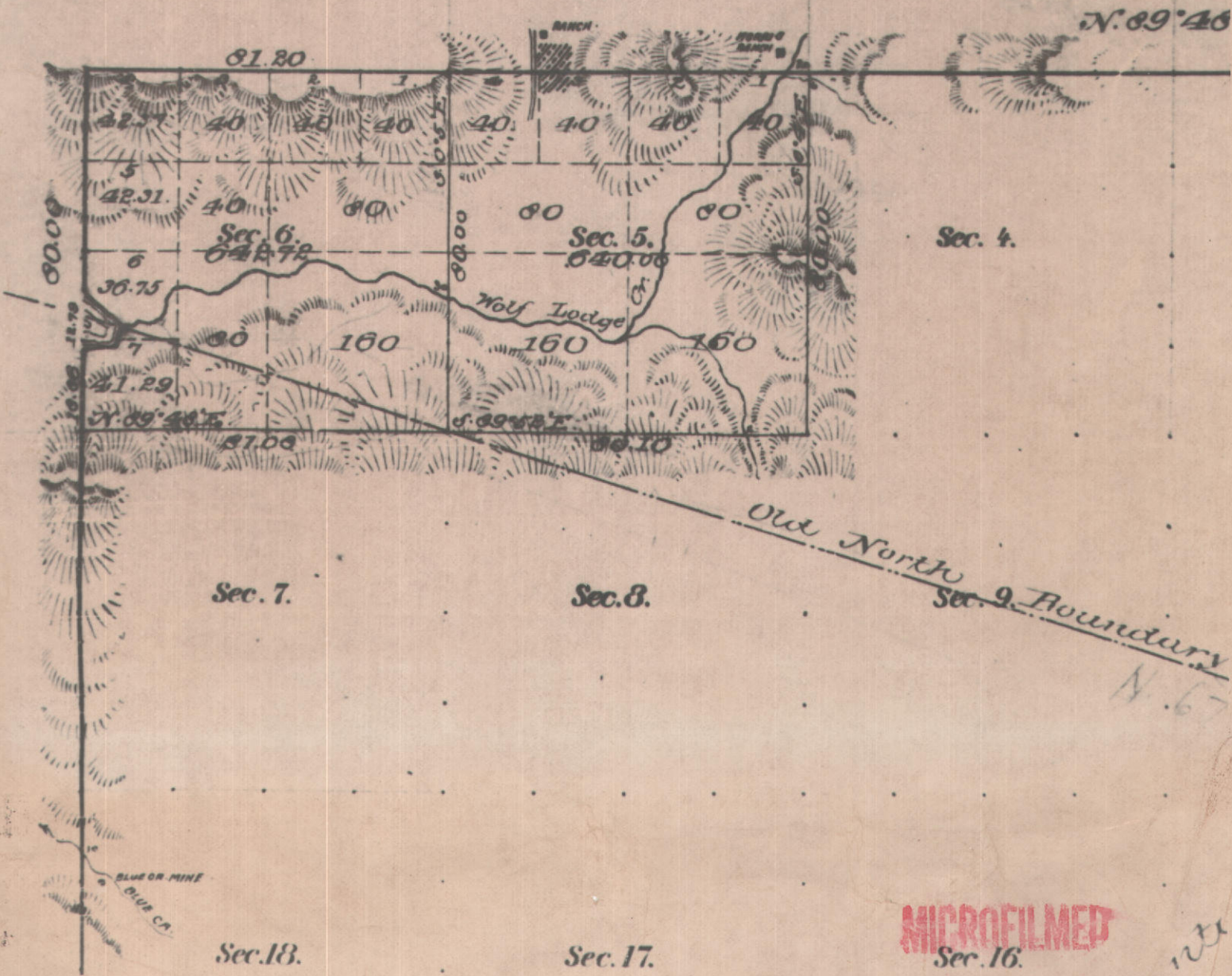
95/94/95 95/94





Township N^o 49. North Range N^o 2 West

G f F e E d D



Portneuf Valley Audubon Society



January 5, 1979

Norman Young
Dept. Of Water Resources
State House
Boise, Idaho 83720

The Portneuf Valley Audubon Society wishes to lend its support for the approval of the 11 instream flow water rights applications as submitted by Idaho Fish and Game. In particular, this chapter notes the ecological importance of Silver Creek and recommends that the minimum flows of 99 CFS near Picabo and 74 CFS near U.S. Highway 93 between Richfield and Carey be approved.

Respectfully,

PETE

Pete Cole
President of the Portneuf Valley
Audubon Society

✓	776
✓	777
✓	778

37-7727

37-7728

✓ 36-7818

36-7819

36-7820

36-7821

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36-7772

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MICROFILMED

State of Idaho
Department of Water Resources

WATER RIGHT LICENSE
WATER RIGHT NO. 95-07874

Priority: September 13, 1978 Minimum Stream Flow: 30.00 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 September 13, 1978; and
has submitted Proof of Beneficial Use on September 1, 1989. A minimum stream flow
water right in:

WOLF LODGE CREEK tributary to COEUR D ALENE LAKE

has been established as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>FLOW RATE</u>
MINIMUM STREAM FLOW	07/01 to 11/15	7.00 CFS
MINIMUM STREAM FLOW	11/16 to 06/30	30.00 CFS

LOCATION OF STREAM REACH:

Beginning of Stream Flow Reach
End of Stream Flow Reach

NWSW , Sec. 21, Township 50N, Range 02W
NWNE , Sec. 5, Township 49N, Range 02W
KOOTENAI County

CONDITIONS/REMARKS:

1. This water right is appurtenant to the described place of use.
2. This right is subject to all prior water rights and may be forfeited by five years of non-use.
3. Modifications to or variance from this license must be made within the limits of Section 42-222, Idaho Code, or the applicable Idaho law.
4. Use of water under this license 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 issued by the Director under provisions of Chapter 2, Title 42 Idaho Code, with the priority of the water right dated earlier than the priority date of this license.
5. The use of the water under this license shall be non-consumptive.
6. Upon the future finding and order of the Director that gauging stations are required to maintain the aproved minimum flow on Wolf Lodge Creek, the measuring devices shall be permanently installed as specified by the Department.

RECORDED

AUG 11 1994

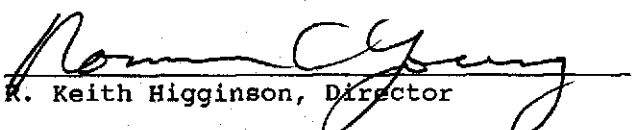
State of Idaho
Department of Water Resources**WATER RIGHT LICENSE**

WATER RIGHT NO. 95-07874

CONDITIONS/REMARKS:

7. The Director retains jurisdiction to review and amend any and all parameters of this license. Any person seeking review and amendment of the license shall file a request with the Board, which request shall include the amendment sought, the reasons for the amendment, and a statement of the change in circumstances since the license was issued or last reviewed that merit a review of the license. A copy of the petition shall be served upon the Director of the Department of Water Resources. The Board may petition the Director for an amendment to the license. The petition must set forth any significant change in circumstances and evidence of public interest supporting the proposed amendment. The Director will notify the general public and specific persons or parties known to be interested in the proposed change, and conduct a hearing for the purpose of determining whether the license should be amended in the public interest. The burden of proof at the hearing shall be upon the person or party seeking the amendment to establish that amendment of the license would be in the public interest.
8. This minimum stream flow reach is between a point in the NWSW, S21, T50N, R2W and a point in the NWNE, S5, T49N, R2W, where Wolf Lodge Creek flows under Interstate Highway 90.

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 15th
day of July, 1994.


R. Keith Higginson, Director

AUG 11 1994

RECEIVED

STATE OF IDAHO SEP 01 1989

DEPARTMENT OF WATER RESOURCES
Department of Water Resources
PROOF OF BENEFICIAL USE

For Office Use Only
Fee Received _____
Date _____
Receipt # _____
Receipt by _____
Reviewed by _____
Sent to region _____

The Idaho Department of Water Resources will consider this form as a statement that the permit holder(s) has 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 or a completed field examination report prepared by a certified water right examiner who has been appointed by the department.

Permit No. 95-7874

Name(s) of Permit Holder: Idaho Water Resource Board

Post Office Address: Statehouse, Boise, ID 83720

Telephone No. _____

Source of Water: Wolf Lodge Creek

Extent of Use:

Domestic _____ (number of households) Stockwater _____ (number and type of stock)

Irrigation _____ (acres) Other/Remark Minimum stream Flow

Total rate and/or volume for which proof is submitted 30 cfs _____ acre-feet

Show the date water was first diverted and beneficially used under this permit: n/a

Measuring Device: Required? ☐ Yes ☒ No
Installed? ☒ Yes ☐ No
Fee enclosed \$ _____
(See License Examination Fee Schedule)

Flow Measurement Port: Required? ☐ Yes ☐ No
Installed? ☐ Yes ☐ No

Person to contact to accompany the Department representative during the field examination:

William D. Horton 334-3791
(Name) (Telephone Number)

P.O. Box 25, Boise, ID 83707
(Address)

The above information 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.

Date

Signature of Permit Holder (and title, if appropriate)

2-1-89
William D. Horton - For the Idaho Water Resource Board

Table 5. Monthly staff gauge and discharge measurements for Granite Creek, Sullivan Springs and Wolf Lodge Creek, June-September, 1982.

Date	Granite Creek		Sullivan Springs		Wolf Lodge Creek	
	Staff gauge (ft)	Discharge (cfs)	Staff gauge (ft)	Discharge (cfs)	Staff gauge (ft)	Discharge (cfs)
6/15/82	1.14	70.57	1.00	9.95	1.40	22.23
7/22/82	.62	17.94	.97	8.70	1.17	11.17
8/30/82	.47	10.50	.95	7.46	1.04	5.01
9/24/82	--a)	--a)	--a)	--a)	1.02	4.29

a) Measurements not taken due to weir construction.

Table 6. Monthly staff gauge and discharge measurements for Granite Creek, Sullivan Springs and Wolf Lodge Creek, Idaho, July-November, 1983.

Date	Granite Creek		Sullivan Springs		Wolf Lodge Creek	
	Staff gauge (ft)	Discharge (cfs)	Staff gauge (ft)	Discharge (cfs)	Staff gauge (ft)	Discharge (cfs)
7/18/83	--	--	--	--	1.86	61.70
7/26/83	.70	28.20	--	--	--	--
8/31/83	.51	13.12	.98	7.27		
9/1/83	--	--	--	--	1.22	7.87
9/9/83	--	--	.96	6.92	--	--
10/26/83	.40	8.97	.94	5.85	--	--
11/8/83	--	--	--	--	1.42	19.22

Table 8. Staff gauge readings and discharge estimates for Wolf Lodge Creek, Spokane River drainage, Idaho, 1984-85. Staff gauge is located approximately 40 m upstream from the Gateway Ranch bridge on the east bank.

Date	Staff gauge readings	Discharge (cfs)
10-15-84	2.00	6.40
11-14-84	2.21	19.54
1-3-85	2.05	—
1-6-85	2.04	—
1-13-85	2.03	—
1-20-85	2.05	—
1-25-85	2.06	11.47
2-03-85	2.36	—
2-17-85	2.04	—
3-27-85	2.57	78.80
4-20-85	3.25	—
5-1-85	3.05	—
5-18-85	3.12	—
6-5-85	2.56	40.06
6-14-85	2.62	—
7-2-85	2.33	—
7-22-85	2.18	—
8-27-85	2.11	—
9-19-85	2.25	—
10-17-85	2.10	6.15
10-25-85	2.15	7.40

For Office Use Only	
Fee Received	NONE
Date	REQ'D
Receipt #	

RECEIVED

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

REQUEST FOR EXTENSION OF TIME

AUG 28 1984

To provide additional time in which to submit
proof of beneficial use on a water right permit

Department of Water Resources

Idaho Water Resource Board of Statehouse, Boise
(Name) (Address)

State of Idaho, deposes and says:

That he is the holder, or the duly authorized agent of the holder*, of Permit to appropriate the Public Water of
the State of Idaho No. 95-7874.

That under the terms and conditions of said permit, work thereunder was required to be completed on or before
September 1, 19 84.

That he has heretofore performed the following work described under said permit: _____
(This must be filled out! If no work has been completed put none.)

Beneficial use is recorded pursuant to a letter dated July 25, 1984
from Region 1, Idaho Department of Fish and Game
Costing \$ _____

That he is unable to complete the remainder of the work within the required time for the following reasons, to-wit:
More flow measurement data is needed prior to licensing

Wherefore, he asks that the Department of Water Resources extend the time for the completion of obligations
under said permit to September 1, 19 89.
(1 yr. minimum, 5 yrs. maximum)

NOTE
AS OF JULY 1, 1980,
THERE IS A \$15.00
CHARGE FOR REQUESTS
FOR EXTENSION OF
TIME.

Donald Kramer
Chairman, Idaho Water Resource Board
(Signature)*
*IF OTHER THAN HOLDER, Power of Attorney must be supplied.

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

IT IS HEREBY ORDERED that the above application for extension of time be APPROVED and the time within
which to submit the statement of beneficial use is extended to September 1, 1989.

Signed this 30th day of August, 19 84.

J. Glen Saxton
Chief, Operations Bureau

RECORDED

IN THE HOUSE OF REPRESENTATIVES
HOUSE CONCURRENT RESOLUTION NO. 36
BY RESOURCES AND CONSERVATION COMMITTEE

Amended

1 A CONCURRENT RESOLUTION
2 APPROVING AN APPLICATION TO APPROPRIATE WATER FOR MINIMUM STREAM FLOW.

3 Be It Resolved by the Legislature of the State of Idaho:

4 WHEREAS, the Water Resource Board may apply for a permit to appropriate
5 unappropriated waters of any stream for minimum stream flow; and,

6 WHEREAS, under the provisions of Section 42-1503, Idaho Code, no permit
7 shall become finally effective until affirmatively approved by the
8 Legislature.

9 NOW, THEREFORE, BE IT RESOLVED by the members of the Second Regular
10 Session, Forty-fifth Idaho Legislature, the House of Representatives and
11 the Senate concurring therein, that the application of the Water Resource
12 Board to appropriate the unappropriated waters for minimum stream flow,
13 described in Department of Water Resources application for permit number
14 95-7874, it being an application for a permit to appropriate 30 cubic feet
15 per second from Wolf Lodge Creek, a tributary of ~~the~~ Coeur d'Alene ^{lake} River,
16 located on the NW 1/4 of NE 1/4 of Section 5, Township 49N, Range 2W, in
17 Kootenai County, Idaho, be, and the same is hereby approved.

MICROFILMED

IN THE HOUSE OF REPRESENTATIVES
HOUSE AMENDMENT TO H.C.R. NO. 36

AMENDMENT TO THE RESOLUTION

- 1
- 2 On page 1 of the printed resolution, in line 15, delete the words "the
- 3 Coeur d'Alene River", and insert in lieu thereof "Coeur d'Alene Lake".

MICROFILMED

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

IN THE MATTER OF APPLICATION FOR PERMIT)
NO. 95-7874 TO ESTABLISH A MINIMUM)
INSTREAM FLOW ON WOLF LODGE CREEK IN THE)
NAME OF THE IDAHO WATER RESOURCE BOARD)

MEMORANDUM DECISION
AND ORDER

On September 13, 1978 the Idaho Water Resource Board filed with the Department of Water Resources an application for permit to appropriate water to preserve minimum stream flows on Wolf Lodge Creek tributary to Coeur d'Alene Lake. The application was filed in accordance with the provisions of Chapter 15, Title 42, Idaho Code.

Notice describing the proposed appropriation and setting the time and place for the required hearing was published in the Coeur d'Alene Press on July 5 and 12, 1979. A public hearing was held at Coeur d'Alene, Idaho on August 2, 1979. C. Stephen Allred, Director of the Department served as hearing officer.

Parties appearing in a formal capacity included the Idaho Water Resource Board and the Idaho Department of Fish and Game. Formal testimony was also presented by the staff of the Idaho Department of Water Resources. Other individuals who informally appeared to present their views and comments as public witnesses included State Senator Arthur Manley; Lester M. Larsen on behalf of the Kootenai Environmental Alliance; and Carl Brautigan, a fisherman from Coeur d'Alene.

Based upon the sworn testimony, documentation and public statements included in the record and upon his understanding of the facts and the law, the Director of the Department of Water Resources makes the following Findings of Fact, Conclusions of Law and Order:

FINDINGS OF FACT

1) On September 13, 1978 the Idaho Water Resource Board pursuant to Chapter 15, Title 42, Idaho Code, filed application for permit No. 95-7874 to appropriate a minimum instream flow on Wolf Lodge Creek which is tributary to Coeur d'Alene Lake.

MICROFILMED

2) Application for permit No. 95-7874 proposes to appropriate a minimum instream flow of 30 cfs from the crossing of Wolf Lodge Creek under Interstate highway 90 in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 5, Township 49 North, Range 2 West, Kootenai County, upstream on Wolf Lodge Creek for a distance of three miles.

3) The annual period of use proposed is from January 1 to December 31.

4) The purpose of the proposed instream appropriation is to maintain trout spawning and rearing habitat throughout the stream reach for which the flow is requested.

5) All rights acquired under application for permit No. 95-7874 are for instream nonconsumptive uses and will be subject to all vested water rights, permits, or water applications having priority earlier than September 13, 1978.

6) Based upon the sworn testimony, documentation and public statements comprising the record in this matter, a finding is made that the proposed minimum instream flow proposed by application No. 95-7874 is necessary to maintain the existing trout passage, spawning and incubation habitat of the stream area.

7) Based upon testimony presented at the hearing, a finding is made that the benefits to be derived from the minimum instream flow application will be enjoyed by members of the public as opposed to being limited to private use or enjoyment.

8) Based upon testimony and evidence submitted by the Idaho Department of Fish and Game, a finding is made that the flow requested in the application is the minimum flow required to preserve the existing unique characteristics of the stream for the public benefit, and is not the ideal or most desirable flow which could be utilized for that purpose.

9) Based upon testimony and evidence submitted concerning available flow measurement data, a finding is made that the minimum instream flow proposed for Wolf Lodge Creek is generally capable of being maintained. This testimony noted that flow data are limited for Wolf Lodge Creek at the suggested point of measurement at the Interstate 90 crossing.

10) Based upon testimony of the staff of the Department of Water Resources, a finding is made that seven permit and license rights with priorities earlier than application No. 95-7874 on Wolf Lodge Creek and tributaries are recorded with the Department with a total diversion rate of 1.52 cfs. One permit for 0.20 cfs from Wolf Lodge Creek with a priority later than application No. 95-7874 is recorded with the Department. Three claims of water rights, based upon diversion and beneficial use have been filed with the

Department claiming a diversion rate of 0.18 cfs from Wolf Lodge Creek and tributaries.

CONCLUSIONS OF LAW

1) The proposed minimum instream flow appropriation will not interfere with any vested water right, permit, or right under an application having a priority date earlier than September 13, 1978.

2) The proposed minimum instream flow appropriation is in the public, as opposed to private, interest.

3) The proposed minimum instream flow appropriation is necessary for the preservation of quality fish passage, spawning and incubation habitat of the stream.

4) The minimum instream flow proposed to be appropriated is the minimum flow required for the purposes cited in Conclusion of Law No. 3 and not the ideal or most desirable flow.

5) The minimum instream flow proposed is generally capable of being maintained.

ORDER

IT IS, THEREFORE, HEREBY ORDERED That Application for Permit No. 95-7874 is APPROVED subject to the following conditions:

1) Measuring devices of a type and at locations approved by the Director of the Department of Water Resources shall be installed and maintained to monitor the flow of Wolf Lodge Creek.

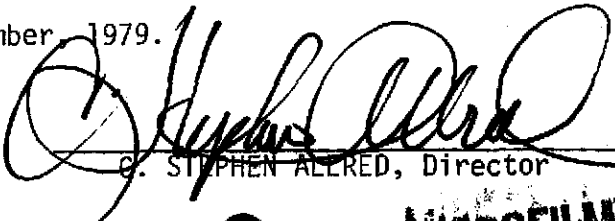
2) Proof of instream beneficial use of the minimum instream flow appropriated shall be submitted in a manner approved by the Department on or before September 1, 1984. The proof submitted shall include at least three years of flow data for the water course. The frequency of the data accumulation shall be approved by the Director.

3) The use of water under the permit shall be nonconsumptive.

4) The use of water under this permit is subject to all prior rights.

5) The application hereby approved by the Director shall be submitted to the Idaho Legislature by the fifth day of the next regular legislative session and the Director's approval shall not become finally effective until approved by the legislature pursuant to the procedure provided by Section 42-1503, Idaho Code.

Dated this 18 day of September, 1979.


C. STEPHEN ALLRED, Director

MICROFILMED

DEPARTMENT OF WATER RESOURCES

STATE OF IDAHO

COUNTY OF ADA

CERTIFICATE OF MAILING

I HEREBY CERTIFY that I have on this date served a true and correct copy of the foregoing MEMORANDUM DECISION AND ORDER by depositing a copy thereof in the United States mail postage prepaid and addressed to:

Joseph H. Nettleton, Chairman
Idaho Water Resource Board
Murphy, ID 83650

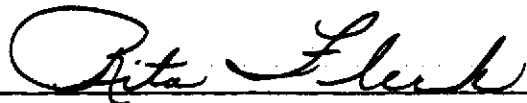
Idaho Department of Fish and Game
Statehouse Mail
Boise, ID 83720

Senator Arthur Murphy
1109 11th
Coeur d'Alene, ID 83814

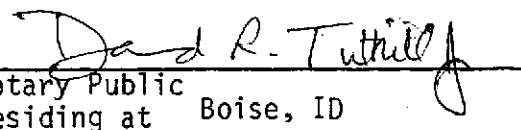
Lester M. Larsen
Kootenai Environmental Alliance
Route 4, Box 307 K-12
Coeur d'Alene, ID 83814

Carl Brautigan
Route 1, Box 88
Coeur d'Alene, ID 83814

Dated this 26th day of September, 19 79.



On this 26th day of September, 19 79, personally appeared before me the signer of the above instrument, who duly acknowledged to me that he (she) executed the same.


Notary Public
Residing at Boise, ID

My commission expires 9/10/80

NAME OF STREAM: Wolf Lodge Creek

LEGAL DESCRIPTION OF THE POINT OF THE STREAM WHERE STREAM FLOW IS REQUESTED:
At Interstate 90, Kootenai County, NW $\frac{1}{4}$, NE $\frac{1}{4}$, Section 5, T49N, R2W.

THE PROPOSED STREAM FLOW IN CUBIC FEET PER SECOND: 30 cfs.

THE PURPOSE FOR WHICH THE MINIMUM STREAM FLOW IS PROPOSED:

To maintain trout spawning and rearing from the point of requested flow to a point three miles upstream.

THE PERIOD OF TIME OR SEASON OF YEAR DURING WHICH APPROPRIATION IS PROPOSED:
All year.

EVIDENCE THAT THE APPROPRIATION WILL NOT INTERFERE WITH ANY VESTED WATER RIGHT, PERMIT, OR WATER APPLICATION OF EARLIER DATE OF PRIORITY:

The above requested flow is for instream nonconsumptive use and will be subject to all vested water rights, permits or water applications of earlier dates of priority.

EVIDENCE THAT THE APPROPRIATION WOULD BE IN THE PUBLIC INTEREST AS OPPOSED TO PRIVATE INTEREST:

Wolf Lodge is a major tributary of Coeur D'Alene Lake and is utilized heavily for spawning and juvenile rearing of trout residing in the lake. Many of the cutthroat trout harvested in Lake Coeur D'Alene and the popular spring fishery in the Spokane River are produced in the Wolf Lodge Drainage. This stream has the heaviest concentrations of lake-run westslope cutthroat spawners we know of in Idaho. Fishery contributes to North Idaho's second most important industry.

The requested instream water right will be held in trust for the people of Idaho by the Idaho Water Resource Board.

EVIDENCE OR JUSTIFICATION THAT THE APPROPRIATION IS NECESSARY FOR THE PURPOSES SHOWN ABOVE:

During 1976, personnel of the Idaho Department of Fish and Game collected data from Wolf Lodge Creek and using this data with instream flow methodologies, determined that the above requested flow is necessary for maintaining the existing trout spawning and rearing habitat. Methodologies, techniques and instream flow recommendations are presented in the following publication:

Cochmauer, Tim. 1977. Stream Resource Maintenance Flow Determinations of Idaho Streams. Job Performance Report, Project F-66-R-2, Job II. 85 pp. Idaho Department of Fish and Game.

EVIDENCE THAT THE REQUESTED FLOW IS MINIMUM AND NOT THE IDEAL OR MOST DESIRABLE FLOW:

The ideal flow would be approximately 50 cfs.

EVIDENCE THAT THE REQUESTED FLOW IS CAPABLE OF BEING MAINTAINED AS EVIDENCED BY RECORDS OF STREAM FLOWS:

No flow records are maintained for Wolf Lodge Creek.

LOCATION OF EXISTING GAGING STATION THAT CAN BE USED IN THE ADMINISTRATION OF THIS APPROPRIATION:

No gage station is located on Wolf Creek Lodge. A gaging device at Highway 90 bridge would be sufficient to monitor the requested flow.

MICROFILMED

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

RECEIVED

SEP 18 1978

To appropriate the public waters of the State of Idaho

Department of Water Resources
Southern District Office

1. Name of applicant Idaho Water Resource Board Phone 384-2215
Post office address Statehouse, Boise, Idaho 83720
2. Source of water supply Wolf Lodge Creek which is a tributary of Coeur d'Alene River
3. Location of point of diversion is NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 5 Township 49 N
Range 2 W B.M. Kootenai County, additional points of diversion if any: _____
4. Water will be used for the following purposes:
Amount 30 cfs for in stream flow purposes from Jan 1 to Dec 31 (both dates inclusive)
(cfs or acre-feet per annum)
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)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
5. Total quantity to be appropriated:
a. 30 cubic feet per second and/or b. _____ acre-feet per annum.
6. Proposed diverting works:
a. Description of ditches, flumes, pumps, headgates, etc. None - instream flow

b. Height of storage dam _____ feet, active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet, materials used in storage dam: _____
Period of year when water will be diverted to storage _____ to _____ inclusive.
(Month/Day) (Month/Day)
c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.
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 - maximum 5 years).
8. Description of proposed uses:
a. If water is not for irrigation:
(1) Give the place of use of water: NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 5 Township 49 N
Range 2 W B.M.
(2) Amount of power to be generated: _____ horsepower under _____ feet of head.
(3) List number of each kind of livestock to be watered _____

(4) Name of municipality to be served _____, or number of families to be supplied with domestic water _____.
(5) If water is to be used for other purposes describe: To maintain trout spawning and rearing habitat

TWP	RANGE	SEC.	NE%						NW%				SW%				SE%			
			NE%	NW%	SW%	SE%	NE%	NW%	SW%	SE%	NE%	NW%	SW%	SE%	NE%	NW%	SW%	SE%		
TOTALS			NE%	NW%	SW%	SE%	NE%	NW%	SW%	SE%	NE%	NW%	SW%	SE%	NE%	NW%	SW%	SE%		

9. a. Who owns the property at the point of diversion _____

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

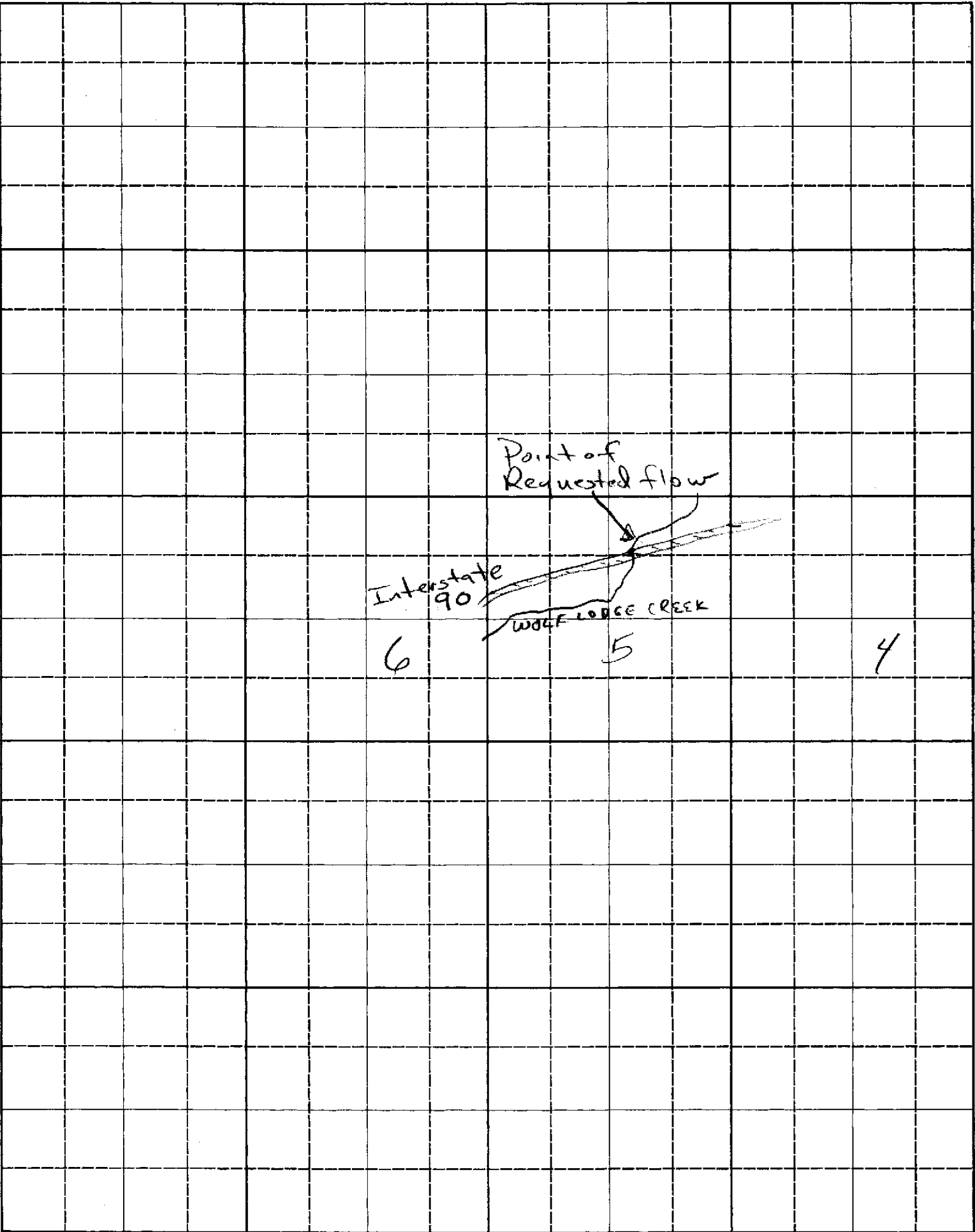
 c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing _____

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

10. Remarks	See attached sheet
-------------	--------------------

11. 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.

R 2 W.

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.

[Signature]
(Applicant)

Director

Witness my hand this 18 day of September, 1979.

PURSUANT TO MEMORANDUM DECISION & ORDER OF THIS DATE.

- d. Other:
- 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.
- b. Proof of construction of works and application of water to beneficial use shall be submitted on or before September 1, 1984.
- a. SUBJECT TO ALL PRIOR WATER RIGHTS.
1. Approval of said application is subject to the following limitations and conditions:
- of Idaho No. 95-7874, and said application is hereby APPROVED.

This is to certify that I have examined Application for Permit to appropriate the public waters of the State

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

Recommended for approval by JHA

Hearing held by CSA

Copies of protests forwarded by

Date 8-2-79

Protests filed by:

Publication approved

Publication dates July 5, 12, 1979

Published in

Publication prepared by

Date

Received by

Date

Preliminary check by N.A.

Fee \$

Received by Mary Date 9-13-79 Time 8:15 a.m.

AFFIDAVIT OF PUBLICATION

NOTICE OF APPLICATION FOR WATER RIGHTS

Notice is hereby given that the following application(s) have been submitted for permit to appropriate the public waters of the State of Idaho: NOTICE OF APPLICATION FOR MINIMUM STREAM FLOW

Notice is hereby given that the Idaho Water Resource Board has on September 13, 1978, submitted one (1) application for permit to the Department of Water Resources proposing the appropriation of water to preserve the minimum streamflow from Wolf Lodge Creek, tributary to the Coeur d'Alene River which is further described as follows:

APPLICATION NO. 95-7874
SOURCE: Wolf Lodge Creek
POINT OF MINIMUM
STREAMFLOW: NWNE, Sec. 5,
T49N, R2W, B.M., Kootenai County

RATE OF FLOW: 30 cubic feet per second

SEASON OF USE: January 1 to December 31.

USE: To maintain trout spawning and rearing habitat.

The Director of the Department of Water Resources will hold a public hearing on the application at 1:30 p.m., on Thursday, August 2, 1979, at the Idaho Department of Water Resources Northern Region Office, 4055 Government Way, Coeur d'Alene, Idaho, for the purpose of hearing evidence in regard to the applications. The hearing will be held pursuant to the provisions of Sec. 42-1503, Idaho Code.

If issued, these permits will be subject to all prior water rights. Any party who wishes to formally appear in this proceeding for the purpose of presenting evidence or cross examining witnesses should file a notice of appearance with the Director, Department of Water Resources, Statehouse, Boise, Idaho, five (5) days prior to the hearing. Other parties will be given an opportunity to informally present their views and comments without the necessity of filing a notice of appearance.

C. STEPHEN ALLRED
Director

If issued, the permit(s) will be subject to all prior water rights. Protests against the granting of any permit must be filed with the Director of the Idaho Department of Water Resources, 4055 Gov't Way, Coeur d'Alene, Id, 83814 on or before AUGUST 1, 1979.

C. STEPHEN ALLRED
Director

STATE OF IDAHO,
County of Kootenai,

ss.

Coral Hodge

being first duly sworn

upon oath deposes and says:

1. I am now and at all times hereinafter mentioned was a citizen of the United States, resident of the State of Idaho, over the age of twenty-one years and not a party of the above entitled action.

2. I am now and at all times hereinafter mentioned was the printer (principal clerk) of the "Coeur d'Alene Press," a newspaper printed and published daily except Sunday in Coeur d'Alene, Kootenai County, Idaho, and having a general circulation in said county.

3. The

Notice

of which the annexed is a printed copy, was published in the regular issue of said newspaper for

2

consecutive

Three

commencing on the

5

day of

July

1979

ending on the

12

day of

July

1979

and such publication was made as often during said period as said

Daily

newspaper was regularly issued.

4. That said newspaper has been continuously and uninterruptedly published in said Kootenai County, during a period of more than seventy-eight consecutive weeks immediately prior to the first publication of said notice.

Coral Hodge

Subscribed and sworn to before me this

12

day of

July

1979

2664

LEADER

Robert M. Mankie
Notary Public for the State of Idaho,
residing at Coeur d'Alene, Idaho.

WR0749NP
No. L95-07874

IDAHO DEPARTMENT OF WATER RESOURCES
WATER RIGHT PROFILE REPORT

DATE: 03/07/94
PAGE: 1

OWNER CODE	NAME & ADDRESS	PRIORITY DATE	WATER USE	USE PERIOD		DIVERSION RATE	DIVERSION VOLUME
				FROM	TO		
C	STATE OF IDAHO IDAHO WATER RESOURCE BOARD STATEHOUSE BOISE ID 83720	09/13/1978	MINIMUM INSTREAM FLOW	07-01	11-15	7.00 CFS	
			MINIMUM INSTREAM FLOW	11-16	06-30	30.00 CFS	
			TOTAL DIVERSION:			30.00 CFS	

Water Source: WOLF LODGE CREEK

Tributary to: COEUR D ALENE RIVER

Stage: LICENSE

Point(s) of Beginning Stream Reach: T50N R02W S21

NWSW

KOOTENAI County

Point(s) of Ending Stream Reach: T49N R02W S05

NWNE

KOOTENAI County

Pou County:

Remarks: Use of water under this license 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 issued by the Director under provisions of Chapter 2, Title 42 Idaho Code, with the priority of the water right dated earlier than the priority date of this license.

The use of the water under this license shall be non-consumptive. Upon the future finding and order of the Director that gauging stations are required to maintain the approved minimum flow on Wolf Lodge Creek, the measuring devices shall be permanently installed as specified by the Department.

The Director retains jurisdiction to review and amend any and all parameters of this license. Any person seeking review and amendment of the license shall file a request with the Board, which request shall include the amendment sought, the reasons for the amendment, and a statement of the change in circumstances since the license was issued or last reviewed that merit a review of the license. A copy of the petition shall be served upon the Director of the Department of Water Resources. The Board may petition the Director for an amendment to the license. The petition must set forth any significant change in circumstances and evidence of public interest supporting the proposed amendment. The Director will notify the general public and specific persons or parties known to be interested in the proposed change, and conduct a hearing for the purpose of determining whether the license should be amended in the public interest. The burden of proof at the hearing shall be upon the person or party seeking the amendment to establish that amendment of the license would be in the public interest.

This minimum stream flow reach is between a point in the NWSW, S21, T50N, R2W and a point in the NWNE, S5, T49N, R2W.

Dates:	App. Received: 09/13/1978	Priority Date: 09/13/1978
	Proof Due Date: 09/01/1989	Proof Made Date: 09/01/1989
	Exam Made Date: 09/01/1989	Exam Sent to S.O.: 09/01/1989
	Licensed Date:	

Misc:	Water District Number:	Field Exam Fee:
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WR0749NP
No. L95-07874

IDAHO DEPARTMENT OF WATER RESOURCES
WATER RIGHT PROFILE REPORT

DATE: 03/07/94
PAGE: 2

Audit: 04/01/92 SKAGGS 04/02/92 SKAGGS 04/08/92 SKAGGS 07/01/92 SKAGGS
01/31/94 CURTIS 01/31/94 CURTIS 03/07/94 CURTIS

MEMORANDUM

To: File 95-07874
From: L. Glen Saxton
RE: **MINIMUM STREAM FLOW REACH DESCRIPTION**
Date: September 23, 1993

Application for permit no. 95-07874 described the reach in which a minimum flow was sought as a point in the NW1/4NE1/4 Section 5, T49N, R2W, B.M. where Wolf Lodge Creek flows under Interstate Highway 90 to a point three (3) miles upstream. The upstream point was not further defined with a legal description in any of the subsequent water right proceedings.

The three (3) mile reach measures approximately to the mouth of Marie Creek located in the NW1/4SW1/4 Section 21, T50N, R2W, B.M. Marie Creek is the major tributary of Wolf Lodge Creek.

In the license that the department issues, it is appropriate to more definitively describe the upstream point of the minimum flow reach in terms other than three miles above a given point. Hence, the license should show the upstream point of the minimum stream flow reach at the mouth of Marie Creek as above described.

WILSON

SEP 11 1994

MEMORANDUM

TO: Minimum Streamflow Permits for Wolf Lodge Creek, Granite Creek, and Sullivan Springs; Water Right Nos. 95-7874, 95-7771, and 96-7772 Respectively
FROM: Gary Spackman
DATE: March 1, 1990

RE: Adequacy of Proof of Maintainability of Flows

Wolf Lodge Creek, Granite Creek and Sullivan Springs are all tributaries to Pend Oreille Lake. Fish and Game has represented that they are important spawning streams in which minimum flows must be maintained to support the fishery, both wild and hatchery.

All three minimum streamflow applications were approved on September 18, 1979. The order portion in all three decisions contains identical language regarding the installation of measuring devices and the accumulation of flow data. The orders read:

- (1) Measuring devices of a type and at locations approved by the Director of the Department of Water Resources shall be installed and maintained to monitor [the flow of the streams].
- (2) Proof of instream beneficial use of the minimum instream flow appropriated shall be submitted in a manner approved by the Department on or before September 1, 1984. The proof submitted shall include at least three years of flow data for the water course. The frequency of data accumulation shall be approved by the Director.

Proof of beneficial use was due on or before September 1, 1984.

In August of 1984, the Idaho Water Resource Board requested an extension of time for all three filings for the purpose of gathering additional flow data. The extensions of time were granted, and the Board was given until September 1, 1989, to submit proof of beneficial use. On September 1, 1989, the Board submitted proof of beneficial use. The proof of beneficial use was accompanied by flow measurements from the three sources of water. The flow measurements are an apparent attempt to comply with the conditions of the permits.

AUG 11 1994

Strictly applied, the conditions required installation of a measuring device approved by the Director at a location approved by the Director. The conditions required three years of flow data, measured with a frequency approved by the Director. I have searched the files for information regarding the three requirements that called for Department approval. A letter to Virgil Moore on August 9, 1984, from Dave Tuthill, signed by Jim Johnson, discussed the flow measurements that would be needed. It states:

. . . more thorough streamflow information will be required before licenses can be issued. For example the discharge measurements for Sullivan Springs range from a minimum of 5.85 cfs to a maximum of 9.95 cfs. It is unclear how these measurements relate to the 45.0 cfs identified in the permit. As another example, the discharge measurements on Granite Creek range from 8.97 cfs to 70.76 cfs. Again, the relationship to the 45.0 cfs identified in the permit is unclear. For all three permits, a series of gauge readings is needed to augment the staff gauge-discharge relationships that have been developed. The frequency of gauge reading should be a minimum of once every two weeks throughout the year.

The data originally submitted did not cover three full years. For Wolf Lodge Creek, no data was submitted for December of any year. For the months of January through May, only one measurement was taken. Measurements were very sporadic. Bill Horton informed me later, however, that the USGS installed a permanent gauging station on Wolf Lodge Creek in 1986, and has compiled data since that time. He later delivered a copy of the data to me.

For Granite Creek, the information is even more sketchy. Flows were not measured in January, February, March and April. Only one measurement was made in May. The flows were sporadically measured in June, July and August. The fall months have very few measurements.

Flows in Sullivan Springs were not measured with any more frequency than the flows of Granite Creek. Flows of Sullivan Springs appear to be more constant, however, requiring fewer measurements.

Dave Tuthill's letter could be interpreted to mean that only one more year of full measured data is required. Even viewed liberally in this way, the data that has been submitted still does not comply with his request. Flows were not measured weekly over an entire one year span, except for USGS measurements of Wolf Lodge Creek flows.

I can find no discussion in the file or in the material submitted about the requirement that a measuring device approved

AUG 11 1994

by the Department be installed and that it be located in a place approved by the Department.

I recommend the following action on each of the filings:

Sullivan Springs

I recommend licensing permit no. 96-7772 for 7.0 cfs. Most staff gauge readings for 1984 read 0.98 inches which appears to correspond to a flow rate of between 7.0 and 7.5 cfs.

Wolf Lodge Creek

Based on the USGS data, I recommend licensing for 7.0 cfs for July 1 through November 15, and 30.0 cfs from November 16 through June 30. I have not statistically analyzed the data, but feel that the amounts recommended reflect probable normal flows. The recommendation may seem liberal when reviewing the data, but the data is artificially low as a result of drought conditions during the data collection period. Water use demands on Wolf Lodge Creek are not heavy at the present time.

Granite Creek

I recommend that we license Granite Creek for 10.0 cfs which is close to the minimum flow measured. Lack of data prevents me from recommending more.

All of the minimum streamflows should be conditioned as follows:

1. Use of water under this license 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 issued by the Director under provisions of Chapter 2, Title 42, Idaho Code, with the priority of the water right dated earlier than the priority date of this license.

2. The use of the water under this license shall be non-consumptive.

3. Upon the future finding and order of the Director that gauging stations are required to maintain the approved minimum flow on (source). Such measuring devices shall be permanently installed as specified by the Department.

4. The Director retains jurisdiction to review and amend any and all parameters of this license. Any person seeking review and amendment of the license shall file a request with the Board, which request shall include the amendment sought, the reasons for the amendment, and a statement of the change in circumstances since the license was issued or last reviewed that merit a review of the license. A copy of the petition shall be

AUG 11 1994

served upon the Director of the Department of Water Resources. The Board may petition the Director for an amendment to the license. The petition must set forth any significant change in circumstances and evidence of public interest supporting the proposed amendment. The Director will notify the general public and specific persons or parties known to be interested in the proposed change, and conduct a hearing for the purpose of determining whether the license should be amended in the public interest. The burden of proof at the hearing shall be upon the person or party seeking the amendment to establish that amendment of the license would be in the public interest.

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AUG 11 1964

AUG 11 1964

MINIMUM STREAM FLOW PERMIT NO. 95-7874
for WOLF LODGE CREEK

Wolf Lodge Creek is a tributary to Lake Coeur d'Alene and is a major spawning and rearing area for cutthroat trout residing in the lake. The stream originates in the Coeur d'Alene mountains and Coeur d'Alene National Forest and flows southwesterly through public and private land, entering the lake in the northeastern portion. Wolf Lodge Creek drains approximately 64 square miles of forested and pastured land. Lake Coeur d'Alene is a beautiful, popular, 25,000 acre coldwater, oligotrophic lake that has developed into one of the cornerstones of North Idaho's economy. Part of its high value is based in the fishing recreation provided by trout and salmon produced in Wolf Lodge Creek.

Wolf Lodge Creek is the only tributary to Lake Coeur d'Alene that the Idaho Department of Fish and Game (Department) stocks with fall chinook salmon for the lake fishery. Since 1982, the Department has stocked between 10,000 and 60,000 chinook fingerlings, averaging five inches in length. The chinook fishery has escalated to approximately 100,000 hours of angling effort in recent years. This is between one-third and one-half of the total effort on the lake. Based on a 1985 survey of economic values for sport fishing, the Lake Coeur d'Alene fishery contributes a minimum of \$1.6 million to the local economy. Wolf Lodge Creek is an important element in providing for that fishery (Exhibits 1 and 2).

The Department is currently managing Wolf Lodge Creek as a wild trout stream with emphasis on protecting cutthroat trout. It is the only major tributary that supports cutthroat trout fishing in the north end of the lake, where most of the fishing pressure occurs. In June 1983, a gasoline pipeline was ruptured approximately five (5) miles upstream from the mouth. This break poured more than 20,000 gallons of gasoline into the creek and killed all aquatic life from that point downstream. The loss included brook trout and cutthroat trout and caused the Department to close the fishery to allow the fastest possible recovery of the fish populations. It has remained closed since. Information on trout densities and estimated mortalities is included in Tables 1 and 2. A settlement with the pipeline company for \$85,000 was made to mitigate for losses and help rehabilitate the stream, which will take many years to recover, even under ideal conditions. The settlement value awarded for this portion of Wolf Lodge Creek is an indication of its value as a free flowing stream. Maintenance of instream flows to provide suitable spawning and rearing habitat is critical to lasting recovery efforts.

The habitat in the Wolf Lodge Creek drainage is in relatively good condition now (Exhibit 3). The Department has been working with Geomax, Inc. (engineering and hydrology consultants), the Department of Water Resources, the U.S. Forest Service (Horizon-Logging Environmental Impact Statement), and land owners to stabilize stream banks and prevent habitat loss. The Department of Transportation is creating habitat improvement structures in the drainage as part of Interstate 90

R2FS602MW

AUG 11 1994

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DEC 13 1989

Department of Water Resources

ROUTING REQUEST

Please

☐ READ

To GLEN SAXTON

☐ HANDLE

DEPT OF WATER RESOURCES

☐ APPROVE

and

☐ FORWARD

AUG 11 1994 CALL YOU WHEN I RETURN

☐ RETURN

FROM PORTLAND. OTHERS ARE IN

☐ KEEP OR DISCARD

PROCESS --- SOON TO YOU.

☐ REVIEW WITH ME

Date 12-12-89

From BILL HOLTUN

construction activities. All of the above activities are directed at keeping Wolf Lodge Creek in a condition capable of protecting and enhancing the westslope cutthroat trout populations and habitat, and to contribute to the satisfaction of the angling public.

On September 13, 1978 the Idaho Department of Fish and Game requested a minimum stream flow of 30 cubic feet per second (cfs) for year round flows in Wolf Lodge Creek. Table 3 provides discharge measurements and staff gage readings from June 1982 to October 1985 to substantiate that request. The information provided shows that 30 cfs cannot be found throughout the year. The Department requests that the unallocated flow be the minimum stream flow when it drops below 30 cfs.

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Exhibit No. 1. Chinook salmon from Lake Coeur d'Alene.

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Exhibit No. 2. Westslope cutthroat trout produced in
Wolf Lodge Creek drainage.

AUG 11 1934



Exhibit No. 3. Typical stream habitat in lower Wolf Lodge Creek.

AUG 11 1994

Table 1. Densities of juvenile trout in Wolf Lodge Creek in areas not affected by the 1983 gasoline spill.

Year	Cutthroat (Fish/100 m ²)	Brook Trout (Fish/100 m ²)
1975	112	3
1976	28	9
1983	30	12

Table 2. Estimates number of cutthroat and brook trout killed by age class in Wolf Lodge Creek following the 1983 gasoline spill.

Age class	Cutthroat Trout	Brook Trout
0 and 1	9,200	183
2	3,000	201
3	5,200	214
4-6	144	44
Total	17,622	642

MAINTAINED

AUG 11 1994

Table 3.

Monthly staff gage and discharge measurements for Wolf Lodge Creek, June 1982-October 1985.

Date	Wolf Lodge Creek	
	Staff gauge (ft)	Discharge (cfs)
06/15/82	1.40	22.23
07/22/82	1.17	11.17
08/30/82	1.04	5.01
09/24/82	1.02	4.29
07/18/83	1.86	61.70
07/26/83	---	---
08/31/83	---	---
09/01/83	1.22	7.87
09/09/83	---	---
10/26/83	---	---
11/08/83	1.42	19.22
10/15/84	2.00	6.40
11/14/84	2.21	19.54
01/03/85	2.05	---
01/06/85	2.04	---
01/13/85	2.03	---
01/20/85	2.05	---
01/25/85	2.06	11.47
02/03/85	2.36	---
02/17/85	2.04	---
03/27/85	2.57	78.80
04/20/85	3.25	---
05/01/85	3.05	---
05/18/85	3.12	---
06/05/85	2.56	40.06
06/14/85	2.62	---
07/02/85	2.33	---
07/22/85	2.18	---
08/27/85	2.11	---
09/19/85	2.25	---
10/17/85	2.10	6.15
10/25/85	2.15	7.40

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AUG 11 1994

Wolf Lodge Creek

95-7874

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
January				11.47
February				≥ 11.47
March				78.80
April				≥ 78.80
May				≥ 78.80
June	22.23			40.06
July	11.17	61.70		≥ 19.54
August	5.01			≥ 11.17
September	4.29	7.87		≥ 19.54
October			6.40	6.15 (7.40)
November		19.22	19.54	
December		(No data)		

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AUG 11 1994

June 30, 1989

Idaho Water Resource Board
c/o Wayne Haas
Statehouse Mail
Boise, ID 83720

HAND DELIVERED

Dear Permit Holder:

PROOF DUE NOTICE

RE: Permit No. 96-7771 -- Granite Creek
Permit No. 96-7772 -- Sullivan Springs
Permit No. 95-7874 -- Wolf Lodge Creek

Proof of beneficial use in connection with the above referenced permits is due on or before September 1, 1989. Either the proof of beneficial use or an acceptable request for extension of time must be received by the department on or before the above described date or the permits will no longer be of any force nor effect.

The permits were issued to establish a minimum stream flows on the referenced streams. Since the Idaho Water Resource Board (Board) filed the applications at the request of the Department of Fish and Game, the Board may want to ask Fish and Game to gather information to be used as a part of the proof of beneficial use submittal. Information required as part of the proof includes at least three years of flow data for the water course and data on the nature and frequency of use of the resources for aesthetic and recreation purposes.

Enclosed is a proof of beneficial use form and a request for extension of time form for your use.

Sincerely,

L. GLEN SAXTON
Chief, Operations Bureau

Enclosures

AUG 11 1994

the Second
the House of
the following
venue avail-
he 1980-1981

\$ 1,650,000
1,350,000
9,000,000
100,000
650,000
17,500,000
250,000
700,000

204,200,000
41,000,000
1,500,000
2,500,000
1,200,000
800,000
6,500,000
600,000

3,500,000
110,000,000
\$403,000,000

13,000,000
\$390,000,000

comparable to
000,000 for
\$390,000,000
ed revenue

fields in order to present the most complete information available;
and

WHEREAS, it is the desire of the Legislature to adopt the findings
of this committee as to the total surplus available.

NOW, THEREFORE, BE IT RESOLVED by the members of the Second
Regular Session of the Forty-fifth Idaho Legislature, the House of
Representatives and the Senate concurring, that we find the following
calculations to provide a factual representation of the total surplus
available as of June 30, 1980.

Beginning Balance FY 1980	\$ 10,137,400
Add Anticipated Revenue FY 1980	365,800,000
Total Available	\$375,937,400
Deduct Amount Appropriated	357,608,400
General Fund Surplus, June 30, 1980	\$ 18,329,000

Adopted by the House January 17, 1980.

Adopted by the Senate January 23, 1980.

(H.C.R. No. 36, As Amended)

A CONCURRENT RESOLUTION

APPROVING AN APPLICATION TO APPROPRIATE WATER FOR MINIMUM STREAM FLOW.

Be It Resolved by the Legislature of the State of Idaho:

WHEREAS, the Water Resource Board may apply for a permit to appro-
priate unappropriated waters of any stream for minimum stream flow;
and,

WHEREAS, under the provisions of Section 42-1503, Idaho Code, no
permit shall become finally effective until affirmatively approved by
the Legislature.

NOW, THEREFORE, BE IT RESOLVED by the members of the Second
Regular Session, Forty-fifth Idaho Legislature, the House of Repre-
sentatives and the Senate concurring therein, that the application of
the Water Resource Board to appropriate the unappropriated waters for
minimum stream flow, described in Department of Water Resources appli-
cation for permit number 95-7874, it being an application for a permit
to appropriate 30 cubic feet per second from Wolf Lodge Creek, a
tributary of Coeur d'Alene Lake, located on the NW 1/4 of NE 1/4 of
Section 5, Township 49N, Range 2W, in Kootenai County, Idaho, be, and
the same is hereby approved.

Adopted by the House March 4, 1980.

Adopted by the Senate March 14, 1980.

DNS.

(H.C.R. No. 37)

A CONCURRENT RESOLUTION

APPROVING AN APPLICATION TO APPROPRIATE WATER FOR MINIMUM STREAM FLOW.

Be It Resolved by the Legislature of the State of Idaho:

of the House
available to
erts in all

AUG 11 1994

UNITED STATES DEPARTMENT OF THE INTERIOR - GEOLOGICAL SURVEY - BOISE

12/18/89

STATION NUMBER 12415350 WOLF LODGE CREEK NR COEUR D'ALENE ID STREAM SOURCE AGENCY USGS
 LATITUDE 472620 LONGITUDE 1163700 DRAINAGE AREA 39 DATUM STATE 16 COUNTY 023
 PROVISIONAL DATA DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989 SUBJECT TO REVISION

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	5.4	14	7.4	38	21	238	209	112	14	4.4	13
2	5.6	5.7	12	7.5	38	21	221	223	102	12	4.7	14
3	5.4	6.9	11	7.7	38	21	223	209	90	12	4.7	12
4	5.3	6.0	11	8.1	39	22	184	209	81	11	4.2	12
5	4.9	7.2	10	9.4	40	22	204	221	74	10	4.0	11
6	4.6	9.0	10	9.9	40	27	412	221	68	10	3.8	10
7	4.6	7.7	9.6	10	41	38	488	238	61	9.3	---	10
8	4.3	8.6	7.8	10	41	44	532	233	55	8.8	3.6	9.5
9	4.3	9.1	10	10	41	74	416	196	51	8.6	5.4	9.1
10	4.3	9.3	11	10	43	282	347	187	47	8.9	5.7	8.7
11	4.3	10	11	9.9	35	286	300	170	44	8.5	7.4	8.3
12	4.3	11	13	9.4	19	361	289	155	40	8.2	7.7	8.2
13	4.3	10	15	9.2	18	---	324	152	37	9.1	7.5	7.5
14	4.7	9.9	17	8.4	17	322	395	152	38	8.5	7.0	7.3
15	4.7	10	23	8.8	16	246	449	152	37	8.3	7.2	7.1
16	4.9	11	23	13	17	209	447	152	35	7.9	7.2	7.0
17	5.0	11	21	23	16	186	385	151	32	8.1	6.8	7.0
18	5.4	9.9	19	19	16	174	342	151	28	7.6	6.5	8.9
19	5.8	9.7	17	39	15	169	349	151	27	7.4	6.8	7.6
20	5.4	12	15	37	15	168	403	151	25	7.1	6.8	7.9
21	6.0	12	15	38	15	171	454	150	24	6.7	8.4	7.9
22	6.0	17	14	38	16	178	426	149	23	6.3	9.1	7.9
23	5.8	21	13	34	17	176	393	149	22	6.0	12	7.4
24	5.6	25	12	31	17	166	306	149	20	5.6	18	7.0
25	5.7	27	11	27	17	176	262	149	19	5.2	20	7.0
26	5.7	25	11	24	18	263	231	149	18	5.3	20	7.1
27	5.7	21	11	21	19	290	205	149	16	5.1	19	6.9
28	5.6	20	11	19	20	298	189	147	15	4.8	18	6.6
29	5.3	17	11	18	---	314	182	154	15	4.5	16	6.6
30	5.5	16	7.0	21	---	285	183	145	14	4.5	15	6.9
31	5.6	---	7.7	37	---	259	---	126	---	4.5	13	---
TOTAL	161.4	380.6	407.9	589.3	722	---	9759	5317	1270	243.8	---	257.4
MEAN	5.21	12.7	13.2	19.0	23.8	---	325	172	42.3	7.86	---	8.58
MAX	6.4	27	23	39	43	---	532	238	112	14	---	14
MIN	4.3	5.4	7.7	7.4	15	---	182	126	14	4.3	---	6.6
AC-FT	320	755	809	1170	1450	---	19360	10050	2520	484	---	511
CFSM	13	32	33	48	65	---	8.26	4.35	1.07	20	---	22
IN	.15	.36	.39	.56	.68	---	9.21	5.02	1.20	.23	---	.24

CAL YR 1988 TOTAL 12379.7 MEAN 33.8 MAX 326 MIN 3.6 AC-FT 24560 CFSM 86 IN. 11.69

SPOKANE RIVER BASIN

12415350 WOLF LODGE CREEK NEAR COEUR D'ALENE, ID

LOCATION.—Lat 47°38'27", long 116°36'58", in NE $\frac{1}{4}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$, sec.32, T.50 N, R.2 W., Kootenai County, Hydrologic Unit 17010303, on upstream left bank, 0.8 mi upstream from Cedar Creek, 2 mi upstream from Lake Coeur d'Alene, and 8 mi southeast of Coeur d'Alene.

DRAINAGE AREA.—39.4 mi².

PERIOD OF RECORD.—December 1985 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 2,150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are fair.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 585 ft³/s Feb. 26, 1986, gage height, 11.11 ft; minimum, 4.3 ft³/s Sept. 23, 24, 25, 1987, gage height, 8.37 ft.

EXTREMES FOR CURRENT YEAR.—Peak discharge greater than base discharge of 220 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 6	1600	*310	*10.57	Mar. 14	1230	220	10.13

Minimum discharge, 4.3 ft³/s Sept. 23, 24, 25, gage height, 8.37 ft.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Feb. 9)

8.3	3.2	9.0	52
8.4	6.4	9.5	117
8.6	16	10.0	200
8.8	32	10.5	300

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	e11	35	13	35	43	61	93	21	9.8	8.4	5.8
2	12	e10	32	13	39	49	66	80	20	9.9	8.0	5.7
3	12	e9.4	29	16	e36	e90	81	66	18	9.5	7.6	5.7
4	12	e8.8	28	20	e34	e150	111	56	17	9.7	7.3	5.6
5	11	e8.2	27	19	e32	e240	122	51	16	11	7.0	5.5
6	10	e8.6	25	18	e30	286	123	47	16	11	6.9	5.5
7	10	e9.0	24	17	e29	279	122	44	15	10	6.6	5.2
8	8.9	e9.4	22	16	e28	218	131	42	16	9.3	6.5	5.0
9	8.5	e8.8	21	16	e29	179	134	40	16	9.3	6.3	5.0
10	8.0	e8.0	20	15	e30	158	125	38	15	11	6.0	4.9
11	8.0	e7.4	19	14	e33	146	133	36	14	9.7	6.0	5.2
12	8.0	e7.4	17	13	e36	140	127	38	14	9.5	6.5	5.2
13	7.6	e7.4	e15	12	e40	164	114	36	13	9.1	6.9	5.1
14	7.2	e7.4	e16	e11	e45	213	102	33	13	8.6	7.9	5.1
15	6.8	e7.6	17	e10	e52	199	96	31	14	8.3	7.4	5.1
16	6.4	e7.8	18	e9.9	e56	175	102	29	14	8.2	7.9	5.1
17	6.8	e8.2	17	12	e64	163	119	28	13	8.4	7.5	5.1
18	6.4	e8.8	16	11	e65	160	135	27	13	8.4	7.5	5.1
19	6.4	e11	e15	9.9	e64	155	122	26	18	9.2	7.4	5.0
20	6.4	e20	15	9.8	e61	144	104	24	16	8.7	7.1	5.0
21	6.4	e42	15	e8.9	e59	132	92	24	15	8.9	7.0	5.0
22	6.0	e45	16	e8.8	e57	121	89	23	15	10	6.7	5.0
23	6.0	e36	17	e8.8	e55	110	94	22	14	12	6.5	4.6
24	6.0	e84	16	e9.2	e52	100	103	21	13	14	6.3	4.6
25	6.0	74	16	9.8	50	91	106	21	12	14	6.2	4.6
26	6.4	57	15	10	49	88	100	20	12	13	6.2	5.2
27	6.8	51	e14	11	47	81	92	20	11	12	6.3	5.0
28	6.8	50	e14	11	44	76	95	20	11	11	6.2	4.9
29	e7.2	47	14	11	---	72	99	19	10	10	6.1	4.9
30	e8.6	40	15	11	---	66	96	21	10	9.5	6.0	5.0
31	e13	---	14	13	---	62	---	22	---	8.9	5.9	---
TOTAL	253.6	710.2	594	388.1	1251	4350	3196	1098	435	311.9	212.1	153.7
MEAN	8.18	23.7	19.2	12.5	44.7	140	107	35.4	14.5	10.1	6.84	5.12
MAX	13	84	35	20	65	286	135	93	21	14	8.4	5.8
MIN	6.0	7.4	14	8.8	28	43	61	19	10	8.2	5.9	4.6
AC-FT	503	1410	1180	770	2480	8630	6340	2180	863	619	421	305
CFSM	.21	.60	.49	.32	1.13	3.56	2.70	.90	.37	.26	.17	.13
IN.	.24	.67	.56	.37	1.18	4.11	3.02	1.04	.41	.29	.20	.15

CAL YR 1986 TOTAL 15506.1 MEAN 42.5 MAX 418 MIN 4.7 AC-FT 30760 CFSM 1.08 IN. 14.6
WTR YR 1987 TOTAL 12953.5 MEAN 35.5 MAX 286 MIN 4.6 AC-FT 25690 CFSM .90 IN. 12.2

e Estimated

AUG 11 1994

SPOKANE RIVER BASIN

12415350, WOLF LODGE CREEK NEAR COEUR D'ALENE, ID

LOCATION.--Lat 47°38'27", long 116°36'58", in NE¼SW¼NE¼ sec. 32, T. 50 N, R. 2 W., Kootenai County, Hydrologic Unit 17010303, on upstream left bank, 0.8 mi upstream from Cedar Creek, 2 mi upstream from Lake Coeur d'Alene, and 8 mi southeast of Coeur d'Alene.

DRAINAGE AREA.--39.4 mi².

PERIOD OF RECORD.--December 1985 to September 1986.

GAGE.--Water-stage recorder. Elevation of gage is 2,150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 29 to Jan. 4, Jan. 6-11, 13-17, Feb. 1-20, Mar. 2-9. Records good except for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 220 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 26	1030	*585	*11.11

Minimum daily discharge, 4.7 ft³/s Aug. 18, 20, 24; minimum gage height, 8.58 ft Sept. 18-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	6.6	55	258	153	60	40	12	6.9	6.2
2			---	6.6	74	250	124	60	39	12	6.5	6.9
3			---	7.4	95	245	106	64	38	12	6.5	6.5
4			---	7.8	85	240	90	74	35	12	6.5	6.5
5			---	8.6	77	225	88	88	35	12	5.9	6.5
6			---	8.5	69	210	80	92	33	12	5.9	6.5
7			---	8.4	64	220	78	88	31	11	5.9	6.9
8			---	8.4	60	260	80	82	32	11	5.9	6.5
9			---	8.4	57	280	88	76	30	11	5.6	6.5
10			---	8.4	54	241	86	73	27	12	5.9	6.2
11			---	8.2	51	201	80	69	25	12	5.6	6.5
12			---	8.0	49	178	78	64	24	12	5.6	6.5
13			---	7.7	47	184	69	62	22	12	5.6	6.5
14			---	7.3	45	158	62	59	23	11	5.3	6.9
15			---	6.8	48	144	60	58	22	11	5.0	6.2
16			---	7.8	70	132	66	55	20	10	5.0	6.5
17			8.2	9.4	105	122	60	53	19	12	5.0	6.0
18			8.2	12	90	110	59	53	18	11	4.7	5.0
19			8.1	15	68	101	60	52	17	11	5.0	5.0
20			7.8	19	42	94	59	53	17	11	4.7	5.0
21			7.8	22	29	96	58	62	16	10	5.0	5.0
22			7.8	21	28	98	62	64	15	10	5.3	5.0
23			7.8	23	29	96	68	64	15	9.9	5.3	5.0
24			8.6	23	86	113	66	64	14	9.4	4.7	5.9
25			8.2	21	273	108	62	60	14	8.6	5.0	5.6
26			8.2	21	418	106	59	58	13	8.2	5.0	6.2
27			7.9	20	315	103	62	56	13	8.2	5.0	6.5
28			7.3	20	291	117	64	52	13	8.2	5.0	8.2
29			7.0	20	---	142	64	50	13	7.3	5.0	8.6
30			6.8	31	---	161	64	48	12	7.3	5.6	12
31			6.7	45	---	172	---	42	---	6.9	5.9	---
TOTAL			---	447.9	2774	5145	2255	1955	685	324.0	169.8	193.3
MEAN			---	14.4	99.1	166	75.2	63.1	22.8	10.5	5.48	6.44
MAX			---	45	418	280	153	92	40	12	6.9	12
MIN			---	6.6	28	94	58	42	12	6.9	4.7	5.0

AUG 11 1984

SPOKANE RIVER BASIN

12415350 WOLF LODGE CREEK NEAR COEUR D'ALENE, ID

LOCATION.—Lat 47°38'27", long 116°36'58", in NE¹/₄, SW¹/₄, NE¹/₄, sec.32, T.50 N, R.2 W., Kootenai County, Hydrologic Unit 17010303, on upstream left bank, 0.8 mi upstream from Cedar Creek, 2 mi upstream from Lake Coeur d'Alene, and 8 mi southeast of Coeur d'Alene.

DRAINAGE AREA.—39.4 mi².

PERIOD OF RECORD.—December 1985 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 2,150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are fair.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 585 ft³/s Feb. 26, 1986, gage height, 11.11 ft; minimum, 3.2 ft³/s Sept. 14, 15, 1988, gage height, 8.33 ft.

EXTREMES FOR CURRENT YEAR.—Peak discharge greater than base discharge of 220 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 7	2100	*368	*10.89	Apr. 16	1545	272	10.42

Minimum discharge, 3.2 ft³/s Sept. 14, 15, gage height, 8.33 ft.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

(Shifting-control method used Jan. 23 to Apr. 2;

stage-discharge relation affected by ice Feb. 1-2, 5-7)

8.3	3.2	9.0	52
8.4	6.4	9.5	117
8.6	16	10.0	200
8.8	32	11.0	400

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	4.2	7.2	e6.0	e8.0	51	83	95	39	15	7.7	4.3
2	5.0	4.1	7.8	e5.8	e7.0	66	85	90	38	14	7.7	4.2
3	5.0	4.0	9.1	e5.6	7.7	105	125	86	38	14	7.3	4.1
4	5.0	4.0	8.3	e5.4	7.7	121	157	82	39	13	7.0	4.1
5	4.8	4.2	9.1	e5.4	e7.6	113	150	78	39	14	6.9	4.0
6	4.6	4.1	13	e5.4	e7.6	118	154	74	41	14	6.8	4.0
7	4.6	4.3	13	e5.6	e7.6	105	e326	68	44	13	6.7	3.9
8	4.6	4.0	13	e5.6	7.6	90	307	64	39	13	6.5	4.0
9	4.6	4.0	17	e5.6	9.1	107	233	64	37	12	6.4	3.9
10	4.6	4.0	24	e5.9	11	106	193	63	36	12	6.2	3.7
11	4.6	4.0	23	e6.4	14	95	176	62	34	11	6.1	3.7
12	4.6	4.8	23	e7.4	17	81	176	63	32	11	6.0	3.7
13	4.6	4.6	21	e9.5	20	69	198	65	30	11	5.8	3.7
14	4.6	4.7	18	e13	23	64	239	62	29	14	5.7	3.6
15	4.6	4.6	15	15	36	56	251	55	27	13	5.8	3.6
16	4.5	5.3	14	13	36	48	260	51	26	12	5.7	3.7
17	4.3	5.3	12	13	33	43	248	49	26	12	5.6	4.0
18	4.3	5.3	11	13	29	39	206	47	24	11	5.6	4.0
19	4.3	5.3	9.5	12	26	38	178	44	22	10	5.4	5.2
20	4.3	5.3	8.6	12	23	40	156	40	21	10	5.5	4.7
21	4.3	5.6	7.9	11	22	46	139	37	20	9.5	5.5	4.6
22	4.3	5.4	7.2	10	21	51	131	35	19	9.2	5.3	4.7
23	4.3	5.7	6.6	9.3	19	57	121	33	19	9.1	5.2	5.0
24	4.3	5.5	e6.1	8.9	19	54	118	34	17	8.8	5.1	5.0
25	4.3	5.6	e5.9	8.1	18	55	104	32	17	9.0	5.0	5.5
26	4.3	5.3	e5.8	7.8	18	73	95	29	18	8.6	5.0	5.4
27	4.3	5.3	e5.8	7.6	19	134	89	27	17	8.5	4.9	6.4
28	4.0	5.3	e5.9	6.9	23	140	84	29	19	8.4	4.5	5.6
29	4.0	5.3	e6.1	7.4	32	126	95	39	18	8.2	4.4	5.7
30	4.0	5.3	e6.2	8.7	---	107	98	39	17	8.0	4.3	5.6
31	4.0	---	e6.2	9.1	---	92	---	35	---	7.7	4.3	---
TOTAL	138.6	144.4	346.3	265.4	528.9	2490	4975	1671	842	344.0	179.9	133.6
MEAN	4.47	4.81	11.2	8.56	18.2	80.3	166	53.9	28.1	11.1	5.80	4.45
MAX	5.0	5.7	24	15	36	140	326	95	44	15	7.7	6.4
MIN	4.0	4.0	5.8	5.4	7.0	38	83	27	17	7.7	4.3	3.6
AC-FT	275	286	687	526	1050	4940	9870	3310	1670	682	357	265
CFSM	.11	.12	.28	.22	.46	2.04	4.21	1.37	.71	.28	.15	.11
IN.	.13	.14	.33	.25	.50	2.35	4.70	1.58	.79	.32	.17	.13

CAL YR 1987 TOTAL 12025.1 MEAN 32.9 MAX 286 MIN 4.0 AC-FT 23850 CFSM .84 IN. 11.35
WTR YR 1988 TOTAL 12059.1 MEAN 32.9 MAX 326 MIN 3.6 AC-FT 23920 CFSM .84 IN. 11.39

e Estimated

AUG 11 1984

95-7874



State of Idaho

DEPARTMENT OF WATER RESOURCES

STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS

Governor

A. KENNETH DUNN

Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

August 9, 1984

Mr. Virgil Moore
State Fisheries Manager
Idaho Department of Fish and Game
600 S. Walnut St.
Boise, ID 83707

Re: Minimum Stream Flows

Dear Virgil:

Throughout the past four months we have had numerous telephone conversations regarding the Idaho Minimum Stream Flow Program. The purpose of this letter is to document the current status of the various minimum stream flow filings for which your Department is the requesting agency. The letter has been organized into three phases corresponding to the stages of water right processing.

Applications

Currently we have four remaining applications for which no hearings have yet been held by this Department. To confirm our earlier conversation, enclosed is a list of projected dates for public meetings to be held in September. As we discussed, we will mail the individual notifications of the meetings based on copies of plats and other information on riparian ownerships that you supply.

Permits

We have received the letter dated July 25, 1984, from Bruce E. Rieman, the Regional Fishery Manager of Region 1, regarding the minimum stream flow permits on Granite Creek, No. 96-7771; Sullivan Springs, No. 96-7772; and, Wolf Lodge Creek, No. 95-7874. The information includes enough documentation of beneficial use for the three permits. However, as we discussed, more thorough stream flow information will be required before licenses can be issued. For example, the discharge measurements for Sullivan Springs range from a minimum of 5.85 cfs to a maximum of 9.95 cfs. It is unclear how these measurements relate to the 45 cfs identified in the permit. As another example, the discharge measurements on Granite

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AUG 14 1984

Mr. Virgil Moore
August 9, 1984
Page 2

Creek range from 8.97 cfs to 70.76 cfs. Again, the relationship to the 45 cfs identified in the permit is unclear. For all three permits, a series of gauge readings is needed to augment the staff gauge-discharge relationships that have been developed. The frequency of gauge reading should be a minimum of once every two weeks throughout the year. This office would be happy to entertain a proposal in this regard.

Because proof of beneficial use is due for these three permits on September 1, 1984, extensions of time will be required to maintain the permits in a valid status while the discharge measurements are being collected. We have prepared the three Requests for Extension of Time forms for the signature of Mr. Don Kramer, the chairman of the Idaho Water Resource Board. By separate letter we are mailing the request forms to Mr. Kramer, with the request that they be signed and returned to this office by August 24, 1984. In this way the dates of priority of the minimum stream flow applications will be preserved.

These are the final three minimum stream flow permits for which further documentation will be required this year. Regarding permits with proof due in upcoming years, you may wish to review the conditions of approval to insure that the needed measurements are being made on a current basis to enable timely filing of statements of beneficial use. I would be happy to review the requirements on the permits at your convenience.

Licenses

As you are aware, water right licenses have been issued for both of the upper reaches on Silver Creek. License Nos. 37-7727 and 37-7728 represent the first two licenses issued as a result of the minimum stream flow program. We have received statements of beneficial use for permit Nos. 37-7734, Bancroft Springs, and 36-7818, Vinyard Creek. We are currently reviewing the data on these files and plan to issue licenses in the near future.

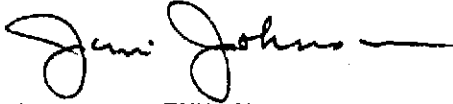
This completes the information that I wanted to summarize regarding the water rights based on requests from your agency. In addition, we would like to request that a study of in-stream flow needs be made on the east fork of Rock Creek, tributary to Rock Creek near American Falls. Minimum stream flow application No. 41-7046 was originally filed by the Idaho Water Resource Board based on a request from the Power County Commissioners. The application was held pending the outcome of an existing protested application for permit located upstream on the east fork of Rock Creek. That application has now been withdrawn and further action can be taken on the application. However, the information provided in the original hearing does not provide a sufficient technical basis for a minimum flow. Therefore, it appears that the next step for action regarding the minimum flow is some type of fishery-related study. Enclosed for

Mr. Virgil Moore
August 9, 1984
Page 3

your information is a copy of the application. Please advise me regarding the possibilities of an instream flow study on not only the proposed reach, but upstream to the source of the stream as well.

If you wish to clarify or add to any portion of this letter, Virgil, please feel free to give me a call. I will be out of the office until August 27 on military leave, but Jim Johnson of this office should be able to assist you until that date. I look forward to working with you and your staff regarding this program in the future.

Sincerely,



for DAVID R. TUTHILL, JR., P.E.
Supervisor, Water Allocation Section

DRT:ls

Enclosures

MICROFILMED

Donald R. Kramer, Chairman
Idaho Water Resource Board
Statehouse Mail
Boise, ID 83720

Re: Permit Nos. 95-7874 - Wolf Lodge Creek Minimum Instream Flow,
96-7771 and 96-7772 - Granite Creek Minimum Instream Flow

Sincerely,

Enclosures



State of Idaho

DEPARTMENT OF WATER RESOURCES

STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS

Governor

A. KENNETH DUNN

Director

Mailing address:

Statehouse

Boise, Idaho 83720

(208) 334-4440

August 9, 1984

Mr. Donald Kramer, Chairman
Idaho Water Resource Board
Castleford, ID 83321

Re: Minimum Stream Flow Permit Nos. 96-7771, Granite Creek; 96-7772;
and, 95-7874, Wolf Lodge Creek

Dear Mr. Kramer:

Enclosed please find three Requests for Extension of Time, which have been prepared regarding the three permits identified above. Please note that although beneficial uses on the three reaches described by the permits have been documented, information on flows within the reaches is insufficient to provide for licensing at this time. Please sign the requests if you concur with the information on the forms and return them to this office by August 24, 1984 if possible.

Sincerely,

for DAVID R. TUTHILL, JR., P.E.
Supervisor, Water Allocatin Section

DRT:ls

cc: Gene Gray

Enclosures

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

STATEHOUSE
BOISE, IDAHO 83720
(208) 334-4440
CERTIFIED MAIL

STATE OF IDAHO
IDAHO WATER RESOURCE BOARD
STATEHOUSE
BOISE, ID 83720

HAND DELIVERED TO
BOARD SECRETARY -
A. Warntjes

PROOF DUE NOTICE

JUNE 30, 1984

DEAR PERMIT HOLDER:

ONE OF THE CONDITIONS OF APPROVAL OF YOUR WATER PERMIT NO. 95-7874 WAS THAT PROOF OF THE EXTENT OF YOUR BENEFICIAL USE MUST BE SUBMITTED TO THIS OFFICE ON OR BEFORE SEPTEMBER 01, 1984. (SEE LAST PAGE OF YOUR APPROVED PERMIT OR YOUR LAST APPROVED EXTENSION REQUEST). ENCLOSED IS A POSTCARD WHICH MAY BE USED TO SUBMIT THE REQUIRED PROOF.

IF YOU HAVE NOT FULLY COMPLETED YOUR PROJECT, AND YOU OR A PREVIOUS OWNER OF THIS PERMIT HAVE NOT RECEIVED A PRIOR EXTENSION OF TIME, YOU MAY REQUEST AN EXTENSION OF TIME IF THE DELAY IS FOR REASONABLE CAUSE AS PROVIDED IN SECTION 42-204, IDAHO CODE. IF YOU HAVE BEEN PREVENTED FROM PROCEEDING BY A GOVERNMENTAL AGENCY OR BY LITIGATION, MORE THAN ONE EXTENSION OF TIME CAN BE GRANTED. AN EXTENSION OF TIME REQUEST FORM IS ENCLOSED FOR YOUR CONVENIENCE.

EITHER THE BENEFICIAL USE POSTCARD OR A REQUEST FOR AN EXTENSION OF TIME MUST BE RECEIVED BY THIS DEPARTMENT ON OR BEFORE THE ABOVE DESCRIBED PROOF DUE DATE. IF NEITHER IS RECEIVED, THE DEPARTMENT WILL SEND YOU A LAPSE NOTICE. WITHIN SIXTY (60) DAYS OF THE MAILING OF THE LAPSE NOTICE, THE PERMIT WILL NO LONGER BE OF ANY FORCE NOR EFFECT.

SINCERELY,

RITA FLECK
SECRETARY/RECORDS MANAGER

RECEIVED

ENCLOSURES



STATE OF IDAHO

DEPARTMENT OF FISH AND GAME

600 SO. WALNUT ST. — P.O. BOX 25
BOISE, IDAHO 83707

October 20, 1981

RECEIVED

OCT 23 1981

Department of Water Resources

Mr. David R. Tuthill, Jr., P.E.
Supervisor, Water Allocation Section
Idaho Department of Water Resources
Statehouse Mail
Boise, ID 83720

Dear Dave:

The following work has been done on Minimum Stream Flows in 1981:

95-7874 - Wolf Lodge Creek ✓
96-7771 - Granite Creek
96-7772 - Sullivan Springs

Region 1 reports that staff gauges were installed and calibrated on these waters this summer. Periodic readings and recalibrations will be recorded.

73-7045 - Pahsimeroi River

We have collected stream flow measurements at 12 sites on the Pahsimeroi monthly since May and at two week intervals during some of the peak irrigation times. A report is being prepared which will include an aerial photo-map indicating the flow volume, inflows and withdrawals at the different sites and times. We hope to have the data completed and summarized in the next two months.

37-7849 - Silver Creek, lower end

The Regional office is supposed to be making contact with the riparian land owners this week and a report will be forwarded to you.

Sincerely,

A handwritten signature in cursive script, appearing to read "Herb Pollard".

Herb Pollard
State Fishery Manager
Bureau of Fisheries

ENCLOSURE

FACT SHEET

Source: WOLF LODGE CR.
Tributary To: COEUR D'ALENE RIVER
Requestor: ID DEPT OF FISH & GAME
Quantity: 30 cfs
Length of Reach: 3.0 mi
Purpose: MAINTENANCE OF TROUT SPAWNING AND REARING

Date Received: 9/13/78
Date Hearing Held: 8/2/79 IN COEUR D'ALENE
Date Approved by Director: 9/18/79

Other Rights: - 7 Permit & License rights w/ PRIORITIES
EARLIER THAN THIS APP., TOTALING 1.52 cfs.
- 3 CLAIMS TOTALING 0.18 cfs., 1 JUNIOR PERMIT FOR .2 cfs.

REMARKS: AVERAGE FLOW A MOUTH IN WATER YEAR 1959 WAS
80 cfs.

RECEIVED

MINIMUM STREAMFLOW REQUEST/APPLICATION

PROCESSING CHECKLIST

Legislative Approval Procedure
(For use after a MSF application is approved by the Director)

	<u>ASSIGNED TO</u>	<u>INITIALS/DATE</u>
1. Fact sheet prepared.	Section Supervisor	<u>DRT 1/5/80</u>
2. Copy of application sent to Speaker of the House and President Protem of the Senate.	Section Supervisor	<u>DRT 1/7/80</u>
3. Approval/Denial legislation placed in file.	Records Chief	<u>DRT 4/1/80</u>
4. Applicant notified of legisla- tive Approval/Denial.	Records Chief	<u>DRT 4/1/80</u>

MICROFILMED

FACT SHEET

Source: Wolf Lodge CreekTributary To: Coeur d'Alene RiverRequestor: Idaho Dept. of Fish & GameQuantity: 30 cfsLength of Reach: 3.0 mi.Purpose: Maintenance of trout spawning and rearingDate Received: 9-13-78Date Hearing Held: 8-2-79 in Coeur d'AleneDate Approved by Director: 9-18-79Other Rights: -7 Permit & License rights with priorities earlier than
this application, totaling 1.52 cfs.-3 Claims totaling 0.18 cfs, 1 Junior Permit for .2 cfs.REMARKS: Average flow a month in water year 1959 was 80 cfs.

MICROFILMED

FACT SHEET # 2

HEARING

Filings Examined at Hearing 96-7771, 96-7772, 95-7874

Date Hearing Held 8-2-79

Location of Hearing Coeur d'Alene

Hearing Officer C. Stephen Allred

No. of Persons at Hearing See Attached sheet

Roster of Attendance

<u>Name</u>	<u>Organization</u>
See Attached sheet	

Related Correspondence

<u>Name</u>	<u>Organization</u>	<u>Received</u>
Ed Chaney	Self	10-27-78
Joe F. Allen	Self	10-24-78
Joe Wyllie	Boise Valley Fly Fishermen	11-16-78
Doli Obee	Self	11-4-78
Pete Cole	Portneuf Valley Audubon Society	1-5-79
George Davis	Forest Service	7-27-79
Philip Nelson	Inland Empire Fly Fishing Club	7-27-79
Richard Fisher	Fish & Wildlife Service	7-30-79
Joseph K. Haynes	North Idaho Fly Casters	7-30-79

MICROFILMED

DEPARTMENT OF WATER RESOURCES

STATE OF IDAHO

COUNTY OF ADA

CERTIFICATE OF MAILING

I HEREBY CERTIFY that I have on this date served a true and correct copy of the foregoing MEMORANDUM DECISION AND ORDER by depositing a copy thereof in the United States mail postage prepaid and addressed to:

Joseph H. Nettleton, Chairman
Idaho Water Resource Board
Murphy, ID 83650

Idaho Department of Fish and Game
Statehouse Mail
Boise, ID 83720

Senator Arthur Murphy
1109 11th
Coeur d'Alene, ID 83814

Lester M. Larsen
Kootenai Environmental Alliance
Route 4, Box 307 K-12
Coeur d'Alene, ID 83814

Carl Brautigan
Route 1, Box 88
Coeur d'Alene, ID 83814

Dated this 26th day of September, 19 79.

Rita L. Clark

On this 26th day of September, 19 79, personally appeared before me the signer of the above instrument, who duly acknowledged to me that he (she) executed the same.

Dana R. Tulliff
Notary Public
Residing at Boise, ID

My commission expires 9/10/80

RECORDED



STATE OF IDAHO

file 95-2874

IDAHO WATER RESOURCE BOARD

STATEHOUSE
BOISE, IDAHO 83720

January 14, 1980

Dear Legislator:

For the opening of the 1980 legislative session the Idaho Water Resource Board has submitted to the Legislature seven applications for minimum instream flows which have been approved by the Director of the Idaho Department of Water Resources. These applications will become effective under the provisions of I.C. §42-1503 if the legislature passes a concurrent resolution of approval or fails to act at all prior to the end of the regular session.

Recent newspaper stories have reflected considerable misunderstanding and misinformation concerning the minimum flow law which was adopted in 1978 and the action taken by the Idaho Water Resource Board under that act. My purpose in writing to each senator and representative is to try to clarify the law and our actions under that law to date.

Under I.C. §42-1501 the preservation of minimum stream flows for the protection of fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, transportation and navigation values, and water quality is recognized as a beneficial use. The Idaho Water Resource Board is granted the power to apply for a minimum flow right and hold that right if approved. No other agency or individual can either make application or hold a minimum flow water right.

The standards to be used by the Director in determining whether to approve a minimum flow are set forth in I.C. §42-1503. It is very important to note that under the first requirement of that section the Director cannot approve an application for a minimum flow unless he specifically makes a finding that such an appropriation:

Will not interfere with any vested water right, permit, or water application with priority of right date earlier than the date of receipt in the office of the director of a complete application for appropriation of minimum stream flow filed under the provisions of this act.

MICROFILMED

Minimum flow applications are treated exactly in this same fashion as any diversionary applications. Any right that is granted is subsequent to and inferior to any prior right. The minimum flow rights are subject to the statutory and constitutional rule in Idaho commonly expressed as "first in time is first in right."

On the sources described by the seven applications which were approved by the Director, there were no other applications pending prior to the date of the Board's application. Prior water rights exist on the sources of three of the approved applications, but the applications are junior in priority to the existing water rights.

The Board did submit four other applications in the Thousand Springs area. The testimony at the hearings and the records of the Department of Water Resources indicated that undeveloped water rights exist on the four sources described by the applications. These existing water rights are recorded in the form of unapproved applications and undeveloped permits. The Director has not approved the four applications submitted by the Board but has deferred action to see if the prior filings are developed within the allowable time limits.

The following applications as approved by the Director have been presented to the Speaker of the House and the President Protem of the Senate for your consideration:

Permit No. 37-7727 Silver Creek, tributary to the Little Wood River, Blaine County, 99 c.f.s.

Permit No. 37-7728 Silver Creek, tributary to the Little Wood River, Blaine County, 74 c.f.s.

Permit No. 36-7818 Vinyard Creek, tributary to the Snake River, Jerome County, 17 c.f.s.

Permit No. 37-7734 Bancroft Springs, tributary to the Snake River, Elmore County, 17 c.f.s.

Permit No. 95-7874 Wolf Lodge Creek, tributary to Coeur d'Alene Lake, Kootenai County, 30 c.f.s.

Permit No. 96-7771 Granite Creek, tributary to Pend Oreille Lake, Bonner County, 45 c.f.s.

Permit No. 96-7772 Sullivan Springs, tributary to Pend Oreille Lake, Bonner County, 45 c.f.s.

January 14, 1980
Page 3

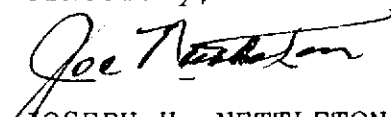
You may be interested in the procedures that were followed. The Department published legal notice of hearings on all applications and in addition news releases concerning the applications were sent to newspapers in the vicinity. The first hearing was on the Silver Creek applications held in the City Hall at Hailey on January 11, 1979. Approximately 40 people attended and twelve testified in support of the applications. There was no opposition at the hearing to either application.

A hearing was held in Buhl on April 25th and 26th on Vinyard Creek and Bancroft Springs along with four other flows in the Thousand Springs area. Approximately 50 people attended the hearing. There was considerable testimony in support of all of the applications with opposition to the request for flows on some of the springs from trout farming interests. There was no testimony in opposition to either Vinyard Creek or Bancroft Springs. Consolidated hearing was held on the three Panhandle applications in Coeur d'Alene on August 2nd. Approximately twenty people attended and all of the testimony was in support of the applications.

Some members of our board were in attendance at each of the hearings. As far as we can determine from the public hearings and the written testimony received by the Department, the applications as approved have very substantial public support and are free from controversy. We believe these seven applications are consistent with the intent of the legislature at the time it unanimously passed the minimum stream flow law as part of its consideration of the State Water Plan.

The approved applications with supporting documentation will be available in the legislative files. If there is any further information that you desire to have, please do not hesitate to call upon us.

Sincerely,


JOSEPH H. NETTLETON
Chairman

JHN:SWR:rh

● Fish & Game Ex 7
Introduced
C.R.

IDAHO DEPARTMENT OF FISH & GAME

Joseph C. Greenley, Director

FEDERAL AID IN FISH AND WILDLIFE RESTORATION

Job Performance Report

Project F-66-R-2



STREAM FLOW INVESTIGATIONS

- Job I. Evaluation of Applicability of Water Surface Profile Predictive Modeling in Reference to Stream Resource Maintenance Flow (SRMF) Determinations
- Job II. Stream Resource Maintenance Flow Determinations on Idaho Streams

Period Covered: 1 March 1976 to 28 February 1977

by

Tim Cochnauer
Senior Fishery Research Biologist

MICROFILMED

April, 1977

ACKNOWLEDGMENTS

This project was funded by the U. S. Bureau of Reclamation, Boise Office, and federal aid funds from the Dingell-Johnson program. The United States Bureau of Reclamation provided data processing assistance and computer time through the Federal Technical Assistance program. Mr. Harold Brush provided invaluable assistance in preparation of data for computer processing.

INTRODUCTION

This study is a continuation of stream resource maintenance flow studies initiated in 1974 by the Idaho Department of Fish and Game in cooperation with the Idaho Department of Water Resources.

White (Cochner and White 1975) proposed a methodology for recommending stream resource maintenance flows for large rivers, utilizing the Bureau of Reclamation's water surface profile (WSP) computer program to predict stream flow parameters over a range of flow stages. During the past 2 years, the Idaho Department of Fish and Game has been developing techniques for collecting field data for use in the WSP (Cochner 1976), and "field testing" the proposed methodology. An evaluation of the WSP is presented in Job I.

Stream resource maintenance flow recommendations using the WSP were developed for six sections of Snake River and 11 additional streams studied during 1976 (Fig. 1).

JOB PERFORMANCE REPORT

State of Idaho Name: STREAM FLOW INVESTIGATIONS
Project No. F-66-R-2 Title: Stream Resource Maintenance
Job No. II Flow Determinations on
Idaho Streams
Period Covered: 1 March 1976 to 28 February 1977

ABSTRACT

Stream resource maintenance flows are recommended for 13 streams studied during 1976. The flows were determined by measurement of flow parameters at one discharge at each study site for utilization with the Bureau of Reclamation's water surface profile computer program to predict flow parameters (velocities and depths) over a range of flow stages, and then correlating the predicted values with biological criteria for fish and wildlife in the streams.

Important fish and wildlife species are listed for each stream.

Author:

Tim Cochnauer
Senior Fishery Research Biologist

Table 1. Spawning criteria for fish species in study streams.

<u>Species</u>	<u>Velocity</u>		<u>Depth</u>	
	<u>(cm/s)</u>	<u>(fps)</u>	<u>(cm)</u>	<u>(in)</u>
Rainbow trout	34-89	1.1-2.9	15	5.6
Brown trout	31-70	1.0-2.3	17	6.8
Brook trout	9-64	0.3-2.1	12	4.7
Cutthroat trout	24-79	0.8-2.6	12	4.7
Kokanee	20-65	0.66-2.1	12	4.7
Chinook salmon	34-95	1.1-3.1	24	10.0
Steelhead trout	34-92	1.1-3.0	20	8.0
Dolly Varden	34-64	1.1-2.1	20	8.0

Rearing flow recommendations were determined by the relationship of the wetted perimeter and discharge (Cochner and White 1975). The optimum quantity of water for rearing (food production) was selected at the inflection point where wetted perimeter increases slowly while the discharge increase rapidly (see appendix).

Periodicity charts for fish and wildlife life history phases are given in Tables 2-11, Appendix. Stream resource maintenance flows are presented for each life history period for each species (Appendix, Table 12). Flows are recommended for each month on the basis of the highest minimum flows for all species for each stream section and the maximum flows where waterfowl are concerned.

New flow recommendations may be made in future reports when circumstances warrant (improved methodologies, changes in species compositions, etc.).

Table 2. Important fish and wildlife resources in study streams.

Stream	Rainbow trout	Cutthroat trout	Brook trout	Dolly Varden	Steelhead trout	Chinook trout	Kokanee salmon	Mountain salmon	Smallmouth whitefish	Mallard bass	Muskrat	Beaver	Mink	Otter
<u>Wolf Lodge Creek</u>	X	X				X								
<u>Lemhi River</u> Big Springs Creek to Highway 28 bridge near Tendoy	X	X	X	X	X		X		X	X	X	X	X	
<u>South Fork Payette R.</u> At Lowman	X	X		X			X							
<u>South Fork Boise River</u> Anderson Ranch Dam to Arrowrock Res.			X	X				X		X	X			
<u>Big Wood River</u> Bellevue Diversion to Magic Reservoir			X			X				X	X	X		
<u>Malad River</u> Idaho Power Di- version to mouth								X						
<u>Willow Creek</u> Ririe Dam to mouth	X	X					X			X	X			

FINDINGS

Wolf Lodge Creek

Wolf Lodge Creek flows for approximately 20 km (12.4 mi) from its origin into Coeur d'Alene Lake. This stream is one of the major spawning and rearing tributaries for trout in north Idaho. Station WLC is located on representative spawning and food production habitat, 3 km (1.9 mi) upstream from Coeur d'Alene Lake (Fig. 1).

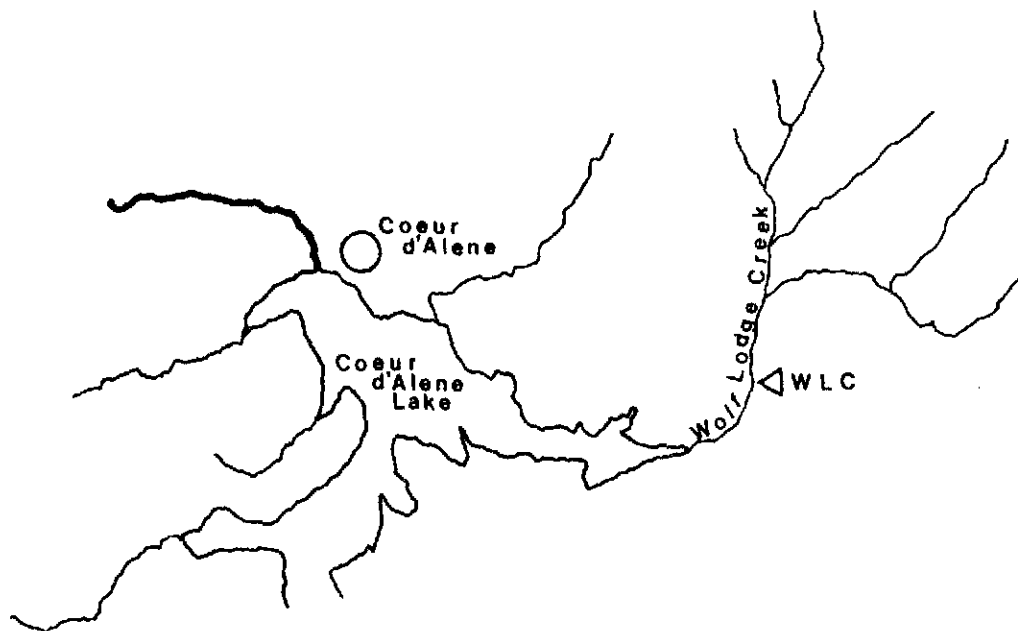


Figure 1. Study site location on Wolf Lodge Creek.

Game fish species include cutthroat trout, brook trout, kokanee and mountain whitefish.

Stream resource maintenance flows, based on fish spawning and rearing requirements, are as follows:

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>
Min. cfs	30	30	30	30	30	30
Min. cu m/s	.85	.85	.85	.85	.85	.85
	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Min. cfs	30	30	30	30	30	30
Min. cu m/s	.85	.85	.85	.85	.85	.85

Table 2. Wolf Lodge Creek fish periodicity chart.

Species	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Cutthroat Trout Passage Spawning Incubation Rearing				----- XXXXXXXXXXXXXXXXXXXX	----- XXXXXXXXXXXXXXXXXXXX							
Brook Trout Spawning Incubation Rearing				XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX				XXXXXX XXXXXX XXXXXX			XXXXXXXXXXXX
Kokanee Spawning Incubation Rearing Passage				XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX						----- XXXXXXXXXXXX	

50

[illegible]

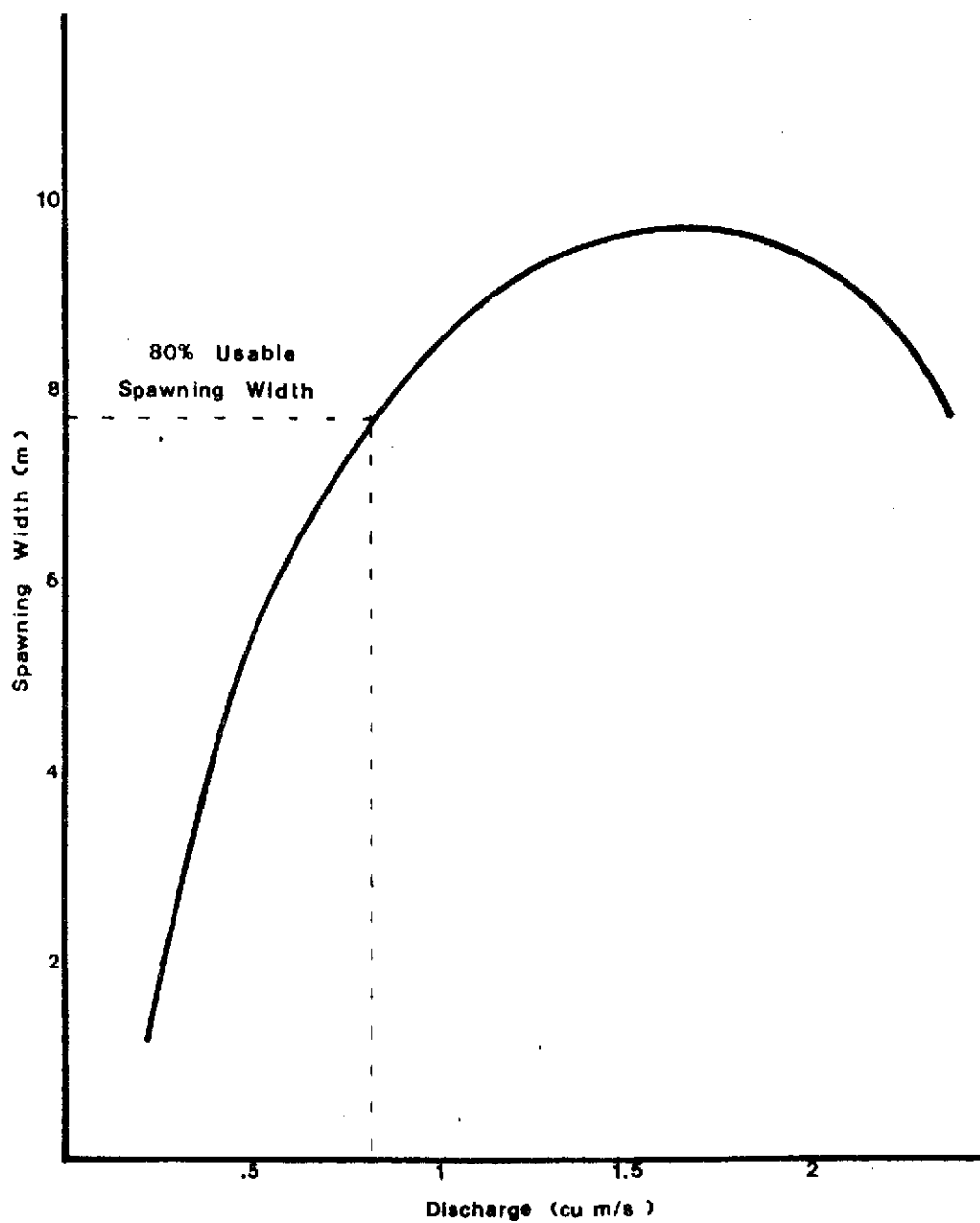


Figure 1. Cutthroat trout spawning curve for Wolf Lodge Creek.

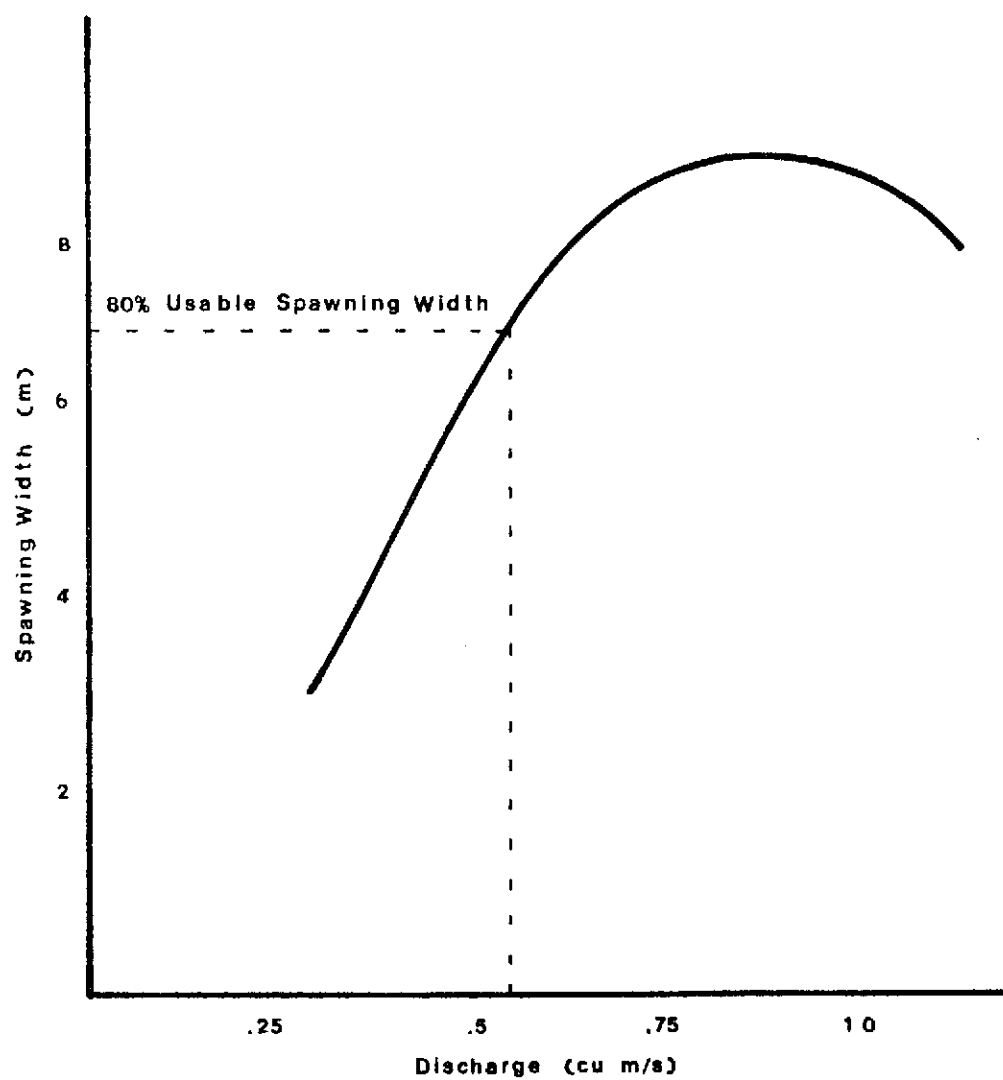


Figure 2. Brook trout spawning curve for Wolf Lodge Creek.

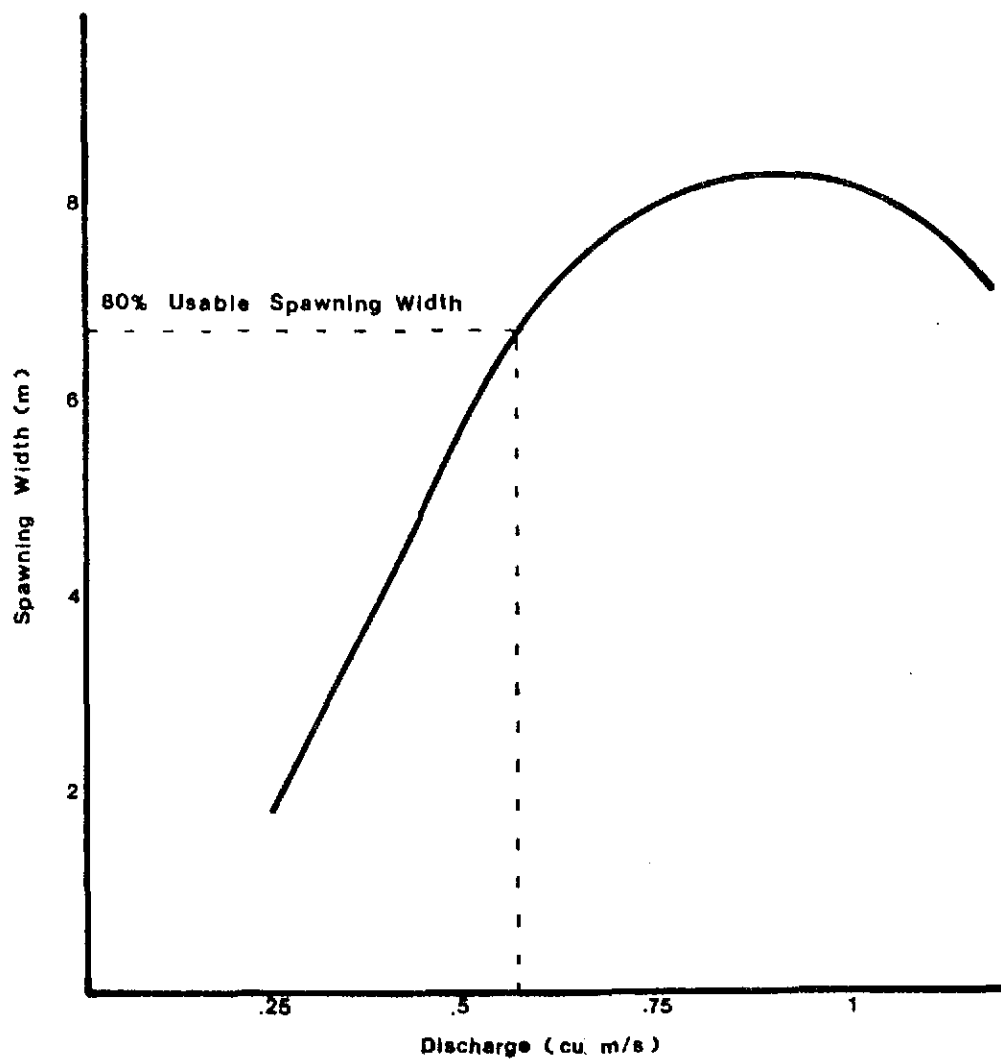


Figure 3. Kokanee spawning curve for Wolf Lodge Creek.

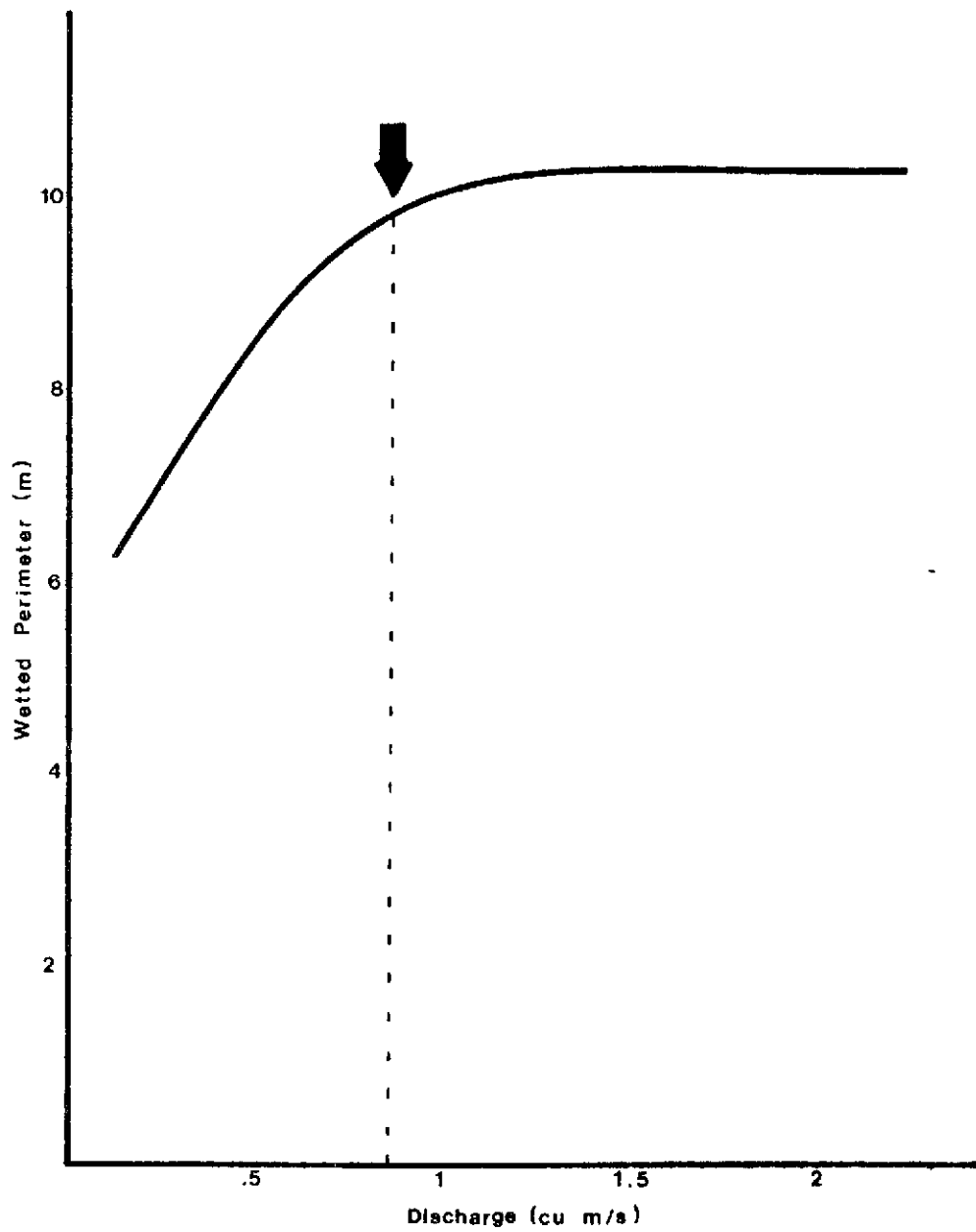


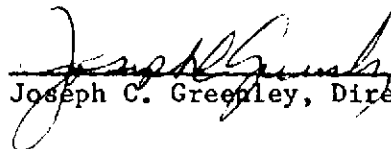
Figure 4. Rearing flow curve for Wolf Lodge Creek.

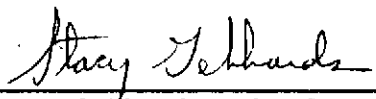
Submitted by:

Tim Cochnauer
Senior Fishery Research Biologist

Approved by:

IDAHO DEPARTMENT OF FISH AND GAME


Joseph C. Greenley, Director


Stacy Gebhards, Chief
Bureau of Fisheries


Jerry Mallet
Fisheries Research Supervisor
Bureau of Fisheries

Fish and Game
Submittal
Ex 6
FISH & WILDLIFE

Project _____
Fish _____
Ent _____
Land _____
Action _____
Route & Rte _____
Comments _____

WOLFE LODGE STREAM HABITAT SURVEY

by

Ron Van Gundy
Fisheries Biologist

MICROFILMED

The following report was written to provide input for fisheries management of the Wolfe Lodge Creek drainage. Steve Mikel and I conducted a stream transect survey in the spring of 1974 (late May through June). This survey involved recording quantitative data as outlined by Forest Service Handbook 2600.21 R-1 Wildlife Surveys Handbook, Chapter 600. In conjunction with the transect survey an ocular survey was undertaken. The ocular survey involved rating resident and spawning habitat and listing limiting factors to the fisheries resource. The ocular survey was based on the system developed by James Cooper, former Forest Service Fisheries Biologist.

Transect surveys were conducted only on major streams and mainly in areas where land adjacent to the creeks is publicly owned. Ocular surveys were conducted on those streams that were thought to have some direct fisheries significance.

Quantitative spawning information (Appendix A) was recorded by transect. Areas one square foot or larger were considered. Although this information may serve as trend data, no correlation exists between the subjective spawning ratings and the transect spawning data. For example, one stream which had a high quantity of spawning gravel by the transect method may subjectively rate only average for spawning; while a stream with a low quantity of spawning gravel may rate well above average. The transect spawning data may be useful in determining total quantities of spawning gravels in streams or particular reaches of streams.

The habitat rating system used in this survey can be misleading. For example, in saying that a particular stream rates poor for spawning habitat a person could be led to think the stream is insignificant as a spawning value. This could be wrong since the average spawning habitat in northern Idaho is considered poor. Therefore, a "poor" spawning stream might, in fact, be very important. To avoid confusion the habitat ratings have been put in terms of the average (for northern Idaho) as they correspond to the original ratings (Good, Fair, etc.):

Resident Habitat		<u>Spawning Habitat</u>	
Good	- Above Average	Good	- Well Above Average
Fair	- Average	Fair	- Above Average
Poor	- Below Average	Poor	- Average
Virtually None	- Well Below Average	Virtually None	- Below Average
None	- None	None	- None

FISHES

Both adfluvial and residential fishes occur within the Wolfe Lodge drainage. Adfluvial fishes occurring in the unit are cutthroat trout. Land-locked sockeye salmon and rainbow trout may also occur in the unit as adfluvial fishes. It was assumed that most cutthroat over 12 inches were adfluvial fishes. Using this logic, numbers of adfluvial fishes appeared good. Cutthroat in excess of 12 inches were commonly observed.

Eastern brook trout and cutthroat trout exist as residential populations. The number of eastern brook trout is good. Numbers of residential cutthroat are hard to ascertain since differentiation from adfluvial cutthroat was difficult. Numbers of cutthroat trout, in general, appeared lowest in the higher and steeper streams and portions of streams.

Suckers, squawfish, whitefish, and sculpins may also be found in the Wolfe Lodge drainage.

CHARACTERISTICS OF FISHERIES HABITAT

A total of 54.5 map miles of streams were found to be directly significant to the fisheries resource. Approximately 45% of the resident habitat rated below average or less. The reason for poor ratings for habitat is mainly the lack of water, steepness, and high water velocities of many of the streams.

Approximately 92% of the spawning habitat rated average or greater. Spawning gravels and water velocities were found to be, at least, suitable in a majority of the streams. Many streams had reaches which had quite good spawning gravels but simply had too high water velocities to be used by fishes for spawning purposes.

Generally, fish migration barriers are not a serious threat to the fisheries. Areas blocked to fish passage are predominately low quality for spawning and are typically upper drainages with high gradients. South Fork Cedar Creek and Cedar Creek do have fish migration barriers (culverts) which are quite significant. Correction of these barriers could be very helpful to the Wolfe Lodge fishery.

Beaver activity was found only in the Marie Creek drainage. This activity was found approximately one-half mile above and below stream transect station #5. Fresh beaver cuttings were found throughout this reach. Beaver ponds and dams were common, creating good residential fish habitat. It is not known if this section of stream is a barrier to fish migration.

Overall, streamside vegetation was good in the Wolfe Lodge drainage. Wolfe Lodge Creek, Marie Creek, and Lonesome Creek were the only creeks with significant streamside vegetation problems. The problems were closely related to the channel stability of the streams involved. Correction is questionable because of the flooding history of the Wolfe Lodge drainage.

Most streams within the Wolfe Lodge drainage have perennial water flow. Only 1.6 miles of stream have intermittent water flow (Lonesome, X-A of Lonesome, and Marie). Dry periods usually occur in late summer and early fall.

MANAGEMENT IMPLICATIONS AND OPPORTUNITIES

It should be understood that all creeks in the Wolfe Lodge drainage (fisheries significant or not) should, at least, receive basic water quality protection.

- Wolfe Lodge - Major problems of Wolfe Lodge Creek are closely tied to its flooding events. A degradation of the fisheries habitat has occurred. Velocities were increased, the pool-riffle ratio was decreased, and streamside vegetation was removed. The affected area was mainly from survey station 8 to survey station 3. Many reaches have suitable spawning materials, but water velocities are too high to allow spawning to occur. Many reaches were also devoid of resting areas.

A person living adjacent to Wolfe Lodge Creek said fish usually spawn in Wolfe Lodge Creek directly in front of her house, but this year no fish had spawned. Apparently the channel has been altered by flooding to the point that it is no longer suitable as a spawning site.

Improvement of Wolfe Lodge Creek seems questionable since the Ccreek has a past history of flooding. Any work done to improve the fisheries habitat will likely be "washed out" by a following flooding event.

The flooding situation of Wolfe Lodge Creek should be studied to determine if, or to what degree, rehabilitation work should be done.

- X-1 of Wolfe Lodge - X-1 of Wolfe Lodge Creek is too steep and has too little water to have fisheries significance.
- Rutherford Gulch - No direct fisheries significance. The oil pipeline crossing Rutherford Gulch should be checked. A local person said a pipe was fully exposed. If this is the case, measures

should be taken to correct the situation. The danger is that of a break in the pipe and a resulting oil spill into Wolfe Lodge Creek.

- Marie - Flood damage is a major problem to the Marie Creek fisheries. The result is generally the same that has occurred on Wolfe Lodge Creek (above). The lower one-half mile of Marie Creek might be a particular problem. The bottom materials in this section have become highly aggraded resulting in sub-surface flow during late summer and early fall. This could interfere with the upward migration of fall spawning fishes. Channelization may be a solution but its rewards are questionable.
- Searchlight - Searchlight Creek appeared to be an important fish reproducing stream to the Wolfe Lodge fisheries and measures should be taken to minimize detrimental impacts (sedimentation, fish migration barriers, loss of water, etc.).
- Burton - No fish were observed in Burton Creek. A complete fish migration block was found near the mouth, therefore, it is likely that the stream is barren of fish. It may be desirable to stock the creek since the habitat is above average and could very likely support a reproducing fish population. If the stream were stocked, it may be desirable to remove the fish migration barriers other than those directly above the mouth.
- Skitwish - A debris jam approximately one and one-half mile above the mouth is a complete fish migration barrier. Correction of this block would be of low priority since the resident and spawning habitat is of low quality above the barrier. The likelihood of fish using the area above the barrier is low. That section of creek had a low pool-riffle ratio (.2) and high water velocities. It is unlikely that fish would migrate within the area above the barrier.
- X-1 of Marie - Basic protection
- X-A of Marie - Basic protection
- X-2 of Marie - X-2 of Marie contains many low flow fish migration blocks. Correction of these blocks would be of low priority.
- X-3 of Marie - Low priority for removal of debris jams.
- X-4 of Marie - Basic protection
- Lonesome - Lonesome Creek has two particular problems: (1) Channel debris, (2) excessive deposition. The channel debris at this time poses no direct problem, numerous debris jams were observed but none appeared to be fish migration barriers. Special care should be taken to assure that the debris does not impair fish migration since this stream rates above average for spawning.

Excessive deposition has occurred in the lower one-half mile of the stream. The impact of this excessive deposition is subsurface flow in late summer and early fall. Cutthroat have been observed trapped in pools as water flows decreased. This situation should be analyzed and corrected, if feasible.

- X-A of Lonesome - This stream seems to flow intermittently. If a significant number of fish are using the stream for spawning, efforts should be made to prolong water flow so that a maximum number of fishes survive. Since the upper portion of this stream flows through a clearcut, special measures may be needed to protect the fish habitat.

- Stella - Stella Creek has a channel stability problem. Cutting, deposition, and braided channels were common in many reaches of the stream. This has proved to be both good and bad to the fisheries. Good, in that much of the deposition is a size of gravel that is considered good for spawning use. This deposition seems to be increasing spawning opportunities. The stability condition is bad, in that much of the gravel cannot be used because high water velocities have been created. Also the resident habitat condition has been degraded because of a filling in of many pools.

Potential fish blocks have been created since debris is abundant and the stream is unstable. This stream should be monitored periodically to make sure fish passage is possible. One particular area that should be checked frequently is the small gorge area approximately seven-tenths of a mile above the mouth. A complete fish migration barrier was found in this area, but has since been removed. The stream width is decreased considerably and debris accumulation is likely.

- X-A of Stella - Debris, as a result of natural blowdown, is abundant. At survey time only one barrier was observed (low flow). Removal of this barrier would open up access to six-tenths of a mile of above-average spawning stream to fall spawning fishes. Removal of the channel debris would be quite beneficial to the fisheries from a migration standpoint.

- X-1 of Stella - X-1 of Stella has abundant debris as does X-A of Stella. The potential for low water barriers is great, removal of some debris would be advantageous to the fisheries.

- X-1 of X-1 Stella - . . . is clogged with debris and has a low value as a fisheries stream.

- X-D of Stella - Basic protection

- X-F of Stella - The lower one-third mile of this stream should be kept open to fish because an above-average spawning condition exists.

- X-2 of Stella - Basic protection
 - X-1 of X-2 Stella - Basic protection
 - X-3 of Stella - Basic protection
 - Halliday - Low flow debris fish migration barriers are abundant. Removal of these barriers would be of low priority.
 - X-1 of Onowa - Basic protection
 - Blue Grouse - Unlikely that a significant amount of fish can use Blue Grouse Creek because of the fish migration barriers (bedrock control - falls and sluices) just below the mouth. Removal of the low flow fish migration blocks would be of low priority since spring spawning resident fish would be the main fish using the stream.
 - Phantom - Low priority for removal of fish migration barriers (same situation as described for Blue Grouse).
 - X-1 of Phantom - Basic protection
 - Cedar - Encroachment from Interstate Highway 90 is the biggest problem of Cedar Creek. Shading vegetation is lacking and rocks (fill material) have been introduced into the creek, thus decreasing the pool-riffle ratio. Most important is the possible fish migration blockage by the culverts installed under the highway. More information is needed to determine the impact of these structures. If they do prove to be blocking fish migrations, it may be very advantageous to correct the structures. Baffle structures may be the most economical solution.
- Cedar Creek also has an extreme erosion problem on the lower end (one-fourth mile). Three- to four-foot cutbanks are common. Correction of this problem should be addressed.
- Alder - Basic protection
 - X-1 of Alder - Basic protection
 - South Fork Cedar - Providing that fish can get to the South Fork of Cedar Creek, correction of the culvert just below X-1 of Cedar will very likely enhance the fisheries. If the culvert situation is corrected approximately one and two-tenths mile of above average spawning stream would be made available to fishes.
 - X-1 of South Fork Cedar - Basic protection
 - X-2 of South Fork Cedar - Removal of the fish migration barrier would be of low priority.

- B-2 of Wolfe Lodge - Land adjacent to this creek is privately owned, therefore, cooperation of the land owner will be needed for fisheries management.
- Z-1 of Wolfe Lodge - Same as B-2 of Wolfe Lodge.

CONCLUSION

The Wolfe Lodge drainage fisheries is unique. All precautions should be taken to protect the fisheries habitat. Enhancement opportunities do exist and should be carried out where possible.

The survey we conducted in the spring of 1974 has mainly pointed out the existing fisheries habitat condition of the Wolfe Lodge drainage. This type of information is vital to an effective fisheries management program, but it would be helpful to the managers to know more:

- Exactly what species of fish exist in the Wolfe Lodge drainage.
- When are the fishes using the drainage.
- What particular areas do the fishes use for spawning and rearing purposes.
- What is the success of the fishes in their spawning efforts.

Appendix A

QUANTITATIVE SPAWNING DATA

Wolfe Lodge Creek

	Square Feet	
S-7	234	
S-8	67	
S-9	54	
S-10	15	
	<u>370</u>	370

Marie Creek

	Square Feet	
S-3	101	
S-6	8	
S-4	217	
	<u>326</u>	326

Lonesome Creek

	Square Feet	
S-1	417	
S-2	83.5	
	<u>500.5</u>	500.5

Stella Creek

	Square Feet	
S-1	148	
X-A of Stella -		
S-1	42	
S-2	65	
X-1 of Stella -		
S-1	82.5	
S-3	195	
S-4	8	
	<u>540.5</u>	540.5

Skitwish Creek

	Square Feet	
S-1	31	
S-2	22	
	<u>53</u>	53

QUANTITATIVE SPAWNING DATA - Continued

Blue Grouse

S-1	Square Feet 14	14
-----	-------------------	----

Phantom Creek

S-1	Square Feet 13	13
-----	-------------------	----

South Fork Cedar Creek

S-1	Square Feet 12	
S-2	12	
	<u>24</u>	<u>24</u>

TOTAL	1841 Square Feet
-------	------------------

Rare & Endangered
Potential

Fish Species

Fisheries Feeder
Stream Potential

Fisheries Feeder
Stream Rating

Location (Mi.) of Lowest
Low-Water Migration Block
from Mouth of Stream

Location (Mi.) of Lowest
High-Water Migration Block
from Mouth of Stream

Location (Mi.) of Lowest
Complete Migration Block
from Mouth of Stream

Feeder Stream Water
Quality Value

Sport Fishery
Potential Rating

Sport Fishery Rating

Miles & Rating of
Spawning Habitat

Miles & Rating of
Resident Habitat

Stream Miles
Intermittent

Stream Miles
Perennial

H - Good

M - Fair

L - Poor

V - Virtually None

N - None

STREAM

CT ?
BT
RB?

10.2 | H-4.1 | M-3.4 | L-2.3 | V-.4 | H-.6 | M-3.0 | L-4.3 | N-2.3

X-1 of Wolfe Lodge

Rutherford Gulch

Marie

Searchlight

Burton

Skitwish

X-1 of Marie

10.2	H-4.1	M-3.4	L-2.3	V-.4	H-.6	M-3.0	L-4.3	N-2.3	H	H	H	-	-	8.6	H	H	H	CT	BT	RB?
?	-	-	-	-	-	-	-	-	N	-	-	-	-	-	-	-	-	-	-	-
7.0	.5	H-4.5	L-2.5	N-.5	M-5.0	L-2.5	-	-	M	M	H	-	-	-	H	H	H	BT	CT	?
1.5	-	L-1.5	H-1.3	L-.2	N	N	N	N	N	L	L	-	-	-	H	H	H	CT	CT	?
1.9	-	M-1.2	L-.7	M-1.6	N	M	M	M	M	L	L	.2	-	.6	N	N	N	H	N	H
2.9	-	H-1.4	M-1.5	M-1.4	L-1.5	M-1.4	L-1.5	-	L	L	M	1.5	-	-	H	H	H	BT	N	N
.3	-	N-.3	L-.3	N	N	N	N	-	N	N	V	-	-	-	V	V	V	-	-	N

H - Good M - Fair L - Poor V - Virtually None N - None	STREAM	Stream Miles Perennial	Stream Miles Intermittent	Miles & Rating of Resident Habitat	Miles & Rating of Spawning Habitat	Sport Fishery Rating	Sport Fishery Potential Rating	Feeder Stream Water Quality Value	Location (Mi.) of Lowest Complete Migration Block from Mouth of Stream	Location (Mi.) of Lowest High-Water Migration Block from Mouth of Stream	Location (Mi.) of Lowest Low-Water Migration Block from Mouth of Stream	Fisheries Feeder Stream Rating	Fisheries Feeder Stream Potential	Fish Species	Potential
	X-A of Marie	.4	L- .4	L- .4	L- .4	N	N	L	-	-	-	L	L	-	N
	X-2 of Marie	.5	L- .5	L- .5	L- .5	V	V	L	-	.1	-	L	L	?	N
	X-3 of Marie	Est. .8	M- .8	L- .8	L- .8	V	V	L	-	-	.3	L	L	?	N
	X-4 of Marie	Est. .5	V- .5	V- .5	V- .5	N	N	V	-	-	-	V	V	?	N
	Lonesome	2.0	.5	L- 2.0 N- .5	L- .5 M-2.0	M	M	M	-	-	-	H	H	BT CT	?
	X-A of Lonesome		.6	V- .6	M- .6	V	V	V	-	-	-	-	M	CT	?
	Stella	4.0		M-2.7 L-1.3	M-2.7 L-1.3	M	M	H	-	-	-	H	H	CT	?
	X-A of Stella	.9		L- .9	H- .3 L- .6	V	V	L	-	-	.3	H	H	CT	?

STREAM EVALUATION SHEET FOR LAND USE PLANNING UNIT

Wolfe Lodge

3

Appendix B

H - Good

M - Fair

L - Poor

V - Virtually None

N - None

STREAM

X-1 of Stella

X-1 of Stella

X-D of Stella

X-F of Stella

X-2 of Stella

Y-1 of X-2

X-3 of Stella

Halliday

Potential

Fish Species

Fisheries Feeder
Stream Potential

Fisheries Feeder
Stream Rating

Location (Mi.) of Lowest
Low-Water Migration Block
from Mouth of Stream

Location (Mi.) of Lowest
High-Water Migration Block
from Mouth of Stream

Location (Mi.) of Lowest
Complete Migration Block
from Mouth of Stream

Feeder Stream Water
Quality Value

Sport Fishery
Potential Rating

Sport Fishery Rating

Miles & Rating of
Spawning Habitat

Miles & Rating of
Resident Habitat

Stream Miles
Intermittent

Stream Miles
Perennial

?

CT

M

L

-

-

-

-

L

V

V

M-1.0

L-1.0

L

1.0

N

-

V

V

.1

-

-

-

M

N

N

L-.3

V-.3

V

.3

N

-

V

V

-

-

-

-

V

N

N

L-.1

N-.1

N

.1

?

-

M

M

-

-

-

.3

L

N

N

M-.4

L-.4

L

.4

N

?

L

L

-

-

-

.7

H

L

L

L-.6

L-.6

L

.6

L

?

N

N

-

-

-

0

L

V

V

V-.2

V-.2

V

.2

N

?

V

V

-

-

-

.1

L

V

V

L-.3

L-.3

L

.3

N

?

L

L

.1

-

-

-

L

L

V

L-.6

L-.6

L

.6

Appendix B

H - Good

M - Fair

L - Poor

V - Virtually None

N - None

STREAM

SILVER EVALUATION SHEET FOR LAND USE PLANNING UNIT

WOLFE LODGE

4

Potential

Fish Species

Fisheries Feeder
Stream PotentialFisheries Feeder
Stream RatingLocation (Mi.) of Lowest
Low-Water Migration Block
from Mouth of StreamLocation (Mi.) of Lowest
High-Water Migration Block
from Mouth of StreamLocation (Mi.) of Lowest
Complete Migration Block
from Mouth of StreamFeeder Stream Water
Quality ValueSport Fishery
Potential Rating

Sport Fishery Rating

Miles & Rating of
Spawning HabitatMiles & Rating of
Resident HabitatStream Miles
IntermittentStream Miles
Perennial

Onowa	.7	L-.2	L-.7	V	V	L	-	-	L	L	L	?	N
X-1 of Onowa	.2	V-.2	L-.2	V	V	L	-	-	V	V	V	?	N
Blue Grouse	1.0	L-.2 M-.8	M-1.0	L	L	M	-	-	H	H	H	CT	N
Phantom	1.3	H-.7 L-.6	L-1.3	L	L	H	.7	-	L	M	CT	L	L
X-1 of Phantom	.2	L-.2	L-.2	V	V	L	.2	-	V	V	V	?	N
Cedar	5.4	H-.5 L-4.9	N-.5 L-4.9	L	L	M	?	?	L	L	L	CT	N
Alder Creek	2.4	M-1.4 N-1.0	L-1.4 V-1.0	L	L	M	-	-	M	M	M	?	N
X-1 of Alder	.3	V-.3	L-.3	V	V	L	-	-	V	V	V	N	N

Appendix B

Table 1

SUMMARY OF HABITAT AND SPORT FISHERY

	<u>High</u>	<u>Medium</u>	<u>Low</u>	<u>Virtually None</u>	<u>None</u>
Resident Habitat	11.9	12.8	24.4	3.0	2.4
Spawning Habitat	2.3	20.8	26.9	1.7	2.8
Sport Fishery	10.2	14.0	16.5	8.4	5.4
Sport Fishery Potential	10.2	15.9	17.1	7.8	3.5

Fish & game Ex 5
Salmon
CIA

The Life History of Adfluvial Cutthroat Trout
in
Wolf Lodge Creek

A Paper presented to the Fifteenth
Annual Meeting of the Idaho Chapter
of the American Fisheries Society,
February 18, 1977 at McCall, Idaho

by

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MICROFILMED

The Life History of Adfluvial Cutthroat Trout in Wolf Lodge Creek

Increased angler harvest, habitat deterioration, and introduction of competing species have reduced cutthroat trout abundance in many streams of central and northern Idaho. The adfluvial population of westslope cutthroat trout in Wolf Lodge Creek is still comparatively abundant and provides an opportunity to assess the characteristics of a thriving population. The detrimental effects of development on the cutthroat trout population, particularly those caused by logging, can be minimized if we understand the life history and habitat requirements of the fish.

The objectives of the study are twofold: first, to assess the cutthroat trout life history with respect to the number of migrants, age-size of migrants, timing of migrations, and growth rates; second, to determine the critical habitat areas, particularly those used for spawning and rearing.

Wolf Lodge Creek drains an area of approximately 52 square miles before entering the northeast arm of Lake Coeur d'Alene, about 11 miles east of the town of Coeur d'Alene (Figure 1).

To monitor cutthroat trout movements in 1975, we installed four temporary weirs on selected tributaries (Figure 2). We operated upstream and downstream traps on Wolf Lodge Creek and Cedar Creek and downstream traps on No Name and Searchlight creeks from June through November. In 1976 we operated temporary weirs from June through mid-August at the same locations. The weir on Wolf Lodge Creek had a downstream trap only and we added an additional downstream trap on Clear Cut Creek.

To determine the densities of cutthroat and brook trout rearing in the streams during the summer, we counted snorkeling transects. We selected transects in areas representative of good trout habitat such as pools and runs. We counted all cutthroat and brook trout and divided them into four size classes corresponding to age groups (Table 1). The 0-79 mm size class was primarily age 0 fish with some age I's, the 80-159 mm fish were mainly age II and III with some age I's, the 160-239 mm size class was predominantly age IV fish with a few age III's, and the 240 mm and larger size class was made up of age V and older fish.

We collected scales from adult and juvenile cutthroat trout from the area between the adipose fin and the lateral line. I then analyzed the scale samples for age and growth histories and to determine the number of growing seasons each adult fish spent in both the lake and stream environments.

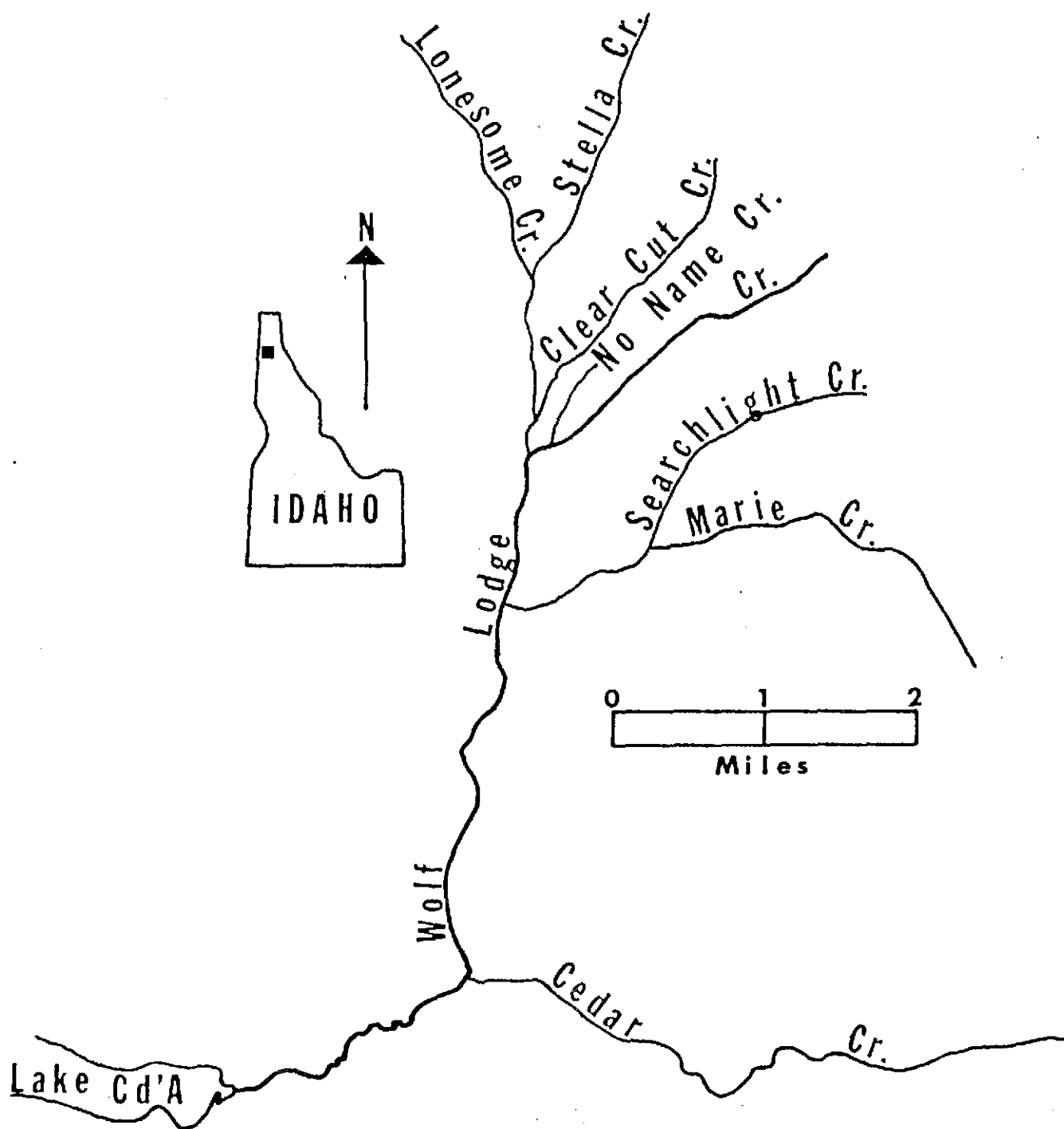


Figure 1. Map of Wolf Lodge Creek study area.

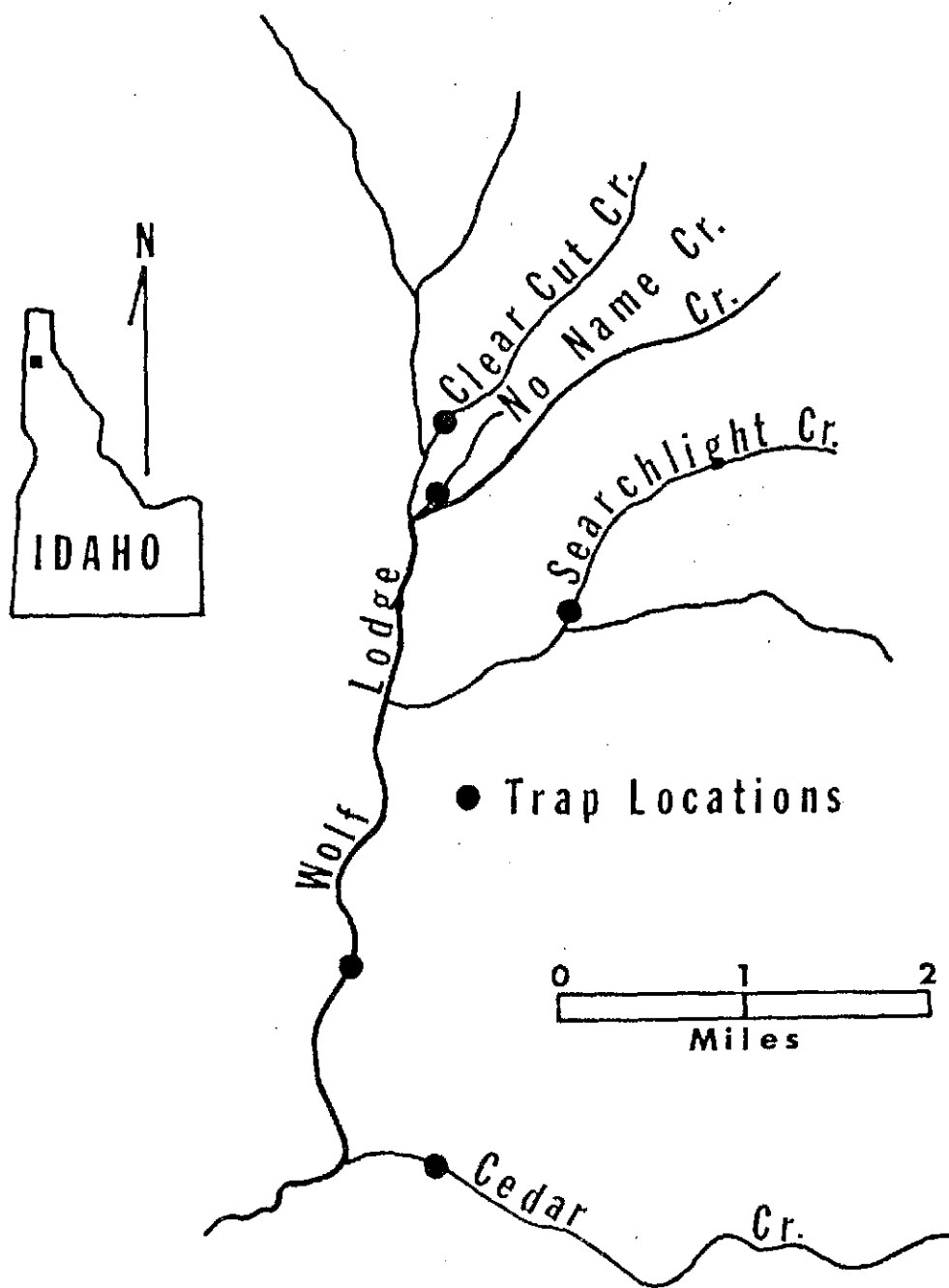


Figure 2. Map of weir locations.

Table 1. Size/age classes of cutthroat and brook trout counted in snorkeling transects.

Size Class	Age Class
0-79 mm	0, (I)
80-159 mm	(I), II, III
160-239 mm	(III), IV
240+ mm	V +

Table 2. Age at mature of 112 adult cutthroat trout sampled in 1975.

Age	Number of fish	Percent
4	3	3
5	72	64
6	<u>37</u>	33
	112	

Since high spring runoff prevented operation of a temporary weir on Wolf Lodge Creek to enumerate cutthroat trout spawners, we estimated the timing of the spawning migration by observation. We found that mature cutthroat begin their spawning migration in early April. Daytime stream temperatures average 5 to 6 C during this period. These fish range in size from 255 to 390 mm. Spawning occurs throughout May when daytime stream temperatures average 7 to 11 C. The majority of spawning is completed by the third week of May. I found that the greatest amount of spawning was taking place in the smaller tributaries. Some of these tributaries become intermittent by mid-summer.

Most of the spent cutthroat trout leave the tributaries for Lake Coeur d'Alene soon after spawning, however, some remain in the larger tributaries well into the summer. In 1976, many of these fish were still in Wolf Lodge Creek on July 1 for the opening of the general fishing season.

Fry begin emerging from the gravel by June 20 at just over 20 mm in length. Many fry begin moving downstream immediately after emergence. This movement is underway by the end of June, peaks between the first and second week of July and decreases to very small numbers by the beginning of August (Figure 3). We captured the largest number of fry in the Searchlight Creek weir. We captured a total of 13,770 fry in 1975 and 2,596 in 1976. The decreased fry production from 1975 to 1976 was probably due to a decreased number of spawners. The comparatively small numbers of fry captured in the Wolf Lodge Creek weir indicates that this movement is not a lakeward migration.

Juvenile cutthroat trout remain in the drainage for two or three seasons before migrating to Lake Coeur d'Alene. These fish range in size from 120 to 175 mm. This migration is underway by the middle of June, peaks by the third week of June, and declines to small numbers by the middle of July (Figure 4). We captured a total of 606 juvenile cutthroat trout in the Wolf Lodge Creek weir in 1976 and 135 in 1975.

Cutthroat trout comprised 75 to 100% of the total trout densities observed in snorkeling transects for both 1975 and 1976 (Figure 5). Brook trout made up the balance. In 1975 we counted the largest density of cutthroat trout in Clear Cut Creek with five fish per square meter of surface area. In 1976, we counted over 2 cutthroat trout per square meter of surface area in Lonesome, Clear Cut, and Searchlight creeks.

In general, the smaller tributaries, those averaging 2 to 5 square meters of surface area per transect, supported considerably larger densities of 0 to

Figure 3.

CUTTHROAT TROUT FRY CAPTURED IN DOWNSTREAM TRAPS.

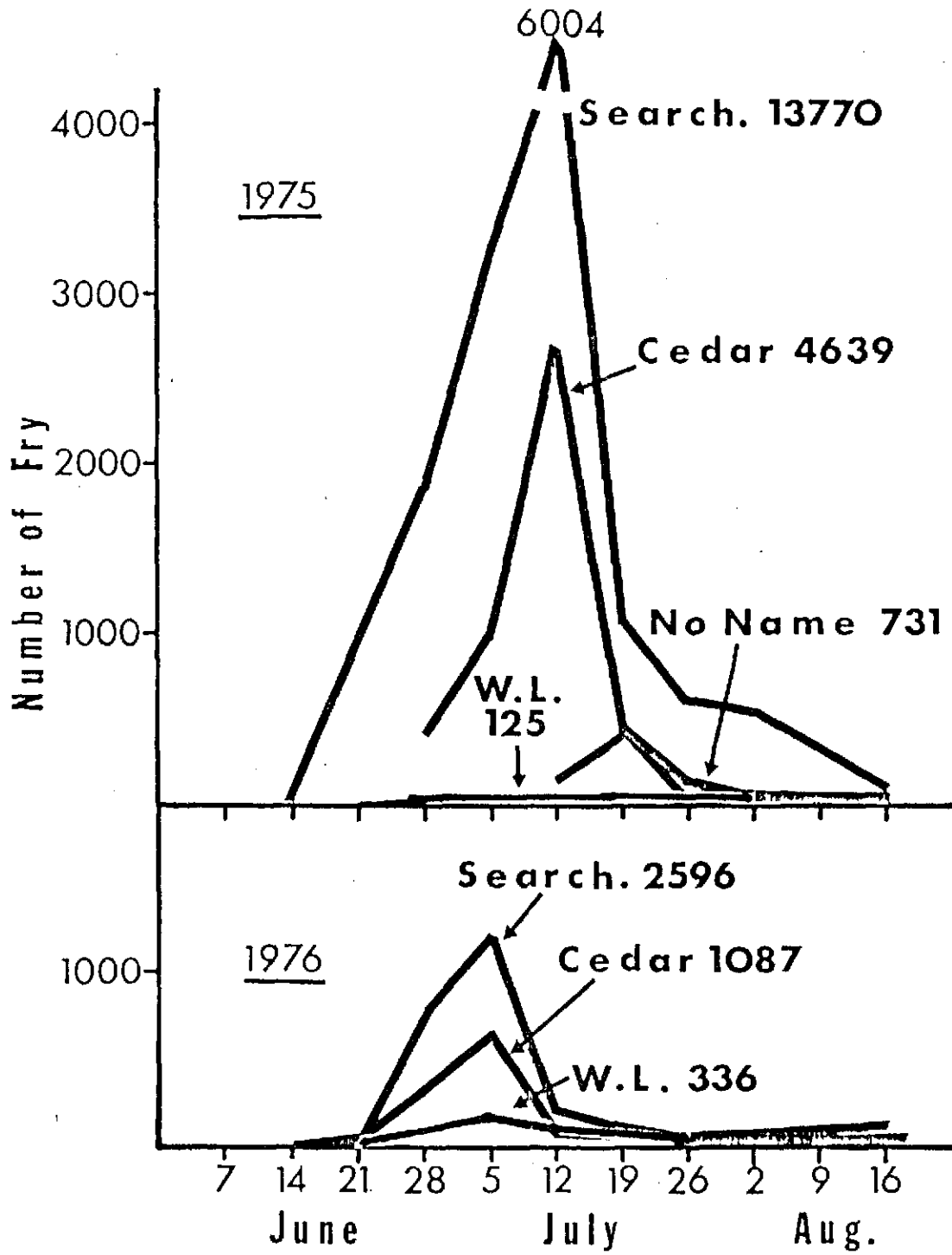


Figure 4.

JUVENILE CUTTHROAT TROUT CAPTURED IN WOLF LODGE WEIR.

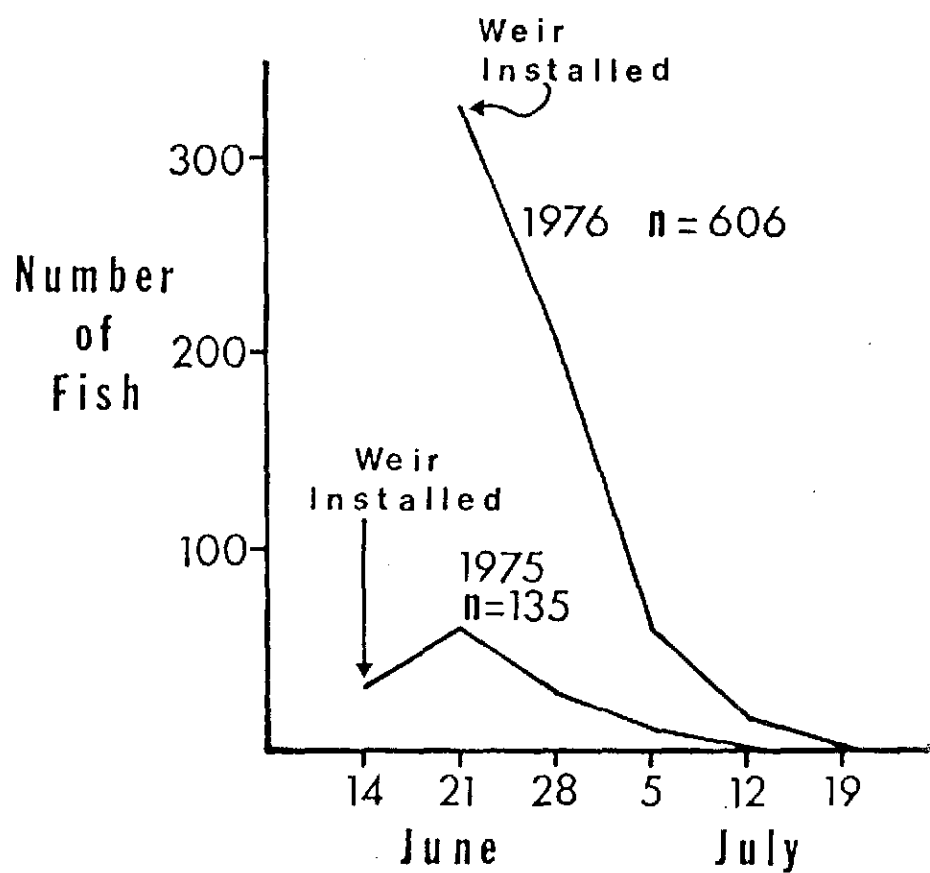
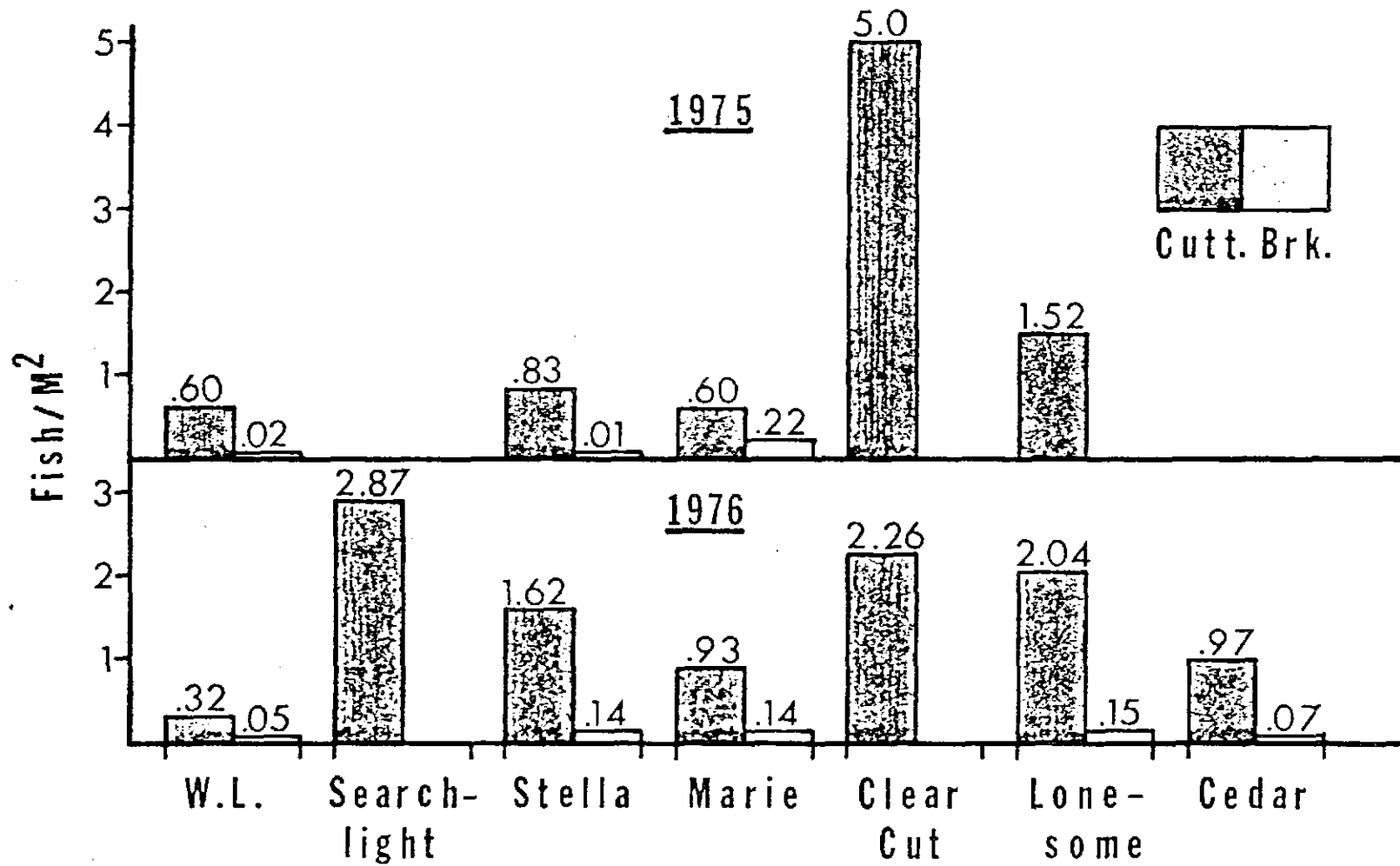


Figure 5.

DENSITIES OF CUTTHROAT AND BROOK TROUT.



79 mm cutthroat trout (Figure 6). These tributaries included Lonesome, Clear Cut and Searchlight creeks.

In the larger tributaries, those averaging 20 to 100 square meters of surface area per transect, we found a higher proportion of cutthroat in the larger size classes (Figure 7). Many of these fish in Stella Creek and Marie Creek were resident cutthroat trout. I observed these fish exclusively in the upper stretches of these streams, a condition identical to that found in many tributaries of the St. Joe River.

The only exception to the larger stream-larger fish trend was Cedar Creek (Figure 8). The eight transects counted in 1976 averaged 56 square meters. Eighty-four percent of the cutthroat trout observed were 0 to 79 mm in length. The reason for the high fry densities is probably due to the large amount of spawning taking place in the lower section of this stream. The relatively abundant spawning run of adfluvial cutthroat trout is stopped $\frac{1}{2}$ mile up Cedar Creek by an impassable freeway culvert and therefore forced to spawn downstream.

While scale analysis is not yet completed, we were able to determine the age at maturity for 112 adult cutthroat trout sampled in 1975 (Table 2). We found that 64% of the cutthroat sampled returned to the drainage to spawn at 5 years of age, 33% returned at 6 years of age and 3% returned at 4 years of age. Slightly more than half of the adults sampled spent two seasons in the drainage (Figure 9). Seventy-six percent of these fish returned at 5 years of age, 19% at 6 years of age and 5% at 4 years of age. Forty-five percent of the fish sampled had scale patterns indicating 3 seasons of stream growth. These fish returned to spawn in equal numbers as 5 and 6 year olds.

In summary, the life history of the adfluvial cutthroat trout in the Wolf Lodge Creek drainage shows the following patterns: the fish reach maturity at 4, 5, or 6 years of age after spending 2, 3, or 4 seasons in Lake Coeur d'Alene. The spawning migration into the Wolf Lodge Creek drainage begins in early April. Spawning occurs throughout May in the smaller tributaries, particularly Searchlight, Cedar, Clear Cut, and Lonesome creeks. Fry emergence begins by June 20, followed by downstream movement, not to Lake Coeur d'Alene but to areas of suitable rearing habitat within the drainage. The juvenile cutthroat trout rear for two or three seasons in tributary streams such as Stella, Marie, Wolf Lodge, Clear Cut, and Cedar creeks before entering Lake Coeur d'Alene in June and July.

Figure 6

LENGTH DISTRIBUTIONS OF CUTTHROAT
IN SMALL-STREAM TRANSECTS, '75-'76.

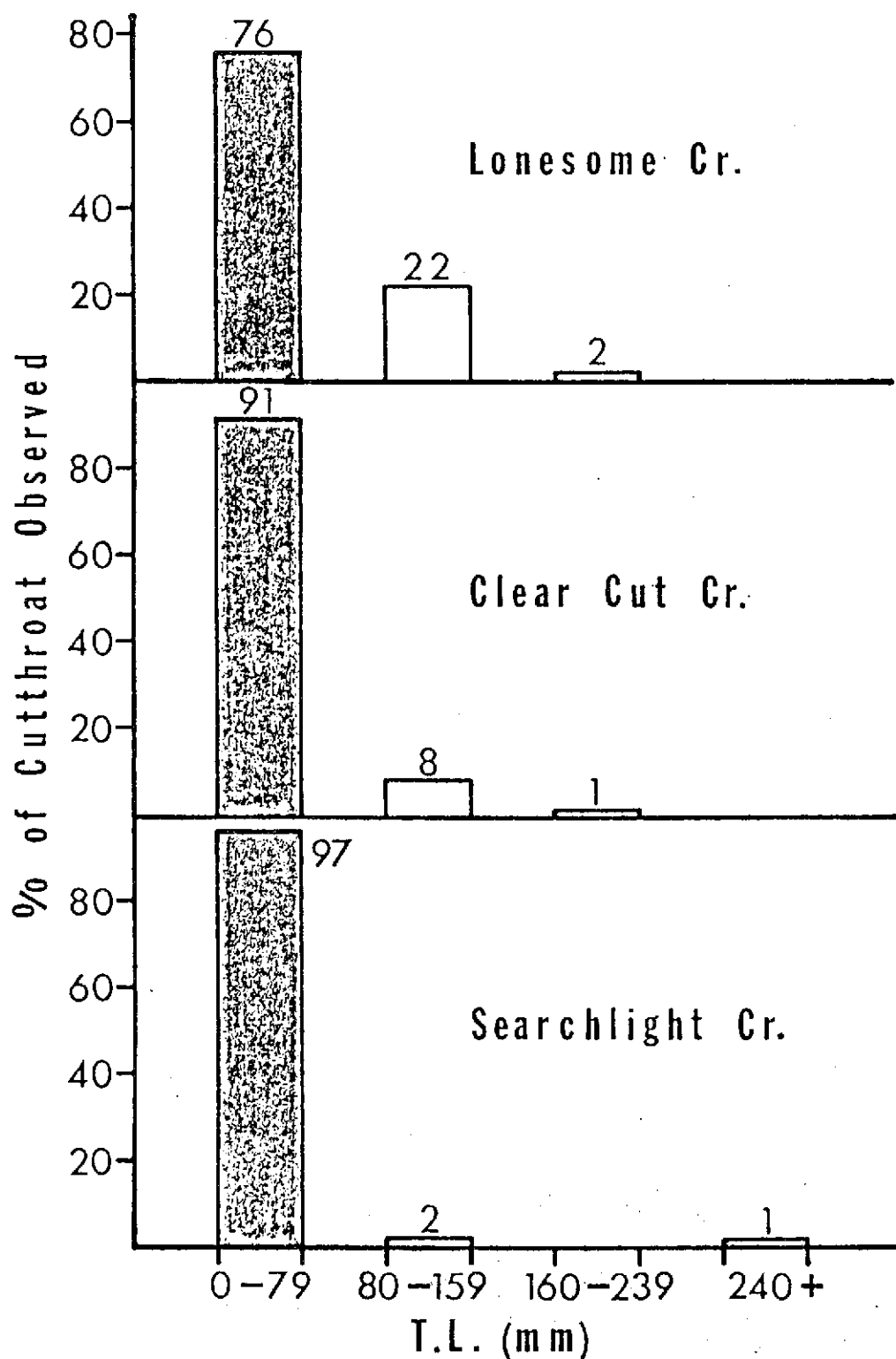


Figure 7.

LENGTH DISTRIBUTIONS OF CUTTHROAT
IN LARGE-STREAM TRANSECTS, 1975-76.

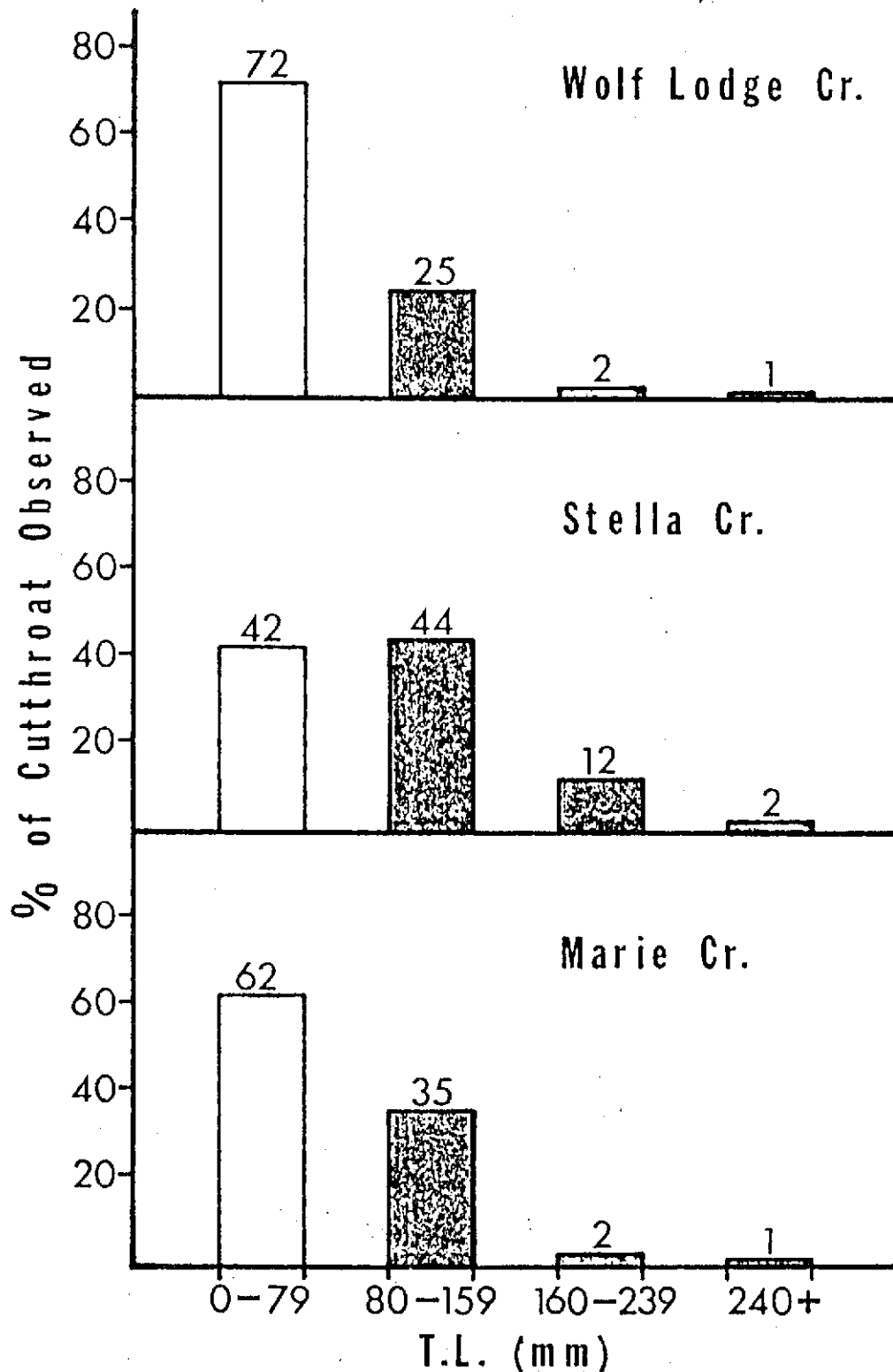


Figure 8.

LENGTH DISTRIBUTION OF CUTTHROAT
IN CEDAR CREEK TRANSECTS, 1976.

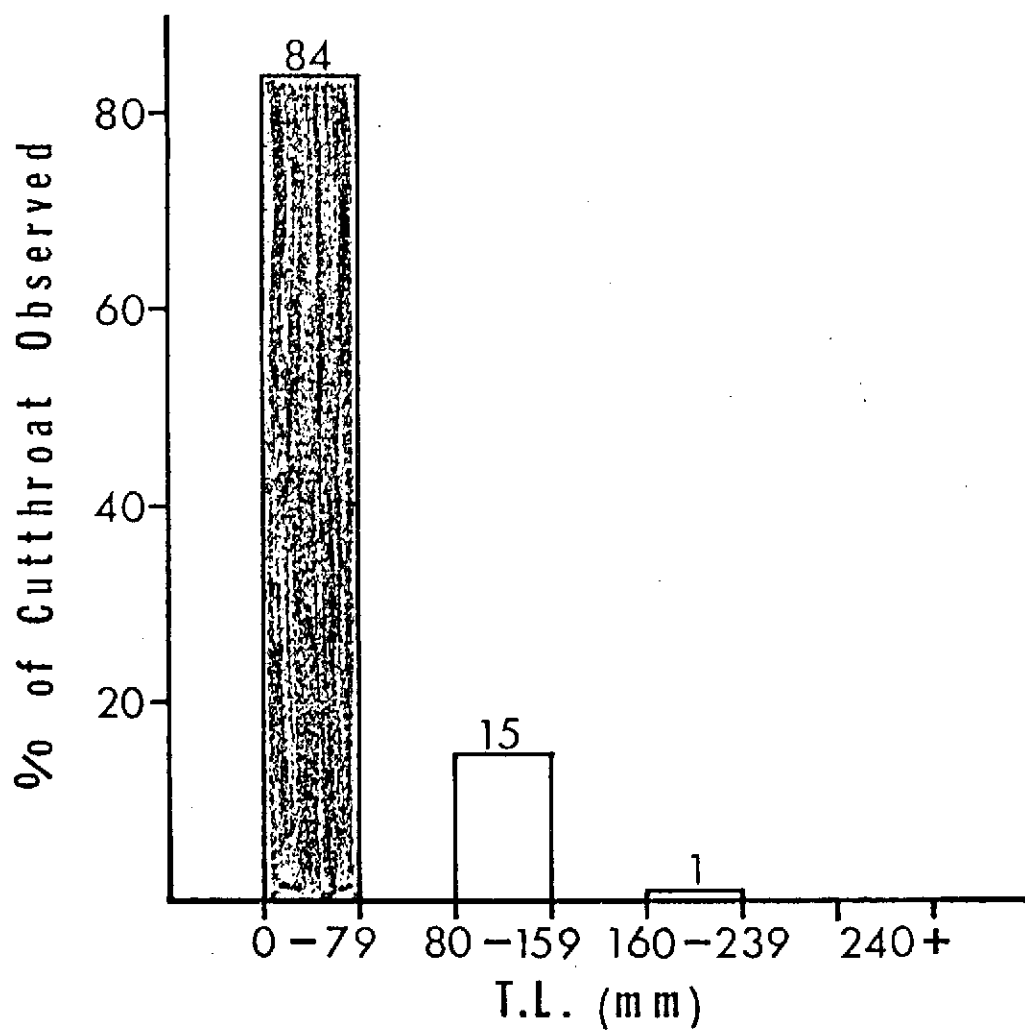
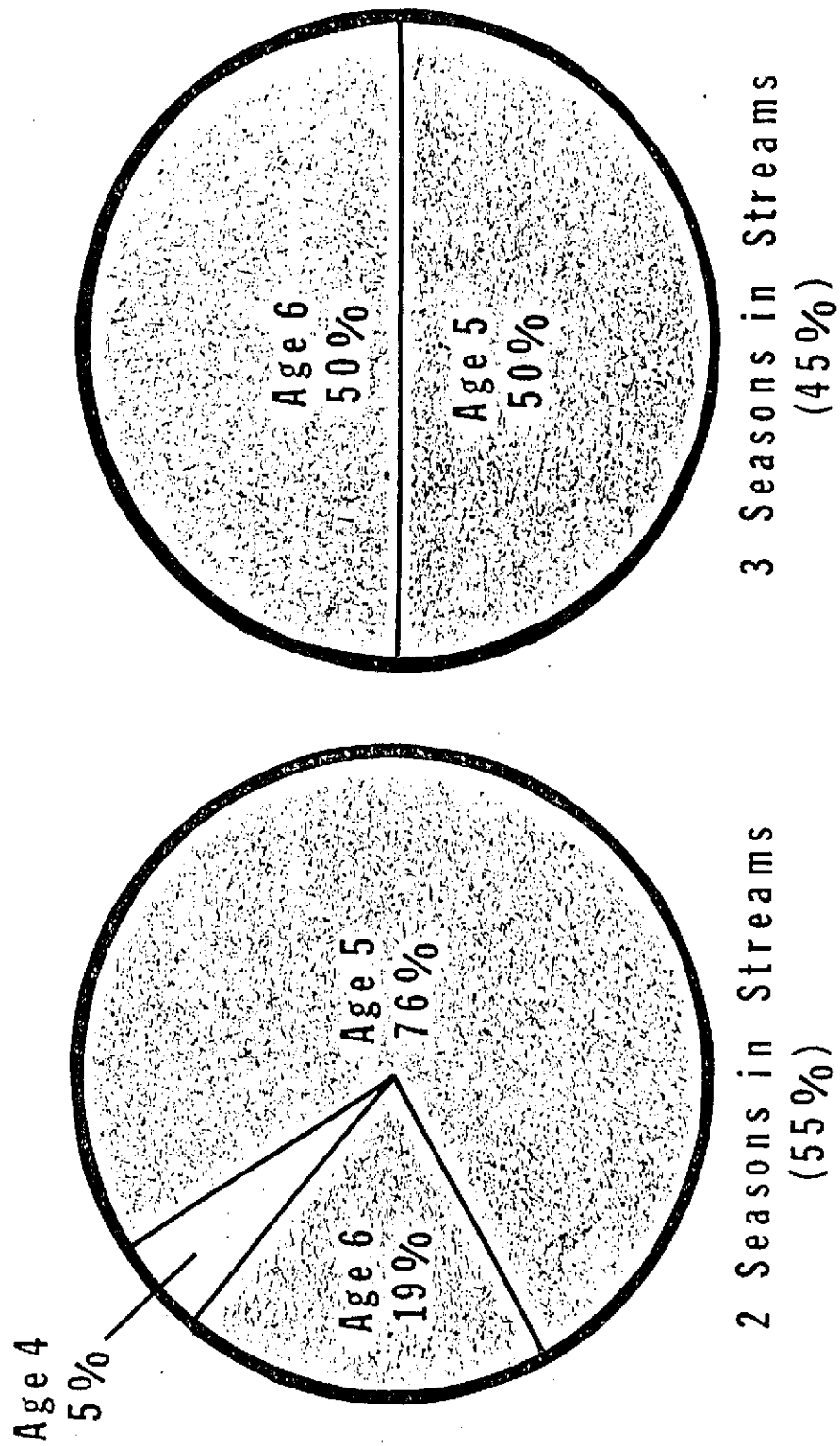


Figure 9.

AGE CLASSES OF CUTTHROAT SPAWNERS WITH
TWO OR THREE SEASONS OF STREAM GROWTH.



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IDAHO DEPARTMENT OF FISH & GAME

Joseph C. Greenley, Director

FEDERAL AID TO FISH AND WILDLIFE RESTORATION

Job Performance Report

Project F-71-R-1



REGIONAL FISHERY MANAGEMENT INVESTIGATIONS

Job I-a. Region 1 Mountain Lake Investigations
Job I-b. Region 1 Lowland Lake Investigations
Job I-c. Region 1 Stream Investigations
Job I-d. Region 1 Technical Guidance

Period Covered: 1 January 1976 to 31 December 1976

by

William H. Goodnight
Regional Fishery Manager

and

Gregg R. Mauser
Regional Fishery Biologist

MICROFILMED

June, 1977

Westslope Cutthroat

Idaho Cooperative Fishery Unit and Department personnel relocated 83 cutthroat spawners to areas above culvert barriers on Cedar Creek. In conjunction with the Wolf Lodge cutthroat study, we helped scale sample and tag 130 cutthroat during May. One of these fish was subsequently recovered in Cottonwood Bay, at the inlet end of the lake. Tag returns from the Spokane River fishery did not materialize this year for some reason.

On the July opening of Wolf Lodge Creek, 51 interviewed anglers fished 118.5 hours to catch 78 cutthroat, 40 brook trout, 1 Dolly Varden, 1 whitefish and 1 rainbow-cutthroat hybrid (Table 2). Catch rates in this opener have declined since 1974 while modal sizes have not (Table 3, Fig. 2). The occurrence of larger fish and angler success have shown a historical downward trend with increased angling pressure.

Table 2. Harvest data for Wolf Lodge Creek opener, 1 July 1974, 1975 and 1976.

Year	Time	Anglers	Hours	Catch (salmonids only)							Total fish	Fish/hour
				Ct	Brk	Rb	Hyb	DV	Wf	Kok		
1974	0600-1100	42	90	140	76	1	0	0	0	0	~~216~~ 217	2.4
1975	--	66	114.5	100	24	1	0	0	0	0	~~124~~ 125	1.1
1976	0500-1000	51	118.5	78	40	0	1	1	1	0	~~118~~ 121	1.0
1977		41	96.5	107	15	0	0	0	0	0	122	1.3
1978	0630-0830	24	47.5	62	29	0	0	0	0	0	91	1.9

Table 3. Species catch rates for Wolf Lodge Creek opener, 1 July 1974, 1975 and 1976.

Year	Cutthroat	Brook trout
1974	1.56	0.84
1975	0.87	0.21
1976	0.66	0.34
1977	1.11	0.16
1978	1.31	0.61

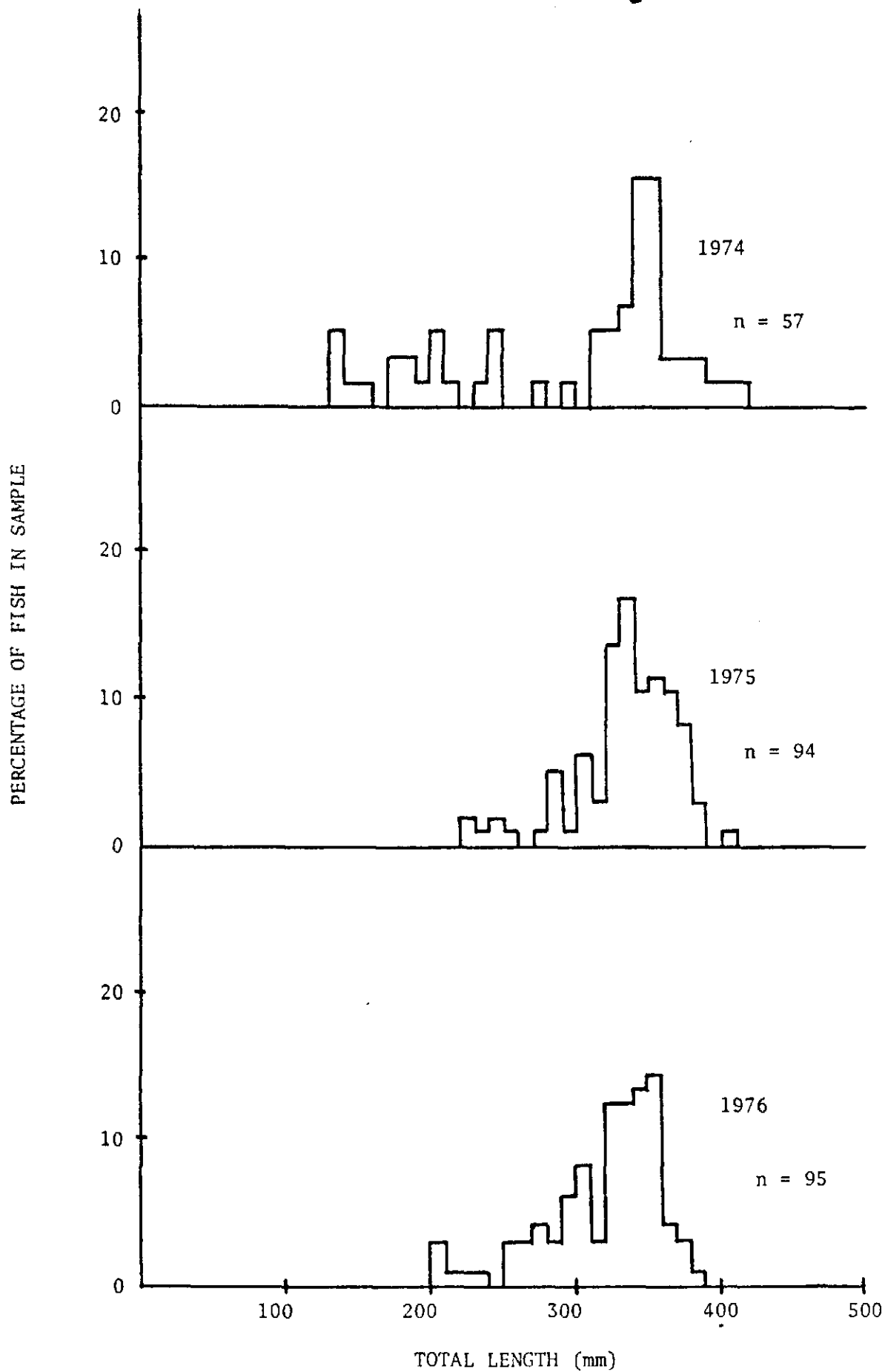


Figure 2. Length frequencies of cutthroat trout measured at a check station on Wolf Lodge Creek, 1 July 1974-1976.

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IDAHO DEPARTMENT OF FISH & GAME

Joseph C. Greenley, Director

FEDERAL AID TO FISH AND WILDLIFE RESTORATION

Job Performance Report

Project F-71-R-2



REGIONAL FISHERY MANAGEMENT INVESTIGATIONS

- Job I-a. Region 1 Mountain Lake Investigations
- Job I-b. Region 1 Lowland Lake Investigations
- Job I-c. Region 1 Stream Investigations
- Job I-d. Region 1 Technical Guidance

Period Covered: 1 January 1977 to 31 December 1977

by

William H. Goodnight
Regional Fishery Manager

and

Gregg R. Mauser
Regional Fishery Biologist

MICROFILMED

May, 1978

JOB PERFORMANCE REPORT

State of Idaho Name: REGIONAL FISHERY MANAGEMENT INVESTIGATIONS
Project No. F-71-R-2 Title: Region 1 Lowland Lakes Investigations
Job No. I-b.
Period Covered: 1 March 1977 to 28 February 1978

ABSTRACT

Coeur d'Alene Lake

High success rates were experienced by kokanee anglers in 1977. On Memorial Day (30 May) anglers caught an estimated 15,350 kokanee. Spawning escapement was excellent and 482,098 eggs were collected in lake tributaries.

Cutthroat trapping operations on Wolf Lodge Creek indicated a run size of about 3,000 fish in 1977. Approximately 183,000 cutthroat eggs were collected at traps on Wolf Lodge and Cedar Creeks for the Hayden Lake program.

McArthur Reservoir

After conducting public meetings to assess public preferences regarding management, we eradicated McArthur Reservoir. An effective kill was obtained and the lake was restocked with 132,702 young-of-the-year brook trout. A one time only release of 5,000 catchable-sized rainbow will be made in 1978.

Pend Oreille Lake

We took 2,323,174 kokanee eggs at Sullivan Springs in 1977. All resultant fry will be released in Sullivan Springs in the summer of 1978.

By trapping and marking, we estimated 100 Kamloops spawners used the Lightning Creek drainage in 1977.

Hayden Lake

Trapping of Hayden Creek, the major inlet, indicated annual spawning runs of about 800 adult trout mostly around 400 mm (15.7 in) in size presently occur in this drainage. A test release of 30,000 2-year old westslope cutthroat to bolster the fishery and provide an egg source gave promising results with 118 mm (4.6 in) fish growing to 300 mm (11.8 in) between April and November of 1977. Management goals and brood stock programs for Hayden Lake were forwarded. These plans precede an egg source of westslope cutthroat for other waters.

Cutthroat

In 1977 we operated temporary weirs on Wolf Lodge and Cedar Creeks to enumerate spawners, take eggs and move fish above barriers. In 62 days of trap operation between 29 March and 13 June we trapped over 1,000 adult cutthroat which were migrating upstream in Wolf Lodge Creek. Between 7 and 15 April the weir was removed after collapse due to high water when the majority of the run apparently moved upstream.

A total of 549 upstream migrants were jaw tagged. A downstream trap captured 57 juvenile and 631 adult cutthroat between 2 May and 13 June. Of these, 123 adult fish were jaw tagged and 114 were definitely spent. These figures would indicate a total run size of about 3,000 cutthroat in Wolf Lodge Creek. We transported 474 adult cutthroat from Wolf Lodge Creek to Sandpoint Hatchery for spawn taking in 1977.

In Cedar Creek we trapped 123 cutthroat in 27 days of weir operation between 3 April and 29 April 1977. Approximately 40 additional fish moved upstream through a picket gap on 24 April to give an estimated run size of 150-200 adult cutthroat in 1977. The entire run is blocked from spawning and rearing sites upstream by six impassable culverts and a falls created by highway construction. We moved 31 adults to stream sections above these barriers. An additional 92 of the trapped fish were spawned with Wolf Lodge cutthroat at Sandpoint Hatchery.

Cutthroat spawners in the Wolf Lodge drainage ranged from 260 to 405 mm (10.2 - 15.9 in) in size in 1977 with a mean size of 340 mm (13.4 in) for males and 323 mm (12.7 in) for females (total lengths).

The combined Wolf Lodge Creek-Cedar Creek fish that were spawned at Sandpoint Hatchery produced 182,461 eggs from 447 total females for a minimum of 408 eggs/female (does not account for some pre-spawning mortality among fish held to ripening).



State of Idaho

DEPARTMENT OF WATER RESOURCES

STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS

Governor

C. STEPHEN ALLRED

Director

Mailing address:

Statehouse

Boise, Idaho 83720

(208) 334-4440

January 7, 1980

The Honorable Reed Budge
President Protem of the Senate
State House
Boise, Idaho 83720

Dear Senator Budge:

Enclosed please find copies of the applications for permit to appropriate water for minimum streamflow purposes that have been approved by this Department during calendar year 1979. They are numbered 37-7734, 37-7728, 36-7818, 37-7727, 95-7874, 96-7772, and 96-7771.

As you are aware, Section 42-1503, Idaho Code requires that these applications be reviewed by the legislature. As defined by the 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."

Please advise me if you desire either further information or a presentation on the nature of the applications.

Sincerely,

C. STEPHEN ALLRED
Director

CSA:DRT:jg

Enclosure



State of Idaho

DEPARTMENT OF WATER RESOURCES

STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS

Governor

C. STEPHEN ALLRED

Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

January 7, 1980

The Honorable Ralph Olmstead
Speaker of the House
State House
Boise, Idaho 83720

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Sincerely,

C. STEPHEN ALLRED
Director

CSA:DRT:jg

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STATE OF IDAHO
FISH AND GAME DEPARTMENT

John R. Woodworth, Director

COEUR D'ALENE LAKE FISHERIES INVESTIGATIONS

By

Jerry L. Mallet
Regional Fishery Biologist
Boise, Idaho

September 4, 1968

MICROFILMED

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COEUR D'ALENE LAKE FISHERIES INVESTIGATIONS

ABSTRACT:

A boat count interview census was undertaken on Coeur d'Alene Lake during the 1967 fishing season (April 29 to November 30) to evaluate present management programs.

An estimated 37,757 anglers spent 169,908 hours to catch 242,207 kokanee, 889 cutthroat, 572 rainbow, and 2,443 other game fish from Coeur d'Alene Lake during 1967. Approximately 98.4 percent of the total catch was kokanee, 0.6 percent trout, and 1.0 percent other species.

During 1967, 0.7 percent of the catch from the south end of the lake was cutthroat compared to a reported 45.0 and 51.0 percent in 1958 and 1959, respectively. Records indicate that in the north end of the lake, cutthroat made up only 0.2 percent of the catch in 1967 while 36 and 17 percent of the catch was cutthroat in this section in 1958 and 1959, respectively.

During 1967, kokanee composed 98.4 percent of the harvest from Coeur d'Alene Lake. Prior to 1960 kokanee had not comprised more than 40 percent of the harvest from Coeur d'Alene Lake.

Only 5 percent of the rainbow planted in Coeur d'Alene Lake during 1967 was harvested.

Author: Jerry L. Mallet
Regional Fishery Biologist

September 4, 1968

RECOMMENDATIONS:

1. Catchable-size hatchery rainbow plants should be discontinued in the north end of Coeur d'Alene Lake.
2. The annual stocking of Coeur d'Alene Lake with fingerling kokanee should be continued at present levels and should not be allowed to fall below 500,000.
3. Efforts should be made to reestablish a large lake run cutthroat population in the Coeur d'Alene River once the pollution is removed from the drainage.

OBJECTIVES:

The 1967 Coeur d'Alene Lake Creel Census program was undertaken to evaluate:

1. The contribution of catchable-size rainbow plants in Coeur d'Alene Lake.
2. The contributions of fingerling kokanee plants in Coeur d'Alene Lake.
3. The relative condition of the cutthroat, kokanee, and rainbow populations in Coeur d'Alene Lake.

TECHNIQUES USED:

Creel Census

Because of the large size of Coeur d'Alene Lake, it was divided into two census areas, A and B, for census purposes (Figure 1). Census Area A (north end of the lake) was further broken down into Sections 1 and 2 to enable collection of finer data. Census Area B (south end of the lake) was broken down into Sections 3 and 4. Section 4 was Chatcolet Lake and is covered

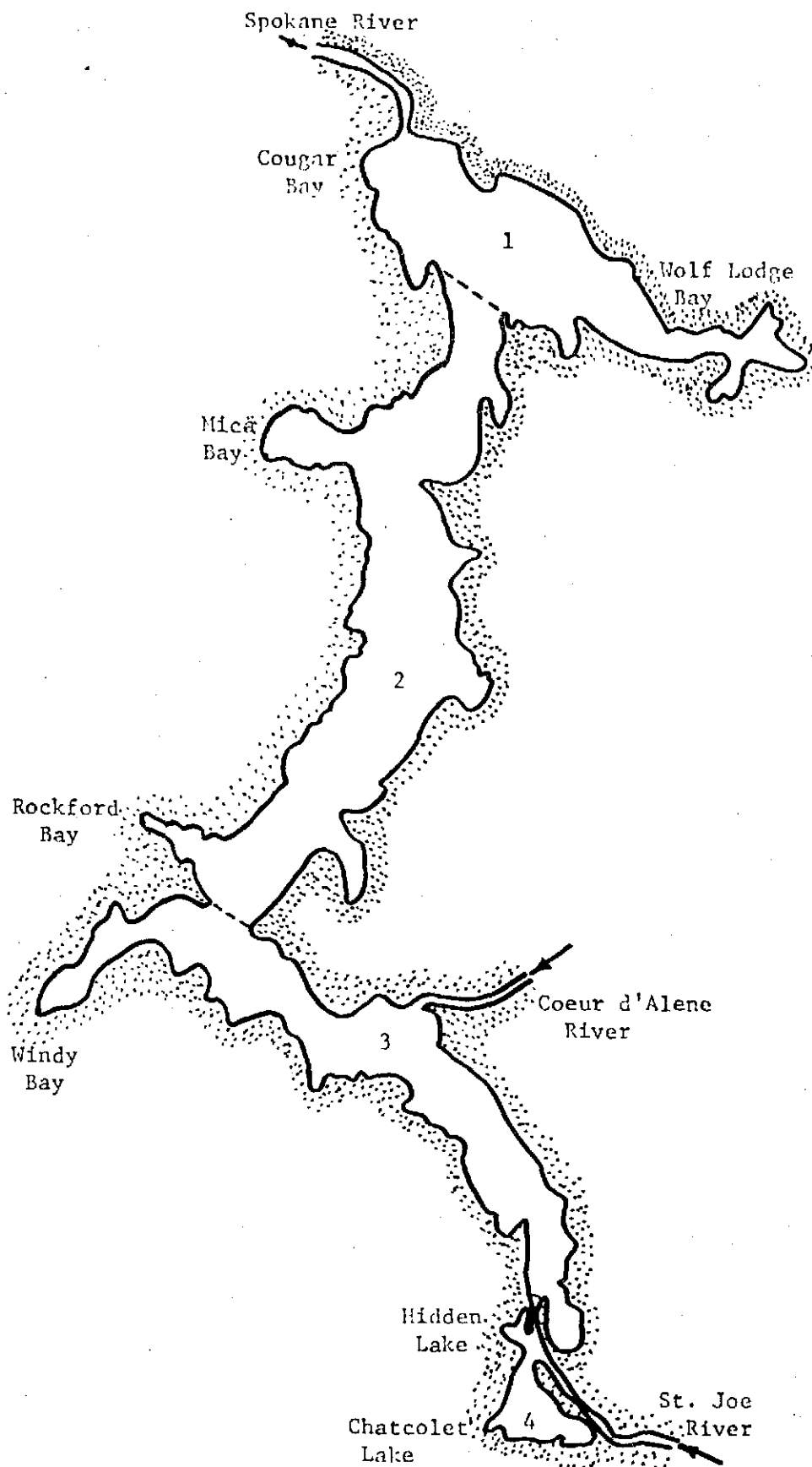


Figure 1. Map of Coeur d'Alene Lake showing census sections.

in a separate report.

The season was divided into two-week segments to remove as much error as possible due to seasonal variation. Boat counts were made in Areas A and B randomly on one weekday and one weekend day each during each two-week segment.

The day was divided into four three-hour time periods to eliminate variation due to the time of day. The remainder of the daylight hours for each day was divided into equal "buffer" periods before and after each period. These "buffer" periods varied throughout the season as the number of daylight hours changed. During each census day a boat count was made during each of the time periods of the day.

As many anglers as possible were interviewed during each two-week period. Information was recorded on number of anglers per boat, duration of fishing, number and species of fish caught, etc.

The number of boats counted during each of the four periods of the day were averaged by section for weekdays and for weekend days. The number of anglers per boat was multiplied by the mean number of boats to get the average number of anglers fishing the lake at any given time. The total number of daylight (fishable) hours for the two-week period was multiplied by the mean number of anglers to arrive at the estimated hours of fishing that occurred during the two-week period.

Data on species composition and catch per hour was applied to the estimated total angling hours by two-week segments to compute total catch.

Trout measurements were taken to enable an approximation of the size range for the various species to be reached.

FINDINGS:

Description of Lake

Coeur d'Alene Lake is a 25,072 acre lake approximately 25 miles long with 125 miles of shoreline. It is located in Kootenai County and has the county's largest city, Coeur d'Alene, on its north shore.

The Washington Water Power Company has regulated the waters of Coeur d'Alene Lake since 1903 when the Post Falls Dam about 8 miles downstream on the Spokane River was built. The natural low water level is 2119.9 feet elevation and can be regulated to 2128 feet by water storage. Round, Hidden, Chatcolet, Benewah, and Coeur d'Alene Lakes have all become connected by water since the lake elevation was raised.

One of the major tributaries (Coeur d'Alene River) has been the source of extensive mine pollution since about 1885 when the Bunker Hill strike occurred on the South Fork of the Coeur d'Alene River. As other mining operations followed, the pollution eliminated all aquatic life from the South Fork and the main Coeur d'Alene River below its confluence with the South Fork. This pollution entered Coeur d'Alene Lake and Ellis (1932) reported that mine slimes had been deposited over the entire floor of the lake from Harrison to the outlet.

The area that bounds the west side of Coeur d'Alene Lake is heavily farmed and most of the streams flowing through this

area have suffered from denuding of the watersheds. Water quality has adversely been affected by a large increase in siltation, increases in water temperatures, and rapid runoff. This has resulted in decreased stream spawning and nursery areas and has caused many of the west side bays to become settling basins for the large quantities of soil that are washed off the area each spring.

Total Catch

An estimated 37,757 anglers spent 169,908 hours to catch 242,207 kokanee, 889 cutthroat, 572 rainbow, and 2,443 other game fish from Coeur d'Alene Lake during 1967 (Table 1). Approximately 98.4 percent of the total catch was kokanee, 0.6 percent trout, and 1.0 percent other species.

Section 3 produced more kokanee (117,052), more cutthroat (488), and more rainbow (422) than any other section.

Catch by Census Section

Approximately 16,285 men fished 73,284 hours and harvested 93,041 kokanee, 176 cutthroat, and 123 rainbow from Section 1 during 1967. Catch rate for Section 1 was 1.3 fish per hour.

A total of 5,477 fishermen spent 24,648 hours in Section 2 and took 32,114 kokanee, 225 cutthroat, and 27 rainbow during the year. Catch rate for Section 2 was 1.3 fish per hour.

About 15,995 anglers fished 71,976 hours in Section 3 during 1967 and harvested 117,052 kokanee, 488 cutthroat, and 422 rainbow. Catch rate for Section 3 was 1.7 fish per hour.

Table 1. Estimated fishing pressure and harvest, by area, for Coeur d'Alene Lake, 1967.

Section	Hours fished	Kokanee	Rainbow	Cutthroat	Perch	Bullheads	Largemouth bass	Fish per hour
1	73,284.00	93,041	123	176	437	410	35	1.3
2	24,647.8	32,114	27	225	152	-	-	1.3
3	71,976.4	117,052	422	488	1,221	188	-	1.7
Totals	169,908.2	242,207	572	889	1,810	598	35	1.4

Cutthroat

The cutthroat is the only game fish native to the lake and was found in abundance in past years. However, a decrease in cutthroat numbers was noted as early as 1932 by Ellis. Ellis in his report of 1932 states:

"That there has been a decline in the trout fishing in Coeur d'Alene Lake from the days of Captain Mullan who in 1858 described Coeur d'Alene Lake as 'a noble sheet of water--filled with an abundance of delicious salmon trout,' to the present time, when trout are rarely caught off Harrison, cannot be denied, but many causes have contributed to this change in the fish population of this lake."

This decline has continued until 1967 when cutthroat made up only 0.4 percent of the harvest in Coeur d'Alene Lake.

As late as 1959 the cutthroat harvest comprised a significant portion of the catch from Coeur d'Alene Lake, especially in the south end of the lake. During 1967, 0.7 percent of the catch from the south end of the lake (Section 3) was cutthroat compared to a reported 45.0 percent and 51.0 percent in 1958 and 1959, respectively. Records indicate that in the north end of the lake (Section 1), cutthroat made up only 0.2 percent of the catch in 1967 while 36 percent and 17 percent of the catch was cutthroat in this section in 1958 and 1959, respectively.

Jeppson (1960) observed that the cutthroat catch in Coeur d'Alene Lake declined from 40 percent to 15 percent in three years (1957 to 1960).

Cutthroat harvested from Coeur d'Alene Lake in 1967 ranged from 7½ to 16½ inches in length with an average size of 12 inches.

Over half of the cutthroat taken from Coeur d'Alene Lake

during 1967 were harvested from Section 3 (55.0 percent) while Section 1 produce the fewest cutthroat (19.8 percent).

Cutthroat angling was generally best starting in May and running through early July and again in September (Tables 2, 3, & 4).

The decrease in cutthroat numbers may be credited to several factors. No doubt the loss of the Coeur d'Alene River drainage as spawning grounds was a big factor as was the loss of the west side streams due to farming practices. Competition from a large kokanee population has appeared to harm the quality of cutthroat fishing in other large north Idaho lakes and has certainly played a role at Coeur d'Alene Lake. Some of the decrease in cutthroat catch has probably resulted as more anglers fish for the more easily caught kokanee and thus the pressure on the cutthroat population is reduced.

Kokanee

Kokanee were first introduced into Coeur d'Alene Lake in 1937. However, early plantings were relatively conservative in numbers with the exception of 1942 when 854,690 were planted (Table 5). This large plant was directly followed by four years when no plants were made. It was not until about 1955 that a concentrated effort to make large continuous plants was made. Correspondingly, angler success for kokanee picked up considerably in 1958 and 1959 and this species began to furnish the bulk of the fishery starting in about 1960. Paul Jeppson in 1960 observed that prior to 1954, kokanee plants were 100,000 to 200,000 annually and

Table 2. Estimated fishing pressure and harvest for section 1, by two-week segments, Coeur d'Alene Lake, 1967

Interval	Hours fished	Kokanee	Rainbow	Cutthroat	Perch	Bullheads	Largemouth bass	Fish per hour
1 (4-29)*	99.2	-	6	-	-	-	-	0.06
2 (5-13)	1,091.2	151	25	25	151	410	-	0.70
3 (5-27)	3,696.0	4,324	-	-	-	-	-	1.17
4 (6-10)	19,131.2	15,434	-	-	153	-	-	0.81
5 (6-24)	14,752.0	24,341	-	-	-	-	-	1.65
6 (7-8)	9,600.0	12,096	-	-	-	-	-	1.26
7 (7-22)	2,246.4	2,505	47	23	-	-	-	1.15
8 (8-5)	1,770.0	780	16	49	17	-	-	0.49
9 (8-19)	1,740.0	1,740	-	35	-	-	35	1.04
10 (9-2)	3,709.4	5,888	-	15	-	-	-	1.59
11 (9-16)	5,776.6	7,914	29	29	116	-	-	1.40
12 (9-30)	6,292.8	13,026	-	-	-	-	-	2.07
13 (10-14)	3,379.2	4,842	-	-	-	-	-	1.43
14 (10-28)	-	-	-	-	-	-	-	-
Totals	73,284.0	93,041	123	176	437	410	35	1.28

*Starting Date for Period

Table 3. Estimated fishing pressure and harvest for section 2, by two-week segments, Cocur d'Alene Lake, 1967.

Interval	Hours fished	Kokanee	Rainbow	Cutthroat	Perch	Bullheads	Largemouth bass	Fish per hour
1 (4-29)*	99.2	-	-	6	-	-	-	0.06
2 (5-13)	331.2	-	-	15	-	-	-	0.04
3 (5-27)	1,345.3	673	-	-	-	-	-	0.50
4 (6-10)	4,668.8	5,199	-	45	-	-	-	1.12
5 (6-24)	2,673.6	5,534	-	-	-	-	-	2.07
6 (7-8)	2,675.2	3,155	-	106	-	-	-	1.22
7 (7-22)	2,793.6	4,035	-	-	-	-	-	1.44
8 (8-5)	516.5	661	-	-	-	-	-	1.28
9 (8-19)	1,331.1	1,092	27	53	-	-	-	0.88
10 (9-2)	3,805.2	5,061	-	-	152	-	-	1.37
11 (9-16)	1,971.3	3,568	-	-	-	-	-	1.81
12 (9-30)	1,880.0	2,858	-	-	-	-	-	1.52
13 (10-14)	556.8	278	-	-	-	-	-	0.50
14 (10-25)	-	-	-	-	-	-	-	-
Totals	24,647.8	32,114	27	225	152	-	-	1.32

*Starting Date for Period

Table 4. Estimated fishing pressure and harvest for section 3, by two-week segments, Coeur d'Alene Lake, 1967.

Interval	Hours fished	Kokanee	Rainbow	Cutthroat	Perch	Bullheads	Largemouth bass	Fish per hour
1 (4-29)*	773.8	-	46	46	-	-	-	0.12
2 (5-13)	948.5	766	15	14	27	188	-	1.06
3 (5-27)	1,195.2	851	-	42	-	-	-	0.75
4 (6-10)	9,973.6	15,205	94	49	49	-	-	1.54
5 (6-24)	12,447.6	27,084	37	199	239	-	-	2.21
6 (7-8)	10,566.4	14,140	85	41	42	-	-	1.35
7 (7-22)	6,854.4	10,891	-	-	469	-	-	1.66
8 (8-5)	4,936.0	6,232	100	-	-	-	-	1.27
9 (8-19)	3,897.6	7,494	-	-	61	-	-	1.94
10 (9-2)	4,939.0	10,372	7	7	49	-	-	2.11
11 (9-16)	11,648.0	16,471	38	19	285	-	-	1.44
12 (9-30)	3,307.1	6,605	-	71	-	-	-	2.02
13 (10-14)	412.8	941	-	-	-	-	-	2.28
14 (10-28)	26.4	-	-	-	-	-	-	-
Totals	71,976.4	117,052	422	488	1,221	188	-	1.66

*Starting Date for Period

Table 5. Number of kokanee planted in Coeur d'Alene Lake and/or tributary streams since introduction.

Year	Number of fish	Year	Number of fish
1937	35,000	1953	126,000
1938	150,000	1954	124,000
1939	259,000	1955	365,400
1940	-	1956	314,488
1941	187,200	1957	832,896
1942	854,690	1958	608,000
1943	-	1959	920,000*
1944	-	1960	1,128,000
1945	-	1961	1,304,000
1946	-	1962	750,000
1947	42,000	1963	226,090
1948	100,000	1964	113,856
1949	219,150	1965	615,317
1950	202,500	1966	725,305
1951	533,600	1967	1,166,422
1952	175,000		

* 488,000 of these fish were from a strain of early spawning kokanee.

the catch relatively poor. He further observed that in 1956 when the plant was 314,488 the resultant catch increased to about 40 percent of the total catch and when the plant was increased to 832,896 in 1957 the resultant catch in 1960 was 77 percent of the total harvest. Jeppson indicated that while 1960's harvest was 77 percent kokanee, this species had never exceeded 40 percent of the catch prior to that year.

During 1967 kokanee composed 98.4 percent of the harvest from Coeur d'Alene Lake. Kokanee were caught in primarily two places in the lake with smaller amounts of fishing pressure and/or success scattered throughout the remainder of the lake (Figure 2). The major kokanee fishing area in the south end of the lake was along the west side of the lake from Conkling Park to and including Windy Bay. The fishing area in the north end of the lake extended from Wolf Lodge Bay to Arrow Point.

Kokanee began to be caught about mid-May in small numbers with good fishing starting about the first of June. Excellent fishing generally continued in all three sections until late July at which time it trailed off considerably. Good fishing started again about September 1 and continued throughout the first week of October. By mid-October the anglers lost interest in the fish as they started to develop spawning characteristics (hooked jaw, scale absorption, etc.)

Kokanee normally spawn in Coeur d'Alene Lake during late November through mid-December. However, spawning success is believed to be low due to lack of proper lakeshore spawning sites

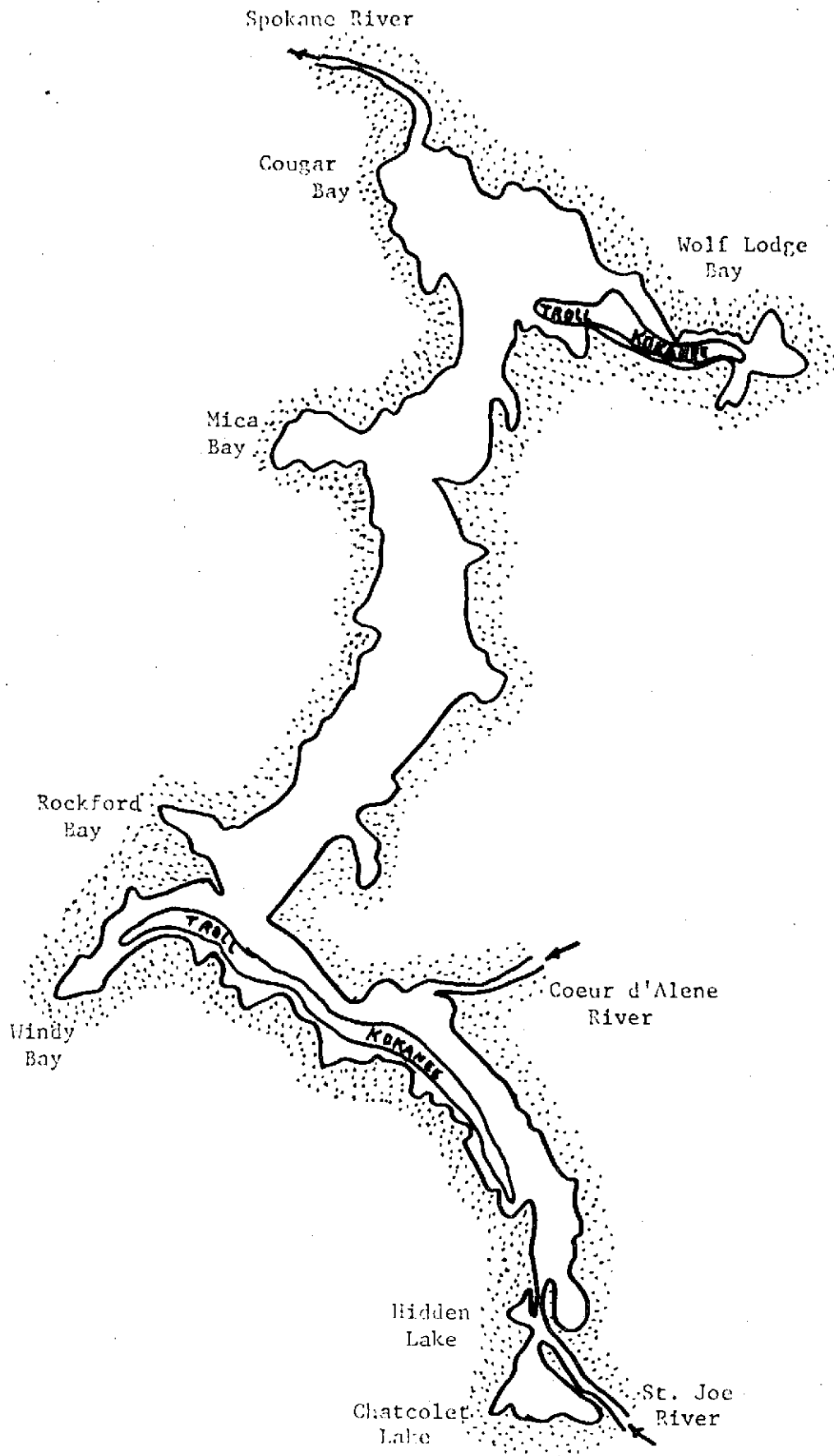


Figure 2. Map of Coeur d'Alene Lake showing primary kokanee fishing areas.

and an annual lake drawdown that occurs subsequent to spawning. Preliminary studies in tributaries, such as Wolf Lodge Creek indicates that survival of eggs spawned naturally in these streams have limited survival due to late egg deposition and cold water which does not afford sufficient temperature units prior to spring floods.

In view of the apparent lack of kokanee spawning success in Coeur d'Alene Lake, annual plants have been made in order to provide a good fishery. As previously shown, it was found that a substantial plant was necessary to provide quality fishing. A goal of 1,000,000 kokanee fry annually has been established for stocking of Coeur d'Alene Lake.

Table 6 displays the average size of kokanee in the spawning run at Coeur d'Alene Lake since 1954. It is interesting to note that as the plants were increased and the population correspondingly increased that the average size decreased to a point and then leveled off.

Rainbow

Rainbow plants have been made annually in the north end of Coeur d'Alene Lake (at or near Wolf Lodge Bay). It was thought that these plants were not adding significantly to the harvest but no data was available. During 1967, a total of 11,430 legal size rainbow were planted in Coeur d'Alene Lake at Wolf Lodge Bay. This was made in two plants prior to the opening of the season--9,720 fish at 3.6 per pound on April 3 and 1,710 fish at 1.9 per pound on April 24.

Creel census figures indicate that a total of 572 rainbow trout were taken from all three sections of Coeur d'Alene Lake during 1967. This represents about 5.0 percent of the 1967 plant but may include holdover fish or Section 3 may include fish planted in Chatcolet Lake. Nevertheless, the return does not seem to warrant further rainbow plants in the north end of the lake.

Other Species

The census covered the trout and kokanee season and, therefore, did not sample the majority of the bass, bullhead, or perch fishing. Bullheads are fished heavily in April from shore in both the north (Cougar Bay area) and south ends of the lake. Many anglers fish for this species at night by the light of campfires.

The majority of the largemouth bass fishing occurs in April and May and was not censused.

LITERATURE CITED:

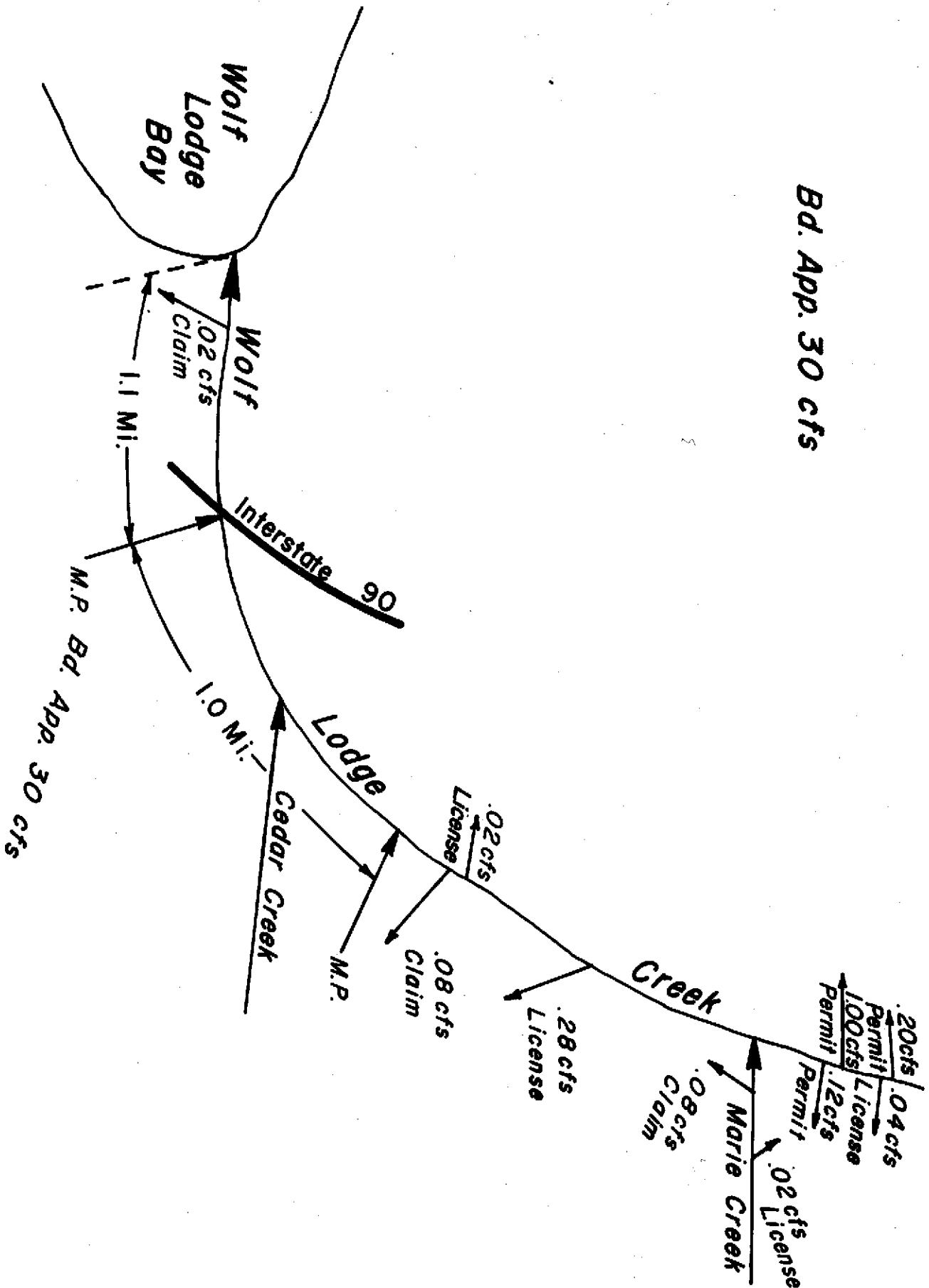
ELLIS, M. M. 1932. Pollution of the Coeur d'Alene River and adjacent waters by mine wastes. U. S. Bureau of Fisheries. Mimeo report. 55 pp.

JEPPSON, PAUL W. 1960. Data sheets and correspondence from Region I fishery files.

Table 6. Average measurements of spawning kokanee, by sex, from Coeur d'Alene Lake, 1954 to 1967.

Year	Males Length (in.)	Females Length (in.)	Year	Males Length (in.)	Females Length (in.)
1954	16.1	15.0	1961	12.9	12.4
1955	14.6	14.2	1962	11.5	11.3
1956	-	-	1963	10.8	10.6
1957	15.7	13.5	1964	11.0	10.6
1958	14.3	14.2	1965	11.5	11.1
1959	13.2	13.0	1966	-	-
1960	13.4	12.8	1967	12.5	11.9

Bd. App. 30 cfs



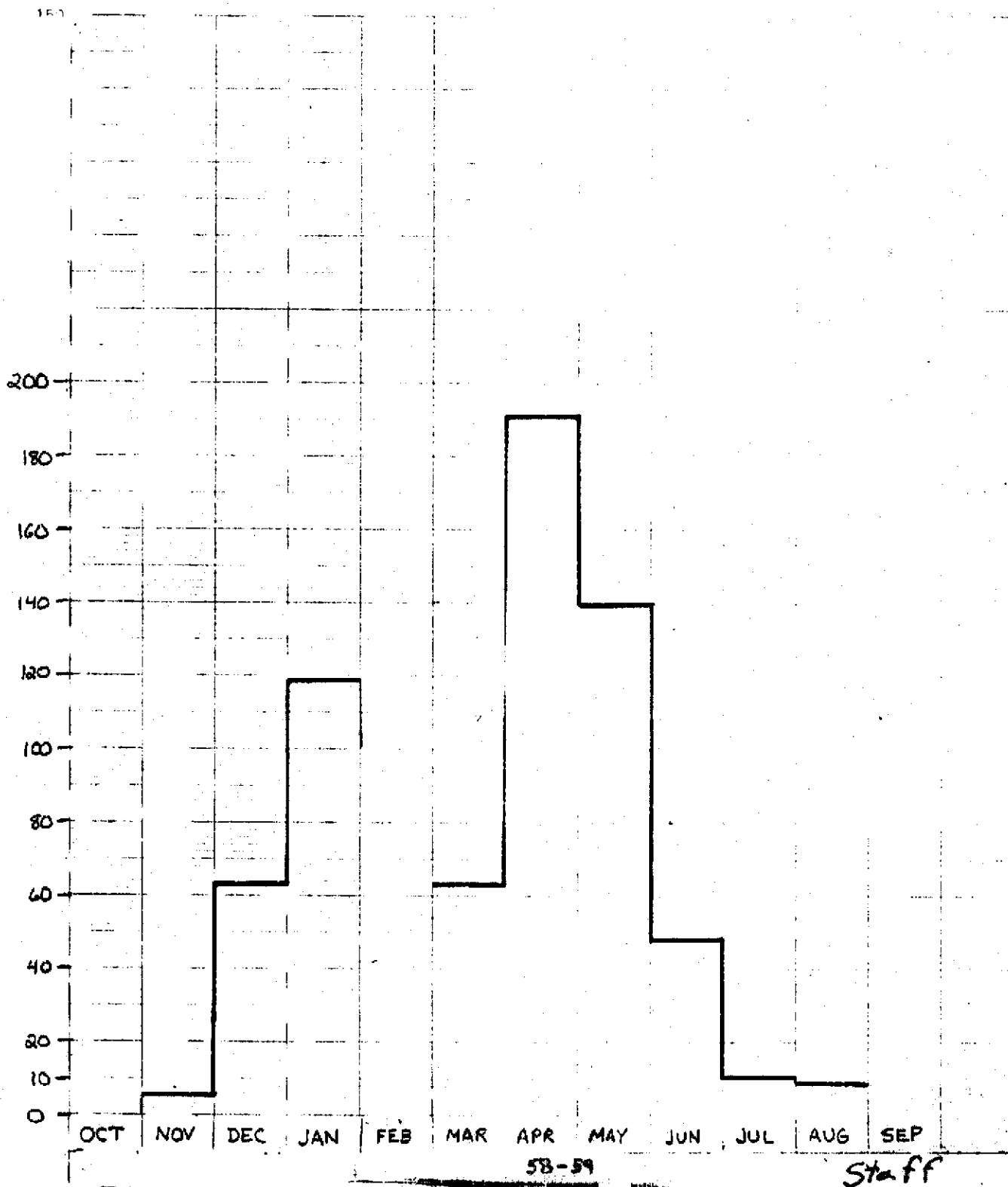
Staff
ex. #2

FIGURE 1. WOLF LODGE CREEK ESTIMATED MONTHLY DISCHARGE,
AS DETERMINED FROM ONE MEASUREMENT PER MONTH. (D.A. = 39 SQ. MI.)
WATER YEAR 1959

46 3093

KE 1 YEAR BY MONTHS X 150 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

DISCHARGE (CFS)

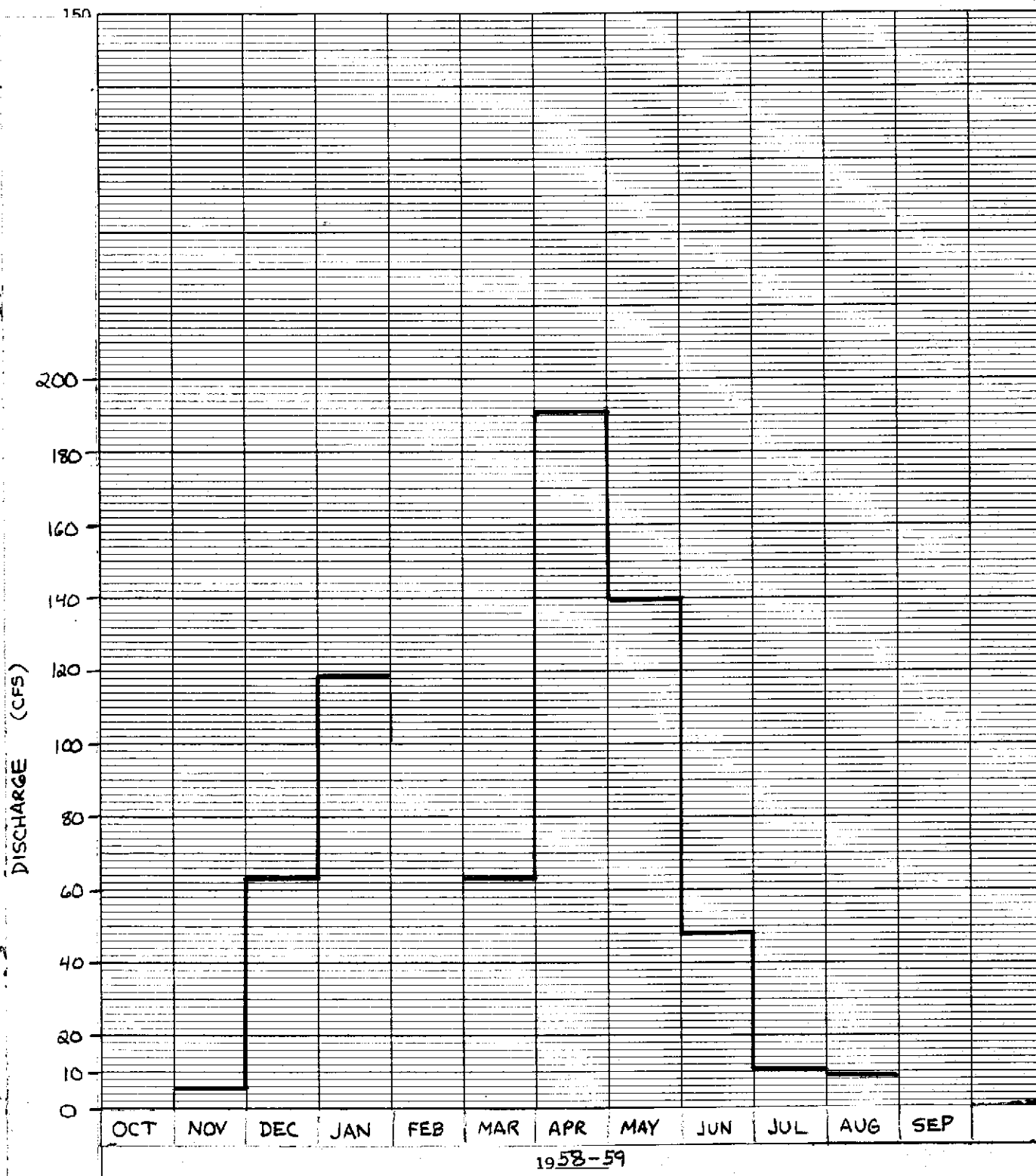


58-59

Staff

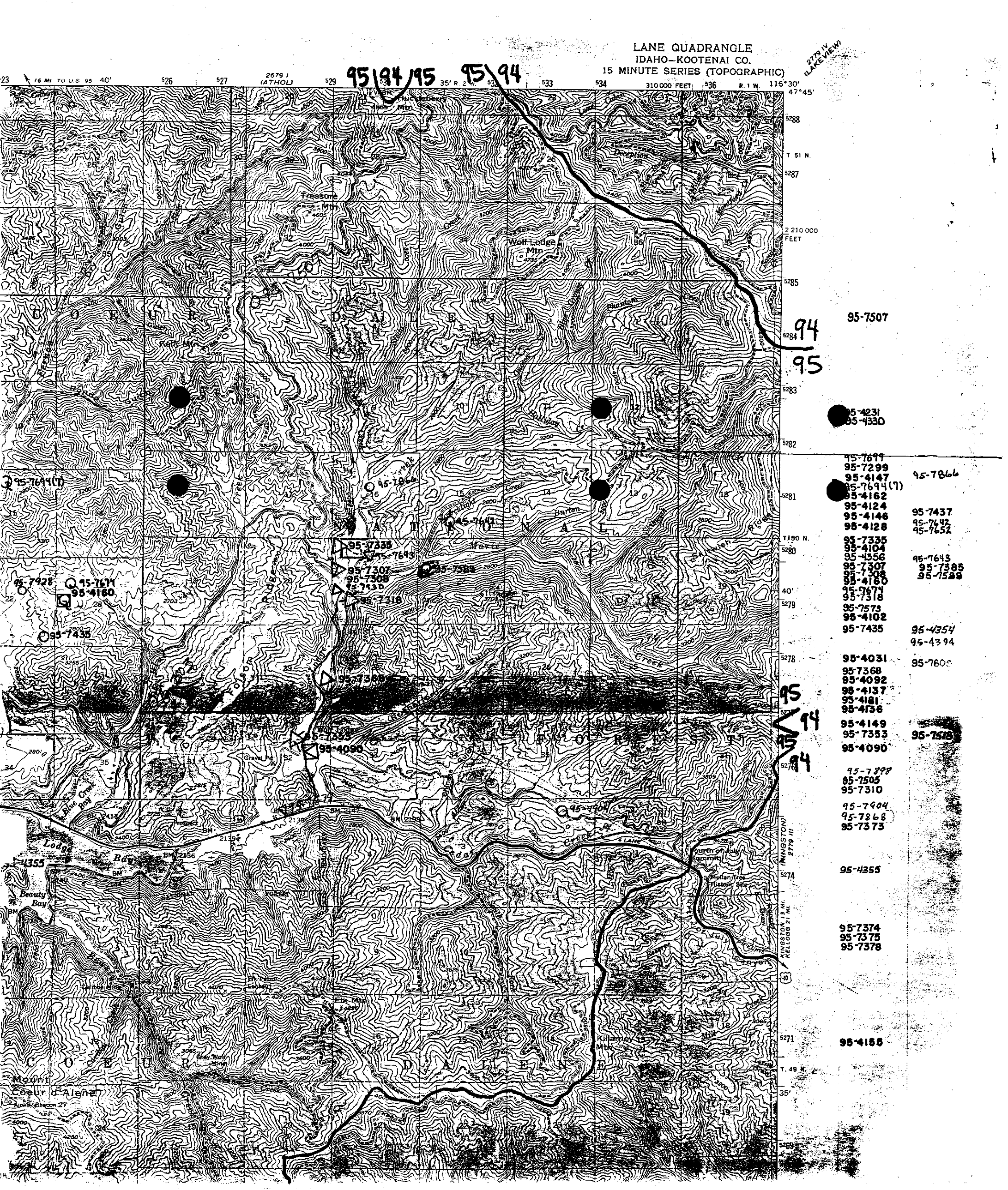
FIGURE 1. WOLF LODGE CREEK ESTIMATED MONTHLY DISCHARGE,
AS DETERMINED FROM ONE MEASUREMENT PER MONTH. (D.A. = 39 SQ. MI.)

WATER YEAR 1959

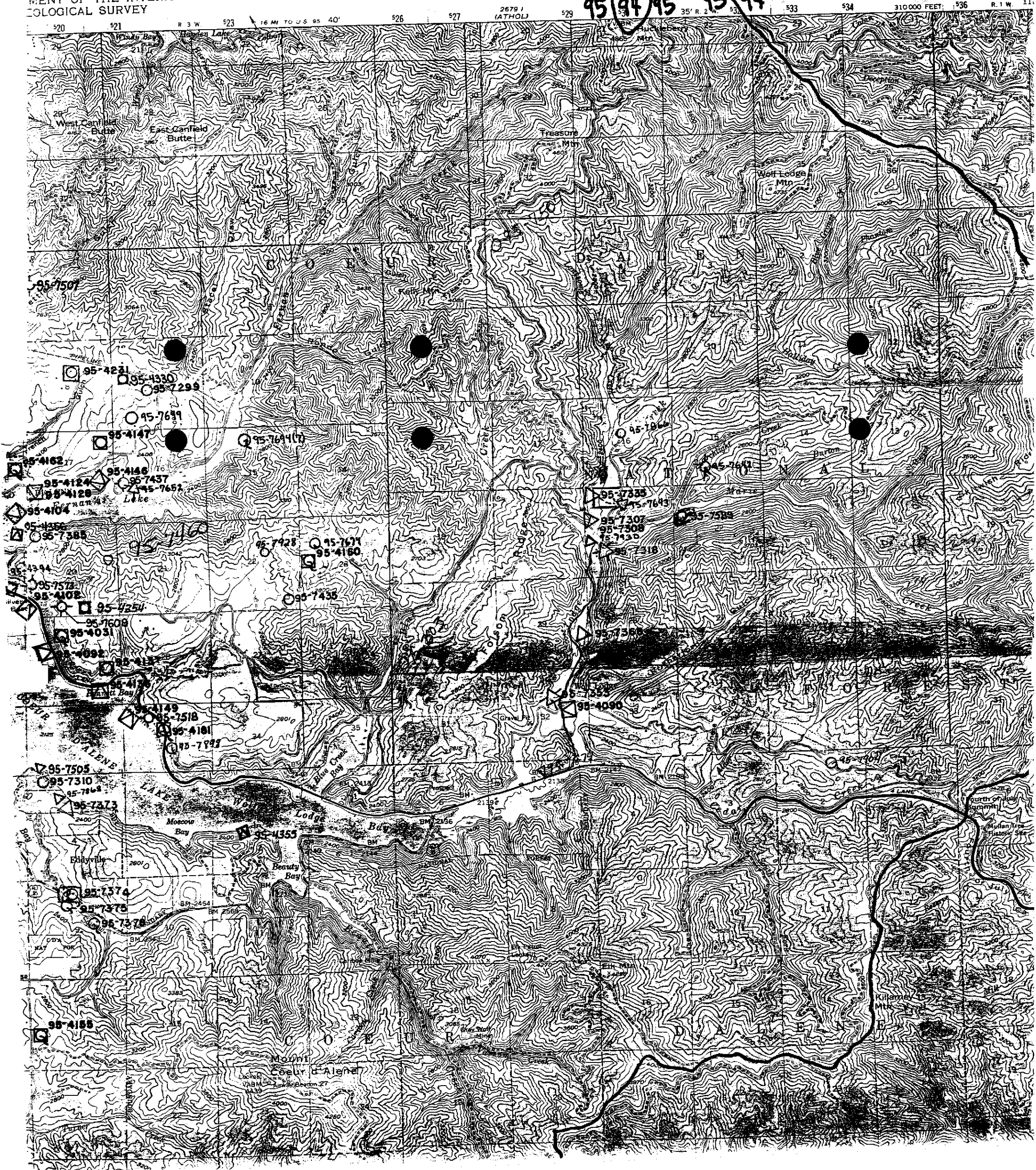


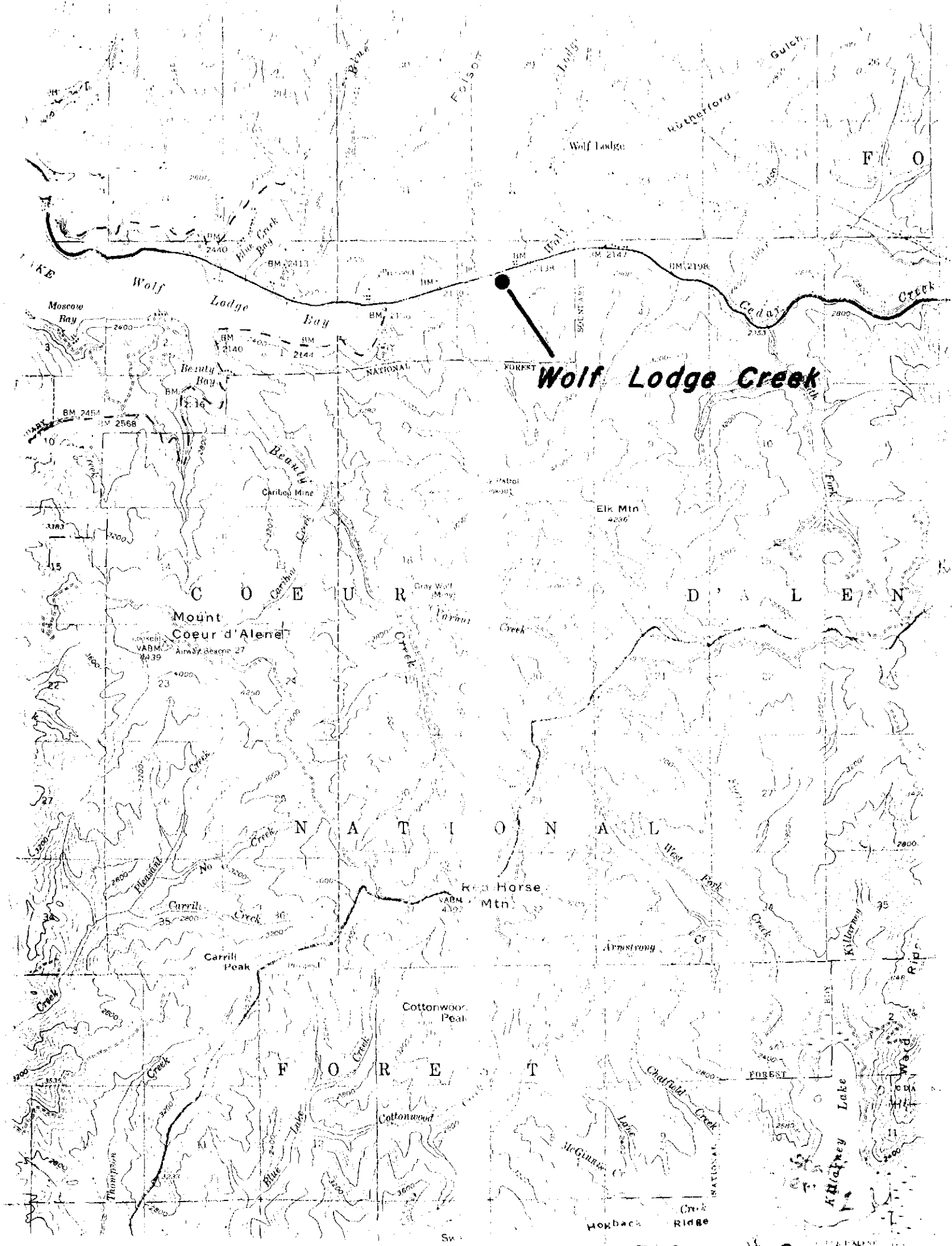
46 3093

K-E 1 YEAR BY MONTHS X 150 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.



95/94/95 95/94





T.O. 11-D #2

INTER-DEPARTMENT MEMO — 1

DATE 7-27-79

FROM Dave T

TO Glen

SUBJECT Min St. Apps.

permits -
3 for 1.32 cfs
beavers -
5 for 0.40 cfs
clearing
3 for .19 cfs

Roberta found no water rights on Sullivan Spgs or Granite Cr.
Wolf Lodge creek. shows 11 recorded rights on the creek and its
tributaries.

Ron has completed the ^{location} transparencies for all three : please review
the Schematics (located in the respective files) and add any info before
giving them to Ron today to draft. (He will give this high priority)

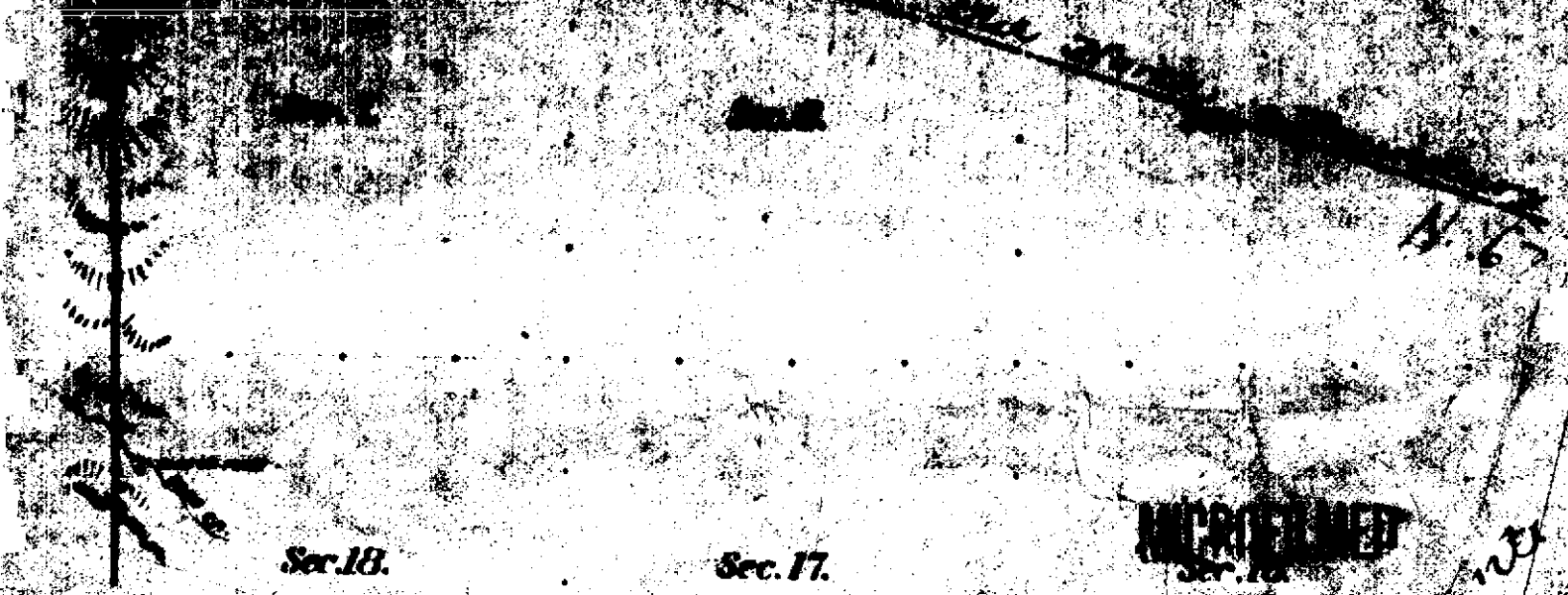
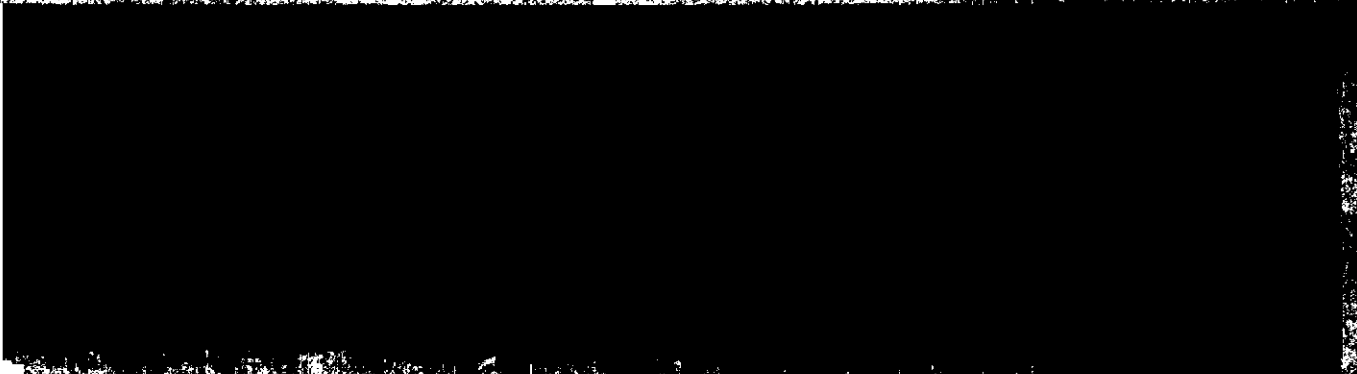
Bill Ond's memo indicates scattered hydrologic info. Based on his info 30 cfs
seems quite high as a min flow for Wolfe Lodge Cr. I have not added anything to

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SIGNATURE

the Wolf Lodge schematic about hydrology.

Dave





95-7874
ROUTE 5, BOX 86A
COEUR D'ALENE, IDAHO 83814

July 30, 1979

Mr. Steve Allred
Director
Idaho Dept. of Water Resources
4055 Government Way
Coeur d'Alene, Idaho 83814

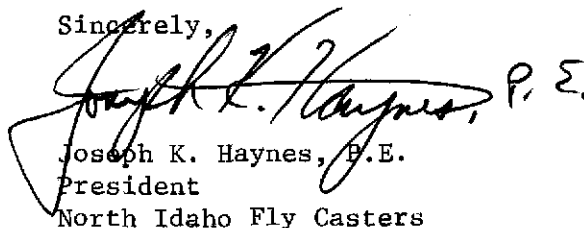
Dear Mr. Allred:

Our organization, the North Idaho Fly Casters, would like to have the following comment read into the record at your August 2, 1979 hearing.

We, the Members of the North Idaho Fly Casters, are very concerned that an adequate "in-stream" flow must be maintained in Wolf Lodge Creek to guarantee spawning of cutthroat trout. This is a vital spawning stream and we feel is critical to the survival of the native trout which inhabit Coeur d'Alene Lake, the Spokane River, and their tributaries. Please work with the Idaho State fish biologist to determine the amount of water necessary and then do what you can to guarantee at least that minimum in-stream flow for the survival of the trout population.

Thank you for your consideration.

Sincerely,

 P. E.
Joseph K. Haynes, P.E.
President
North Idaho Fly Casters

JKH/cad

cc: Board of Directors

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JUL 1979

Department of Water Resources
Northern District Office

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Hand Delivered

United States Department of the Interior

RECEIVED

JUL 30 1979

FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
4620 Overland Road, Room 209
Boise, Idaho 83705

Department of Water Resources
DAS

July 30, 1979

95-7874✓
96-7771
96-7772

Mr. C. Stephen Allred, Director
State Office
Idaho Department of Water Resources
373 W. Franklin
Boise, Idaho 83702

Dear Mr. Allred:

We have cooperated with Idaho Department of Fish and Game personnel for several years collecting information to establish resource maintenance flows needed to support fish and wildlife and other environmental factors.

A major step leading to proper water management is to determine the quantity and quality of water which should remain in a stream to support aquatic resources. Therefore, we support the Fish and Game in their efforts to establish instream flows which will maintain and/or enhance the fishery resources in Wolf Lodge, Sullivan and Granite Creeks, tributaries to Lake Coeur d'Alene.

Thank you.

Sincerely yours,

Richard J. Fisher
Field Supervisor

cc: IDF&G, Headquarters
IDF&G, Coeur d'Alene
IDP&R, Boise
Regional Office, FWS, Portland
Area Office, FWS, Boise



Save Energy and You Serve America!

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INLAND EMPIRE FLY FISHING CLUB

BOX 2926 TERMINAL ANNEX
SPOKANE, WASHINGTON 99220

RECEIVED

July 27, 1979

JUL 1979

Department of Water Resources
Northern District Office

Steve Allred
Director, Id. Dept. of
Water Resources
4055 Government Way
Coeur d'Alene, ID 83814

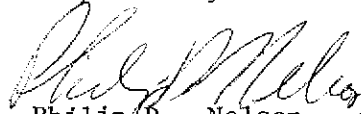
Dear Mr. Allred:

I am writing this letter on behalf of the Inland Empire Fly Fishing Club, consisting of 135 active members. I would like to have the following expression of concern and interest entered into the record during your Aug. hearing about the status of Wolf Lodge Creek.

A number of our members utilize the Wolf Lodge Creek fishery. Fishery data indicated these waters provide spawning beds for over 3000 Cutthroat. The water also provides a late season fishery for 13 to 17 inch Cuts. It is our strong opinion that support should be maintained to insure that Wolf Lodge Creek remains capable of being both an excellent fishery and a strong producer of Cutthroat trout. We do not believe the stream flow should be reduced to negatively affect the above uses.

You have our full support in maintaining these waters.

Respectfully Submitted,


Philip D. Nelson
President, IEFFC

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95-7874

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

IDAHO PANHANDLE NATIONAL FORESTS
P.O. Box 310
COEUR D'ALENE, IDAHO 83814

ADDRESS REPLY TO
FOREST SUPERVISOR
AND REFER TO

2600
July 27, 1979

Stephen Allred, Director
Idaho Department of Water Resources
4055 Government Way
Coeur d'Alene, Idaho 83814

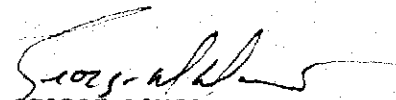
Dear Mr. Allred:

The Idaho Panhandle National Forests wish to enter the following testimony (August 2, 1979 hearing) in support of the effort by the Idaho Department of Fish and Game to seek allocation of fishery flows in Wolf Lodge Creek.

Considerable monies and effort have been expended by the Forest Service in managing the habitat and water quality of Wolf Lodge Creek to perpetuate and enhance fishing opportunities to meet demands of an increasing fishing public.

If the State and Forest Service are to continue to meet the needs of increasing fishing pressure, efforts to preserve habitat of important fish populations must include maintenance of adequate stream flows for fish migration, spawning, and rearing.

Sincerely,


GEORGE DAVIS
Deputy Forest Supervisor

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JUL 30 1979
DEPT. OF AGRICULTURE
FOREST SERVICE
IDAHO PANHANDLE NATIONAL FORESTS



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Portneuf Valley Audubon Society



January 5, 1979

Norman Young
Dept. Of Water Resources
State House
Boise, Idaho 83720

The Portneuf Valley Audubon Society wishes to lend its support for the approval of the 11 instream flow water rights applications as submitted by Idaho Fish and Game. In particular, this chapter notes the ecological importance of Silver Creek and recommends that the minimum flows of 99 CFS near Picabo and 74 CFS near U.S. Highway 93 between Richfield and Carey be approved.

Respectfully,

PETE

Pete Cole
President of the Portneuf Valley
Audubon Society

✓	774
✓	775
✓	776
✓	777
✓	778
✓	779
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✓	781
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✓	794
✓	795
✓	796
✓	797
✓	798
✓	799
✓	800

37-7727

37-7728

✓ 36-7818

36-7819

36-7820

36-7821

36-7822

36-7823

36-7772

36-7771

95-7874

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STATE OF IDAHO

DEPARTMENT OF HEALTH
AND WELFARE

DIVISION OF ENVIRONMENT
Statehouse
Boise, Idaho 83720

801 Reserve Street

December 8, 1978

Mr. L. Glen Saxton
Chief, Operations Bureau
Department of Water Resources
373 W. Franklin Street
Boise, Idaho
Statehouse Mail

RECEIVED
DEC 11 1978
Department of Water Resources

RE: Applications for Water Rights No.'s 36-7821
36-7822
37-7727
37-7728
37-7734
37-7739
95-7874✓
11-7152
36-7818
36-7819
36-7820

Dear Mr. Saxton:

This office has no comments or objections about these applications.

Sincerely,

Jon Wroten
Senior Environmental Quality Specialist

JW/ap

cc: David Sanders

121 South Hill Street
 Boise, Idaho 83725
 November 4, 1978

Mr. George Yost, Chairman
 Idaho Water Resource Board
 State House
 Boise, Idaho 83720

RECEIVED

NOV 5 1978
 Department of Water Resources

Dear Mr. Yost,

I am delighted to see that the newly legislated opportunity to apply for minimum stream flows in Idaho has been taken up by the Fish and Game Department. Such a request is very much in the public interest for the citizens of this state. If the water for these minimum flow requests is indeed available, I urge affirmative action be taken by the members of the Idaho Water Resource Board. I refer to the following applications for permits: 36-7818 - Vineyard Creek, 36-7819 - Briggs Springs, 36-7820 - Blind Canyon Springs, 36-7821 - Lower Little Springs, 36-7822 - Bambury Springs, 37-7727 and 37-7728 - Silver Creek, 61-7373 - Bancroft Springs, 95-7874 - Wolf Lodge Creek, 11-7152 - St. Charles Creek.

I do not think we can any longer operate efficiently with a zero-based budgeting concept for the waters of Idaho. To establish minimum flows for those streams where it is still possible is like putting money in a water savings account. The sooner we move ahead with such a program the more everyone will benefit, and I include the agricultural water user as a very direct beneficiary of such a program.

Since the concept of establishing minimum stream flows for Idaho's waters is very long overdue in my estimation, I hope that you can move forward with all possible speed in the granting of these applications.

Sincerely,

Doli Obee
 Doli Obee

MICROFILMED

95-7874

BOISE VALLEY FLY FISHERMEN

OFFICE OF
Joe Wyllie

P. O. BOX 311

BOISE, IDAHO 83702

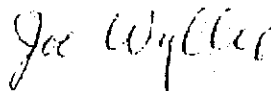
November 16, 1978

Water Resource Board
373 W. Franklin Street
Boise, Idaho 83720

Dear Sirs:

The members of the Boise Valley Fly Fishermen are in complete favor of the action taken by the Idaho Fish and Game Department to gain water rights for minimum flows on 11 streams or portions of streams in Idaho. We sincerely hope that you will take action and approve the request.

Sincerely,



Joe Wyllie
President, BVFF

JW:jl

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Copy to:
Board members
Soldiers: Waters, [unclear]
[unclear]

RECEIVED

Department of Water Resources

Dear Mr. Yost:

36-7818 -Vinyard Creek
36-7819 -Briggs Springs
36-7820 -Blind Canyon Springs
36-7821 -Lower White Springs
36-7822 -Banbury Springs
Silver Creek 37-7728
Silver Creek 37-7727
61-7373 -Bancroft Springs
95-784 -Wolf Lodge Creek
11-7152 -St. Charles Creek

Yours very truly

Joe F. Allen, Co-chairman
Water/Power Initiative

MICROFILM

ED CHANEY • Rural Route 1 • Eagle, Idaho 83616 • (208) 963-0714

October 24, 1978

RECEIVED

OCT 25 1978

Department of Water Resources

George Yost
Chairman, Idaho Water
Resources Department
Statehouse
Boise, Idaho 83720

George Yost:

It is my understanding that the Idaho Water Resources Board has made application for minimum instream flows on ten Idaho streams subject to availability of unappropriated water.

This application is in accordance with the instream flow protection provisions of the State Water Plan and implementing legislation passed by the 1978 legislature, both of which, in my view, reflect the majority view of Idaho citizens.

The ten applications for permit (listed below) appear to include streams of modest potential controversy. Therefore, they should serve as a comparatively painless test of the department's and legislature's commitment to preserving the public instream flow values of Idaho streams not already fully committed to out-of-stream diversions.

I urge your support of these applications and pledge my support of your efforts to that end.

Sincerely,

Ed Chaney

Ed Chaney

P.S. I would appreciate it if your staff could alert me to the time and place of the board meeting at which these applications will be aired.

36-7818 - Vinyard Creek	37-7728 - Silver Creek
36-7819 - Briggs Springs	37-7727 - Silver Creek
36-7820 - Blind Canyon Springs	61-7373 - Bancroft Springs
36-7821 - Lower White Springs	✓ 35-7874 - Wolf Lodge Creek
36-7822 - Banbury Springs	11-7152 - St. Charles Creek



State of Idaho

DEPARTMENT OF WATER RESOURCES

STATE OFFICE, 373 W. Franklin Street, Boise, Idaho

JOHN V. EVANS

Governor

C. STEPHEN ALLRED

Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 384-2215

September 26, 1979

Joseph H. Nettleton, Chairman
Idaho Water Resource Board
Murphy, ID 83650

Dear Mr. Nettleton:

Re: Applications for Permit Nos. 95-7874, 96-7771 & 96-7772
Minimum Stream Flow - Wolf Lodge Creek, Granite Creek & Sullivan Creek

Enclosed is a copy of each of the above referenced permits along with a copy of the corresponding Memorandum Decision and Orders. We direct your attention to the conditions of approval as set forth in the orders.

Be sure to note the special condition requiring you to install measuring devices at the locations approved by the Director.

Any person who does not agree with the decision of the Department may request a rehearing before the Director within 20 days, or may appeal directly to the district court within 60 days of the date the decision is mailed.

Sincerely,

David R. Tutthill, Jr. Acting, for:

L. GLEN SAXTON
Chief, Operations Bureau

LGS:rf

Enclosures

MINOR

INTER-DEPARTMENT MEMO — 1

FROM Rita Fleck

DATE 9/26/79

TO Files 96-7771, 96-7772 & 95-7874

SUBJECT

A copy of the approved applications and the corresponding Memorandum Decision and Orders were sent to each of the board members.

See file 96-7772 for hearing tapes

RF

SIGNATURE

MEMORANDUM

TO: Norm Young

FROM: Bill Ondrechen, Hydrology Section

SUBJECT: Hydrology of Wolf Lodge Creek, Granite Creek and Sullivan Springs
(Instream Flow Applications 95-7874, 96-7771 and 96-7772)

Wolf Lodge Creek (95-7874)

Wolf Lodge Creek Drains a 61 square mile area on the east side of Coeur d'Alene Lake. There are no continuous streamflow records for the stream, but it has been measured occasionally. Most of the measurements were made about one mile upstream from the point where the flow is requested. The drainage area at this upstream point is about 39 square miles. The discharge data are as follows:

<u>DATE</u>	<u>DISCHARGE</u> (cfs)	<u>DATE</u>	<u>DISCHARGE</u> (cfs)
11/03/58	4.8	04/10/75	39
12/08/58	64	04/11/75	53
01/18/59	118	04/12/76	389
03/05/59	63	04/15/76	283
04/08/59	191	04/21/76	167
05/08/59	139	04/28/76	146
06/18/59	48	05/18/76	111
07/30/59	10.5	06/09/77	38
08/29/59	8.7	06/20/77	22
11/22/74	12	07/05/77	14
03/05/75	165	07/11/77	11

The record is not sufficient to define a frequency of occurrence to the 30 cfs requested flow, but it appears as though ^{THE FLOW} at the upstream point commonly drops below 30 cfs. Downstream at the point described in the application, flows will most likely be greater ^{THAN THE MEASURED VALUES} due to the increased drainage area. Most of the additional area is drained by Cedar Creek, which enters ^{WOLF LODGE} Wolf Creek about 1/4 mile upstream from the requested point of flow. **FIGURE 1** ILLUSTRATES ESTIMATED MONTHLY FLOWS OF WOLF LODGE CR. FOR WATER YEAR 1959.

Because the drainage area varies from 61 to 39 square miles within the lower portion of the reach specified in the application, the request for 30 cfs throughout the entire reach is somewhat inconsistent. Perhaps only 70 percent of the total flow will exist in the reach upstream from Cedar Creek.

Granite Creek (96-7771)

Granite Creek Drains an area of approximately 27 square miles in the Bitterroot Range on the east side of Lake Pend Oreille. Most of the basin is forested, with elevations ranging from 2100 to over 6000 feet above sea level. The stream has only been measured 10 times, all during 1977. The data are as follows:

<u>DATE</u>	<u>DISCHARGE (CFS)</u>
04/06/77	16
04/13/77	23
04/20/77	26
04/28/77	39
05/05/77	26
05/12/77	28
05/18/77	21
06/08/77	13
06/29/77	9
08/18/77	5

From the description of the measuring section and the sketch map provided by the applicant, it appears that these measurements were made just upstream of the confluence of Granite Creek and Sullivan Springs. The application ^{states} ~~mentions~~ that during the winter months when fish spawning occurs, most of the flow in Granite Creek is from Sullivan Springs. Since the 45 cfs requested in the application is for the reach from the Sullivan Springs confluence to Pend Oreille Lake, the main factor in water availability is the flow of Sullivan Springs.

Sullivan Springs (96-7722)

No continuous flow records exist for Sullivan Springs. A measurement was made on July 20, 1977 by Department of Fish and Game personnel. The observed flow was 45 cfs.



STATE OF IDAHO

DEPARTMENT OF FISH AND GAME

Fish & Game Ex 1
read file record

REGION 1
2320 GOVERNMENT WAY
COEUR D'ALENE, IDAHO 83814

STATEMENT OF BILL GOODNIGHT, REGIONAL FISHERY MANAGER
IDAHO DEPARTMENT OF FISH AND GAME
REGARDING INSTREAM FLOW WATER RIGHT APPLICATION FOR WOLF LODGE CREEK

To: Idaho Department of Water Resources

Date: August 2, 1979
Coeur d'Alene, Idaho

Up until the late 1950s, the primary sport fishery in Coeur d'Alene Lake was for cutthroat trout. This fishery steadily declined from the turn of the century due to degradation and exploitation of tributary streams necessary for spawning and rearing. By the early 1960s the fishery on the lake had shifted to kokanee as the primary game fish species. The loss of tributary stream areas formerly used extensively by cutthroat trout was recognized as a major contributing cause of this decline by Mallet (1968). A significant exception to this loss is much of the Wolf Lodge Creek drainage.

At the present time Wolf Lodge Creek appears to supply the majority of the cutthroat trout harvested in the Coeur d'Alene area. Significant seasonal fisheries still exist at the mouth of the Spokane River and in Wolf Lodge Creek, as well as a continuing contribution of roughly 1,000 cutthroat trout to anglers' creels on the lake throughout the season (Mallet 1968). Monitoring of cutthroat movements indicates much of this harvest has its origin in the fish populations which use Wolf Lodge Creek.

An estimated minimum of 3,000 adult cutthroat migrate from the lake into Wolf Lodge Creek annually to reproduce (Goodnight and Mauser 1978). These fish range in size from 10 to 16 inches. This migration occurs during April with fish spawning in large numbers during May. Most of the adult fish return to the lake soon after spawning, however some remain to contribute to the opening day fishery on July 1 in Wolf Lodge Creek. We generally observe in the neighborhood of 100 lake-run cutthroat through a check station operated for several hours on opening day only, each year (Goodnight and Mauser 1977).

Many of those fish which do return to the lake immediately after spawning subsequently enter the Spokane River to feed during spring runoff. We have not estimated numbers of fish harvested in this fishery, but it appears to be significant.

Accessible streams of the entire Wolf Lodge drainage are used by cutthroat trout for spawning with heaviest use in smaller tributary streams. Newly hatched cutthroat trout begin emerging from stream gravels by June 20. Many

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of these fish move to rearing areas downstream immediately thereafter and throughout the early summer into August. Juvenile cutthroat trout then remain in Wolf Lodge streams for two or three seasons before migrating to the lake just after the peak of runoff as 5-8 inch fish. They remain in the lake 2-3 years before returning to spawn (Lukens 1977).

Our Department has repeatedly expressed concerns for protection of this highly important drainage through various state and federal agencies (see letter of 26 September 1973 to Forest Supervisor). Habitat surveys subsequently conducted by the Forest Service documented the unique character of this stream system as well as some flow problems (VanGundy 1974).

Department personnel utilized accepted methodology to arrive at the stream resource maintenance flow recommendations of 30 cfs. Methodology, techniques and some technical data are presented in the following report: Cochnauer, Tim. 1977. Stream Resource Maintenance Flow Determinations on Idaho Streams. Job Performance Report, Project F-66-R-2, Job II. Idaho Department of Fish and Game. 83 pp.

Approval of these instream flow recommendations is viewed as a very important measure necessary to guarantee continuation of this important fishery resource.

Bill Goodnight
Regional Fishery Manager

Norm Young 8/2/79
95-7874 HRC notes

- ① Staff identified that min. flow as requested would not protect Wolf Lodge below the interstate. Fish & Game indicated that the area below interstate was ponded & essentially lake @ high lake levels. No reason to fear appropriation below freeway. Staff understanding of location of reach to be protected is correct & matches the intent of the filing.
- ② Condition permit to require measurement sufficient to identify flow that can reasonably be expected to be maintained ~~and~~[?] measurement to be made for 5 yr period & prior to filing proof?

NOTICE OF APPLICATION FOR MINIMUM STREAM FLOW

Notice is hereby given that the Idaho Water Resource Board has on September 13, 1978, submitted one (1) application for permit to the Department of Water Resources proposing the appropriation of water to preserve the minimum streamflow from Wolf Lodge Creek, tributary to the Coeur d'Alene River which is further described as follows:

APPLICATION NO. 95-7874

SOURCE: Wolf Lodge Creek

POINT OF MINIMUM STREAMFLOW: NWNE, Sec. 5, T49N, R2W B. M,
Kootenai County

RATE OF FLOW: 30 cubic feet per second

SEASON OF USE: January 1 to December 31.

USE: To maintain trout spawning and rearing habitat.

The Director of the Department of Water Resources will hold a public hearing on the application at 1:30 p.m., on Thursday, August 2, 1979, at the Idaho Department of Water Resources Northern Region Office, 4055 Government Way, Coeur d'Alene, Idaho, for the purpose of hearing evidence in regard to the applications. The hearing will be held pursuant to the provisions of Sec. 42-1503, Idaho Code.

If issued, these permits will be subject to all prior water rights. Any party who wishes to formally appear in this proceeding for the purpose of presenting evidence or cross examining witnesses should file a notice of appearance with the Director, Department of Water Resources, Statehouse, Boise, Idaho, five (5) days prior to the hearing. Other parties will be given an opportunity to informally present their views and comments without the necessity of filing a notice of appearance.

C. STEPHEN ALLRED
Director

Published in the Coeur d'Alene Press, on July 5, and July 12, 1979.

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95-2824

STATE OF IDAHO

IDAHO WATER RESOURCE BOARD, STATEHOUSE, BOISE, ID 83720

Source: WOLF LODGE CREEK tributary to COEUR D'ALENE RIVER

Date Filed: 09/13/1978

Amount: 30.00 CFS

Diversion Point: NWNE Sec 05 T 49N R 02W, KOOTENAI Co.

Use:

Place of Use: NWNE Sec 05 T 49N R 02W

Diversion Means: NONE - INSTREAM FLOW

*Did not
use this
for adv.*

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~~SEE OTHER RIGHTS~~ -- Wolf Lodge Creek and Wolf Lodge Creek (Middle Fk)

~~Source Book~~

Several Small rights



State of Idaho

DEPARTMENT OF WATER RESOURCES

STATE OFFICE, 373 W. Franklin Street, Boise, Idaho

JOHN V. EVANS
Governor

C. STEPHEN ALLRED
Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 384-2215

November 24, 1978

Re: Applications for Water Right No.'s 36-7821, 36-7822, 37-7727, 37-7728,
37-7734, 37-7739, 95-7874, 11-7152, 36-7818, 36-7819, 36-7820

Department of Health and Welfare
State Office Building
700 W. State
Boise, Idaho 83720

Gentlemen:

Pursuant to the provisions of Section 42-1503, Idaho Code, enclosed are copies of the above referenced applications for water right. The applications have been submitted by the Idaho Water Resource Board to the Department and propose to appropriate minimum stream flows as described on the applications.

The applications will be advertised in the form of a legal notice one a week for two consecutive weeks. The notice will specify a time and place for a public hearing to be held concerning the proposed appropriation. To date, the hearing schedule has not yet been set.

Please submit any comments you may have within twenty (20) days or contact this office if you have questions.

Sincerely,

L. GLEN SAXTON
Chief, Operations Bureau

LGS:lr

Enc: 11



State of Idaho

DEPARTMENT OF WATER RESOURCES

STATE OFFICE, 373 W. Franklin Street, Boise, Idaho

JOHN V. EVANS

Governor

C. STEPHEN ALLRED

Director

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Department of Parks and Recreation
2177 Warm Springs Avenue
Boise, Idaho 83720

Gentlemen:

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State of Idaho

DEPARTMENT OF WATER RESOURCES

STATE OFFICE, 373 W. Franklin Street, Boise, Idaho

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Department of Fish and Game
600 S. Walnut Street
Boise, Idaho 83706

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Sincerely,

L. GLEN SAXTON
Chief, Operations Bureau

LGS:lr

Enc: 11

RECEIVED



STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

SOUTHERN REGION

John V. Evans
Governor

C. Stephen Allred
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

September 13, 1978

MEMO:

FROM: Loren O. Holmes, Southern Region Supervisor

TO: Steve Allred, Director

SUBJECT: Application for Permit - Idaho Water Resource Board

Attached herewith are 10 applications for instream flows from
the Idaho Water Resource Board which were received in this office

on September 13, 1978 at 8:15 a.m.

Southern Region

Application for Permit #36-7818 - Vinyard Creek
Application for Permit #36-7819 - Briggs Springs
Application for Permit #36-7820 - Blind Canyon Springs
Application for Permit #36-7821 - Lower White Springs
Application for Permit #36-7822 - Banbury Springs
Application for Permit #37-7728 - Silver Creek
Application for Permit #37-7727 - Silver Creek

Western Region

Application for Permit ~~#61-7373~~ - Bancroft Springs
#37-7734

Northern Region

Application for Permit #95-7874 - Wolf Lodge Creek

Eastern Region

Application for Permit #11-7152 - St. Charles Creek

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