

Considered: 4-25-84

WATER PERMIT NO. 4998-3

MAP No. 4998-3

Name of Applicant LLOYD G. SORLIEN

Post Office Address RR 2, Box 209, Scotland, SD 57059

Amount of Water Claimed 2.50 Total Acres 175.20

Source of Water Supply One 245' well

Water to be used for IRR County Hutchinson

About 2W 1 mile NORTH of OLIVET

PROOF OF PUBLICATION: Received 3-23-84 Not Received

APPLICATION: Approved 4-25-84 Subject to

F.F. & C.L. Adopted Not Approved Deferred

PRIORITY Date Received 11/23/83 Fee 250.00 Remarks

11-23-83

Corrected Application Received 1/10/84 Period of Annual Use 4/1 - 10/31

WATER QUALITY APPROVAL RECEIVED 1-16-84 APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES X NO REMARKS

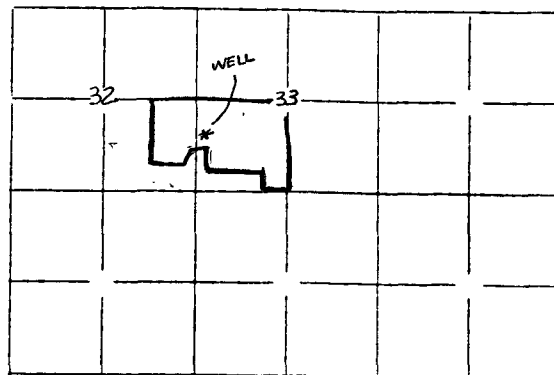
Diversion Point

NW $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 33-T98N-R58W

Land to be Irrigated

NE $\frac{1}{4}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 32 and

SW $\frac{1}{4}$, Section 33 all in T98N-R58W



Well Log: Driller SDGS well

Licensed YES NO

Depth of Well 245' REMARKS

Type of Map aerial County Agent PREPARED BY Darrell Deneke Reviewed and the Number

assigned on 1-18-84

By BJ Westlund

No. 4998-3 Hydrologic Unit 10160011
 Map No. 4998-3 Basin James River
 Newspaper Hutchinson Herald By 537, Mimeo 57005 Jans.

Application For Permit To Appropriate Water Within The State Of South Dakota

Type of Application: Check one or more of the following:

New ☒ Vested Right ☐ Future Use ☐☐ Application to amend Permit No. _____ with old priority date retained☐ Change diversion point(s) ☐ Add diversion point(s) ☐ Change acreage ☐ Other ☐☐ Application to: ☐ Change use ☐ Change diversion point(s) ☐ Add diversion point(s)☐ Add Acreage ☐ Increase diversion rate ☐ Other _____ See Permit No. _____☐ Application to: ☐ Use ☐ Transfer water reserved by Future Use Permit No. _____1. Name of Applicant Lloyd G. Sorlien Phone No. 605-583-2594Post Office Address R.R. 2, Box 209, Scotland, S.D. State S.D. Zip Code 57059
(Street, RR or Box)2. Amount of water claimed (c.f.s) 2.50 Total acres irrigated 175.203. Source of Water supply ground water - one well4. Location of point of diversion NW 1/4 SW 1/4, Section 33-T98N-R58WCounty Hutchinson5. Counties where water will be used Hutchinson6. Annual period during which water is to be used April through October

7. 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.
NE 1/4 SE 1/4, Sec. 32-98-58	40
N 1/2 SE 1/4 SE 1/4, Sec. 32-98-58	23.40

Land Description	No. Acres Irr.
NW 1/4 SW 1/4, Sec. 33-98-58	40
NE 1/4 SW 1/4, Sec. 33-98-58	40
N 1/2 SW 1/4 SW 1/4, Sec. 33-98-58	10.80
SE 1/4 SW 1/4, Sec. 33-98-58	21

Attach sheet if more space is needed

8. Give a brief description of proposed project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

Plan on using traveling gun on 175.20 acres for irrigation

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map (see instruction)

STATE OF SOUTH DAKOTA
County of HUTCHINSON ssI, Lloyd G. Sorlien the applicant, certify that I have read the foregoing application, 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 Lloyd G. SorlienSubscribed and sworn to before me this 9th day of January 1984

GLENDA ZEEB

Notary Public (or other qualified officer)

WATER PERMIT

The Water Management Board hereby approves Water Permit Application No. 4998-3
Lloyd G. Sorlien RT. 2, Box 209 Scotland
(Applicant) (Post Office Address)
South Dakota 57059 With the following qualifications.
(State) (Zip Code)

The irrigation well approved under this Permit will be located near domestic wells and other 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 adequate wells having prior water rights.

This permit is approved subject to the irrigation water use questionnaire being submitted each year.

Date of first-receipt of application November 23, 1983
 Date of return to applicant for correction, amendments or changes required November 29, 1983
 Date of receipt of corrected application January 10, 1984 Approved April 25, 1984

The Water Management Board hereby approves this Water Permit No. 4998-3 authorizing the construction of the water use system and the placing of water to beneficial use as stated in the Application and as qualified in the Water Permit approval, subject, however, to the following limitations and conditions:

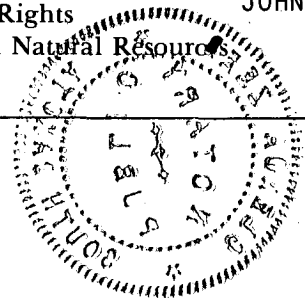
1. The date from which applicant may claim right is November 23, 1983.
2. One-fifth of the work is to be completed on or before September 25, 1986.
3. The whole of said work is to be completed on or before April 25, 1989.
4. The time limit for proof of beneficial use of water is April 25, 1993.
5. The 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 unlawfully impaired by this appropriation.
7. The amount of the appropriation herein granted shall not exceed 2.50 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. For irrigation purposes said appropriation must be limited to not more than 2 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 April 25, 1993; said water to be used during the following described annual period: April 1st to October 31

WATER MANAGEMENT BOARD

By: John Hatch
Chief Engineer
 Division of Water Rights
 Dept. of Water and Natural Resources

JOHN HATCH

May 3, 1984



Supplemental Information

(type or print in ink)

1. Well Information - Proposed construction

- a) Drill Hole Diameter 2 inch Depth 245'
- b) Casing Type PVC Diameter 2 inch Thickness Sch 80
- c) Screen Type PVC Diameter 2 inch Thickness 65'
- d) Gravel Pack Thickness _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth of Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well:
- On applicants property _____ On property owned by others _____

2. Dugout Information Estimates

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam please give their name and address

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Outlet Dimensions:
Pipe diameter _____

Spillway width _____

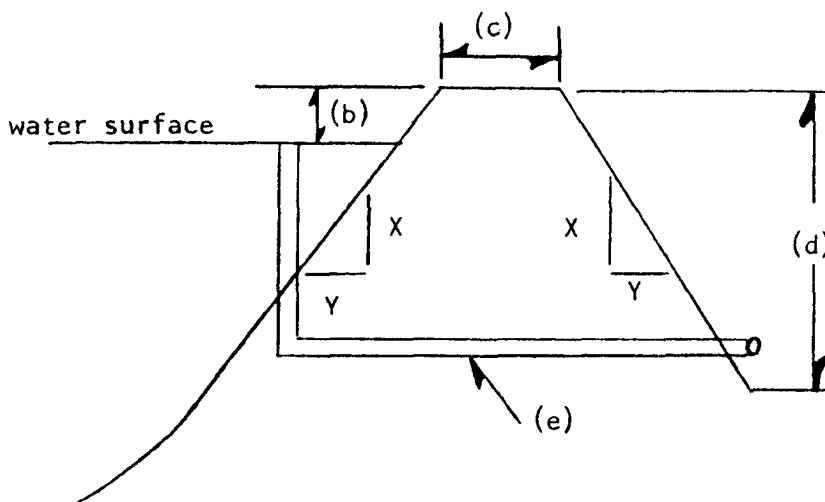
f) X & Y Slope
Upstream _____

Downstream _____

Surface Area of Impoundment _____

Storage _____ acre feet

Drainage area above dam _____



x Lloyd S. Lorien
Signature of Applicant

D Well Information

- (1) Drill Hole, Diameter 2 inch, Depth 245'
- (2) Casing, Type PVC SCH 80, Diameter 2 inch, Thickness SCH 80
(wood, concrete, steel, etc)
- (3) Screen, Type PVC, Diameter 2 inch, Length 65'
- (4) Gravel Pack, Thickness _____, Length of gravel pack _____

E. Dugout Information or Estimates

- (1) Surface dimensions, _____, Depth _____

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

- (1) Water Bearing Materials. (Attach a copy of test well log)

Depth to top of water bearing material _____

Depth to bottom of water bearing material _____

Depth to water (ground surface to water level) _____

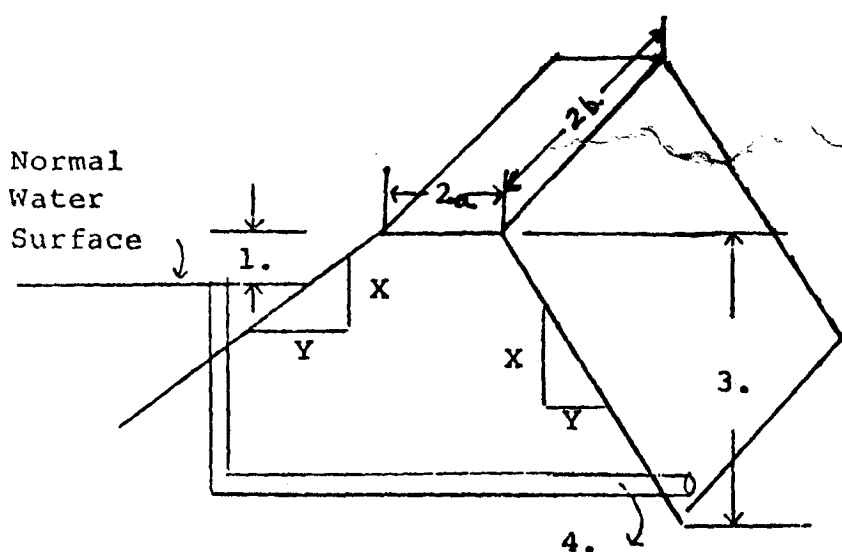
- (2) Distance to nearest existing household or livestock watering well.

On same owner's property _____ rds.

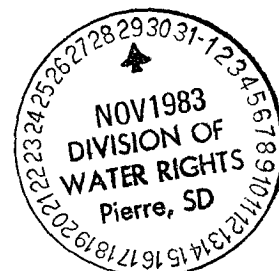
On property owned by others _____ rds.

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, length, maximum water depth, surface area, drainage area, storage capacity, dam slope, dimensions, location and size of outlet works, of each storage dam. The location of each water storage dam should be shown on the water right map.



1. Freeboard _____
2. Crest width _____ b. length _____
3. Height of Dam _____
4. Outlet dimensions:
 - Pipe diameter _____
 - Spillway width _____
- X & Y slope:
 - Upstream _____
 - Downstream _____
- Surface area of impoundment _____
- Drainage area above dam _____



WNR-802A0-7/79

Lloyd Sorlien
Signature of Applicant

COUNTY: HUTCHINSON

LOCATION: 098N-58W-33CCBB

LEGAL LOCATION: NW NW SW SW SEC. 33, T. 098 N., R. 58 W.

LATITUDE: 43.1535

LONGITUDE: 97.4302

LAND OWNER:

PROJECT: HUTCHINSON COUNTY STUDY

DRILLING COMPANY: SDGS

DRILLER: L. HELSETH

GEOLOGIST: G. DUCHOSSOIS

DRILLER'S LOG:

GEOLOGIST'S LOG: x

DATE DRILLED: 09-12-1983

DRILLING METHOD: ROTARY

E-LOG: YES SAMPLES: YES

GROUND SURFACE ELEVATION: 1298.00

TOTAL DRILL HOLE DEPTH: 260.0

TEST HOLE NUMBER: R1-83-131

SDGS WELL NAME: R1-83-131

WATER RIGHTS WELL NAME:

Basin: JAMES

AQUIFER: LOWER-JAMES-MISSOURI

MANAGEMENT UNIT: JAMESVILLE

SCREEN TYPE: PVC AND PVC, MFG.

SCREEN LENGTH: 65.0

CASING TYPE: PVC, SCH 80

CASING DIAMETER: 2.0

CASING TOP ELEVATION: 1302.00 T

CASING STICK-UP: 4.0

TOTAL CASING AND SCREEN: 245.0

WELL MAINTENANCE DATE: 09-13-1983

E-LOG: SPONTANEOUS POTENTIAL. 5 FOOT SANDPOINT
WITH 60 FEET OF SLOTTED PIPE IMMEDIATELY ABOVE
IT. BACKFLUSHED WITH CLEAN WATER. BACKFILLED
WITH SAND CUTTINGS. BLOWN CLEAN WITH AIR.
TSCHETTER COLONY QUADRANGLE.

0 -	67	CLAY, GRAY, SILTY, SANDY, PEBBLY (TILL)
67 -	97	SAND, COARSE; SOME MEDIUM SAND AND VERY FINE PEBBLES; MOSTLY QUARTZ WITH MULTI- COLORED EXOTICS AND SEDIMENTARY ROCKS INCLUDING COAL PEBBLES (WESTERN DERIVED ALLUVIUM)
97 -	106	GRAVEL, FINE PEBBLES TO COBBLES; WIDE VARIETY OF ROCK TYPES
106 -	133	SAND, FINE TO MEDIUM; MOSTLY QUARTZ WITH MULTI-COLORED EXOTICS AND SEDIMENTARY ROCKS; COARSE SAND WITH SOME FINE PEBBLES BELOW 125 FEET; SAMPLE TAKEN AT 130 FEET (WESTERN DERIVED ALLUVIUM)
133 -	144	CLAY, GRAY; NO GOOD CUTTINGS (TILL?)
144 -	180	SAND, COARSE, SOME FINE PEBBLE GRAVEL; SAND IS MOSTLY QUARTZ WITH SOME "WES- TERN" EXOTICS AND SEDIMENTARY ROCKS, PEBBLES ARE MOSTLY GLACIALLY DERIVED, WITH COAL; BOTTOM DEPTH APPROXIMATE
180 -	243	SAND AND GRAVEL, COARSE SAND TO VERY COARSE PEBBLE GRAVEL; SOME BOULDERS BELOW 235 FEET; SAME MATERIAL AS FROM 144 TO 180 FEET; SAMPLES TAKEN AT 220 AND 230 FEET; SOME THIN CLAY LAYERS
243 -	260	CLAYSTONE, GRAY, GREASY (CARLILE SHALE)

6.1	7.6	
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STATE OF SOUTH DAKOTA WELL DRILLERS REPORT

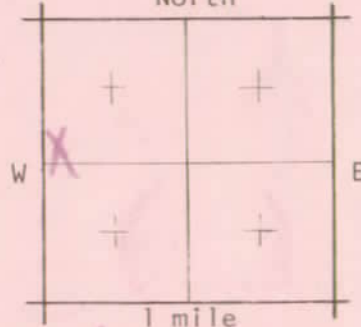
Location N-W 1/4 Sec 33 Twp 98 Rg 10-58

County

HUTCHINSON

North

Please mark well location with an "X"

Well Completion Date 7/24/84

PROPOSED USE:

☐ Domestic ☐ Municipal ☐ Test Holes
☒ Irrigation ☐ Industrial ☐ Stock

Method of Drilling:

REVERSE ROTARY

WELL CONSTRUCTION:

Diameter of hole 26 inches Depth feetCasing: ☐ Steel ☒ Plastic ☐ Other
Specify
 Pipe Weight Diameter From To
SDR 37 lb/ft 15 inches 0 feet 233 feet
 lb/ft inches feet feet
Was a well screen used? ☐ Yes ☒ NoIf Not Specify 40' SLOTTED PVCScreen Type Slot Size Length Diameter Was Casing left open end? ☐ Yes ☒ NoWas a Packer or seal used? ☐ Yes ☒ NoIf so what material? Was well gravel packed? ☒ Yes ☐ NoWas well grouted? ☐ Yes ☒ NoDescribe grouting procedure To what depth? FeetWhat was grouting material? If cement, how many sacks? Location of packer(s) and screen or perforated pipe WAS WELL PLUGGED OR ABANDONED ☐ Yes ☐ NoIf so how and with what material? Well Owner: LLOYD SORLIENName Address SCOTLAND SOUTH DAKOTA

Well Log:

Depth

Formation

From

To

TOP SOIL TOBACCO CLAY 0 17BLUE CLAY W/ PEBBLES 17 4330% PEBBLES + BLUE CLAY 43 71MED TO COARSE GRAVEL 71 98ROCKS 98 100MED COARSE GRAVEL 100 128SAND, GRAVEL 30% CLAY 70% 128 142MED TO COARSE GRAVEL 142 230COURSE GRAVEL + 230 240BOULDERS STATIC WATER LEVEL 70 FeetIf flowing: closed in pressure PSIGPM flow through inch pipeControlled by ☐ Valve ☐ Reducers ☐ OtherIf other; specify Can well be completely shut off?

WELL TEST DATA:

☒ Pumped 8' TURBINE PUMP☐ Bailed Describe: ☐ Other

Pumping Level Below Land Surface

75 ft. After 1/2 Hrs. pumped 800 GPM80 ft. After 1 Hrs. pumped 1200 GPM ft. After Hrs. pumped GPM

Remarks:

This well was drilled under license # 444

and this report is true and accurate.

CHRISTENSEN WELL CO. William Christensen

Drilling Firm

Signed by

7/28/84

Date

RECEIPT

Division of Water Rights

No 4 9426

South Dakota Department of Water and Natural Resources

Pierre, December 5, 1983

RECEIVED OF Lloyd G. Sorlien, RR#2, Box 209, Scotland, SD 57059

the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. 4993-3 to Appropriate Water, to construct works and to put water to beneficial use	250	00
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.		
Fee for Filing Transfer Form		
Fee for Filing Extension Request		
Fee for Certified Copy of		
Fee for Print Copy of Map		
Fee for Certifying		
Fee for (Any Other Work Provided by Law)		
Total	250	00

By

Chief Engineer

John Hatch
JOHN HATCH (ms)



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501

Water Rights Division
605 773-3352

November 29, 1983

Lloyd E Sorlien
RR 2, Box 209
Scotland SD 57059

Dear Mr. Sorlien:

The following information will be required before further processing of your application for a water permit.

1. Complete where indicated in red.
 - (2) If this amount is 400 gpm that is 0.89 cfs, the maximum allowable for 175.2 acres is 2.50 cfs,
 - (4) complete the exact location of the well and county,
 - (6) put months to be used,
 - (7) list each quarter section and acreage,

Also show exact location of well on your map and have your county agent or local SCS Conservationist sign the map. The soils information has been forwarded to the Dept. of Agriculture, Anderson Bldg., Pierre SD. Their office will contact you for further information needed.

Your check for \$25.00 is also enclosed. The fee for this application is \$250.00 (two hundred and fifty dollars).

To maintain your priority date of November 23, 1983 on your Application for Permit to Appropriate Water, in accordance with SDCL 46-5-16, you will now have 60 days from the date of this letter to correct your application and have the above information submitted to this office.

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

Sincerely,

BETTY WESTLUND
Natural Resources Analyst

BW:ks

enclosures

cc: Jim Stukel
Conservation Comm.



Department of Agriculture

DIVISION OF CONSERVATION

Anderson Building, Room 322 • Pierre, South Dakota 57501

Phone 605/773-3258

November 30, 1983

Lloyd Sorlien
RR 2, Box 209
Scotland, SD 57059



Dear Mr. Sorlien:

In reviewing your soil and water compatibility application for portions of SE $\frac{1}{4}$ 32 & SW $\frac{1}{4}$ 33-99-58, the irrigation staff is recommending a Conditional Approval of your application to the State Conservation Commission at their January 12, 1984 meeting. The Conditional recommendation is based on the clay content of the soils making the leaching of salts difficult. The Restrictions and Management Recommendations are as follows:

RESTRICTIONS:

The areas mapped as Betts-Ethan Loams (BeE) 15-40% slope is subject to a severe erosion hazard. This area shall be restricted from irrigation.

The areas mapped as Ethan-Betts loam (EtC2) 6 to 9% slopes eroded is subject to severe water erosion. These areas shall be restricted from irrigation.

The areas mapped as Tetonka silty clay loam (Te) and Tetonka-Whitewood silty clay loams (Tw) are subject to wetness and ponding. The larger areas in Sec 33 will require adequate drainage. We also recommend that these areas be maintained in grass to prevent trafficability problems.

MANAGEMENT RECOMMENDATIONS:

We recommend that a form of conservation tillage be used to control erosion. It is also recommended that the areas of Tetonka be maintained in permanent vegetation to avoid the potential drowning out of crops and trafficability problems. If these areas are cropped the use of a deep ripper may improve the water movement through these soils.

If you have any questions concerning your application please feel free to contact this office.

Sincerely,

Jim Stukel

Irrigation Program Administrator

January 5, 1984

Lloyd G. Sorlien
R.R. 2, Box 209
Scotland, S.D. 57059

Dear Mr. Sorlien:

Enclosed please find the typed application forms 2 and 2A for your signature and have notarized, as we discussed over the phone this date. The original copy of your application is also enclosed.

As stated to you as soon as we receive the soil/water compatibility approval from the State Conservation Commission further processing of your application will proceed.

Sincerely,

Betty Westlund
Natural Resource Analyst III

bw

Encl: Forms 2 and 2A and original application

Conversation or File Documentation

NAME OF PERSON OR FILE: Lloyd SorlienADDRESS: Scotland, SD. COUNTY HutchinsonDATE: 1-5-84 TELEPHONE 605-583-2594RE: Application for water permit.

COMMENTS:

Explained the mistakes in land description and told him I would send a new appl. for his signature. The mistake was found when checking over the application in preparation of writing up advertisement and SEC meeting.

Received corrected application 1/10/84

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: B. J. Westlund

SOIL/WATER COMPATIBILITY PERMIT APPLICATION FORM

Division of Conservation

Office Use Only

4067

WR#

OWNERS NAME: Lloyd Sorlien OWNERS ADDRESS: Scotland S.D.

COUNTY LAND LOCATED IN: Hutchinson PHONE: 513-2574

TENANT'S NAME AND ADDRESS: _____

LEGAL DESCRIPTION: (Show Legal Description to Nearest 10 Acres)

1. WELL LOCATION NW NW SW SW Sec 33 98-58
Depth 245'

2. SURFACE WATER SOURCE AND DIVERSION LOCATION: _____
Diversion Location _____

Legal Description	Acres	Legal Description	Acres
<u>NE $\frac{1}{4}$ SE $\frac{1}{4}$ 32-98-58</u>	<u>40</u>	<u>N $\frac{1}{2}$ SW $\frac{1}{4}$ 33-98-58</u>	<u>80</u>
<u>N $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ 32-98-58</u>	<u>23.40</u>	<u>N $\frac{1}{2}$ S $\frac{1}{2}$ SW $\frac{1}{4}$ 33-98-58</u>	<u>10.80</u>
<u>N $\frac{1}{2}$ S $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ 32-98-58</u>	<u>40</u>	<u>SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ 33-98-58</u>	<u>21</u>
			<u>175.20 ac</u>

3. SHOW ANY PORTION OF LAND THAT PRESENTLY HOLDS AN IRRIGATION PERMIT: YEAR OBTAINED _____

LEGAL DESCRIPTION: none

IN WHAT NAME: _____

4. LOCATION OF AREA TO BE IRRIGATED NOTE: SOILS INFORMATION FOR THIS AREA MUST ACCOMPANY THE APPLICATION. (See instruction sheet)

5. TYPE OF IRRIGATION: GRAVITY: _____ TOWLINE: _____ CENTER PIVOT: X GUN: X OTHER: _____ (Specify)

6. CROPS TO BE IRRIGATED: Corn, Alfalfa, Oats, Soybeans

WATER QUALITY: (TO BE COMPLETED BY SDSU WATER QUALITY LABORATORY)

7. WATER SAMPLE NUMBER: 83-0623 10. ADJUSTED (SAR): 2.22
8. SALINITY (EC X 10⁶): 1200 11. PERCENT SODIUM 13.18%
9. SODIUM (SAR): 0.83

I hereby certify that I personally obtained or that I personally observed that taking of a sample of the water to be used in irrigating the above-described land. I also hereby certify that the required procedures for the taking of the sample (see instruction sheet) were followed, and that the sample was taken at 10:00 a.m./p.m., on Nov. 1, 1983, at the following location: NW NW SW SW Sec 33-98-58 by (individual who took sample if other than applicant). I also hereby certify that the water sample taken has NOT been adulterated or tampered with in any manner, and is TRULY REPRESENTATIVE of the water which will be used in irrigating the above-described land.

Signature

I understand that the Division of Conservation or agents thereof may obtain water samples from wells and surface bodies to be used for irrigation purposes to validate water samples taken at the time of application. The Department of Agriculture may also gather technical information necessary to protect the land. (46-5-6.4).

SUBSCRIBED AND SWORN BEFORE ME THIS

DAY OF November, 1983.

(NOTARY PUBLIC)

APPLICANT'S SIGNATURE

Director, Division of Conservation

Date

APPROVED

DISAPPROVED

CONDITIONALLY APPROVED

IMPORTANT
Action by the Department of Agriculture or the State Conservation Commission is not the final action on any application. In all cases a WATER RIGHT must be obtained from the Board of Water Management, Foss Building, Pierre.

Conditional soil/water permits will be recorded by the Department of Agriculture, with the County Register of Deeds.

Conditional Approval

44067

SOUTH DAKOTA DEPARTMENT OF AGRICULTURE
DIVISION OF CONSERVATION

NAME OF APPLICANT: Lloyd SorlienLEGAL DESCRIPTION: Portions of S24 32; S24 33-38-58SOIL RESTRICTIONS:THE SOIL(S) LISTED BELOW CANNOT BE IRRIGATED:

The area mapped as Betts-Ethan Loams (BaE) 15-40% slope is subject to a severe erosion hazard. This area shall be restricted from irrigation.

The areas mapped as Ethan-Betts loam (EbC2) 6 to 9% slopes eroded is subject to severe water erosion. These areas shall be restricted from irrigation.

THE SOILS(S) LISTED BELOW CAN BE IRRIGATED
WITH THE FOLLOWING RESTRICTIONS:

The areas mapped as Tetonka silty clay loam (Te) and Tetonka-Whitewood silty clay loams (Tw) are subject to wetness and ponding. The larger areas in Sec 33 will require adequate drainage. We also recommend that these areas be maintained in grass to prevent trafficability problems.

RECOMMENDED MANAGEMENT:

We recommend that a form of conservation tillage be used to control erosion. It is also recommended that the areas of Tetonka be maintained in permanent vegetation to avoid the potential drowning out of crops and trafficability problems. If these areas are cropped the use of a deep ripper may improve the water movement through these soils.

Lloyd M. Sorlien
SIGNATURE1-10-84
DATE



REPORT ON WATER PERMIT APPLICATION NO. 4998-3

LLOYD G. SORLIEN

March 8, 1984

Water Permit Application No. 4998-3 proposes to divert 2.5 cfs from one 245 feet deep well to irrigate 175.2 acres in Hutchinson County (SE 1/4 S.32 and SW 1/4 S.33, T98N, R58W). The proposed water source is the Lower James - Missouri Aquifer.

Discussion

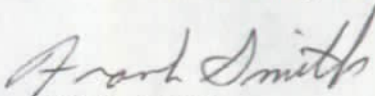
The Lower James-Missouri Aquifer is a glacial aquifer which covers 264,500 acres in Clay, Hutchinson, Bon Homme, and Yankton Counties and contains an estimated 3,906,050 acre feet of recoverable water in storage.¹ Annual appropriation from the aquifer is currently 16,476 acre feet, which is 0.4% of the estimated recoverable storage.² Maximum annual use of water from the aquifer was 1,954 acre feet in 1981.³

The proposed well location is over four miles from the nearest existing permit in the Lower James-Missouri Aquifer. Interference with existing irrigation wells will not be a problem if this application is developed.

Water Rights observation well No. HT-83D is located within a few hundred feet of the proposed well location.⁴ The log of HT-83D indicates the Lower James-Missouri Aquifer is composed of coarse sand and gravel approximately 165 feet thick and is under water table conditions in this area.

Conclusions

1. Unappropriated water is available for Water Permit Application No. 4998-3.
2. If developed, Application No. 4998-3 will not cause interference problems with existing irrigation wells or adequate domestic wells.



FRANK SMITH
Water Resources Engineer

References

1. Hedges, Burch, Iles, Barari, Schoon, "Evaluation of Ground Water Resources, Eastern South Dakota and Upper Big Sioux Basin South Dakota and Iowa", SDGS, Vermillion, 1982.
2. Water Rights Files, Dept of Water & Natural Resources, Div of Water Rights, Pierre SD, 1984.
3. Irrigation Questionnaire File, Div of Water Rights, Pierre SD, 1984.
4. Observation Well File, Div. of Water Rights, Pierre, 1984.

RECOMMENDATION OF CHIEF ENGINEER FOR WATER
PERMIT APPLICATION NO. 4998-3, Lloyd G Sorlien

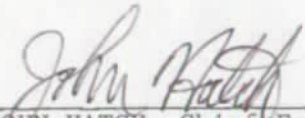
Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Water and Natural Resources concerning Water Permit Application No. 4998-3, Lloyd G Sorlien RR 2, Box 209, Scotland SD.

The Chief Engineer is recommending APPROVAL of Application No. 4998-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) in the public interest with the following qualifications:

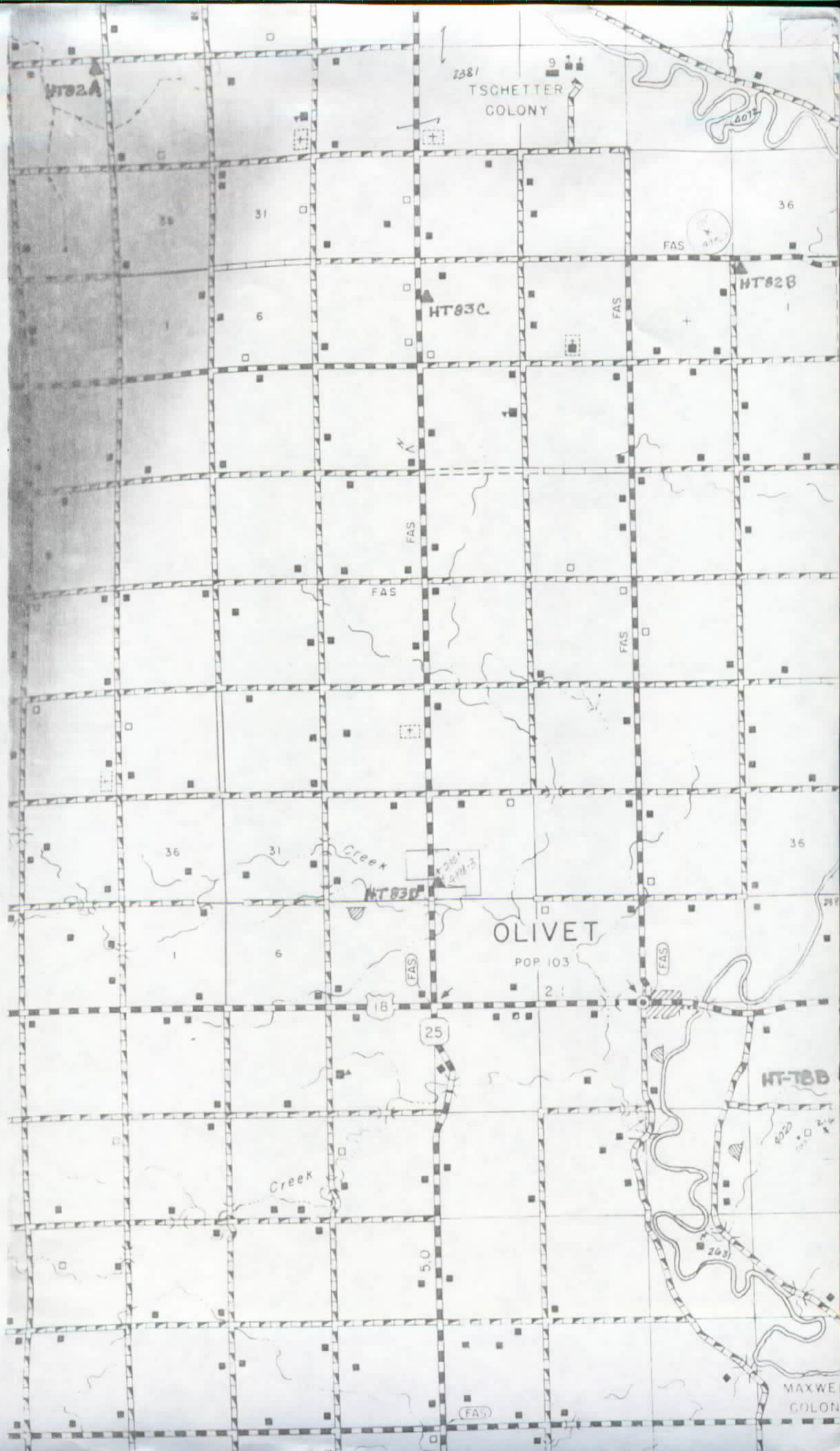
The irrigation well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The irrigation well owner, under this Permit shall control his irrigation withdrawals so there is not a reduction of needed water supplies in adequate domestic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

This permit is approved subject to the irrigation water use questionnaire being submitted each year.

See the attached report for additional information.



JOHN HATCH, Chief Engineer
March 8, 1984



Instruction to Newspaper - Publish first publication of the following Notice on or before March 15, 1984 with 2nd publication 1 week later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 4993-3 to Appropriate Water and/or to Amend Water Permit or Water Rights No. _____

Notice is hereby given that Lloyd G. Sorlien whose mailing address is RR#2, Box 209, Scotland, South Dakota has made an application for a permit to appropriate 2.50 cubic feet per second from groundwater, one well 245' deep. The point of diversion is to be located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$, Section 33-T98N-R58W. The water is to be used for irrigation of 175.20 acres in the NE $\frac{1}{4}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 32 and SW $\frac{1}{4}$, Section 33 all in T98N-R58W.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Division recommends APPROVAL of Application No. 4993-3 because 1) unappropriated water is available, 2) will be no unlawful impairment of existing rights, 3) is beneficial use of water and 4) is in the public interest.

This application will be considered by the Water Management Board at Foss Building, 523 E. Capitol, Pierre, South Dakota, April 25, 19 84 at 10:00 am.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to make a determination on this application after it reaches a conclusion based upon facts presented at the public hearing. Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the Applicant and the Chief Engineer by April 13, 1984. The petition may be informal, but it must include a statement describing the petitioner's interest in the application, the reason for the petitioner's opposition to or support of the application, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The applicant need not file a petition.

This application is made pursuant to the provisions of SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17, 46-5-1 thru 46-5-16, 46-5-24, 46-5-25, 46-5-30.2, 46-5-31; 46-2A-1 thru 46-2A-10, 46-2A-12; (ground) 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14; (future use) 46-5-38 thru 46-5-40; (transfer lands) 46-5-30.4, 46-5-33 thru 46-5-35; (10,000 AFA) 46-5-20.1, 46-5-8.1; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15; (future use) 74:02:01:24 thru 74:02:01:25; (10,000 AFA) 74:02:01:15:02 thru 74:02:01:15:05.

This hearing is an adversary proceeding. The applicant or any person, after filing a petition, 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. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this application or to assure access to the hearing by the handicapped can contact the Water Rights Division, DWRN, Joe Foss Bldg, Pierre SD (605 773-3352) for assistance prior to the hearing date. The time of the hearing will be automatically extended for at least twenty days upon written request of the applicant or any person who has filed a petition to oppose or support the application. The request for extension must be filed with the Chief Engineer by April 13, 1984.

No. 4993-3

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County Hutchinson) ss.

I, Judy Headley hereby
certify that the annexed printed copy of Notice of Intent to Appropriate
Water was taken from the Hutchinson Herald

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 Menna

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

March 15, 1984
March 22, 1984

Judy Headley
(Signature)
Bookkeeper
(Title)
3/22/84
(Date Signed)



Cost of Printing: \$135.14

NOTICE OF HEARING
On Application No. 4993-3
To Appropriate Water

Notice is hereby given that
Lloyd G. Sorlien, whose mailing
address is R.R. #2, Box 209,
Scotland, S. Dak., has made an
application for a permit to ap-
propriate 2.50 cubic feet per
second from groundwater, one
well 245' deep. The point of
diversion is to be located in the
NW $\frac{1}{4}$ SW $\frac{1}{4}$, Section 33-T98N-
R58W. The water is to be used
for irrigation of 175.20 acres in
the NE $\frac{1}{4}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$,
Section 32 and SW $\frac{1}{4}$, Section
33 all in T98N-R58W.

Pursuant to SDCL 46-2A-2
the Chief Engineer of the Water
Rights Division recommends
Approval of Application No.
4993-3 because 1. unappropriat-
ed water is available, 2. will be
no unlawful impairment of exist-
ing rights, 3. is beneficial use
of water, and 4. is in the public
interest.

This application will be con-
sidered by the Water Manage-
ment Board at Foss Building,
523 E. Capitol, Pierre, S. Dak.,
April 25, 1984, at 10:00 a.m.

The recommendation of the
Chief Engineer is not final or
binding upon the Board and the
Board is authorized to make a
determination on this applica-
tion after it reaches a conclu-
sion based upon facts presented
at the public hearing. Any in-
terested person who may be
affected by a Board decision
and who intends to participate
in the hearing before the Board
and present evidence or cross-
examine witnesses according to
SDCL 1-26, must file a written
petition with BOTH the Appli-
cant and the Chief Engineer by
April 13, 1984. The petition
may be informal, but it must in-
clude a statement describing
the petitioners interest in the
application, the reason for the
petitioner's opposition to, or
support of the application, and
the signature and mailing ad-
dress of the petitioner or his
legal counsel if legal counsel is
obtained. The applicant need
not file a petition.

This application is made pur-
suant to the provisions of SDCL
46-1-1 thru 46-1-9, 46-1-12 thru
46-1-15; 46-2-3.1, 46-2-9, 46-2-

11, 46-2-13, 46-2-17, 46-5-1 thru 46-5-16, 46-5-24, 46-5-25, 46-5-30.2, 46-5-31; 46-2A-1 thru 46-2A-10, 46-2A-12; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.

This hearing is an adversary proceeding. The applicant or any person, after filing a petition, 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. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this application or to assure access to the hearing by the handicapped can contact the Water Rights Division, DWNR, Joe Foss Building, Pierre, S. Dak. (605 773-3352) for assistance prior to the hearing date. The time of the hearing will be automatically extended for at least twenty days upon written request of the applicant or any person who has filed a petition to oppose or support the application. The request for extension must be filed with the Chief Engineer by April 13, 1984.

(Publish March 15 & 22, 1984)



Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501

WATER RIGHTS DIVISION
(605) 773-3352

4998-3

May 7, 1984

Lloyd G. Sorlien
RR#2, Box 209
Scotland, South Dakota 57059

Dear Mr. Sorlien:

Enclosed herewith is your Water Permit No. 4998-3 as approved by the Water Management Board authorizing you to construct your water diversion system and the water to beneficial use, not exceeding the limits as specified in said Water Permit No. 4998-3.

Also enclosed is Form 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the system and/or have put the water to beneficial use. An inspection can then be scheduled so that your Water License may be issued to you, thus completing your acquisition of a Water Right.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division

JH:ms

enclosure

PLEASE NOTE: Certain changes can be made in your permit within the five year construction period, usually without affecting the priority date provided an application to amend your permit is made within the five year period-i.e. changes in location or number of diversion points (wells) or location of land to be irrigated. Well locations for wells into the same aquifer can be moved up to 660 feet without application.

Applications to amend a permit after the five year construction period will be assigned a new priority date. Applications to change water sources, to add lands or increase original diversion rates, if approved will usually receive the date of the new application as a priority date regardless of the five year construction period.

WNR-809-5/83

No. 4998-3



NOTICE OF COMPLETION OF WORKS AND/OR
APPLICATION OF WATER TO BENEFICIAL USE

Post Office Scotland S.D.

Date Mar. 15, 1988

TO: Water Rights
Joe Foss Building
Pierre, South Dakota 57501

Dear Sirs:

This is to inform you that I have completed the construction of the water diversion system and/or that I have put the water to beneficial use to maximum extent it is going to be used, not exceeding the amounts as specified in Water Right No.

4998-3.

Water Right Permit No. 4998-3 states that the diversion system is to be constructed by April 25, 1989, and that the water is put to beneficial use by April 25, 1993.

The diversion system was completed on April 25, 1985. Applying the water to beneficial use was completed on April 25, 1986.

You may schedule an inspection so that ~~the Certificate of Construction and/or~~ the Water License may be issued, thus completing my acquisition of a water right.

Lloyd Sorlien
(Signature)

RR-2 Box 209
Scotland SD 57059

Report Of Examination Of Works And/Or Application Of Water To Beneficial Use

I have this day made a thorough examination of the water use system constructed by Lloyd G. Sorlien
_____ of RR 2, Box 209, Scotland, SD 57059 holder of
Permit No. 4998-3, bearing the priority of November 23 1983 authorizing
the diversion of 2.50 cu. ft. per second of the waters of groundwater
for irrigation purposes, in Hutchinson County.


(signature)

LICENSE FOR PERMIT NUMBER 4998-3 Lloyd G. Sorlien

1. Legal location of wells: at a point located 970 feet south and 2,580 feet west of the
center of section 33, T98N R58W

dams & structures: _____

2. Well Information: Well Drilling Firm Christensen Well Co.

Completion Report Yes x No _____ No. of Wells 1 Depth 233 feet

Casing a) diameter 15 inch Screen a) type slotted PVC

b) length 193 feet b) length 40 feet

c) type PVC Static Water Level 70 feet

Pump a) make Western Land Roller Motor a) make PTO, International Turbo.

b) model Serial No. 8405802 b) model No. Diesel, 1066 Farmall

c) size 12C bowl, H impeller c) horsepower rating tractor motor 100 HP

d) capacity run at 800 gpm Run at 1400 rpm but rated at 1800 rpm

e) turbine pump - no. of stages 5

f) operating PSI 65 to 75

3. Distribution lines or canals

a) size 8 inch , 6 inch

b) type PVC , Aluminum

c) length 1,310 feet, 1,030 feet

4. Dam Information:

a) height to crest _____ m) Outlet tubes:

b) height to primary spillway _____ 1) diameter _____

c) height to secondary spillway _____ 2) type _____

d) crest width _____ 3) valved (Y/N) _____

e) crest length _____ 4) valve type _____

f) spillway length _____ 5) location on structure _____

g) spillway width _____

h) approx. storage _____ n) Category of Dam _____

i) approx. storage to crest _____

j) date constructed _____

k) inspection sheet completed (Y/N) _____

l) Name of Contractor _____

5. System Type a) sideroll:

- 1) length _____ feet
- 2) diameter of pipe _____
- 3) make, model & number of sprinklers _____
- 4) spacing of sprinklers _____
- 5) nozzle size _____

c) gun

- 1) make _____
- 2) nozzle size _____
- 3) capacity (GPM) _____
- 4) hose size _____
- 5) hose length _____

e) gated pipe

- 1) length _____
- 2) diameter _____
- 3) spacing of gates _____

f) portable boom

- 1) make _____
- 2) nozzle size _____
- 3) capacity (GPM) _____

b) towline:

- 1) length _____ feet
- 2) make, model & number of sprinklers _____
- 3) spacing of sprinklers _____
- 4) nozzle size _____

d) center pivot two pivots (run one at a time)

- 1) make @Hydromatic, *Zimmatic _____
- 2) number of towers @3, *7 _____
- 3) distance between towers @213, *187 _____
- 4) overall length @650', *1345' _____
- 5) end gun (Y/N) yes _____
- 6) high or low pressure high _____
- 7) make & size of nozzles _____

- 8) capacity (GPM) 800 _____

g) siphons @ denotes SE $\frac{1}{4}$ section 32, T98N R58W

- * denotes SW $\frac{1}{4}$ section 33, T98N R58W
- 1) size _____
- 2) number _____

NOTE:

For Permits with additional wells or changes in well locations, record the following for each well: pumping capacity, date constructed, well driller and if a well log is available.

Indicate any other permit(s) which are associated with project none

Yes	No	Check Items
<u>X</u>	___	1. Soil and water permit lands agree with lands being irrigated and lands listed on permit?
<u>X</u>	___	2. Special qualifications to permit being abided by?
<u>X</u>	___	3. All structures, wells and lands on map?
<u>X</u>	___	4. Irrigation Questionnaires checked to determine if permit owner started irrigation by end of construction period?
___	<u>X</u>	5. Is chemigation used?
<u>NA</u>	___	6. If yes, does equipment comply with chemigation rules?

REMARKS:

NOT TO SCALE

98-58

77.0 T28347

Prepared by David Brown
Natural Resources Engineer 73.4
DWR, Water Rights Division

Water Right No. 4998-3
2/5/90

7. 78123

15.9

45.9

Hand-drawn map of a 100-acre tract, divided into three sections. The tract is bounded by a purple line. The sections are labeled as follows:

- Section 1 (Top Left):** 34 acres. Contains a well and a 1310' PVC line. Other labels include 21.2, 14.2, 61.6, T2795, 87, 1.0, and 4.0.
- Section 2 (Top Right):** 35 acres. Contains a 2580' line.
- Section 3 (Bottom):** 17 acres. Contains a CRP area.

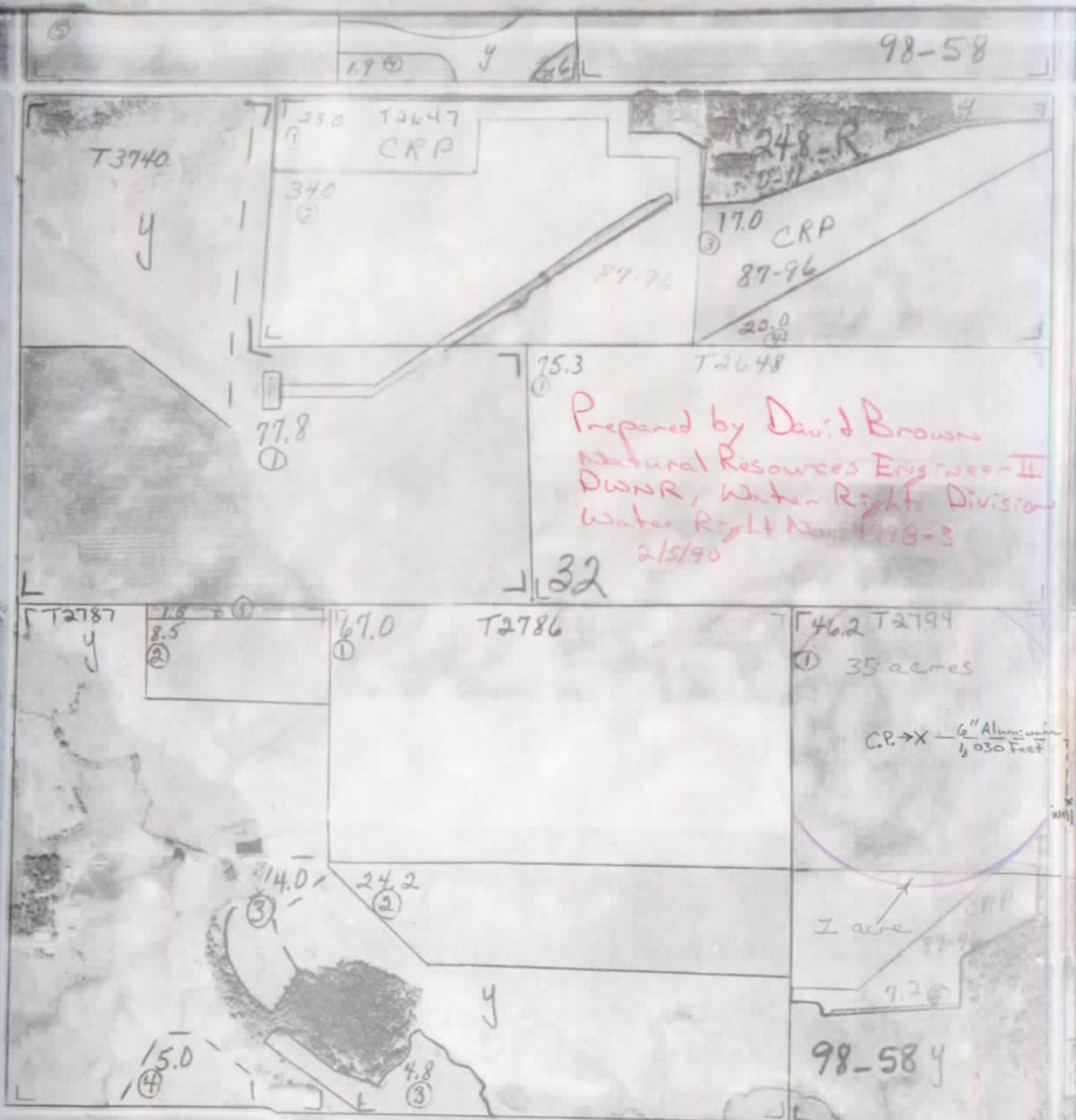
The map also shows a dashed line labeled "8" PVC 1,310'" and a point labeled "C.P.". The total area is 100 acres.

98-58

Scale 1" = 656 Ft.
2/5/90 DMR

Water Right
No. 4998-3 (182)

NOT TO SCALE





Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

February 7, 1990

4998-3

Lloyd G Sorlien
RR #2 Box 209
Scotland, SD 57059

Dear Mr. Sorlien:

The inspection of your water use system and the inspection of the extent of the application of water to beneficial use, as developed under your Water Permit No. 4998-3 has been completed. Your final water right document, the Water License, can now be issued.

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

South Dakota Water Law 46-5-30.1 requires that a permit holder may not divert water until this \$50.00 license fee has been paid. Please contact us if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "Genny McMath".

GENNY MCMATH
Natural Resources Analyst
(605) 773-3352

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



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

APR 6 1990

4998-3

Lloyd G. Sorlien
RR 2, Box 209
Scotland SD 57059

Dear Mr. Sorlien:

Enclosed is Water License No. 4998-3. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 412130 in the amount of \$50.00 which you paid for the inspection 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. 4998-3, 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.

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,

A handwritten signature in cursive script, appearing to read "John Hatch".

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

enclosures

RECEIPT

Division of Water Rights

South Dakota Department of Water and Natural Resources

412100

Pierre, March 9, 1990

RECEIVED OF Lloyd & Geneva Sorlein, RR #2 Box 209, Scotland, SD 57059

the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct works 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. <u>Water Permit No. 4990-3</u>	50	00
Fee for Filing Transfer Form <u>Water Permit No. 4990-3</u>	50	00
Fee for Filing Extension Request _____		
Fee for Certified Copy of _____		
Fee for Print Copy of Map _____		
Fee for Certifying _____		
Fee for _____		
(Any Other Work Provided by Law)	Total	50 00

By John Hale / [Signature]
Chief Engineer

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 4998-3

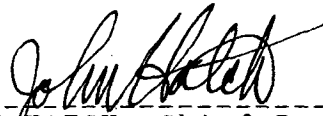
(1) Lloyd G. Sorlien of RR 2, Box 209, Scotland SD 57059 made Application No. 4998-3, November 23, 1983 for a water permit to appropriate 2.50 cubic feet of water per second from groundwater (one well), Hutchinson County, South Dakota for irrigation purposes. Permit No. 4998-3 with a priority date of November 23, 1983 was approved April 25, 1984 and issued to applicant(s) for diversion of water with construction of the described water supply system to be completed on or before April 25, 1989 and for the application to beneficial use of said water on or before April 25, 1993.

(2) It is certified that the applicant 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 1.74 cubic feet of water per second for beneficial use. The location of the diversion point is: at a point located 970 feet south and 2,580 feet west of the center of Section 33, T98N, R58W.

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

T98N, R58W Section 32	NE 1/4 SE 1/4	35 acres
	SE 1/4 SE 1/4	1 "
Section 33	NW 1/4 SW 1/4	34 "
	NE 1/4 SW 1/4	35 "
	SE 1/4 SW 1/4	17 "
	TOTAL	122 acres

(4) Pursuant to Section 46-5-30.1 Lloyd G. Sorlien of RR 2, Box 209, Scotland SD 57059 the holder(s) and/or owner(s) of Water Permit No. 4998-3 is issued a license to appropriate water, the right to use 1.74 cubic feet of water per second from groundwater (one well) with a priority date of November 23, 1983 from the location specified in (2) of this license. The water is 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 Permit No. 4998-3 and subject to South Dakota State Law.



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

APR 6 1990

2000 WATER MANAGEMENT BOARD IRRIGATION QUESTIONNAIRE
Please fill out and return before December 1, 2000

4998-3
LLOYD G SORLIEN
28482 424TH AVE
SCOTLAND SD 57059 6500

CHANGES TO ADDRESS LABEL, IF ANY:

Telephone No. 605-583-2594

COMPLETE AND RETURN THIS FORM TO THE WATER RIGHTS PROGRAM AT 523 E CAPITOL, PIERRE, SD 57501-3181 (605) 773-3352

1. Is the system constructed? *yes X no _____

*Type of system used (check all that apply):

center pivots 2 towlines _____ big gun _____

flood _____ sprinklers _____ other _____

2. Did you irrigate in 2000? *yes X **no _____

*If yes, number of acres irrigated 130

**If no, list reason(s) in comment section:

3. Source of water: well

4. Is land enrolled in CRP? *yes _____ no X

*If yes, through what year? _____

5. Did you apply chemicals or fertilizer through the system in 2000? *yes _____ no X

* If yes, a separate chemigation form is NOT needed.

Comment Section:

could you send me a copy of the static levels on your well next to mine for 2000. thank you
Lloyd G. Sorlien

Office use only



The portion of the form for reporting acres irrigated is on the back of this page. Listed below are two examples of how to complete the form:

EXAMPLE 1: In June & July, 130 acres were irrigated using a pivot system (70 acres of corn & 60 acres of alfalfa). The pump rate of the pivot is 800 gallons per minute and you pumped 8 days (@ 24 hours per day) on the corn and 22 days on the alfalfa:

MONTH	CROP	ACRES	PUMP RATE	# DAYS	AVE/HRS DAY
JUNE	CORN	70	800 GPM	8	24
	ALFALFA	60	800 GPM	10	24
JULY					
	ALFALFA	60	800 GPM	12	24

EXAMPLE 2: In June, 40 acres of alfalfa were irrigated (using gated pipe @ 3000 gpm) for 5 days - 24 hours per day; 60 acres of beans were irrigated (using big gun @ 380 gpm) for 10 days at 24 hours per day:

JUNE	ALFALFA	40	3000 GPM	5	24
	BEANS	60	380 GPM	10	24

For ease in calculating water use, please specify if actual irrigation hours or kilowatt hours are being reported. For kilowatt hours, include depth to water & system pressure in comment section.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

October 26, 2000

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland, SD 57059-6500

Dear Mr. Sorlien:

Thank you for the prompt return of your 2000 irrigation questionnaire.

Enclosed as you requested is a copy of the static water levels for observation well HT-83D. If you have any questions, please get in touch with us.

Sincerely,

Genny McMath
Environmental Scientist
Water Rights Program
(605) 773-3352

enclosure



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.denr.sd.gov

October 23, 2012

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland SD 57059 6500

Dear Mr. Sorlien:

Thank you for the prompt return of your 2012 irrigation questionnaire.

Enclosed as you requested is a graph of Observation Well HT-83D. If you have any questions, please give us a call.

Sincerely,

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosure



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.denr.sd.gov

October 28, 2013

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland SD 57059 6500

Dear Mr. Sorlien:

Thank you for the prompt return of your 2013 irrigation questionnaire.

Enclosed as you requested is a graph of Observation Well HT-83D. If you have any questions, please call and ask for Adam Mathiowetz within our program.

Sincerely,

A handwritten signature in cursive script that reads "Genny McMath".

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosure



**DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



October 23, 2014

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland SD 57059 6500

Dear Mr. Sorlien:

Thank you for the prompt return of your 2014 irrigation questionnaire.

Enclosed as you requested is a graph of Observation Well HT-83D. If you have any questions, please call and ask for Adam Mathiowetz within our program.

Sincerely,

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosure



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

November 2, 2015

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland SD 57059 6500

Dear Mr. Sorlien:

Thank you for the prompt return of your 2015 irrigation questionnaire.

Enclosed as you requested is a graph of Observation Well HT-83D. If you have any questions, please call and ask for Adam Mathiowetz within our program.

Sincerely,

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosure



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.denr.sd.gov

November 1, 2016

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland SD 57059 6500

Dear Mr. Sorlien:

Thank you for the prompt return of your 2016 irrigation questionnaire.

Enclosed as you requested is a graph of Observation Well HT-83D. If you have any questions, please call and ask for Adam Mathiowetz within our program.

Sincerely,

A handwritten signature in cursive script that reads "Genny McMath".

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosure



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.denr.sd.gov

October 30, 2017

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland SD 57059 6500

Dear Mr. Sorlien:

Thank you for the prompt return of your 2017 irrigation questionnaire.

Enclosed as you requested is a graph of Observation Well HT-83D. If you have any questions, please call and ask for Adam Mathiowetz within our program.

Sincerely,

A handwritten signature in cursive script that reads "Genny McMath".

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosure

4998-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.denr.sd.gov

November 5, 2018

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland SD 57059 6500

Dear Mr. Sorlien:

Thank you for the prompt return of your 2018 irrigation questionnaire.

Enclosed as you requested is a graph of Observation Well HT-83D. The information contained on the graph is still preliminary and subject to staff review.

If you have any questions, please call and ask for Adam Mathiowetz within our program.

Sincerely,

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosure

4998-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.denr.sd.gov

October 29, 2019

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland SD 57059 6500

Dear Mr. Sorlien:

Thank you for the prompt return of your 2019 irrigation questionnaire.

Enclosed as you requested is a graph of Observation Well HT-83D. There were not as many well readings in 2019 as in previous years due to the flooding. The information contained on the graph is still preliminary and subject to staff review.

If you have any questions, please call and ask for Adam Mathiowetz within our program.

Sincerely,

A handwritten signature in cursive script that reads 'Genny McMath'.

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosure

4998-3



DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

November 9, 2020

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland SD 57059 6500

Dear Mr. Sorlien:

Thank you for the prompt return of your 2020 irrigation questionnaire.

Enclosed as you requested is a graph of Observation Well HT-83D. The information contained on the graph is still preliminary and subject to staff review.

If you have any questions, please call and ask for Adam Mathiowetz within our program.

Sincerely,

A handwritten signature in cursive script, appearing to read "Genny McMath".

Genny McMath
Water Rights Program
605 773-3352
Genny.mcmath@state.sd.us

enclosure

4998-3



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

November 2, 2021

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland SD 57059 6500

Dear Mr. Sorlien:

Thank you for the prompt return of your 2021 irrigation questionnaire.

Enclosed as you requested is a graph of Observation Well HT-83D. The information contained on the graph is still preliminary and subject to staff review.

If you have any questions, please call and ask for Adam Mathiowetz within our program.

Sincerely,

Genny McMath
Water Rights Program
605 773-3352
Genny.mcmath@state.sd.us

enclosure



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

January 14, 2025

NOTICE

TO: LLOYD G SORLIEN, 28482 424TH AVE, SCOTLAND, SD 57059 6500

FROM: Ron Duvall, Engineer III
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2024 Irrigation Questionnaire(s)

Our records indicate your 2024 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 4998-3. The request for the Questionnaire was dated October 23, 2024. The Water Management Board has directed owners of water permits who have not submitted the 2024 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 4998-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held on **Wednesday, March 5, 2025, at 9:30 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1. Suspend or cancel Permit No(s) 4998-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner 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. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 5, 2025**, hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Amanda Dewell at (605) 773-3352 or email at amanda.dewell@state.sd.us. **If you prefer, you can complete the questionnaire online at the following link: <https://danr.sd.gov/iq> using this password: HOCSDO**

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

January 24, 2025

4998-3

Lloyd G Sorlien
28482 424th Ave
Scotland SD 570559

Dear Mr. Sorlien:

I am writing to acknowledge the receipt of your 2024 irrigation questionnaire(s).

You may disregard the January 14, 2025, "Notice" concerning the reporting requirements for Water Permit No(s). 4998-3. The information was received prior to the March 5, 2025, Water Management Board meeting and the above listed permit number(s) have been removed from the agenda.

If you have any questions or concerns, please contact me.

Sincerely,

Amanda Dewell
Permitting Administrator
Water Rights Program
605 773-3352
Amanda.Dewell@state.sd.us