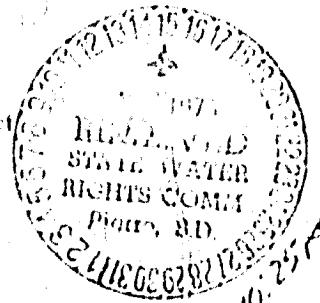


Water Right Number 7290-3

1. Considered 1-26, 1977
2. Name of Applicant NORMA D. GUAM
3. Post Office Address ELK POINT
4. Amount of water claimed 2.2
5. Source of water supply 200' WELL
6. Water to be used for IRRIGATION
Acres to be irrigated 100
7. Water to be diverted and used in UNION County
about 12N, 2W Miles of ELK POINT
8. Proof of Publication
Received 1-17-77
Not received
9. Application
Approved
Subject to
Not approved
Action deferred

10. Remarks:

No. 3790-3Map No. 2577-3 Water Division No. 3 BIG SIOUX 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

1. Name of Applicant Norma D. Quam
 Postoffice address Elk Point S.Dak. State S.Dak.
 If a corporation show date and place of incorporation None
2. Method of accomplishing work (contract, employment of others, or by direct labor) Employment of others
3. Name of diversion work Quam project #2
4. Amount of water claimed (cubic feet per second) 2.5 2.38 MAXIMUM ALLOWABLE
5. Source of water supply deep well
6. Location of point of diversion Center of farm located on Sec 4
Section 15 T 23 N R 50 Brule County, S.D.
 County Union
7. Annual period or periods during which water is to be used Spring, summer or fall
8. Use to be made of water, (irrigation, industrial, municipal, commercial, recreation, etc.) irrigation
9. For irrigation use, Total number of acres to be irrigated 150

List below each forty-acre subdivision, or lot, or fraction thereof and show number of acres to be irrigated in each.

Land Description	No. Acres Irr.	Land Description	No. Acres Irr.
<u>S.E. 1/4 section 15 T 23 N R 50</u>	<u>150</u>		

Attach sheet if more space is needed

10. Time required to complete construction of water supply system 2 years. Additional time required to complete application of water to the proposed beneficial use 4 years.
11. Choice of newspaper for Notice of Intent to Appropriate Water publication Elk Point Leader Courier
12. Principal Features of the Proposed Water Supply System.

A. Works proposed to divert water from its natural source.

well

B. Works proposed to transport water to place of use.

Center pivot

C. Works proposed to apply water to beneficial use.

SprinklerEstimated Total Cost \$ 60,000Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map.
(See instructions concerning preparation.)

STATE OF SOUTH DAKOTA

County of UnionI, Norma D. Quam, the applicant, certify that I have read the foregoing application and have examined the attached map and that the matters therein stated are true and that I intend, and am able to complete the necessary construction.Signed Norma D. QuamSubscribed and sworn to before me this 3rd day of November 19 76Keith E. Wings
Notary Public (or other qualified officer)My Commission Expires May 15 1981

WATER RIGHT APPLICATION APPROVAL

The Water Rights Commission hereby approves Water Right Application No. 3290-3

NORMA D QUAM
(Applicant)

ELK BINT
(Post Office Address)

SOUTH DAKOTA 57025 With the following modifications:
(State)

The irrigation well approved under this Permit will be located near domestic wells and other irrigation wells which may obtain water from the same aquifer. The irrigation well owner, under this Permit, shall control his irrigation withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in irrigation wells having prior water rights.

*Cancelled
incorporated into
w/l 3291-3*

Date of first receipt of application NOVEMBER 15, 1976

Date of return to applicant for correction, amendments or changes required NOVEMBER 15, 1976

Date of receipt of corrected application DECEMBER 10, 1976

Approved JANUARY 27, 1977, Recorded in Book 17 Page 84

WATER RIGHT PERMIT NO. 3290-3

The Water Rights Commission hereby grants and issues this Water Right Permit No. 3290-3 authorizing the construction of the water use system and the putting of water to beneficial use as stated in the Application and as modified in the Water Right Application approval, subject, however, to the following limitations and conditions:

1. The date from which applicant may claim right is NOVEMBER 15, 1976
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before JANUARY 27, 1978
3. The whole of said work is to be completed on or before JANUARY 27, 1979
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is JANUARY 27, 1983
5. The water appropriated shall be used for the purpose of IRRIGATION

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

7. The amount of the appropriation herein granted shall not exceed 2.2 cubic feet per second; neither shall it exceed the capacity of the above described water supply system; nor shall it exceed the amount of water needed for beneficial uses served, and if for the irrigation purposes said appropriation must be limited to not more than 3 acre feet per acre per year and 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 JANUARY 27, 1983; said water to be used during the following described annual period: SPRING, SUMMER, FALL

Witness my hand this 7TH day of APRIL, 1977

WATER RIGHTS COMMISSION

By:

John H. Hilt
Chief Engineer, Executive Officer

Certificate of Construction Issued _____, 19____

Water License Issued _____, 19____

Form 2A - Wells, Dugouts or Water Storage Dams (Supplement to form 2)

12. Principal Features of the Proposed Water Supply System (continued.)

D. Well Information or Estimates

- (1) Drill Hole, Diameter 30, Depth 200'
- (2) Casing, Type Concrete (wood, concrete, steel, etc) Diameter _____ Thickness _____
- (3) Perforated Screen.
- Type Steel, Diameter 16, Length 20'
- (4) Gravel Pack, Thickness 14, Length of gravel pack 14'

E. Dugout Information or Estimates

- (1) Surface dimensions _____, Depth _____

F. Fill out for Either a Well or a Dugout.

- (1) Water Bearing Materials (Please attach a copy to test well log if available.)

Character of Water bearing materials Copy will be sent later

Depth to top of water bearing material _____

Depth to bottom of water bearing material _____

Thickness of water bearing material _____

Depth to water (ground surface to water level) _____

- (2) Distance to nearest existing household or livestock watering wells.

On same owner's property 10 rds. On property owned by others 120 rds.

G. Water Storage Dams.

If the proposed water use system contains one or more water storage dams, please show in the space below, the height, maximum water depth, surface area and storage capacity of each storage dam. The location of each water storage dam should be shown on the water right map.

Thomas D. Brown
Signature of Applicant

October 19, 1976

Norma D. Quam
Elk Point, SD 57025

Dear Ms. Quam:

Your water sample (Lab. No. 76-1550) has been analyzed and the results are reported on the accompanying sheet, which is your copy to keep.

I am also enclosing a copy of AES pamphlet #13 for your use. The quality of your water for irrigation use is plotted approximately by means of the red cross in the chart on the outside back cover.

This water is marginal for use on the soils you intend to irrigate and should be considered for use only under the following conditions:

(1) It will be used no more than 3 times (preferably less) in any growing season.

(2) The soil will be completely filled with water so natural leaching can occur, by irrigating in the late fall just before freeze-up, at least one year out of 3.

(3) Water applications will be made each irrigation to completely re-wet the entire depleted soil within the rooting zone of the crop being grown. This may require 3-5 inches of water each irrigation with fine soils.

(4) If a salt problem or soil dispersion occurs, contact extension personnel or this office for management recommendations.

Sincerely yours,

L. O. Fine
L. O. Fine
Water Quality Lab

LOP:ckb
Enclosures
cc: State Conservation Commission



CONSERVATION
COMMISSION
FORM WI #1

STATE CONSERVATION COMMISSION
SUPPORTING INFORMATION
FOR APPROPRIATION OF GROUND WATER IN ACCORDANCE
WITH SDCL 46-6-3 AS AMENDED
(THIS FORM REQUIRED FOR PROPOSED GROUND WATER IRRIGATION ONLY)

#2
NAME Norman D. Quam
ADDRESS Old Farm Rd. Oak
COUNTY Liberty

LEGAL DESCRIPTION

1. WELL LOCATION 1/4 Sec 1, T24N, R50W, S17E
2. LOCATION OF AREA TO BE IRRIGATED Sec 4, T24N, R50W, S17E

TYPE OF IRRIGATION

3. GRAVITY _____ TOWLINE _____ CENTER PIVOT ☒ GUN _____
4. CROPS TO BE IRRIGATED Corn & Soybeans

WATER QUALITY

5. SAMPLE NUMBER 76-1530
6. SALINITY (EC X 10⁶) 2095 (high)
7. SODIUM (SAR) 1.44 (low)
8. RESIDUAL SODIUM CARBOATE (meq/l.) 0

I do hereby certify that a chemical analysis of the ground water representative of that used to irrigate shall be acquired from South Dakota State University and: the soils information has been acquired from _____ Conservation District, County Extension office or Soil Conservation Service.

and: that the legal description for the location of the well and land to be irrigated is true and correct.

SUBSCRIBED AND SWORN BEFORE ME THIS
10 DAY OF Sept 19 76

R. E. Van Boeckem
(TITLE OR SEAL)

Norman D. Quam
Paul T. Quam
APPLICANT'S SIGNATURE

Approved and sworn to that this project can be carried out successfully in all circumstances. Individual management will, to a large degree, determine the relative success of this venture.

Alfred J. Smith
APPROVED/CI APPROVED

(SOILS INFORMATION ON REVERSE SIDE)

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

Submitted by: Norma Quam
 Address: Elk Point, SD 57025

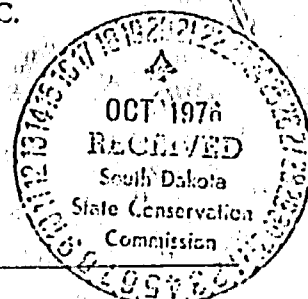
Date Rec'd: October 7, 1976
 Sample No. 76-1550
 Identification Well
Wet, Sec. 15, T 92N, R 50W

WATER ANALYSIS

Calcium (Ca)	288 ppm*	14.40 me/l**
Magnesium (Mg)	75 ppm	6.15 me/l**
Sodium (Na)	106 ppm	4.61 me/l**
Potassium (K)	15 ppm	0.39 me/l**
Sulfate (SO ₄)	860 ppm	17.69 me/l**
Nitrate (as N)	ppm	me/l
Chloride (Cl)	79 ppm	2.21 me/l**
Bicarbonate (HCO ₃)	244 ppm	4.00 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)	200 ppm (as CaCO ₃)	
Alkalinity (Phenolphthalein)	0 ppm (as CaCO ₃)	
Electrical Conductivity	2095 micromhos per cm at 25° C.	
Sodium Adsorption Ratio	1.44	
Sodium	18.04 % of cations	
Residual sodium carbonate	0.00 me/l	
pH	7.11	
Others:		

*ppm=parts per million
 **me/l=millequivalents per liter

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



COMMENTS: Total cations 25.55 me/l
 Total anions 24.10 me/l

By: Shirley Hittan

Service Performed

Amount Due

Irrigation analysis

\$8.00

Make checks payable to: Water Quality Laboratory

Cut along dotted line and return the lower portion with payment

Sample No. 76-1550

Amount Enclosed \$

Signed

Form 6 - Notice of Intent to Appropriate Water:

No. 3200-3

Publish first publication, on or before January 13, 1977

**NOTICE
INTENT TO APPROPRIATE WATER**

Pierre, South Dakota 57501

December 16, 1976

Notice is hereby given that Norma D. Quam
whose post office address is Elk Point, South Dakota, has made an application in accordance
with the provisions of the water laws of South Dakota for a permit to appropriate for beneficial use
2.2 cubic feet of water per second of time from the ground water through the
Quam # 2 the point of diversion of which is to be located in the _____

_____ center of the SE 1/4 _____
of Section: 15, Twp. 93N, Range 50W. Said water to be used for the purpose
of providing irrigation on the following described land:

SE 1/4, Section 15, T93N, R50W

This application No. 3200-3 will be considered by the Water Rights Commission at their office at
Pierre upon the 26th day of January, 1977, at 10:00 A.M. All interested
persons may appear and be heard.

WATER RIGHTS COMMISSION

By:

**FURTON F. JONES
Water Rights Specialist**

BFJ/bw

cc: Norma D. Quam, Elk Point, SD 57025

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County Union) ss.

I, Lester E. Emerson hereby
certify that the annexed printed copy of Notice of Intent to Appropriate
Water was taken from the Leader- Courier

A newspaper which during the whole time of publication of said notice
herein after stated, has been and is printed and published in the

City of Lockport
County of Union and State of South Dakota,
that the said notice was published in said newspaper on the following
two dates:

January 6, 1977

January 13, 1977

Lester E. Emerson
(Signature)

Emerson
(Title)

January 13, 1977
(Date Signed)

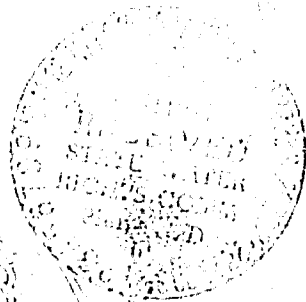
NOTICE OF INTENT TO
APPROPRIATE WATER
Pierre, South Dakota 57501
December 10, 1970

Notice is hereby given that
Norma D. Quam whose post off-
ice address is Elk Point, South
Dakota, has made an application
in accordance with the provisions
of the water laws of South Dakota
for a permit to appropriate for
beneficial use 2.2 cubic feet of
water per second of time from
ground water through the Quam
#2, the point of diversion of
which is to be located in the cen-
ter of the SE 1/4 of Section 16, Twp.
42 N, Range 50 W. Said water to
be used for the purpose of provid-
ing irrigation on portions of the
following described land:

SE 1/4, Section 16, T42N, R50W

This application No. 3290-3
will be considered by the Water
Rights Commission at their of-
fice at Pierre upon the 26th day
of January, 1977, at 10:00 A.M.
All interested persons may appear
and be heard.

WATER RIGHTS COMMISSION
By: Burton F. Jones
Water Rights Specialist
Published: January 6, 13.



144.7 (4M317)

143.7

296

(4-214)

34.1

well

40.7

2.5

2.0

39.8

92.50

Louie E DeBret
Union Co Agent

MAP NO 2572-3 / APP NO 3290-37