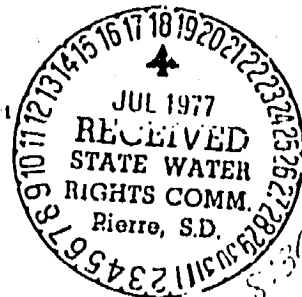


Water Right Number 4091-3

1. Considered 10-6, 19 77
2. Name of Applicant JOHN H. GUNDERSON
3. Post Office Address IRENE
4. Amount of Water claimed 3.5
5. Source of Water supply 277' DEEP WELL
6. Water to be used for IRRIGATION
- Acres to be irrigated 471
7. Water to be diverted and used in YANETON County
about 9W, 2S miles of IRENE
8. Proof of Publication
Received 9-14-77
Not Received
9. Application
Approved 1-31-79
Subject to will Interf.
Not Approved
Action Deferred
10. Remarks:

No. 4091-3Map No. 3326-3 Water Division No. 3 JAMES 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)

1. Name of Applicant John H. Thunderson
Postoffice address Box 140 Irene, S.D. State S.D. 57037

If a corporation show date and place of incorporation _____

2. Method of accomplishing work (contract, employment of others, or by direct labor) Contract3. Name of diversion work Thunderson and Thunderson4. Amount of water claimed (cubic feet per second) 3.55. Source of water supply Well6. Location of point of diversion NW 1/4 of SE 1/4 9 95-55County Yankton7. Annual period or periods during which water is to be used March 1 - Nov. 18. Use to be made of water (irrigation, industrial, municipal, commercial, recreation, etc.) Irrigation9. For irrigation use, _____ Total number of acres to be irrigated 171

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 1/2 NE 1/4; N 1/2 SE 1/4; NE 1/4 SW 1/4; SE 1/4</u>	<u>245</u>	<u>SW 1/4 10 95-55</u>	<u>159</u>
<u>NW 1/4; SE 1/4 SE 1/4 9-95-55</u>	<u>245</u>		
<u>N 1/2 NE 1/4; W 1/2 SW 1/4; NE 1/4</u>	<u>17</u>		
<u>16-95-55</u>			

Attach sheet if more space is needed

10. Time required to complete construction of water supply system 5 years. Additional time required to complete application of water to the proposed beneficial use _____ years.11. Choice of newspaper for Notice of Intent to Appropriate Water publication Press & Dispatch - Yankton

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.

Pipe

C. Works proposed to apply water to beneficial use.

Pivot - Side Roll and Big GunEstimated Total Cost \$ 160,000Attachments: 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 YANKTON) ss.
J H GUNDERSONI, J H GUNDERSON 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 constructionSigned J H GUNDERSONSubscribed and sworn to before me this 14th day of July 1977

Notary Public (or other qualified officer)

WATER RIGHT APPLICATION APPROVAL

The Water Rights Commission hereby approves Water Right Application No. 4091-3JOHN H. GUNDERSON

(Applicant)

IRENE

(Post Office Address)

SOUTH DAKOTA 57087

(State)

With the following modifications:

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.

When the well is drilled, the upper aquifer must be sealed off.

Date of first receipt of application JULY 18, 1977

Date of return to applicant for correction, amendments or changes required _____, 19__

Date of receipt of corrected application _____, 19__

Approved JANUARY 31, 1979, Recorded in Book 20 Page 150WATER RIGHT PERMIT NO. 4091-3

The Water Rights Commission hereby grants and issues this Water Right Permit No. 4091-3 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 JULY 18, 1977
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before JULY 31, 1981
3. The whole of said work is to be completed on or before JANUARY 31, 1984
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is JANUARY 31, 1984
5. The water appropriated shall be used for the purpose of IRRIGATION

6. 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.

7. The amount of the appropriation herein granted shall not exceed 3.5 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 31, 1984; said water to be used during the following described annual period: MARCH 1ST - NOVEMBER 1ST

Witness my hand this 20th day of FEBRUARY, 1979

WATER RIGHTS COMMISSION

By:

John Walsh
Chief Engineer, Executive Officer

Certificate of Construction Issued _____, 19__

Water License Issued _____, 19__

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

D. Well Information or Estimates

- (1) Drill Hole, Diameter 14", Depth 277'
 (2) Casing, Type Steel (wood, concrete, steel, etc) Diameter 14" Thickness 219 WALL
 (3) Perforated Screen.
 Type Stainless Steel, Diameter 14", Length 80'
 (4) Gravel Pack. Thickness 6", Length of gravel pack 80'

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 Coarse Sand & Gravel

Depth to top of water bearing material 197'

Depth to bottom of water bearing material 300'

Thickness of water bearing material 103'

Depth to water (ground surface to water level) 10'

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

On same owner's property 10 rds. On property owned by others 640 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.

[Signature]
 Signature of Applicant

No. 4091-3

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County County) ss.

I, Harry L. Speece hereby
certify that the annexed printed copy of Notice of Intent to Appropriate
Water was taken from the Daily Express & Dakotan

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 Yankton of Yankton

County of Yankton and State of South Dakota;
that the said notice was published in said newspaper on the following
two dates:

September 6, 1977

September 13, 1977

Harry L. Speece
(Signature)

Business Manager
(Title)

September 13, 1977
(Date Signed)

9-6813
NOTICE OF HEARING
ON APPLICATION TO
APPROPRIATE WATER

August 29, 1977
Notice is hereby given that John H. Gunderson, whose post office address is Irene, South Dakota, has made an application in accordance with the provisions of SDCL 46-1-1 thru 46-1-9; 46-2-1 thru 46-2-11; 46-2-13; 46-5-1 thru 46-5-8; 46-5-10 thru 46-5-22; 46-5-41; 46-6-1, 46-6-3, 46-6-5, 46-6-6, 46-6-10, 46-6-14 and Commission Rules ARSD 52:01:01:01 thru 52:01:02:13, for a permit to appropriate for beneficial use 15 cubic feet of water per second of time from ground water through the Gunderson #1, the point of diversion of which is to be located in the NW 1/4 SE 1/4 of Section 9, Twp. 96N, Range 45W. Said water to be used for the purpose of providing irrigation on portions of the following described land: SW 1/4, SE 1/4, NE 1/4 SW 1/4, Section 9; W 1/2 NE 1/4, NE 1/4 NE 1/4 Section 10; SW 1/4, Section 10; T86N, R45W.

This Application No. 4091-3 will be considered by the Water Rights Commission at the Holiday Inn, Spearfish, S.D. upon the 6th day of October, 1977 at 10 A.M. The Commission is authorized to make a determination on this application at the hearing. All interested persons may appear and be heard. Any person who may be affected by a Commission decision who desires to present evidence or cross-examine witnesses according to SDCL 1-26 may notify the Commission in writing prior to the hearing or orally at the hearing.

WATER RIGHTS COMMISSION
JAMES WINTERTON
Water Rights Specialist



ATION
35.0N
RM 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)



NAME JOHN H GUNDERSON
ADDRESS Box 140 IRON, S.D. 57037
COUNTY YANKTON

LEGAL DESCRIPTION

1. WELL LOCATION NW 1/4 of SE 1/4 9 95-55
2. LOCATION OF AREA TO BE IRRIGATED S 1/2 NE 1/4; N 1/2 SE 1/4; NE 1/4 SW 1/4; SE 1/4 NW 1/4;
SE 1/4 SE 1/4 - 9-95-55 = 245 acres
N 1/2 NE 1/4; W 1/2 SW 1/4 NE 1/4 - 16-95-55 = 67 acres
SW 1/4 95-55 = 159 acres

TYPE OF IRRIGATION

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

WATER QUALITY

5. SAMPLE NUMBER 77-1051
6. SALINITY (EC x 10⁶) 1991 (high)
7. SODIUM (SAR) 2.34 (low)
8. RESIDUAL SODIUM CARBONATE (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 Yankton County Soil 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.

John H. Gunderson
APPLICANT'S SIGNATURE

SUBSCRIBED AND SWORN BEFORE ME THIS
22 DAY OF July 19 77.

Albert L. Hoff
(TITLE OR SEAL)

WITNESSES
Conditional

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

Submitted by: **John H. Gunderson**
 Address: **Irene, SD 57037**

Date Rec'd: **July 1, 1977**
 Sample No.: **77-1051**
 Identification: **Well -**
SE 1/4, Sec. 9, T 95N, R 55W

WATER ANALYSIS

Calcium (Ca)	270	ppm*	13.50	me/l**
Magnesium (Mg)	40	ppm	3.28	me/l
Sodium (Na)	156	ppm	6.79	me/l
Potassium (K)	21	ppm	0.55	me/l
Sulfate (SO ₄)	1044	ppm	21.71	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	36	ppm	1.01	me/l
Bicarbonate (HCO ₃)	102	ppm	1.68	me/l
Carbonate (CO ₃)		ppm		me/l
Iron (Fe)		ppm		me/l
Fluoride (F)		ppm		g.p.g.***
Hardness (EDTA as CaCO ₃)	84	ppm (as CaCO ₃)		
Alkalinity (Methyl Orange)	0	ppm (as CaCO ₃)		
Alkalinity (Phenolphthalein)	1991	micromhos per cm at 25° C.		
Electrical Conductivity	2.34			
Sodium Adsorption Ratio	28.15	% of cations		
Sodium	0.00	me/l		
Residual sodium carbonate	7.21			
pH				
Others:				

*ppm=parts per million
 **me/l=millequivalents per liter
 ***g.p.g.=grains per gallon

COMMENTS: Total cations 24.12 me/l
 Total anions 24.40 me/l

By: **Shirley Luttan**

Service Performed	Amount Due
Irrigation analysis	\$15.00 PAID

Make checks payable to: Water Quality Laboratory

Cut along dotted line and return the lower portion with payment:

Sample No. **77-1051**

Amount Enclosed \$

Signed

Publish first publication, on or before September 15, 1977

NOTICE OF HEARING ON
APPLICATION TO APPROPRIATE WATER

Pierre, South Dakota 57501

August 29, 1977

Notice is hereby given that John H. Gunderson whose post office

address is Irene, South Dakota, has made an application in accordance with the provisions of SDCL 46-1-1 thru 46-1-8; 46-2-9 thru 46-2-11, 46-2-13; 46-5-1 thru 46-5-8, 46-5-10 thru 46-5-22, 46-5-41, 46-6-3, 46-6-5, 46-6-6.1, 46-6-10, 46-6-14 and Commission Rules ARSD 52:01:01:01 thru 52:01:01:13, for a permit to appropriate for beneficial use 3.5 cubic feet of water per second of time from ground water

through the Gunderson & Gunderson #1, the point of diversion of which is to be located in the NW $\frac{1}{4}$ SE $\frac{1}{4}$

of Section 9, Twp. 95N Range 55W. Said water to be used for the purpose of providing irrigation on portions of the following described land:

S $\frac{1}{2}$ N $\frac{1}{2}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, Section 9

W $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 10;

SW $\frac{1}{4}$, Section 10; T95N, R55W

This Application No. 4091-3 will be considered by the Water Rights Commission at the Holiday Inn, Spearfish, SD upon the 6th day of October, 1977 at 10 A.M. The Commission is authorized to make a determination on this application at the hearing. All interested persons may appear and be heard. Any person who may be affected by a Commission decision who desires to present evidence or cross-examine witnesses according to SDCL 1-26 may notify the Commission in writing prior to the hearing or orally at the hearing.

WATER RIGHTS COMMISSION

JAMES WINTERTON
Water Rights Specialist

cc: John H. Gunderson, Irene, SD 57037



4091-3

No. _____

Department of Natural Resource Development

WATER RIGHTS COMMISSION

Joe Foss Building, Pierre, South Dakota 57501

Phone 605/224-3151

October 17, 1977

John H. Gunderson
Irene
South Dakota 57037

Dear Mr. Gunderson:

The Water Rights Commission deferred action on your Application
October 6-7, 1977

No. 4091-3 at the _____

Commission meeting, pending investigation by the Commission Staff.

If you have any questions, feel free to contact this Office.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Commission

JH/bw



Department of Natural Resource Development

WATER RIGHTS COMMISSION
Joe Foss Building, Pierre, South Dakota 57501
Phone 605/773-3151

January 16, 1979

TO: Persons Interested in Yankton County Deferred Applications,
No. 3069-3, James Kribell; No. 3995-3, Jamesville Colony;
No. 4091-3, John Gunderson

FROM: John Hatch, Chief Engineer, Water Rights Commission

SUBJECT: Reconsideration of Deferred Applications in Yankton County

The Water Rights Commission will reconsider deferred water right applications in Yankton County at 3:00 p.m., January 31, 1979 at the South Dakota Education Association Building, 411 E. Capitol, Pierre, South Dakota.

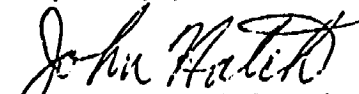
This reconsideration hearing will be conducted in accordance with the provisions of SDCL 46-1-1 thru 46-1-9; 46-1-14, 46-2-9 thru 46-2-11, 46-2-13; 46-5-1 thru 46-5-8, 46-5-10 thru 46-5-22, 46-5-31; 46-6-3, 46-6-3.1, 46-6-5, 46-6-6.1 46-6-10, 46-6-14 and Commission Rules ARSD 52:01:01:01 thru 52:01:01:13.

These applications were deferred by the Water Rights Commission during 1977 and 1978, pending staff investigation.

After reconsideration of the deferred applications, the Commission can approve, defer or deny all or part of any of these applications.

This hearing is an adversary proceeding. Any person has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing. Decisions of the Commission may be appealed to the courts as provided by law.

Very truly yours,


JOHN HATCH, Chief Engineer
Water Rights Commission

JH/gy

WATER RIGHTS CONSIDERATIONS
AND
THE YANKTON COUNTY HYDROGEOLOGY

Preliminary Notes

by

Stephen L. Burch, Hydrologist
South Dakota Geological Survey

INTRODUCTION

A review of the Bon Homme and Clay county studies plus the Lesterville and Viborg city studies yielded valuable insights into the geology of Yankton County. Information from these previous investigations was used to supplement recent data (1977-1978 drilling) from the Yankton County Study (in progress). The initial results of this review are:

- a bedrock geologic map for Yankton County,
- a recognition that two important aquifers occur in the bedrock valleys,
- an observation that water level variations in the upper buried aquifer appear to coincide with streamflow variations in the James River (observation well YA-78-B),
- a recognition that large quantities of ground water are available to irrigators in the county.

INDIVIDUAL WATER RIGHTS APPLICATIONS

James Kribell (3069-3)

The Kribell application proposes to develop three parcels of land with an irrigation well on each. His application for a permit to appropriate water is sketchy, at best, and does not indicate the depth to the intended aquifer. Consequently, only guesses about the feasibility for irrigation can be made, based on the land's elevation, the proposed well depth, and the proposed gravel pack length.

The Kribell parcels are located over the northern edge of a north-east-southwest trending bedrock valley. Two buried glacial aquifers lie in this valley and are separated by till (clay). A nearby observation well, 96-55-34-bbbb (YA-73-B), showed the top of the upper buried aquifer to lie at 1170 ft. above mean sea level and with a thickness of 35 feet. The observation well also showed that the aquifer is under considerable

head pressure (185 ft.) and may possibly be varying with changes in the James River. Drilling indicates that a lower buried aquifer may be lying on the bedrock's surface and vary widely in thickness. Generalizations about the lower aquifer's top are difficult to make, but it seems that the lower aquifer lies below the 1125 ft. elevation.

Judging from estimated ($7\frac{1}{2}'$ topo sheets) diversion point elevations ~~1170~~¹⁴⁰⁰, 1315, and 1385 for well numbers 1, 2, and 3, one can calculate elevation tops of the intended aquifer by subtracting the gravel pack's length (250 ft.). They are 1150, 1065, and 1135 respectively. It would seem that Kribell proposes to withdraw ground water from the upper aquifer in wells 1 and 3. However, in well number 2, he may be planning to pump from both the upper and the lower aquifers.

Jamesville Colony (3995-3)

The Jamesville Colony application proposes to construct two irrigation wells on the floodplain of the James River. At or near the proposed location (96-56-29 db) two aquifers are present. The upper one occurs at the surface (elevation about equal to 1170) and is probably linked with the alluvial system of the James River. Although unconfined, it appears to coincide in elevation with the upper buried aquifer described earlier in the Kribell hydrogeology. Elevations on the top of the lower aquifer range from 1091 to 1125 feet above mean sea level. In other words, it correlates with the lower buried aquifer of northern Yankton County (see Kribell hydrogeology) and ranges from 50 to 85 feet below the surface. Although the Colony's application indicated the lower aquifer's thickness at 85 feet, it was observed in a nearby 1956 test hole that 108 feet of sand and gravel is present at the Jamesville Colony (Rittershaus log and SDGS E-log).

The Jamesville Colony's application indicates the depth to water level to be about 25 feet in wellstopping the lower aquifer. When the Colony's irrigation wells begin pumping, they will cause a lowering of the water level and the head pressure in the lower aquifer. This will induce leak/age (recharge) to move downward from the upper aquifer (and the alluvium) and into the lower aquifer. At the same time, recharge from the James River will be induced into the alluvium and the upper aquifer. Consequently, there should be no problems so long as streamflow is maintained in the river. Furthermore, because the river is at an extremely low gradient, water (recharge) may back up the James from the Missouri River's confluence. Therefore, future irrigation systems along the James River floodplain may ^{need} careful monitoring to ensure the Colony of continued recharge.

John Gunderson (4091-3)

The Gunderson application proposes to withdraw irrigation water from the lower buried aquifer. His application indicates that at the proposed location, 103 feet of coarse sand and gravel exists. Similar values have been recorded at the Jamesville Colony although in a nearby location (95-55-10 cccc) only 20 feet of gravel was observed in a corresponding position. Presumably much of it had been eroded away and the gravel at the Gunderson site ($\frac{1}{2}$ mile away) was not.

No problems are foreseen for the Gunderson property besides the aquifer thinning. The Division of Water Rights is in a position to monitor the Gunderson permit using observation well YA-78C although an observation well to the north, one mile, would be better.

Permit No. 4091-3
James River - Water District

Report of Examination of Works and/or Application of Water to Beneficial Use

TO: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, September 14, 1998, made a thorough examination of the water use system, constructed by John H Gunderson of 29875 443rd Avenue, Irene SD 57037 holder of Permit No. 4091-3, bearing the priority of July 18, 1977 authorizing the diversion of 3.50 cu. ft. per second of the waters of ground water for irrigation purposes, in Yankton County.

I have to report on the conditions of the same as follows:

A. Works used to divert the water:

Motor: General Electric, 60 hp

Pump: Fair Banks Morse

B. Works used to transport water to place of use:

3,950 feet of 10 inch PVC

C. Works used to apply water to beneficial use:

1. Make Lockwood, towable

2. Overall length 1287 feet

3. Number of towers 8

4. End gun Y

5. High pressure 60 psi

6. Capacity 700 GPM

The system is in the following condition good. The point of diversion is located well: 1,400 feet W & 1,700 feet N from the SE corner sec 9-T95N-R55W (NW¼SE¼). The works are capable of diverting and conveying to the place of use 1.56 cu. ft. per second of water which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:

Legal	Acreage	Legal	Acreage
SW¼NE¼ sec 9-T95N-R55W	34 acres	NW¼SW¼ sec 10-T95N-R55W	34 acres
SE¼NE¼ sec 9-T95N-R55W	34 acres	NE¼SW¼ sec 10-T95N-R55W	34 acres
NE¼SE¼ sec 9-T95N-R55W	34 acres	SW¼SW¼ sec 10-T95N-R55W	34 acres
NW¼SE¼ sec 9-T95N-R55W	32 acres	SE¼SW¼ sec 10-T95N-R55W	34 acres
		Total Acreage	270 acres

comprising a total of 270 acres of land and the license should be issued for 1.56 cfs.

Applicable permit qualifications have been complied with: Yes X

Exceptions to compliance are: none Date report completed: October 7, 1998



Ron Duvall
 Natural Resources Engineer
 DENR, Water Rights Program

FIELD INVESTIGATION REPORT FOR PERMIT NO. 4091-3

DATE OF INVESTIGATION	September 14, 1998
NAME & ADDRESS OF INVESTIGATION CONTACT/ RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE	John H Gunderson 29875 443 rd Avenue Irene SD 57037
NAME & ADDRESS OF PERMIT HOLDER	
DIVERSION POINT LEGAL LOCATION	Well: 1,400 feet W & 1,700 feet N from the SE corner sec 9-T95N-R55W (NW $\frac{1}{4}$ SE $\frac{1}{4}$)

Other permit(s) associated with the project: none

WELL INFORMATION:

- 1) Well Drilling Firm: Wetmore
- 2) No. of Wells 1
- 3) Depth(s) 325 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 16 inches
- 2) Length ? feet

Screen:

- 1) Type 16
- 2) Length ? feet
- 3) Static water level 180 feet

Pump:

- 1) Make Fair Banks Morse

Motor:

- 1) Make General Electric
- 2) Horsepower rating 60 hp

DISTRIBUTION LINES OR CANALS:

- 1) Type PVC
- 2) Size 10 inches
- 3) Length 3,950 feet

SYSTEM TYPE:

Center pivot:

- 1) Make Lockwood, towable
- 2) Overall length 1287 feet
- 3) Number of towers 8
- 4) End gun Y
- 5) High pressure 60 psi
- 6) Capacity 700 GPM



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

October 20, 1998

4091-3

John H. Gunderson
29875 443rd Ave.
Irene, SD 57037

Dear Mr. Gunderson:

The investigation of your water use system was conducted on September 14, 1998, by Ron Duvall, staff engineer. The investigation included the extent of application of water to beneficial use, as developed under Water Permit No. 4091-3. Your final water right document, the Water License, can now be issued.

Statutes require that we charge a \$50.00 fee for the investigation and issuance of the Water License. Upon receipt of the \$50.00 fee from you, we will begin processing your Water License.

Please remit fee to:
Department of Environment & Natural Resources
Water Rights Program
523 E. Capitol
Pierre, SD 57501-3181

Sincerely,

Cheryl F. Frost
Secretary
Water Rights Program
(605) 773-3352

NOTE: On check or money order, please specify your permit number. This will insure proper handling of the fee.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/den

April 6, 1999

Permit No. 4091-3

REMINDER NOTICE

TO: John H Gunderson, 29875 443rd Ave, Irene. SD 57037

FROM: Delvin D Brosz, PE, Natural Resources Engineer
for John Hatch, Chief Engineer
Water Rights Program

SUBJECT: Water License/Investigation Fee Requirement

On October 20, 1998, we advised you that a \$50.00 fee was due for the completed investigation of Water Permit No. 4091-3. The fee also covers issuance of your water license, which is the final document in obtaining and perfecting a water right.

To date, we have not received the \$50.00 fee; therefore, we can not issue the water license. Your licensed water right will be similar to a property right that can not be lost as long as the water use continues and you abide by any permit requirements.

Please remit the fee as soon as possible to obtain your water license. In addition, South Dakota water law does not allow water to be diverted until the license fee is paid. To avoid jeopardizing your ability to use water, please send the fee to the following address:

Department of Environment and Natural Resources
Water Rights Program
523 E Capitol
Pierre SD 57501-3181

Thank you for your prompt response. If you have any questions or believe our records are in error, please contact Genny McMath at (605) 773-3352.

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources
Pierre, _____

№ 4161.05

April 22, 1999

RECEIVED OF J. H. Gunderson, 29875 - 443rd Ave., Irene, SD 57037
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct
and to put water to beneficial use _____

Fee for Application for Permit No. _____ to Appropriate Water, for Future
Use _____

Fee to retain Future Use Permit No. _____ after period of seven years.

Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water
License No. 4091-3

Fee for Filing Transfer Form _____

Fee for Filing Extension Request _____

Fee for _____

Total

50 00

(Any Other Work Provided by Law)

By

Chief Engineer

John H. Hatcher (Signature)



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3161
www.state.sd.us/denr

MAY 20 1999

4091-3

John H. Gunderson
29875 443rd Ave.
Irene, SD 57037

Dear Mr. Gunderson:

Enclosed is Water License No. 4091-3. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 416105 in the amount of \$50.00 which you paid for the investigation and issuance of the Water License.

For your information SDCL 46-6-27 requires that if the owner of an existing well, such as the well authorized by Water Right No. 4091-3, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

The investigation of your water use system included the chemigation equipment. The equipment was properly installed and complies with chemigation laws and rules with the exception of the low pressure drain. Prior to using the chemigation equipment, you must add a hose and the low pressure drain to ensure the discharge is at least 20 feet from the well.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Program
(605) 773-3352

ks
enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 4091-3

(1) John H Gunderson, 29875 443rd Ave, Irene SD 57037 made Application No. 4091-3, July 18, 1977 for a water permit to divert 3.50 cubic feet of water per second from groundwater (one well), Yankton County, South Dakota for irrigation purposes. Permit No. 4091-3, with a priority date of July 18, 1977 was approved January 31, 1979 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before January 31, 1984 and for the application to beneficial use of said water on or before January 31, 1984.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 1.56 cubic feet of water per second for beneficial use. The location of the diversion point is 1,400 feet west and 1,700 feet north from the southeast corner of Section 9-T95N-R55W (NW ¼ SE ¼).

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use to irrigate the following land:

Sec 9-T95N-R55W	SW ¼ NE ¼	34 acres	Sec 10-T95N-R55W	NW ¼ SW ¼	34 acres
	SE ¼ NE ¼	34 acres		NE ¼ SW ¼	34 acres
	NE ¼ SE ¼	34 acres		SW ¼ SW ¼	34 acres
	NW ¼ SE ¼	32 acres		SE ¼ SW ¼	34 acres
Total 270 acres					

(4) Pursuant to South Dakota Water Law 46-5-30.1 John H Gunderson, 29875 443rd Ave, Irene SD 57037 the holder and/or owner of Water Right No. 4091-3 is issued a license to appropriate water, the right to use 1.56 cubic feet of water per second from groundwater (one well) with a priority date of July 18, 1977 from the location specified in (2) of this license. The water to be conducted to and upon lands specified in (3) of this license for the purpose of irrigation. This license is subject to any limitations or qualifications listed in Water Right No. 4091-3 and subject to South Dakota State Law.


JOHN HATCH, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

MAY 20 1999

date

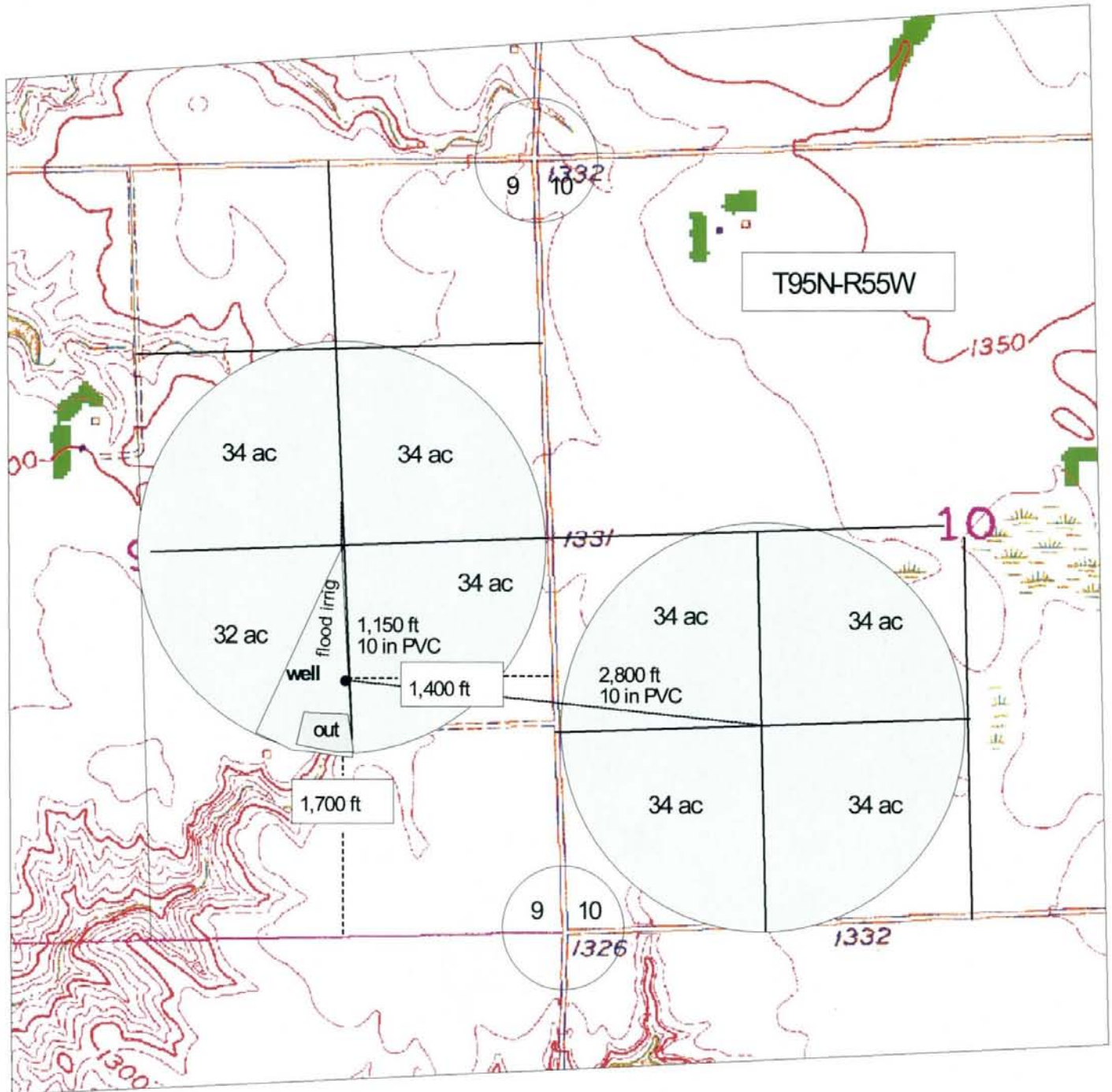


1000 0 1000 Feet

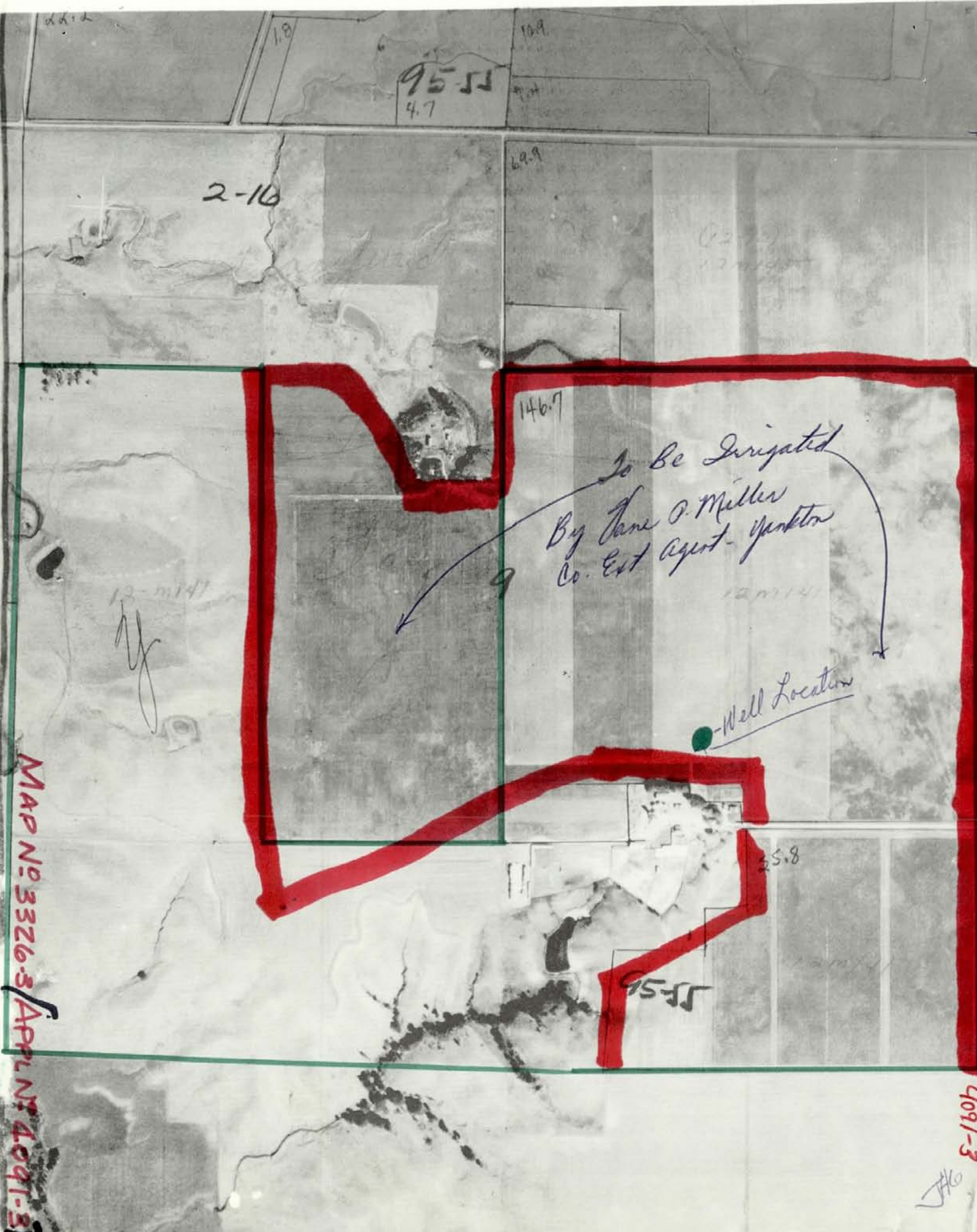


Ron Duvall
Ron Duvall, Nat Res Engineer

10/7/98
Date

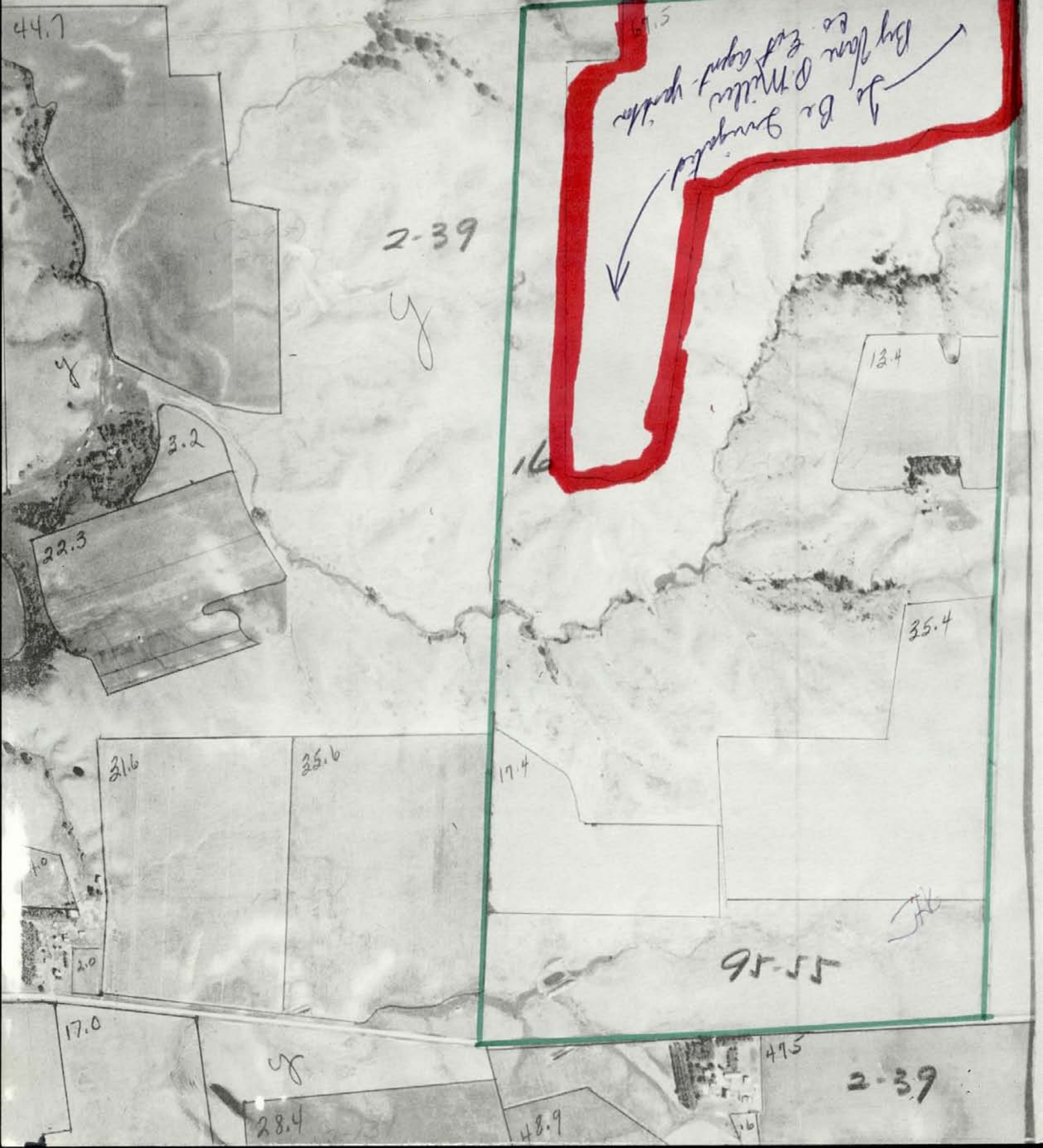


Water Right No. 4091-3



MAP NO 3326-3/APPLN: 4091-3

4091-3
JH



95-55

19.4

76.3

14.5

79.4

2-18

60.6

12-21

73.3

10

11.8

11.9

159.3

To Be Irrigated

By Hane P. Miller
Co. Est Agent - Yakima

95-55

6.7

+1

JHG

4091-3

RECEIVED

JUN 17 2013

WATER RIGHTS
PROGRAM

12 June 2013

Eric Gronlund
Water Rights Program, DENR
PMB 2020, JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SD, 57501-3182

605-773-3352

Eric.gronlund@state.sd.us

Dear Eric:

Enclosed please find the responses to the questions you and the Intervener had concerning some of my Irrigation Questionnaires. Concerning Water Rights 4061-3 and 6698-3, irrigation equipment for both permits:

- 1) The irrigation system located (Lockwood) on Sec 10-95-55 was and still is a towable system and was available to tow from the SW1/4 (Permit 4061-3) to the NW1/4. (Permit 6698-3).
- 2) We purchased a used (T/L) irrigation system dedicated to the NW1/4. (Permit 6698-3) in 2011, but were unable to move the (T/L) system to the new location in time for the 2012 irrigation season. The system on the SW1/4 (Permit 4061-3) was still available to tow, but we didn't have enough water to cover both permits, SW1/4 (Permit 4061-3), NW1/4 (Permit 6698-3).
- 3) In the fall of 2012 the (T/L) system was setup and tested, but no water was run through the system.
- 4) There is also a pivot associated with permit 4061-3 located on Sec 9-95-55.

Concerning the amount of water used and reported on the Yearly Irrigation Questionnaire for Water Rights 4061-3 and 6698-3.

I include the "Pump Curve" sheet provided by Dick Hammond of Hammond Wetmore Drilling. The Pump Curve Sheet indicates that the amount of water provided by the installed pump. The capacity of the installed pump is about 700 gallons per minute. Any other number, lessor or greater was an error on my part in remembering what that pump would actually deliver.

The error in reporting was mine. The number should have been 700 gallons per minute on all reports.

2008 WATER MANAGEMENT BOARD IRRIGATION QUESTIONNAIRE

Please fill out and return before December 1, 2008

98 (A)

Permit/Right No. 6698-3

Name John H Gunderson

Owner ☒

Operator ☐

Address 29875 443rd Ave

City, State, Zip Irene

SD

57037

Phone (605) 263-3850

1. Did you irrigate in 2008? *yes ☒ **no ☐

*If yes, number of acres irrigated 280.0

**If no, check reason(s) for not irrigating and proceed to the end of the questionnaire to submit your form:

sufficient moisture ☐ no water available ☐

system not constructed ☐ use abandoned ☐

enrolled in CRP ☐ through what year?

other ☐ please explain in comment box:

2. Source of water: well

3. Did you apply chemicals or fertilizer through the system in 2008? *yes ☒ no ☐

Comment Box:

12-2-2008: Mr. Gunderson submitted an irrigation questionnaire for Water Right No. 4091-3 and indicated that all irrigation for both No. 4091-3 and 6698-3 were reported on one form.

See 4091-3 for irrigation information for 2008.

Genny

Attention: Multiple irrigation permit holders!

If possible, please complete a separate questionnaire for each one of your water permits/rights. However, if you are unable to do this and you plan to report water usage for all your water permits/rights on one report, please answer the following:

☐ I am reporting the combined water usage under the following permits/rights:

List combined Permits/Rights

4091-3 and 6698-3

List any Permits/Rights under which no irrigation occurred

Did Not Tow System
No Irrigation Occurred On 6698-3

The water use reporting form is on the next page. If you need assistance, here is a sample completed form:

In June and July, 190 acres of alfalfa (130 acres) and soybeans (60 acres) were irrigated (alfalfa -- using center pivot @ 900 gpm for 5 days - 24 hours per day in June only); (beans -- using big gun @ 380 gpm for 8 days in June and for 10 days in July at 12 hours per day)

MONTH	CROP	ACRES	PUMP RATE	# DAYS	AVE/HRS DAY
JUNE	ALFALFA	130	900 GPM	5	24
	BEANS	60	380 GPM	8	12
JULY	BEANS	60	380 GPM	10	12

If you prefer to report your water use based on kilowatt-hours, please provide the following information:

of Kilowatt-hours

Operating pressure lb/sq.in.

Depth to water (feet)

Crop types irrigated and acres for each crop:

2009 Water Management Board Irrigation Questionnaire

Please fill out and return before **December 1, 2009**



REMEMBER! Return of this questionnaire is required whether or not you irrigated this year.

Return the completed form(s) to the Water Rights Program at 523 E Capitol, Pierre, SD 57501 3181 ph. (605) 773 3352 or send your form(s) electronically over the internet at <http://denr.sd.gov/iq.aspx>

Permit No. 6698-3

JOHN H GUNDERSON, MGR
29875 443RD AVE
IRENE SD 57037

Any address/ownership corrections?

Telephone No. 605 263 3850

1. Did you irrigate in 2009? *yes ☐ **no ☐
*If yes, _____ acres were irrigated out of
the 135.00 acres covered by Permit No. 6698-3

**If no, check reason(s) for not irrigating:
sufficient moisture ☒ no water available ☐
system not constructed ☐ use abandoned ☐
enrolled in CRP ☐, through what year? _____
other ☐, please explain in the Comment Box:

Comment Box

Best Rain in years!

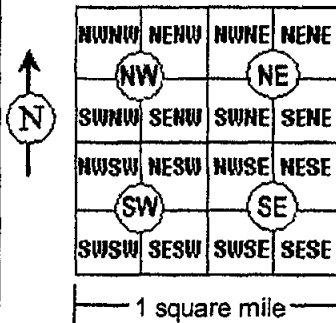
Did NOT need to tow
system

2. If your answer to question No. 1 is "no," you are done!
If you answered "yes," please complete Nos. 3, 4 & 5.

3. Did you apply chemicals or fertilizer through the
system in 2009? yes ☐ no ☒

4. If more than one water source is listed below, circle
each source used. A GROUNDWATER

5. Provide your water use on the back of this form.



Office use only

RECEIVED

NOV - 2 2009

WATER RIGHTS
PROGRAM

Acreage permitted for irrigation under No. 6698-3

(see above section map for help reading legal descriptions)

sec 10-T095N-R55W, NW1/4 - 135.0 acres

Please provide your 2009 water use to irrigate the above acreage on the REVERSE side of this form.

2010 6698-3

C₂

Type of system used: center pivot ☐ towline ☐ big gun ☐ flood ☐ sprinklers ☐ other _____
 (check all that apply)

If more room is needed, copies of this page may be made or complete blank pages and attach to this form.

MONTH IRRIGATED	CROP TYPE	*NUMBER OF ACRES IRRIGATED	PUMP RATE IN GALLONS PER MINUTE	DAYS PER MONTH WATER WAS APPLIED	AVERAGE HOURS PER DAY
MARCH					
APRIL					
MAY					
JUNE	CORN	135	200	2	18
JULY	Should have reported these Acres on 4091				
AUGUST					
SEPTEMBER					
OCTOBER					

*Total number of acres irrigated should be the same as your answer in question No. 1 on reverse side of this form.

2011 Water Management Board Irrigation Questionnaire

Please fill out and return before December 2, 2011

REMEMBER! Return of this questionnaire is required whether or not you irrigated this year.

Return the completed form(s) to the Water Rights Program at 523 E Capitol, Pierre, SD 57501 3181 ph. (605) 773 3352 or send your form(s) electronically over the internet at <http://denr.sd.gov/iq.aspx>

Permit No. 6698-3

JOHN H GUNDERSON, MGR
29875 443RD AVE
IRENE SD 57037

Any address/ownership corrections?

Email _____

Phone _____

1. Did you irrigate in 2011? *yes ☐ **no ☒
*If yes, _____ acres were irrigated out of
the 135 acres covered by Permit No. 6698-3

**If no, check reason(s) for not irrigating:
sufficient moisture ☒ no water available ☐
system not constructed ☐ use abandoned ☐
enrolled in CRP ☐, through what year? _____
other ☒, please explain in the Comment Box:

Comment Box

Renter did not want to
irrigate

① did not tow system
② Dad Purchase USED system
so that we did not have to tow

2. If your answer to question No. 1 is "no," you are done!
If you answered "yes," please complete Nos. 3, 4 & 5.

3. Did you apply chemicals or fertilizer through the
system in 2011? yes ☐ no ☐

4. If more than one water source is listed below, circle
each source used. A. GROUNDWATER

5. Provide your water use on the back of this form.

NWNW	NENW	NWNE	NENE
NW		NE	
SWNW	SENW	SWNE	SENE
NWSW	NESW	NWSE	NESE
SW		SE	
SWSW	SESW	SWSE	SESE

1 square mile

Office use only

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DEC 12 2011
WATER RIGHTS
PROGRAM

Acreage permitted for irrigation under No. 6698-3

(see above section map for help reading legal descriptions)

sec 10-T095N-R55W, NW1/4 - 135.0 acres

Please provide your 2011 water use to irrigate the above acreage on the REVERSE side of this form.

Patties

2012 Water Management Board Irrigation Questionnaire

Please fill out and return before **December 3, 2012**

(Handwritten initials)

REMEMBER! Return of this questionnaire is required whether or not you irrigated this year.

Return the completed form(s) to the Water Rights Program at 523 E Capitol, Pierre, SD 57501 3181 ph. (605) 773 3352 or send your form(s) electronically over the internet at <http://denr.sd.gov/iq.aspx>

Permit No. 6698-3

JOHN H GUNDERSON, MGR
29875 443RD AVE
IRENE SD 57037

Any address/ownership corrections?

Well is owned by John H Gunderson
Email macok@iw.NET
Phone 605 263 3850

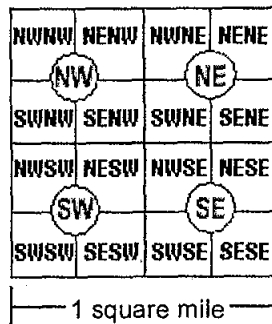
1. Did you irrigate in 2012? *yes ☐ **no ☒
*If yes, _____ acres were irrigated out of the 135 acres covered by Permit No. 6698-3

**If no, check reason(s) for not irrigating:
sufficient moisture ☐ no water available ☒
system not constructed ☒ use abandoned ☐
enrolled in CRP ☐, through what year? _____
other ☐, please explain in the Comment Box:

2. If your answer to question No. 1 is "no," you are done! If you answered "yes," please complete Nos. 3, 4 & 5.
3. Did you apply chemicals or fertilizer through the system in 2012? yes ☐ no ☐
4. If more than one water source is listed below, circle each source used. A. GROUNDWATER
5. Provide your water use on the back of this form.

Comment Box

Did not have enough water
Did not tow system
Could not find installer
for new (used) system.



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NOV 15 2012
WATER RIGHTS PROGRAM

Acreage permitted for irrigation under No. 6698-3

(see above section map for help reading legal descriptions)

sec 10-T095N-R55W, NW1/4 - 135.0 acres

Did set up and test new (used) system in Fall of 2012. Dry Run w/ no water

Please provide your 2012 water use to irrigate the above acreage on the REVERSE side of this form.

For an example of a completed questionnaire, please refer to the reverse side of your cover letter.

2012

House + CR

Type of system used: center pivot ☒ towline ☐ big gun ☐ flood ☐ sprinklers ☐ other _____
(check all that apply)

If more room is needed, copies of this page may be made or complete blank pages and attach to this form.

MONTH IRRIGATED	CROP TYPE	*NUMBER OF ACRES IRRIGATED	PUMP RATE IN GALLONS PER MINUTE	DAYS PER MONTH WATER WAS APPLIED	AVERAGE HOURS PER DAY
MARCH					
APRIL	CORN	135	900 gpm	4 Days	18
	CORN	135	900 gpm	4 Days	18
MAY	CORN	135	900 gpm	8 Days	18
	CORN	135	900 gpm	8 Days	18
JUNE	CORN	135	900 gpm	12	18
	CORN	135	900 gpm	12	18
JULY	CORN	135	900 gpm	16	24
	CORN	135	900 gpm	15	24
AUGUST	CORN	135	900 gpm	15	24
	CORN	135	900 gpm	16	24
SEPTEMBER	CORN	135	900 gpm	6	24
	CORN	135	900 gpm	6	24
OCTOBER					

*Total number of acres irrigated should be the same as your answer in question No. 1 on reverse side of this form.

HOUSE + QTR

2012 Water Management Board Irrigation Questionnaire

Please fill out and return before **December 3, 2012**

REMEMBER! Return of this questionnaire is required whether or not you irrigated this year.

Return the completed form(s) to the Water Rights Program at 523 E Capitol, Pierre, SD 57501 3181 ph. (605) 773 3352 or send your form(s) electronically over the internet at <http://denr.sd.gov/iq.aspx>

Permit No. 4091-3

JOHN H GUNDERSON
29875 443RD AVE
IRENE SD 57037

Any address/ownership corrections?

Well is owned by John H Gunderson.

Email macola@iwi.NET

Phone 605-263-3850

1. Did you irrigate in 2012? *yes ☒ **no ☐

*If yes, 270 acres were irrigated out of the 270 acres covered by Permit No. 4091-3

**If no, check reason(s) for not irrigating:

sufficient moisture ☐ no water available ☐

system not constructed ☐ use abandoned ☐

enrolled in CRP ☐, through what year? _____

other ☐, please explain in the Comment Box:

2. If your answer to question No. 1 is "no," you are done! If you answered "yes," please complete Nos. 3, 4 & 5.

3. Did you apply chemicals or fertilizer through the system in 2012? yes ☒ no ☐

4. If more than one water source is listed below, circle each source used. A. GROUNDWATER

We have only one

5. Provide your water use on the back of this form.

Comment Box

*It was so bloody hot + dry
we couldn't keep up.*



NWNW	NENW	NWNE	NENE
NW		NE	
SWNW	SENW	SWNE	SENE
NWSW	NESW	NWSE	NESE
SW		SE	
SWSW	SESW	SWSE	SESE

1 square mile

Office use only

RECEIVED
NOV 15 2012
WATER RIGHTS
PROGRAM

Acreage permitted for irrigation under No. 4091-3

(see above section map for help reading legal descriptions)

sec 09-T095N-R55W, SW1/4NE1/4 - 34.00 acres
sec 09-T095N-R55W, SE1/4NE1/4 - 34.00 acres
sec 09-T095N-R55W, NE1/4SE1/4 - 34.00 acres
sec 09-T095N-R55W, NW1/4SE1/4 - 32.00 acres
sec 10-T095N-R55W, NW1/4SW1/4 - 34.00 acres
sec 10-T095N-R55W, NE1/4SW1/4 - 34.00 acres
sec 10-T095N-R55W, SW1/4SW1/4 - 34.00 acres
sec 10-T095N-R55W, SE1/4SW1/4 - 34.00 acres

Please provide your 2012 water use to irrigate the above acreage on the REVERSE side of this form.

For an example of a completed questionnaire, please refer to the reverse side of your cover letter.

2010 Water Management Board Irrigation Questionnaire

Please fill out and return before **December 3, 2010**

REMEMBER! Return of this questionnaire is required whether or not you irrigated this year.

Return the completed form(s) to the Water Rights Program at 523 E Capitol, Pierre, SD 57501 3181 ph. (605) 773 3352 or send your form(s) electronically over the internet at <http://denr.sd.gov/iq.aspx>

Permit No. 6698-3

JOHN H GUNDERSON, MGR
29875 443RD AVE
IRENE SD 57037

Any address/ownership corrections?

Email _____

Phone _____

1. Did you irrigate in 2010? *yes ☒ **no ☐
*If yes, _____ acres were irrigated out of
the 135.00 acres covered by Permit No. 6698-3

**If no, check reason(s) for not irrigating:
sufficient moisture ☐ no water available ☐
system not constructed ☐ use abandoned ☐
enrolled in CRP ☐, through what year? _____
other ☐, please explain in the Comment Box:

Comment Box

Rain!

Did Not Need to tow
system

2. If your answer to question No. 1 is "no," you are done!
If you answered "yes," please complete Nos. 3, 4 & 5.
3. Did you apply chemicals or fertilizer through the
system in 2010? yes ☒ no ☐
4. If more than one water source is listed below, circle
each source used. A. GROUNDWATER
5. Provide your water use on the back of this form.



NWNW	NENW	NWNE	NENE
NW		NE	
SWNW	SENW	SWNE	SENE
NWSW	NESW	NWSE	NESE
SW		SE	
SWSW	SESW	SWSE	SESE

1 square mile

Office use only

RECEIVED
DEC -1 2010
WATER RIGHTS
PROGRAM

Acreage permitted for irrigation under No. 6698-3

(see above section map for help reading legal descriptions)

sec 10-T095N-R55W, NW1/4 - 135.0 acres

Please provide your 2010 water use to irrigate the above acreage on the REVERSE side of this form.

For an example of a completed questionnaire, please refer to the reverse side of your cover letter.

2008 WATER MANAGEMENT BOARD IRRIGATION QUESTIONNAIRE

Please fill out and return before December 1, 2008

John

Permit/Right No. 4091-3

Name John H Gunderson

Owner ☒

Operator ☐

Address 29875 443 Ave

City, State, Zip Irene SD 57037

Phone (605) 263-3850

1. Did you irrigate in 2008? *yes ☒ **no ☐

*If yes, number of acres irrigated 280.0

**If no, check reason(s) for not irrigating and proceed to the end of the questionnaire to submit your form:

sufficient moisture ☐ no water available ☐

system not constructed ☐ use abandoned ☐

enrolled in CRP ☐ through what year? _____

other ☐ please explain in comment box:

2. Source of water: Well

3. Did you apply chemicals or fertilizer through the system in 2008? *yes ☒ no ☐

Comment Box:

RECEIVED

DEC - 2 2008

WATER RIGHTS PROGRAM

Attention: Multiple irrigation permit holders!

If possible, please complete a separate questionnaire for each one of your water permits/rights. However, if you are unable to do this and you plan to report water usage for all your water permits/rights on one report, please answer the following:

☒ I am reporting the combined water usage under the following permits/rights:

List combined Permits/Rights

4091-3 and 6698-3

List any Permits/Rights under which no irrigation occurred

The water use reporting form is on the next page. If you need assistance, here is a sample completed form:

In June and July, 190 acres of alfalfa (130 acres) and soybeans (60 acres) were irrigated (alfalfa -- using center pivot @ 900 gpm for 5 days - 24 hours per day in June only); (beans -- using big gun @ 380 gpm for 8 days in June and for 10 days in July at 12 hours per day)

MONTH	CROP	ACRES	PUMP RATE	# DAYS	AVE/HRS DAY
JUNE	ALFALFA	130	900 GPM	5	24
	BEANS	60	380 GPM	8	12
JULY	BEANS	60	380 GPM	10	12

If you prefer to report your water use based on kilowatt-hours, please provide the following information:

of Kilowatt-hours _____

Operating pressure lb/sq.in. _____

Depth to water (feet) _____

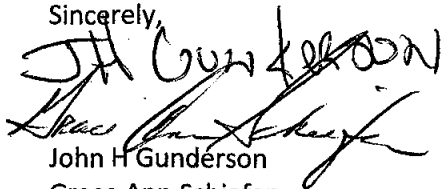
Crop types irrigated and acres for each crop:

Current irrigation status as of 6/12/13.

- 1) We have not irrigated this year due to abundant rainfall.
- 2) We are waiting for the pump installers to arrive to put the pump in the well for Permit 7520-3. I do not know when they will get here and install the pump. We have not been able to get a firm date for the installation.
- 3) We will inform you immediately when that pump is installed so that we can begin the test pumping of the new well.
- 4) We have not purchased the new nozzles for the existing pivots as we don't have the GPM and pressure numbers for the new combined wells. As soon as we have those numbers we will purchase the nozzles. We will not install the new nozzles until Permit 7520-3 is in effect.
- 5) In the next week we may put fertilizer on the irrigated crops using the pivot for fertigation. If we do, we will notify you. We also note that if we do use the existing well (Permit 4061-3), we must let the well recover for 72 hours before we begin a pump test.

If you have any other questions or concerns please contact us.

Sincerely,



John H Gunderson
Grace Ann Schiefen
29875 443 Ave
Irene, SD 57037

macula@iw.net
gaschiefen@iw.net

605-263-3850

2008

Permit/Right No. 4091-3

Type of system: center pivot ☐ towline ☐ big gun ☐ flood ☐ sprinklers ☐ other _____

MONTH IRRIGATED	CROP TYPE	*NUMBER OF ACRES IRRIGATED	PUMP RATE IN GALLONS PER MINUTE	# DAYS PER MONTH WATER WAS APPLIED	AVERAGE HOURS PER DAY (not kilowatt- hrs)
*Total number of acres irrigated should add up to your response given in question No. 1.					
MARCH					
APRIL					
	Should be 700 GPM				
MAY					
JUNE	Soybeans	135.0	900	3.0	24.0
JULY	Corn	135.0	900	15.0	18.0
	Soybeans	135.0	900	4.0	18.0
	Corn	135.0	900	4.0	18.0
AUGUST	Corn	135.0	900	8.0	18.0
	Soybeans	135.0	900	8.0	18.0
SEPTEMBER	Corn	135.0	900	8.0	18.0
OCTOBER					

If you need more room or have additional comments, please use the following blank page.

-- Continue to the end of the next page to submit your completed questionnaire --

4091-3

2013 WATER MANAGEMENT BOARD IRRIGATION QUESTIONNAIRE

Please fill out and return before December 2, 2013

Permit/Right No.

Name

John H. Gundersen

Owner ☒Operator ☐

Address

29875 443 AVE

Email macola@iw.net

City, State, Zip

Iowa

SD

57037

Phone

605 263 3850

1. Did you irrigate in 2013? *yes ☒ **no ☐

*If yes, number of acres irrigated? 370

**If no, check reason(s) for not irrigating and proceed to the end of the questionnaire to submit your form:

- ☐ sufficient moisture ☐ no water available
☐ system not constructed ☐ use abandoned
☐ enrolled in CRP, through what year? _____
☐ other, please explain in comment box: _____

2. Does this permit allow use of both ground water and surface water? *yes ☐ no ☒

*If yes, which source was used?

☒ ground (well), or ☐ surface, or ☐ both3. Did you apply chemicals or fertilizer through the irrigation system? yes ☒ no ☐

Comment Box:

Please SEE Attached sheet

RECEIVED

DEC 11 2013

WATER RIGHTS
PROGRAM**Attention: Multiple irrigation permit holders!**

If possible, please complete a separate questionnaire for each one of your water permits/rights. However, if you are unable to do this and you plan to report water usage for all your water permits/rights on one report, please answer the following:

☒ I am reporting the combined water usage under the following permits/rights:

List combined Permits/Rights

4091-3

6698-3

List any Permits/Rights under which no irrigation occurred

7520-3

The water use reporting form is on the next page. However, if you prefer reporting your water use based on kilowatt-hours, please provide the following information and then proceed to the last page to submit this form.

of Kilowatt-hours

Crop types irrigated and number of acres for each crop:

Operating pressure lb/sq.in.

Depth to water (feet)

If you need more space, please provide the additional kilowatt-hours information on the last page of this form.

If you need assistance completing the water use information on the next page, here is a sample completed form:

In June and July, a total of 190 acres were irrigated -- 130 acres were alfalfa and 60 acres were corn:

Alfalfa -- using center pivot @ 900 gallons per minute (gpm) for 5 days in June only at 24 hours per day

Corn -- using big gun @ 380 gpm for 8 days in June and for 10 days in July at 12 hours per day

MONTH	CROP	ACRES	PUMP RATE (GPM)	# DAYS	AVE/HRS DAY
JUNE	ALFALFA	130	900	5	24
	CORN	60	380	8	12
JULY	CORN	60	380	10	12

For personal assistance please contact Genny McMath at (605) 773-3352 or by email at genny.mcmath@state.sd.us

AM
12-12-13

4091-3						
Month	Crop	Acres	GPM	Days	ave hrs/day	Total Pumpage (ac-ft)
Jul	Corn	260	700	17	24	54.4
	Beans	50	700	1	14.5	
Aug	Corn	260	700	8	23	26.4 <i>Div</i> 56.4
	Beans	50	700	1	20.5	
Sep	Corn	260	700	7	24	24.4
	Beans	50	700	1	21.5	
Yearly Total (ac-ft)						135.2 / 105.2

6698-3						
Month	Crop	Acres	GPM	Days	ave hrs/day	Total Pumpage (ac-ft)
Jul	Corn	75	700	6.5	21	20
	Beans	75	700	1	19	
Aug	Corn	75	700	2	18.5	5.9
	Beans	75	700	1	8.5	
Sep	Corn	75	700	2	19.5	8.6
	Beans	75	700	2	13.75	
Yearly Total (ac-ft)						34.5

Notes on Irrigation Questionnaire 2013

12/6/2013

The DENR Report form for the Yearly Irrigation Questionnaire wasn't designed for our situation. We have three pivots operating from one irrigation well, that serves two different permits. For simplicities sake, I enclose the spreadsheet covering our water usage for the season 2013.

The water pump is rated at 700 gallons per minute.

The irrigation plan is to put water on the driest dirt first, based on crop needs.

The date starts at midnight.

We have three pivots, Ole, Lena and Sven. Ole was 160 acres in corn. Lena was 50 acres in beans and 100 acres in corn. Sven was 75 acres in beans and 75 acres in corn.

The start/stop times are our best estimate. Factors affecting the start/stop times are primarily load control from the electric company and some sort of system failure of either the water pump or the pivot. Our normal procedure is when a pivot fails is to start another pivot and not shut down the water pump. This same procedure is used when a system has completed a circle.

Permit 7520-3 Activity.

In July we finished construction on the well and installed a pump. The well performed well, 700 gpm. However, when the pump used for Permits, 4091-3 & 6698-3 was engaged there was significant reduction in the flow of the original well. The combination of both pumps only gained 100-175 gpm to the full system which was not considered worth the expense of completing the project at this location. We are investigating moving the diversion point to another location.

Irrigation Questionnaire 2013

11/18/2013 12:46

700 Gallons per minute

All times are estimates/approximations.

					0:00	0:00	0:00	0:00	
					Permit Number:				
Date	Pivot	Start	Stop	Time On	4091-3 Ole Corn	4091-3 Lena Corn	4091-3 Lena Beans	6698-3 Sven Corn	Sven Beans
4-Jul	Ole	7:00 AM	2:00 PM	7:00	7:00	0:00		0:00	
5-Jul	Ole	7:30 AM	8:30 PM	13:00	13:00	0:00		0:00	
5-Jul	Lena	8:30 PM	11:59 PM	3:29	0:00	3:29		0:00	
6-Jul	Lena	12:01 AM	12:00 AM	23:59	0:00	23:59		0:00	
7-Jul	Lena	12:01 AM	12:00 AM	23:59	0:00	23:59		0:00	
8-Jul	Lena	12:01 AM	12:00 AM	23:59	0:00	23:59		0:00	
9-Jul	Lena	12:01 AM	1:30 PM	13:29	0:00	13:29		0:00	
9-Jul	Lena	5:30 PM	12:00 AM	6:30	0:00	6:30		0:00	
10-Jul	Sven	12:00 PM	9:00 PM	9:00	0:00	0:00			9:00
11-Jul	Sven	5:00 AM	11:59 PM	18:59	0:00	0:00		18:59	
12-Jul	Sven	12:00 AM	8:30 PM	20:30	0:00	0:00		20:30	
12-Jul	Ole	8:30 PM	11:59 PM	3:29	3:29	0:00		0:00	
13-Jul	Ole	12:00 AM	11:59 PM	23:59	23:59	0:00		0:00	
14-Jul	Ole	12:00 AM	11:59 PM	23:59	23:59	0:00		0:00	
15-Jul	Ole	12:00 AM	9:00 PM	21:00	21:00	0:00		0:00	
15-Jul	Sven	9:00 PM	11:59 PM	2:59	0:00	0:00		2:59	
16-Jul	Sven	12:00 AM	7:30 AM	7:30	0:00	0:00		7:30	
16-Jul	Lena	7:30 AM	10:30 AM	3:00	0:00		3:00	0:00	
16-Jan	Lena	12:30 PM	11:59 PM	11:29	0:00		11:29	0:00	
17-Jan	Lena	12:00 AM	8:00 AM	8:00	0:00	8:00		0:00	
18-Jan	Lena	12:00 PM	4:00 PM	4:00	0:00	4:00		0:00	
18-Jul	Lena	8:00 PM	9:00 PM	1:00	0:00	1:00		0:00	
19-Jul	Lena	6:00 AM	9:00 AM	3:00	0:00	3:00		0:00	
19-Jan	Sven	9:00 AM	11:59 PM	14:59	0:00	0:00		14:59	
20-Jan	Sven	12:00 AM	1:00 AM	1:00	0:00	0:00		1:00	
20-Jul	Lena	1:00 AM	11:59 PM	22:59	0:00	22:59		0:00	
21-Jul	Lena	12:00 AM	2:00 PM	14:00	0:00	14:00		0:00	
21-Jul	Sven	2:00 PM	11:59 PM	9:59	0:00	0:00		9:59	
22-Jul	Sven	12:00 AM	8:00 PM	20:00	0:00	0:00		20:00	

Jul
~~22-Jul Lena~~
~~23-Jul Lena~~

22-Jul Lena	8:00 PM	11:59 PM	3:59	0:00	3:59	0:00
23-Jul Lena	12:00 AM	6:30 AM	6:30	0:00	6:30	0:00
23-Jul Ole	6:30 AM	11:59 PM	17:29	17:29	0:00	0:00
24-Jul Ole	12:00 AM	11:59 PM	23:59	23:59	0:00	0:00
25-Jul Ole	12:00 AM	11:59 PM	23:59	23:59	0:00	0:00
26-Jul Ole	12:00 AM	11:59 PM	23:59	23:59	0:00	0:00
27-Jul Ole	12:00 AM	11:00 PM	23:00	23:00	0:00	0:00
27-Jul Lena	11:00 PM	11:59 PM	0:59	0:00	0:59	0:00
28-Jul Lena	12:00 AM	11:59 PM	23:59	0:00	23:59	0:00
29-Jul Lena	12:00 AM	9:00 AM	9:00	0:00	9:00	0:00
29-Jul Ole	9:00 AM	12:00 PM	3:00	3:00	0:00	0:00
29-Jul Sven	12:00 PM	11:59 PM	11:59	0:00	0:00	11:59
30-Jul Sven	12:00 AM	11:59 PM	23:59	0:00	0:00	23:59
31-Jul Sven	12:00 AM	4:30 PM	16:30	0:00	0:00	16:30
31-Jul Ole	5:00 PM	11:59 PM	6:59	6:59	0:00	0:00

579:36:00 214:52:00 192:51:00 14:29:00 136:25:00

558:37:00

1-Aug Ole	12:00 AM	1:30 PM	13:30	13:30	0:00	0:00
1-Aug Ole	10:00 PM	11:59 PM	1:59	1:59	0:00	0:00
2-Aug Ole	12:00 AM	9:30 AM	9:30	9:30	0:00	0:00
13-Aug Lena	9:00 AM	11:00 AM	2:00	0:00	2:00	0:00
18-Aug Ole	6:00 PM	11:59 PM	5:59	5:59	0:00	0:00
19-Aug Ole	12:00 AM	2:00 PM	14:00	14:00	0:00	0:00
19-Aug Ole	10:00 PM	11:59 PM	1:59	1:59	0:00	0:00
20-Aug Ole	12:00 AM	11:59 PM	23:59	23:59	0:00	0:00
21-Aug Ole	12:00 AM	10:30 AM	10:30	10:30	0:00	0:00
21-Aug Sven	10:30 AM	10:00 PM	11:30	0:00	0:00	11:30
23-Aug Sven	8:30 PM	11:59 PM	3:29	0:00	0:00	3:29
24-Aug Sven	12:00 AM	10:30 AM	10:30	0:00	0:00	10:30
24-Aug Lena	10:30 AM	11:59 PM	13:29	0:00	13:29	0:00
25-Aug Lena	12:00 AM	2:30 PM	14:30	0:00	14:30	0:00
25-Aug Lena	8:00 PM	11:59 PM	3:59	0:00	3:59	0:00

2

26-Aug Lena	12:00 AM	2:30 PM	14:30	0:00	14:30	0:00		
26-Aug Lena	10:00 PM	11:59 PM	1:59	0:00	1:59	0:00		
27-Aug Lena	12:00 AM	2:30 PM	14:30	0:00	14:30	0:00		
28-Aug Sven	8:00 AM	4:30 PM	8:30	0:00	0:00		8:30	
28-Aug Sven	8:30 PM	11:59 PM	3:29	0:00	0:00	3:29		
29-Aug Sven	12:00 AM	8:00 AM	8:00	0:00	0:00	8:00		
29-Aug Lena	8:00 AM	3:00 PM	7:00	0:00		7:00	0:00	
29-Aug Lena	9:00 PM	11:59 PM	2:59	0:00	2:59	0:00		
30-Aug Lena	12:00 AM	11:00 AM	11:00	0:00	11:00	0:00		
30-Aug Ole	11:00 AM	11:59 PM	12:59	12:59	0:00	0:00		
31-Aug Ole	12:00 AM	11:59 PM	23:59	23:59	0:00	0:00		
249:48:00				118:24:00	65:27:00	20:29:00	36:58:00	8:30:00

249:48:00

1-Sep Ole	12:00 AM	11:59 PM	23:59	23:59	0:00	0:00		
2-Sep Ole	12:00 AM	1:00 PM	13:00	13:00	0:00	0:00		
2-Sep Sven	1:00 PM	11:59 PM	10:59	0:00	0:00		10:59	
3-Sep Sven	12:00 AM	11:59 PM	23:59	0:00	0:00	23:59		
4-Sep Lena	12:00 AM	2:00 PM	14:00	0:00	14:00	0:00		
4-Sep Lena	10:30 PM	11:59 PM	1:29	0:00		1:29	0:00	
5-Sep Lena	12:00 AM	6:00 AM	6:00	0:00		6:00	0:00	
5-Sep Sven	6:00 AM	1:30 PM	7:30	0:00	0:00		7:30	
6-Sep Lena	8:00 AM	1:30 PM	5:30	0:00	5:30	0:00		
6-Jan Lena	9:00 PM	11:59 PM	2:59	0:00	2:59	0:00		
7-Jan Lena	12:00 AM	1:30 PM	13:30	0:00	13:30	0:00		
7-Sep Lena	7:30 PM	11:59 PM	4:29	0:00	4:29	0:00		
8-Sep Lena	12:00 AM	11:59 PM	23:59	0:00	23:59	0:00		
9-Sep Lena	12:00 AM	2:00 PM	14:00	0:00		14:00	0:00	
9-Sep Ole	2:00 PM	11:59 PM	9:59	9:59	0:00	0:00		
10-Sep Ole	12:00 AM	9:00 AM	9:00	9:00	0:00	0:00		
10-Sep Sven	9:00 AM	11:59 PM	14:59	0:00	0:00	14:59		
11-Sep Sven	12:00 AM	9:00 AM	9:00	0:00	0:00		9:00	
11-Sep Ole	9:00 AM	11:59 PM	14:59	14:59	0:00	0:00		

3

12-Sep Ole	12:00 AM	11:59 PM	23:59	23:59	0:00	0:00
13-Sep Ole	12:00 AM	8:00 AM	8:00	8:00	0:00	0:00
13-Sep Sven	8:00 AM	8:15 AM	0:15	0:00	0:00	0:15
13-Sep Lena	8:15 AM	8:30 AM	0:15	0:00	0:15	0:00
			255:49:00	102:56:00	64:42:00	21:29:00
						39:13:00
						27:29:00
						255:49:00

4

4091-3



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

AUG 02 2021

John Gunderson
29875 443rd Ave
Irene SD 57037

4091-3
6698-3
7520-3

RE: Water License No. 6698-3, JH Gunderson, GA Shiefen and MB Gunderson

Dear Mr. Gunderson:

Enclosed is Water License No. 6698-3. Upon licensing, the applicable portions of Water Right No. 4091-3 were incorporated into No. 6698-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

For your information SDCL 46-6-27 requires that if in the future, the owner of an existing well, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Sincerely,

Eric Gronlund, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Note: With regard to Water Permit No. 7520-3, the staff investigation found the authorized well was not going to be used to supplement the irrigation system. No. 7520-3 will be scheduled for cancellation at a later date. The well can still be used for domestic purposes (household, lawn, garden, livestock) without a permit in place provided use does not exceed 18 gpm (which equates to 25,920 gallons per day).