

IMPORTANT—This form is a notice to the State Engineer that permittee is ready to make **final proof** to the extent to which the water has actually been applied to the intended use under the terms of the permit. Permittee is cautioned that Certificate of Water Right will be issued based on the extent of the quantity and use as determined by the **final proof** inspection and survey which will be made in response to the filing of this Form C.

NOTE: In the case of an irrigation permit, this Form C should not be mailed to the State Engineer until all of the land described in the permit, which it is intended to irrigate under this permit at any time, has actually been irrigated.
Fill out, detach and mail to the State Engineer, Salem, Oregon, when all of the water has been applied.

Application No. 29702

NOTICE OF COMPLETE APPLICATION OF WATER TO A BENEFICIAL USE
CITY OF EUGENE, OREGON, BY AND THROUGH

I, THE EUGENE WATER & ELECTRIC BOARD, the holder of Permit No. 23958
to appropriate the public waters of the state of Oregon, completely applied the waters to a beneficial use in accordance with the terms of said permit, on the 1st day of May, 1955.

Remarks: _____

IN WITNESS WHEREOF, I have hereunto set my hand this 16th day of April, 1956

EUGENE WATER & ELECTRIC BOARD

(Signature of Applicant)

General Supt.-Sec'y.

500 E. 4th, Eugene, Oregon

(Address)

RECEIVED
APR 17 1956
STATE ENGINEER
SALEM, OREGON

FEDERAL ENERGY REGULATORY COMMISSION
Office of Energy Projects
Division of Dam Safety and Inspections – Portland Regional Office
805 SW Broadway, Suite 550
Portland, Oregon 97205
(503) 552-2700 Office - (503) 552-2799 Facsimile

9/28/2018

In reply refer to:
P-2496-OR

Mr. Mark Zinniker
Generation Engineering Supervisor
Eugene Water and Electric Board
P.O. Box 10148
Eugene, OR 97440

Subject: Leaburg Emergency Drawdown, Leaburg-Waltermville Project

Dear Mr. Zinniker:

This confirms our discussion during the September 27, 2018 conference call with yourself, Mr. Mike McCann of your office, Mr. Ken Fearon and Mr. Justin Smith of D2SI-WO, and Ms. Katie Clarkson, Ms. Kristie Hartfeil, Mr. Karl Swanson, and myself from D2SI-PRO regarding the internal erosion observed at the Leaburg Canal of the Leaburg-Waltermville Project, FERC No. 2496.

Background:

During the September 25, 2018 annual dam safety inspection (DSI) of the project, our staff observed a void on the downstream face of the Leaburg Canal embankment and accumulated sediment in weir LCW-21C, located near Station 120+50. The majority of the seepage flowing into the weir was emanating from the 6-inch-diameter void in the embankment. During the DSI, a wooden stake was easily inserted into the void and it was found to extend at least 5.5 feet horizontally into the embankment. Staff were unable to determine the full extent of the void. Sediment accumulated in the weir box was a silty sand with fine gravel.

The 2017 Dam Safety Surveillance and Monitoring Report indicates that seepage from weir LCW-21C has been progressively increasing since 2015. It is our understanding that EWEB has been aware of significant seepage flow exiting the embankment toe in the area between Station 114+00 and 123+00 and attempted to repair the canal embankment to reduce seepage in 2016 and 2018.

As discussed in EWEB's July 2, 2018 letter transmitting the final construction report for the 2018 embankment repair between Station 114+00 and 122+50, your most recent repair effort did not reduce seepage from this section of canal. Your report indicated seepage from weirs at Stations 115+50, 120+00, 120+81, and 121+50 actually increased for similar canal elevations after the repair.

During the 2018 repair work, several important observations were made. Pervious gravels and cobbles were noted below the canal embankment and a gradation test on a sample of this material indicated it had less than 1 percent fines. The report also noted "oversaturated soupy" zones were observed along the excavated embankment slope beneath the clay liner. These zones averaged 5 to 15 inches in diameter. A photograph of a "hole" near Station 123+20 was also documented but not discussed in the report.

During the 2018 repair work, it is our understanding that pervious gravels and cobbles were observed immediately below the canal embankment and that the clay liner constructed along the surface of the embankment does not extend over the pervious gravels. The pervious gravels and cobbles are likely not filter compatible with the embankment materials, and pose a potential pathway for seepage and internal erosion of embankment. A review of Lidar imagery indicates that between Station 114+00 and 123+00, Leaburg Canal was likely constructed over the meandering Cogswell Creek streambed, resulting in pervious alluvial materials that extend for several hundred feet beneath the canal.

Findings:

Observations of the voids into the canal embankment, history of sediment accumulation in weir boxes, increasing weir flows over time, and pervious foundation conditions indicate that this section of the Leaburg Canal is very likely in a state of active failure due to internal erosion. Due to the significant dam safety and public safety concerns associated with a failure of the high hazard potential embankment, EWEB is required to draw down the canal to reduce the head on the piping area to a safe level.

During our discussion, EWEB requested 24 hours to review the information, investigate potential implications to supplying water to the fish hatchery through the existing fish hatchery intake at Station 109+00, and prepare an investigation plan. In your email sent to me the evening of September 27th, you indicated that the canal could only be drawn down 10 inches without adversely affecting the fish hatchery. A 10-inch drawdown is inadequate for lowering the head on the canal to a safe level. You will need to explore other options, such as a cofferdam or providing pumps, to provide water to the hatchery, so that the canal level can be lowered much further until repairs can be made.

My September 27, 2018 email that followed our discussion requested EWEB to initiate or complete four tasks. These are described below with four additional tasks:

1. It is critical the downslope residences and businesses within the inundation zone from a dam breach be informed of the potential danger from a failure of the canal embankment. EWEB should immediately work with the local Emergency Management Agency to contact all homeowners and businesses within the inundation zone from a breach that could occur between Station 114+00 to Station 123+00. EWEB and the Emergency Management Agency should obtain phone numbers so those in the inundation zone can be contacted if the embankment continues to deteriorate.
2. If the weir boxes for Leaburg Canal have not been cleaned out for September, EWEB must collect sediment samples immediately from every weir box and have samples classified based on the results of gradation tests. The results of those tests should be officially submitted to D2SI-PRO upon receipt.
3. EWEB must immediately begin inspecting Leaburg Canal embankment between Stations 114+00 and 123+00 every morning and evening. The inspections should include obtaining weir flow data, visual inspection of the embankment for new or changes in seepage flow, and visual inspection of accumulating sediment in the weir boxes. EWEB is to provide the inspection summaries in weekly reports by e-mail for our review. EWEB is to notify D2SI-PRO immediately if worsening conditions are observed.
4. EWEB must report the internal erosion void discovery as a dam safety incident in accordance with 18 CFR 12.10(a) requirements and submit to D2SI-PRO by October 5, 2018.
5. EWEB is required to have stockpiled reverse filter compatible material on-site for use in an emergency response by October 5, 2018. Your Independent Consultant should review the material gradations to determine their suitability to act as a reverse filter for this section of the canal embankment.
6. A completed plan for emergency drawdown of Leaburg Canal, including providing an alternate water supply to the fish hatchery, is due to D2SI-PRO by October 5, 2018.
7. EWEB is required to provide full-time inspection of the downstream slope between Station 114+00 and 123+00 by a licensed geotechnical engineer until the drawdown is complete.

8. EWEB is required to submit a workplan by October 12, 2018 to investigate the void, determine the extent of the canal that is susceptible to internal erosion failure, and repair all necessary canal embankment sections.

Please note that, once drawn down, you may not re-water Leaburg Canal without prior written authorization from this office. Thank you for your continued cooperation and interest in dam safety. If you have any questions, please contact Ms. Kristie Hartfeil of this office at (503) 552-2731.

Sincerely,

A handwritten signature in cursive script, appearing to read "Kath Mc Cle", followed by a long horizontal line.

for

Douglas L. Johnson, P.E.
Regional Engineer



Application No. 29702
Permit No. 23958

RECEIVED
FEB 9 1955
STATE ENGINEER
SALEM, OREGON

NO.	REVISION	DATE	APP.
EUGENE WATER & ELECTRIC BOARD EUGENE, OREGON			
MAP TO ACCOMPANY WATER RIGHT APPLICATION 29702 LEABURG POWER PROJECT			
DWN. 2/4/55	SCALE 1" = 1000'	D-3478	
CHK.	DATE 2-4-55		
APP.			

Permit No. 23958Application No. 29702County Lane**Proof of Appropriation of Water**

City of Eugene by and through the

1. Name Eugene Water & Electric Board 2. Address 500 East 4th Ave., Eugene3. Source of supply McKenzie RiverTributary of Willamette River4. Amount of water 300 c.f.s. 5. Priority date January 24, 19556. Use Electric Power Production -- appropriation shall be limited to the *(SE7. Location of point of diversion SW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 31, Twp. 16 S., Range 2 E., W. M.
(Legal Subdivision)

8. The description of land given below corresponds to that found in your permit covering land to be irrigated, or, if for other purposes, the place of use.

Township	Range	Section	Legal Subdivision	No. Acres Actually Irrigated
17 S.	1 E.	9	SE $\frac{1}{4}$ SE $\frac{1}{4}$	Electric Power Production
*amount of water which can be applied to beneficial use and not to exceed 300 c.f.s.				
provided that at all times the quantity of water flowing in the main channel of the				
McKenzie River below this applicant's diversion shall not be diminished to a point				
that will materially injure fish life in the stream, including migratory fish or				
other species, provided further that the quantity shall not be diminished below				
500 c.f.s. until such time as on proper showing the reasonable conclusion is that a				
smaller quantity of water is sufficient for the protection of such fish life and in				
that event the quantity to be fixed by the State Engineer.				

I have read the above and foregoing proof of appropriation of water; I know the contents thereof, and that the facts therein stated are true.

IN WITNESS WHEREOF, I have hereunto set my hand this 25 day of May,

1960.

Eugene Water & Electric Board



MUNICIPAL UTILITIES
EUGENE WATER & ELECTRIC BOARD

300 EAST 4TH AVENUE - EUGENE, OREGON - PHONE DI 3-1661

BYRON PRICE, Supt.-Secy.
COMMISSIONERS:
L. W. TROMMLITZ, Pres.
OLUF A. HOUGLUM, Vice Pres.
CALVIN R. SMITH
EARL L. McNUTT
J. ORVILLE LINDSTROM

May 18, 1960

RECEIVED
MAY 26 1960
STATE ENGINEER
SALEM, OREGON

Lewis A. Stanley
State Engineer
251 Finance Building
170 12th Street, S.E.
Salem, Oregon

Reference: File Nos. 10626,
29702, 22597, R-29278

Dear Mr. Stanley:

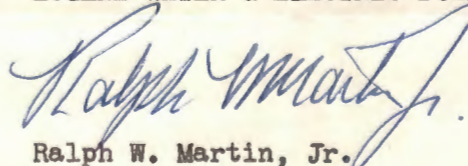
Enclosed are signed proof forms in connection with permits numbered 23958 and 8449 covering the use of water at our Leaburg Hydroelectric Project. We note these proofs as giving a total of 2,500 cubic feet per second for the Leaburg Project.

Also enclosed are signed proof forms in connection with permits numbered R-1640 and 23041 covering the Walterville Hydroelectric Project. Please note that these two permits only partially cover the water claimed for the Walterville Project. There is an additional claim for 1,600 cubic feet per second having a priority dated 1906, thus giving a total of 2,577 cubic feet per second for the Walterville Project.

Enclosed is a check for \$4.00 as the recording fees of \$1.00 for each of the four permits.

Very truly yours,

EUGENE WATER & ELECTRIC BOARD



Ralph W. Martin, Jr.
Chief Engineer

RWMjr/dj

Encl. - 4

10626
29702
22597
R-29278

April 29, 1960

City of Eugene
Eugene Water and Electric Board
500 East 4th Avenue
Eugene, Oregon

Gentlemen:

Enclosed are the proof forms in connection with permits numbered 23958 and 8449 covering the use of water at Leaburg. You will note that the quantity of water is that amount listed in the original permits and no maps accompany these proofs as the application maps were accepted.

I have also enclosed the proof forms in connection with permits numbered R-1640 and 23041 covering the Walterville Plant. Information shown on these proofs was based on inspection by a representative of this office and the application maps were accepted as final proof maps also.

All these forms should be dated and signed at the place indicated and returned to this office together with the certificate recording fees of \$1 for each permit.

Very truly yours,

LEWIS A. STANLEY
State Engineer

By
Trevor Jones, Assistant

TJ:bks

Encl

March 7, 1960

Mr. R. B. Boals
Eugene Water & Electric Board
500 East 4th Avenue
Eugene, Oregon

Dear Mr. Boals:

Permit No. 8449, in the name of City of Eugene, describes the appropriation of 2200 cubic feet per second of water of McKenzie River for power. This permit bears the priority date of March 5, 1926.

On January 24, 1955, you filed an application for a permit to appropriate an additional 300 cubic feet per second from the McKenzie River.

Mr. C. A. Cummings of this office made a measurement of a power canal a short distance above the spillway at the last road bridge before the canal crosses under the highway. This was within the NW¹/₄ NW¹/₄, Section 6, Township 17 South, Range 2 East. He measured the water at 2340 cubic feet per second with the water stage lacking about 1 inch of flowing over the spillway crest. He estimated that the canal would carry an additional 50 cubic feet per second before the water would reach the spillway crest. This indicates the passing at this point as being 2390 cubic feet per second, or to round out the figure, 2400.

It appears then, that the final proof form for permit No. 23958 should be reduced from 300 cubic feet per second to 200 cubic feet per second so the combined permits would total 2400 cubic feet per second. Before we prepare these forms, I would appreciate receiving your comments on this.

Very truly yours,

LEWIS A. STANLEY
State Engineer

By
Trevor Jones, Assistant

TJ:rb

August 12, 1957

City of Eugene Oregon by and through
the Eugene Water and Electric Board
P. O. Box 112
Eugene, Oregon

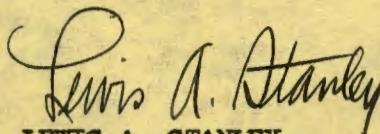
Gentlemen:

Enclosed is the final proof in connection with the incomplete water right represented by your permit No. 23958 granting a right to the use of 300 c.f.s. of the waters of McKenzie River.

The data contained in the proof, which is based on an inspection ~~and survey~~ of your project made by a representative of this department, defines the extent to which your water right has been completed within the terms of the permit. The proof should be dated, and signed by you on the bottom of the page.

Upon receipt of the signed proof accompanied by the statutory recording fee in the amount of \$1, a certificate of water right will be issued confirming the right thereunder and will be forwarded to you, after recording in Lane County.

Very truly yours,



LEWIS A. STANLEY
State Engineer

Form 117
Enclosure
dlf.

April 20, 1956

City of Eugene
Eugene Water and Electric Board
P. O. Box 1111
Eugene, Oregon

Gentlemen:

This will acknowledge receipt of your notice to the effect that complete application of water has been made under Permit No. 23958.

Pursuant to your report and in line with the general practice of this office, a survey will be made at a later date. After this survey, proof may be made and certificate issued covering the actual use of water as found by the engineer. In the case of irrigation, any lands described in the permit that have not been irrigated will be automatically eliminated from the water right.

In the meantime, the permit which you hold will be valid evidence of the water right in question so long as you continue to use the water.

Very truly yours,

Lewis A. Stanley

LEWIS A. STANLEY
State Engineer

A stylized illustration of a mountain range with snow-capped peaks, evergreen trees in the foreground, and a body of water. The mountains are rendered in black and white with green outlines, and the water is depicted with green horizontal strokes. The scene is set against a light beige background.

EUGENE WATER & ELECTRIC BOARD

MUNICIPAL UTILITIES

RECEIVED
APR 17 1956
STATE ENGINEER
SALEM, OREGON

Dear Sir:

Yours very truly,

By :

R. B. Boals
General Supt.-Sec'y.

Enc. - Form "C"

March 20, 1956

29702

City of Eugene
Eugene Water & Electric Board
P. O. Box 1112
Eugene, Oregon

Gentlemen:

together with blueprint.

29702, Permit No. 23958,

COMMISSIONERS:
VEATCH, CHAIRMAN, PORTLAND
L. JONES, CLIFTON
C. ELLIS, GARIBALDI



STATE OF OREGON
FISH COMMISSION OF OREGON
307 STATE OFFICE BLDG., 1400 S. W. 5TH AVENUE
PORTLAND 1

March 15, 1955

File

Mr. Lewis A. Stanley
State Engineer
Salem, Oregon

RECEIVED
MAR 17 1955
STATE ENGINEER
SALEM, OREGON

Dear Mr. Stanley:

This is in regard to Application No. 29702 in the name of Eugene Water and Electric Board for a permit to appropriate an additional 300 cubic feet per second of water from the McKenzie River at Leaburg Dam. We do not wish to protest the issuance of a permit for the diversion of this additional quantity of water. However, we do feel that it is desirable to withhold action on this application until after a study is made of minimum flow requirements for fishlife below Leaburg Dam as requested by the Eugene Water and Electric Board. As a result of this study, certain stipulations for minimum flow requirements will be agreed upon. It appears to us, therefore, that it would be more desirable to resolve the whole matter at the conclusion of this proposed study.

As indicated in our letter to you on March 7, 1955 we have agreed to undertake a cooperative study of this problem with the Game Commission and the Eugene Water and Electric Board this summer.

Very truly yours,

M. T. HOY
STATE FISHERIES DIRECTOR

cc: Oregon Game Commission
Eugene Water & Electric Board

March 10, 1955

Mr. M. T. Hoy
State Fisheries Director
Fish Commission of Oregon
307 State Office Building
Portland 1, Oregon

Dear Mr. Hoy:

Pursuant to your request in your letter of March 7, I am enclosing a copy of Application No. 29702 in the name of Eugene Water & Electric Board.

The city's existing right acquired under Permit No. 8449 is for the appropriation of 2,200 cubic-feet per second at the Leaburg diversion dam and contains the following limitation in the permit:

"This appropriation shall be limited to the amount of water which can be applied to beneficial use and not to exceed 2,200 cubic-feet per second, provided that at all times the quantity of water flowing in the main channel of the McKenzie River below this applicant's diversion shall not be diminished to a point that will materially injure fish life in the stream, including migratory fish or other species, provided further that the quantity shall not be diminished below 500 cubic-feet per second until such time as on proper showing the reasonable conclusion is that a smaller quantity of water is sufficient for the protection of such fish life and in that event the quantity to be fixed by the State Engineer".

Since the Game Commission has advised they have no objection to the approval of Application No. 29702 as long as it contains the same provision for a flow of 500 second-feet, we had contemplated issuing the permit.

If you have any objections to the issuance of the permit and desire to protest, we will appreciate it if you will advise us within two weeks from the date of this letter.

Very truly yours,

LEWIS A. STANLEY, State Engineer

By

Chris L. Wheeler, Assistant

CLW:eh
enc.

COMMISSIONERS:
JOHN TCH, CHAIRMAN, PORTLAND
ROBERT JES, CLIFTON
DON ARIBALDI



STATE OF OREGON
FISH COMMISSION OF OREGON
307 STATE OFFICE BLDG., 1400 S. W. 5TH AVENUE
PORTLAND 1

March 7, 1955

Mr. Lewis A. Stanley
State Engineer
Salem, Oregon

RECEIVED
MAR 9 1955
STATE ENGINEER
SALEM, OREGON

Dear Mr. Stanley:

This is in regard to the recent application of the City of Eugene for a permit to appropriate 300 c.f.s. of water from the McKenzie River. We have corresponded with the City of Eugene regarding this matter and have received a copy of their letter to the Game Commission in which they outline their proposal. In addition they have made the following request which is quoted from their letter:

"In regard to minimum flows below this diversion, we believe that it might be to our mutual advantage to modify the present agreement and make it somewhat parallel to the agreement now in effect below our Walterville diversion. This would give greater minimum flows during the early summer when the stream is being fished and when the salmon are migrating upstream, and would give us greater power flows in the fall when the trout season is closed and the salmon migration is completed. We have no specific proposals to make, but request that the two Commissions study the problem this year. We will be glad to cooperate in varying the flows, assisting in observation, or helping in any way that we can."

We have discussed this matter with the Oregon Game Commission and it is our plan to undertake a cooperative study as requested.

Will you please supply us with a copy of the City of Eugene's application for this additional 300 c.f.s. of water. Also, we would like to know the amount of water involved in their present water right at Leaburg Dam and any information contained in the permit concerning minimum flow conditions which must be maintained below the dam.

Very truly yours,

M. T. Hoy

M. T. HOY
STATE FISHERIES DIRECTOR

2200

COMMISSIONERS:
L. W. OMMLITZ, Pres.
STANLEY R. DARLING
OLUF A. JOUGLUM
CALVIN P. SMITH
EARL L. MENUTT



R. B. BOALS
GENERAL SUPT.-SEC'Y.

500 East 4th Avenue
EUGENE, OREGON
Phone 4-6211

EUGENE WATER & ELECTRIC BOARD

MUNICIPAL UTILITIES

March 4, 1955

Ref. File No. 29702

State Engineer
Salem
Oregon

Attention: Mr. Robert D. Best,
Assistant

RECEIVED
MAR 7 1955
STATE ENGINEER
SALEM, OREGON

Dear Sir:

This will acknowledge receipt of your letter dated February 18, 1955, with the enclosed copy of our application No. 29702.

The corrections and additions for items 4, 7, and 8 have been made on the application and we are returning it for your consideration.

Very truly yours,

EUGENE WATER & ELECTRIC BOARD

By:

R. B. Boals
General Supt.-Sec'y.

RBB:ln

Enc.

March 4, 1955

Mr. P. W. Schneider, Director
State Game Commission
1634 S. W. Alder Street
Portland 8, Oregon

Dear Mr. Schneider:

This will acknowledge receipt of your letter of March 2 regarding Application No. 29702 in the name of Eugene Water and Electric Board.

The application will be placed in line for approval as soon as it is completed and the permit, when issued, will be subject to the terms of the minimum flow stipulation.

Very truly yours,

LEWIS A. STANLEY
State Engineer

By
Chris L. Wheeler, Assistant

CJW:eh
cc. Eugene Water & Electric Board

KENNEDY, DENMAN, CHAIRMAN, MEDFORD
DOCK, MITCHELL, TAFT
DEAN, WILDERSLLEEVE, BAKER
J. M. AN, WINKLE, OREGON CITY
E. H. ALSIGER, KLAMATH FALLS



STATE OF OREGON
OREGON STATE GAME COMMISSION

1634 S. W. ALDER STREET
P. O. BOX 4136
PORTLAND 8

March 2, 1955

Mr. Lewis A. Stanley
The State Engineer
Salem, Oregon

RECEIVED
MAR 4 1955
STATE ENGINEER
SALEM, OREGON

Dear Mr. Stanley:

This letter is in reference to the recent application of the Eugene Water and Electric Board for an additional 300 cfs. of water for its permit No. 8449 at the Leaburg Dam on the McKenzie River. This permit now carries the stipulation that the minimum flow in the channel below the diversions will not be reduced below 500 cfs.

We have no objection to the granting of this permit for the additional 300 cfs. provided the stipulation for the minimum flow in the channel below the dam of 500 cfs. remains as a part of the permit. According to our correspondence, this is the understanding of the applicant.

Later this year we anticipate a study in cooperation with the Fish Commission and the Eugene Water and Electric Board of the situation at Leaburg with the objective of adjusting the minimum flow requirement at that point to the mutual advantage of the parties concerned. This would be similar to the program that was carried out at the Walterville Diversion about two years ago.

Very truly yours,

P. W. Schneider
P. W. Schneider
Director

cc: Eugene Water and Electric Board
Fish Commission of Oregon



STATE OF OREGON
OREGON STATE GAME COMMISSION
1634 S. W. ALDER STREET
P. O. BOX 4136
PORTLAND 8, OREGON

March 2, 1955

Eugene Water and Electric Board
500 East Fourth Avenue
Eugene, Oregon

Attention Mr. Byron K. Taylor

Gentlemen:

RECEIVED
MAR 4 1955
STATE ENGINEER
SALEM, OREGON

This is in answer to your letter of February 11 concerning the increased water permit at Leaburg and the proposed study program at that point.

We have written to the State Engineer saying that we have no objection to your application for the additional 300 cfs. as long as the present stipulations continue to apply. A copy of this letter is enclosed.

We will plan, in cooperation with you and the Fish Commission to make a water level study later this year at Leaburg similar to the one carried out about two years ago at the Walterville Diversion. We hope that such a study will result in a flow regime that will react to our mutual benefit.

Very truly yours,

P. W. Schneider

P. W. Schneider
Director

Enclosure
cc: Fish Commission
State Engineer

COPY

February 18, 1955

Eugene Water and Electric Board
500 East 4th Avenue
Eugene, Oregon

Attention Mr. R. B. Boals, General Superintendent-Secretary

Gentlemen:

This will acknowledge receipt of the transparency to accompany your application, No. 29702, and check in the amount of \$170, for which our receipt No. 3241 is enclosed. However, upon examination of the transparency with the accompanying map, a few discrepancies have been noted.

Item 4 of the application should be corrected to agree with the tie which is shown on the map.

Item 7 should be completed by giving a general description of the canal.

Item 8 must be completed by listing the 40-acre tract within which the powerhouse is located.

For your convenience in so completing your application it is enclosed herewith, endorsed so that in order to retain its date of priority it must be returned to this office on or before March 18, 1955.

Very truly yours,

LEWIS A. STANLEY
State Engineer

By

Robert D. Best, Assistant

RDB:dg

Enclosures: 2

Pres.
OLUF A. HOUGLUM
CALVIN R. SMITH
EARL L. McNUTT



R. B. BOALS
GENERAL SUPT.-SEC'Y.

500 East 4th Avenue
EUGENE, OREGON
Phone 4-6211

EUGENE WATER & ELECTRIC BOARD

MUNICIPAL UTILITIES

Ref. File No. 29702

February 8, 1955

State Engineer
Salem, Oregon

Attention: Mr. Chris L. Wheeler, Asst. Engr.

RECEIVED
FEB 10 1955
STATE ENGINEER
SALEM, OREGON

Dear Sir:

This will acknowledge receipt of your letter of January 25, 1955, concerning our application for appropriation of an additional 300 c.f.s. at our Leaburg Plant.

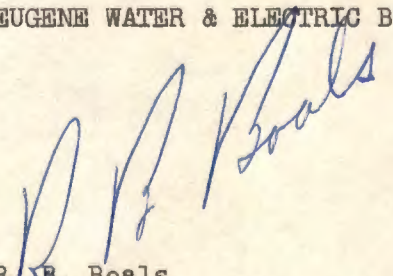
A transparency has been prepared showing point of diversion and the location of the Leaburg canal as constructed. This plan is being forwarded under separate cover.

Attention is called to the location tie for point of diversion on the transparency which differs from that information shown in Item 4 of the application form. This change involves no difference in essential location of the point of diversion, but has been used because the section corner is more readily accessible.

Our check in the amount of \$170.00 to cover the balance due on recording fees has been enclosed herewith.

Yours very truly,

EUGENE WATER & ELECTRIC BOARD


R. B. Boals
General Superintendent-Secretary

DEH/vaf

encl. check

29702

10626

January 25, 1955

Eugene Water & Electric Board
500 East 14th Avenue
Eugene, Oregon

Attention: Mr. R. B. Boals

Gentlemen:

This will acknowledge receipt of your letter of January 20 transmitting an application for a permit to appropriate 300 second feet of water from the McKenzie River for electric power production at the Leaburg Plant and check in the amount of \$55, for which our Receipt No. 3164 is enclosed.

The map in our files which accompanied Permit No. 8449 was made in 1926 and does not show the location ties or much detail. If you have a later map in your files which would show the points of diversion and location of the Leaburg canal and plans as actually constructed, it will be appreciated if you would have a transparency made and submit it to accompany your application.

The filing fees for your new application are computed as follows:

Examination fee	\$ 10.00
Recording fees	
first 100 theoretical horsepower	\$ 25.00
next 900 theoretical horsepower	90.00
next 2000 theoretical horsepower	<u>100.00</u>
Total	\$225.00

The application has been examined, given File No. 29702 and will be given further consideration upon receipt of the remaining recording fees and transparency.

This will also acknowledge receipt of your letter of January 13 transmitting report of complete application of water to beneficial use under Permit No. 8449.

January 25, 1955

Pursuant to this report and in line with the general practice of this office, a survey will be made at a later date. After this survey, proof may be made and certificate issued covering the actual use of water as found by the engineer.

In the meantime, the permit which you hold will be valid evidence of the water right in question so long as you continue to use the water.

Very truly yours,

LEWIS A. STANLEY
State Engineer

By Chris L. Wheeler, Assistant

CLW:eh
enc.

COMMISSIONERS:

W. R. ROBERTSON, Pres.
L. W. ...
HOW ...
STANLEY ...
OLU ...

R. B. BOALS
GENERAL SUPT.-SEC'Y.

500 East 4th Avenue
EUGENE, OREGON
Phone 4-6211



January 20, 1955

15 00
90 00
Mr. Lewis A. Stanley,
State Engineer,
Salem, Oregon.

RECEIVED
JAN 24 1955
STATE ENGINEER
SALEM, OREGON
10626

Dear Mr. Stanley:

Enclosed herewith is an application for the appropriation of an additional 300 c.f.s. at our Leaburg Plant.

We find that our generating units, under actual operating conditions, as now installed at Leaburg, will beneficially use 2,500 c.f.s. at maximum capability instead of 2,200 c.f.s. as originally designed.

Mr. Wheeler, of your office, has suggested that the additional flow be made on a new application instead of showing as an amended flow on our Permit No. 8449.

Our check in the sum of \$55.00 to cover examination and filing fees has been enclosed herewith.

Very truly yours,

EUGENE WATER & ELECTRIC BOARD

By:

R. B. Boals,
General Supt.-Sec'y.

DEH:nef

Enclosures.



MUNICIPAL UTILITIES
EUGENE WATER & ELECTRIC BOARD

500 EAST 4TH AVENUE - EUGENE, OREGON - PHONE DI 3-1661

BYRON PRICE, Supt.-Secy.

COMMISSIONERS:

L. W. TROMMLITZ, Pres.

OLUF A. HOUGLUM, Vice Pres.

CALVIN R. SMITH

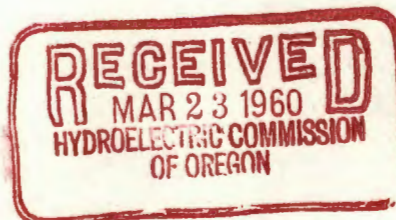
EARL L. McNUTT

J. ORVILLE LINDSTROM

*Chas
Jim*

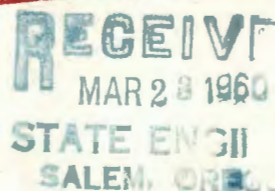
March 21, 1960

Mr. Lewis A. Stanley
State Engineer
State of Oregon
251 Finance Building
170 12th Street, S. E.
Salem, Oregon



Attention: Mr. Trevor Jones, Assistant

Subject: Permit No. 8449, in the name of
City of Eugene



Dear Sir:

Your letter of March 7, 1960, addressed to Mr. R. B. Boals, indicated that your Mr. C. A. Cummings had taken measurements on the Leaburg Canal and had obtained data indicating that our maximum beneficial use of water under permit No. 8449 and an application for an additional 300 cubic feet per second should be reduced to 2400 cubic feet per second total. We believe that we can divert a minimum of 2500 second feet of water to the Leaburg Canal and that such water can be put to beneficial use through our Leaburg Hydroelectric Plant. We, therefore, request that our application for a permit to appropriate an additional 300 second feet, thus giving a total of 2500 second feet, be allowed.

Enclosed is a sheet showing our day to day data for the month of March, 1959. You will note that on March 5 and on March 6 we have staff readings at the Doyle Hill gage of 4.47 ft. on each date. From the extrapolation of the calibration of Doyle Hill gage data against stream flow data we estimate that the flow on the 5th and 6th of March was 2505 sec. ft. for each day. We also enclose a copy of salt velocity test data for the Leaburg Power Plant Unit No. 1 taken in August, 1931. This curve is marked No. 583-1. You will note from these curves that at 9,990 h.p. with 89% gate and a gross head of ~~89~~ 89.50 ft. that the No. 1 turbine requires 1250 sec. ft. of water. You will also note that this is the maximum output of the unit at this head. Leaburg Power Plant Unit No. 2 has a runner, scrollcase, and draft tube essentially identical to that of Unit No. 1. There have been no salt velocity tests made on Unit No. 2 but we have assumed that Unit No. 2 would require the same water quantities as those shown for Unit No. 1. Therefore, we believe that for maximum total output

March 21, 1960

To - State Engineer

Re: Permit No. 8449

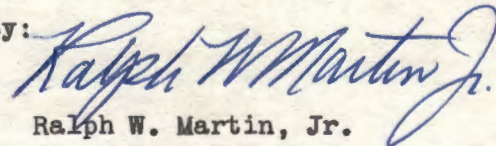
of Unit No. 1 and Unit No. 2 we would require a total of 2500 sec. ft.

If further information is required to substantiate our claim for a total of 2500 sec. ft. on these two permits, please inform us as to what is required and permit us to obtain this information for your office.

Sincerely yours,

EUGENE WATER & ELECTRIC BOARD

By:



Ralph W. Martin, Jr.
Chief Engineer

RWM,jr.:ln

Encls.

Rainfall 6.79 oct.
6.21 Ave
.58 over

March 1959

RECEIVED
MAR 23 1960
STATE ENGINEER
SALEM, OREGON

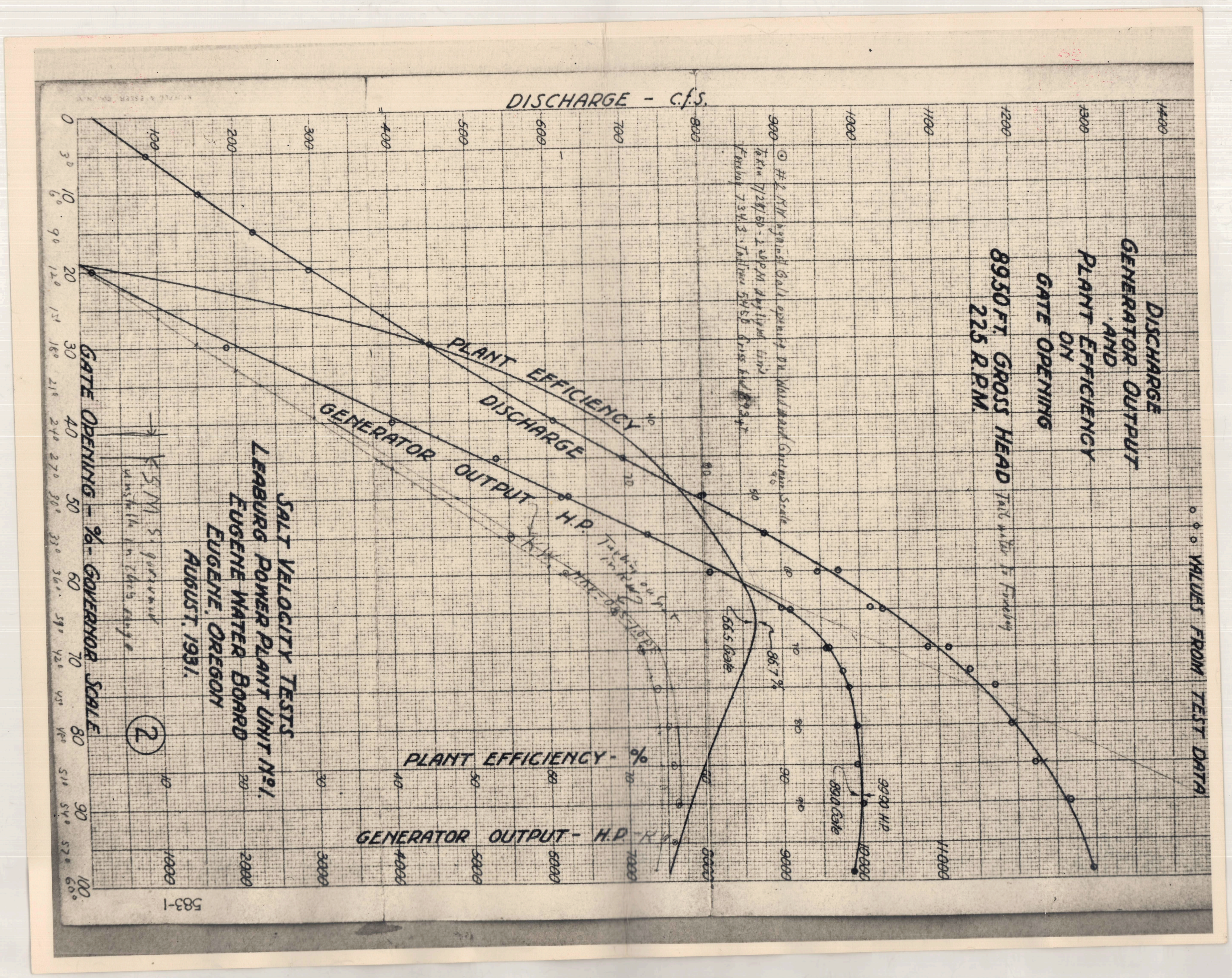
Date	Gage at P.T. Co bridge Time "E"	River below Dam	Canal Gage at Dam	After change Canal C.F.S.	change Dyke Mill Gage	Kennier Gate Totals C.F.S.	T Race 8:00 AM. Leaburg	T.R. 1958
1		2150	7	2435	4.35	4575	46.1	47.3
2		2285	41.07	2465	4.41	4750	46.2	
3		1920	41.10	2450	4.44	4400	46.0	
4		1680	41.22	2470	4.42	4150	45.85	
5		1495	41.20	2505	4.47	4000	45.75	46.3
6		1295	41.19	2505	4.47	3800	45.6	
7		1320	41.14	2480	4.44	3800	45.6	
8		1320	—	2470	4.42	3700	45.55	
9		1070	41.18	2480	4.44	3550	45.45	
10		1185	41.20	2465	4.41	3600	45.5	46.0
11		940	41.18	2460	4.40	3400	45.35	
12	9:20	1300 .92	41.16	2475	4.43	3500	45.4	45.0
13		1315	41.15	2485	4.45	3800	45.6	
14		1325	41.03	2475	4.43	3800	45.6	
15		1225	—	2425	4.35	3600	45.5	45.7
16		1195	—	2455	4.39	3600	45.5	
17		1175	41.17	2475	4.43	3650	45.55	
18		1405	41.21	2495	4.46	3900	45.7	
19		2515	41.15	2485	4.45	5000	46.35	
20		1820	41.21	2470	4.42	4300	45.95	45.2
21		1715	41.16	2485	4.45	4200	45.9	
22		2240	—	2460	4.40	4700	46.2	
23		1935	41.16	2465	4.41	4400	46.0	
24		1950	41.12	2450	4.38	4400	46.0	
25		1770	41.12	2480	4.44	4250	45.9	46.0
26		4410	41.00	2390	4.30	6800	47.1	
27		3790	40.99	2410	4.33	6200	47.05	
28		3190	40.95	2410	4.33	5600	46.7	
29		3715	40.94	2385	4.29	6100	47.0	
30		5665	40.94	2435	4.36	8100	48.2	45.8
31		5740	40.88	2360	4.26	8100	48.2	
						6-27 curve		

PROJECT: WATER & ELECTRIC RAIL, SALEM, OREGON

SHEET OF

DATE

March 1959



Permit No. 23958

Application No. 29702

County Lane

Preliminary Data for Proof of Appropriation of Water

- Name City of Eugene, Oregon by and through the Eugene Water & Electric Board Address P.O. Box 112, Eugene, Ore.
- Source of supply McKenzie River

Tributary of Willamette River

- Amount of water 300 cfs.
- Priority date January 24, 1955

- Use Electric Power Production — appropriation shall be limited to the amount of water which can be applied to beneficial use and not to exceed 300 cfs. provided that at all times the quantity of water flowing in the main channel of the McKenzie River below this applicant's diversion shall not be diminished to a point that will materially injure fish life in the stream, including migratory fish or other species, provided further that the quantity shall not be diminished below 500 cfs. until such time as on proper showing the

- Location of point of diversion NE 1/4 Sec. 31 Tp. 16 S. Rg. 2 E., W. M. (cont. below)

- The description of land given below corresponds to that shown in the permit covering land to be irrigated, or, if for other purposes, the place of use.

Township	Range	Section	Legal Subdivision	No. Acres Described in Permit	No. Acres Actually Irrigated
17 S	1 E	9	SE 1/4 SE 1/4	Electric Power Production	
continued from use above:			reasonable conclusion is that a smaller quantity of water is sufficient for the protection of such fish life and in that event the quantity to be fixed by the State Engineer.		

Land on which water is to be used is part of the property described by appropriator as follows:

REPORT OF PERSON MAKING INSPECTION

Description of works:

On June 21, 1957 I measured 2,340 cfs in the City of Eugene Power Canal. The measurement was made from the upstream side of the last road bridge before the canal crosses under the highway and a short distance above the spillway. Being within the NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 6 T. 17 S., R. 2 E. W. M. The canal was running close to capacity at the time of the measurement, ^{the stage} lacking only about one inch of flowing over the spillway crest. It was estimated that an additional 50 cfs could be added (2,390 cfs) before water would reach the spillway crest.

Chester A. Cummings

CWAC says measurement very good.

Mr Ralph Martin says only data they have is approach velocity test #1 machine for 1250 cfs. Since both machines identical he feels 2500 cfs is accurate.

Mr Stanley instructs cert. for 300 cfs. be issued.

I,, do hereby certify that I have made an inspection of the works described herein and in Permit No., on the day of, 19...., and found the foregoing statements and descriptions of works to be accurate. In my opinion the appropriation has been completed to the extent of
(Quantity of water in second-feet or acre-feet)
 and I recommend the issuance of water right certificate for this amount.

NOTICE TO INSPECTORS

If conditions do not justify the above report by you, please return this form without your signature, with a full report by letter.

(Name)

(Title)