INTER-DEPARTMENT MEMO — 1

DATE

FROM Glen Saxton

TO File 11-7152

SUBJECT Notice of Hearing

Advise Matt Mulaney of hearing notices.

C.L. Chaney

MIDDLEFIELD MED

SIGNATU

Notice is hereby given that the following application has 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 application 11-7152 for a permit to the Department of Water Resources proposing the appropration of 9 to 17 cubic feet per second of water within the SE¼SE¼, Sec. 13, T. 15S, R. 43E, B.M., Bear Lake County to preserve the minimum stream flow for maintaining the present quality of fisheries and provide adequate spawning and rearing conditions year around in Little Creek, otherwise known as St. Charles Creek, tributary to Bear Lake.

The Director of the Department of Water Resources will hold a public hearing on the application in the City Auditorium in Montpelier, Idaho, at 9:00 a.m. on June 10, 1980, for the purpose of hearing evidence in regard to the application. The hearing will be held pursuant to the provision of Section 42-1503, Idaho Code.

Any party who wishes to formally appear at this proceeding for the purpose of presenting evidence or cross examing witnesses should file a notice of appearance with the Director of the Department of Water Resources, Statehouse, Boise, Idaho, five 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.

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

C. STEPHEN ALLRED

Director

Published in the News-Examiner, P.O. Box 278, Montpelier, ID.

Published May 8, and May 15, 1980

№ 1301

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO,
County of Bear Lake } ss.

Loren W. Thompson
being duly sworn,
deposes and says:

That he is the publisher of THE NEWS-EXAMINER, a weekly newspaper published at Montpelier, in the County of Bear Lake and State of Idaho; and said paper has been and is in general circulation in the county aforesaid, and in the vicinity of Montpelier; that the advertisement, a copy of which is attached hereto, was published in said newspaper once a week for two consecutive weeks in the regular and entire issue of said paper during the period and time of publication, and was published in the newspaper proper and not a supplement; that said paper has been established and regularly published for more than seventy-eight consecutive weeks prior to the date of first publication of said advertisement.

Such notice was published in the issue beginning with

May 8, 19 80, and ending

with the issue of May 15, 19 80

Loren W. Thompson

Fees, $37.14

Subscribed and sworn to before me this 20 day

of May, 1980

Wanda Thompson

Notary Public, Residing at Montpelier, Idaho

My Commission Expires March 11, 1983

Public Notices

Notice is hereby given that the following application has 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 application 11-7152 for a permit to the Department of Water Resources proposing the appropriation of 9 to 17 cubic feet per second of water within the SE¼SE¼ Sec 13 T 16S, R 43E, B.M. Bear Lake County to preserve the minimum stream flow for maintaining the present quality of fisheries and provide adequate spawning and rearing conditions year around in Little Creek, otherwise known as St. Charles Creek, tributary to Bear Lake.

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

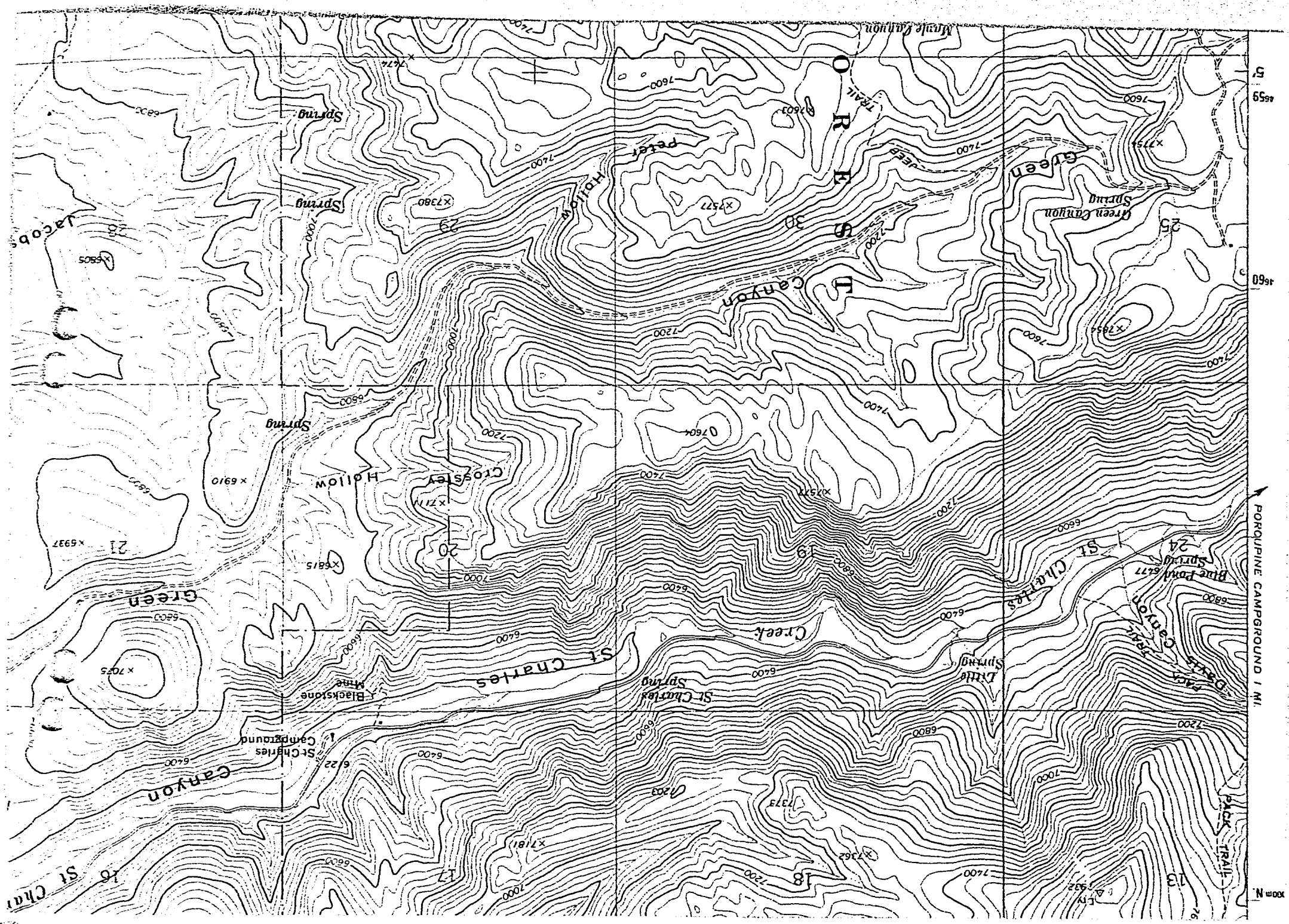
/s/ Stephen Allred
STEPHEN ALLRED
Director

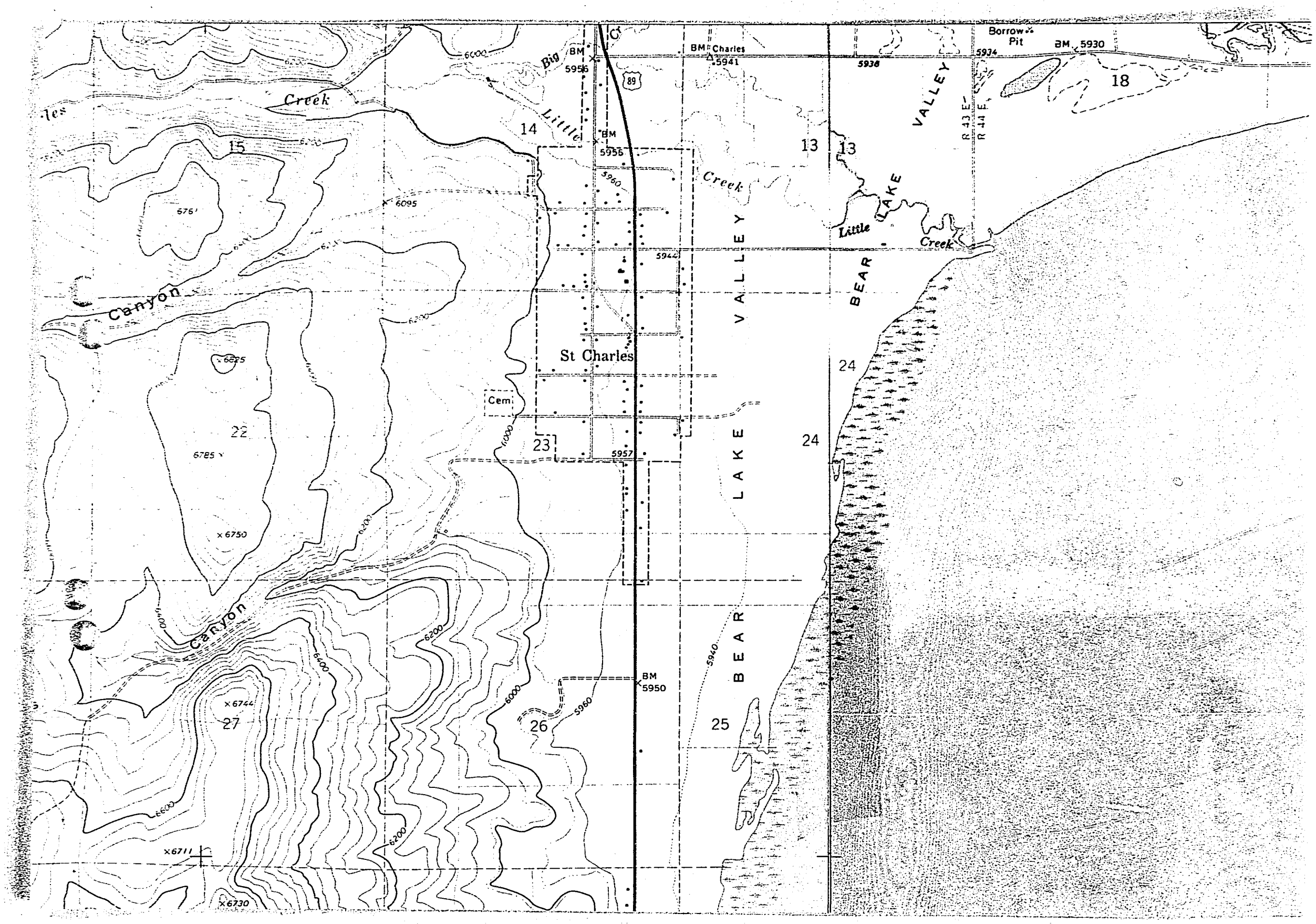
Published in the News-Examiner
Box 278 Montpelier, ID
Published May 8 and May 15
M 8,15

RECEIVED
JUN 3

Department of Water Resources
Eastern District Office

MICROFILMED


Devils Canyon
Green Canyon Spring
Green
Trail
Peter
Holiow
Spring
Jacob
Spring
Spring
Crossley
Hollow
Green
Canyon
St Charles
Creek
St Charles Spring
Little Spring
Blackstone Mine
St Charles Campground
St Charles
Pack Canyon
Trail
Blue Point Spring
Pack Trail
PORQUPINE CAMPGROUND 1 MI.
100m N
MICROFILM


Big
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Little
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Canyon
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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 11-7152 TO ESTABLISH A MINIMUM STREAM FLOW IN ST. CHARLES CREEK (LITTLE CREEK) IN THE NAME OF THE IDAHO WATER RESOURCE BOARD	CERTIFCATE OF MAILING

I HEREBY CERTIFY That on the 10th day of September, 1980, true and correct copies of the foregoing PROPOSED MEMORANDUM DECISION AND ORDER and ORDER ISSUING PROPOSAL FOR DECISION, were mailed, postage prepaid to:

Idaho Water Resource Board
Statehouse
Boise, ID 83720

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

W. M. Transtrum
P. O. Box 608
Soda Springs, ID 83276

St. Charles Irrigation Company
St. Charles, Idaho 83272

Eugene B. Stucki
361 West 2nd South
Paris, ID 83261

Charles E. Hulme
Bloomington, ID 83223

Rita I. Fleck
RITA I. FLECK

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V.

FINAL DECISION

A. Following the submission of all exceptions and briefs and oral arguments, if they are heard, the Director shall issue a final decision adopting, modifying or rejecting and replacing the proposed decision. Copies of the decision and order shall be served on all parties.

DATED this 9 day of September, 1980.

C. STEPHEN ALLRED
Director
Department of Water Resources

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B. Exceptions not in compliance with the above stated requirements will not be considered and will be deemed an acceptance of the proposed decision.

II.

BRIEFS

A. Any briefs in support of exceptions to the proposed decision shall be filed with the Director at the same time that party's exceptions are filed with the Director.

B. Any party desiring to file a brief in response to any exceptions filed by any other party may do so by filing such brief with the Director on or before the 15th day following the last day any exceptions by any other party were served upon that party desiring to respond.

III.

ORAL ARGUMENTS

A. No oral arguments before the Director on the proposed decision will be held unless specifically requested by a party filing exceptions to the proposed decision and unless that request is filed with the Director concurrently with the filing of that party's exceptions.

B. If oral arguments have been properly requested by a party filing exceptions, any other party shall have the right to present oral arguments in response to the exceptions filed, provided that party files a request with the Director on or before the 15th day following the day the last exceptions by any other party were served upon that party.

C. After all exceptions, briefs and requests for oral arguments have been received by the Director and if oral arguments have been properly requested, the Director will, within a reasonable time, set the case for oral arguments and notify each party of the place, date and hour the oral arguments will take place and of the period of time allocated for the arguments of this case. Unless the Director orders otherwise, all oral arguments shall be heard in Boise, Idaho.

IV.

CERTIFICATION OF SERVICE

A. All exceptions, briefs, requests for oral arguments and other matters filed with the Director in connection with the proposed decision shall be served on all other parties to these proceedings in accordance with Rule 7.2.

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BEFORE THE DIRECTOR OF THE DEPARTMENT

OF WATER RESOURCES OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 11-7152 TO ESTABLISH A MINIMUM STREAM FLOW IN ST. CHARLES CREEK (LITTLE CREEK) IN THE NAME OF THE IDAHO WATER RESOURCE BOARD	ORDER ISSUING PROPOSAL FOR DECISION I. C. SECTION 67-5211

C. Stephen Allred, Director of the Department of Water Resources, having reviewed the attached proposed decision prepared by his appointee, Norman C. Young, who conducted the hearing or who has read the record in this case, hereby approves the same as a proposal for decision pursuant to Idaho Code, Section 67-5211 and orders that said proposed decision and a copy of this order be served upon each of the parties to these proceedings who appeared at the hearing on June 10, 1980, of this matter or upon their attorneys in accordance with Rule 7.3 of the Rules of Practice and Procedure of this Department.

Each party to these proceedings who appeared at the hearing is hereby afforded the opportunity, pursuant to Idaho Code, Section 67-5211, to file exceptions to the attached proposed decision and to present briefs and oral agruments in accordance with the provisions of this order. Exceptions may not be filed and briefs and oral arguments may not be presented by parties who did not appear at the hearing of this case. If no timely and proper exceptions are received, an order by the Director will be entered adopting and issuing the proposed decision as his final decision.

I.

EXCEPTIONS

A. To be considered by the Director, exceptions must:

1. be received by the Director on or before the 15th day following the day of service of this Order and the proposed decision, and

2. specifically identify the portions of the proposed decision to which exceptions are made and specifically state the grounds for those exceptions.

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 11-7152 TO ESTABLISH A MINIMUM STREAM FLOW IN ST. CHARLES CREEK (LITTLE CREEK) IN THE NAME OF THE IDAHO WATER RESOURCE BOARD	CERTIFICATE OF MAILING

I HEREBY CERTIFY That on the 21th day of November, 1980, true and correct copies of the foregoing ORDER ADOPTING PROPOSED MEMORANDUM DECISION AND ORDER were mailed, postage prepaid to:

Joseph H. Nettleton, Chairman
Idaho Water Resource Board
Statehouse Mail
Boise, ID 83720

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

W. M. Transtrum
P. O. Box 608
Soda Springs, ID 83276

St. Charles Irrigation Company
St. Charles, ID 83272

Eugene B. Stucki
361 West 2nd South
Paris, ID 83261

Charles E. Hulme
Bloomington, ID 83223

Rita I. Fleck

RITA I. FLECK
Senior Secretary
Department of Water Resources

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NAME OF STREAM: St. Charles Creek

12. LEGAL DESCRIPTION OF THE POINT OF THE STREAM WHERE STREAM FLOW IF REQUESTED:
At confluence with Bear Lake, Bear Lake County, SE¼, SE¼, Section 13, T15S, R43E.

13. THE PROPOSED STREAM FLOW IN CUBIC FEET PER SECOND:

Jan	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	9	9	9	17	17	14	11	9	9	9	9

All requested flows are cubic feet/second.

14. THE PURPOSE FOR WHICH THE MINIMUM STREAM FLOW IS PROPOSED:
To maintain the present quality of fisheries and fish populations in the stream and to provide adequate spawning and rearing conditions for Bear Lake fish utilizing the stream.

15. THE PERIOD OF TIME OR SEASON OF YEAR DURING WHICH APPROPRIATION IS PROPOSED:
See above.

16. 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.

17. EVIDENCE THAT THE APPROPRIATION WOULD BE IN THE PUBLIC INTEREST AS OPPOSED TO PRIVATE INTEREST:
St. Charles Creek is considered the most important tributary of Bear Lake for spawning of cutthroat trout, rainbow trout and rainbow/cutthroat hybird trout. Trout, spawned and reared, in St. Charles Creek provide unlimited recreational use of Bear Lake adds to the local economy of the surrounding area.

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

18. EVIDENCE OR JUSTIFICATION THAT THE APPROPRIATION IS NECESSARY FOR THE PURPOSES SHOWN A BOVE:
During 1976, personnel of the Idaho Department of Fish and Game collected field data from St. Charles Creek and using this data with instream flow methodologies determined that the above requested flows are necessary for maintaining the existing wild populations and trout spawning habitat in St. Charles Creek. Methodologies, techniques and instream flow recommendations are presented in the following publication:

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

19. EVIDENCE THAT THE REQUESTED FLOW IS MINIMUM AND NOT THE IDEAL OR MOST DESIRABLE FLOW:
Based on field data the most desirable flow for spawning would be approximately 22cfs and the most desirable flow for trout rearing would be approximately 18 cfs -- see above mentioned report.

20. EVIDENCE THAT THE REQUESTED FLOW IS CAPABLE OF BEING MAINTAINED AS EVIDENCED BY RECORDS OF STREAM FLOWS:
There are no regularly recorded flows for St. Charles Creek. USGS miscellaneous streamflow measurements indicate that 11 cfs was measured in October, 1903 and 27 cfs was measured in November 1904.

21. LOCATION OF EXISTING GAGING STATION THAT CAN BE USED IN THE ADMINISTRATION OF THIS APPROPRIATION:
No gaging station exists on St. Charles Creek. A gaging device at Highway 89 bridge would be sufficent to monitor the requested flows.

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Form 202
3/78

Ident. No. 11-7152

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

RECEIVED
SEP 13 1978
Department of Water Resources
Southern District Office

To appropriate the public waters of the State of Idaho

1. Name of applicant Idaho Water Resource Board Phone 384-2215

   Post office address Statehouse, Boise, Idaho 83720

2. Source of water supply St. Charles Creek which is a tributary of Bear Lake

3. Location of point of diversion is SE ¼ of SE ¼ of Section 13 Township ~~51~~ 15 S

   Range 43 E B.M. Bear Lake County, additional points of diversion if any: ____

4. Water will be used for the following purposes:

   Amount (See remarks) (cfs or acre-feet per annum) for in stream flow purposes from _____ to _____ (both dates inclusive)

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

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

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

5. Total quantity to be appropriated:

   a. 9 to 17 cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works:

   a. Description of ditches, flumes, pumps, headgates, etc. _____

   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 _____ (Month/Day) to _____ (Month/Day) inclusive.

   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: SE ¼ of SE ¼ of Section 13 Township ~~51~~ 15 S

      Range 43E 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 the present quality of fisheries and fish populations in the stream and to provide adequate spawning and rearing conditions for Bear Lake fish utilizing the stream.

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b. If water is for irrigation, indicate acreage in each subdivision in the tabulation below:

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

Total number of acres to be irrigated _____

c. Describe any other water rights used for the same purposes as described above. None

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

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

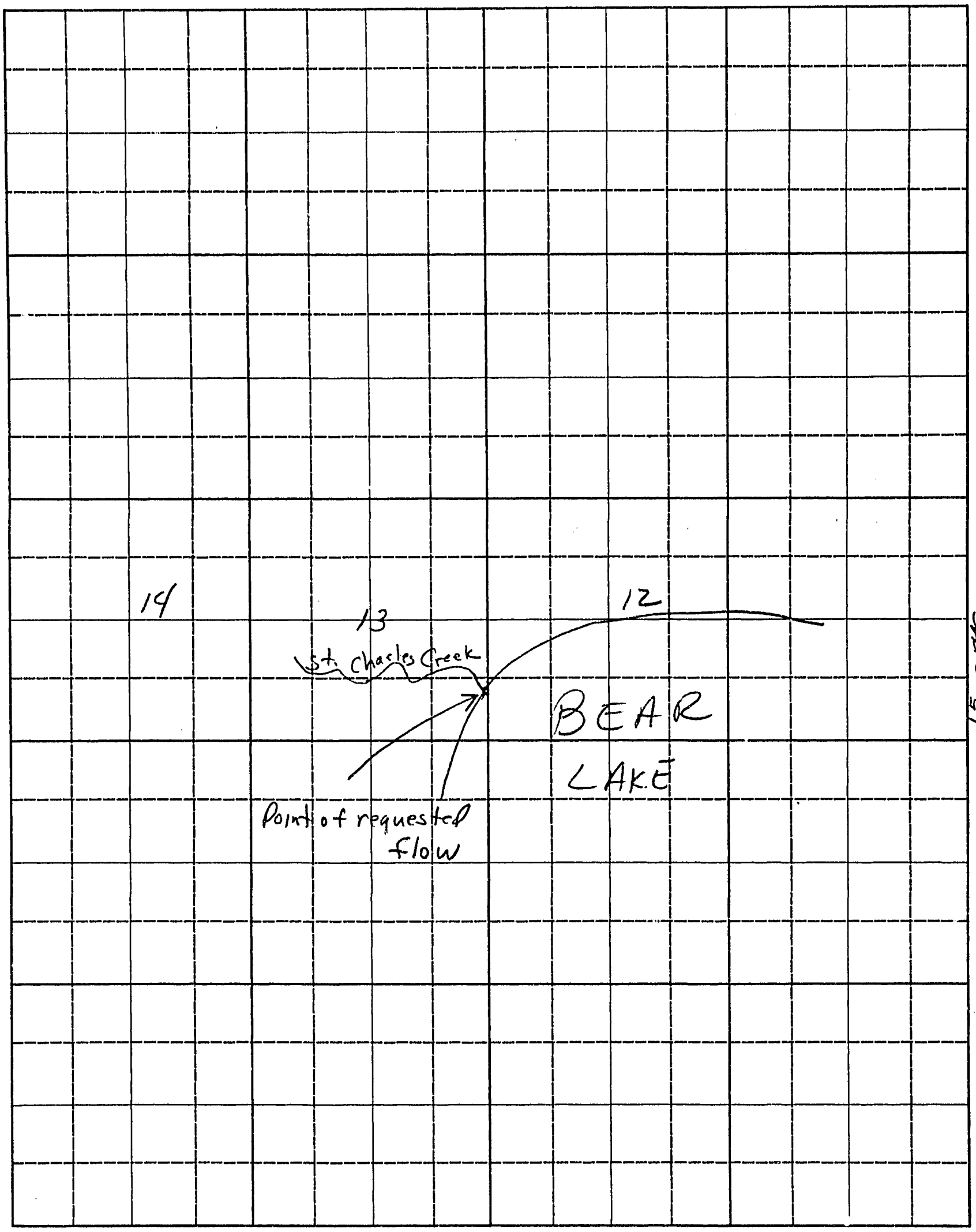
c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing _____

10. Remarks See attached sheet.

Item 4 continued:

Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
9	9	9	9	17	17	14	11	9	9	9	9

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.

T. 43 E.

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.

George R Good

(Applicant)

Received by Mailing Date 9-13-78 Time 8:15 a.m.

Preliminary check by _____ Fee $ N.A.

Receipted by _____ Date _____

Publication prepared by _____ Date _____

Published in _____

Publication dates _____

Publication approved _____ Date _____

Protests filed by: _____

_____

_____

Copies of protests forwarded by _____

Hearing held by _____ Date _____

Recommended for approval denial by _____

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. 11-7152, and said application is hereby APPROVED.

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

   a. SUBJECT TO ALL PRIOR WATER RIGHTS.

   b. Proof of construction of works and application of water to beneficial use shall be submitted on or before September 1, 19 85.

   c. The rate of diversion, if water is to be used for irrigation under this permit, when combined with all other water rights for the same land shall not exceed 0.02 cubic feet per second for each acre of land.

   d. Other: PURSUANT TO PROPOSED MEMORANDUM DECISION AND ORDER

_____

_____

_____

_____

Witness my hand this 13 day of November, 19 80.

Stephen Allred

Director

Department of Water Resources shall be installed and maintained at or near the confluence with Bear Lake, or the concrete diversion works located in Lot 1, Sec. 13, Twp. 15S, Rge. 43E, B.M. shall be rated, to monitor the flow of St. Charles Creek (Little Creek).

2) Proof of instream beneficial use of the minimum stream flow appropriated shall be submitted in a manner approved by the Department on or before September 1, 1985. The proof submitted shall include at least three years of flow data for the water course. The frequency of data accumulation must be submitted to the Director for review and approval.

3) The use of water under this 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 9TH day of September, 1980.

Norman C Young

NORMAN C. YOUNG
Hearing Officer

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6) Based upon the sworn testimony, documentation, and public statements comprising the record in this matter, a finding is made that the minimum instream flows proposed by application No. 11-7152 are 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 stream 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 would be utilized for that purpose.

9) Based upon testimony and evidence submitted concerning available flow measurement data, a finding is made that the minimum stream flow proposed for St. Charles Creek (Little Creek) is generally capable of being maintained.

CONCLUSIONS OF LAW

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

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

4) The minimum stream 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 stream flow proposed is capable of being maintained.

6) The proposed minimum stream flow extends from the confluence with Bear Lake upstream to the confluence with Blue Pond Spring located in the NW¼SE¼, Sec. 24, Twp. 15S, Rge. 42E, B.M.

ORDER

IT IS, THEREFORE, HEREBY ORDERED That Application for Permit No. 11-7152 is APPROVED Subject to the following conditions:

1) A measuring device of a type approved by the Director of the

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prevent only future development to the extent that the minimum flows would be diminished or otherwise adversely affected.

An additional concern regards the reach identified in the minimum stream flow application. Only one diversion point is expressly identified in items 1, 8(a)(1), and 11 of the application, and the advertisement. However, a reach is implied in items 5, 14, 17 and 18 of the application. Testimony related to flows within various reaches of the stream, not just to the flow at the measuring point. The upper end of the reach was testified to be Blue Pond Spring located in the NW¼SE¼, Sec. 24, Twp. 15S, Rge. 42E., B.M. To follow the intent of this minimum stream flow application, the reach rather than the point will be considered to be defined by the application.

FINDINGS OF FACT

1) On September 13, 1978 the Idaho Water Resource Board filed application for permit No. 11-7152 to appropriate a minimum stream flow in St. Charles Creek (Little Creek) which is tributary to Bear Lake pursuant to provisions of Chapter 15, Title 42, Idaho Code.

2) Application for permit No. 11-7152 proposes to appropriate a minimum instream flow in St. Charles Creek (Little Creek). The proposed rate of flow varies per month as follows:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
9	9	9	9	17	17	14	11	9	9	9	9

where all flows are in cubic feet per second.

3) The purposes of the proposed instream appropriation are to (1) maintain the present quality of fisheries and fish populations in the stream and (2) to provide adequate spawning and rearing conditions for both Bear Lake fish and St. Charles Creek (Little Creek) fish utilizing the stream.

4) Based upon testimony of the staff of the Department of Water Resources, a finding is made that four (4) decreed water rights are diverted from St. Charles Creek (Little Creek) within two (2) miles upstream from the confluence with Bear Lake. These decreed rights have a combined diversion rate of 14.65 cfs. In addition, other decreed water rights exist further upstream on St. Charles Creek.

5) All rights acquired under application for permit No. 11-7152 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.

MICROFILMED

BEFORE THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 11-7152 TO ESTABLISH A MINIMUM STREAM FLOW IN ST. CHARLES CREEK (LITTLE CREEK) IN THE NAME OF THE IDAHO WATER RESOURCE BOARD	PROPOSED 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 in St. Charles Creek, sometimes known as Little Creek, tributary to Bear 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 Montpelier News-Examiner on May 8 and 15, 1980. A public hearing was held at Montpelier, Idaho on June 10, 1980. Norman C. Young of the Department of Water Resources served as hearing officer.

Parties appearing in a formal capacity included the Idaho Water Resource Board, the Idaho Department of Fish and Game, Mr. W. M. Transtrum representing the St. Charles Irrigation Company, and State Representative Eugene B. Stucki. Formal testimony was also presented by the staff of the Idaho Department of Water Resources. One individual, Mr. Charles E. Hulme, appeared to present views and comments as a public witness.

The following Analysis, Findings of Fact, Conclusions of Law and Order are based upon sworn testimony, documentation and public statements included in the record.

ANALYSIS

The major concern expressed by the water users at the hearing was the relationship between the proposed minimum stream flow and the existing water rights. Testimony indicated that at times the flow of water into St. Charles Creek (Little Creek) at the point where Big Creek divides is reduced to zero to satisfy irrigation demands. The response to this concern was unanimous by all parties represented -- the minimum stream flow will not affect full exercise of existing water rights and will

MICROFILMED

BEFORE THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 11-7152 TO ESTABLISH A MINIMUM STREAM FLOW IN ST. CHARLES CREEK (LITTLE CREEK) IN THE NAME OF THE IDAHO WATER RESOURCE BOARD	ORDER ADOPTING PROPOSED MEMORANDUM DECISION AND ORDER

WHEREAS, C. Stephen Allred, Director of the Department of Water Resources issued and served a copy on the parties thereto on September 10, 1980, a Proposed Memorandum Decision and Order in the above-mentioned matter, pursuant to Idaho Code, Section 42-5211; and,

WHEREAS, more than fifteen days have passed since the service of the Proposed Memorandum Decision and Order; and,

WHEREAS, an exception to paragraph two of the ANALYSIS Section and Conclusion of Law No. 6 has been received; and,

WHEREAS, the ANALYSIS Section and Conclusion of Law No 6 both state that the upper end of the minimum stream flow reach is:

"Blue Pond Spring located in the NW¼SE¼, Sec. 24, Twp. 15S, Rge. 42E, B.M."; and,

WHEREAS, the ANALYSIS Section and Conclusion of Law No. 6 should be amended to state that the upper end of the minimum flow reach is:

"The confluence of 'Little Creek' and the main channel of St. Charles Creek, located in the SE¼NW¼, Sec. 14, Twp. 15S, Rge. 43E, B.M.";

IT IS, THEREFORE, HEREBY ORDERED that said Proposed Memorandum Decision and Order together with the amended ANALYSIS and Conclusion of Law No. 6 be adopted as the Final Decision and Order.

Dated this 13 day of November, 1980.

C. STEPHEN ALLRED
Director

MICROFILMED

CERTIFICATE OF MAILING

I HEREBY CERTIFY that on the 26th day of May, 1981, a true and correct copy of the foregoing ORDER was mailed, postage prepaid, addressed to:

Idaho Water Resource Board
Statehouse
Boise, Idaho 83720

Idaho Department of Fish & Game
Statehouse Mail
Boise, Idaho 83720

W. M. Transtrum
P.O. Box 608
Soda Springs, Idaho 83276

St. Charles Irrigation Company
St. Charles, Idaho 83272

Eugene B. Stucki
361 West 2nd Street
Paris, Idaho 83261

Charles E. Hulme
Bloomington, Idaho 83223

Rita I. Fleck

RITA I. FLECK
Senior Secretary
Department of Water Resources

MICROFILMED

BEFORE THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 11-7152 TO ESTABLISH A MINIMUM STREAM FLOW IN ST. CHARLES CREEK (LITTLE CREEK) IN THE NAME OF THE IDAHO WATER RESOURCE BOARD	)	O R D E R

WHEREAS, C. Stephen Allred,, Director of the Department of Water Resources issued an order approving the above-referenced application for permit on November 13, 1980; and

WHEREAS, a copy of the approved application was submitted by the Department to the Forty-Sixth Idaho Legislature by the fifth legislative day of the First Regular Session pursuant to § 42-1503, Idaho Code (Supp. 1980) under cover letters dated January 12, 1981 addressed to the President Protem of the Senate and to the Speaker of the House; and

WHEREAS, § 42-1503, Idaho Code, provides that if the Legislature fails to act on an application prior to the end of the regular session to which it was submitted, the application shall be considered approved; and

WHEREAS, the Final Edition of Daily Data for the Forty-Sixth Idaho Legislature, First Regular Session, January 12, 1981 through March 27, 1981 shows no action taken by the Legislature with respect to Application for Permit No. 11-7152;

IT IS, THEREFORE, HEREBY ORDERED that pursuant to I.C. § 42-1503 Application for Permit 11-7152 be considered finally effective as approved by the Director on November 13, 1980.

DATED this 18th day of May, 1981.

A. KENNETH DUNN
Director

MICROFILMED



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~~ #37-7734 - Bancroft Springs

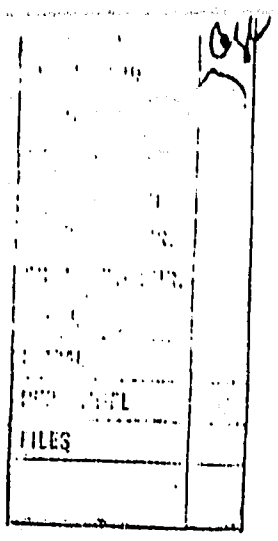
Northern Region

Application for Permit #95-7874 - Wolf Lodge Creek

Eastern Region

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

MICROFILMED



95-7874

Copy to:
Board members
Soldero
: water file

✓ 11-7152

American Falls, Idaho
October 24, 1978

RECEIVED
OCT 25 1978
Department of Water Resources

Mr. George Yost
Chairman I.J.R.D.
State House
Boise, Idaho 83720

Dear Mr. Yost:

I strongly support the application by the Water Resources Board for the minimum flows for the following springs and creeks:

36-7818 --Vinyard Creek
36-7819 - Briggs Springs
36-7820 -Blind Canyon Springs
-Lower White Springs
36-7821 -Banbury Springs
36-7822 Silver Creek 37-7728
Silver Creek 37-7727
61-7373 -Bancroft Springs
95-7874 Wolf Lodge Creek
11-7152- St. Charles Creek

Your favorable consideration of this matter will be much appreciated.

Yours very truly

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

MICROFILMED

f. — Copy to

ED CHANEY • Rural Route 1 • Eagle, Idaho 83616 • (208) 939-9249

October 24, 1978

RECEIVED
OCT 26 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
36-7819 - Briggs Springs
36-7820 - Blind Canyon Springs
36-7821 - Lower White Springs
36-7822 - Banbury Springs
37-7728 - Silver Creek
37-7727 - Silver Creek
61-7373 - Bancroft Springs
95-7874 - Wolf Lodge Creek
11-7152 - St. Charles Creek

MICROFILMED
Pacific Northwest Natural Resource Consultants

320 South Uni.L.Appl.
Boise, Idaho 83705
November 4, 1978

RECEIVED
NOV 9 1978
Department of Water Resources

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

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 - Vinyard Creek, 36-7819 - Briggs Springs, 36-7820 - Blind Canyon Springs, 36-7821 - Lower White Springs, 36-7822 - Banbury Springs, 37-7727 and 37-7723 - 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,

Dali Obee

Doli Obee

MICROFILMED

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

Joe Wyllie
President, BVFF

JW:jl

MICROFILMED

IDAHO DEPARTMENT of PARKS & RECREATION

Statehouse Mail 2177 Warm Springs Ave. Boise Idaho 83720 (208) 384 - 2154

Dale R. Christiansen, Director
R. P. Peterson, Deputy Director

John V. Evans, Governor

STATEMENT OF DALE CHRISTIANSEN, DIRECTOR
IDAHO STATE PARKS & RECREATION DEPT.
SUPPORTING APPLICATION FOR MINIMUM FLOWS FOR
ELEVEN APPLICATIONS SUBMITTED BY FISH & GAME DEPT.

TO: Idaho Water Resource Board

DATE: November 16, 1978
Boise, Idaho

Mr. Chairman, our department, through our Statewide Outdoor Recreation Plan has identified a need to establish minimum flows as a very high priority for the preservation of certain recreation activities throughout Idaho. Among those activities that rely heavily on Idaho's flowing waters include stream fishing, white water boating, kayaking, and also visual enjoyment. Although, by many standards Idaho has an abundance of flowing waters at certain times, Idaho is also experiencing a rapid decline in the availability of flowing waters for recreation needs. We believe that the establishment of minimum flows for not only fish and wildlife purposes but also for other recreation purposes, is a need that has long been overlooked in the State of Idaho. As a general statement, we support the establishment of maintenance as well as minimum flows for many of Idaho's flowing waters for fish & wildlife purposes as well as for other recreational use of our free flowing waters.

In specifics, we are very supportive of having the Water Resources Board leave intact the application for minimum flows by the Idaho Department of Fish & Game to establish minimum flows for selected springs in the Hagerman Valley (Blind Canyon, Malad River, and Vineyard Creek) which I understand are a part of the applications being studied at this time.

Several of these sections relate to a direct interest our department has via our state park program. Several years ago we started work on the Malad Gorge State Park outside of Bliss, Idaho on the Malad River. We are nearing completion of our Development Phase and expect to have the park opened for use within the next year to year and a half. One of the key and major features of the Malad Gorge State Park is the gorge and the river that runs through it. Much of the water flow in this particular stretch arises from the springs located on state park property at the foot of the gorge. These springs help to improve the quality of the water that runs through the Malad Gorge and also makes it a significant trout fishery. The water is of high quality and is one of the key attractions of the state park. For these reasons, we feel that any depletion of the quality or quantity of the spring waters in the Malad River would have a detrimental effect on our state park program.

MICROFILMED

The Department has also been supportive of the efforts made by other public agencies, notably the Bureau of Land Management, in efforts to establish Vineyard Creek and Devils Corral Area as a recreation area. This area was being looked at as a potential state park but the concept has been set aside as the BLM is working to establish the area as a BLM recreation site. We have been cooperatively working with the BLM over the past year on this project. We feel that Vineyard Creek possesses some unique features that should be preserved for posterity. The establishment of minimum flows would ensure this preservation.

The Department further supports the establishment of minimum flows for Silver Creek as this is one of the finest trout streams in Idaho and a treasure with international recognition. Any request to reduce the quality or quantity of this area should be studied very closely. Although not mentioned in the application under review, we also encourage the Department of Water Resources to investigate setting minimum flows for Devils Corral, Crystal, and Niagra Springs which are located in the Hagerman Valley near Blind, Bancroft, and Vineyard Springs.

We appreciate the Water Resource Board giving us the opportunity to make a statement concerning the pending application for minimum flows. If our department can provide the Board or the Department of Water Resources with any further information, we would be happy to do so.

Thank you.

Dale R. Christiansen
Director

cc: Herm McDevitt
Merle Allison
Joe Greenley

MICROFILMED

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

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

L. GLEN SAXTON
Chief, Operations Bureau

LGS:lr

Enc: 11

MICROFILMED

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:

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Sincerely,

L. Glen Saxton

L. GLEN SAXTON
Chief, Operations Bureau

LGS:lr

Enc: 11

MICROFILMED

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, 37-7822, 37-7727, 37-7728, 37-7734, 37-7739, 95-7874, 11-7152, 36-7818, 36-7819, 36-7820

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

Gentlemen:

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Sincerely,

L. Glen Saxton

L. GLEN SAXTON
Chief, Operations Bureau

LGS:lr

Enc: 11

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF HEALTH AND WELFARE

DIVISION OF ENVIRONMENT
636 Pershing
Pocatello, Idaho
83201

5 December 1978

RECEIVED
DEC 7 1978
Department of Water Resources

L. Glen Saxton, Chief
Operations Bureau
Idaho Department of Water Resources
Statehouse
Boise, Idaho 83720

Re: Application #11-7152 (Bear Lake)

Dear Mr. Saxton:

We have reviewed the subject application for a permit to appropriate the public waters of the State of Idaho, and believe the water diversion will not impact water quality.

Yours very truly,

Henry L. Moran

Henry L. Moran, P.E.
Rgnl. Environmental Supervisor

HLM/md

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF HEALTH
AND WELFARE

DIVISION OF ENVIRONMENT
Statehouse
Boise, Idaho 83720

801 Reserve Street

December 8, 1978

RECEIVED
DEC 11 1978
Department of Water Resources

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

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.

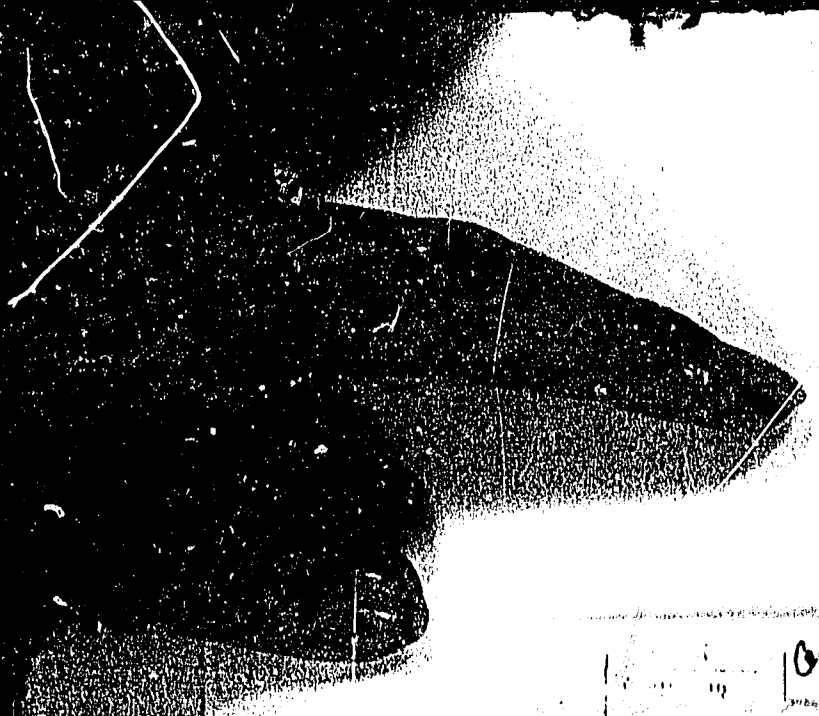
Sincerely,

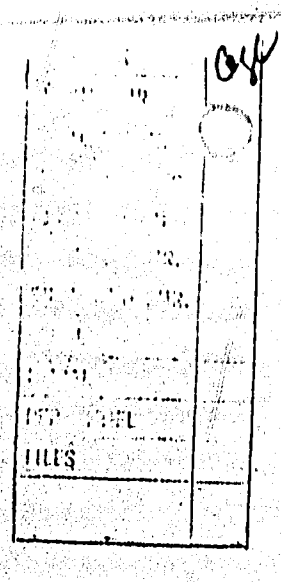
Jon Wroten
Senior Environmental Quality Specialist

JW/ap

cc: David Sanders

MICROFILMED





11-7152

Copy to:
Board members
Soldero
: water rights
Sites

American Falls, Idaho
October 24, 1978

RECEIVED
OCT 25 1978
Department of Water Resources

Mr. George Yost
Chairman I.W.R.B.
State House
Boise, Idaho 83720

Dear Mr. Yost:

I strongly support the application by the Water Resources Board for the minimum flows for the following springs and creeks:

Vinyard Creek
Briggs Springs
Blind Canyon Springs
Lower Mike Springs
Banbury Springs
Silver Creek 37-7728
Silver Creek 37-7727
Bancroft Springs
Wolf Lodge Creek
St. Charles Creek

Your favorable consideration of this matter will be much appreciated.

Yours very truly

Joe F. Allen

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

MICROFILMED

Copy to

ED CHANEY • Rural Route 1 • Eagle, Idaho 83616 • (208) 939-0714

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	95-7874 - Wolf Lodge Creek
36-7822 - Banbury Springs	11-7152 - St. Charles Creek

MICROFILMED

Portneuf Valley Audubon Society



RECEIVED
JAN 8 197
tment of W/a

January 5, 1979

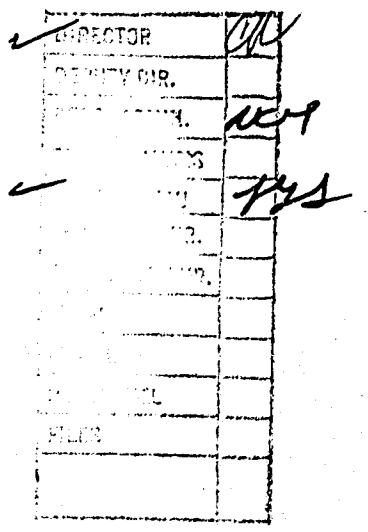
Norman Young
Dept. Of Water Resources
State House
Boise, Idaho 83720

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



MICROFILMED

TABLE 2. WATER DISTRICTS 37-RR and 37M XXXAR

Daily Discharge in second feet of LITTLE WOOD RIVER AT RICHFIELD NO.10 for year ending Sept. 30th 1977

Day	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1							156	46	47	36	35	37
2							153	48	43	40	34	38
3							161	51	46	41	34	38
4							154	53	46	43	35	38
5							156	52	45	44	33	44
6							150	55	45	44	33	39
7							148	59	44	43	34	39
8							140	59	42	43	35	36
9							127	61	43	43	34	36
10							120	56	43	42	32	38
11							112	50	45	43	32	38
12							82	46	44	39	32	38
13							76	44	44	41	32	40
14							74	41	43	40	32	39
15							74	40	43	39	32	40
16							70	39	44	38	32	40
17							68	44	43	38	33	42
18							67	50	44	36	33	44
19							65	57	46	37	33	44
20							57	60	47	39	33	43
21							50	55	47	36	34	43
22							49	52	50	37	34	44
23							50	51	50	40	33	44
24							51	50	40	43	32	42
25							51	54	43	44	33	41
26							50	57	43	46	36	40
27							50	60	43	45	36	40
28							51	58	41	44	36	40
29							47	58	42	41	33	44
30							48	57	40	38	40	47
31								51		36	40	
							2710.0	1614.0	1330.0	1261.0	1056.0	1216.0
MEAN							90.3	52.1	44.3	41.2	34.1	40.5
A.F.							5375.2	3201.3	2638.0	2501.2	2094.0	2411.9

YEAR OR PERIOD	MEAN	50.2
	ACRE FEET	18,222.3

MICROFILMED

TABLE 1.

IDAHO DEPARTMENT OF WATER RESOURCES — SUMMARY HYDROGRAPH DATA

LITTLE WOOD RIVER NR RICHFIELD — 13151000

***** MEAN DAILY FLOW BY MONTH *****

MONTH	MAXIMUM	YEAR	DAY	MINIMUM	YEAR	DAY	AVERAGE	COUNT
OCT	252.	1966	23	53.	1961	1	157.	795
NOV	292.	1959	11	60.	1956	16	167.	750
DEC	455.	1965	25	75.	1962	11	159.	572
JAN	230.	1965	4	35.	1962	22	144.	558
FEB	405.	1957	27	80.	1962	27	152.	510
MAR	545.	1971	31	90.	1960	1	183.	630
APR	829.	1969	14	50.	1961	29	245.	720
MAY	816.	1969	1	41.	1961	29	210.	744
JUN	626.	1967	16	45.	1961	24	176.	720
JUL	436.	1965	3	38.	1961	24	122.	744
AUG	265.	1965	23	41.	1961	4	106.	744
SEP	234.	1971	8	49.	1960	22	132.	720

***** YEARLY FLOW DATA *****

MAXIMUM	YEAR	MINIMUM	YEAR	AVERAGE	COUNT
829.	1969	35.	1962	163.	8207

***** MEAN MONTHLY FLOW DATA *****

MONTH	MAXIMUM	YEAR	MINIMUM	YEAR
OCT	223.	1966	95.	1967
NOV	212.	1971	120.	1962
DEC	217.	1965	102.	1962
JAN	192.	1965	82.	1962
FEB	201.	1963	108.	1962
MAR	291.	1971	117.	1961
APR	745.	1969	90.	1961
MAY	637.	1969	47.	1961
JUN	500.	1967	49.	1961
JUL	256.	1965	45.	1961
AUG	198.	1965	46.	1961
SEP	209.	1965	57.	1966

***** MEAN ANNUAL FLOW DATA *****

MAXIMUM	YEAR	MINIMUM	YEAR
268.	1969	89.	1961

NO. 341-T9 DIETZGEN GRAPH PAPER
6 MONTHS BY DAYS
DIETZGEN CORPORATION
MADE IN U.S.A.

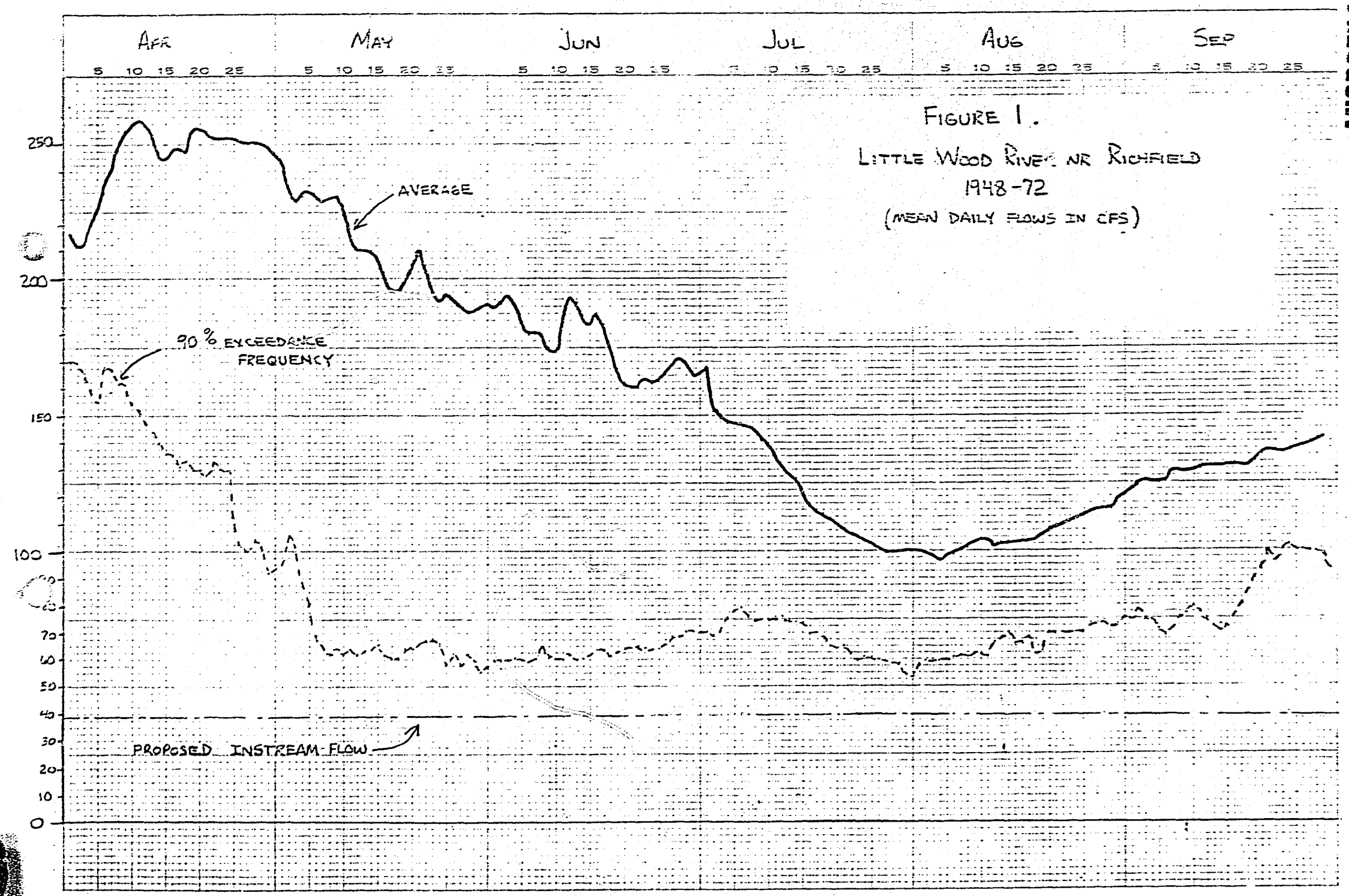


FIGURE 1.

LITTLE WOOD RIVER NR RICHFIELD
1948-72
(MEAN DAILY FLOWS IN CFS)

MICROFILMED

LITTLE WOOD RIVER

The section of stream specified in the application is that portion of the Little Wood River from its confluence with Silver Creek downstream to the Dietrich Canal Diversion. The Little Wood River from Carey to the confluence of Silver Creek is normally dry during the summer due to irrigation diversions and channel losses. During most irrigation seasons, Silver Creek provides the only inflow to the lower reach.

There are good streamflow records for the Little Wood River near Richfield site, which is at the lower end of the specified reach. There are records for the April - September period for the years 1911 to 1972. In addition, the years 1955-72 have data for the non-irrigation season as well. An analysis of data for the period 1948-72 was made using the summary hydrograph program. Figure 1 illustrates average daily, 90 percent exceedance (the daily flows equalled or exceeded 90 percent of the time), and the proposed instream flow for the months of April through September. Table 1 illustrates other summary hydrograph data for the Little Wood River near Richfield site. This gaging station was discontinued by the USGS in 1972. It is still operated during the irrigation season by Water District No. 37. Table 2 illustrates the flow for the 1977 irrigation season.

It can be seen from these data that there generally is sufficient water present for the instream flow. The 1977 season was very dry: Flows were slightly less than 39 cfs most of the month of August, with a few days in July and September having less than 39 cfs as well.

WTO:cjs

Attachments

MICROFILMED

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

MEMORANDUM

TO: Glen Saxton DATE: September 20, 1979

FROM: Bill Ondrechen, Hydrology Section WTO

SUBJECT: Analysis of Instream flow applications 37-7789 and 11-7152 (Little Wood River and St. Charles Creek)

ST. CHARLES CREEK

There appears to be some confusion as to the name of the stream described in the applicaion. According to the names on the USGS 7½ minute maps, the stream that enters Bear Lake in SE¼SE¼, Section 13, Township 15 South, Range 43 East is called Little Creek. St. Charles Creek flows in a well defined channel until about the middle of Section 14, at which point the channel forks (see map). The north fork, called both Big Creek and St. Charles Creek, flows northward to become tributary to Spring Creek, and ultimately the swamp west of Mud Lake. The south fork, Little Creek, flows into Bear Lake and is the stream to which application has been made, according to the legal description.

Streamflow records are available for St. Charles Creek at a point above all diversions (about 4½ miles upsteam from the mouth of Little Creek) for the period 1962-66. Also, a record for the 1945 irrigation season is available for St. Charles Creek (Big Creek) about a mile below the point where it forks. There are no measurements available (to my knowledge) of Little Creek. There are several diversions made from both St. Charles and Little creeks.

The following table lists the average monthly flows in cubic feet per second for the St. Charles Creek above the diversion site (drainage area 17.4 sq. mi.), for the 1962-66 period.

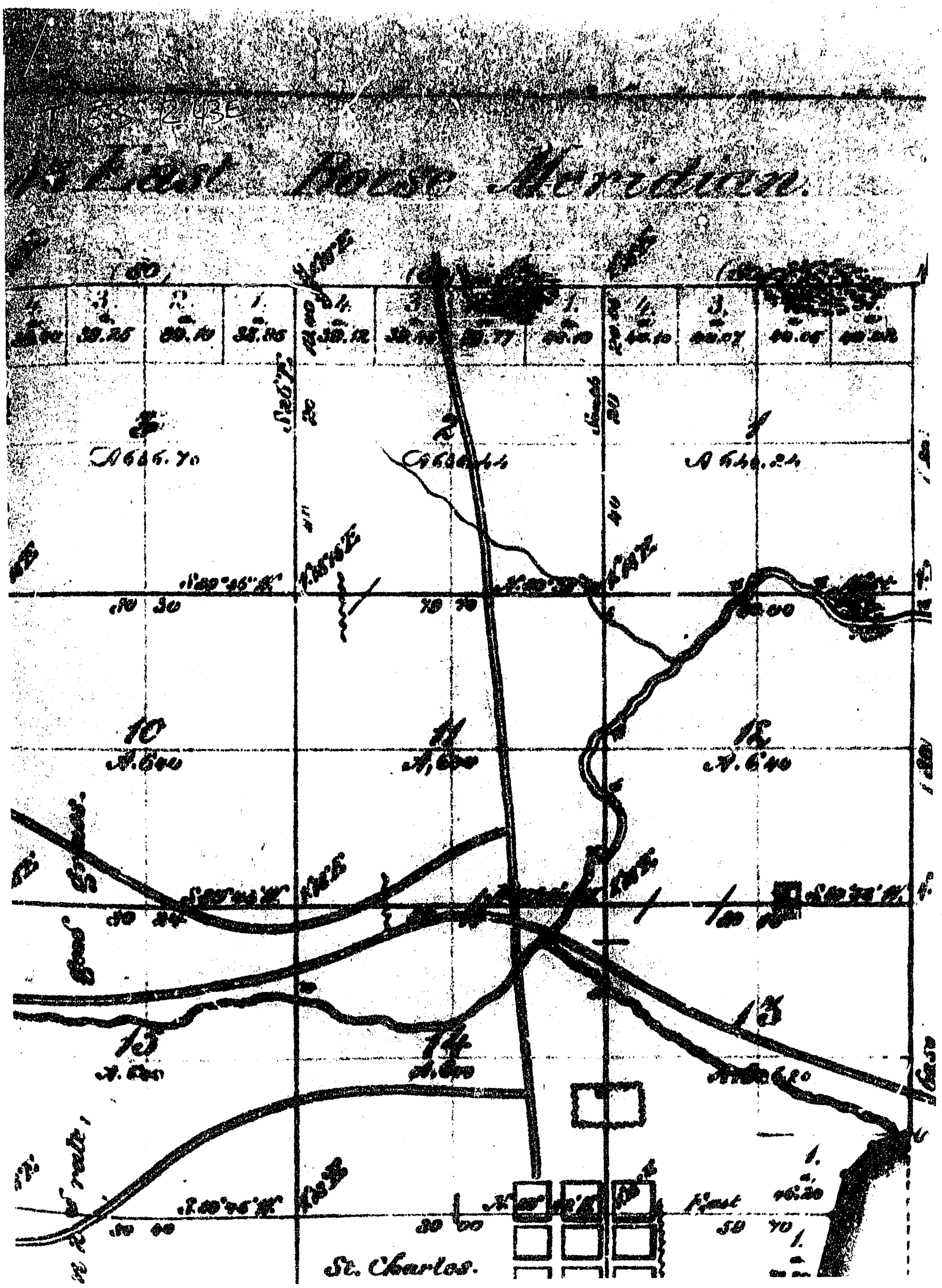
Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
36	33	30	27	27	26	57	149	150	69	48	41

Since nothing is known about the channel at the forks, there is not sufficient information to determine water availability for the proposed instream flow.

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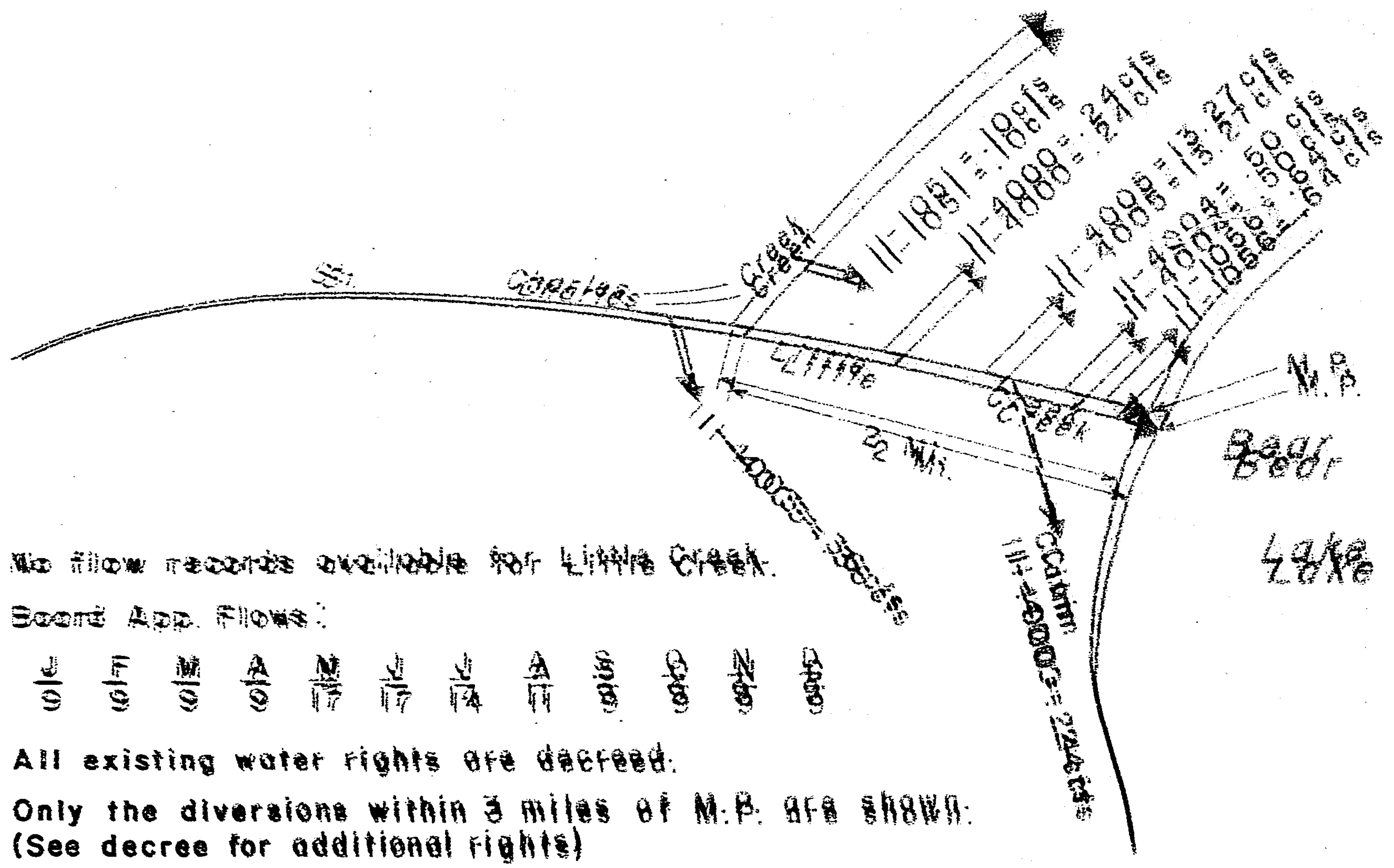
T 16 S. R 2 E

Beat Nine. Meridian.



LITTLE CREEK

11-7152



No flow records available for Little Creek.

Board App. Flows:

J	F	M	A	M	J	J	A	S	O	N	D
9	9	9	9	17	17	14	11	9	9	9	9

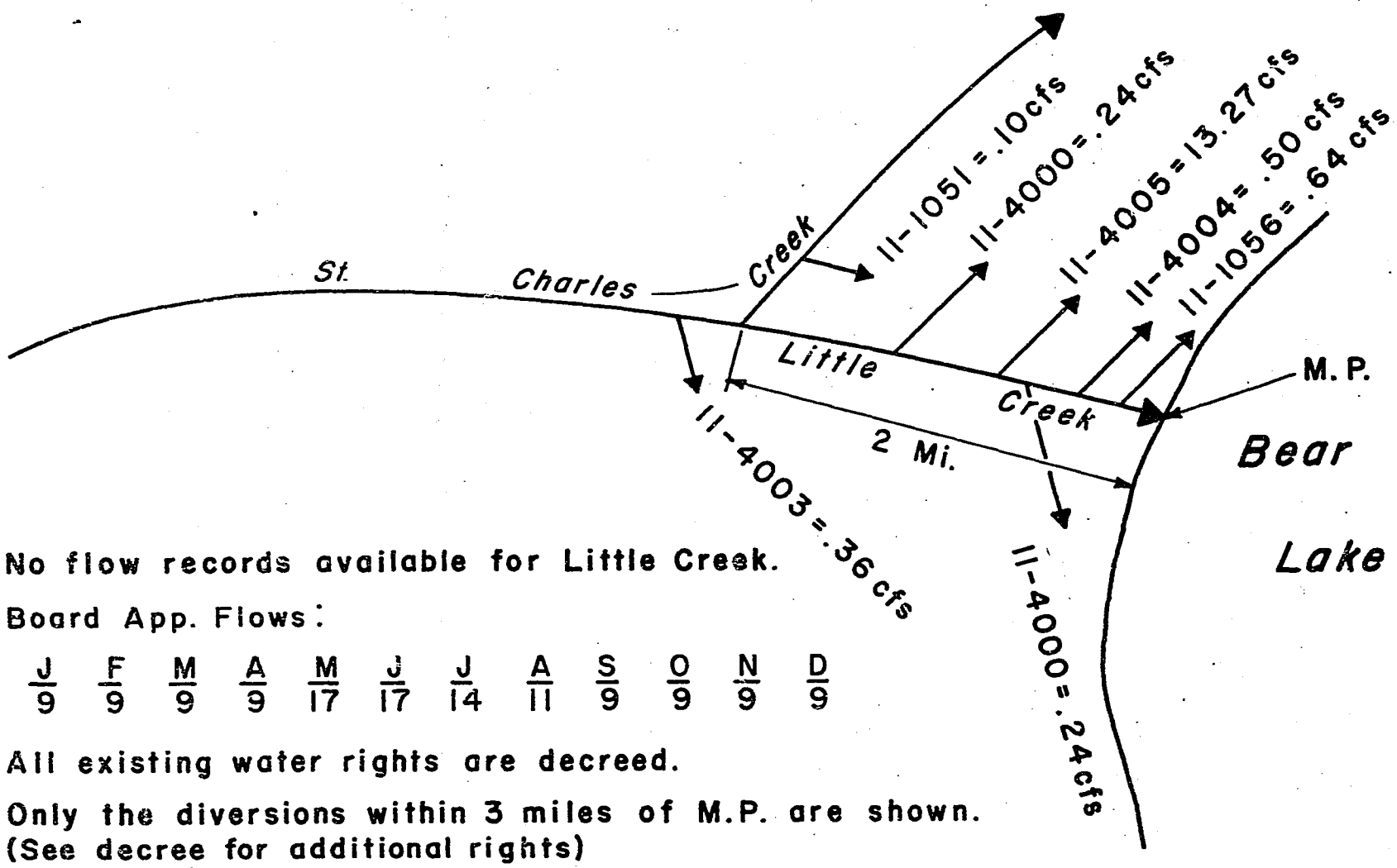
All existing water rights are decreed.

Only the diversions within 3 miles of M.P. are shown.
(See decree for additional rights)

MICROFILMED

LITTLE CREEK

II-7152



No flow records available for Little Creek.

Board App. Flows:

J	F	M	A	M	J	J	A	S	O	N	D
9	9	9	9	17	17	14	11	9	9	9	9

All existing water rights are decreed.

Only the diversions within 3 miles of M.P. are shown.
(See decree for additional rights)

11- 7152

PERMIT AND LICENSED RIGHTS ON ST. CHARLES CREEK (Surface) BASIN 11 CO., IDAHO

AS RECORDED IN DEPARTMENT OF RECLAMATION, STATE OF IDAHO

19____ Revised _____ Water Dist. No._____

LICENSE	PERMIT	NAME	AMT.	Date of Filing or Priority	Point of Diversion				PLACE OF USE, REMARKS, ETC.
					Subdiv.	Sec.	Twp.	Rge.	
11-1092		St. Charles, City of	1.0	3-11-1893	NENE	19	15S	43E	Municipal purposes for the City of St. Charl
11-1055		St. Charles Irrigation Company	75.5	3-11-1893	NWNW SENE	20 16	15S	43E	W½NW¼, SW¼, SWSE, Sec. 1, E½, E½NW¼, SW¼, Sec E½, N½NW¼, SENW, SW¼, Sec. 11, Sec. 12, Sec.
					SENW SENW	15 15	15S	43E	E½, NW¼, N½SW¼, SESW, Sec. 14, E½NE¼, SWNE, SWSW, NESE, Sec. 15, E½, E½NW¼, SW¼, Sec. 23,
					SENW NWSW	14 2	15S	43E	W½, W½NE¼, Sec. 24, NW¼, W½SW¼, Sec. 25, E½, E½SW¼, Sec. 26, NE¼, NENW, N½SE¼, SESE, Sec.
					NENE	14	15S	43E	W½NW¼, W½SW¼, Sec. 36, T. 15S, R. 43E; S½SW¼, W½NW¼, SENW, NWNW, Sec. 18, T. 15S, R. 44E,
									S½NW¼, N½SW¼, Sec. 31, T. 14S, R. 44E, B.M.
11-1045		Bateman, Ben	5.35	3-01-1894	NWNW	7	15S	44E	S½NE¼, SENW, Sec. 36, T. 14S, R. 43E, B.M.
11-1043		Thornock, Ronald	2.12	3-01-1894	NWNW	7	15S	44E	N½NW¼, Sec. 7, S½SW¼, NWNW, Sec. 6, T. 15S,
11-1044		Bateman, Ray	2.04	3-01-1894	NWNW	7	15S	44E	R. 44E, B.M.
11-1046		Bunderson, Augusta P.	0.27	3-01-1894	NWNW	7	15S	44E	NE¼NE¼, Sec. 12, T. 15S, R. 43E, B.M.
11-4006		Dunford, J. Hulme	9.92	3-01-1894	NWNW	7	15S	44E	SW¼SE¼, S½SW¼, Sec. 31, T. 14S, R. 44E; SE¼, E½SW¼, Sec. 36, T. 14S, R. 43E; NW¼NW¼, E½NW¼
									Sec. 1, T. 15S, R. 43E, B.M.
11-1047		Hemmert, Dwight H. & Hervin L.	3.88	3-01-1894	NWNW	7	15S	43E	E½NE¼, N½SE¼, Sec. 1, T. 15S, R. 43E, B.M.
11-1048		Hemmert, Lorenzo H. & Robert	2.57	3-01-1894	NWNW	7	15S	44E	NW¼SE¼, N½SW¼, S½NW¼, Sec. 7, T. 15S, R. 44E,
11-1049		Hemmert, Robert H.	0.32	3-01-1894	NWNW	7	15S	44E	SE¼SW¼, SW¼SE¼, Sec. 7, T. 15S, R. 44E, B.M.
11-4005		Payne, Patience	13.27	3-01-1894	NESE	13	15S	43E	SW¼NW¼, Lots 3, 4, & 5, Sec. 18, T. 15S, R. 4 B.M.
11-1052		Peterson, Bertha A.	0.97	3-01-1894	NWNW	7	15S	44E	W½NE¼, Sec. 1, T. 15S, R. 43E, B.M.
11-1053		Peterson, Weldon J.	1.63	3-01-1894	NWNW	7	15S	44E	S½SE¼, Sec. 1, T. 15S, R. 43E, B.M.
11-1054		Pugmire, Vivian Lamont	0.65	3-01-1894	NWNW	7	15S	44E	S½SW¼, Sec. 7, T. 15S, R. 44E, B.M.
11-4004		(Being purchased by Swenson, Leon C. Wayne J. Transtrum)	0.24	3-01-1894	NENE	13	15S	43E	E½SE¼, Sec. 13, T. 15S, R. 43E, B.M.
11-4003		Thornock, Ronald	0.92	3-01-1894	NWNW	7	15S	44E	SW¼SW¼, Sec. 36, SE¼SE¼, Sec. 35, T. 14S, R. 43E, B.M.

PERMIT AND LICENSED RIGHTS ON ST. CHARLES CREEK (Surface) BASIN 11 CO., IDAHO
AS RECORDED IN DEPARTMENT OF RECLAMATION, STATE OF IDAHO
19 Revised Water Dist. No.

LICENSE	PERMIT	NAME	AMT.	Date of Filing or Priority	Point of Diversion				PLACE OF USE, REMARKS, ETC.
					Subdiv.	Sec.	Twp.	Rge.	
11-1056		Transtrum, Whitney J.	0.64	3-01-1894	SESE	13	15S	43E	NE¼SW¼, NW¼SE¼, Sec. 13, T. 15S, R. 43E, B.M.
11-4004		Utah Power & Light Company	0.50	3-01-1894	NESE	13	15S	44E	Lots 3 & 4, Sec. 17, Lot 2, Sec. 18, T. 15S, R. 44E, B.M.
11-1057		U. S. Forest Service	0.07	3-01-1894					Points of diversion: School House Hill, Hidde Porcupine Canyon, Minnetonke Cave, Cloverleaf Dry Canyon, Blue Pond, Davis Canyon, North Fo Crossley Hollow Springs (all of which are poi of diversion, and excepting Crossley Hollow S are situated in the Cache Nat'l Forest.)
11-4001		Arnell, Cleneth E.	0.2	8-29-1903	NESE	9	15S	43E	NE¼SE¼, Sec. 9, T. 15S, R. 43E, B.M.
11-1059		U. S. Forest Service	0.5	5-28-1906					Original diversion at Blue Pond Spring for mi purposes, with subsequent other points of use including: Porcupine, Minnetonka Cave, & Clo leaf Springs (all of which points are situate within the Cache Nat'l Forest.)
11-4003		c/o Bunderson, Iola Whitney Bunderson	0.36	4-15-1916	SWNW	14	15S	43E	S½NW¼, Sec. 14, T. 15S, R. 43E, B.M.
11-2097		Michaelson, Glenn	1.26	4-03-1940	NWNE	2	15S	43E	W½NE¼, Sec. 2, T. 15S, R. 43E, B.M.
11-4001		Arnell, Cleneth E.	0.02	5-12-1945	NESE	9	15S	43E	NE¼SE¼, Sec. 9, T. 15S, R. 43E, B.M.
11-1051		Payne, Patience	0.10	1-01-1965	NWNE	14	15S	43E	NW¼NE¼, Sec. 14, T. 15S, R. 43E, B.M.

WATER RIGHT ANALYSIS FORM

- DATA ENTRY -

Identification No. _____ / 11-7152
Old No. New No.

Record

1, 2 & 3 Original Owner: Idaho Water Resource Board

Address: Statehouse, Boise, ID 83720

Present Owner:

Address:

4. A. Source of Water St. Charles Creek

B. Tributary of: Bear Lake

5. A. Stage (A,P,L,D,S,J): A

B. Status (D,L,R,C,A,I,F - leave blank if valid):

C. Priority Date: 9/13/78

D. County: 07

E. Total Diversion Rate: 17 cfs

F. Total Diversion Volume:

G. Transfer/Amendment (P,T of A or blank):

H. Water District:

I. DLE/Carey Act (D,C or blank):

J. Right Basis (for adjudication claims A,B,C only):

	Tract	Sec.	Twp.	Rge.	Gov't Lot	Rediv.
6. A. Point of Diversion	SESE	13	15S	43E		

7. Period of Use, Use, Diversion Rate/Volume:

from 1-1 to 12-31 for N (in stream flows) purposes. Amount 17 (cfs or ~~AC-FT/yr~~)

from _____ to _____ for _____ purposes. Amount _____

from _____ to _____ for _____ purposes. Amount _____

from _____ to _____ for _____ purposes. Amount _____

from _____ to _____ for _____ purposes. Amount _____

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8. Use Code: N

TWP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼			
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SE¼	SW¼
				See remarks														

9. A. Decree Name:

B. Decree Date:

10. Remarks: St. Charles Creek below SCSE Sec 13 Twp 15S, Rge 45E

11. Other Uses (Non-irrigation explanatory information):

In stream flow data, see file

12. Other Rights for Same Use:

13. A. Proof Due Date:

B. Date Permit Approved or Denied:

C. Protested Date:

D. Hearing Date:

E. Old Number:

F. Proof Made (P or blank):

G. Field Exam Made (P,R,F or blank):

H. Conditions of Approval:

14. Diversion Means (brief narrative): none

TRANSTRUM, BUDGE & LARSON
CHARTERED
ATTORNEYS AT LAW
240 South Main - P.O. Box 608
SODA SPRINGS, IDAHO 83276

Wallace M. Transtrum
Randall C. Budge
A. Bruce Larson

Soda Springs - (208) 547-2186
Montpelier - - (208) 847-1876

June 2, 1980

Mr. C. Stephen Allred, Director
Idaho Dept. of Water Resources
Statehouse
Boise, Idaho 83720

RE: APPLICATION NO. 11-7152

Enclosed is the Notice of Appearance which we are submitting on behalf of St. Charles Irrigation Co.

Very truly yours,

TRANSTRUM, BUDGE & LARSON, CHARTERED

Randall C. Budge

RCB:cls

Enclosure

RECEIVED
JUN 4 1980
Department of Water Resources

MICROFILMED

RECEIVED
JUN 4 1980
Department of Water Resources

IN THE OFFICE OF THE DIRECTOR OF THE
IDAHO DEPARTMENT OF WATER RESOURCES

IN THE MATTER OF APPLICATION NO. 11-7152 FOR PERMIT TO APPROPRIATE MINIMUM STREAM FLOW OF ST. CHARLES CREEK, TRIBUTARY TO BEAR RIVER FILED 9-13-78 BY THE IDAHO WATER RESOURCE BOARD	NOTICE OF APPEARANCE

NOTICE IS HEREBY GIVEN that St. Charles Irrigation Co. of St. Charles, Idaho, by and through their attorneys, Transtrum, Budge & Larson, Chartered, of P.O. Box 608, Soda Springs, Idaho, intends to formally appear at the public hearing on the above-entitled application to be held in the City Auditorium of Montpelier, Idaho, at 9:00 a.m. on June 10, 1980, for the purpose of presenting evidence and testimony and cross-examining witnesses.

DATED this 2nd day of June, 1980.

TRANSTRUM, BUDGE & LARSON, CHARTERED

By: Faudell C. Budge
Wallace M. Transtrum

MINIMUM STREAMFLOW REQUEST/APPLICATION

PROCESSING CHECKLIST

	ASSIGNED TO	INITIALS/DATE
1. Request recieved and checklist attached.	Receptionist	✓
2. Request indexed.	Records Chief	✓
3. Preliminary review. Application prepared for signature.	Section Supv.	✓
4. Streamflow information requested from hydrology.	Section Supv.	✓
5. Region advised of request.	Section Supv.	✓
6. Acknowledgment letter sent.	Section Supv.	✓
7. Copy of request routed to: Reg. Off. Bur. Ch.; Oper. Bur. Ch.; Admin.; Asst. Dir.; Dir.	Records Chief	✓
8. Copy of request routed to Administrator, Resources Analysis Division for placement on Board Agenda.	Records Chief	✓
9. Water Rights researched and abstracted.	Records Chief	✓
10. Visual aid request prepared.	Section Supv.	✓
11. Visual aid reviewed.	Section Supv.	✓
12. Request and related data presented to Board.	Admin., Res. Admin. Div.	✓
13. Filed or Rejected by Board.	Sec. Sup. et.al.	✓
14. Board action indexed.	Records Chief	✓
15. Original app. sent to region.	Records Chief	DRT 5/2/80
16. Copy of app. (*hearing notice) sent to F&G, H&W, Parks & Rec. (mandatory)	Region	EMC 5/6/1980
17. App. advertised after a suitable hearing date determined by S.O.	Region	EMC 5/6/1980.
18. Hearing held (mandatory).	Hearing Off. & Regional Rep.	DRT 6-10-80
19. Decision prepared for Director's signature.	Attorneys	
20. Approval/Denial of app. indexed.	Records Chief	
21. Copy of Approval/Denial sent to parties formally appearing at Hearing.	Records Chief	
22. Copy of signed app. submitted to the legislature for approval.	Section Supv.	
23. Copy of legislative action placed in file. If no overt approval is made, memo placed in file.	Section Supv.	

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INTER-DEPARTMENT MEMO — 1

FROM Dave Tuthill

DATE June 18, 1980

TO 11-7152

SUBJECT

For information on MSF hearing held June 10, 1980, see hearing file.

MICROFILMED

DRT

SIGNATURE

June 26, 1980

Mr. Reed Hansen
Route #5 Box 213
Idaho Falls, Idaho 83401

Dear Reed:

I was pleased to hear that you will be representing the Board at the next two MSF hearings. Glen Saxton has asked me to represent the Department at the hearings, and Iam looking forward to attending.

In the meantime, you may wish to review some of the documentation regarding the Birch Creek and Pahsimeroi River MSF applications. Enclosed please find copies of the applications, the newspaper notices, and available hydrologic data.

Also enclosed for your review is a copy of additional information provided by the Idaho Department of Fish and Game for the MSF application on St. Charles Creek. This information is currently being sent to all principal parties in the case.

We will be spending the night on Monday, July 7, at the Westbank in Idaho Falls. We plan to arrive at about 9:00 P.M., and drive to Dubois early Tuesday morning. We will prepare a briefing sheet for your use at the hearing, but we invite you to come to the motel on Monday evening to discuss the application.

Sincerely,

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

DRT:jg

Enclosure

MICROFILMED

BEFORE THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 11-7152 TO ESTABLISH A MINIMUM STREAM FLOW IN ST. CHARLES CREEK (LITTLE CREEK) IN THE NAME OF THE IDAHO WATER RESOURCE BOARD	EXCEPTION TO PROPOSED MEMORANDUM DECISION AND ORDER

COMES NOW St. Charles Irrigation Co. and excepts to portions of the proposed Memorandum Decision and Order as follows:

1. Excepts to paragraph two of the ANALYSIS appearing on page two that the implications, if any, raised by some portions of the application overcame the clear stated intention of the State of Idaho in identifying the upstream commencement point for the area covered by the minimum stream flow.

2. Excepts to the CONCLUSIONS OF LAW no. 6 whereby the hearing officer concludes that the proposed minimum stream flow extends from the confluence with Bear Lake upstream to the confluence with Blue Pond Spring.

St. Charles Irrigation Co., one of the parties who gave notice of appearance and in fact appeared at the hearings in the above-entitled matter, submits that such analysis by the hearing officer and such conclusion is without merit or basis in fact or law, and that it is a considerable and unwarranted conclusion by the hearing officer completely unsubstantiated by any pleadings, testimony of any witnesses or any documentary evidence received by the hearing officer, and completely contrary to the position of the state and the evidence offered, either in its application or at the public hearing.

The application and the published notice of application propose appropriation of water in the SE1/4SE1/4, Section 13, Township 15 South, Range 43 East, B.M. "in Little Creek, otherwise known as St. Charles Creek, tributary to Bear Lake." The so-called Blue Pond Spring is identified as being in the NW1/4SE1/4 of Section 24, Township 15 South, Range 42 East, B.M., which is

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some six to seven miles away. Assuming even that there had been a scrivener's error in one or the other descriptions, they are still some distance apart, and Blue Pond Creek is upstream quite some distance from the confluence of "little creek" and the main channel of St. Charles Creek.

St. Charles Irrigation Co. submits that there was no evidence presented to the hearing officer which in any way would substantiate the conclusions reached, and the findings and conclusions of the hearing officer are in error and without basis.

DATED this 30 day of September, 1980.

TRANSTRUM & LARSON, CHARTERED

By: S
Wallace M. Transtrum
Attorney for St. Chrles Irrigation Co.

CERTIFICATE OF MAILING

I HEREBY CERTIFY that I mailed a copy of the foregoing EXCEPTION TO PROPOSED MEMORANDUM DECISION AND ORDER, postage prepaid, to:

C. Stephen Allred, Director
Department of Water Resources
Statehouse
Boise, Idaho 83720

Norman C. Young ,
Hearing Officer
Department of Water Resources
1515 Lincoln Rd.
Idaho Falls, Idaho 83401

on this 30 day of September, 1980.

TRANSTRUM & LARSON, CHARTERED

By: S/
Wallace M. Transtrum

BEFORE THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 11-7152 TO ESTABLISH A MINIMUM STREAM FLOW IN ST. CHARLES CREEK (LITTLE CREEK) IN THE NAME OF THE IDAHO WATER RESOURCE BOARD	EXCEPTION TO PROPOSED MEMORANDUM DECISION AND ORDER

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St. Charles Irrigation Co., one of the parties who gave notice of appearance and in fact appeared at the hearings in the above-entitled matter, submits that such analysis by the hearing officer and such conclusion is without merit or basis in fact or law, and that it is a considerable and unwarranted conclusion by the hearing officer completely unsubstantiated by any pleadings, testimony of any witnesses or any documentary evidence received by the hearing officer, and completely contrary to the position of the state and the evidence offered, either in its application or at the public hearing.

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St. Charles Irrigation Co. submits that there was no evidence presented to the hearing officer which in any way would substantiate the conclusions reached, and the findings and conclusions of the hearing officer are in error and without basis.

DATED this 30th day of September, 1980.

TRANSTRUM & LARSON, CHARTERED

By: Wallace M. Transtrum
Wallace M. Transtrum
Attorney for St. Chrles Irrigation Co.

CERTIFICATE OF MAILING

I HEREBY CERTIFY that I mailed a copy of the foregoing EXCEPTION TO PROPOSED MEMORANDUM DECISION AND ORDER, postage prepaid, to:

C. Stephen Allred, Director
Department of Water Resources
Statehouse
Boise, Idaho 83720

Norman C. Young
Hearing Officer
Department of Water Resources
1515 Lincoln Rd.
Idaho Falls, Idaho 83401

on this 30th day of September, 1980.

TRANSTRUM & LARSON, CHARTERED

By: Wallace M. Transtrum
Wallace M. Transtrum

S. .e 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

October 8, 1980

Charles E. Hulme
Bloomington, ID 83223

Re; Minimum Stream Flow 11-7152, St. Charles Creek

Dear Mr. Hulme:

Enclosed is a copy of an Exception to the Proposed Memorandum Decision and Order for the above referenced application received from Mr. W.M Transtrum. Please submit any response to this objection to this office by October 23, 1980.

Sincerly,

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

DRT:td

Enclosures

MICROFILMED

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

October 8, 1980

Eugene B. Stucki
361 West 2nd South
Paris,ID 83223

Re: Minimum Stream Flow 11-7152, St. Charles Creek

Dear Mr. Stucki:

Enclosed is a copy of an Exception to the Proposed Memorandum Decision and Order for the above referenced application received from Mr. W.M. Transtrum. Please submit any response to this objection to this office by October 23, 1980.

Sincerely,

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

DRT:td

Enclosures

MICROFILMED

te 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

October 8, 1980

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

Attn: Steve Goddard, Attorney

Re: Minimum Stream Flow 11-7152, St. Charles

Dear Steve:

Enclosed is a copy of an Exception to the Proposed Memorandum Decision and Order for the above referenced application received from Mr.W.M Transtrum. Please submit any response to this objection to this office by October 23, 1980.

Sincerely,

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

DRT:td

Enclosures

MICROFILMED

S te 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

October 8, 1980

Franklin Jones
Idaho Water Resource Board
Statehouse
Boise, ID 83720

Re: Minimum Stream Flow 11-7152, St. Charles Creek

Dear Mr. Jones:

Enclosed is a copy of an Exception to the Propose Memorandum Decision and Order for the above referenced application received from Mr. W.M. Transtrum. Please submit any response to this objection to this office by October 23, 1980.

Sincerely,

DAVID R. TUTHILL JR., P.E.
Supervisor, Water Allocation Section
DRT:td

Enclosures

MICROFILMED

S te 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

October 8, 1980

Reed Hansen
Idaho Water Resource Board
Statehouse
Boise, ID 83720

Re: Minimum Stream Flow 11-7152, St. Charles Creek

Dear Mr. Hansen:

Enclosed is a copy of an Exception to the Proposed Memorandum Decision and Order for the above referenced application received from Mr. W.M. Transtrum. Please submit any response to this objection to this office by October 23, 1980.

Sincerely,

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

DRT:td

Enclosures

MICROFILMED

November 21, 1980

Joseph H. Nettleton, Chairman
Idaho Water Resource Board
Statehouse Mail
Boise, ID 83720

Dear Mr. Nettleton:

Re: Application for Permit No. 11-7152

Enclosed is an approved copy of the above-referenced Application for Permit a copy of the Proposed Memorandum Decision and Order and a copy of the Order Adopting the Proposed Memorandum Decision and Order. We direct your attention to the conditions of approval and ask that you note the special condition requiring you to install and maintain a measuring device at your point of diversion. Enclosed is a description of the different types of measuring devices accepted by this office.

Please also note the condition of approval which requires that proof of instream beneficial use of the water be submitted to the Department on or before September 1, 1985. As a part of the proof submitted, at least three years of flow data must be submitted at the same time. The proposed frequency of data accumulated should, however, be submitted to the Director relatively soon in order to be approved. You may wish to contact the Idaho Department of Fish and Game to ask them to 1) install and maintain the required measuring device, 2) prepare and submit a data frequency collection for review and approval of the Director, and, 3) gather the required flow data for the minimum three year period required after the frequency proposal is approved.

If you have any questions concerning this permit, please feel free to contact this office.

Sincerely,

L. GLEN SAXTON
Chief, Operations Bureau

LGS:rf

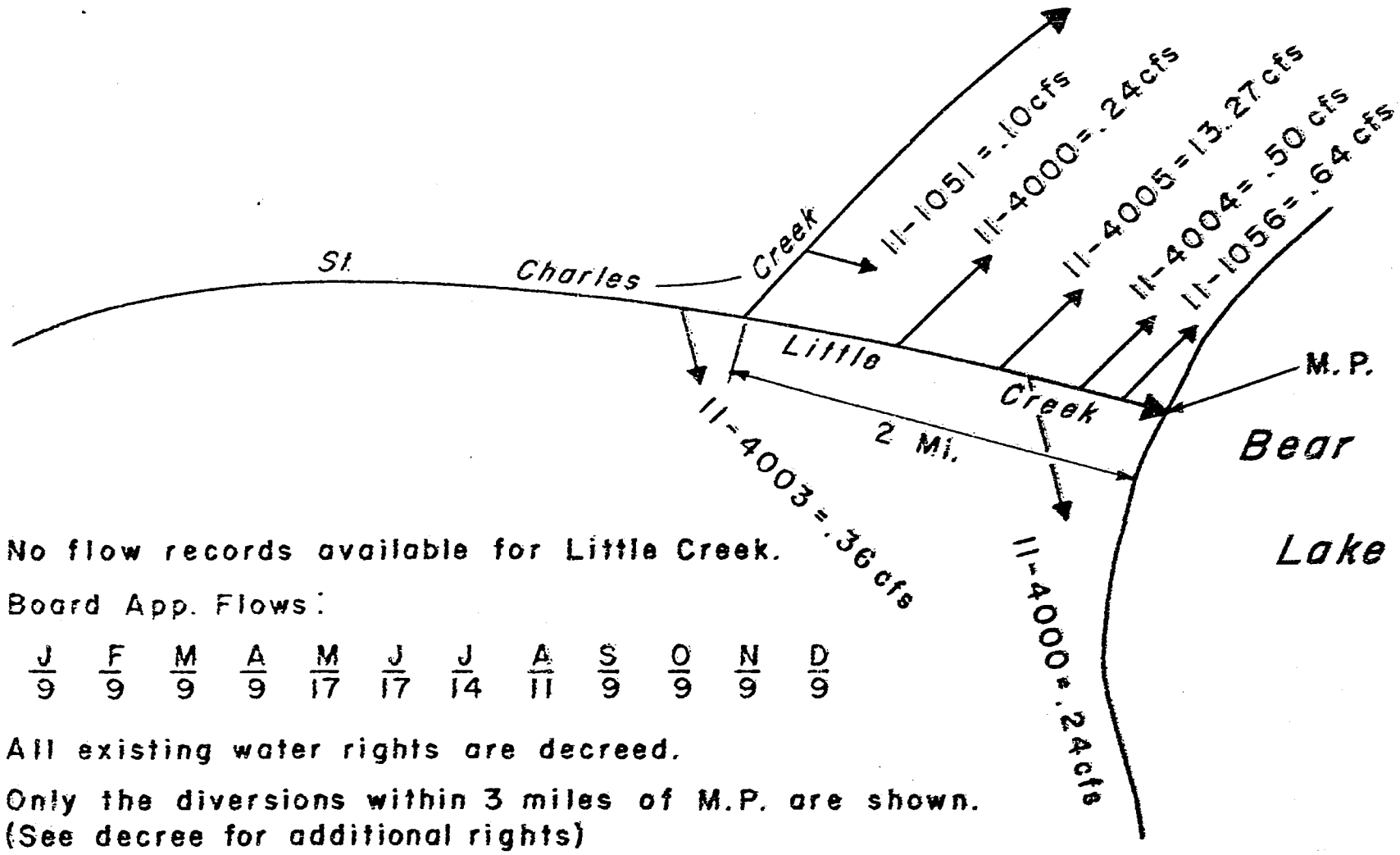
Enclosures

MICROFILMED

LITTLE CREEK

II-7152

MICROFILMED



No flow records available for Little Creek.

Board App. Flows:

J	F	M	A	M	J	J	A	S	O	N	D
9	9	9	9	17	17	14	11	9	9	9	9

All existing water rights are decreed.

Only the diversions within 3 miles of M.P. are shown.
(See decree for additional rights)

11-7152
App. No.

FACT SHEET # 2

HEARING

Filings Examined at Hearing 11-7152

Date Hearing Held 06/10/1980

Location of Hearing Montpelier, Idaho City Auditorium

Hearing Officer Norman C. Young

No. of Persons at Hearing 18

Roster of Attendance

Name	Organization
W. M. Transtrum	Attorney for St. Charles Irrigation Company
Lamont J. Pugmire, Arlo M. Rasmussen, Oren S. Peterson	St. Charles Irrigation Company
W. J. Transtrum, Loyal C. Hulme, Charles E. Hulme	None Stated
Herb Page, John F. Heimer, Wendell J. Johnson, Bill Davidson	Idaho Department of Fish and Game
Bryce R. Nielson	Utah Wildlife Resources
Reed Hansen, Franklin Jones	Idaho Water Resource Board
Ernest Carlsen, Dave Tuthill, Norman C. Young	Idaho Department of Water Resources
Eugene B. Stucki	State Representative

Related Correspondence

Name	Organization
Joe F. Allen	Co-Chairman, Water/Power Initiative
Ed Chaney	Pacific Northwest Resource Consultants
Doli Obee	None Stated
Joe Wylie	President, Boise Valley Fly Fishermen
Dale R. Christiansen	Director, Idaho Department of Parks & Recreation
Pete Cole	President, Portneuf Valley Audobon Society

All of the above letters were in favor.

No letters in opposition were received.

MICROFILMED

11-7152
App. No.

FACT SHEET #1

General Information

Source: St. Charles Creek (Little Creek)

Tributary to: Bear Lake

Requestor: Idaho Department of Fish and Game

Quantity: 9 to 17 cubic feet per second (varies by month).

Length of Reach: 2 miles

Purpose: To maintain the present qualities of fisheries and fish populations in the stream and to provide adequate spawning and rearing conditions for Bear Lake fish and native fish utilizing the stream.

Date Received: 09/13/1978

Date Hearing Held: 06/10/80

Date Approved by Director: 11/13/80

Other Rights: Multiple decreed rights (see attachment).

REMARKS:

MICROFILMED

MINIMUM STREAMFLOW REQUEST/APPLICATION

PROCESSING CHECKLIST

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

		ASSIGNED TO	INITIALS/DATE
1.	Fact sheet prepared.	Section Supervisor	Dret/12/12/1980
2.	Copy of application sent to Speaker of the House and President Protem of the Senate.	Section Supervisor	Prepared for Sig 12/22/80
3.	Approval/Denial legislation placed in file.	Records Chief	_____
4.	Applicant notified of legislative Approval/Denial.	Records Chief	_____

MICROFILMED

January 12, 1981

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

Dear Mr. Speaker:

Enclosed please find copies of the two applications for permit to appropriate water for minimum streamflow purposes that have been approved by this Department during calendar year 1980. Application Nos. 11-7152 and 37-7739 pertain to minimum streamflows in St. Charles Creek and Little Wood River, respectively.

As you are aware, Section 42-1503, Idaho Code requires that these applications must 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

MICROFILMED

January 12, 1981

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

Dear Senator Budge:

Enclosed please find copies of the two applications for permit to appropriate water for minimum streamflow purposes that have been approved by this Department during calendar year 1980. Application Nos. 11-7152 and 37-7739 pertain to minimum streamflows in St. Charles Creek and Little Wood River, respectively.

As you are aware, Section 42-1503, Idaho Code requires that these applications must 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

MICROFILMED

May 26, 1981

Mr. M. Reed Hansen
Idaho Water Resource Board
Statehouse Mail
Boise, ID 83720

Dear Mr. Hansen:

Re: Permit No. 11-7152 -- Minimum Stream Flow -- St. Charles Creek

Enclosed for your information is an order confirming the Director's approval of October 24, 1980. The order has been prepared and issued as a followup to provisions in Section 42-1503 since the Legislature failed to act on the instream flow application prior to the end of the session.

Sincerely,

L. GLEN SAXTON
Chief, Operations Bureau

LGS:rf

Enclosure

cc: Idaho Department of Fish and Game
W. M. Transtrum
St. Charles Irrigation Company
Eugene B. Stucki
Charles E. Hulme

MICROFILMED

Notice is hereby given that the following application has 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 application 11-7152 for a permit to the Department of Water Resources proposing the appropration of 9 to 17 cubic feet per second of water within the SE¼SE¼, Sec. 13, T. 15S, R. 43E, B.M., Bear Lake County to preserve the minimum stream flow for maintaining the present quality of fisheries and provide adequate spawning and rearing conditions year around in Little Creek, otherwise known as St. Charles Creek, tributary to Bear Lake.

The Director of the Department of Water Resources will hold a public hearing on the application in the City Auditorium in Montpelier, Idaho, at 9:00 a.m. on June 10, 1980, for the purpose of hearing evidence in regard to the application. The hearing will be held pursuant to the provision of Section 42-1503, Idaho Code.

Any party who wishes to formally appear at this proceeding for the purpose of presenting evidence or cross examing witnesses should file a notice of appearance with the Director of the Department of Water Resources, Statehouse, Boise, Idaho, five 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.

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

C. STEPHEN ALLRED

Director

Published in the News-Examiner, P.O. Box 278, Montpelier, ID.

Published May 8, and May 15, 1980

MICROFILMED

IN THE OFFICE OF THE DIRECTOR OF THE

IDAHO DEPARTMENT OF WATER RESOURCES

IN THE MATTER OF APPLICATION NO. 11-7152 FOR PERMIT TO APPROPRIATE MINIMUM STREAM FLOW OF ST. CHARLES CREEK, TRIBUTARY TO BEAR RIVER FILED 9-13-78 BY THE IDAHO WATER RESOURCE BOARD	NOTICE OF APPEARANCE

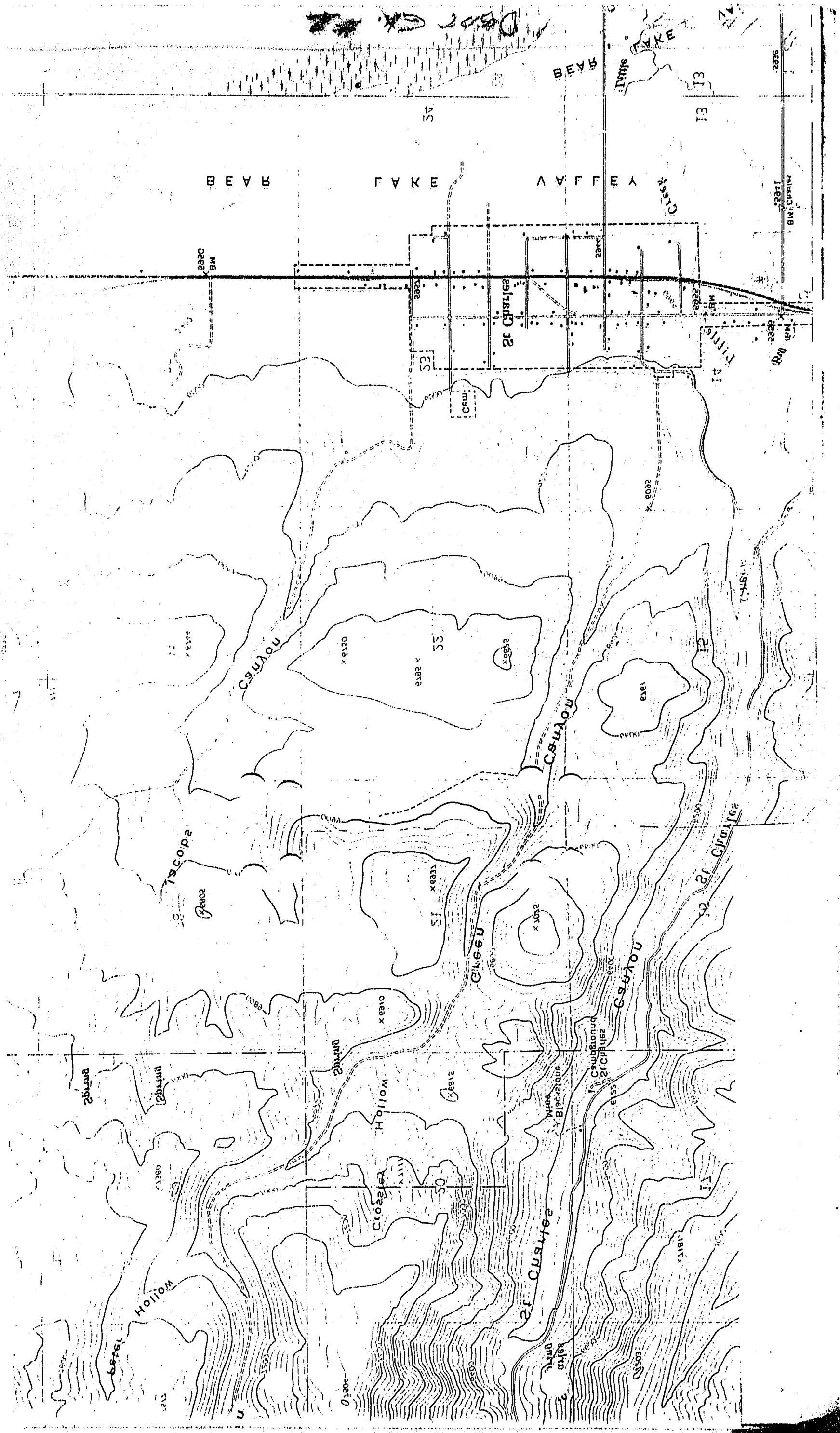
NOTICE IS HEREBY GIVEN that St. Charles Irrigation Co. of St. Charles, Idaho, by and through their attorneys, Transtrum, Budge & Larson, Chartered, of P.O. Box 608, Soda Springs, Idaho, intends to formally appear at the public hearing on the above-entitled application to be held in the City Auditorium of Montpelier, Idaho, at 9:00 a.m. on June 10, 1980, for the purpose of presenting evidence and testimony and cross-examining witnesses.

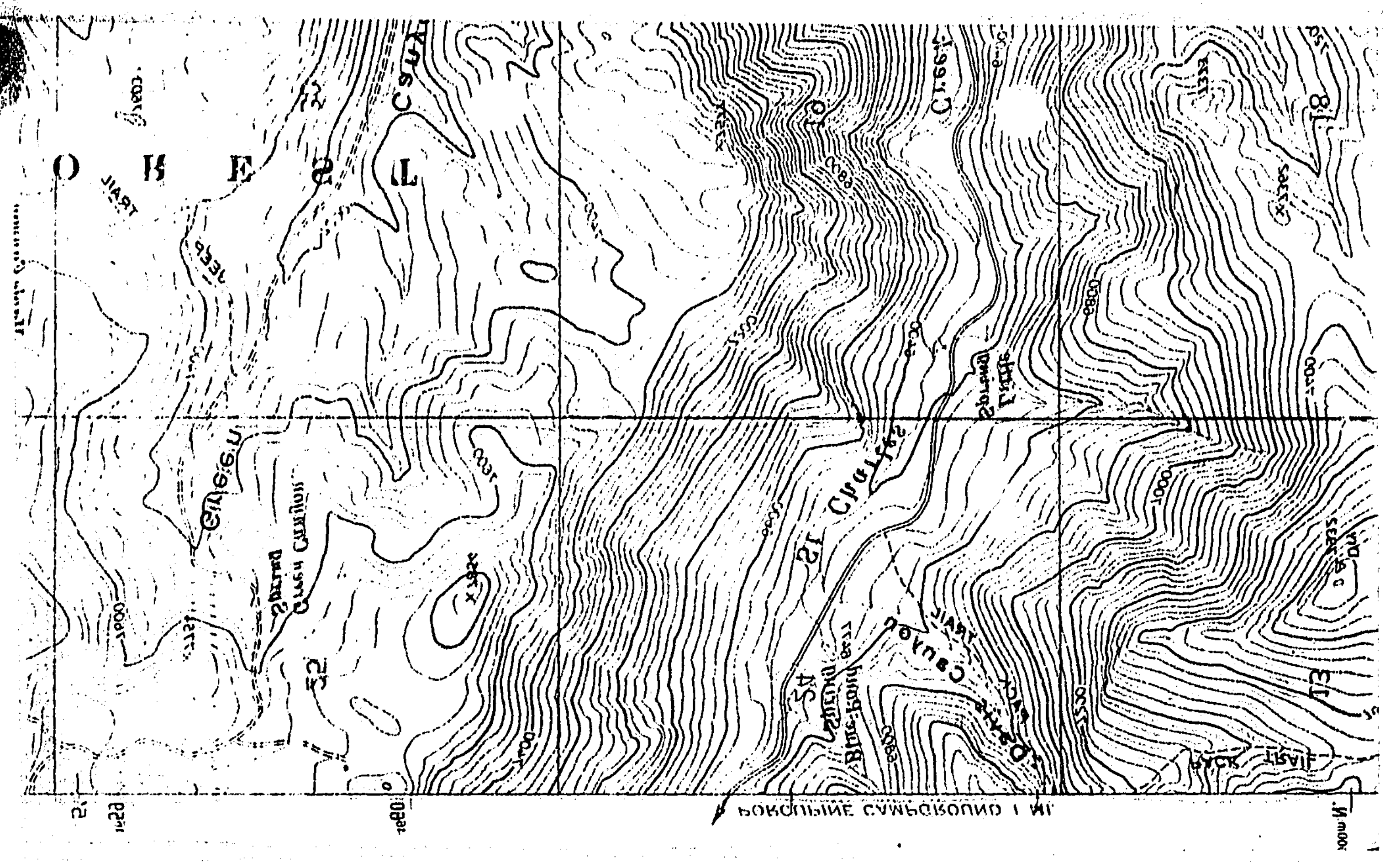
DATED this 2nd day of June, 1980.

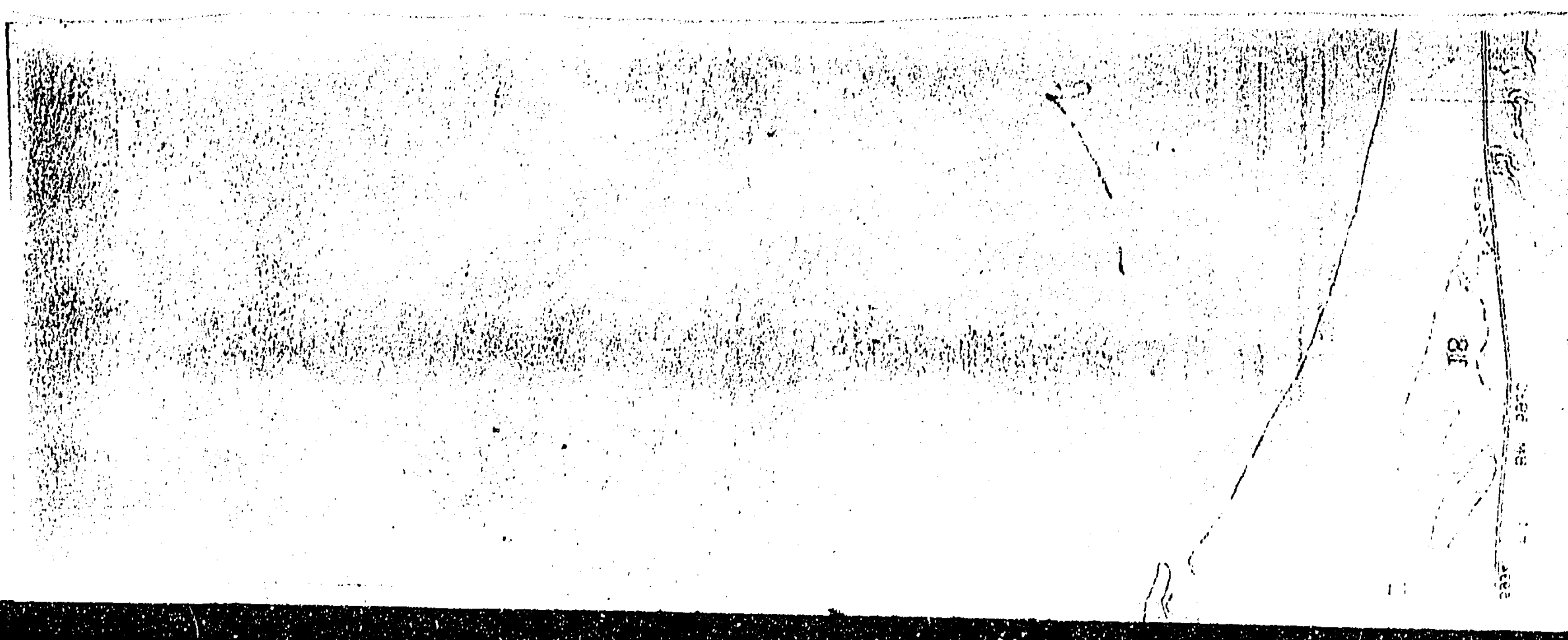
TRANSTRUM, BUDGE & LARSON, CHARTERED

By: Wallace M. Transtrum

MICROFILMED

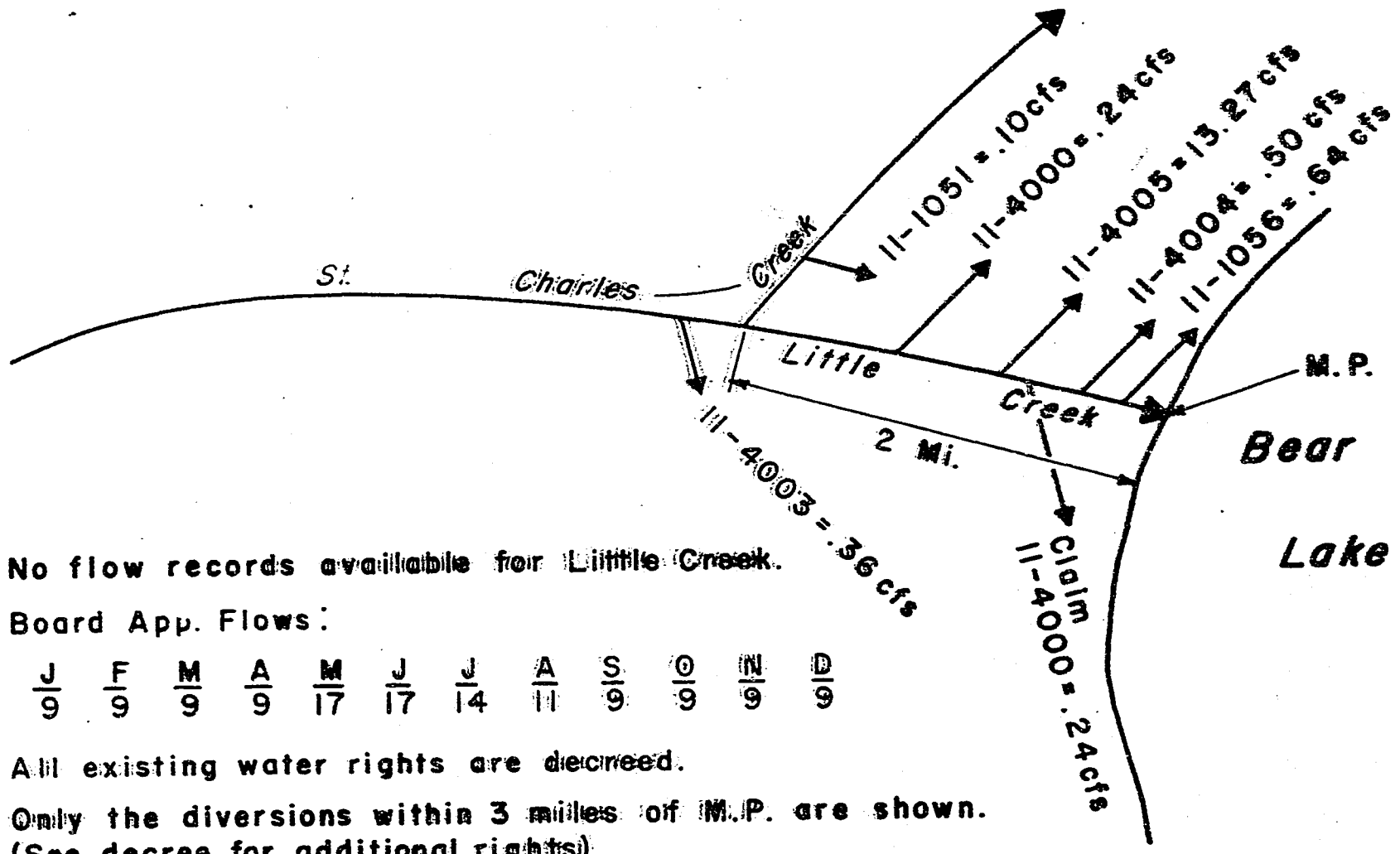

BEAR LAKE VALLEY
Bear Lake
Canyon
St Charles
Hollow
Spring
Creek
Ridge
Cliff
Rock
Timber
Cabin
Trail
Road
Fence
Mine
Tank
Dam
Well
Pond
Marsh
Meadow
Orchard
Cemetery
Church
School
Bridge
Ford
Pass
Peak
Summit
Valley
Basin
Flat
Slope
Ridge
Creek
Canyon
Hollow
Spring
Trail
Road
Fence
Mine
Tank
Dam
Well
Pond
Marsh
Meadow
Orchard
Cemetery
Church
School
Bridge
Ford
Pass
Peak
Summit
Valley
Basin
Flat
Slope





LITTLE CREEK

III-7152



No flow records available for Little Creek.

Board App. Flows:

J	F	M	A	M	J	J	A	S	O	N	D
9	9	9	9	17	17	14	11	9	9	9	9

All existing water rights are decreed.

Only the diversions within 3 miles of M.P. are shown. (See decree for additional rights)

Dwgr 6x, #2

RECEIVED
JAN 4 - 1974
OFFICE OF ATTORNEY GENERAL
STATE OF IDAHO

RECEIVED
JAN 7 1974
Department of Water Administration

IN THE DISTRICT COURT OF THE SIXTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF BEAR LAKE

ST. CHARLES IRRIGATION COMPANY, a corporation,

Plaintiffs,

-vs-

R. KEITH HIGGINSON, State Reclamation Engineer for the State of Idaho, et al.,

Defendants.

CIVIL NO. 2462

DECREE

This matter was set for trial and continued at the request of counsel who would furnish a stipulation to the court. A proposed stipulation has been furnished but no stipulation signed by the parties has been submitted. However, the court will accept the proposed stipulation as binding and if any party does not agree to this they will evidence the same. However, the absence of objection is presumed approval by the court.

The court finds the water rights to be as follows:

MICROFILMED

STIPULATED FINDING OF WATER RIGHTS

No.	Name and Address	Priority	Amount, acre feet per annum	Maximum Rate of Diversion, cubic feet per second	Point of Diversion	Period of Use From	Period of Use To	Purpose	Lands Irrigated Acres	Lands Irrigated Description	Remarks
1	Cleneth E. Arnell St. Charles, Idaho	8-29-1903 5-12-1945	6 6.8 or 6200 gpd	0.2 0.02	Springs in NE¼SE¼, Sec. 9 T. 15S, R. 43E	4-15 1-1	10-31 12-31	Irrigation Stockwater	2.0	NE¼SE¼, Sec. 9 NE¼SE¼, Sec. 9 T. 15S, R. 43E	250 head of cattle, map B insert Claim 11-3001
2	Ronald Thornock St. Charles, Idaho	3-1-1894	159	2.72	NW¼NW¼, Sec. 7 T. 15S, R. 44E	4-15 8-15	6-30 9-15	Irrigation	20.9 21.3 10.9 53.1 total	SE¼NE¼, Sec. 36 SW¼NE¼, Sec. 36 SE¼NW¼, Sec. 36 T. 14S, R. 43E	map E 11 1043
3	Ray Bateman Bloomington, Idaho	3-1-1894	153	2.04	NW¼NW¼, Sec. 7 T. 15S, R. 44E	4-15 8-15	6-30 9-15	Irrigation	20.0 2.0 11.0 10.0 8.0 51.0 total	NW¼NW¼, Sec. 7 NE¼NW¼, Sec. 7 SW¼SW¼, Sec. 6 SE¼SW¼, Sec. 6 NW¼NW¼, Sec. 6 T. 15S, R. 44E	map B 11 1044
4	Ben Bateman St. Charles, Idaho	3-1-1894	402	5.35	NW¼NW¼, Sec. 7 T. 15S, R. 44E	4-15 8-15	6-30 9-15	Irrigation	38.0 18.0 39.0 39.0 134.0 total	SW¼NW¼, Sec. 31 SE¼NW¼, Sec. 31 NE¼SW¼, Sec. 31 NW¼SW¼, Sec. 31 T. 14S, R. 44E	map F 11 1045
5	Augusta P. Bunderson	3-1-1894	21	0.27	NW¼NW¼, Sec. 7 T. 15S, R. 44E	4-15 8-15	6-30 9-15	Irrigation	6.7	NE¼NE¼, Sec. 12 T. 15S, R. 43E	map A 11 1046
6	Iola Bunderson c/o Whitney Bunderson St. Charles, Idaho	4-15-1916	53	0.36	SW¼NW¼, Sec. 14 T. 15S, R. 43E	4-15	10-31	Irrigation	8.3 9.3 17.6 total	SW¼NW¼, Sec. 14 SE¼NW¼, Sec. 14 T. 15S, R. 43E	map D Claim 11-4005

STIPULATED FINDING OF WATER RIGHTS (Cont.)

No.	Name and Address	Priority	Amount, acre feet per annum	Maximum Rate of Diversion, cubic feet per second	Point of Diversion	Period of Use From	Period of Use To	Purpose	Lands Irrigated Acres	Lands Irrigated Description	Remarks
7	City of St. Charles St. Charles, Idaho	3-11-1893	135	1.0	NE¼NE¼, Sec. 19 T. 15S, R. 43E	1-1	12-31	Municipal		11-1092	For city domestic use
8	J. Hulme Dunford Bloomington, Idaho	3-1-1894	744	9.92	NW¼NW¼, Sec. 7 T. 15S, R. 44E	4-15 8-15	6-30 9-15	Irrigation	5.0 34.6 27.4	SW¼SE¼, Sec. 31 SW¼SW¼, Sec. 31 SE¼SW¼, Sec. 31 T. 14S, R. 44E	map F Claim 11-4006
									33.0 35.0 32.0 28.0 11.3 5.7	SE¼SE¼, Sec. 36 NE¼SE¼, Sec. 36 NW¼SE¼, Sec. 36 SW¼SE¼, Sec. 36 NE¼SW¼, Sec. 36 SE¼SW¼, Sec. 36 T. 14S, R. 43E	Flooded map E Claim 11-4006
									4.6 17.7 13.5 247.8	NW¼NW¼, Sec. 1 NE¼NW¼, Sec. 1 SE¼NW¼, Sec. 1 T. 15S, R. 43E	map A Claim 11-4006
9	Dwight H. & Hervin L. Hemmert St. Charles, Idaho	3-1-1894	291	3.88	NW¼NW¼, Sec. 7 T. 15S, R. 43E	4-15 8-15	6-30 9-15	Irrigation	34.7 16.0 17.8 25.3 total 96.8	NE¼NE¼, Sec. 1 SE¼NE¼, Sec. 1 NE¼SE¼, Sec. 1 NW¼SE¼, Sec. 1 T. 15S, R. 43E	Flooded map A 11 1047
10	Lorenzo H. & Robert Hemmert St. Charles, Idaho	3-1-1894	193	2.57	NW¼NW¼, Sec. 7 T. 15S, R. 44E	4-15 8-15	6-30 9-15	Irrigation	2.0 20.6	NW¼SE¼, Sec. 7 NW¼SW¼, Sec. 7	map B 11 1048

STIPULATED FINDING OF WATER RIGHTS (Cont.)

No.	Name and Address	Priority	Amount, acre feet per annum	Maximum Rate of Diversion, cubic feet per second	Point of Diversion	Period of Use From	Period of Use To	Purpose	Lands Irrigated Acres	Lands Irrigated Description	Remarks
10	Lorenzo H. & Robert (Continued)								20.7	NE¼SW¼, Sec. 7	
									14.0	SW¼NW¼, Sec. 7	11 1048 con't
									7.0	SE¼NW¼, Sec. 7	
								total	64.3	T. 15S, R. 44E	
11	Robert H. Hemmert St. Charles, Idaho	7-1-1894	50	0.32	NW¼NW¼, Sec. 7 T. 15S, R. 44E	4-15 8-15	6-30 9-15	Irrigation	4.8 3.0	SE¼SW¼, Sec. 7 SW¼SE¼, Sec. 7	map B
								total	7.8	T. 15S, R. 44E	11 1049
12	Glenn Michaelson St. Charles, Idaho	4-3-1940	129 not spec in permit	1.26	NW¼NE¼, Sec. 2 T. 15S, R. 43E	4-15	10-31	Irrigation	30.0 33.0	NW¼NE¼, Sec. 2 SW¼NE¼, Sec. 2	map A Permit 18965
								total	63.0	T. 15S, R. 43E	11-2697
13	Patience Payne St. Charles, Idaho	3-1-1894	366.0	15.27	NE¼SE¼, Sec. 13 T. 15S, R. 43E	4-15 8-15	7-15 9-15	Irrigation	122.38	SW¼NW¼ & Lots 3, 4 & 5 of Sec. 18, T. 15S, R. 44E	map C Claim 11-1005
13a	Patience Payne St. Charles, Idaho	1-1-1965	15.5	0.10	NW¼NE¼, Sec. 14 T. 15S, R. 43E	4-15 8-15	7-15 9-15	Irrigation	4.5	NW¼NE¼, Sec. 14 T. 15S, R. 43E	11 1051
14	Bertha A. Peterson St. Charles, Idaho	3-1-1894	73	0.97	NW¼NW¼, Sec. 7 T. 15S, R. 44E	4-15 8-15	6-30 9-15	Irrigation	17.1 7.3	NW¼NE¼, Sec. 1 SW¼NE¼, Sec. 1	map A
								total	24.4	T. 15S, R. 43E	11 1052
15	Weldon J. Peterson St. Charles, Idaho	3-1-1894	122	1.63	NW¼NW¼, Sec. 7 T. 15S, R. 44E	4-15 8-15	6-30 9-15	Irrigation	22.0 18.7	SE¼SE¼, Sec. 1 SW¼SE¼, Sec. 1	Flooded map A
								total	40.7	T. 15S, R. 43E	11 1053

STIPULATED FINDING OF WATER RIGHTS (Cont.)

No.	Name and Address	Priority	Amount, acre feet per annum	Maximum Rate of Diversion, cubic feet per second	Point of Diversion	Period of Use From	Period of Use To	Purpose	Lands Irrigated Acres	Lands Irrigated Description	Remarks
16	Vivian Lamont Pugmire St. Charles, Idaho	3-1-1894	49	0.65	NW¼NW¼, Sec. 7 T. 15S, R. 44E	4-15 8-15	6-30 9-15	Irrigation	9.8 6.3 16.1	SE¼SW¼, Sec. 7 SW¼SW¼, Sec. 7 T. 15S, R. 44E	Flooded map B 11 1054
17	St. Charles Irrigation Company St. Charles, Idaho	3-11-1893	11,337	75.5	*	4-15	10-31	Irrigation	3778.7	*	11 1055
18	Leon C. Swenson St. Charles, Idaho (being purchased by Wayne J. Transtrum)	3-1-1894	35.0	0.24	NE¼NE¼, Sec. 13 T. 15S, R. 43E	4-15	10-31	Irrigation	7.6 3.9 11.5	NE¼SE¼, Sec. 13 SE¼SE¼, Sec. 13 T. 15S, R. 43E	map D Claim 11-4000
19	Ronald Thornock St. Charles, Idaho	3-1-1894	69.0	0.92	NW¼NW¼, Sec. 7 T. 15S, R. 44E	4-15 8-13	6-30 9-15	Irrigation total	10.0 13.0 23.0	SW¼SW¼, Sec. 36 SE¼SE¼, Sec. 35 T. 14S, R. 43E	map E Claim 11-4002
20	Whitney J. Transtrum St. Charles, Idaho	3-1-1894	96.0	0.64	SE¼SE¼, Sec. 13 T. 15S, R. 43E	4-15	10-31	Irrigation total	22.6 9.2 31.8	NE¼SW¼, Sec. 13 NW¼SE¼, Sec. 13 T. 15S, R. 43E	map D 11 1056
21	U.S. Forest Service 324 25th Street Ogden, Utah	3-1-1894	5.0	0.07	School House Hill Spring, Hidden Spring, Porcupine Canyon Spring, Minnetonke Cave Spring, Clover-leaf Spring, Dry Canyon Spring, Blue Pond Spring			Stockwater			11 1057

* See supplement on pages 7 & 8.

STIPULATED FINDING OF WATER RIGHTS (Cont.)

No.	Name and Address	Priority	Amount, Acre feet per annum	Maximum Rate of Diversion cubic feet per second	Point of Diversion	Period of Use From	Period of Use To	Purpose	Lands Irrigated Acres	Lands Irrigated Description	Remarks
21	U.S. Forest Service (Continued)				Davis Canyon Spring, North Fork Spring, Crossley Hollow Spring, (all of which are points of diversion, and excepting Crossley Hollow Spring, are situated in the Cache Nat'l Forest)						~~11 1058~~ 11-1057 Cont'd
22	U.S. Forest Service	5-28-1906	22.0	0.5	Original diversion at Blue Pond Spring for milling purposes, with subsequent other points of use including: Porcupine Spring, Minnetonka Cave Spring, Cloverleaf Spring (all of which points are situated within the Cache Nat'l Forest)			Domestic			11 1059
23	Utah Power & Light Salt Lake City, Utah	3-1-1894	97.5	0.50	NE¼SE¼, Sec. 13 T. 15S, R. 44E	4-15	10-31	Irrigation	32.5	Lots 3 & 4, Sec. 17, Lot 2, Sec. 18, T. 15 S, R. 44E	map C-- Claim 11-4004

SUPPLEMENT TO ENTRY NO. 17, ST. CHARLES IRRIGATION COMPANY

Lands irrigated under the St. Charles Irrigation Company have the following points of diversion:

Jerico Ditch	South Upper Ditch	South Lower Ditch	North Field Ditch	Little Creek	Spring Creek	Island Ditch
NW¼NW¼, Sec. 20	SE¼NE, Sec. 16	SE¼NW¼, Sec. 15	SE¼NW¼, Sec. 15	SE¼NW¼, Sec. 14	NW¼SW¼, Sec. 2	NE¼NE¼, Sec. 14
T. 15S, R. 43E	T. 15S, R. 43E	T. 15S, R. 43E	T. 15S, R. 43E	T. 15S, R. 43E	T. 15S, R. 43E	T. 15S, R. 43E
map C	map C	map D	map D	map D	map A	map B

Description of lands irrigated under the St. Charles Irrigation Company:

T. 15S. R. 43E, B.M.

Sec. 1 -- NW¼NW¼, SW¼NW¼, NE¼SW¼, NW¼SW¼, SW¼SW¼, SE¼SW¼, SW¼SE¼

Sec. 2 -- NE¼NE¼, NW¼NE¼, SW¼NE¼, SE¼NE¼, NE¼NW¼, SE¼NW¼, NE¼SW¼, NW¼SW¼, SW¼SW¼, SE¼SW¼, NE¼SE¼, NW¼SE¼, SW¼SE¼, SE¼SE¼

Sec. 11 -- NE¼NE¼, NW¼NE¼, SW¼NE¼, SE¼NE¼, NE¼NW¼, NW¼NW¼, SE¼NW¼, NE¼SW¼, NW¼SW¼, SW¼SW¼, SE¼SW¼, NE¼SE¼, NW¼SE¼, SW¼SE¼, SE¼SE¼

Sec. 12 -- all of this section

Sec. 13 -- all of this section

Sec. 14 -- NE¼NE¼, NW¼NE¼, SW¼NE¼, SE¼NE¼, NE¼NW¼, NW¼NW¼, SW¼NW¼, SE¼NW¼, NE¼SW¼, NW¼SW¼, SW¼SW¼, SE¼SW¼, NE¼SE¼, NW¼SE¼, SW¼SE¼, SE¼SE¼

Sec. 15 -- NE¼NE¼, SW¼NE¼, SE¼NE¼, SE¼NW¼, SW¼SW¼, NE¼SE¼

Sec. 23 -- NE¼NE¼, NW¼NE¼, SW¼NE¼, SE¼NE¼, NE¼NW¼, SE¼NW¼, NE¼SW¼, NW¼SW¼, SW¼SW¼, SE¼SW¼, NE¼SE¼, NW¼SE¼, SW¼SE¼, SE¼SE¼

Sec. 24 -- NW¼NE¼, SW¼NE¼, NE¼NW¼, NW¼NW¼, SW¼NW¼, SE¼NW¼, NE¼SW¼, NW¼SW¼, SW¼SW¼, SE¼SW¼

Sec. 25 -- NE¼NW¼, NW¼NW¼, SW¼NW¼, SE¼NW¼, NW¼SW¼, SW¼SW¼

Sec. 26 -- NE¼NE¼, NW¼NE¼, SW¼NE¼, SE¼NE¼, NE¼NW¼, SE¼NW¼, NE¼SW¼, SE¼SW¼, NE¼SE¼, NW¼SE¼, SW¼SE¼, SE¼SE¼

Sec. 35 -- NE¼NE¼, NW¼NE¼, SW¼NE¼, SE¼NE¼, NE¼NW¼, NE¼SE¼, NW¼SE¼, SE¼SE¼

Sec. 36 -- NW¼NW¼, SW¼NW¼, NW¼SW¼, SW¼SW¼

SUPPLEMENT TO ENTRY NO. ~~19~~ 17, ST. CHARLES IRRIGATION COMPANY (Cont.)

Description of lands irrigated under the St. Charles Irrigation Company (Cont.):

T. 15S, R. 44E, B.M.

Sec. 7 -- SW¼SW¼, SE¼SW¼

Sec. 18 -- NW¼NW¼, SW¼NW¼, SE¼NW¼, NW¼SW¼

PRIORITY INDEX

STIPULATED FINDING OF WATER RIGHTS

Entry No.	Name	Priority	Amount, acre feet per annum	Maximum Rate of Diversion, cubic feet per second
7	City of st. Charles	3-11-1893	135.0	1.0
17	St. Charles Irrig. Co.	3-11-1893	11,337.0	75.5
4	Ben Bateman	3-1-1894	402.0	5.35
2	Ronald Thornock	3-1-1894	159.0	2.12
3	Ray Bateman	3-1-1894	153.0	2.04
5	Augusta P. Bunderson	3-1-1894	21.0	0.27
8	J. Hulme Dunford	3-1-1894	744.0	9.92
9	Dwight H. & Hervin L. Hemmert	3-1-1894	291.0	3.88
10	Lorenzo H. & Robert Hemmert	3-1-1894	193.0	2.57
11	Robert H. Hemmert	3-1-1894	30.0	0.32
13	Patience Payne	3-1-1894	366.0	13.27
14	Bertha A. Peterson	3-1-1894	73.0	0.97
15	Weldon J. Peterson	3-1-1894	122.0	1.63
16	Vivian Lamont Pugmire	3-1-1894	49.0	0.65
18	Leon C. Swenson	3-1-1894	35.0	0.24
19	Ronald Thornock	3-1-1894	69.0	0.92
20	Whitney J. Transtrum	3-1-1894	96.0	0.64
23	Utah Power & Light Co.	3-1-1894	97.5	0.50
21	U.S. Forest Service	3-1-1894	5.0	0.07
1	Cleneth E. Arnell	8-29-1903	6.0	0.2
22	U.S. Forest Service	5-28-1906	22.0	0.5
6	Iola Bunderson	4-15-1916	53.0	0.36
12	Glenn Michaelson	4-3-1940	129.0	1.26
1	Cleneth E. Arnell	5-12-1945	6.8 or 6200.0 gpd	0.02
13a	Patience Payne	1-1-1965	13.5	0.10

The question is whether the Federal Government can reserve rights by withdrawal of lands by proclamation without any further act on their part showing an intent to put the waters to beneficial use?

The proclamation relied upon by the Federal Government bears date of May 28, 1906, 34 Stat. 3206. This is claimed for purpose of timber management and production and related purposes, including fish and wild life management, livestock grazing and recreational activities.

The Federal Government rely on Winters -vs- United States, 20U.S. 564; Arizona -vs- California 373 U.S. 546; and United States -vs- Eagle County 91 S.Ct. 1003. However, the Federal Government contends that the reservation made by the presidential proclamation is open ended and no factual proof is necessary. That the reserved water right is a right in law which need not be developed to have priority of 1906, as to appropriations after that date.

The position of the Federal Government would seem to be inconsistent with any organized development of an area because of a blight of potential claim which may be made by the Federal Government.

It is true that water rights can be reserved but of necessity this must be followed with a development or factual determination of need and development. The purpose of the McCarren Amendment would be defeated if this were not so.

The mere creation of the reserve would protect the Federal Government from then on. Futher adjudication would be unnecessary. The meaning of the Amendment was to require

the Federal Government to appear before the State Courts and prove their rights, other than by reiterating the reservation. That would amount to a lawsuit to determine what has been fully and publicly declared to be.

The pronouncement of the Amendment is that the Federal Government must factually prove their reserved rights which did not occur in this case.

IT IS HEREBY ORDERED that the water rights in this matter, together with their priority are as found herein.

IT IS FURTHER ORDERED that the Federal Government did not prove any water rights reserved under Presidential Proclamation 24 Stat. 3206, dated May 28, 1906.

DATED this 3rd day of January, 1974.

FRANCIS J. RASMUSSEN
District Judge

cc - Wallace M. Transtrum
W. Anthony Park
Thomas C. Frost
Isaac McDougall
Robert B. Porter
Gary Williams

LITTLE CREEK, 11-7152

NOTES OF DAVID R TUTHILL JR.

(St. Charles Creek)

- On August 28, 1978 the Water Resource Board received a request for a minimum streamflow on St. Charles Creek tributary to Bear Lake in Bear Lake County.

- This request was considered by the Water Resource Board on September 11, 1978, and on September 13, 1978, the Board filed an application with the Department of Water Resources.

- Copies of the application were sent to the State Departments of Health and Welfare, Parks and Recreation, and Fish and Game.

- A public notice of the application was advertised in the Montpelier News-Examiner on May 8 and 15, 1980. The notice included information about this hearing.

- Letters in support of the application were received from

    1. Joe F. Allen Co-chairman of the Water/Power Initiative.
    2. Ed Chaney Pacific Northwest Resource Consultants.
    3. Doli Obee
    4. Joe Wyllie President, Boise Valley Fly Fishermen.
    5. Dale R. Christiansen Director, IDPR.
    6. Pete Cole President, Portneuf Valley Audobon Society

- No letters in opposition have been received.

- Present staff exhibit 1 which depicts the location of the reach of stream in question. Decree entered Jan 3, 1974

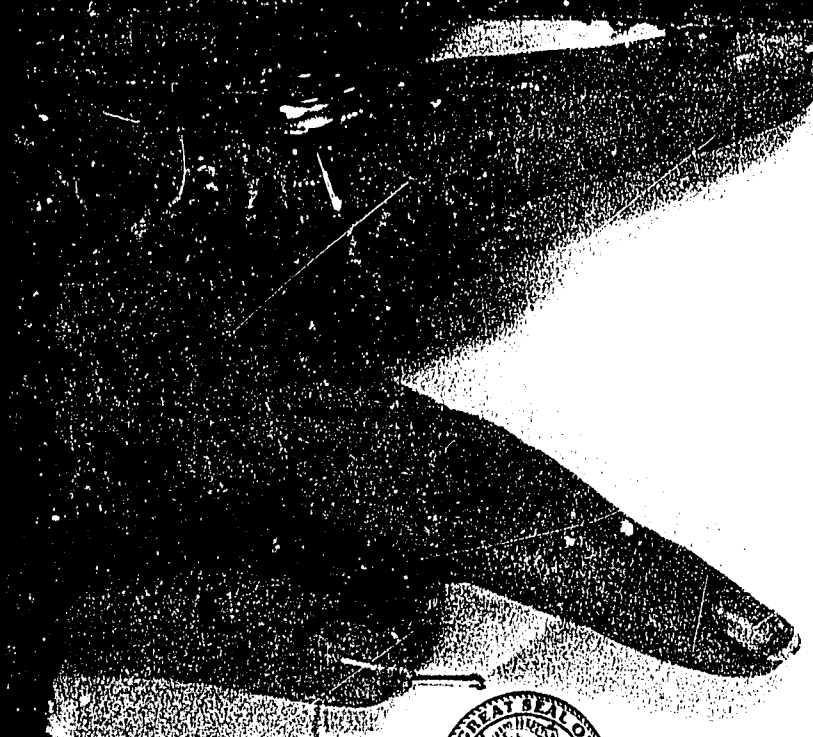
- Present staff exhibit 2 which is a schematic of the reach, showing:

    - Measuring point

    - Other rights

- No streamflow records available except at a measuring station 4½ miles upstream from mouth of Little Creek. There, for 1962 - 1966, the following average flows were

OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.
36	33	30	27	27	26	57	149	150	69	48	41



STATE OF IDAHO

DEPARTMENT OF FISH AND GAME

REGION 5
636 PERSHING, SUITE B
POCATELLO, IDAHO 83201

JUNE 9, 1980

STATEMENT FOR A HEARING IN MONTPELIER, TUESDAY, JUNE 10, 1980

MY NAME IS BILL DAVIDSON, I AM SUPERVISOR FOR REGION 5 OF THE IDAHO DEPARTMENT OF FISH AND GAME. ALONG WITH REGION 5 FISHERIES MANAGER JOHN HEIMER, WE WOULD LIKE TO DISCUSS WITH YOU THE IMPORTANCE OF ST. CHARLES CREEK FROM THE STANDPOINT OF FISH POPULATIONS IN THIS AREA.

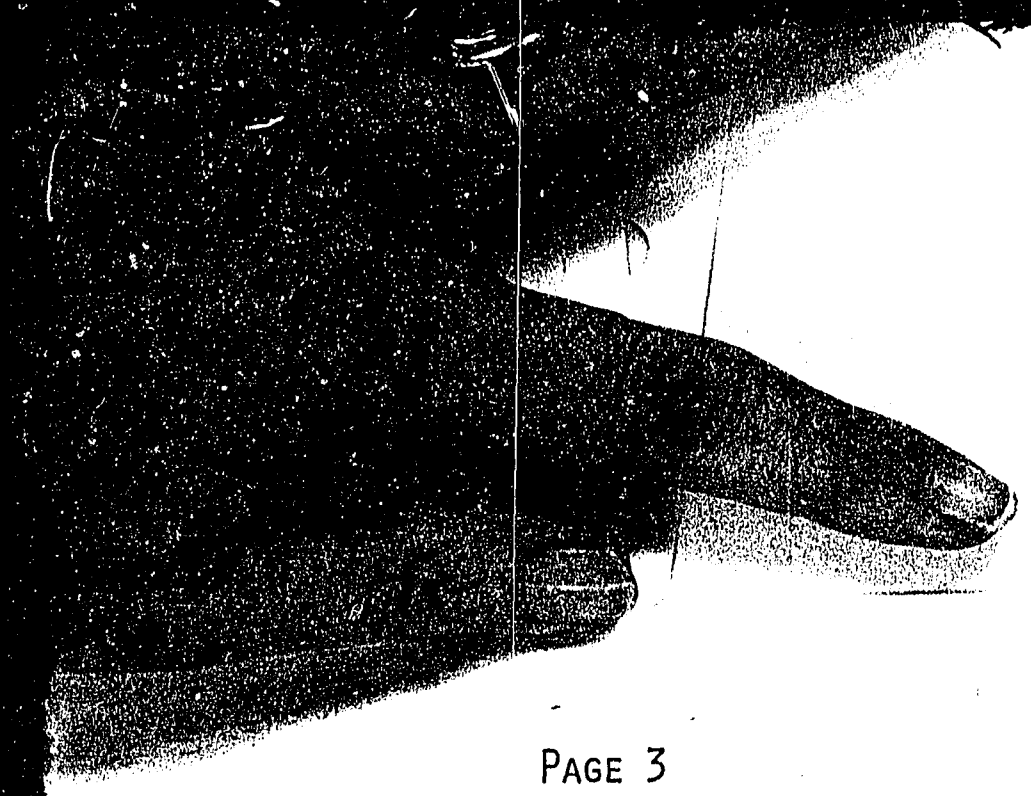
ST. CHARLES CREEK IS LOCATED IN BEAR LAKE COUNTY AND IS AN IMPORTANT CONTRIBUTOR TO THE OVERALL FISHERIES IN THE BEAR LAKE AREA. HISTORICALLY, BEAR LAKE HAS SUPPORTED AN IMPORTANT COMMERCIAL FISHERIES FOR BOTH GAME AND NON-GAME FISH WITH THE BEAR LAKE CUTTHROAT BEING THE PREDOMINANT GAME FISH TAKEN; HOWEVER, OVER FISHING, DEMANDS FOR WATER AND VARIOUS OTHER EXTERNAL ENVIRONMENTAL FACTORS IN BEAR LAKE HAVE INTER-ACTED SO THAT THE CUTTHROAT GRADUALLY DECLINED. FROM 1946 TO 1960 THE IDAHO DEPARTMENT OF FISH AND GAME MAINTAINED AN EGG TAKING STATION AT THE MOUTH OF ST. CHARLES CREEK. DURING THIS PERIOD, EGGS WERE TAKEN FROM BOTH RAINBOW AND CUTTHROAT WHICH ANNUALLY MIGRATED UP THE STREAM TO SPAWN. FISH HATCHED FROM THIS SPAWN WERE RELEASED BACK INTO THE SYSTEM. ADDITIONAL PLANTS WERE MADE OF CUTTHROAT AND RAINBOW FROM OTHER EGG SOURCES TO THE LAKE'S SYSTEM. RESEARCH INDICATED A CONTINUING PROBLEM WITH THE BEAR LAKE CUTTHROAT POPULATION.

MICROFILMED

EQUAL OPPORTUNITY EMPLOYER

THE CLOSE PROXIMITY OF LARGE POPULATION CENTERS AND INCREASE IN LEISURE TIME HAS FOCUSED ON THE BEAR LAKE AS A FIRST CLASS RECREATIONAL AREA. FISHING IN THE LAKE AND ITS TRIBUTARIES IS AN IMPORTANT PART OF THE RECREATIONAL PICTURE. WE FEEL THAT CUTTHROAT NUMBERS CAN BE INCREASED SO THAT THEY WILL PROVIDE A GREATER BENEFIT TO ANGLERS. ONE IMPORTANT KEY TO THE MAINTENANCE OF THE CUTTHROAT POPULATIONS IN BEAR LAKE IS THE MAINTENANCE OF FISH HABITAT IN ST. CHARLES CREEK, THE MOST IMPORTANT SPAWNING AND REARING TRIBUTARY FOR BOTH CUTTHROAT AND RAINBOW TROUT FOUND IN THIS LAKE.

IN THE EARLY 1970'S, THE UTAH DEPARTMENT OF NATURAL RESOURCES INITIATED A CUTTHROAT ENHANCEMENT PROGRAM FOR BEAR LAKE. A FULL-TIME FISHERIES RESEARCH BIOLOGIST WAS STATIONED AT BEAR LAKE TO EVALUATE THE RESULTS OF THIS PROJECT. THE IDAHO DEPARTMENT OF FISH AND GAME COOPERATED ON THIS PROJECT. BASICALLY, THIS PROGRAM CONSISTS OF TAKING EGGS FROM MATURE CUTTHROAT AT ST. CHARLES CREEK IN IDAHO AND SWAN CREEK IN UTAH, HATCHING AND REARING THESE EGGS FOR APPROXIMATELY ONE YEAR, THEN PLANTING THE YOUNG FISH BACK INTO BEAR LAKE. A FISH HATCHERY WAS CONSTRUCTED AT MANTUA, UTAH, SPECIFICALLY DESIGNED AND BUILT BY THE UTAH DEPARTMENT OF NATURAL RESOURCES FOR THIS CUTTHROAT ENHANCEMENT PROJECT. GENERALLY, BETWEEN 250 AND 500 MATURE, ADULT CUTTHROAT SPAWN ANNUALLY IN ST. CHARLES CREEK. EGGS AND SPERM ARE TAKEN FROM ABOUT 80% OF THESE FISH, WITH THE REMAINDER BEING PLACED UPSTREAM FROM THE TRAP TO COMPLETE THEIR NORMAL SPAWNING ACTIVITIES. BETWEEN 500,000 AND ONE MILLION EGGS, OR 60% OF THE TOTAL EGG TAKE AT BEAR LAKE ARE TAKEN AT THIS SITE ANNUALLY. THIS IS AT THE SAME LOCATION WHERE THE MAINTENANCE FLOWS ARE REQUESTED. IT IS IMPORTANT THAT THE CUTTHROAT RUN IN ST. CHARLES CREEK BE MAINTAINED. IT IS A SPECTACULAR FISH AND IT IS VERY IMPORTANT TO THE FISHING ENHANCEMENT PROGRAM. CUTTHROAT IN THIS SPAWNING RUN GENERALLY RANGE FROM 18 TO 27



INCHES IN TOTAL LENGTH AND AVERAGE FROM FOUR TO TEN POUNDS. THESE FISH ARE NOTED FOR THEIR LARGE SIZE AND THE PRESENT STATE RECORD CUTTHROAT WEIGHING 18 POUNDS, 15 OUNCES WAS TAKEN AT THE MOUTH OF ST. CHARLES CREEK ON APRIL 30, 1970. THE SIZE OF THE CUTTHROAT WHICH SPAWN IN THIS STREAM ARE PROBABLY LARGER THAN CUTTHROAT IN ANY OTHER MAJOR SPAWNING CUTTHROAT RUN IN THE STATE OF IDAHO.

IN ADDITION TO THE CUTTHROAT WHICH USE THIS STREAM FOR THEIR SPAWNING ACTIVITIES, UP TO 150 RAINBOW AND RAINBOW-CUTTHROAT HYBRIDS SAPWN HERE ANNUALLY. THESE FISH ARE ALSO OF COMPARABLE SIZE TO THE BEAR LAKE CUTTHROAT.

ST. CHARLES CREEK IS EXTREMELY IMPORTANT AS A SPAWNING AREA FOR LARGE BEAR LAKE CUTTHROAT, BUT IT IS ALSO VERY IMPORTANT AS A FISHING AND RECREATIONAL AREA. ITS HIGHLY DEVELOPED CAMPING FACILITIES, U. S. FOREST SERVICE SPONSORED TOURS OF MINITONKA CAVE AND ITS STREAM FISHING MAKE THIS A POPULAR RECREATIONAL AREA. IT HAS BEEN ESTIMATED BY THE U. S. FOREST SERVICE THAT APPROXIMATELY 20% OF THE FISHING IN BEAR LAKE COUNTY OCCURS ON ST. CHARLES CREEK AND THAT 23,000 VISITOR DAYS ARE MADE TO THIS STREAM ANNUALLY, OF WHICH BETWEEN 1,500 AND 3,000 ARE ANGLERS. THE PAST FEW YEARS HAS SEEN ADDITIONAL DEMANDS PLACED ON THIS RECREATIONAL RESOURCE DUE TO THE ELIMINATION OF OVERNIGHT CAMPING ON THE NORTH SHORE OF BEAR LAKE. THE IDAHO DEPARTMENT OF FISH AND GAME ANNUALLY PLANTS APPROXIMATELY 7,000 CATCHABLE SIZED RAINBOW IN THE UPPER SECTION OF ST. CHARLES CREEK. OCCASIONALLY, CUTTHROAT AND BROOK TROUT ARE PLANTED, DEPENDING UPON AVAILABILITY AND STREAM CONDITIONS. MOST OF THE FISH CAUGHT FROM THE STREAM ARE RAINBOWS; HOWEVER, OCCASIONALLY, CUTTHROAT AND BROOK TROUT ARE ALSO TAKEN.



THE FISHING REGULATIONS FOR THIS STREAM ARE SO DESIGNED SO THAT THE LARGER SPAWNING CUTTHROAT AND RAINBOW CAN MOVE UP THE STREAM, SPAWN UNHINDERED AND RETURN BACK TO BEAR LAKE WITHOUT BEING EXPOSED TO FISHING PRESSURE. FORTUNATELY, MOST OF THE SPAWNING OCCURS IN THE LOWER ONE-HALF OF THIS STREAM WITH THE MAJOR FISHING EFFORT EXERTED IN THE UPSTREAM HALF.

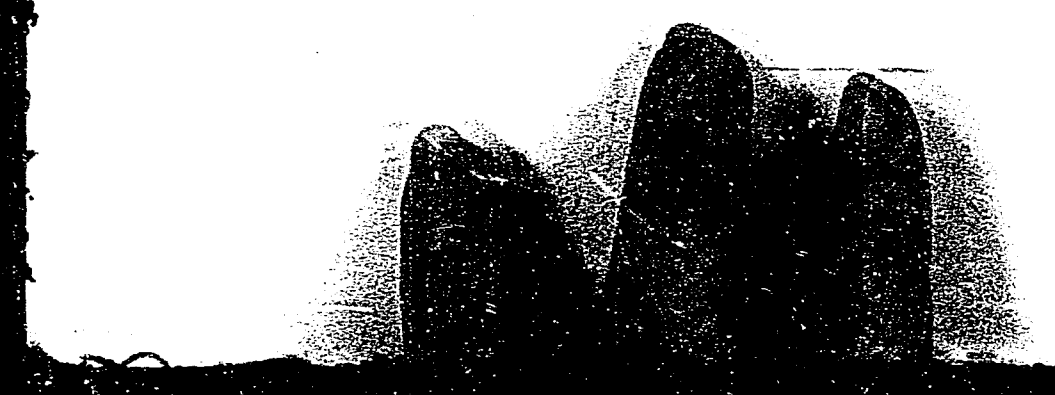
DUE TO THE CONTRIBUTION AND IMPORTANCE OF THIS STREAM, THE OVERALL BEAR LAKE FISHERY AND ITS OWN IMPORTANCE AS A PUBLIC RECREATIONAL RESOURCE, WE STRONGLY SUPPORT MAINTENANCE FLOWS SO THAT THIS CUTTHROAT AND RAINBOW POPULATION WHICH UTILIZES ST. CHARLES CREEK AND BEAR LAKE CAN BE ENHANCED AND PERPETUATED SO THAT ALL MAY BENEFIT IN THE FUTURE.

END

MICROFILMED

Bear Lake Egg Collection Data, 1973-1979

Date	No. Males Tagged	No. Females Tagged	$\bar{x}$ TL (mm) Tagged Female	$\bar{x}$ WGT (g) Tagged Female	$\bar{x}$ No. Eggs Per Female	Total Ozs. Eggs	$\bar{x}$ No. Eggs/ Oz.	Total No. of Eggs	Trapping Season Begin/End
Swan Creek									
1973	25	115	--	--	3825	1955	225	439,896	3/1 - 6/18
1974	95	141	447	1386	2538	1136	315	357,845	3/9 - 6/18
1975	24	57	587	2776	2361	1205	246	296,530	4/3 - 6/24
1976	28	60	524	1560	3151	690	--	191,914	4/2 - 6/29
1977	59	75	522	1528	3150	856	--	236,245	4/16- 6/21
1978	189	215	482	1593	3267	2491	--	663,120	4/4 - 6/19
1979	116	174	544	1700	3719	1694	--	502,117	4/16- 6/29
								26 7607	
St. Charles Creek									
1975	91	178	612	2981	5559	3980	249	989,079	4/4 - 6/19
1976	124	250	568	2080	4202	2598	--	712,529	5/1 - 6/15
1977	25	71	552	1774	3399	847	--	241,364	5/1 - 6/15
1978	91	155	573	2108	4347	1958	--	517,294	5/9 - 6/16
1979	98	~~98~~ 147	570	2050	4014	1911	--	441,539	5/3 - 6/15
								2401735	
Total Combined									
1973	25	115	--	--	3825	1955	225	439,896	
1974	95	141	447	1386	2538	1136	315	357,845	
1975	115	235	605	2931	5471	5185	248	1,285,609	
1976	152	310	558	1980	4007	3288	278	913,506	
1977	84	146	527	1553	3271	1730	276	477,609	
1978	280	370	516	2085	3666	4449	263	1,180,414	
1979	214	~~244~~ 321	556	1850	3852	3605	262	943,656	
		1372							



Montpelier June 10 1980
Public Hearing App. # 11-7152
INSTREAM FLOW ST CHARLES CK

NAME	Address	Representing	Wish to testify
W. J. Transtrum	St Charles Idaho	Self	-
Wm. Transtrum	Soda Springs Ida	St. Charles Irr. Co.	Counsel Atty
Lamont J. Pugmire	St Charles, Idaho	St Charles Irr. Co	P
Arlo M. Rasmussen	St. Charles, Idaho	St. Charles Irr. Co.	✓
Dragg S Peterson	St. Charles, Idaho	St. Charles Irr. Co	
Gene Page	Montp. Idaho.	Fish & Game Dept.	no —
John F. Hemmer	Pocatello, Idaho	Idaho Fish & Game	✓
Bruce R Nielsen	Garden City, Ut	Utah Wildlife Resources	✓
Wendell Johnson	Montpelier, Ida	U.S. F.S	No
Bill Davidson	636 Pershing - Pocatello	Idaho Fish & Game	Yes.
Loyal C. Holmes	Bloomington Ida.	Rancher	
Charles E. Holmes	Bloomington Idaho	Rancher	?
Eugene B Stucki	Paris Idaho	State Rep.	no.
Reed Hansen		IWRB	
Franklin Jones		"	
Ernest Carlsen		IDWR	
David R. Tuthill Jr		"	
Norman C. Young		"	

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runs 3/4 mile over sandy soil —
No problem over years / FFA —
— Cooperated with FFA —

— left record open for F+G flow
data; will distribute to full parties —

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Reestablishes itself by return flow
starting 1/2 block (300 ft) below
fence —

Only years 1977, & 1930 dry sequence.
Still flow @ fish trap even
though shut down in 1977! — yes
5 to 10 cfs @ trap

Served Island ditch @ time of demand
off

Water Rights in Bloomington were
not served by you from creek? Yes
Bloomington Bottoms —

Confusion on name of stream —
Concern that on a dry year
could not close off Riffle Ck?

Does it make a difference where
measurement is to be taken —
Yes — no problems @ mouth
but would have @ diversion

Prior rights are protected? Yes, I
understand that

X-EXAM (HANSEN)
Distance late to Fence? — 1/2 to 2 mile

STUCKI —

MICROFILMED

Charles Holmes — Operates land for WPTC
— has a new diversion dam about 200 yds
above trap — raised it 4 or 5 feet to divert

because it must install of others to get to mouth

H&O. series of questions on where flow is to be maintained — ——— Bellevue flow is needed over entire stream —

HANSEN —

Resident Fish — yes several species

Mr. Davidson — Recalled

felt that they were applicants for water the full length of creek —

Mr Fransstrum — Not here as antagonists agree in principle — seek infor.

Jr Engineer

Water rights of St Charles Ck —

Decreed rights 1/4/24

Proof of Blk — 1892

5 diversions all out of Big Ck

Principle owner & users of water rights from St Charles Ck —

Several customers length of ck.

Big Creek its old name of entire stream runs from Creek —

Little Ck & Big Ck forks

Has flow into Little Ck been stopped on dry years — yes for example 1977 — Dam Little Ck entirely & divert into Big Ck — Still a substantial flow @ Little Ck

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Amount caught of cutthroat
1973 – 500 fish
1979 – 7000 fish
catch rates have increased –
mainly a function of fish pressure
not numbers of fish

Value of catch (?) –

of Spawn

1973–79 Swan Ck 2.6 m. eggs
1975–79 St. Clair Ck 2.9 m. eggs

Why not natural spawn

Overall decline in Coef 30 yrs – probably
many factors irrig demand
diversion losses
Artificial rearing problems some fish

X-Exam – Transtrum

Sem creek dry – No but very close
in 1977 –
Flows can be maintained –
Observations one / Sleek below Fish
trap –

X-Exam Mr Stucki

Population increase in Lake? – Can't
really tell but creel census have increased

Mr Transtrum –

Problems with stream spawning run
into low lake – yes.

MICROFILMED

Davidson – water @ mouth will be there

Problems with stocking from other sources—

Federal aid funds for research Project

1975 agreement with Idaho F+G -

Stocked eggs taken on St Charles

(1) Take eggs from wild cutthroat trout

(2) Eggs processed @ Mennen Hatchery

Cost $2 million dollars — exclusively for Ben Lake Hatchery — only returned to Ben Lake

(3) Restock with 5" fish -

(4) Gill netting program to assess fish habits — creel census — base for regulation — reciprocal regulations for Utah + Idaho

St Charles is closed 4/15 to 6/15 & Forest Service Boundary to Boundary.

(5) Full assessment of project possible by creel census —

<u>Wild fish eggs</u> — not a domesticated type — very important.

All fish taken on Swan

80% of St Charles taken 20% allowed to escape

<u>X-Exam</u>

Where are flows to be maintained.

Flows must be allowed to enter lakes for fish to <u>rear</u> on — main need is for flow @ mouth

However, 4 to 4½ miles upstream is excellent spawning area -

+ Need good rearing habitat of stream also

MICROFILMED

No records for maintaining flow year after year -

Point of measurement @ confluence - yes lowest flow @ that point

Mr Stucki -

Spawn May & June

What effect on Big Creek if diversion

H.O. - Questions on location of flow maintenance

Mr. Hansen

Cutthroat different - yes a different variety than other cutthroat

% of spawn - up to 60% of spawn 50 to 30%.

How much of creek has high value - lower half -

Approx. how many miles of stream - 8 miles total length - 4 to 8 miles spawning area.

Downstream from Blue Pond spring spawning occurs.

Reg. - fish closed till July 1 6 or 8 years

Gaging station -

Was water bound

Mr Stucki

No manmade structure @ forks

Bryce Nielson - Garden City, Utah - State of Utah

Fishery Biologist - Bear Lake project leader for 8 yrs

Started 64 Utah 1973 - Eggs taken started on Swan Ck

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→ Get Stucki data on key notices

Plantings made each year -
No fishing pressure by reg.
Most spawning occurs in lower half of stream -

X-GRAM -
No information

Spawning timing

John Heimer
Photos Fig- 1 & 15 -
of fish

X-EXAM
Stream flow records
Hiway 89 bridge - 1st station
~~Just below~~
Upstream from forks just above
canal - 1/2 to 2 miles
upstream
No records here today

9 to 17 cfs was determined by
Amount of flow at that time
in the stream

IDEA ON GAIN from hiway to here? -
only minor NOT much

Why more flow for May + June -
time spawners are in stream - need protection -
only enough needed in August to
keep riffles wet.
Flow problems in spring - floods

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Montepelier 6/10/80
Hearing on 18-7152

Appearances -
Reed Hansen
Bill Davidson
Wallace Transtrum — St. Charles Creek

Dept - Tuthill
Qualification
Applic processing
File information — Letters
Accepted reviewed location map - dept ex. # 1
Accepted reviewed Dept records on file - dept ex # 2
reviewed Hydrology records -
no idea of flow in Little Creek

Board — Hansen
Request to Board 8/28/78
Board considered 9/11/78
filed 9/13/78
Hrg 11/78
criteria —

Dept of Fish & Game
Bill Davidson - Region 5 director
Cutthroat pop. declined -
Egg-taking station @ mouth of ck
200 to 500 V Spawners Cutthroat — 500,000 to 1 mill eggs
60% of take @ hat
18" to 27" fish — 18½ lb record in Idaho
100 to 200 Rainbow spawners
Very important for best take Spawning
" " " Recreation —

MICROFILMED

DEPARTMENT OF WATER RESOURCES

STATE OF IDAHO)
)
COUNTY OF ADA)

CERTIFICATE OF MAILING

I HEREBY CERTIFY That on the 2nd day of July, 1980, true and correct copies of a letter from Tim Cochnauer dated June 12, 1980, and portions of a job performance report project F-66-R-2 dealing with St. Charles Creek were mailed, postage prepaid to:

Mr. W. M. Transtrum
240 S. Main
Soda Springs, Idaho 83276

Mr. Eugene B. Stucki
Paris, Idaho 83261

Jackie Gibbons

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF FISH AND GAME

Region 4
868 East Main
Box 428
Jerome, Idaho 83338

June 12, 1980

RECEIVED
JUN 18 1980
Department of Water Resources

Norm Young
Idaho Department of Water Resources
Statehouse
Boise, Idaho 83720

Dear Norm:

The requested discharge measurements on St. Charles Creek are listed below. If you have any question, do not hesitate to call me.

Average of two stations located above main irrigation diversion upstream of Highway 89 bridge

Date	Discharge (cfs)
7/20/76	72.37
8/27/76	53.45
10/20/76	30.18
3/28/77	28.81
6/1/77	44.06

Average of three stations located immediately downstream of Highway 89 bridge

Date	Discharge (cfs)
7/20/76	11.19
8/27/76	11.04
10/20/76	9.00
3/28/77	10.33
6/1/77	1.46

Sincerely,

Tim Cochnauer

Tim Cochnauer
Senior Fishery Research Biologist

cc: John Heimer, Idaho Dept. Fish & Game

EQUAL OPPORTUNITY EMPLOYER

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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

April, 1977

MICROFILMED

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 (Cochnauer 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 (Cochnauer 1976), and "field testing" the proposed methodology. An evaluation of the WSP is presented in Job 1.

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).

MICROFILMED

Table 2 (Cont'd.). Important fish and wildlife resources in study streams.

Stream	Rainbow trout	Cutthroat trout	Brown trout	Black crappie	Mountain whitefish	White sturgeon	Smallmouth bass	Largemouth bass	Channel catfish	Canada goose	Mallard duck	Muskrat	Beaver	Mink	Otter
Box Canyon Springs	X										X				
Briggs Springs	X										X				
Lower White Springs	X										X				
Sand Springs	X										X				
Snake River															
American Falls to Minidoka Dam	X		X		X			X		X	X	X	X	X	X
C.J. Strike Dam to Swan Falls Dam	X			X	X	X		X	X	X	X	X	X	X	X
Swan Falls Dam to Bernard's Ferry	X			X	X	X	X	X	X	X	X	X	X	X	X
Bernard's Ferry to Boise River mouth				X	X		X	X	X	X	X	X	X	X	X
Boise River mouth to Payette River				X	X		X	X	X	X	X	X	X	X	
Payette River to Brownlee floodline				X	X		X	X	X	X	X	X	X	X	
St. Charles Creek	X	X									X	X	X		

MICROFILMED



Stream resource maintenance flow recommendations, based on rearing flows for fish food production, are as follows:

	Jan.	Feb.	Mar.	Apr.	May	June
Min. cfs	5,650	5,650	5,650	5,650	5,650	5,650
Min. cu m/s	160	160	160	160	160	160

	July	Aug.	Sept.	Oct.	Nov.	Dec.
Min. cfs	5,650	5,650	5,650	5,650	5,650	5,650
Min. cu m/s	160	160	160	160	160	160

Payette River Mouth to Brownlee Flowline

Snake River is entirely free flowing in this 46 km (28.6 mi) stretch. Gravel riffle areas are around the 37 islands located in this section. Stations PR, WR and OO are located on representative food production habitat; 6 km (3.7 mi) downstream of Highway 52 bridge at Payette, 5 km (3.1 mi) downstream of Highway 30N bridge at Weiser, and 16 km (9.9 mi) downstream of Highway 30N bridge at Weiser.

Game fish populations include channel catfish, largemouth bass, smallmouth bass, mountain whitefish and black crappie. In 1972, anglers fished an estimated 11,964 hours to harvest 22,955 game fish in this section (Reid et al. 1973).

Wildlife populations include Canada goose, muskrat, mink, beaver and a variety of ducks. Hunters expended an estimated 5,943 hours to harvest 1,987 waterfowl in 1972 (Reid et al. 1973). Idaho Fish and Game personnel located 129 goose nests in this section during the 1975 survey.

Stream resource maintenance flow recommendations, based on rearing flows for fish food production, are as follows:

	Jan.	Feb.	Mar.	Apr.	May	June
Min. cfs	5,850	5,850	5,850	5,850	5,850	5,850
Min. cu m/s	166	166	166	166	166	166

	July	Aug.	Sept.	Oct.	Nov.	Dec.
Min. cfs	5,850	5,850	5,850	5,850	5,850	5,850
Min. cu m/s	166	166	166	166	166	166

St. Charles Creek

St. Charles Creek flows 22 km (13.7 mi) from the Cache National Forest east into Bear Lake near the town of St. Charles (Fig. 9). Water is diverted approximately 3.5 km (2.2 mi) upstream of the mouth. Station SCC is located on representative spawning and food production habitat at Highway 29 bridge in St. Charles.

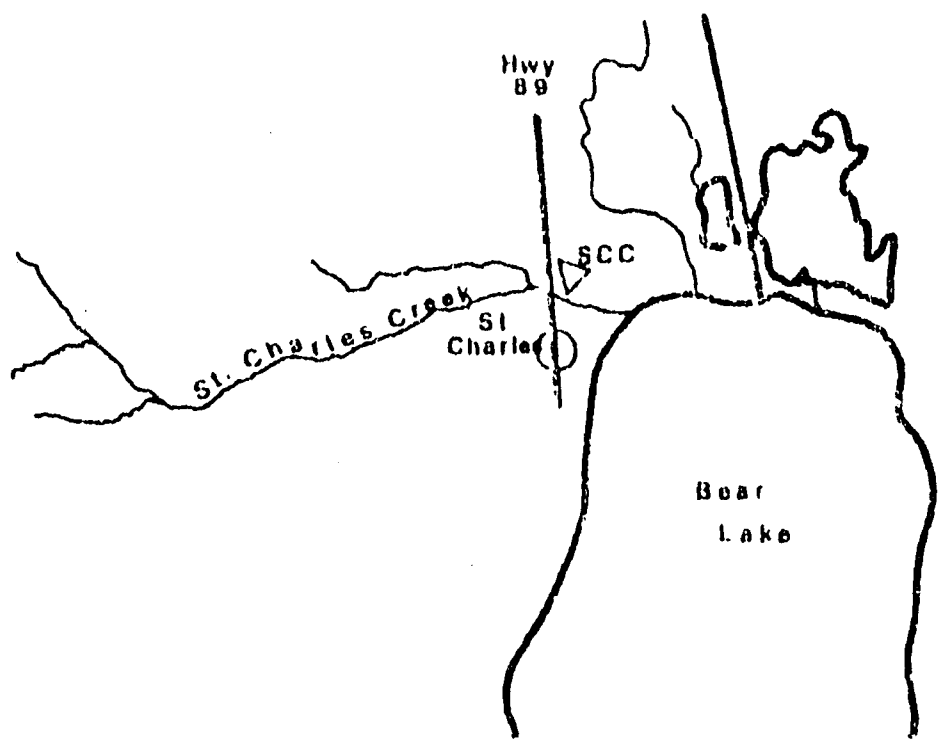


Figure 9. Study site location on St. Charles Creek.

This stream is considered the most important tributary of Bear Lake for cutthroat and rainbow trout spawning. The Idaho Department of Fish and Game operates a spawntaking weir 0.5 km (0.3 mi) upstream from the mouth. In 1976, approximately 500 cutthroat entered the trap. These fish ranged from 0.9 to 7.3 kg (2 to 16 lb) with an average of 2.7 kg (6 lb). In addition to the cutthroat, approximately 500 rainbow and rainbow/cutthroat hybrid trout utilize the drainage for spawning.

This stream is used by waterfowl for production, feeding and nesting. Furbearers within the drainage include muskrat, beaver and mink.

Stream resource maintenance flows for the stretch from Highway 89 bridge to the mouth are based on trout spawning and rearing requirements and are as follows:

	Jan.	Feb.	Mar.	Apr.	May	June
Min. cfs	9	9	9	9	17	17
Min. cu m/s	.25	.25	.25	.25	.48	.48

	July	Aug.	Sept.	Oct.	Nov.	Dec.
Min. cfs	14	11	9	9	9	9
Min. cu m/s	.40	.32	.25	.25	.25	.25

Table 11. St. Charles Creek fish periodicity chart.

Species	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Rainbow Trout												
Spawning												
Incubation												
Rearing												
Cutthroat Trout												
Spawning												
Incubation												
Rearing												

Table 12 (Cont'd.). Stream resource maintenance flow recommendations (cu m/s) for life history periods of important fish and wildlife resources in study streams.

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Snake River (Cont'd.)												
Swan Falls Dam to Bernard's Ferry												
All fish species Rearing	156	156	156	156	156	156	156	156	156	156	156	156
Bernard's Ferry to Boise River mouth												
All fish species Rearing	144	144	144	144	144	144	144	144	144	144	144	144
Boise River mouth to Payette River mouth												
All fish species Rearing	160	160	160	160	160	160	160	160	160	160	160	160
Payette River mouth to Brownlee Flowline												
All fish species Rearing	166	166	166	166	166	166	166	166	166	166	166	166
South Fork Boise River												
Anderson Ranch Dam to Arrowrock Res.												
All fish species Rearing	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
South Fork Payette R.												
At Lowman												
All fish species Rearing	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
St. Charles Creek												
Highway 89 bridge to mouth												
Rainbow Trout (Spawning)					.48	.48						
Incubation					.32	.32	.32	.32				

Table 12 (Cont'd.). Stream resource maintenance flow recommendations (cu m/s) for life history periods of important fish and wildlife resources in study streams.

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
St. Charles Crk. (Cont'd)												
Cutthroat Trout												
Spawning					.40	.40	.40					
Incubation					.25	.25	.25	.25				
All fish species												
Rearing	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25
Willow Creek												
Ririe Dam to mouth												
Rainbow Trout												
Spawning				1.07	1.07	1.07	1.07					
Incubation				.71	.71	.71	.71	.71				
Cutthroat Trout												
Spawning					.95	.95	.95					
Incubation					.63	.63	.63	.63				
Brook Trout												
Spawning										.73	.73	.73
Incubation	.49	.49	.49	.49						.49	.49	.49
Brown Trout												
Spawning										1.08	1.08	1.08
Incubation	.72	.72	.72	.72						.72	.72	.72
All fish species												
Rearing	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39
Wolf Lodge Creek												
at mouth												
Cutthroat Trout												
Spawning				.82	.82							
Incubation				.55	.55	.55	.55					
Brook Trout												
Spawning									.55	.55	.55	
Incubation	.37	.37	.37	.37					.37	.37	.37	.37
Kokanee												
Spawning											.55	.55
Incubation	.37	.37	.37	.37	.37						.37	.37
All fish species												
Rearing	.85	.85	.85	.85	.85	.85	.85	.85	.85	.85	.85	.85

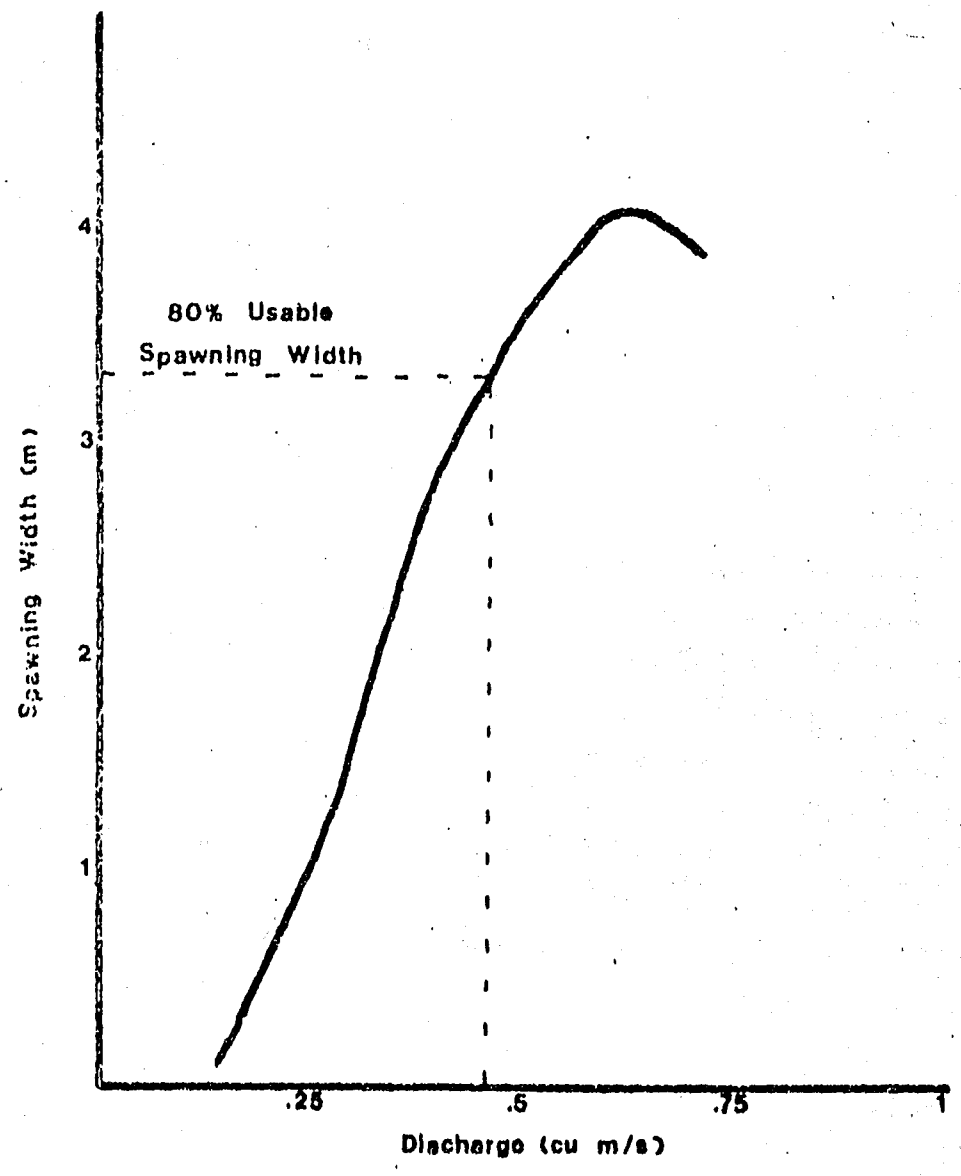


Figure 32. Rainbow trout spawning curve for St. Charles Creek.

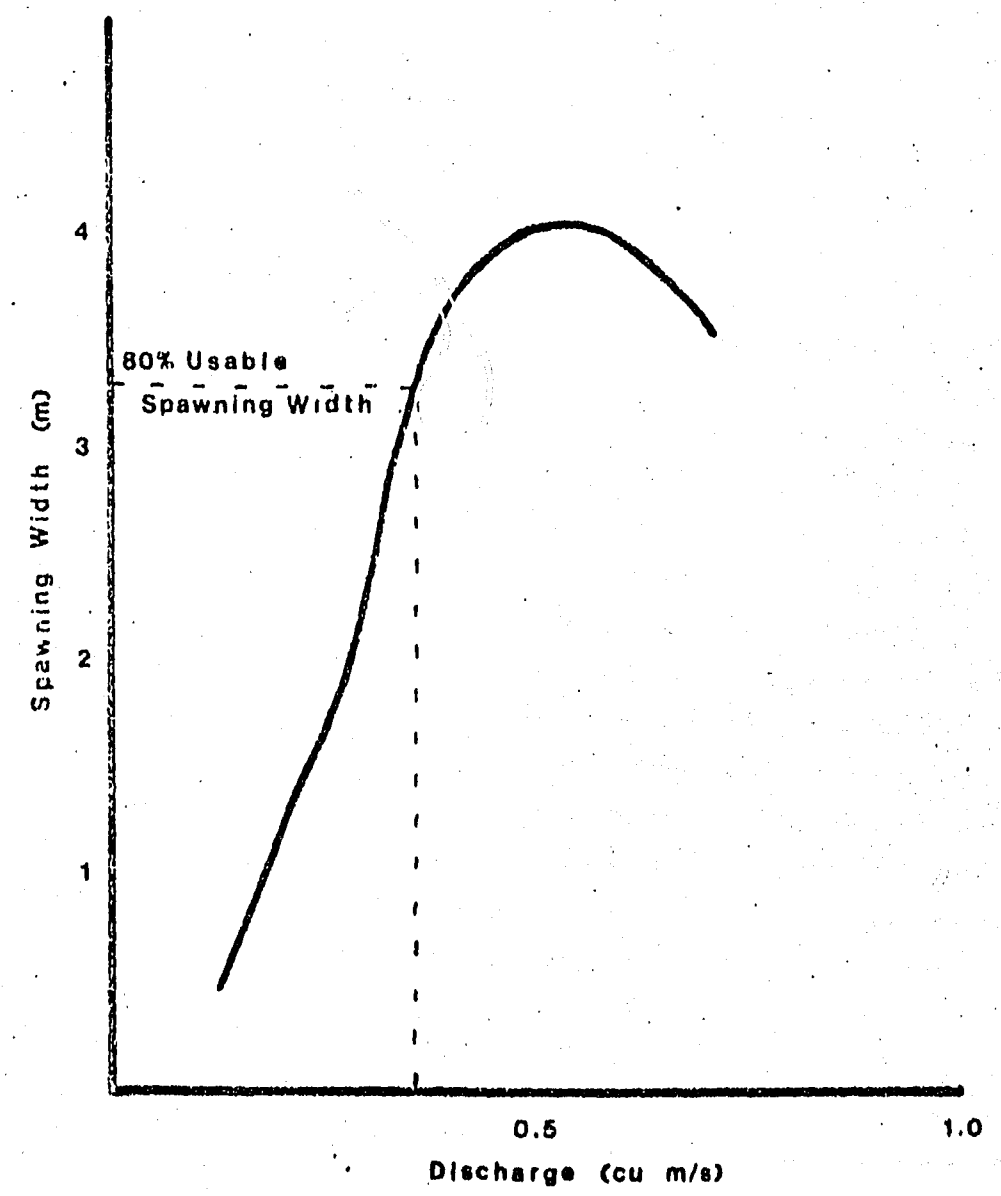


Figure 33. Cutthroat trout spawning curve for St. Charles Creek.



Figure 34. Rearing flow curve for St. Charles 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

July 2, 1980

Mr. W. M. Transtrum
240 S. Main
Soda Springs, Idaho 83276

Dear Mr. Transtrum:

Enclosed please find copies of additional evidence presented by the Idaho Department of Fish and Game on the matter of Application for Minimum Stream Flow No. 11-7152, St. Charles Creek. This evidence includes a letter from Tim Cochnauer dated June 12, 1980, and portions of job performance report, project F-66-R-2 dealing with St. Charles Creek.

Please submit any comments on this evidence to this office by July 18, 1980.

Sincerely,

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

DRT:jg

Enclosure

MICROFILMED

July 2, 1980

Mr. Eugene B. Stucki
Paris, Idaho 83261

Dear Mr. Stucki:

Enclosed please find copies of additional evidence presented by the Idaho Department of Fish and Game on the matter of Application for Minimum Stream Flow No. 11-7152, St. Charles Creek. This evidence includes a letter from Tim Cochnauer dated June 12, 1980, and portions of job performance report, project F-66-R-2 dealing with St. Charles Creek.

Please submit any comments on this evidence to this office by July 18, 1980.

Sincerely,

David R. Tuthill Jr., P. E.
Supervisor, Water Allocation Section

DRT:jg

Enclosure

MICROFILMED

Eugene Stookey (SCS) - 1) Copy of flows requested on application.
2) Information as to dates & where advertised.

Bill Davidson - Idaho F & G.
John Hymer - " "
Bryce Nelson - Utah Fish & Wildlife.

Continued

Also water rights on Bloomington - Soft Sp.
~~If moved into~~ Question - will permit prevent the lowering of Little Creek during low water.
Distance from lake to fork - 1½ to 2 miles.

Bill Davidson - point of measurement is to be at the ~~mouth~~ of Little Cr. at high water mark in Bear Lake.

Minimum Flow on St. Charles Creek.

Application 11-7152 June 10th 1980.

Wallace Thornton - represents St. Charles Creek Irrigation Co.

D.R. Tuthill Jr. (IDWR) - Spoke for Water Allocation Section.

Water Right Issued is used for irrigation on Creek.
after 1971 B.U.R.'s could not be established. (Depts Exhibit No. 2).

- No flow records below diversions of Big & Little Creeks.

Applicant - Reed Hansen Frank Jones.

Criteria: 1) No injury to existing water rights. "Co is subordinate to exist & rights. 2) The in stream need to ~~[illegible]~~ maintain existing values 3) Q. filed on was a minimum. 4)

Bill Davidson - Read statement concerning importance of St Charles Cr. to fishery of Bear Lake.

John Keener - Idaho F & G -
Cannot provide flow data for St. Charles Creek.

Bryce Nelson: Utah - Bear Lake Cutthroat Enhancement Project.

Inquiries - Resident of St Charles Irrigation Co.
- Co. has decreed rights on Cr.
Water runs on both Big & Little Creek.
June 1977 - Cr. closed off Little Creek to maintain flow in Big Creek. Below diversion a short [illegible] flow about 300 ft then stops -

Form No. 202a
3/79

State of Idaho

Department of Water Resources

APPLICATION FOR PERMIT ANALYSIS SHEET

INITIAL REVIEW BY: _____ APPLICATION NUMBER: 11-7152

CHECK:

- ☐ Source.
- ☐ Point of diversion.
- ☐ County.
- ☐ Quantity of water and period of use.
- ☐ Description of diverting works.
- ☐ Time required for beneficial use of water.
- ☐ Place of use or acres irrigated.
- ☐ Map.
- ☐ Signature.
- ☐ Fee.

Field check by: _____
Date: _____
Comments: _____

- ☐ Yes ☐ No Field check required.
- ☐ Yes ☐ No Critical groundwater area.
- ☐ Yes ☐ No Request dam safety information. Sent by: _____ Date: _____
- ☐ Yes ☐ No* In form to receipt.

*REQUEST THE FOLLOWING ADDITIONAL INFORMATION FROM THE APPLICANT: _____

SEND COPIES TO:

☒ Idaho State Health Department.	Copies sent by: KW	Date: 4/8/80
☒ Idaho Fish and Game Department.	KW	4/8/80
☐ Idaho Department of Lands.		
☐ U.S. Bureau of Land Management.		
☐ U.S. Forest Service.		
☒ Other Parks & Rec.	KW	4/8/80

PROCESSING:

- ☐ Yes ☐ No Platted by: _____ Map No. _____
- ☐ Yes ☐ No Other rights on same place of use. _____
- ☐ Yes ☐ No* In form for advertising.
  Final date for protests: _____
- ☐ Yes ☐ No Protests received. If yes, record information on 4th page of application.

FINAL REGIONAL PROCESSING REVIEW:

- ☐ Affidavit of publication received. Date: _____
- ☐ Application published correctly. If not, record action taken: _____
- ☐ Fee amount, receipt date & number, recorded on application.
- ☐ Publication dates and paper, recorded on application.
- ☐ Protests, dates, withdrawal, etc., recorded on application.
- ☐ Recommendation & initial, recorded on application.
- ☐ Yes ☐ No Measuring device required.
- ☐ Yes ☐ No Access port required.
- ☐ Yes ☐ No Will water be delivered by watermaster? If yes, what district? _____
  _____ Date of priority recommended.

Special conditions of approval or cover letter. _____

By: _____ Date: _____

STATE OFFICE REVIEW:

☐ See attached sheet for more information.

By: _____ Date: _____

Form 204
3/85
09-10-120, 2000, A-6887

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

For Office Use Only
$15 FEE Received ____
Date FEE NOT
Receipt # APPLICABLE

REQUEST FOR EXTENSION OF TIME

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

RECEIVED
SEP 3 1985
Department of Water Resources

Idaho Water Resource Board (Name) of Statehouse Mail, Boise, ID 83720 (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. 11-7152.

That under the terms and conditions of said permit, work thereunder was required to be completed on or before September 1, 19 85.

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.)
Established a minimum instream flow

Costing $ ____

That he is unable to complete the remainder of the work within the required time for the following reasons, to-wit:
Need additional time to supply support data with proof of beneficial use

Wherefore, he asks that the Department of Water Resources extend the time for the completion of obligations under said permit to September 1, 19 86
(1 yr. minimum, 5 yrs. maximum)

Chairman (Signature)*
*IF OTHER THAN HOLDER, Power of Attorney must be supplied.

FEE: $15.00

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 proof of beneficial use is extended to September 1, 1986.

Signed this 6th day of December, 19 85.

L. Glen Saxton
Chief, Operations Bureau

June 28, 1985

HAND DELIVERED

Idaho Water Resource Board
Statehouse Mail
Boise, ID 83720

Gentlemen:

Re: Permit No. 11-7152

PROOF DUE NOTICE

One of the conditions of approval of your water permit No. 11-7152 was that proof of the extent of your beneficial use must be submitted to this office on or before September 1, 1985. (See last page of your approved permit or your last approved extension request). Enclosed is a form 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 provided the delay is for reasonable cause as described in Section 42-204, Idaho Code. If you have been prevented from proceeding by a government 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 form 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

STATE OF IDAHO

IDAHO WATER RESOURCE BOARD

STATEHOUSE
BOISE, IDAHO 83720

RECEIVED
JUL 9 1985
Department of Water Resources

July 8, 1985

Idaho Department of Fish and Game
Statehouse
Boise, ID 83720

Attention: Virgil Moore

Re: Minimum Stream Flow Permit Nos. 11-7152 (St. Charles Creek)
37-7739 (Little Wood River)

Gentlemen:

One of the conditions of approval for the above-referenced permits was that the Water Resource Board submit proof of the extent of beneficial use to the Department of Water Resources on or before September 1, 1985.

The Board requests that you provide us the data you have collected within the minimum stream flow reach which will support the following stated purposes of the permits:

St. Charles Creek To maintain the present quality of fisheries and fish populations in the stream and to provide adequate spawning and rearing conditions for Bear Lake fish utilizing the stream.

Little Wood River To maintain trout spawning and rearing from the point of requested flow upstream to Silver Creek.

Personnel from the Department have indicated that photographs demonstrating the beneficial uses, creel census data and fisherman use data are especially useful in establishing proof of beneficial use. In addition, as shown on the permit approvals, both of the minimum stream flow permits have conditions of approval requiring that the proof submitted shall have at least three (3) years of flow data for the water courses. Data to demonstrate beneficial use and to satisfy the measurement requirements is needed at the time proof is submitted.

The next Board meeting is scheduled for July 30 in Pocatello. If you could provide the information to me before that date, the Board can review the information and submit the required proof in a timely manner. If you have specific questions regarding appropriate data, you may wish to contact Glen Saxton of the Department's staff at 334-4410. Thank you for your assistance in this matter.

Sincerely,

Don Rydalch

DAVID RYDALCH, Chairman
Minimum Stream Flow Committee

DR/ls

cc: Glen Saxton
Wayne Haas

IDAHO
DEPARTMENT OF FISH AND GAME

Jerry M. Conley, Director

GRACE HATCHERY

Annual Report

1 October 1981 - 30 September 1982

by

Jerry Mowery
Fish Hatchery Superintendent II

November 1983

FISH HEALTH

We had several minor outbreaks of bacterial gill disease at the station during the year. Purina 4X was used at one ounce per cfs administered in a one-hour drip through the raceway.

The Bear Lake cutthroat were also treated with Purina 4X as a protection against any diseases that may have come in from Utah.

SPAWNTAKING OPERATION

At our St. Charles Creek trap, adult Bear Lake cutthroat trout are trapped during the spring and taken to Utah's Swan Creek trap for spawning. Utah Division of Wildlife Resources personnel spawn these adults, return them to the lake and send the eggs to Mantua Hatchery for rearing. After growing to a length of seven to nine inches, these fish are planted into Bear Lake. The purpose of this joint effort with Utah is to enhance the Bear Lake cutthroat trout fishery and to ensure the future of this species.

Kenneth Taylor operated the fish trap at St. Charles Creek from May 3, to June 8, 1982. A total of 91 fish were trapped, 41 males and 50 females. We transported 78 cutthroat, 38 males and 40 females to Utah's Swan Creek trap for spawning. Thirteen cutthroat escaped from the trap and went upstream.

High water conditions, due to heavy snowpack, caused us problems at the trap site. We could not hold fish, as water was over our pickets, and therefore, an undisclosed number of fish went upstream. Swan Creek trap in Utah washed out and they lost their trapping capabilities early in the season.

HATCHERY IMPROVEMENTS

The construction crew installed a new plastic 12-inch water line from our spring into the main hatchery building. The old line rusted through and was not repairable. New 8-inch lines, which feed our 16 nursery vats and incubator room, were installed in hatchery building.

The crew also put up a new 11-ton capacity feed bin during the year. This increases our feed capacity and will help during the winter months.

A new water weir was installed at the outlet of our settling pond. We are now able to read a total water flow through the hatchery and this also satisfies our area watermaster.

IDAHO

DEPARTMENT OF FISH AND GAME

Jerry M. Conley, Director

GRACE HATCHERY

Annual Report

1 October 1983 - 30 September 1984

by

Thomas S. Frew
Fish Hatchery Superintendent II

June 1985

The fish feed consumed by our fish during the year is as follows:

Swim-up: 750 lbs.
No. 1: 2,200 lbs.
No. 2: 2,500 lbs.
No. 3: 8,600 lbs.
No. 4: 25,900 lbs.
No. 5: 15,400 lbs.
Bulk 3/32 and 1/8: 21,400 lbs. and 112,660 lbs.

The total cost of this feed totaled $37,847.53. This calculates out to 1.60 pounds of feed for each pound of fish raised this year at a feed cost of $0.32 per pound of fish produced.

FISH HEALTH

Fish health was excellent overall for the 1984 growing season. Grace Hatchery experienced a minor outbreak of Enteric Redmouth disease (Yersinia ruckeri) in one raceway of catchable rainbow. Minor coldwater disease (Cytophaga psychrophila) and bacterial gill disease outbreaks also occurred. Routine treatments controlled these problems.

ST. CHARLES CREEK TRAPPING

Robert Hill operated the St. Charles Creek fish trap this year from May 7 to June 14. The trap is installed on St. Charles Creek, a tributary to Bear Lake, in a cooperative effort with the state of Utah Division of Wildlife Resources to trap adult Bear Lake cutthroat. A total of 89 females and 38 males were trapped and taken to the Swan Creek holding pens to be ripened and spawned. Two hundred seventy-four thousand, five hundred sixty-three (274,563) eggs were taken from these fish to be reared at the Mantua Hatchery and returned to the lake as fingerlings. There were a few problems caused by run-off due to a cool spring this year. We released 15 of each sex above the trap to spawn naturally.

HATCHERY IMPROVEMENTS

The only capital outlay item purchased was a 3-inch trash pump for pumping settleable solids and for fire control. Many portable hand and power tools were obtained to make work more efficient on the station.

Improvements to the existing structures included a partition wall in the four-car garage, a cover over the heating fuel tank at residence 1, new upwelling incubators for the hatchery vats and some finish work in the basement of residence 3.

RECEIVED
SEP 11 1985
Department of Water Resources

IDAHO DEPARTMENT FISH AND GAME

REGION 5

September 4, 1985

M E M O R A N D U M

FROM: John Heimer JH

TO: Virgil Moore

SUBJECT: ST. CHARLES CREEK, BEAR LAKE COUNTY, INFORMATION FOR MINIMUM FLOWS.

As requested, enclosed please find some photos covering St. Charles Creek, its fish and our activities there.

St. Charles Creek characteristically contains two different sections. The lower one is the area of the proposed minimum flows and where the large fish from Bear Lake spawn. This is also where our egg taking station is located and principle rearing area for the Bear Lake cutthroat. This area is closed to fishing during the time these fish are present.

The other section of St. Charles Creek (upper part) is on forest land and has a general fishing season in effect. It is planted with hatchery rainbow and because of the presence of the forest service campgrounds receives a considerable amount of fishing pressure and provides a considerable amount of fishing opportunity.

We originally proposed minimum flows for the lower section of St. Charles Creek, which is obviously the most important stretch. Bear Lake in relation to its size probably has the smallest inflowing natural tributaries as any lake in the western United States. Consequently streams which contain Bear Lake cutthroat such as St. Charles Creek and Swan Creek (in Utah) are extremely important from the standpoint of the protection of this species.

For a number of years now we have maintained an egg taking station for Bear Lake cutthroat on St. Charles Creek. The Grace hatchery should have detailed records on numbers of fish trapped, eggs taken, etc. if you desire it.

Information on flows at St. Charles Creek covering a 20 year period was submitted a couple of years ago.

Please return the slides to me when you no longer need them.

STATE OF IDAHO

IDAHO WATER RESOURCE BOARD

STATEHOUSE
BOISE, IDAHO 83720

December 6, 1985

Virgil Moore
Fish and Game Department
600 S. Walnut
Boise, ID 83707

Re: Instream Flow Permit Nos. 37-7739 and 11-7152 in the name of the Idaho Water Resource Board

Dear Mr. Moore:

The conditions of approval for the above-referenced instream flow permits required that proof of beneficial use for the instream flows be submitted to the Director, Department of Water Resources, on or before September 1, 1985.

The Idaho Water Resource Board (Board) submitted the supporting data prepared by the Fish and Game Department as part of the required proofs to the Department of Water Resources (DWR). The DWR has advised me that the proof for Permit No. 37-7739 in connection with the Little Wood River is acceptable. The DWR, however, has also advised me that the proof submitted for Permit No. 11-7152 on St. Charles Creek is deficient in its failure to provide at least three (3) years of flow data for the water course. In view of this deficiency, the Board applied for and received from the DWR an extension of time in which to submit proof of beneficial use for Permit No. 11-7152. The proof due date has been extended to September 1, 1986.

I trust that your Department will timely provide me with sufficient data to make an acceptable proof before September 1, 1986, since the Fish and Game Department was the originator of the request to establish a minimum stream flow on St. Charles Creek.

If you have questions, please feel free to contact me.

Sincerely,

Dave Rydalch

DAVE RYDALCH
Chairman, Instream Flow Committee
Idaho Water Resource Board

ls cc: Jerry Conley

Photographs

SEE

File

Hearing Tapes

SEE

File

State of Idaho

Department of Water Resources

WATER RIGHT LICENSE

License of Water Right No. 11-7152 Priority September 13, 1978 Amount 9 to 17 cfs

THIS IS TO CERTIFY, that Idaho Water Resource Board

of Boise, Idaho, has complied with the terms and conditions of Permit No. 11-7152 issued pursuant to Application for Permit dated September 13, 1978, and has submitted proof to the Department of Water Resources on March 10, 1986, that he has applied water to a beneficial use; an examination by the Department indicates that the works have a capacity for the diversion of N/A of water from St. Charles Creek, tributary to Bear Lake, and that the permit holder has applied to a beneficial use and established a right to use water as follows:

Beneficial Use	Period of Use		Rate of Diversion		Annual Volume
Instream Flow	from January 1	to December 31	at 9 to 17*	cfs and	N/A
	from	to	at	cfs and	
	from	to	at	cfs and	

(both dates inclusive)

Subject, however, to the condition that no more than 9 to 17 cfs of water be ~~diverted at any one time~~ appropriated, and that the amount of water so ~~diverted and~~ appropriated to which such right is entitled and confirmed is for the purpose aforementioned and is limited to the amount which can actually be beneficially used, said flow is located within the reach from Bear Lake, SE¼SE¼, Section 13, Twp 15S, Rge 43E, upstream to the confluence with Blue Pond Spring located in the NW¼SE¼, Section 24, Twp 15S, Rge 42E, B.M., Bear Lake County.

Description and location of place of use: As shown above

Twp.	Range	Sec.	NE¼				NW¼				SW¼				SE¼				Totals
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

Total number of acres irrigated _____

*See reverse side

CONDITIONS OF APPROVAL

a. Modifications to or variance from this license must be made within the limits of Section 42-222, **Idaho Code,** or the applicable Idaho Law. This right may be forfeited by five years of non-use.

b. The right to the use of the water hereby confirmed is restricted and appurtenant to lands or place of use herein described, and is subject to all prior water rights, as provided by the laws of Idaho.

c. Any water right confirmed in this license for hydropower purposes shall be junior and subordinate to all rights to the use of water, other than hydropower, within the State of Idaho that are initiated later in time than the priority of this license and shall not give rise to any right or claim against any future rights to the use of water other than hydropower, within the State of Idaho initiated later in time than the priority of this license.

Source also known as Little Creek.

Use of water under this license is subject to control by the watermaster of State Water District No. 11, Bear River.

This instream flow water right is subject to all prior water rights.

*Amount of cfs per month:

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
9	9	9	9	17	17	14	11	9	9	9	9

Witness the seal and signature of the Director, affixed at Boise, Idaho, this 15th day of July, 1986.

Director

MEMORANDUM

TO: File No. 11-7152

FROM: Kay Walker KW

OK JIM

DATE: June 23, 1986

RE: Assessment of Proof of Beneficial Use Data

This assessment is designed to summarize the adequacy of Proof of Beneficial Use Data submitted by the Idaho Department of Fish and Game on behalf of the Idaho Water Resource Board, with respect to two primary considerations, as follows:

1. Has the water been used for the purposes described in the permit?

   The permit was issued to maintain the quality of fisheries and fish populations in the stream; this including maintaining adequate spawning and rearing conditions for Bear Lake fish utilizing the stream. The attachments to the proof of beneficial use report entitled "Grace Hatchery, Annual Report" for the years 83-84 and 81-82 clearly identify improvements made at the Grace Hatchery and also identify the procedures used in collecting data on fish population within this reach.

2. How much water was used for the purposes described in the permit?

   In reviewing the flow data of St. Charles Creek for the years of 1973 through 1983, it has been determined that the permitted monthly flow amounts are not excessive and the license should be issued to reflect the permitted amounts.

In summary, the minimum stream flow has enhanced public enjoyment through maintaining the trout rearing habitat.

	JAN	FEB	MARCH	April	MAY	June	July	AUG
1973	14.0 ✓	11.2 ✓		22.7 ✓		34.5 ✓	11.8 ✓	8.2 ✓
1974	11.3 ✓					106.6 ✓	27.0 ✓	15.7 ✓
1975	13.0 ✓	8.5 ✓		11.3 ✓	19.8 ✓	94.6 ✓		14.0 ✓
1976				10.3 ✓	60.6 ✓	21.9 ✓		11.3 ✓
1977	12.6 ✓	10.7 ✓	10.1 ✓		2.5 ✓	1.8 ✓	2.7 ✓	1.6 ✓
1978			7.8 ✓	20.6 ✓	33.9 ✓	85.0 ✓	26.8 ✓	21.1 ✓
1979	12.9 ✓		12.0 ✓	15.0 ✓	43.9 ✓	24.5 ✓	8.3 ✓	4.3 ✓
1980		16.3 ✓	15.8 ✓	63.5 ✓	88.7 ✓	71.7 ✓	28.3 ✓	15.8 ✓
1981	15.4 ✓	14.0 ✓	12.2 ✓	21.9 ✓	7.3 ✓	6.3 ✓		2.2 ✓
1982	11.1 ✓	11.4 ✓	13.0 ✓	48.2 ✓	65.4 ✓	67.3 ✓	35.9 ✓	30.2 ✓
1983	22.2 ✓		19.6 ✓ ~~20.5~~	17.2 ✓		122.8 ✓	39.2 ✓	
Average Monthly Flow →	14.1 cfs ✓	12.0 cfs ✓	12.9 cfs ✓	25.6 cfs ✓	40.3 cfs ✓	57.9 cfs ✓	22.5 cfs ✓	12.4 cfs ✓

ALLOW PERMITTED AMOUNTS FOR EACH MONTH — KW

6/23/86

April	MAY	June	July	AUG	SEPT	OCT	NOV	DEC
2.7 ✓		34.5 ✓	11.8 ✓	8.2 ✓	8.2 ✓	11.0 ✓	12.2 ✓	11.1 ✓
		106.6 ✓	27.0 ✓	15.7 ✓	10.5 ✓	15.1 ✓		
.3 ✓	19.8 ✓	94.6 ✓		14.0 ✓	14.9 ✓		17.0 ✓	16.4 ✓
.3 ✓	60.6 ✓	21.9 ✓		11.3 ✓		12.4 ✓	15.8 ✓	15.1 ✓
	2.5 ✓	1.8 ✓	2.7 ✓	1.6 ✓	1.7 ✓	5.3 ✓	4.3 ✓	8.7 ✓
0.6 ✓	33.9 ✓	85.0 ✓	26.8 ✓	21.1 ✓	11.4 ✓	15.7 ✓	15.6 ✓	
5.0 ✓	43.9 ✓	24.5 ✓	8.3 ✓	4.3 ✓	3.9 ✓	5.5 ✓	29.8 ✓	
3.5 ✓	88.7 ✓	71.7 ✓	28.3 ✓	15.8 ✓	16.4 ✓		19.1 ✓	16.5 ✓
1.9 ✓	7.3 ✓	6.3 ✓		2.2 ✓	3.4 ✓	8.8 ✓	9.3 ✓	8.4 ✓
2 ✓	65.4 ✓	67.3 ✓	35.9 ✓	30.2 ✓	28.0 ✓	25.2 ✓	24.0 ✓	
2 ✓		122.8 ✓	39.2 ✓					
6 cfs ✓	40.3 cfs ✓	57.9 cfs ✓	22.5 cfs ✓	12.4 cfs ✓	10.9 cfs ✓	12.4 cfs ✓	16.3 cfs ✓	12.7 cfs ✓

ACH MONTH — kw 6/23/86

Form 217
12/84

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

PROOF OF BENEFICIAL USE

RECEIVED
MAR 10 1986
Department of Water Resources

The Idaho Department of Water Resources will consider this form as a statement that the permit holder(s) has completed development under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below:

Permit No. 11-7152

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

Post Office Address: Statehouse Mail, Boise, ID 83720

Telephone No. 334-4440

Source of Water: St. Charles Creek also known as Little Creek

Extent of Use:

Domestic _____ (number of households)

Stockwater _____ (number and type of stock)

Irrigation _____ (acres)

Other/Remarks Establish a Minimum Instream Flow. See the Annual Reports for the Grace Hatchery and flow records from 1949 to 1983, which are also a part of this proof.

Indicate the date water was first diverted and beneficially used under this permit: September 13, 1978

Measuring Device:** Required? ☐ Yes ☐ No
Installed? ☐ Yes ☐ No

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

**Measuring device, maintained and read by the Utah Power and Light Co., exists as a staff guage on the Southeast abutment on the highway 89 bridge over St. Charles Creek

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

_____
(Name)

_____
(Address) (Telephone Number)

The above information is a true statement of the extent to which the above numbered permit has been developed.

_____ _____
Date Signature of Permit Holder (and Title, if appropriate)
GENE GRAY, CHAIRMAN

3-10-86

IDAHO DEPARTMENT OF FISH AND GAME
600 South Walnut • Box 25
Boise • Idaho • 83707

February 3, 1986

Mr. Dave Rydalch
Idaho Water Resources Board
Statehouse
Boise, ID 83720

Re: Instream Flow Permit No. 11-7152, St. Charles Creek

Dear Mr. Rydalch

I am enclosing flow information by month for St. Charles Creek dating back to 1949. These flows were determined by Utah Power and Light from a staff gauge located on the Highway 89 bridge (southeast abutment). This gauge has been in use since 1935.

If additional information is needed, please contact me.

Sincerely,

Virgil K. Moore
Resident Fisheries Manager

cc: Dave Tuthill

RECEIVED
FEB 11 1986
Department of Water Resources
Western Regional Office

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE (C.F.S.)

19 - 82 - 83

	9-17-82 to 9-15-82	10-15-82 to 10-14-82	11-12-82 to 11-18-82	1-13-83	3-22-83 to 3-17-83	4-13-83 to 4-12-83	6-2-83 to 6-3-83	6 to 6-
BEAR LAKE								
LITTLE ST. CHARLES CREEK	27.97	25.18	23.95	22.18	19.55	17.16	122.79	12
FISH HAVEN CREEK	6.43	7.80	7.91	6.39	4.90	4.88	82.91	7
SWAN CREEK	40.95	45.71	44.64	34.88	37.55	38.50	*249.00	24
ROUND VALLEY CREEK	37.89	30.31	37.47	32.63	47.85	45.25	93.96	6.
FALULA SPRINGS	.89	.93	1.47	2.07	4.67	3.73	1.96	4.
SOUTH EDEN CREEK	1.46	* .75	* .50	—	1.58	2.07	11.20	11
NORTH EDEN CREEK	1.84	1.45	* 1.50	1.73	2.83	2.78	6.19	4
INDIAN CREEK	* .50	* .50	* .50	—	* .50	—	* 2.50	* 2
WASTE AND MINOR STREAMS *	* .90	* 1.25	* 1.25	—	* 2.00	—	* 1.50	* 2
TOTALS	118.83	113.88	119.19	99.88	121.43	113.37	572.01	42
MUD LAKE								
BLOOMINGTON CREEK	31.32	27.58	24.25	20.47	22.23	24.22	99.46	10
SPRING CREEK	12.21	8.85	6.68	6.29	7.33	8.23	11.43	6
BIG ST. CHARLES CREEK	31.48	23.05	24.21	21.53	23.74	21.92	146.71	15
BEAN DRAIN	1.65	* 1.50	1.48	1.59	3.45	—	—	
WASTE AND MINOR STREAMS *	—						—	
TOTALS	76.66	60.98	56.62	49.88	56.75	54.37	257.60	27
TOTAL TRACED INFLOW	195.49	174.86	175.81	149.76	178.18	167.74	829.61	75

* ESTIMATED

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE (C.F.S.

19 - 82 - 83

	6-15-83 6-25-83	7-21-83
BEAR LAKE		
LITTLE ST. CHARLES CREEK	93.37	39.18
FISH HAVEN CREEK	74.17	9.11
SWAN CREEK	$200.00	82.24
ROUND VALLEY CREEK	38.60	30.93
FALULA SPRINGS	4.09	6.17
SOUTH EDEN CREEK	11.32	1.51
NORTH EDEN CREEK	4.97	1.13
INDIAN CREEK	3.35	
WASTE AND MINOR STREAMS *		* 4.00
Bd Valley Drain	3.99	
TOTALS	434.61	174.29
MUD LAKE		
BLOOMINGTON CREEK	101.93	38.37
SPRING CREEK	17.30	5.21
BIG ST. CHARLES CREEK	134.10	44.45
REAM DRAIN	3.90	4.58
WASTE AND MINOR STREAMS *		
TOTALS	257.23	92.61
TOTAL TRACED INFLOW	691.84	266.90

* ESTIMATED

TOTAL TRACER INFLOW TO BEAR LAKE STORAGE (C.F.S.

1981 - 1982

	9-17-81 / 9-16-81	10-15-81 / 10-14-81	11-12-81 / 11-11-81	12-10-81 / 12-9-81	1-27-82 / 1-26-82	3-3-82 / 2-26-82	3-30-82 / 3-26-82
BEAR LAKE							
LITTLE ST. CHARLES CREEK	3.42	8.82	9.34	8.44	11.08	11.42	12.99
FISH HAVEN CREEK	DRY	DRY	* .25	1.32	* 1.30	2.28	2.53
SWAN CREEK	9.74	10.86	27.79	25.84	25.61	24.87	27.65
ROUND VALLEY CREEK	15.67	23.30	24.17	26.63	26.77	43.48	46.77
FALULA SPRINGS	.16	.65	* .50	1.69	1.68	1.46	2.42
SOUTH EDEN CREEK	DRY	DRY	DRY	DRY	DRY	.....	.84
NORTH EDEN CREEK	DRY	* .50	* .50	.98	0.82		2.60
INDIAN CREEK	—	DRY	DRY	DRY	DRY		DRY
WASTE AND MINOR STREAMS *	—	* 1.00	* .70	—	* .75	* .70	1.00
TOTALS	28.99	45.13	63.25	64.90	68.01	84.21	95.80
MUD LAKE							
BLOOMINGTON CREEK	* .50	14.06	17.83	16.49	15.72	16.06	16.14
SPRING CREEK	3.38	4.17	5.62	4.89	5.24	4.97	5.83
BIG ST. CHARLES CREEK	13.24	14.39	16.17	16.37	16.82	16.90	21.56
REAM DRAIN	3.80	4.26	1.69	1.44	.96	1.00	3.31
WASTE AND MINOR STREAMS *	—			—			
ISLAND CANAL	11.81	DRY	DRY	—	DRY	DRY	DRY
TOTALS	32.73	36.88	41.31	39.19	38.74	38.93	46.84
TOTAL TRACED INFLOW	61.72	82.01	104.56	104.09	106.75	123.14	142.64

* ESTIMATED

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE (C.F.S.)
1981 - 1982

	4-29-82 4-27-82	5-13-82 5-14-82	6-8-82 6-2-82	6-24-82 6-23-82	7-30-82 7-29-82	8-19-82 8-18-82	9-17-82 9-15-82
BEAR LAKE							
LITTLE ST. CHARLES CREEK	48.16	65.40	67.30	102.28	35.85	30.23	27.97
FISH HAVEN CREEK	12.47	33.12	47.75	42.53	3.33	1.63	6.43
SWAN CREEK	101.33	175.26	155.38	115.39	75.83	35.44	40.95
ROUND VALLEY CREEK	47.78	74.69	16.99	-	25.38	14.10	37.89
FALULA SPRINGS	1.33	1.14	2.97	1.00	* .50	—	.89
SOUTH EDEN CREEK	1.85	4.00	2.93	*.25	—	.98	1.46
NORTH EDEN CREEK	4.22	3.48	2.22	—	3.14	2.04	1.84
INDIAN CREEK	.97		* .25	* .25	* .25	* .25	* .50
WASTE AND MINOR STREAMS *	* 1.89	* 1.25	* .75	—	* .75	* .75	* .90
TOTALS	220.00	358.34	296.54	261.70	145.03	85.42	118.83
MUD LAKE							
BLOOMINGTON CREEK	34.42	55.89	88.77	83.28	57.60	28.14	31.32
SPRING CREEK	14.84	5.94	5.67	6.39	14.79	10.57	12.21
BIG ST. CHARLES CREEK	32.51	95.51	79.82	123.36	39.89	40.56	31.48
REAM DRAIN	—	2.00	1.25	11.61	5.13	1.32	1.65
WASTE AND MINOR STREAMS *	* .23	* .61	* .49	—	—	—	—
TOTALS	82.00	160.00	176.00	224.64	117.41	80.59	76.66
TOTAL TRACED INFLOW	302.00	518.34	472.54	486.34	262.44	166.01	195.49

* ESTIMATED

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE (C.F.S.)

1980-81

	8-27-80 8-26-80	10-9-80 9-24-80	11-5-80 11-4-80	12-9-80 12-3-80	1-8-81 1-7-81	2-10-81 2-5-81	3-12-81 3-10-81	4-1 4-
BEAR LAKE								
LITTLE ST. CHARLES CREEK	15.80	16.38	19.11	16.53	15.91	13.99	12.20	11.
FISH HAVEN CREEK	1.85	5.23	6.92	6.15	5.20	3.62	4.02	3.
SWAN CREEK	20.96	20.42	36.95	34.18	32.31	21.24	27.02	27
ROUND VALLEY CREEK	18.46	27.84	28.81	33.48	26.80	23.30	30.06	16
FALULA SPRINGS	1.43	1.74	2.63	2.00	1.92	2.28	2.23	1.
SOUTH EDEN CREEK	.81	* .50	—	—	* .50	* .25	.54	* .
NORTH EDEN CREEK		DRY	—	—	* .50	* 0.30	1.37	+
INDIAN CREEK		* .25	—	—	* .25	0.27	* .30	* .
WASTE AND MINOR STREAMS *		* 1.00	—	—	* .75	.65	* .75	* .
TOTALS	59.31	73.36	94.42	92.34	84.14	65.90	78.49	63
MUD LAKE								
BLOOMINGTON CREEK	17.31	25.27	22.17	20.35	18.11	16.39	15.86	15.
SPRING CREEK	7.13	9.05	6.76	5.80	6.29	5.57	5.13	5.
BIG ST. CHARLES CREEK	21.55	24.18	20.23	18.64	18.64	19.85	17.75	19.
REAM DRAIN	2.43	1.11	—	1.33	* .75	.66	1.05	* 1.
WASTE AND MINOR STREAMS *			—	—				
TOTALS	48.60	59.61	49.16	46.12	43.79	42.47	39.79	40
TOTAL TRACED INFLOW	107.91	132.97	143.58	138.46	127.93	108.37	118.28	104

* ESTIMATED

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE (C.F.S.)

1980-81

	4-30-81 4-29-81	5-21-81 5-20-81	6-25-81 6-23-81	8-14-81 8-13-81	9-17-81 9-16-81	10-15-81 10-14-81		
BEAR LAKE								
LITTLE ST. CHARLES CREEK	21.96	7.29	6.29	7.24	3.42	8.82		
FISH HAVEN CREEK	3.33	Dry	* .50	Dry	Dry	DRY		
SWAN CREEK	16.71	26.21	5.18	5.38	9.74	10.86		
ROUND VALLEY CREEK	* .50	*1.00	* .50	* .50	15.67	23.30		
FALULA SPRINGS	1.86	1.74	1.01	1.59	.16	.65		
SOUTH EDEN CREEK	1.17	.82	* .15	Dry	Dry	DRY		
NORTH EDEN CREEK	1.73	1.30	1.70	Dry	Dry	* .50		
INDIAN CREEK	* .25	* .25	* .25	* .29	---	DRY		
WASTE AND MINOR STREAMS *	* .30	* .15	* .90	---	---	* 1.00		
TOTALS	47.75	38.76	16.48	9.96	28.99	45.13		
MUD LAKE								
BLOOMINGTON CREEK	16.72	.71	1.95	* .50	* .50	14.06		
SPRING CREEK	1.65	6.93	7.62	6.21	3.38	4.17		
BIG ST. CHARLES CREEK	22.91	5.71	2.45	13.90	13.24	14.39		
REAM DRAIN	* .50	* .50	1.12	* .75	3.80	4.26		
WASTE AND MINOR STREAMS *	---	---	---	---	---			
Island Pond	16.94	10.37	9.63	Dry	11.81	DRY		
TOTALS	58.72	24.22	22.72	21.36	32.73	36.88		
TOTAL TRACED INFLOW	106.47	62.98	39.25	31.32	61.72	82.01		

* ESTIMATED

TOTAL TRACED FLOW TO BEAR LAKE STORAGE (C.F.S.)

1979-80

	9-16-79	10-14-79	11-17-79	2-7-80	3-14-80	4-22-80	5-6-80 4-30-80	6-6-80 6-5-80
BEAR LAKE								
LITTLE ST. CHARLES CREEK	3.85	5.47	29.83	16.33	15.80	63.49	88.68	71.74
FISH HAVEN CREEK	.25	1.52	2.95	3.33	3.01	9.35	50.76	39.94
SWAN CREEK	22.65	16.77	31.51	28.31	27.36	88.61	204.66	170.66
ROUND VALLEY CREEK	12.96	36.55	23.14	25.27	36.85	35.96	62.93	54.10
FALULA SPRINGS	.47	.78	0.37	.35	1.96	2.99	1.25	1.58
SOUTH EDEN CREEK	—	DRY	DRY	DRY	DRY	2.28	DRY	1.39
NORTH EDEN CREEK	.66	.76	0.45	1.19	8.06	9.81	2.80	2.07
INDIAN CREEK	—	DRY	DRY	.25	.25	* .50	DRY	* .25
WASTE AND MINOR STREAMS	*.25	* .40	* .90	* 1.20	* 2.90	* 7.75		* 2.50
TOTALS	41.09	62.25	89.15	76.23	96.19	220.74	411.08	344.23
MUD LAKE								
BLOOMINGTON CREEK	2.08	12.16	16.64	14.81	15.80	56.46	65.25	89.72
SPRING CREEK	9.49	3.25	5.28	4.56	4.39	19.31	5.10	9.16
BIG ST. CHARLES CREEK	3.99	16.52	DIVERTED TO LITT. ST. CHAR	12.81	12.84	36.42	125.28	110.70
REAM DRAIN	.60	1.36	* .75	.61	.96	9.60	1.53	6.82
WASTE AND MINOR STREAMS *								
TOTALS	16.16	33.29	22.67	32.79	33.99	121.79	197.16	216.40
TOTAL TRACED INFLOW	57.25	95.54	111.82	109.02	130.18	342.53	608.24	560.63

* ESTIMATED

TOTAL TRACED FLOW TO BEAR LAKE STORAGE (C.F.S.)

1979-80

	7-10-80 7-9-80	8-27-80 8-26-80	10-9-80 9-24-80
BEAR LAKE			
LITTLE ST. CHARLES CREEK	28.30	15.80	16.38
FISH HAVEN CREEK	4.06	1.85	5.23
SWAN CREEK	66.14	20.96	20.42
ROUND VALLEY CREEK	* .50	18.46	27.84
FALULA SPRINGS	2.67	1.43	1.74
SOUTH EDEN CREEK	2.23	.81	* .50
NORTH EDEN CREEK	.54		DRY
INDIAN CREEK	* .25		* .25
WASTE AND MINOR STREAMS *	* 2.25		* 1.00
TOTALS	366.98	59.31	73.36
MUD LAKE			
BLOOMINGTON CREEK	30.93	17.31	25.27
SPRING CREEK	4.94	7.13	9.05
BIG ST. CHARLES CREEK	19.85	21.55	24.18
REAM DRAIN	2.35	2.43	1.11
WASTE AND MINOR STREAMS *			
TOTALS	58.07	48.60	59.61
TOTAL TRACED INFLOW	425.05	107.91	132.97

* ESTIMATED

TOTAL TRACED FLOW TO BEAR LAKE STORAGE (C.F.S.)

1978-79

	9-17-78	10-21-78 10-22-78	11-18-78 11-19-78	1-13-79	3-10-79 3-11-79	4-8-79	5-6-79	5-
BEAR LAKE								
LITTLE ST. CHARLES CREEK	11.38	15.72	15.63	12.91	12.04	15.0	43.88	88
FISH HAVEN CREEK		6.02	6.21	4.70	3.50	4.58	14.80	37
SWAN CREEK	24.27	32.97	33.04	29.81	27.39	30.20	102.08	147
ROUND VALLEY CREEK	37.62	23.12	20.44	26.13	25.76	60.30	22.39	65 2
FALULA SPRINGS	.44	* .40	.40	.30	—	2.56	.60	[illegible]
SOUTH EDEN CREEK		DRY	DRY	Dry	—	—	Dry	—
NORTH EDEN CREEK		* .50	* .50	.60	6.65	3.02	2.26	—
INDIAN CREEK	.25	* .25	* .10	.25		—		[illegible]
WASTE AND MINOR STREAMS *		* .40	* 2.00		—	—	.45	
TOTALS	73.71	73.36	78.32	76.75	75.34	115.66	186.46	272
MUD LAKE								
BLOOMINGTON CREEK	18.32	12.56	22.49	18.71	18.12	28.91	50.86	64
SPRING CREEK	12.23	20.58	5.95	5.01	4.31	6.35	5.18	5
BIG ST. CHARLES CREEK	12.13	22.99	26.64	21.97	18.97	25.47	86.80	11
REAM DRAIN	1.63	1.26	1.18	1.14	.93	2.84	1.10	—
WASTE AND MINOR STREAMS *								
TOTALS	44.37	57.39	56.26	46.83	42.33	63.57	143.94	190
TOTAL TRACED INFLOW	118.08	130.75	134.58	123.58	117.67	179.23	330.40	46

* ESTIMATED

TOTAL TRAC INFLOW TO BEAR LAKE STORAGE (C.F.S.

1978-79

	6-9-79 6-10-79	7-8-79	8-25-79 8-26-79	9-16-79	10-14-79		
BEAR LAKE							
LITTLE ST. CHARLES CREEK	24.46	8.26	4.33	3.85	5.47		
FISH HAVEN CREEK	5.58	* .20	* .50	* .25	1.52		
SWAN CREEK	73.36	24.94	18.40	22.65	16.77		
ROUND VALLEY CREEK	——	—	——	12.96	36.55		
FALULA SPRINGS	.20	* .25	* .50	.47	.78		
SOUTH EDEN CREEK	—	—	—	—	—		
NORTH EDEN CREEK	1.38	—	* .50	.66	.76		
INDIAN CREEK	.20	—	* .20	Dry	DRY		
WASTE AND MINOR STREAMS *	2.00	* .70	* 2.20	* .25	* .40		
TOTALS	107.18	34.35	26.63	41.09	62.25		
MUD LAKE							
BLOOMINGTON CREEK	21.59	1.40	18.43	2.08	12.16		
SPRING CREEK	3.77	8.27	7.14	9.49	3.25		
BIG ST. CHARLES CREEK	24.14	5.57	18.28	3.99	16.52		
REAM DRAIN	1.04	6.62	3.21	.60	1.36		
WASTE AND MINOR STREAMS *							
TOTALS	50.54	21.86	47.06	16.16	33.29		
TOTAL TRACED INFLOW	157.72	56.21 7-4-	73.69	57.25	95.54		

* ESTIMATED

TOTAL TRACED FLOW TO BEAR LAKE STORAGE (C.F.S.)

1977-78
1977- 1978

	9-18-77	10-22-77 / 10-23-77	11-19+20-77	12-18-77	3-5-78	4-7-78	5-7-78	6-
BEAR LAKE								
LITTLE ST. CHARLES CREEK	1.74	5.25	4.30	8.70	7.82	20.55	33.90	85
FISH HAVEN CREEK	Dry	Dry	DRY	EST. 15	1.40	6.96	8.35	38
SWAN CREEK	8.82	17.57	17.66	21.45	20.50	44.98	86.11	124
ROUND VALLEY CREEK	12.06	24.23	31.14	28.68	31.90	35.86	27.77	
FALULA SPRINGS	.52	.20	.20	2.25	.99	.20	0.48	0.
SOUTH EDEN CREEK	Dry	Dry	DRY	Dry	Dry	Dry	DRY	
NORTH EDEN CREEK	Dry	Dry	DRY	Dry	1.57	3.85	2.39	1.
INDIAN CREEK	* .05	* .10	* .10	0	.30	.70	0.00	
WASTE AND MINOR STREAMS *	* .20	* 30	.30	.50	.60	1.40	3.40	
TOTALS	25.39	47.65	53.70	[illegible]	65.06	114.0	163.40	25
MUD LAKE								
BLOOMINGTON CREEK	4.23	5.89	10.01	12.01	13.34	35.0	35.89	87.
SPRING CREEK	1.41	3.21	5.13	4.70	4.55	6.17	5.31	5.
BIG ST. CHARLES CREEK	1.45	10.48	17.70	16.13	16.58	42.32	62.30	12
REAM DRAIN	.99	1.35	1.25	.97	.84	1.74	5.82	
WASTE AND MINOR STREAMS *	—	—	—	.30	.50	—	0.00	
TOTALS	8.58	20.93	34.09	35.11	35.81	85.23	109.32	22
TOTAL TRACED INFLOW	36.97	68.58	87.79	95.84	100.87	199.23	272.72	474

* ESTIMATED

TOTAL TRACED FLOW TO BEAR LAKE STORAGE (C.F.S.)

1977-78

1977- 1978

	7-16-78	8-20-78	9-17-78	10-21-78 10-22-78
BEAR LAKE				
LITTLE ST. CHARLES CREEK	26.75	21.07	11.38	15.72
FISH HAVEN CREEK	0.29	1.61		6.02
SWAN CREEK	50.94	34.72	24.27	32.97
ROUND VALLEY CREEK	6.47		37.62	23.12
FALULA SPRINGS	*0.15	0.12	0.44	* .40
SOUTH EDEN CREEK	DRY			DRY
NORTH EDEN CREEK	0.00			* .50
INDIAN CREEK	0.00	0.21	0.35	* .25
WASTE AND MINOR STREAMS *	*0.60			* .40
TOTALS	85.20	57.73	73.71	73.36
MUD LAKE				
BLOOMINGTON CREEK	23.05	34.98	18.38	12.56
SPRING CREEK	9.33	7.80	12.23	20.58
BIG ST. CHARLES CREEK	16.84	34.10	12.13	22.99
REAM DRAIN	10.85	3.61	1.63	1.26
WASTE AND MINOR STREAMS *	0.00			
TOTALS	60.07	80.49	44.37	57.39
TOTAL TRACED INFLOW	145.27	138.22	118.08	130.75

* ESTIMATED FLOWS

TOTAL TRAC(INFLOW TO BEAR LAKE STORAGE (C.F.S.

1975-76

	8-28-76 8-29-76	10-3-76	11/13+14/76	12/11+12/12	1-15+1-16	2-12+2-13	3-12-77
BEAR LAKE							
LITTLE ST. CHARLES CREEK	11.26	12.36	15.77	15.18	12.57	10.66	10.08
FISH HAVEN CREEK	* .05	.28	3.50	5.52	4.61	5.59	4.05
SWAN CREEK	12.13	38.74	31.87	29.07	34.48	35.78	27.63
ROUND VALLEY CREEK	9.92	29.57	32.68	36.22	27.35	27.06	27.31
FALULA SPRINGS	.14	.42	1.17	1.11	1.01	1.37	1.36
SOUTH EDEN CREEK	.19	.09	DRY	DRY	DRY	DRY	DRY
NORTH EDEN CREEK	.38	.82	0.87	0.66	0.54	.56	.51
INDIAN CREEK	.50	.21	0.41	0.30	0.19	.25	.37
WASTE AND MINOR STREAMS *	00	00	1.00	1.00	—	—	—
TOTALS	34.43	82.49	87.27	79.29	80.75	81.27	71.31
MUD LAKE							
BLOOMINGTON CREEK	14.49	23.41	14.04	18.05	17.53	14.98	14.94
SPRING CREEK	10.89	5.65	7.00	5.16	5.05	4.74	5.07
BIG ST. CHARLES CREEK	24.52	28.46	20.40	22.91	18.85	18.27	19.01
REAM DRAIN	2.24	3.84	1.46	0.93	1.13	.83	.94
WASTE AND MINOR STREAMS *	00	00	1.00	1.00	—	—	—
TOTALS	52.14	61.36	43.90	48.55	42.56	38.82	39.96
TOTAL TRACED INFLOW	86.57	143.83	131.17	127.84	123.31	120.09	111.27

* ESTIMATED

5-15-77	6-11-77	7-17-77	8-21-77	7-18-77	10-22-77 & 10-23-77
2.46	1.75	2.62	1.57	1.74	5.25
	DRY	DRY	Dry	Dry	Dry
6.16	5.84	4.68	6.40	8.82	12.57
3.93	2.22	9.41	7.04	12.06	24.23
1.02	2.55	2.90	.39	[illegible]	.20
	DRY	DRY	Dry	Dry	Dry
1.35	4.55	0	Dry	Dry	Dry
.24	* .15	* .05	* .10	* .05	* .10
	.15	.10	* .20	* .21	* .30
15.16	17.21	17.82	15.70	[illegible]	42.65
* .40	.73	* .25	* .50	4.73	5.89
2.16	1.18	1.43	8.60	1.41	3.21
* .10	1.06	DRY	3.27	1.45	10.48
.46	.50	3.20	.39	.99	1.35
		—	—	—	—
3.12	3.47	4.98	12.76	8.58	20.93
18.28	20.68	24.80	28.46	36.77	68.58

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE (C.F.S.
1975-76

	9-28-75	11-2-75	12-7-75	1-11-76	4-1-76	5-27-76	6-27-76
BEAR LAKE							
LITTLE ST. CHARLES CREEK	14.91	17.03	16.40	INCLUDED IN 316 ST. CHARLES	10.28	60.61	21.90
FISH HAVEN CREEK	* .30	5.49	6.48	5.50	4.48	37.17	1.12 *
SWAN CREEK	24.38	35.56	37.70	37.55	27.98	137.53	51.19
ROUND VALLEY CREEK	25.23	31.91	40.88	26.53	45.03	6.45	11.53
FALULA SPRINGS	DRY	1.33	4.01	2.72	2.81	2.55	* .20
SOUTH EDEN CREEK	DRY	DRY	DRY	DRY	* 1.72	1.00	dry
NORTH EDEN CREEK	.48	.58	.54	.77	8.29	3.00	dry
INDIAN CREEK	* .20	* .30	* .20	* .20	2.71	.60	.45
WASTE AND MINOR STREAMS *	1.00	1.40	1.10	.80	7.00	4.00	2.50
TOTALS	66.50	93.60	107.31	74.07	110.30	252.91	88.42
MUD LAKE							
BLOOMINGTON CREEK	10.06	20.97	19.54	17.30	18.07	64.84	15.88
SPRING CREEK	2.84	6.07	5.57	4.64	5.38	3.70	9.96
BIG ST. CHARLES CREEK	33.20	27.07	25.77	36.06	17.13	100.96	22.32
REAN DRAIN	9.91	1.44	1.35	1.21	1.09	1.50	1.39
WASTE AND MINOR STREAMS *	.70	1.00	.90	1.10	2.00	1.00	1.50
TOTALS	57.11	56.55	53.13	60.31	43.67	172.00	50.05
TOTAL TRACED INFLOW	123.61	150.15	160.44	134.38	153.97	424.91	138.47

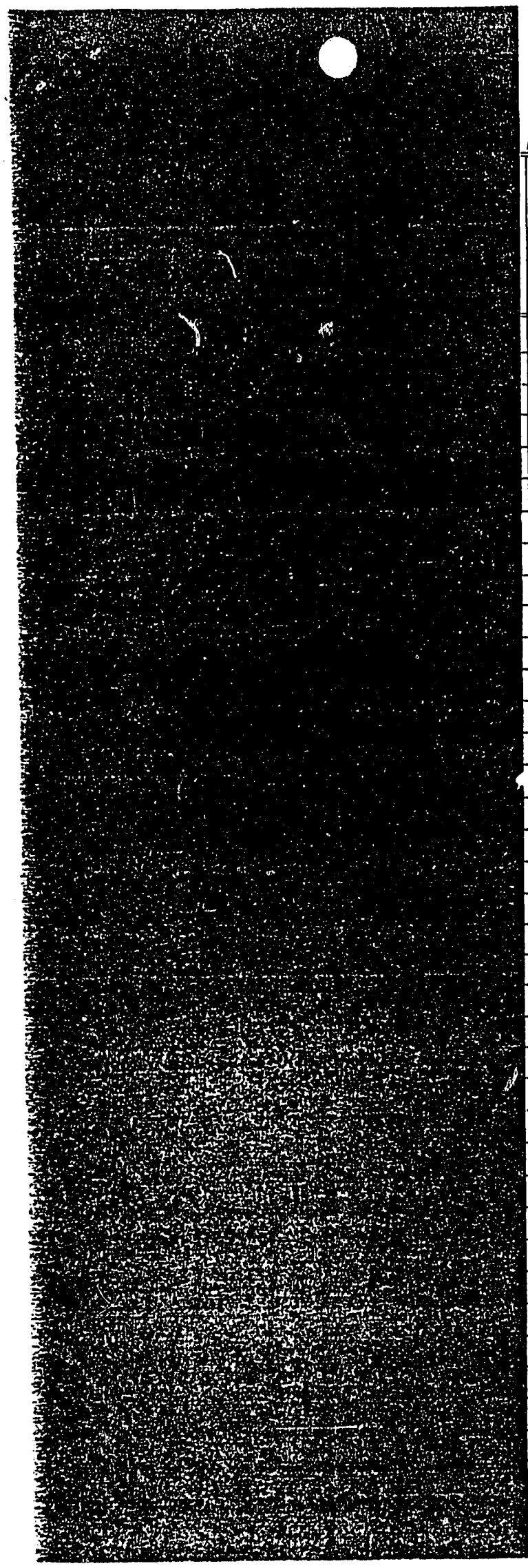
* ESTIMATED

	91.	8-29-91	10-3-91	
	-	11.26	12.36	
	) *	.05	.28	
		12.13	39.74	
		9.92	29.57	
	-	[illegible]	.42	
		.19	.07	
		.38	.52	
		.50	.21	
		00	00	
		34.42	82.47	
		14.49	23.41	
		10.89	5.65	
		24.52	28.46	
		2.24	3.84	
		00	00	
		52.14	61.36	
	1	86.57	143.83	

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE (cfs.)
1974-1975

	9-15-74	10-16-74	12-15-74	1-19-75	2-26-75	4-6-75	5-11-75	6-15-75	7-2
BEAR LAKE									
LITTLE ST. CHARLES CREEK	10.54	15.05	[illegible]	13.01	8.52	11.26	19.80	94.57	21
FISH HAVEN CREEK	* .20	3.81	6.01	4.10	4.35	3.95	9.96	54.78	-3
SWAN CREEK	28.24	25.08	31.40	32.23	28.92	28.00	53.87	175.75	62
ROUND VALLEY CREEK	37.86	25.51	30.98	27.47	28.39	38.14	32.71	5.46	15
FALULA SPRINGS	Dry	* .10	3.22	3.10	3.10	.70	2.05	2.02	2
SOUTH EDEN CREEK	Dry	* .10	*0.10	DRY	DRY	* .30	.55	* .30	*
NORTH EDEN CREEK	.89	.86	.89	.86	.96	1.30	3.00	3.60	3.
INDIAN CREEK	* .10	* .20	* .20	* .20	* .20	* .30	* .30	* .20	*,
WASTE & MINOR STREAMS*	1.60	.80	.70	.70	.60	1.00	1.10	2.10	1.
TOTALS	79.43	71.51	87.60	81.67	75.04	8495	122.34	338.78	110
MUD LAKE									
BLOOMINGTON CREEK	15.61	9.59	17.74	16.18	15.11	14.87	26.66	96.75	28.
SPRING CREEK	9.27	7.40	6.02	5.12	4.81	5.35	4.76	4.39	3.
BIG ST. CHARLES CREEK	18.42	24.85	37.64	23.23	18.68	19.97	43.24	190.45	56
REAM DRAIN	5.10	1.81	2.43	2.39	2.50	3.77	2.71	9.21	14.
WASTE & MINOR STREAMS*	.50	2.30	.70	.80	.70	.90	1.30	3.00	1.
TOTALS	48.90	45.95	50.43	47.72	41.80	44.86	78.67	303.80	103
TOTAL TRACED INFLOW	128.33	117.46	138.03	129.39	116.84	129.81	201.01	642.58	214

*ESTIMATED



	8-24-75	9-28-75	11-2-75			
	12.98	14.91	17.03			
	* .20	* .30	5.49			
	16.95	24.38	35.56			
	* .20	25.23	31.91			
	.81	DRY	1.33			
	DRY	DRY	DRY			
	4.61	.48	.58			
	* .20	* .20	* .30			
	.90	1.00	1.40			
	37.85	42.50	92.60			
	10.92	10.46	20.79			
	10.73	2.84	6.07			
	34.53	33.20	27.07			
	4.24	9.91	1.44			
	.80	.70	1.60			
	61.12	57.11	56.55			
	98.97	123.61	150.15			

TOTAL TRACED INFLOW TO B
1973-

				9-2-73	10-7-73	11-11-73	12-9-73	1-13-74	2-1
BEAR LAKE									
	LITTLE ST. CHARLES CREEK			8.23	11.02	12.20	11.06	11.31	6.
	FISH HAVEN CREEK			.30	2.58	3.81	3.89	3.45	3
	SWAN CREEK			21.05	29.16	26.57	26.49	26.92	27
	ROUND VALLEY CREEK			3.00*	28.60	33.88	29.42	30.94	33
	FALULA SPRINGS			.10*	.81	4.11	4.37	1.22	1
	SOUTH EDEN CREEK			.00	.10*	.00	.00	.00	
	NORTH EDEN CREEK			2.04	.20*	.27	.36	.19	
	INDIAN CREEK			.20*	.20*	.30*	.20*	.20*	
	WASTE & MINOR STREAMS*			1.40	1.20	1.30	.70	.90	
	TOTALS			36.32	73.87	82.44	76.57	75.13	74
MUD LAKE									
	BLOOMINGTON CREEK			9.63	16.94	19.50	15.11	15.79	14
	SPRING CREEK			11.02	6.75	7.81	5.46	4.96	5
	BIG ST. CHARLES CREEK			22.06	30.80	22.37	23.43	20.38	21
	REAM DRAIN			1.87	1.64	1.73	1.81	2.03	2
	WASTE & MINOR STREAMS*			.80	.70	1.10	.80	.90	
	TOTALS			45.38	46.83	52.51	46.61	44.06	4
	TOTAL TRACED INFLOW			81.70	120.70	134.95	123.12	119.19	11

* ESTIMATED

			6-2-74	7-7-74	8-11-74	9-15-74	10-16-74
			106.61	27.02	15.65	10.52	15.05
			52.95	0.30*	.30*	*.20	3.81
			199.34	65.19	18.27	28.24	25.08
			32.36	6.18	5.32	13.65	37.86	25.51
			1.62	.69	.20*	4.88	DRY	*.10
				1.60	DRY	.20*	DRY	*.10
				2.07	1.07	.81	.89	.86
			.20*	.30*	.20*	.20*	*.10	*.20
			3.50	4.50	.80	.80	1.60	.80
				374.24	100.10	54.76	79.43	71.51
				87.00	31.38	25.29	15.61	9.59
				7.76	4.85	8.98	9.27	7.40
			69.12	98.38	36.45	40.34	18.42	24.85
			10.26	2.34	14.62	3.40	5.10	1.81
			2.10	3.10	.80	.80	.50	2.30
			130.87	198.58	88.10	78.81	48.50	45.95
			415.70	572.82	188.20	133.57	128.33	117.46

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE (cfs
1972-1973

		SEPT. 3	OCT. 8	NOV. 12	DEC. 17	JAN. 21	FEB. 25	April 6	June 13	
BEAR LAKE										
	LITTLE ST. CHARLES CREEK	13.3	15.4	16.4	14.1	14.0	11.2	22.62	34.51	
	FISH HAVEN CREEK	0.50*	6.71	9.73	9.48	6.79	6.73	7.16	72.93	
	SWAN CREEK	38.3	36.8	39.7	37.2	34.8	32.2	67.45	73.57	
	ROUND VALLEY CREEK	23.7	36.0	42.0	36.8	35.1	35.9	60.69	.96	
	FALULA SPRINGS	0.10*	1.99	2.60	2.27	1.53	1.12	2.16	1.38	
	SOUTH EDEN CREEK	0.20*	0.31	0.30*	0	0	0	.99	.60	
	NORTH EDEN CREEK	0.42	0.62	0.57	0.53	0.67	0.79	3.54	2.41	
	INDIAN CREEK	0.10*	0.47	0.30*	0.30*	0.30*	0.20*	.36	6.30*	
	WASTE & MINOR STREAMS*	3.30	2.10	1.10	1.10	1.00	1.10	1.50	2.50	
	TOTALS	79.92	100.40	111.70	100.78	94.19	89.24	168.33	129.10	6
MUD LAKE										
	BLOOMINGTON CREEK	29.5	21.6	21.2	19.3	15.9	16.7	28.76	26.43	
	SPRING CREEK	11.0	9.58	7.16	6.19	5.74	5.54	5.56	1.98	3
	BIG ST. CHARLES CREEK	27.7	29.0	27.0	32.4	33.7	23.9	48.83	53.01	8
	REAM DRAIN	2.23	1.64	1.40	3.93	3.96	4.71	1.96	12.97	1
	WASTE & MINOR STREAMS*	1.10	0.80	0.90	1.00	0.90	0.90	1.20	1.20	
	TOTALS	71.53	62.62	57.66	61.82	60.20	51.75	86.21	95.39	3
	TOTAL TRACED INFLOW	151	163	169	163	154	141	254.54	224.49	9

* ESTIMATED

	1993 July 29	1993 Aug 9	1993 Sept 2	1993 Oct 7		
	11.81	8.22	8.23	11.02		
	.20*	.30*	.20	2.58		
	13.49	21.05	21.05	29.16		
	24.32	.30	.30	29.60		
	2.57	.10*	.10	.71		
	.10*	.00	.00	.10		
	.44	2.64	2.64	.20		
	.20*	.30*	.20	.30		
	2.00	.80	.50	1.26		
	55.13	33.62	33.62	73.79		
	12.37	9.63	9.63	16.94		
	9.71	11.02	11.62	6.95		
	20.59	22.06	22.06	20.80		
	6.63	1.89	1.89	1.64		
	.60	.80	.80	6.90		
	49.00	45.38	45.38	46.83		
	13.13	78.40	78.40	20.90		

1970 +

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE (c.f.s.)

	1970 Sept. 24	Oct. 29	Dec. 6	1971 Jan 17	Feb 14	March 30	May 1	June 6
BEAR LAKE								
LITTLE ST. CHARLES CREEK	6.2	12.7	11.17	9.15	9.28	10.84	36.01	131.48
FISH HAVEN CREEK	.4*	4.0	3.42	3.93	3.39	4.45	10.90	49.61
SWAN CREEK	26.3	29.8	29.91	31.90	30.07	29.81	60.76	196.35
ROUND VALLEY CREEK	21.5	23.5	29.36	33.16	38.63	94.95	60.52	31.22
FALULA SPRINGS	.1*	.4	.47	1.43	1.61	8.84	1.42	1.03
SOUTH EDEN CREEK	0	0	0	0	0	0	0	0
NORTH EDEN CREEK	.3	.4	.49	.59	.42	2.12	3.47	2.95
INDIAN CREEK	.1*	.2*	.2*	.2*	.3*	1.0*	.3*	.2*
WASTE & MINOR STREAMS	1.0	1.6	1.1	1.2	5.90	43.24	1.90	5.1
TOTAL	55.9	72.6	72.12	81.56	89.55	195.05	175.23	418.04
MUD LAKE								
BLOOMINGTON CREEK	13.5	19.5	18.06	21.96	12.61	22.30	43.11	122.13
SPRING CREEK	6.5	6.5	4.87	4.80	4.67	2.27	6.39	9.00
BIG ST. CHARLES CREEK	26.8	18.8	22.62	30.48	25.75	35.12	58.77	122.35
REAM DRAIN	12.0	1.4	1.51	2.30	1.97	5.11	3.93	5.45
WASTE & MINOR STREAMS	.8	.9	1.10	1.10	1.40	1.20	4.60	4.00
TOTAL	59.6	47.1	48.16	60.64	51.39	96.50	116.80	262.93
TOTAL TRACED INFLOW	115.5	119.7	120.28	142.20	138.97	271.55	292.08	680.97

* ESTIMATED

1971

			August 75	September 19	Oct. 24 1971		
			[illegible]	16.62	21.33		
			[illegible]	6.94	11.08		
			59.7[illegible]	55.12	44.01		
			15.3[illegible]	24.60	29.75		
			[illegible]	2.99	2.31		
			0	0	0		
			1.09	.32	0.41		
			[illegible]	.20	0.30*		
			[illegible]	2.31	0.70		
			[illegible]1	108.99	109.89		
			[illegible]715	25.9[illegible]	22.87		
			12.18	5.37	9.36		
			50.56	20.00	28.50		
			[illegible]31	4.49	2.41		
			.20	.70	0.70		
			91.15	56.36	63.84		
			203.66	165	173.73		

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE (cf

				SEPT 19 1971	OCT 24 1971	NOV 28 1971	JAN 2 1972	FEB 6 1972	March 12 1972	APR 16 1972	MA 21 197
BEAR LAKE											
	LITTLE ST. CHARLES CREEK			16.62	21.33	19.61	15.34	15.88	15.93	26.82	79
	FISH HAVEN CREEK			6.94	11.08	8.19	7.22	6.68	5.60	12.06	57
	SWAN CREEK			55.12	44.01	44.94	42.46	37.55	41.04	62.39	25
	ROUND VALLEY CREEK			24.60	29.75	36.42	30.42	33.38	105.53	94.16	56
	FALULA SPRINGS			2.89	2.31	3.92	3.03	3.01	438	5.33	
	SOUTH EDEN CREEK			0	0	0	0	0	0	1.74	1
	NORTH EDEN CREEK			0.32	0.41	0.53	0.64	0.64	0.92	2.90	2
	INDIAN CREEK			0.20*	0.30*	0.30*	0.20*	0.20*	* 0.30	.30	
	WASTE AND MINOR STREAMS			2.30	0.70	1.00	0.80	0.80	4.50	4.20	4
	TOTAL			108.99	109.89	114.91	100.11	98.14	178.00	209.90	45
MUD LAKE											
	BLOOMINGTON CREEK			25.80	22.87	19.91	18.29	16.56	25.45	32.36	88
	SPRING CREEK			5.37	9.36	7.63	6.01	5.48	5.59	10.32	8
	BIG ST. CHARLES CREEK			20.00	28.50	29.15	25.40	28.09	30.49	51.45	113
	REAM DRAIN			4.49	2.41	1.69	1.86	1.95	3.78	2.20	9
	WASTE AND MINOR STREAMS			0.70	0.70	0.90	1.00	0.80	1.10	1.40	2
	TOTAL			56.36	63.84	59.28	52.56	52.88	66.37	97.73	221
	TOTAL TRACED INFLOW			165.35	173.73	174.19	152.67	151.02	244.37	307.63	670

* ESTIMATED

1971 to 1972

		June 6	JUNE 25 1972	JULY 30 1972	SEPT 3 1972	OCT 8 1972
		139.98	49.54	20.72	13.34	15.44
		53.75	34.17	1.93	.50	6.71
		199.13	108.26	64.45	38.31	36.84
		55.41	6.02	37.04	23.67	36.04
		1.54	3.01	.10	.10	1.99
		.91	.40	.30	.20	.31
		3.63	2.36	.59	.42	.62
		.65	.20	.30	.10	.47
		4.00	6.10	3.10	3.30	2.10
		[illegible]59.49	208.06	128.43	79.94	100.52
		124.53	90.43	13.08	29.47	21.58
		9.09	8.20	12.62	10.96	9.58
		155.14	73.52	45.14	27.72	28.95
		1.96	6.54	4.26	2.23	1.64
		1.90	4.60	.80	1.10	.80
		292.21	183.29	75.90	71.48	62.55
		751.70	391.55	204.33	151.42	163.07

TOTAL TRACED INFLOW TO BEAR LAKE S
(All quantities in c.f.s.

	1969 SEPTEMBER 25	OCTOBER 30	NOVEMBER 30	1970 JANUARY 4	FEBRUARY 5	MARCH 12
BEAR LAKE						
LITTLE ST. CHARLES CREEK	6.5	18.7	15.4	12.1	18.1	12.4
FISH HAVEN CREEK	0	2.6	3.1	2.8	2.9	2.5
SWAN CREEK	19.2	29.6	28.9	29.8	27.2	25.0
ROUND VALLEY CREEK	10.8	25.3	23.9	13.4	25.5	25.0
PAULA SPRINGS	2.3	1.0	.2*	2.0	0.4	0.4
SOUTH EDEN CREEK	0	0	0	0	0	0
NORTH EDEN CREEK	.2	.4	.4	.5	0.6	0.5
INDIAN CREEK	.2*	.2*	.2*	.2*	.2*	.2*
WASTE AND MINOR STREAMS	2.5*	1.2	.9	.8	.8	.8
TOTAL	41.7	79.0	73.0	61.6	75.7	66.5
MUD LAKE						
BLOOMINGTON CREEK	9.5	13.6	16.7	14.1	19.1	14.0
SPRING CREEK	5.3	5.8	4.8	4.7	4.3	4.3
BIG ST. CHARLES CREEK	11.4	15.5	14.0	18.9	18.8	15.1
REAM DRAIN	11.5	1.6	3.1	13.0	5.2	3.5
WASTE AND MINOR STREAMS	.9*	.7	.8	.7	.8	1.0
TOTAL	38.6	37.2	39.4	51.4	48.2	37.9
TOTAL TRACED INFLOW	80.3	116.2	112.4	113.0	123.9	104.7

* ESTIMATED

1969–1970

			MAY 31	JUNE 19	July 19	AUGUST 23	SEPTEMBER 4	October 29
		.4	75.3	48.4	6.6	10.0	6.2	12.7
			37.2	6.0	.2 *	.1 *	.4	4.0
		111.1	143.4	81.9	17.6	7.6	36.3	29.8
		...	.8	2.6	7.1	.2 *	21.5	23.5
		.3	.2*	.5	.2 *	0	.1 *	.4
		2	2	0	2	0	0	0
		1	1.7	.4	.3	.3	.3	.4
		1	.2	.2	.1 *	.1	.1 *	.2*
		.0	2.3	6.4	.8	3.5	1.0	1.6
		5	261.6	146.4	32.9	21.8	55.9	72.6
			68.5	36.6	7.0	11.1	13.5	19.4
		5	1.6	.8	11.2	10.5	1.5	6.5
		3	103.8	77.0	25.2	13.3	26.8	18.8
		.5	9.8	15.2	6.7	2.4	12.0	1.4
			1.8	1.3	1.0	2.7	.8	.9
		3.0	185.5	129.9	51.1	40.0	59.6	47.0
		.8	447.1	276.3	84.0	61.8	115.5	119.6

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE
(All quantities in cfs)

	1968 DECEMBER 1	1969 JANUARY 12	FEBRUARY 16	MARCH 23	APRIL 20	MAY 18	JUNE 15	JULY 20	AUG 2
BEAR LAKE									
LITTLE ST. CHARLES CREEK	13.8	13.9	13.1	10.5	22.6	52.5	18.8	6.2	71
FISH HAVEN CREEK	2.6	2.1	2.6	3.2	5.0	23.2	.2*	.2*	—
SWAN CREEK	28.9	28.1	28.2	22.0	42.8	115.2	34.9	2.1	77
ROUND VALLEY CREEK	21.7	25.0	29.6	27.4	40.3	8.9	.3	18.0	70
FALULA SPRINGS	.2*	2.2	1.3	0.4	0.9	.7	.2*	.6	—
SOUTH EDEN CREEK	0	0	0	0	0	0	0	0	—
NORTH EDEN CREEK	.4	.5	.4	.6	3.1	4.4	.1*	.6	.
INDIAN CREEK	.1*	.2*	.2*	.2*	.2*	.2*	.2*	.2*	.
WASTE & MINOR STREAMS	.9*	.9*	.8*	.9*	1.2*	5.5*	4.1*	1.2*	—
									—
TOTAL	70.6	77.9	75.2	69.3	121.1	210.8	58.9	37.1	91
									—
MUD LAKE									—
BLOOMINGTON CREEK	15.1	15.2	14.1	13.5	24.9	44.5	3.6*	2.5	3
SPRING CREEK	5.2	4.5	4.4	4.2	4.7	6.8	4.7	12.4	71
BIG ST. CHARLES CREEK	15.2	15.0	14.8	15.0	27.9	60.7	3.1	11.2	7
REAM DRAIN	2.5*	2.2	4.6	2.7	4.2	3.3	10.6	5.8	3
WASTE & MINOR STREAMS	.8*	.9*	.8*	.6*	.9*	1.4*	.8*	1.2*	—
									—
TOTAL	38.8	38.8	38.7	36.0	62.6	112.7	22.8	34.1	30
TOTAL TRACED INFLOW	109.4	112.7	114.0	105.3	183.7	323.5	81.7	71.2	71
									—
*ESTIMATED									—

	SEPTEMBER 25	OCTOBER 30	NOVEMBER 30	1970 January 4						
	6.5	18.7	15.4	12.1						
	0	2.6	3.1	2.8						
	19.2	29.6	28.9	29.8						
	10.8	25.3	23.9	13.4						
	2.3	1.0	.2*	2.0						
	0	0	0	0						
	.2	.4	.4	.5						
	.2*	.2*	.2*	.2*						
	2.5*	1.2	.9	.8						
	41.7	79.0	72.0	61.6						
	9.5	13.6	16.7	14.1						
	5.3	5.8	4.8	4.7						
	11.4	15.5	14.0	18.9						
	11.5	1.6	3.1	13.0						
	.9*	.7	.8	.7						
	38.6	37.2	39.4	51.4						
	80.3	116.2	112.4	113.0						

TOTAL TRACED INFLOW TO BE
(All quantiti

		1967 December 17	January 19	February 24	March 31	May 5	May 26	June 16	July 14	19 Au 1
BEAR LAKE										
	LITTLE ST. CHARLES CREEK	14.4	5.9	5.4	13.9	30.8	21.4	37.5	4.0	1
	FISHHAVEN CREEK	4.1	4.4	3.9	4.2	9.8	0.5	4.0	.2*	
	SWAN CREEK	30.7	32.7	28.9	31.4	81.1	52.5	72.2	8.3	27
	ROUND VALLEY CREEK	25.0	23.4	54.5	27.5	0.6	1.7	.3*	11.0	
	FALULA SPRINGS	1.6	1.0	2.4	1.5	1.4	1.7	.2*	.1*	
	SOUTH EDEN CREEK	0	0	0	0	0	0	0	0	
	NORTH EDEN CREEK	.3*	.2*	.3	.4	2.5	0.5	.5	1.2	
	INDIAN CREEK	.2*	.2	.2	.2	.2*	.2*	.2*	.2*	
	WASTE & MINOR STREAMS	.7*	.8*	1.5*	1.1*	3.0*	4.4*	2.2*	3.0*	2
	TOTAL	77.0	68.6	97.1	80.2	129.4	82.9	117.1	28.6	41
MUD LAKE										
	BLOOMINGTON CREEK	20.3	11.8	16.8	16.2	28.2	5.9	37.2	1 7	11
	SPRING CREEK	4.8	4.7	4.9	4.4	0.2*	7.6	4.5	3.1	13
	BIG ST. CHARLES CREEK	27.8	20.9	23.7	21.6	48.2	11.1	34.9	16.8	17
	REAM DRAIN	3.0	4.8	3.6	2.9	5.4	7.3	8.3	1.5*	2
	WASTE & MINOR STREAMS	.9*	.8*	1.3*	1.1*	.5*	1.1*	.8*	.9*	2
	TOTAL	56.8	43.0	50.3	46.2	82.5	33.0	85.7	24.0	46
	TOTAL TRACED INFLOW	133.8	111.6	147.4	126.4	211.9	115.9	202.8	52.6	8

*ESTIMATED

AKE STAGE
n cfs,

	Septem 25	October 27	December 1	[illegible]					
	12.5	12.8	12.8						
	.2	.9	2.6						
	19	31.7	28.9						
	16.5	22.8	24.7						
	.3	.4	.2*						
	0	.0	0						
	.3	.4	.4						
	.1	.2	.1*						
	1.3	1.2*	.9*						
	49.	70.4	70.6						
	14	13.2	15.1						
	7.7	8.4	5.2						
	10.7	13.2	15.2						
	3.3	2.0*	2.5*						
	.8	.6*	.8*						
	32.0	32.4	38.8						
	81.3	102.8	109.4						

Total Traced Inflow To Bear Lake
(all quantities in cfs)

	1966 December 22	February 2	March 2	April 2	April 30	May 28	June 18	1967 July 5
BEAR LAKE								
LITTLE ST. CHARLES CREEK	10.3	8.5	7.9	9.1	12.2	78.2	62.9	38.6
FISHHAVEN CREEK	2.4	2.9	2.6	2.6	2.8	42.4	41.3	3.6
SWAN CREEK	26.5	24.0	24.7	26.6	30.3	219.2	150.4	60.5
ROUND VALLEY CREEK	24.7	26.8	28.8	54.6	37.6	19.3	56.0	2.0
FALULA SPRINGS	.7	2.2	0.8	1.5	2.1	0.6	0.9	.2*
SOUTH EDEN CREEK	0	0	0	0	0	0.5	1.0	0
NORTH EDEN CREEK	.3*	.2*	.2*	.2*	.6	3.4	2.5	.5*
INDIAN CREEK	.2*	.2*	.2	.1	.2	0.1	0.1*	.6*
WASTE & MINOR STREAMS	.7*	.9*	1.0	4.5*	1.3*	4.9*	5.7*	4.7*
TOTAL	65.8	65.7	66.2	99.2	87.1	368.6	320.8	110.7
MUD LAKE								
BLOOMINGTON CREEK	10.8	13.4	13.4	15.2	20.2	71.3	82.1	37.4
SPRING CREEK	5.6	5.0	4.9	5.0	5.0	6.0	10.5	5.6
BIG ST. CHARLES CREEK	14.1	17.4	18.9	19.3	23.6	101.1	87.8	32.5
REAM DRAIN	3.4	2.4	3.7	3.4	2.4	6.9	6.8	6.2
WASTE & MONOR STREAMS	.7*	.8*	.9*	1.1*	.9*	2.8*	1.1*	.4*
TOTAL	34.6	39.0	41.8	44.0	52.1	193.1	188.3	82.1
TOTAL TRACED INFLOW	100.4	104.7	108.0	143.2	139.2	561.7	509.1	192.8

* ESTIMATED

age

	September	October	November	December	1968 January
	3	8	12	17	19
	13.4	12.5	18.8	14.4	5.9
	.4	2.0	4.5	4.1	4.4
	9.8	31.8	33.6	30.7	32.7
	.3	23.8	25.3	25.0	23.4
	.4	.1*	1.7	1.6	1.0
	.1*	.1*	0	0	0
	.1*	.5	.5	.3*	.2*
	.2	.3	.3	.2*	.2
	.9*	1.4	2.7*	.7*	.8
	25.6	72.5	87.4	77.0	68.6
	16.6	19.3	10.9	20.3	11.8
	3.3	6.1	10.2	4.8	4.7
	9.0	12.4	13.9	27.8	20.9
	1.0	5.3	1.7	3.0	4.8
	.5*	.9	.9*	.9*	.8
	30.4	44.0	37.6	56.8	43.0
	56.0	116.5	125.0	133.8	111.6

...tal Traced Inflow To Bea...
(all quantities in c...

	1965 December 5	January 9	February 19	March 27	May 1	June 5	19... July 10
BEAR LAKE							
LITTLE ST. CHARLES CREEK	8.1	8.0	7.6	7.4	18.4	9.4	2.4
FISHHAVEN CREEK	6.0	6.4	6.8	5.2	17.2	.3*	.2*
SWAN CREEK	37.2	33.6	37.0	28.7	116.6	18.0	9.0
ROUND VALLEY CREEK	30.7	28.5	29.8	33.8	33.5	.8	6.4
FALULA SPRINGS	1.3	1.5	1.8	.9	1.2	.1*	.5
SOUTH BDEN CREEK	0	0	0	3.0*	.5	.7	.0
NORTH BDEN CREEK	.3*	0	0	2.5*	1.6	5.2	.5
INDIAN CREEK	.3*	.2*	.2*	2.6	.4*	.2*	.1
WASTE & MINOR STREAMS	4.4*	1.5*	3.0*	16.7*	1.5*	.8	5.3
TOTAL	88.3	79.7	86.2	100.8	190.9	35.5	24.4
MUD LAKE							
BLOOMINGTON CREEK	20.3	20.1	16.2	17.6	34.3	5.8	.7
SPRING CREEK	6.3	5.9	5.4	5.0	.4	3.0	5.1
BIG ST. CHARLES CREEK	32.7	28.4	27.8	27.2	57.3	10.8	10.7
REAM DRAIN	1.9	3.3	2.9	3.2	4.0	4.3	8.4
WASTE & MINOR STREAS	1.8*	.7*	.4*	2.3*	.7*	.8	3.5
TOTAL	63.0	58.4	52.7	55.3	96.7	24.7	28.4
TOTAL TRACED INFLOW	151.3	138.1	138.9	156.1	287.6	60.2	52.8

* ESTIMATED

Storage

	September 11	October 16	November 17	December 22	February 2						
	1.7	5.6	7.5	10.3	8.5						
	.1*	2.5	2.8	2.4	2.9						
	7.4	23.0	22.9	26.5	24.0						
	12.6	23.2	26.1	24.7	26.8						
	.1*	.2*	.5	.7	2.2						
	.1*	.1*	0	0	0						
	.1*	.1*	.4	.3*	.2*						
	.2*	.1*	.2	.2*	.2*						
	1.7*	1.6*	.6*	.7*	.9*						
	24.0	56.4	61.0	65.8	65.7						
	10.2	8.1	11.9	10.8	13.4						
	7.6	7.4	6.8	5.6	5.0						
	.9	14.7	22.1	14.1	17.4						
	5.1	2.1	1.5	3.4	2.4						
	.6*	.7*	.6*	.7*	.8*						
	24.4	33.0	42.9	34.6	39.0						
	48.4	89.4	103.9	100.4	104.7						

Total Traced I[illegible]
(all [illegible]

	1964 December 2-3	January 6-8	February 10-11	March 17-18	April 25	May 13-25	[illegible]
Bear Lake							
Little St. Charles Creek	10.8	5.7	7.2	8.5	28.9	61.1	[illegible]
Fishhaven Creek	2.1	2.5	1.9	2.3	12.9	56.2	[illegible]
Swan Creek	29.4	30.8	24.0	23.0	82.4	137.5	19
Round Valley Creek	24.5	33.7	29.1	25.5	69.0	410	[illegible]
Fabula Springs	.1*	1.0	1.1	.9	.5	.2	[illegible]
South Eden Creek	0	0		0		[illegible]	[illegible]
North Eden Creek	0	0		.4	.9*	2.2*	[illegible]
Indian Creek	.3*	.8*	.3*	.5*	.4*	.6	[illegible]
Waste and Minor Streams	4.5*	3.5*	3.0*	3.0*	7.4*	8.0*	[illegible]
Total	71.7	78.0	66.6	64.1	202.4	307.6	35
Mud Lake							
Bloomington Creek	17.6	17.7	17.3	16.0	51.0	91.2	9
Spring Creek	5.7	5.0	48	4.5	5.7	3.8	[illegible]
Big St. Charles Creek	24.5	25.2	15.6	23.4	83.0	155.7	18
Ream Drain	3.5	6.3	6.9	6.6	5.0	10.0	[illegible]
Waste and Minor Streams	1.0*	.9*	.8*	.8*	2.8*	4.5*	[illegible]
Total	52.3	55.1	45.4	51.3	147.5	265.2	28
Total Traced Inflow	124.0	133.1	112.0	115.4	349.9	572.8	63

* Estimated

	July 25-31	August 29	October 3	October 31	December 5	1966 January 9				
	2.7	7.3	5.5	7.3	8.1	8.0				
	.5	4.2	8.5	7.7	6.0	6.4				
	21.6	22.5	44.1	38.4	37.2	33.6				
	16.1	18.3	25.5	25.3	30.7	28.5				
	.7	0	1.0	1.2	1.3	1.5				
		.2*	.3*	.1*	0	0				
	2.1	.3*	.2*	.1*	.3*	0				
	.8	.3*	.5	.2	.3*	.2*				
	25*	6.7*	9.5*	4.5*	4.4*	1.5*				
	132.4	59.8	95.1	84.8	88.3	79.7				
	41.0	33.3	23.0	20.6	20.3	20.1				
	2.4	12.6	3.6	8.2	6.3	5.9				
	58.7	42.0	37.1	31.1	32.7	28.4				
	3.0*	2.3	.9	1.7	1.9	3.3				
	6.5*	1.0*	6.0*	3.0*	1.8*	.7*				
	117.6	91.2	70.6	64.6	63.0	58.4				
	250.0	151.0	165.7	149.4	151.3	138.1				

UTAH POWER & LIGHT COMPANY

WATER RESOURCES

Discharge Measurements of BEAR LAKE TRIBUTARIES

No.	Date	Made by—	Width	Area	Mean velocity	Gage height	Discharge	Rating..... Shift adj.*	Rating..... Percent diff.	Method	Meas. secs.	G. H. change	Time	REMARKS
			Feet	Sq. ft.	Ft. per sec.	Feet	Sec.-ft.	Feet			No.	Feet	Hrs.	
					BIG ST. CHARLES CREEK AT HIGHWAY									
	12-15-57	E. J. Taylor					15.68							
	1-23-58	"					13.97							
	3-2-58	"					20.47							
	4-13-58	"					15.79							
	5-24-58	"					204.48							
	6-28-58	"					9.05							
	8-10-58	"					15.88							
	9-17-58	"					6.89							
	10-28-58	"					17.19							
	12-6-58	"					16.94							
	1-17-57	"					14.52							
					LITTLE ST. CHARLES CREEK AT MOUTH									
	12-15-57	E. J. Taylor					16.63							
	1-23-58	"					19.57							
	3-2-58	"					20.92							
	4-13-58	"					23.23							
	5-24-58	"					113.26							
	6-28-58	"					26.75							
	8-10-58	"					20.52							
	9-17-58	"					15.87							
	10-28-58	"					15.31							
	12-6-58	"					17.37							
	1-17-59	"					16.46							

*If shifting control method is not used on date of measurement (rating table applied directly), enter a dash under "shift adj.", and show percentage difference between ...le and measured discharge. If shifting control method is used, enter amount of shift under "shift adj.", and show the percentage difference between rating table and ...asurement after adjustment is applied.

Total Traced Inflow To Bear Lake Storage

(all quantities in cfs)

		1963 December 28-29	February 8-9	March 28-29	April 26	1964 May 31	July 5	August 16	September 13	October 28	December 2-3	1965 January 6-8
Bear Lake												
	Little St Charles Creek	15.4	10.3	9.7	16.4	29.9	13.6	8.3	3.6	9.2	10.8	5.7
	Fish Haven Creek	3.2	2.6	2.5	3.9	11.2	0	0	.1	.2*	2.1	2.5
	Fishpond At Dakota	0	0		0		0	0	0			
	Swan Creek	29.6	23.5	27.6	36.0	96.0	33.9	6.2	11.1	24.7	29.4	30.8
	Round Valley Creek	21.6	20.7	21.9	31.2	.7	1.2	7.7	.3	18.1	24.5	33.7
	Falula Springs	.4	.6	.6	.2	1*	0	0	0	.5	1*	1.0
	South Eden Creek	0	0	0	0	0	0	0	0	0	0	0
	North Eden Creek	0	0	0	0	0	0	0	0	0	0	0
	Indian Creek	.1*	.1*	.1*	.2*	.2*	.2*	.1*	.1*	.6*	3*	.8*
	Waste and Minor Streams	4.7*	3.2*	4.1*	7.8*	6.1*	4.9*	3.3	5.6	2.3	4.5*	3.5*
	Total	75.0	61.0	71.5	95.7	149.2	53.8	25.6	20.8	55.6	71.7	78.1
Mud Lake												
	Bloomington Creek	15.9	13.4	12.2	22.5	48.1	8.7	5.4	8.4	15.1	17.6	17.7
	Spring Creek	4.9	4.8	4.5	5.1	10.5	7.2	8.2	13.3	9.0	5.7	5.0
	Big St Charles Creek	20.8	25.7	19.0	28.0	67.3	46.3	16.3	19.8	20.1	24.5	25.2
	Ream Drain	5.6	3.0	4.8	3.5	10.4	8.6	3.4	4.0	1.6	3.5	6.3
	Waste and Minor Streams	1.2*	3*	.6*	2.4*	5.4*	3.3*	.8*	2.3*	.4*	1.0*	.9*
	Total	48.4	47.2	41.1	61.5	141.7	74.1	34.1	47.8	46.2	52.3	55.1
Total Traced Inflow		123.4	108.2	107.6	157.2	285.9	127.9	59.7	68.6	101.8	124.0	133.1

* Estimated

Total Traced Inflow To Bear Lake Storage

(all quantities in cfs)

	1962 December 30	February 16	March 31	1963 May 5	June 23	August 4	September 27	November 17	1964 December 29	February 8
Bear Lake										
Little St. Charles Creek	7.5	7.8	9.9	29.3	8.9	15.0	7.4	8.8	15.4	10.3
Fish Haven Creek	3.7	4.6	4.3	3.5	.8	0	.1*	3.4	3.2	2.6
Fishpond At Lakota		.1	.2	.5		0	0	0	0.	0
Swan Creek	27.7	30.2	32.9	90.3	40.5	5.1	29.2	29.9	29.6	23.5
Round Valley Creek	22.6	24.2	26.6	3.0	.7	.5	22.5	23.2	21.6	20.7
Falula Springs	0	1.2	.1	1.6	.6	.2	.8	.4	.4	.6
South Eden Creek	0	0	0	0	0	0	0	0	0	0
North Eden Creek	0	0	0	0	0	0	0	0	0	0
Indian Creek	.2*	.3*	.2*	.2*	.1*	.1*	.1*	.2*	.1*	.1*
Waste and Minor Streams	2.9*	3.4*	3.3*	4.8*	5.7*	4.4*	8.3*	5.1*	4.7*	3.2*
Total	64.6	72.5	78.4	127.2	57.9	25.3	68.4	71.0	75.0	61.0
Mud Lake										
Bloomington Creek	16.3	16.9	16.9	30.9	11.8	1.0	17.8	14.0	15.9	13.4
Spring Creek	4.4	5.1	4.4	8.2	3.5	8.5	5.5	6.8	4.9	4.8
Big St. Charles Creek	22.8	25.3	30.2	56.4	40.1	1.1	20.2	24.3	20.8	25.7
Ream Drain	1.0	1.1	1.6	14.0*	6.3	3.3	3.2	1.9	5.6	3.0
Waste and Minor Streams	.8*	.7*	.5*	16.0*	1.1*	.5*	2.1*	3.3*	1.2*	.3*
Total	45.3	49.1	53.6	125.5	64.8	36.4	48.8	50.3	48.4	47.2
Total Traced Inflow	109.9	121.6	132.0	252.7	122.1	61.7	117.2	121.3	123.4	108.2

*Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE
(all quantities in cfs)

	1961 December 7	1962 January 16	March 3	April 12	May 26	July 16	August 22	October 5	November 15	December 30	1963 February 17
Bear Lake											
Little St. Charles Creek	5.0	5.2	5.4	14.6	29.3	10.2	8.2	12.3	8.5	7.5	7.8
Fishhaven Creek	.1*	.4*	.5*	2.5	12.7	.2*	.2*	.5*	4.0	3.7	4.6
Fishpond at Lakota	.2*	.2*	.2*	.8	0	0	0	.2*	.2*		.1
Swan Creek	19.8	21.0	22.8	47.1	71.3	17.4	4.4	27.9	29.4	27.7	30.2
Round Valley Creek	21.2	18.7	26.3	42.6	19.9	.6	3.6	24.9	25.4	22.6	24.2
Falula Springs	.7*	.8*	1.2	1.8	.8*	.8*	.1*	1.2	1.4	0	1.2
South Eden Creek	0	0	0	0	0	0	0	0	0	0	0
North Eden Creek	0	0	.2*	15.2	.8*	0	.8*	0	0	0	1.7
Indian Creek	.2*	.2*	.2*	1.0*	.3*	.2*	.3*	.2*	0	.2*	.3*
Waste and Minor Streams	2.6*	2.8*	2.6*	6.5*	7.5*	8.7*	6.8*	2.2*	1.4*	2.9*	3.4*
Total	49.8	49.3	59.4	132.1	142.6	38.1	24.4	69.4	70.3	64.6	72.5
Mud Lake											
Bloomington Creek	8.3	8.0	12.8	24.7	40.9	16.4	5.1	11.4	14.2	16.3	16.
Spring Creek	3.8	3.4	3.4	4.7	2.9	7.7	11.1	2.0	8.3	4.4	5.1
Big St. Charles Creek	11.1	11.6	18.7	30.5	83.0	4.6	20.0	25.1	25.8	22.8	25.3
Ream Draw	1.1	.4	1.0	1.9	2.6	7.1	3.1	2.3	1.8*	1.0	1.1
Waste and Minor Streams	.7*	.8*	.7*	.6*	1.1*	3.2*	2.1*	.3*	.4*	.8*	.7*
Total	25.0	24.2	36.6	62.4	130.5	39.0	41.4	41.1	50.5	45.3	49.1
Total Traced Inflow	74.8	73.5	96.0	194.5	273.1	77.1	65.8	110.5	120.8	109.9	121.6

* Estimated.

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE
(all quantities in cfs)

	1960 December 8	1961 January 22	March 8	April 22	June 11	August 1	September 14	October 18	December 7	1962 January 16
Bear Lake										
Little St. Charles Creek	15.1	11.5	13.8	14.4	5.8	2.8	2.0	4.3	5.0	5.2
Fishhaven Creek	3.0	2.3	2.5	1.8	.2*	.1*	.1*	.1*	.1*	.4*
Fishpond at Lakota	.5*	1.1	1.0	.7*	.2*	1.2	.3*	.1*	.2*	.2*
Swan Creek	25.1	21.7	20.4	39.6	2.9	2.1	3.1	21.7	19.8	21.0
Round Valley Creek	20.0	21.0	20.7	3*	.5*	.8	8.2	15.0	21.2	18.7
Falula Springs	.6	1.4	1.6	2.0	1.5	.1*	0	0	.7*	.8*
South Eden Creek	0	0	0	0	0	0	0	0	0	0
North Eden Creek	0	0	0	0	.5*	.3*	0	0	0	0
Indian Creek	.5*	.2*	.2*	.1*	.2*	.2*	.2*	.2*	.2*	.2*
Waste and Minor Streams	3.1*	2.8*	2.5*	6.0*	5.3*	6.2*	7.8*	4.8*	2.6*	2.8*
Total	67.9	62.0	62.7	64.9	17.1	13.8	21.7	46.2	49.8	49.3
Mud Lake										
Bloomington Creek	17.0	11.1	13.6	9.9	1.1	.8*	2.9	7.3	8.3	8.0
Spring Creek	5.0	4.0	3.7	3.9	2.7	2.2	7.8	1.5	3.8	3.4
Bl. St. Charles Creek	12.2	12.6	9.7	6.3	3.2	3.4	.8	13.6	11.1	11.6
Ream Drain	1.0	1.0	.8	1.7	.6	1.9	1.8	1.3	1.1	.4
Waste and Minor Streams	1.6*	.7*	.8*	.8*	1.0*	1.2*	.9*	1.6*	.7*	.8*
Total	36.8	29.4	28.6	22.6	8.6	9.2	14.2	25.3	25.0	24.2
Total Traced Inflow	104.7	91.4	91.3	87.5	25.7	23.0	35.9	71.5	74.8	73.5

* Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE

(all quantities in c.f.s.)

	1959 December 5	January 15	February 29	April 5	May 22	1960 June 25	August 9	September 25	November 8	December 8	1961 January 22
Bear Lake											
Little St. Charles Creek	16.4	20.7	13.7	27.1	45.0	8.3	6.2	15.4	12.3	15.1	11
Fishhaven Creek	1.4	4.0	3.6	4.3	1.3*	.1*	.1*	.1*	.5*	3.0	2.2
Fishpond at Lakota	.1*	.1*	.5*	.5*	0	1.8	1.3	.9	0	.5	1.1
Swan Creek	27.2	25.4	22.8	34.0	47.9	41.3	22.2	8.3	21.9	25.1	21.7
Round Valley Creek	35.0	23.5	27.1	33.0	.5*	.3*	10.2	17.7	25.3	20.0	21.0
Fabia Springs	7.7	.5*	.5*	.8*	.9*	1.9	1.3*	1.4	.3*	.6	1.4
South Eden Creek	0	0	0	0	0	0	0	0	0	0	0
North Eden Creek	0	0	0	.2*	0	1.2*	1.0*	.2*	.3*	0	0
Indian Creek	.2*	.2*	.2*	.3*	.2*	.3*	.2*	.2*	.3*	.5*	.2*
Waste and Minor Streams	3.2*	2.8*	2.9*	3.2	10.3*	9.1*	5.5*	5.9*	5.3*	3.1*	2.8*
Total	91.2	77.2	71.3	103.4	105.1	26.3	27.0	51.1	66.2	67.9	62.0
Mud Lake											
Bloomington Creek	12.5	13.7	8.8	22.1	21.4	2.5	1.0	4.0	8.5	17.0	11.1
Spring Creek	5.1	4.6	3.7	3.8	1.7	6.8	7.7	8.4	8.4	5.0	4.0
Big St. Charles Creek	15.6	8.7	8.2	19.1	19.8	9	7.7	1.5*	12.5	12.2	12.6
Ream Drain	1.0	.9	.8	1.8	2.1	2.8	1.8	4.8	1.6	1.0	1.0
Waste and Minor Streams	.8*	.8*	.6*	1.1*	.7*	1.7*	.8*	1.3*	1.2*	1.6*	0.7*
Total	35.0	28.7	22.1	47.9	45.1	14.3	19.0	19.0	32.2	36.8	29.4
Total Traced Inflow	126.2	105.9	93.4	151.3	150.2	40.6	46.0	70.1	98.4	104.7	91.4

* = Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE

(all quantities in cfs)

	1958 December 6	January 17	February 25	April 12	May 24	1959 June 28	August 1	September 17	October 29	December 5	1960 January 15
Bear Lake											
Little St Charles Creek	17.4	16.5	14.8	20.6	37.0	13.0	6.0	4.7	13.2	16.4	2
Fishhaven Creek	5.1	3.8	3.8	5.1	1.6	.2*	.1*	.1*	.5*	1.4	4.0
Fishpond at Lakota	1.2*	1.2	.5*	.8*	1.2	.3*	2.2	.8	.1*	.1*	1*
Swan Creek	27.9	27.8	24.3	36.7	51.4	22.6	3.2*	8.7	30.0	27.2	25.4
Round Valley Creek	25.2	23.9	25.2	28.3	2.7	1.9	18.5	6.6	23.2	35.0	23.5
Falula Springs	8.9	11.3	.8*	1.5	1.4	1.5	11.8	1.0	3.6	7.7	.5*
South Eden Creek	.0	.0	.0	.10	.0	.0	.0	.0	.0	.0	.0
North Eden Creek	.0	.0	.0	.3*	.0	.0	1.0	.0	.3*	.0	.0
Indian Creek	.3*	.3*	.3*	.3*	.3*	.3*	.2*	.3*	.3*	.2*	.2*
Waste and Minor Streams	3.3*	2.5*	2.9*	3.5*	10.0*	7.0*	6.2*	9.9*	5.6*	3.2*	2.8*
Total	88.3	76.3	72.6	97.1	105.6	46.8	39.2	32.1	76.8	91.2	77.2
Mud Lake											
Bloomington Creek	16.6	15.2	13.7	17.0	25.7	3.2	2.3	4.8	13.9	12.5	13.7
Spring Creek	4.9	4.3	4.1	4.5	2.4	3.3	8.5	8.5	8.1	5.1	4.6
Big St. Charles Creek	16.9	14.5	12.6	18.9	3.4	6.4	1.8	1.3	16.1	15.6	8.7
Ream Drain	1.3	1.1	.9	1.6	1.5	2.0*	5.9	1.0	1.3	1.0	.9
Minor Streams	.8*	.8*	.8*	.9*	1.9*	2.0*	1.0*	1.8*	1.0*	.8*	.8*
Total	40.5	35.9	32.1	42.9	32.9	16.9	19.5	17.4	40.4	35.0	28.7
Total Traced Inflow	128.8	112.2	104.7	140.0	138.5	63.7	58.7	49.5	117.2	126.2	105.9

* Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE
(all quantities in c/s)

					1957			1958							1959
					December 15	January 23	March 2	April 13	May 24	June 28	August 10	September 17	October 28	December 6	January 17
Bear Lake															
Little St. Charles Creek				ck	16.7	19.6	20.9	23.2	113.3	26.8	20.5	15.9	15.3	17.4	16.5
Fishhaven Creek					5.0	5.5	5.2	3.1	45.1	1.0*	.3*	.3*	3.6	.5.1	3.8
Fishpond at Lakota					1.2	1.6	1.4	1.7	2.5	.4	.1*	.2*	.2*	.2*	.2*
Swan Creek					30.4	23.6	23.7	24.1	188.8	36.7	10.7	15.8	27.7	27.9	27.8
Round Valley Creek					24.4	28.2	30.3	37.6	4.2	2.1	1.6	7.8	25.1	25.2	23.9
Fabula Springs					1.4	1.0*	1.3	1.7	1.3	1.2	1.3	1.2	1.0*	8.9	1.3
South Eden Creek					.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
North Eden Creek					.3*	.2*	.3*	.3*	.0	.0	.0	.0	.0	.0	.0
Indian Creek					.3*	.2*	.3*	.3*	.2*	.3*	.3*	.3*	.3*	.3*	.3*
Waste and Minor Streams					3.0*	2.7*	2.6*	6.0*	10.0*	10.0*	5.2*	6.1*	4.1*	3.3*	2.5*
Total					82.7	82.6	86.0	98.0	365.4	79.5	40.0	47.6	77.3	88.3	76.3
Mud Lake															
Bloomington Creek					17.0	16.4	19.6	17.6	135.8	28.7	20.3	9.8	15.1	16.6	15.2
Spring Creek					4.8	4.2	4.2	4.8	1.1	6.1	6.8	8.1	4.8	4.9	4.3
Big St. Charles Creek					15.7	14.0	20.5	15.8	204.5	9.0	15.9	6.9	17.2	16.9	14.5
Ream Drain					1.5	1.4	1.4	1.4	.8	1.5	2.4	.7	1.6	1.3	1.1
Minor Streams					.8*	.7*	0.8*	1.0*	1.7	3.6	7*	2.2*	2.4*	.8*	.8*
Total					39.8	36.7	46.5	40.6	343.9	48.9	46.1	27.7	41.1	40.5	35.9
Total Traced Inflow					122.5	119.3	132.5	138.6	709.3	128.4	86.1	75.3	118.4	128.8	112.2

* Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE

(all quantities in cfs)

					1957								1958
					December 17	January 13	February 18	April 7	May 26	July 9	August 20	September 18	November 2	December 15	January 23
Bear Lake															
Little St. Charles Creek					8.6	10.5	11.8	18.8	40.8	27.8	11.7	16.3	13.5	16.7	14.0
Fishhaven Creek					4.4	3.9	3.4	3.0	1.9	.2*	.3*	.5*	3.3	5.0	5.5
Fishpond at Lakota								2.6	3.3	1.7	.4*		1.0	1.2	1.6
Swan Creek					28.2	26.4	25.1	25.7	90.1	22.7	6.6	19.4	28.9	30.4	23.6
Round Valley Creek					25.2	26.1	25.6	41.7	29.3	1.2	15.8	24.8	25.4	24.4	28.2
Falula Springs					.9	8.4	.5*	1.8	2.6	2.4	.8*	1.0	1.0*	1.4	1.0*
South Eden Creek					.0	.0	.0	.0	.0	1.0	.0	.0	.0	.0	.0
North Eden Creek					.3*	.3*	.3*	.3*	.0	.5*	.0	.0	.3*	.3*	.2*
Indian Creek					.2*	.2*	.3*	.3*	1.3*	1.3*	1.3*	.5*	.3*	.3*	.2*
Waste and Minor Streams					2.5*	3.3*	4.0*	3.7*	7.9*	13.2*	6.5*	6.1*	8.2*	3.0*	2.7*
Total					70.3	79.1	71.0	97.9	190.1	70.0	42.4	68.6	81.9	82.7	82.6
Mud Lake															
Bloomington Creek					16.4	14.8	11.7	20.3	59.1	16.5	18.5	9.8	13.4	17.0	16.4
Spring Creek					4.4	4.2	3.4	4.1	5.6	3.2	7.5	7.0	10.5	4.8	4.2
Big St. Charles Creek					25.0	20.2	22.0	24.2	57.1	15.4	9.0	11.9	15.6	15.7	14.0
Ream Drain					1.1	2.8	5.8	3.5	2.1	2.5*	2.3	5.2	1.8	1.5	1.4
Miner Streams					.9*	.8*	.9*	1.4*	1.7*	2.0*	.8*	.4*	1.0*	.8*	.7*
Total					47.8	42.8	43.8	53.5	125.6	40.6	38.1	34.3	42.3	39.8	36.7
Total Traced Inflow					118.1	121.9	114.8	151.4	315.7	110.6	80.5	102.9	124.2	122.5	119.3

* Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE
(all quantities in cfs.)

	1955 December 11	January 24	February 28	April 7	May 22	1956 June 9	July 8	August 24	October 16	December 1	1957 January 13
Bear Lake											
Little St. Charles Creek	6.4	9.8	7.5	16.6	81.4	40.2	19.3	8.9	7.2	8.6	14
Fishhaven Creek	2.7	3.9	2.4	5.2	41.4	15.7	3	.1*	1.2	4.4	3.9
Swan Creek	23.2	28.5	25.8	30.9	153.9	74.7	21.5	22.9	27.2	28.2	26.4
Round Valley Creek	23.2	31.7	24.3	37.4	7.8	1.5	1.4	6.4	24.7	25.2	26.1
Falula Springs	1.5*	1.0*	3.5	1.5	1.0*	.9	1.0*	.8	.8	.9	8.4
" South Eden Creek	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
" North Eden Creek	.2*	.2*	.2*	.5*	.5*	1.5*	.5*	.0	.2*	.3*	.3*
Indian Creek	.2*	.3*	.2*	.3*	.2*	.3*	.3*	.2*	.2*	.2*	.2*
Waste and Minor Streams	2.3*	3.0*	2.3*	8.0*	13.1*	12.5*	13.3*	8.4*	6.4*	2.5*	3.3*
Total	58.7	78.4	66.2	99.4	299.5	146.9	56.6	47.7	67.9	70.3	79.1
Mud Lake											
Bloomington Creek	13.6	16.9	13.4	19.9	115.1	47.5	16.6	23.4	15.0	16.4	14.8
Spring Creek	5.2	5.0	5.0	5.8	14.6	5.2	8.6	8.6	7.9	4.4	4.2
Big St. Charles Creek	23.7	22.4	19.3	28.4	155.0	61.3	6.8	8.3	18.0	25.0	20.2
Ream Drain	1.4	1.2	1.4	2.1	2.4	3.2	7.8	2.6	1.7	1.1	2.8
Minor Streams	.7*	.6*	.5*	1.5*	2.8*	2.1*	1.0*	3.0*	1.9*	.9*	.8*
Total	44.6	46.1	39.6	57.7	289.9	119.3	39.8	45.9	44.5	47.8	42.8
Total Traced Inflow	103.3	124.5	105.8	157.1	589.4	266.2	96.4	93.6	112.4	118.1	121.9

*Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE
(all quantities in cfs)

	1954 December 14	January 23	March 6	1955 April 14	May 19	June 22	August 15	September 21	November 1	December 7	1956 January 24
Bear Lake											
Little St. Charles Creek	5.3	5.1	6.3	11.4	33.6	25.4	4.6	3.4	16.9	6.4	[illegible]
Fishhaven Creek	1.5*	.8*	.5*	1.5	.8*	.8*	.2*	.1*	2.3	2.7	3.9
Swan Creek	22.2	21.3	18.5	18.6	96.4	19.8	2.3	3.0	20.9	23.2	28.5
Round Valley Creek	25.8	26.1	32.4	82.7	8.1	1.9	19.5	4.2	24.2	23.2	31.7
Falula Springs	1.5*	.5*	4.0	7.2	.8*	3.8	1.6	1.0*	.5*	.5*	1.0*
South Eden Creek	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
North Eden Creek	.0	.0	.0	.2*	.0	.0	.1*	.3*	.0	.2*	.2*
Indian Creek	.3*	.3*	.3*	.2*	.1*	.0	.1*	.2*	.2*	.2*	.3*
Waste and Minor Streams	4.2*	2.9*	3.0*	19.4*	16.0*	7.0*	10.1*	11.0*	5.8*	2.3*	3.0*
Total	58.8	57.0	65.0	141.2	145.8	58.7	38.5	23.2	70.8	58.7	78.4
Mud Lake											
Bloomington Creek	13.7	13.1	18.0	16.0	33.9	8.1	5.2	8.4	10.9	13.6	16.9
Spring Creek	5.3	4.9	4.4	5.3	7.6	2.4	19.3	6.8	7.6	5.2	5.0
Big St. Charles Creek	22.1	21.5	16.0	22.8	46.6	6.3	12.6	1.0*	9.2	23.7	22.4
Ream Drain	1.3	2.3	3.3	7.7	1.0	8.0	3.3	7.7	1.7	1.4	1.2
Minor streams	.8*	.8*	1.6*	1.1	1.9*	1.0	2.6*	1.2*	.8*	.7*	.6*
Total	43.2	42.6	32.3	52.9	94.0	25.8	33.0	25.1	30.2	44.6	46.1
Total Traced Inflow	102.0	99.6	97.3	194.1	236.8	84.5	71.5	48.3	101.0	103.3	124.5

* Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE
(all quantities in cfs)

	1953 December 10	January 21	March 2	April 20	May 26	1954 July 16	August 24	October 3	November 8	December 14	1955 January 23
Bear Lake											
Little St. Charles Creek	16.7	18.2	15.1	22.1	16.9	5.6	2.8	2.9	2.9	5.3	.1
Fishhaven Creek	1.2	3.6	3.0	4.2	.2*	.2*	.2*	.2*	.3*	.5*	.8*
Swan Creek	28.3	28.0	25.2	59.6	48.6	1.0	1.7	16.6	22.7	22.2	21.3
Round Valley Creek	27.2	28.7	34.6	29.1	2.3	1.0	2.2*	2.3	25.1	25.8	26.1
Falula Springs	1.0*	.8*	1.4	1.4	.8*	.8	1.0	4.1	.6	.5	.5
South Eden Creek	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
North Eden Creek	.3*	.3*	.3*	.0	.0	.0	1.0*	.0	.0	.0	.0
Indian Creek	.3*	.3*	.3*	.2*	.0	.0	.2*	.2	.3*	.3*	.3*
Waste and Minor Streams	2.7*	2.2*	2.1*	2.0*	10.7*	15.9*	6.0*	8.6	6.3*	4.2*	2.9*
Total	67.7	72.1	82.0	118.6	79.5	24.5	11.1	54.9	58.2	58.8	57.0
Mud Lake											
Bloomington Creek	16.4	14.5	14.8	20.5	10.2	12.9	6.7	6.7	9.7	13.7	13.1
Spring Creek	6.4	5.4	3.8	5.4	2.9	4.6	10.8	5.6	6.9	5.3	4.9
Big St Charles Creek	27.0	21.9	17.5	31.6	23.5	2.3*	1.2	1.2	20.6	22.1	21.5
Ream Drain	3.6	2.5	2.4	2.8	8.6	.2*	2.8	2.8	1.5	1.3	2.3
Minor Streams	.8*	.8*	1.1*	.6*	1.1*	1.3*	1.4*	1.1*	.9*	.8*	.8*
Total	54.2	45.1	39.6	60.9	46.3	21.3	22.9	17.4	39.6	43.2	42.6
Total Traced Inflow	121.9	117.2	121.6	179.5	125.8	45.5	34.0	72.3	97.8	102.0	99.6

* Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE
(all quantities in cfs)

	1952 December 11	January 22	March 4	1953 April 18	May 22	June 24	August 4	September 24	November 7	December 10	1954 January 21
Bear Lake											
Little St Charles Creek	12.8	11.8	9.7	16.5	26.4	38.1	9.9	6.6	5.6	6.7	
Fishhaven Creek	3.8	3.4	3.2	2.1	1.3	.4*	.1*	.3*	.4*	1.2	3.6
Swan Creek	31.8	28.9	26.7	29.6	59.8	47.4	4.3	3.0	24.3	28.3	28.0
Round Valley Creek	28.5	50.1	36.8	50.4	42.6	4.3	24.1	24.2	28.6	27.2	28.7
Fabula Springs	2.1	1.7	1.8	3.2	2.2	.1*	.0	.8	.6	1.0*	.8*
South Eden Creek		.0	.0	.1*	.0	.0		.0	.0	.0	.0
North Eden Creek		.3*	.5*	.5*	.5*	.0		.3*	.2*	.3*	.3*
Indian Creek		.3*	.3*	.5*	.3*	.0		.2*	.2*	.3*	.3*
Waste and Minor Streams	3.7*	4.0*	3.2*	7.6*	16.8*	10.2*	2.6*	9.1*	4.6*	2.7*	2.2*
Total	82.7	100.5	82.2	110.5	143.9	100.5	41.0	44.5	64.5	67.7	72.1
Mud Lake											
Bloomington Creek	17.1	16.4	15.2	17.5	31.9	11.8	9.5	6.3	15.6	16.4	1.
Spring Creek	6.9	6.3	5.4	6.7	6.7	4.2	11.7	8.6	8.6	6.4	5.4
Big St. Charles Creek	22.6	22.4	17.2	20.9	18.5	27.9	17.0	.5	21.6	27.0	21.9
Ream Drain	2.0	2.9	3.0*	3.2	4.0*	2.0*	4.1	2.2	1.7	3.6	2.5
Minor Streams	.6*	.9*	.7*	1.3*	.6*	1.3*	.7*	2.2*	1.0*	.8*	.8*
Total	49.2	48.9	41.5	49.6	61.7	47.2	43.0	19.8	48.5	54.2	45.1
Total Traced Inflow	131.9	149.4	123.7	160.1	205.6	147.7	84.0	64.3	113.0	121.9	117.2

*Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE
(all quantities in cfs)

	1951 December 11	January 23	March 7	1952 April 24	May 9	June 10	July 30	September 18	October 30	December 11	1953 January 22
Bear Lake											
Lit. St. Charles Creek	12.5	9.8	10.7	22.7	48.8	59.0	14.9	9.5	13.7	12.8	11.8
Fishhaven Creek	6.2	4.8	3.7	9.0	33.5	5.7	.1*	.5*	1.7	3.8	3.4
Swan Creek	34.1	32.4	29.8	64.4	194.4	89.8	12.9	3.3	25.6	31.8	28.9
Round Valley Creek	33.6	33.5	31.7	63.4	87.1	6.4	24.3	29.3	29.3	28.5	50.1
Falula Springs	.8*	.8*	1.5	2.2	2.0	.2*	.1*	1.5	1.7	2.1	1.7
South Eden Creek				.5*	3.0*			.3*	.2*		.0
North Eden Creek				.3*	.5*			.2*	.2*		.3*
Indian Creek				.3*	.3*			.3*	.2*		.3*
Waste and Minor Streams	2.5*	2.5*	2.0*	7.2*	5.9*	6.3*	5.3*	9.7*	5.4*	3.7*	4.0*
Total	89.7	83.8	79.4	170.0	375.5	167.1	57.6	54.6	78.0	82.7	100.5
Mud Lake											
Bloomington Creek	22.1	19.2	14.9	35.5	73.3	58.0	7.8	15.5	13.5	17.1	16.4
Spring Creek	7.4	5.6	5.4	7.2	7.2	11.6	6.3	5.0	8.0	6.9	6.3
Big St. Charles Creek	29.9	24.9	21.1	50.4	126.4	28.4	8.1	5.7	18.9	22.6	22.4
Reom Drain			1.5	4.1	7.6	7.5	3.9	5.3	2.5	2.0	2.9
Minor Streams	1.0*	1.5*	1.5*	4.0*	3.1*	1.7*	1.0*	1.2*	1.1*	.6*	.9*
Total	60.4	51.2	42.9	101.2	217.6	143.6	37.1	32.7	44.0	49.2	48.9
Total Traced Inflow	150.1	135.0	122.3	271.2	587.1	330.7	94.7	87.3	122.0	131.9	149.4

* Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE
(all quantities in c.f.s.)

	1950 October 18	1951 January 10	1951 March 6	1951 April 13	1951 June 6	1951 July 18	1951 September 20	1951 December 11	1952 January 23
Bear Lake									
Little St. Charles Creek	14.6	14.5	16.9	28.9	53.6	25.4	10.5	12.5	9.8
Fishhaven Creek	11.7	7.5	6.2	13.9	37.5	1.2*	1.9	6.2	4.8
Swan Creek	51.6	42.2	35.0	75.3	110.4	36.3	16.9	34.1	32.4
Round Valley Creek	30.6	29.6	33.7	42.7	36.5	4.6	22.1	33.6	33.5
Fa'ula Springs	1.0*	1.7	1.0*	1.9	.5	0	.8*	.8*	.8*
Waste and Minor Streams	3.4*	2.5*	2.5*	7.6*	6.1*	6.5*	4.0*	2.5*	2.5*
Total	112.9	98.0	95.3	170.3	244.6	73.0	56.2	89.7	83.8
Mud Lake									
Bloomington Creek	23.8	18.8	18.6	38.3	71.2	12.8	7.4	22.1	19.2
Spring Creek	8.9	6.1	5.8	10.4	7.8	15.0	6.3	7.4	5.6
Big St. Charles Creek	35.9	25.8	22.4	62.3	67.2	4.0	14.2	29.9	24.9
Minor Streams	2.5*	1.5*	1.0*	4.0*	11.0*	4.5*	7.3*	1.0*	1.5*
Total	71.1	52.2	47.8	115.0	157.2	36.3	35.2	60.4	51.2
Total Traced Inflow	184.0	150.2	143.1	285.3	401.8	109.3	91.4	150.1	135.0

* Estimated

TOTAL TRACED INFLOW TO BEAR LAKE STORAGE

(all quantities in c.f.s.)

	1949 December 8	1949 January 20	1949 February 28	1950 April 18	1950 June 1	1950 July 19	1950 September 6	1950 October 18	1951 January 10
Bear Lake									
Little St. Charles Creek	17.2	23.4	19.1	55.2	186.4	40.3	25.8	14.6	14.5
Fishhaven Creek	3.4	3.5	3.0	15.4	75.6	1.2	1.0	11.7	7.5
Swan Creek	31.0	28.2	30.5	94.8	273.2	76.8	25.4	51.6	42.2
Round Valley Creek	24.4	52.6	60.7	54.0	66.7	10.7	4.1	30.6	29.6
Fabula Springs	1.0	1.0*	1.8	1.5	2.9	.5*	.8*	1.0*	1.7
Waste and Minor Streams	2.8*	2.2*	9.0*	17.3*	10.1*	9.5*	6.0*	3.4*	2.5*
Total	79.8	110.9	124.1	238.2	614.9	139.0	63.1	112.9	98.0
Mud Lake									
Bloomington Creek	14.6	18.6	14.8	54.3	148.0	55.4	12.7	23.8	18.8
Spring Creek	6.1	6.0	5.3	10.6	9.6	11.5	16.3	8.9	6.1
Big St. Charles Creek	15.4	18.1	14.6	62.5	186.7	35.2	8.6	35.9	25.8
Minor Streams	1.0*	1.5*	1.5*	10.8*	4.5*	3.5*	4.5*	2.5*	1.5*
Total	37.1	44.2	36.2	138.2	348.8	105.6	42.1	71.1	52.2
Total Traced Inflow	116.9	155.1	160.3	376.4	963.7	244.6	105.2	184.0	150.2

* Estimated

tate 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

July 16, 1986

RE: Permit Nos. 11-7152 & 37-7739

Idaho Water Resource Board
Attn: Gene Gray, Chairman
Rt. 1, Box 46-A
Payette ID 83661

Dear Mr. Gray:

Enclosed are copies of the water right licenses issued on the above referenced permits.

Sincerely,

JIM JOHNSON
Water Rights Supervisor

JJ:sc

Enclosures