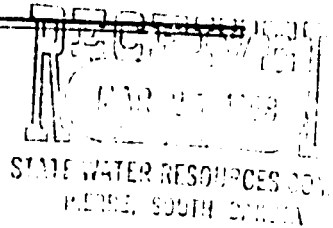


No. 1543-3Water Division No. 3 MISSOURI RIVER District
(Blanks to be Filled by the Engineer for the W. R. C.)

APPLICATION FOR PERMIT To Appropriate Water within the State of South Dakota

(NOTE—Draw a line through items not applicable.) GEORGE, JOHN & PHILIP BOWMAN

1. Name of applicant MR. & MRS. GEORGE E. BOWMAN (TRACED 8-29-69)
 Postoffice address ROUTE 3
PIERRE, County HUGHES, State S. DAK.

I. If a corporation _____

(a) Name of same _____

(b) Date and place of incorporation _____

(c) Amount of capital stock _____

(d) Amount paid in _____

(e) Names and addresses of directors _____

(NOTE—A certified copy of articles of incorporation must accompany the application.)

II. Method of accomplishing the work and financial resources of the applicant:

(a) Method of accomplishing work (Whether by contract, employment of others, or by direct labor)

CONTRACT & DIRECT LABOR(b) Cash on hand, \$ ADEQUATE

(c) Treasury stock, \$ _____

(d) Bonds to be issued, \$ _____

(e) Other resources, \$ _____

2. Name of diversion work BOWMAN IRRIGATION PROJECT3. Amount of water claimed 2.00 cubic feet per second4. Source of water supply GROUND WATER5. Location of point of diversion 330' W & 365' N OF THE SE COR,
SECTION 35, T110N, R16W on _____ bank HUGHES County.6. Annual period or periods during which water is to be used APRIL THROUGH OCTOBER

7. To be used for:

I. Irrigation or domestic use: Gravity, overhead sprinkling or combination system? COMBINATION(a) Number of acres to be irrigated 146.9 acres.(b) Legal subdivisions to be irrigated SEE ATTACHMENT

(NOTE—A list of lands to be irrigated, giving each subdivision and fraction with acreage thereof, should be written here, or may be appended as a part of this application. Same must also be shown on accompanying map.)

(c) Statement as to domestic use (giving location, etc.) _____

II. Stockwatering, mining, milling, power, fish culture, fire protection and public recreation:

(a) Nature of use _____

Name any of the above uses claimed

(b) Amount of power to be generated _____ horse power.

Amount claimed for engine cooling _____

(c) Location of plant _____

(d) Method of developing power _____

(e) Point where water will be returned to stream _____

MAP NO 1122-3

8. Estimated cost of work:

(a) Head Gates, \$..... (b) Pumping plant, \$.....
 (c) Fluming, \$..... (d) Canal-earth, \$..... Rock, \$.....
 (e) Other structures \$..... Total, ...

9. Description of diversion works:

I. Nature of works: (Reservoir, dam, ditch, flume, pumping plant, etc.)

PUMP, PIPE & SPRINKLER SYSTEM

II. Dimensions of works.

(a) Dam: Height.....feet; length at bottom feet; length at top feet; thickness at bottom feet; thickness at top feet; slope at front water face; slope at back face material used in construction

(b) Reservoir: Capacity when filled acre feet. Surface area at highwater mark.....acres.

DEPTH AT OUTLET-Feet	SURFACE AREA AT EACH DEPTH AT OUTLET—ACRES	FEET	ACRE-Feet CAPACITY

(c)* Head gate: Width.....feet; height: feet;
 Material

(d) Canal: Total length miles.

LOCATION BELOW HEADGATE	DEPTH	BOTTOM WIDTH	WIDTH AT WATER-LINE	GRADE PER MILE
At Mile	 feet	 feet	 feet	 feet
At Mile	 feet	 feet	 feet	 feet
At Mile	 feet	 feet	 feet	 feet
At Mile	 feet	 feet	 feet	 feet
At Mile	 feet	 feet	 feet	 feet
At Mile	 feet	 feet	 feet	 feet

(Give dimensions where reductions in size are made.)

10. Time required for completion of work ⁵.....years.

11. Time required for complete application of water to the proposed beneficial use ⁴..... years.

12. Choice of newspaper for publication of notice of intention to appropriate
CAPITAL JOURNAL, PIERRE, S. DAK.

STATE OF SOUTH DAKOTA
 County of HUGHES } ss.

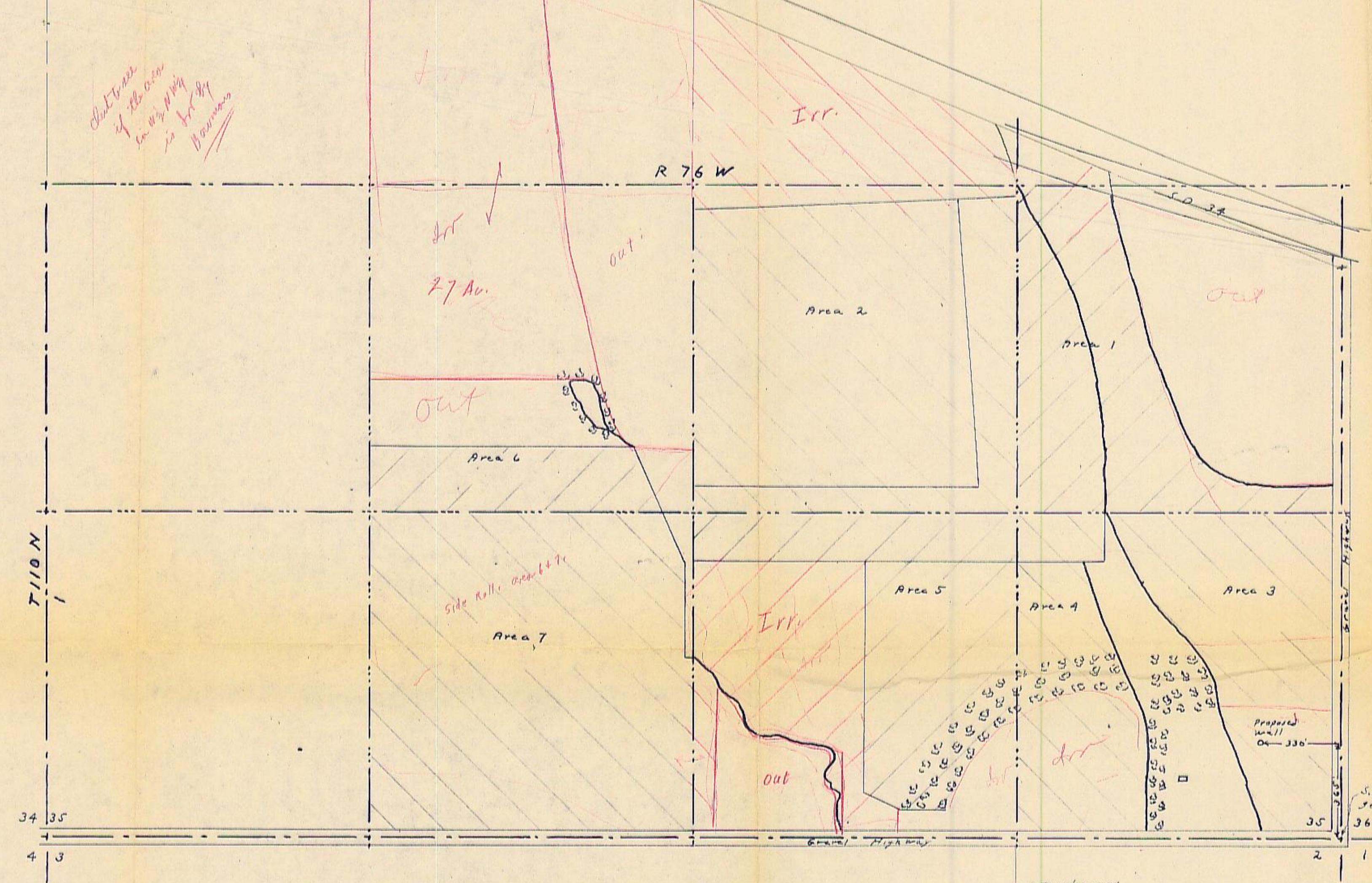
I, GEORGE BOWMAN, JR, being first duly sworn on my oath depose and say: That my relation to the above described undertaking is that of owner, that I have read the above foregoing statement, examined the map accompanying the same, and that I know of my own personal knowledge that the matters therein stated and shown are true.

Signed George F. Bowman Jr
 Subscribed and sworn to before me this 25TH day of MARCH 1968

Notary Public (or other qualified officer.)

*Each diversion must have a headgate or measuring device.

BOWMAN IRRIGATION PROJECT
SECTION 35-T110 NORTH-R 76 WEST
HUGHES COUNTY, SOUTH DAKOTA



All areas to be irrigated owned by Mrs George F. Bowman

Area	Description	Acres
1	NE ¹ SE ⁴ Sec. 35-T110N-R76W	19.7
2	NW ⁴ SE ⁴ Sec. 35-T110N-R76W	38.0
3	SE ⁴ SE ⁴ Sec. 35-T110N-R76W	19.5
4	SE ⁴ SE ⁴ Sec. 35-T110N-R76W	10.5
5	SW ⁴ SE ⁴ Sec. 35-T110N-R76W	18.6
6	NE ⁴ SW ⁴ Sec. 35-T110N-R76W	6.9
7	SE ⁴ SW ⁴ Sec. 35-T110N-R76W	38.3
Total		146.9

SURVEYOR'S CERTIFICATE

I, R. V. Summerville, Registered Land Surveyor, State of South Dakota, do hereby certify that, at the direction of Mrs. George F. Bowman, I have surveyed the tract of land as shown, and that the above drawn plat is a reasonably accurate description of the land of the proposed irrigation project. In witness whereof I have set my hand and seal this 18th day of March, 1968, A.D.

R. V. Summerville
REGISTERED LAND SURVEYOR

Appl. No. 2491-3

MAP NO. 4122-3

APPL. NO. 1543-3

Remarks by State Water Resources Commission:

THIS PERMIT REPLACES PERMIT 1068-3, AND THE
PRIORITIES ESTABLISHED UNDER 1068-3 ARE
TRANSFERRED TO THIS PERMIT.

STATE OF SOUTH DAKOTA
County of HUGHES } ss.

Pierre, South Dakota, JUNE 10, 1968

This is to certify that the foregoing application was received by the Commission at 3:00 o'clock
P.m. upon the 25TH day of MARCH, 1968.

State Water Resources Commission
By: [Signature]
Chief Engineer, Executive Officer

Number of permit 1543.3

Date of first receipt of application MARCH 25, 1968

Date of return to applicant for correction, amendments or changes required as follows: _____, 19____

Date of receipt of corrected application _____, 19____

Date from which applicant may claim right 36 1938
35 MARCH 9, 1960 1.29 MARCH 25, 1968

Approved MAY 22, 1968, Recorded in Book 10 Page 209

This is to certify that we have examined the foregoing application for a permit to appropriate water of the State of South Dakota, and we hereby grant the same as stated herein, subject, however, to the following limitations and conditions:

1st. The equivalent of at least one-fifth of the work above specified is to be completed on or before
NOVEMBER 22, 1970

2nd. The whole of said work is to be completed on or before MAY 22, 1973

3rd. The limit of time for proof of beneficial use of water appropriated in accordance herewith is

MAY 22, 1977

4th. The water appropriated shall be used for the purpose of IRRIGATION

5th. The prior right of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be injuriously affected by this appropriation.

6th. The amount of the appropriation herein granted shall not exceed 2.00
cubic feet per second; neither shall it exceed the capacity of the above described system of diversion works, nor the least amount of water that experience may hereafter indicate as necessary for the production of crops in the exercise of the best husbandry; and further, said appropriation must be limited to not more than one-seventieth (1/70) of one cubic foot of water per second of time for each acre of land to which water is actually

and beneficially applied for irrigation on or before MAY 22, 1977; said water to be used during the following described annual period:

APRIL THRU OCTOBER
Witness my hand this 10TH day of JUNE, 1968

State Water Resources Commission
By: [Signature]
Chief Engineer, Executive Officer

Certificate of Construction Issued _____, 19____

Water License Issued _____, 19____

All areas to be irrigated owned by Mrs George F. Bowman

Area	Description	Acres
1	NE ¹ SE ⁴ Sec. 35-T110N-R76W	19.7
2	NW ⁴ SE ⁴ Sec. 35-T110N-R76W	38.0
3	SE ⁴ SE ⁴ Sec. 35-T110N-R76W	14.5
4	SE ⁴ SE ⁴ Sec. 35-T110N-R76W	10.9
5	SW ⁴ SE ⁴ Sec. 35-T110N-R76W	18.6
6	NE ⁴ SW ⁴ Sec. 35-T110N-R76W	6.9
7	SE ⁴ SW ⁴ Sec. 35-T110N-R76W	38.3
Total		196.9

Form 2A — Wells (Supplement to Form 2)

9. (Continued)

III. Well Specifications

(a) Hole and casing

Size of drill hole or excavation 36", Depth 60'
Type of casing STEEL
(wood, concrete, steel, etc.)
Size of casing 24", Thickness of casing STD
Length of casing 60'. If collection gallery, length, size and depth of
gallery _____

(b) Screens

Type of perforated screen SLOTTED
Size of perforated screen 24" 12'
(diameter) (length)
Thickness of gravel pack 6", length of gravel pack 60'

(c) Water Bearing Materials

Distance to water 10' Character of water bearing materials SAND & GRAVEL

Thickness of water bearing material 40'

(d) Pump and Motor

Type of pump TURBINE
(centrifugal, propeller, mixed flow, etc.)
Name of pump _____, size _____
Kind of motor ELECTRIC
(gasoline, electric, diesel, etc.)
Horsepower _____, Name of Motor _____

(e) Complete well

Capacity 1000 at drawdown of 25. Estimated cost _____

(f) Owner of land upon which well is located MRS. GEORGE F. BOWMAN,
Name

PIERCE, S. DAK.
Address

(g) Distance to nearest existing wells

On same owner's property 350'. On property owned by others 1/2 MILE

Conservation
Commission
Form WI 21

STATE CONSERVATION COMMISSION
SUPPORTING INFORMATION
FOR APPROPRIATION OF GROUND WATER IN ACCORDANCE
WITH SECL 46-6-3 AS AMENDED
(This Form Required for Proposed Well Irrigation Only)

FOR COMPLETION BY THE
Irrigation System: _____
Water Quality: _____
Soils Capab. Uty: _____
Approved: _____
Disapproved: 267/5

NAME: BOWMAN BROS.

ADDRESS: RT. 3 PIERRE, S. DAK.

COUNTY: HUGHES

LEGAL DESCRIPTION

1. WELL LOCATION: SE-CORNER SE 1/4 SEC. 35 T110N R 76W
2. AREA TO BE IRRIGATED: SE 1/4 SEC. 35

TYPE OF IRRIGATION

3. GRAVITY SPRINKLER (Indicate Type): Tow line
4. CROPS TO BE IRRIGATED: Alfalfa & Corn.

LAND CAPABILITY FOR IRRIGATION

5. PERCENTAGE OF SLOPE: 0-2%
6. PHYSICAL SOILS CLASSIFICATION FOR IRRIGATION: Prerise Clay Capability
Unit III S3

WATER QUALITY (TO BE COMPLETED BY COMMISSION)

7. SAMPLE NO.: 75-461
8. SALINITY: EC = 2472 micromhos/cm (very high)
9. SODIUM: Sodium Adsorption Ratio = 1.55 (low)

REPORT OF ANALYSIS
 Water Quality Laboratory
 Water Resources Research Institute
 South Dakota State University
 Brookings, South Dakota 57006

Submitted by: Howman Bros.
 Address: Rt. 3
Pierre, SD 57501

Date Rec'd: June 6, 1975
 Sample No.: 75-461
 Identification: 611-58
Box 35, E 110N, R 76E

WATER ANALYSIS

Calcium (Ca)	280	ppm*	14.00	me/l**
Magnesium (Mg)	180	ppm	14.76	me/l
Sodium (Na)	135	ppm	5.87	me/l
Potassium (K)	12	ppm	0.31	me/l
Sulfate (SO ₄)	1200	ppm	24.96	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	23	ppm	0.64	me/l
Bicarbonate (HCO ₃)	373	ppm	6.12	me/l
Carbonate (CO ₃)		ppm		me/l
Iron (Fe)		ppm		me/l
Fluoride (F)		ppm		me/l
Hardness (EDTA as CaCO ₃)		ppm		g.p.g.***
Alkalinity (Methyl Orange)	306	ppm (as CaCO ₃)		
Alkalinity (Phenolphthalein)	0	ppm (as CaCO ₃)		
Electrical Conductivity	2472	micromhos per cm at 25° C.		
Sodium Adsorption Ratio	1.55			
Sodium	16.80	% of cations		
Residual sodium carbonate	0.00	me/l		
pH	7.20			
Others:				

*ppm=parts per million

***g.p.g.=grains per gallon

**me/l=milliequivalents per liter

COMMENTS: Total cations 34.94 me/l
 Total anions 31.72 me/l

By: Shirley Litten

Service Performed	Amount Due
Irrigation analysis	\$6.00
	~~-4.00 paid~~
	<u>\$2.00 DUE</u>

Make checks payable to: Water Quality Laboratory

Cut along dotted line and return the lower portion with payment

Sample No. 75-461

Amount Enclosed \$

Signed

June 30, 1975

Bowman Brothers
Route 3
Pierre, SD 57501

Dear Sirs:

Your WI 1 form in connection with the application to irrigate in section 35, T 110N, R 76W has been received. You earlier received a copy of the water analysis; this is your copy to keep. I am enclosing herewith a copy of Extension Circular 654 which gives some descriptive material about water and soil reactions and has a chart on the outside back cover showing the classification of water for irrigation purposes. The sample which you sent, having a conductivity of 2472 micromhos, is in the very high salinity, low sodium category. This means that the water has practically no hazard for the dispersion of soils and the causing of slick spot or "alkali" soils but has a very high hazard of causing salinity development, which in time will prevent the germination and growth of practically all useful plants.

If, for example, you use ten inches of water a year on the Promise soil, which has almost no deep percolation, the accumulation of salt which ten inches of water carries in a ten year period would result in a salt value for your soil solution of around 25 millimhos per centimeter. The most salt tolerant crop we have, which is barley, practically ceases growth at 16 millimhos per centimeter. Thus, you see, you would be 50% higher in total salinity than the most salt tolerant crop we could suggest. So, the probable life of your soils using this water would be something less than 10 years, if you irrigated at the rate of 10 inches per year. Of course, using less water would result in a longer life, but I bring this to your attention to point out the probability of destruction of this soil for agricultural purposes in a relatively short time.

Accordingly, I am recommending that you do not proceed with the development of this water supply and irrigation of this soil. On soils of good internal drainage with a sand or gravel layer, perhaps at three to five feet, this water could be used, depending upon infrequent irrigation and occasional fortunate leaching as a result of rainfall or late spring snows which are effective in causing movement of salts downward.

Nowman Brother
June 30, 1975
Page 2

A copy of this letter and the W1-1 form and the copy of the water analysis are being sent to the State Conservation Commission

Sincerely yours,

L.O. Fine
by MCB
L. O. Fine
Water Quality Lab

Enclosure

LOF:RT

cc: ✓ State Conservation Commission
James Livness, Hughes County Extension Agent
Darrel Paul



on or before
(First Publication) April 25, 1968

APPROPRIATION OF WATER

Office of State Water Resources Commission,

Pierre, S. Dak., April 1, 1968.

Notice is hereby given that Mr. George F. Bowman whose postoffice address is Pierre S. Dak., has made an application in accordance with the provisions of the water laws of South Dakota for a permit to appropriate for beneficial use 2.00 cubic feet of water per second of time from the ground water through the Bowman Irrigation Project, the point of diversion of which is to be located on the SE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 35 110N Range 76W. Said water to be used for the purpose of providing irrigation on the following described land:

SE $\frac{1}{4}$ and E $\frac{1}{2}$ SW $\frac{1}{4}$, Section 35, T110N, R76W

and for irrigation purposes.

This application will be taken up by the State Water Resources Commission at their office at Pierre for consideration upon the 22nd day of May, 1968, at 2:00 P.M. All interested persons may appear and be heard.

Appropriate action will be taken by the Water Resources Commission after suitable time has elapsed for the consideration of any or all information presented.

State Water Resources Commission

cc: George Bowman, Jr., Pierre, S.D. By:

Chief Engineer
~~XXXXXXXXXXXX~~
BURTON F. JONES
Water Rights Specialist

Affidav... of Publication

State of South Dakota } ss.
County of HUGHES

J. H. HIPPLE

of said County and State, being first duly sworn, on his oath says:

DAILY CAPITAL JOURNAL

DAILY

newspaper of general circulation, printed and

published in PIERRE in said County

and State by HIPPLE PRINTING COMPANY and has

been such newspaper during the times hereinafter mentioned; that the

said DAILY CAPITAL JOURNAL

is a legal newspaper and has been in existence for more than one year immediately preceding the first publication herein mentioned; and has more than two hundred bona fide subscribers; that I, the undersigned,

am BUSINESS MANAGER of said newspaper, in charge of the advertising department thereof, and have personal knowledge of all the facts stated in the affidavit; and that the advertisement

headed Notice Appropriation of Water a printed copy of which is hereto attached, was printed and published in the said newspaper once each week for 4 successive weeks; the first publication being made on 4-3 19 68, subsequent publications on

4-10, 4-17-

19 68, and last publication on 4-24-

19 68, that \$ 16.71 being the full amount of the fee for publication of the annexed notice inures solely to the benefit of the publishers of the said newspaper; that no arrangement or understanding for a division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any other person whomsoever.

John H. Hippie

Subscribed and sworn to before me

this 24 day of April

19 68

Sarah Gordon

Notarial Commission of
Sarah Gordon
Expires March 25, 1974

Notary Public HUGHES County.

Attorney's Affidavit Ex Rel Fees

State of South Dakota } ss.
County of _____

being first duly sworn,

on his oath says: I am _____

of the _____ that _____

directed the publication of the annexed notice; that the full amount as

appears by the foregoing affidavit of _____

for the publication of such notice has been paid; that no agreement or understanding for any division thereof, has been made with any person whomsoever, and that no part thereof has been refunded by the party publishing said notice.

Subscribed and sworn to before me

this _____ day of _____

19 _____

Notary Public _____ County.

No. 626, 41 daily, April 3-10-17-24.

No. 1543.3

APPROPRIATION OF WATER

Office of State Water Resources

Commissioner, Water Resources

Pierre, S. Dak., April 1, 1968

Notice is hereby given that

Mrs. George F. Bowman whose

postoffice address is Pierre, S.

Dak., has made an application

in accordance with the provisions

of the water laws of South Dakota

for a permit to appropriate for

beneficial use 2.00 cubic feet of

water per second of time from

ground water through the Bowman

Irrigation Project, the point

of diversion of which is to be

located in the SE 1/4 of the SE 1/4

of Section 35 Twp. 110N Range

76W. Said water to be used for

the purpose of providing irrigation

on portions of the following

described land: SE 1/4 and E 1/2 SW 1/4, Section

35, T110N, R76W.

This application will be taken

up by the State Water Resources

Commission at their office at

Pierre for consideration upon

the 22nd day of May, 1968, at

2:00 P.M. All interested persons

may appear and be heard.

Appropriate action will be taken

by the Water Resources Commission

after suitable time has

elapsed for the consideration of

any or all information presented.

State Water Resources

Commission

By: BURTON F. JONES

Water Rights Specialist

Publication Fees - \$ _____

Notary Fees - \$ _____

Total . . . \$ _____

Received payment, _____

LEGAL RATES

South Dakota Session Laws of
1957, Chapter 500 page 601-602.

RECEIVED
JUN 3 1968

STATE WATER RESOURCES COMM.
PIERRE, SOUTH DAKOTA

LEGAL PUBLICATIONS

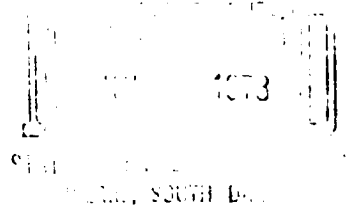
An Act Defining a Legal Newspaper for the Publication of Legal and other Official Notices in the State of South Dakota.

§ 65008. Supplement to South Dakota Code of 1929. (Legal Newspaper Defined.) No daily or weekly newspaper shall be considered a legal newspaper for the publication of legal and other official notices unless the same, if a daily newspaper, be published five days or more each week and shall have a bona-fide circulation of two hundred copies, daily, or, if a weekly newspaper, shall have a bona-fide circulation of two hundred copies weekly, and shall have been published in the English language in the county and shall have been admitted to publication under the laws of the United States prior to the publication of such notice, and no publication of such notice, in part, by any office maintained at the place of publication; provided, that the consolidation or union of any two or more newspapers, or any of which were defined as such consolidation legal newspapers in no manner affect the legality of the newspaper formed by such consolidation, and the same shall be deemed to have complied with the requirements prescribed for a legal newspaper and to be a legal newspaper as above defined: Provided further that nothing in this section shall be so construed as to affect the validity of any publication published in a foreign language prior to the taking effect of this section.

§ 65007. Affidavit Must State Fact of Legality. Affidavits and other official notices shall be published in a legal newspaper as defined in the preceding section, and the affidavit of publication shall state that such newspaper is a legal newspaper, which affidavit shall be prima facie evidence of that fact; and every affidavit of publication shall state in plain terms the fees charged thereon.

Form 18.

1543-3



APPLICATION FOR EXTENSION OF TIME

TO: Water Resources Commission
State Office Building No. 2
Pierre, South Dakota 57501

Date 7-27-73

Dear Sirs:

In Water Right Permit No. 1543-3 it is specified that the water diversion system is to be completed by
May 23, 1973 and that the water is to be put to the limit of beneficial use by
May 22, 1977.

I hereby request that the date for completing the diversion system be extended to May 22,
1976 and that the date for putting the water to the limit of beneficial use be extended to
May 22, 1979.

The extension of time for the completion of these works is requested for the following reasons:
The land authorized for irrigation was involved in estate probate
proceedings in the court beyond our power to control and construction
of the irrigation system could not be started.

Enclosed herewith is a fee of \$1.00 to pay the cost of filing this request for extension of time.

Robert W. Brown
(Signed)
Holder of Permit No. 1543-3

APPROVED: SEPTEMBER 12, 1973

WATER RESOURCES COMMISSION

By: [Signature]

June 4, 1979

No. 1543-3
2491-3

Mr. George Bowman
Route 3
Pierre, SD 57501

Dear Mr. Bowman:

On May 17, 1979 in the process of making the final inspection of your Water Right Permits No. 1543-3 and 2491-3, I found that you were irrigating 53.1 acres of land not on these permits. In order to comply with the South Dakota Water Laws it will be necessary for you to submit an application for the additional acreage.

Enclosed is a completed Form 2 "Application for Permit" for the additional acreage. You should check over the form, make any corrections necessary, then sign, have it notarized and returned to this office with a check for \$150.00 to cover the cost of the filing fees.

Enclosed is a map of the area which you should also check over and return with the Form 2.

It will not be necessary to submit a water sample but it will be necessary to submit a W1-1 Form along with a soils map covering the additional acreage to the Water Quality Laboratory, Water Resources Institute, South Dakota State University, Brookings, South Dakota 57007. Indicate that it is Missouri River water source. Your County Extension Agent has the proper forms. The soils information can be obtained from the local Conservation District.

If you have any questions regarding the matter, please feel free to contact this office.

It may be to your advantage to bring the forms to Room 408 in the Foss Building; and either Burton Jones, Betty Westlund, or myself will check it over to see that everything is in order.

Sincerely,

LEROY MERNAUGH
Water Resources Engineer

LM/bt
Enc.