

Considered: _____

WATER PERMIT NO. 5457-3

Phone: 692-5149

Name of Applicant: J. Wm. Ulmer

Post Office Address: 403.5 Main St. , Brookings, SD 57006

Amount of Water Claimed: 2.17 cfs Total Acres: 152

Source of Water Supply: Groundwater

Water to be used for: irrigation County: Hutchinson

About 3 miles South West of Menno

PROOF OF PUBLICATION: Received _____ Not Received _____

APPLICATION: Approved _____ Subject to _____

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

PRIORITY Date Received: 6/8/90 Fee: \$250 Remarks _____

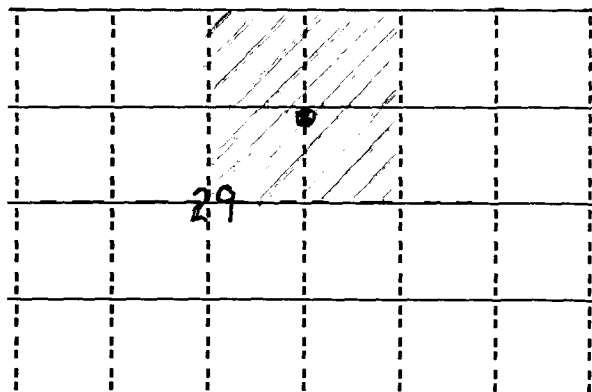
Corrected Application Received _____ Period of Annual Use April 1 - Oct. 31

WATER QUALITY APPROVAL RECEIVED _____ APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES _____ NO _____ REMARKS _____

Diversion Point: center of NE1/4 Sect. 29 T97N-
R57W

Land to be Irrigated: NE1/4 Sect. 29 T97N-R57W



Well Log: Driller: Pullman Licensed YES X NO _____

Depth of Well: 240' REMARKS _____

Type of Map: ASCS Aerial PREPARED BY: Robert Reimoldt Reviewed and the Number

Assigned on 6/12/90 By Eric Gronlund

FORM 2: Application for irrigation (type or print)
in South Dakota

(See instructions)

No. 5457-3 Hydrologic Unit 10160011
Basin James River
Newspaper Hutchinson Herald Box 537 Menno

Pub Day Wed

Mail to: Water Rights Div.
523 E. Capitol
Pierre, SD 57501
(605) 773-3352

57045

Application For Soil/Water Compatibility Permit and Permit To Appropriate Water

Type of Application: ☒ New ☐ Vested Right ☐ Amend Permit No. _____
☐ Change Acreage ☐ Change diversion point(s) ☐ Add diversion point(s)
☐ Add Acreage ☐ Increase diversion rate ☐ Other _____



Applicant J. Wm. Ulmer Phone No. 692-5149

Address 403 1/2 Main D. Brookings State S.D. 57006
(Street, RR or Box) (City) Zip Code

2. Amount of water claimed (~~800~~) 2.17 1.79 cfs Total acres irrigated 152 acres
3. Source of Water supply ground water - one well
4. Location of point of diversion center of NE 1/4 Sec. 29 Twp. 97N Rg 57W

- County Hutchinson
5. Counties where water will be used Hutchinson
6. Annual period during which water is to be used April 1. to Oct. 31st.
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.
NW 1/4 NE 1/4 Sec 29-97N-57W	38
NE 1/4 NE 1/4 Sec 29-97N-57W	38
SW 1/4 NE 1/4 Sec 29-97N-57W	38
SE 1/4 NE 1/4 Sec 29-97N-57W	38

Land Description	No. Acres Irr.

Attach sheet if more space is needed

8. Type of Irrigation: Gravity: _____ Towline: _____ Center Pivot: X Gun: _____ Other: _____
9. Crops to be Irrigated: corn, soybeans, alfalfa
10. Give a description of proposed project. (Attach sheet if more space is needed)

Center pivot irrigation system will be used.

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach maps, soils information and any other technical information.

STATE OF SOUTH DAKOTA)
County of Hutchinson) ss

I, J Wm Ulmer, the applicant, certify that I have read this application and examined the attached maps, that the water sample, if needed, has been taken by the required procedures and has not been adulterated or tampered with and is truly representative of the water to be used, and that the matters stated in this application are true and correct.

Signed [Signature]

7th June 1990

Subscribed and sworn to before me this _____ day of _____ 19____

[Signature]
Notary Public

SOUTH DAKOTA
WATER PERMIT No. 5457-3 FOR IRRIGATION

Date of first receipt of application June 8, 1990.

Date Soil/Water Compatibility Permit received July 2, 1990.

The Water Management Board approved Water Permit Application No. 5457-3 on July 25, 1990 for J. Wm. Ulmer, 403 1/2 Main St., Brookings, SD 57006 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 5457-3 appropriates 2.17 cubic feet of water per second from one well (Lower James - Missouri Aquifer) 240 feet deep located in the center of the NE1/4 of Section 29 T97N-R57W to irrigate 152 acres. The land to be irrigated is located in the NE1/4 Section 29 T97N-R57W.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 - October 31.
3. The date from which applicant may claim right is June 8, 1990.
4. One-fifth of the construction is to be completed on or before January 25, 1993.
5. All construction is to be completed on or before July 25, 1995.
6. Water is to be put to beneficial use on or before July 25, 1999.
7. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well authorized by Permit No. 5457-3 shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted with cement (bottom to top) from the producing formation to the surface pursuant to Section 74:02:04:29.
2. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

(continued)

Water Permit No. 5457-3

Page 2

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

WATER MANAGEMENT BOARD

By:



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

DEC 19 1990

(date)

Supplemental Information

(type or print in ink)

1. Well Information - Proposed construction

- a) Drill Hole Diameter 26 inches Depth 240 ft.
- b) Casing Type plastic Diameter 16 inches Thickness $\frac{1}{2}$ in.
- c) Screen Type plastic Diameter 16 inches Thickness $\frac{1}{2}$ in.
- d) Gravel Pack Thickness 5 inches Length of Gravel Pack 30 feet.
- e) Depth to Top of Water Bearing Material 180 ft.
- f) Depth to Water (ground surface to water level) 112 ft.
- g) Distance to nearest existing domestic well:
On applicants property not applicable On property owned by others $\frac{1}{2}$ mile

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) Primary Outlet Capacity _____
If Pipe, diameter _____

f) Secondary Spillway Capacity _____
Spillway width _____

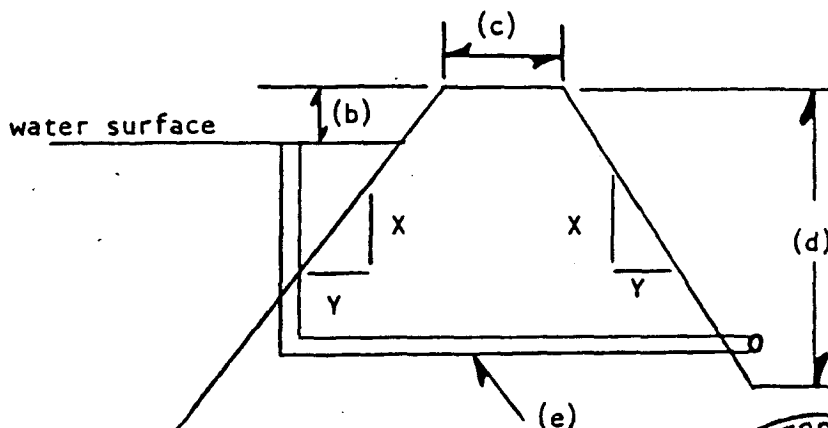
g) X & Y Slope
Upstream _____

Downstream _____

Surface Area of Impoundment _____

Storage _____ acre feet

Drainage area above dam _____



Signature of Applicant _____



Department of Agriculture
WI#1
5/87

SOIL/WATER COMPATIBILITY PERMIT
Division of Conservation

Office Use Only

4513

WR#

OWNERS NAME: J.W. ULMER OWNERS ADDRESS: Box 433
1 Dan Ulmer Menno, SD 57045

COUNTY LAND LOCATED IN: HUTCHINSON PHONE: 692-5149

LEGAL DESCRIPTION:

1. LOCATION Center of NE $\frac{1}{4}$ 29-T97N-R57W

☒ Well

☐ Surface

Depth _____



Legal Description	Acres	Legal Description	Acres
NW $\frac{1}{4}$ NE $\frac{1}{4}$ 29-T97N-R57W	38		
NE $\frac{1}{4}$ NE $\frac{1}{4}$ 29-T97N-R57W	38		
SW $\frac{1}{4}$ NE $\frac{1}{4}$ 29-T97N-R57W	38		
SE $\frac{1}{4}$ NE $\frac{1}{4}$ 29-T97N-R57W	38		

2. TYPE OF IRRIGATION: GRAVITY: _____ TOWLINE: _____ CENTER PIVOT: XXX GUN: _____ OTHER: _____
(Specify)

3. CROPS TO BE IRRIGATED: CORN, SOYBEANS, ALFALFA

WATER QUALITY:

4. WATER SAMPLE NUMBER: 90-0413

7. ADJUSTED (SAR): 6.39

5. SALINITY (EC X 10⁶): 1800

8. PERCENT SODIUM: 34.08

6. SODIUM (SAR): 2.73

Requirements:

The area mapped Betts and Ethan loam, 15-40% slopes, are excessively steep sloped and subject to a severe erosion hazard. This area shall not be irrigated.

The area mapped as Prosper and Crossplain soils (Ps) are subject to a seasonal water table, which may perch under irrigation and inhibit the leaching of salts. To achieve the installation of an artificial drainage system; i.e., tile drainage.

The drainage found in the project area shall be maintained in grass or alfalfa to reduce potential erosion.

Please be advised, we do not consider the Swampbuster provision in developing our recommendations. Before undertaking any drainage project, contact your local ASCS and Conservation District.

[Signature]
Director, Division of Conservation

XXX APPROVED

DISAPPROVED

WAIVER

YYY REQUIREMENTS

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

June 20, 1990
Date

RECEIPT

Division of Water Rights

South Dakota Department of Water and Natural Resources

412260

Pierre, June 8, 19 90

RECEIVED OF Dan Ulmer, Bm 433 Menno, SD 57045-0493

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 _____	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 John Hatch
Chief Engineer

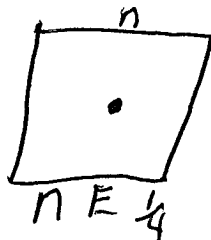
PULLMAN DRILLING — DRILLERS LOG

Phone: 1-800-451-4884

J. W. Ulmer JOB NAME	97N-57W, Sec. 29 NE 1/4 LOCATION	4-17-90 DATE	11 RIG NO.	Ralph FOREMAN
-------------------------	--	-----------------	---------------	------------------

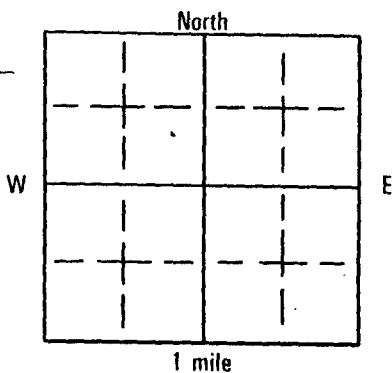
Jt No.	DEPTH	TIME	REMARKS
1	20		0-2 Top Soil 2-20 Yellow Clay
2	40		20-40 Blue Clay
3	60		40-60 Blue Clay Sand streaks
4	80		60-80 Blue Clay
5	100		80-100 Blue Clay
6	120		100-120 Blue Clay
7	140		120-130 Blue Clay
8	160		130-140 Gravel streaks
9	180		140-160 Blue Clay Sand streaks
10	200		160-180 Blue Clay Sand streaks
11	220		180-200 Coarse Sand
12	240		200-220 Coarse Sand Small gravel
13			220-238 Coarse Sand Small gravel
14			238-240 Blue Clay
15			
16			Cased up to 220 240
17			
18			Water Head 112
19			Pump 75 gallon
20			3 in PVC 20 Ft. Screen
21			
22			Ralph Pullman
23			
24			
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40			

REMARKS:



SOUTH DAKOTA WATER WELL COMPLETION REPORT

10-85

Location 1/4 NE 1/4 Sec 29 Twp 97N Rg 57WCounty Hutchinson CoPlease mark well
location with
an "X"Well Completion Date AUGUST 92

PROPOSED USE:

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

Method of Drilling:

REVERSE ROTARY

CASING DATA:

- ☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>340 LB/FT</u>	<u>16" IN</u>	<u>0 FT</u>	<u>230 FT</u>	<u>26" IN</u>
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUT:

Was the well grouted? ☒ YES ☐ NOTo what depth? 20' FEETWhat is grouting material? PORTLANDIf cement, number of sacks? 2405 36 SACKSDescribe grouting procedure TRIMIE PIPEWhat was grout weight? UNKNOWN 15?? LB/GALSCREEN: ☒ Perforated pipe ☐ ManufacturedDiameter 16 IN Length 40 FEETMaterial PVC SLOTTEDSlot Size _____ Set From 190 Feet To 230 Feet

Slot Size _____ Set From _____ Feet To _____ Feet

Slot Size _____ Set From _____ Feet To _____ Feet

Other information _____

Was a packer or seal used? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

Was well disinfected upon completion? ☒ YES ☐ NOExplain WITH CHLORINE PELLETSBacteriological analysis ☐ YES ☒ NO

Laboratory sent to _____

Well Owner:

Name DAN + JOHN VLMEERAddress RT 180 + 104 HENNO S. DAKOTA 57045

Well Log:

Depth

Formation

From

To

<u>TOP + BRN + YELLOW CLAY</u>	<u>0</u>	<u>65</u>
<u>BLUE CLAY + BOULDERS</u>	<u>65</u>	<u>120</u>
<u>MED SAND + GRAVEL</u>	<u>120</u>	<u>185</u>
<u>COURSE GRAVEL</u>	<u>185</u>	<u>230</u>

STATIC WATER LEVEL 125 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

If other; specify _____

Can well be completely shut in? _____

WELL TEST DATA:

☒ Pumped☐ Bailed☐ OtherDescribe: PUMPED WITH 8" LINESHAFT TURBIN PUMP

Pumping Level Below Land Surface

130 ft. After 2 Hrs. pumped 850 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

REMARKS:

This well was drilled under license # 444

And this report is true and accurate.

Drilling firm CHRISTENSEN WELL CO. INC.

Signature of License Representative:

William J. Christensen

Signature of Well Owner:

Date 12/28/92

REPORT APPLICATION NO. 5457-3

J. WM. ULMER

JUNE 14, 1990

Water Permit Application No. 5457-3 for J. Wm. Ulmer proposes to appropriate 2.17 cubic feet of water per second from one well into the Lower James Missouri aquifer. The water will be used to irrigate 152 acres in the NE 1/4 section 29 T97N R57W. The well will be approximately 240 feet deep and located in the center of the NE 1/4 section 29 T97N R57W.

AQUIFER Lower James Missouri (LJM)

The Lower James Missouri management unit is a glacial sand and gravel aquifer that underlies 191,700 acres in Hutchinson, Clay and Yankton counties. The aquifer contains an estimated 2,795,400 acre-feet of recoverable water. Depending on location and elevation above sea level, the aquifer can be either under artesian or water table conditions. The Division of Water Rights monitors an observation well (HT-78B) approximately 2.0 miles northwest of the proposed well where the aquifer begins 126 feet below ground surface and extends to a depth of 179 feet.

The Division of Water Rights monitors a total of eight wells in the LJM aquifer. Water levels for the wells indicate only seasonal changes.

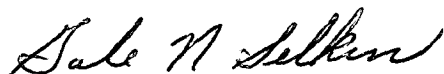
WATER RIGHTS

There are presently 40 water rights issued for the LJM aquifer. There are 14,175 acre-feet of water appropriated with 2651 acre-feet of water reported pumped in 1989.

Water Permit No. 4020-3 is within 1.5 miles of the the proposed permit. Interference between the two permits should not be a problem with the water table conditions at the site.

CONCLUSIONS

1. Unappropriated water is available for Application No. 5457-3.
2. Existing water rights should not be affected by the approval of this application.



Gale N. Selken P.E.
Natural Resources Engineer IV

REFERENCES

Division of Water Rights, 1990, Observation Well Files, DWNR,
Division of Water Rights, Joe Foss Building, Pierre, SD

Division of Water Rights, 1989, Irrigation Report by Aquifer,
DWNR, Division of Water Rights, Joe Foss Building, Pierre,
SD

Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., 1982
Evaluation of Groundwater Resources in Eastern South Dakota
and Upper Big Sioux River, South Dakota and Iowa, U. S. Army
Corps of Engineers contract No. DACW 45-80-C0185, DWNR,
Office of Geological Survey, Vermillion, SD.

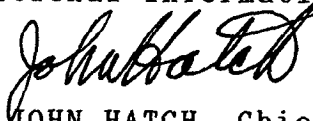
RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 5457-3, J. Wm. Ulmer

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. 5457-3, J. Wm. Ulmer, 403 1/2 Main Street, Brookings SD.

The Chief Engineer is recommending APPROVAL of Application No. 5457-3 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:

1. The well authorized pursuant to this permit shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04.
2. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
3. 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
June 18, 1990



Department of Water & Natural Resources

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

June 19, 1990

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER RIGHT AWAY.

J. Wm. Ulmer
403 1/2 Main
Brookings, SD 57006

Dear Mr. Ulmer:

Water Permit Application No. 5457-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Hutchinson Herald printed at Hutchinson SD. For your information, a copy of the notice is enclosed. Copies of the report and the Chief Engineer's recommendation are also enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Intent to Appropriate Water and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. We must receive Proof of Publication before the application can be considered by the Water Management Board.

Sincerely,

A handwritten signature in cursive script that reads "Eric Gronlund".

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



Department of Water & Natural Resources

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

June 19, 1990

Hutchinson Herald
Box 537
Menno, SD 57045-0537

ATTN: Legal Publications:

Enclosed is a Notice of Hearing on Application No. 5457-3 to be published twice. Please publish the first notice on or before June 27, 1990 with the second publication 7 days later.

The APPLICANT MUST VERIFY TO YOU THAT THE NOTICE IS TO BE PUBLISHED, before you make the first publication. Please BILL the APPLICANT for the cost of publication. The APPLICANT is J. Wm. Ulmer, 403 1/2 Main, Brookings, SD 57006.

A copy of BOTH publications must be SENT to the WATER RIGHTS DIVISION. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. The permit application cannot be considered by the Water Management Board until proof of publication has been received.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CUT HERE-----

FIRST TRANSMITTAL NOTICE

TO:

Eric Gronlund
Water Rights Division
Joe Foss Building
Pierre SD 57501-3181

No. _____

Date _____

We are in receipt of your letter of _____ enclosing Notice of Hearing to
Appropriate Water by Application No. _____ which was first published in our issue
of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name

Newspaper

Instruction to Newspaper - Publish first Notice on or before June 27, 1990 with 2nd publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 5457-3 to Appropriate Water

Notice is given that J. Wm. Ulmer, 403 1/2 Main St., Brookings, SD 57006 has filed an application for a water permit to appropriate 2.17 cubic feet of water per second from one well (Lower James Missouri Aquifer) 240 feet deep located in the center of the NE1/4 Section 29-T97N-R57W to irrigate 152 acres. The land to be irrigated is located in the NE1/4 Section 29-T97N-R57W.

Pursuant to SDCL 46-2A-2, the Chief Engineer of the Water Rights Division recommends APPROVAL of Application No. 5457-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water and 4) it is in the public interest. This application will be considered by the Water Management Board in Room 216, Joe Foss Bldg., 523 E Capitol, Pierre SD on July 25, 1990 at 10:00 am. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer or 4) deny this application based on the facts presented at the public hearing.

Any interested person that intends to participate in the hearing before the Board by presenting evidence or cross-examining witnesses according to SDCL 1-26, must file a written petition with BOTH the applicant and Chief Engineer by July 13, 1990. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)". The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application and the signature and mailing address of the petitioner or legal counsel if legal counsel is obtained. The applicant need not file a petition. Contact the Water Rights Division to request information on this application or to assure access to the hearing by the handicapped.

This hearing is an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. The time of the hearing will also be automatically delayed for at least twenty days upon written request to the Chief Engineer from the applicant or a petitioner. The request for a delay must be received by July 13, 1990.

This application is made pursuant to 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; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 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.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County Hutchinson) ss.

I, Wm J. Headley

certify that the attached printed Notice 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 Menno

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

June 27 & July 4

(Signature)

Owner/publisher
(Title)

7/12/90

(Date Signed)

Cost of Printing: \$33.25

This application is made pursuant
to 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; 46-2A-1 thru
46-2A-10, 46-2A-12, 46-2A-14, 46-
2A-15; 46-5-1 thru 46-5-11, 46-5-13
thru 46-5-15, 46-5-24, 46-5-25, 46-5-
30.2, 46-5-30.4, 46-5-31; 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.

(Publish June 27 & July 4, 1990)

NOTICE OF HEARING on application No. 5457-3 to Appropriate Water

Notice is given that J. Wm. Ulmer, 403 1/2 Main St., Brookings, S. Dak. 57006 has filed an application for a water permit to appropriate 2.17 cubic feet of water per second from one well (Lower James Missouri Aquifer) 240 feet deep located in the center of the NE 1/4 Section 29-T97N-R57W to irrigate 152 acres. The land to be irrigated is located in the NE 1/4 Section 29-97N-R57W.

Pursuant to SDCL 46-2A-2, the Chief Engineer of the Water Rights Division recommends APPROVAL of Application No. 5457-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. This application will be considered by the Water Management Board in Room 216, Joe Foss Bldg., 523 E Capitol, Pierre, S. Dak. on July 25, 1990, at 10:00 a.m. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.

Any interested person that intends to participate in the hearing before the Board by presenting evidence or cross-examining witnesses according to SDCL 1-26, must file a written petition with BOTH the applicant and Chief Engineer by July 13, 1990. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E Capitol, Pierre, S. Dak. 57501 (605-773-3352)". The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application and the signature and mailing address of the petitioner or legal counsel if legal counsel is obtained. The applicant need not file a petition. Contact the Water Rights Division to request information on this application or to assure access to the hearing by the handicapped.

This hearing is an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. The time of the hearing will also be automatically delayed for at least twenty days upon written request to the Chief Engineer from the applicant or a petitioner. The request for a delay must be received by July 13, 1990.

SOUTH Dakota Department of
Water & Natural Resources

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

July 13, 1990

J. Wm. Ulmer
403.5 Main St.
Brookings, SD 57006

Dear Mr. Ulmer:

Attached is a petition of opposition to your water permit application No. 54576-3. This petition was received July 13, 1990.

Sincerely,

Eric Gronlund
Water Rights Division
(605) 773-3352

enc.

SOUTH DAKOTA WATER MANAGEMENT BOARD
WATER RIGHTS DIVISION



In the Matter of the Application)
of J. Wm. Ulmer for Permit to) **PETITION FOR HEARING**
Appropriate Ground Water,) **AND QUALIFICATION**
Application No. 5457-3)

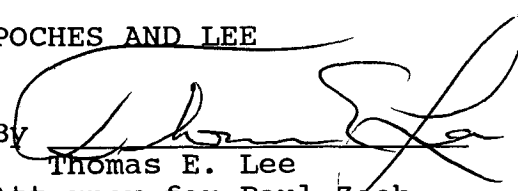
Paul Zeeb, by and through Thomas E. Lee, his attorney, hereby petitions the State Water Management Board for review and denial or qualification of the requested permit to appropriate water from the Lower James Missouri Aquifer.

The petitioner's interest in this matter stems from his reliance upon a well near the proposed pumping site and reliance upon ground water in that area for domestic purposes of the petitioner. The application of J. Wm. Ulmer is opposed because petitioner believes that it is likely to have an adverse affect upon the well of petitioner and his neighbors, reducing water levels and possibly requiring deeper wells, different pumps, or reducing ground water quality.

The domestic wells of petitioner and others in the area are believed to have priority by virtue of length of time in service and also use of the water yielded by those wells, and petitioner wishes to insure that his well and others will not be adversely affected by the requested permit.

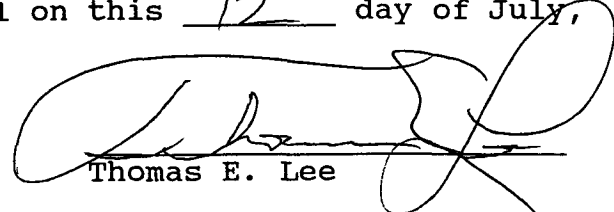
Dated this 12 day of July, 1990.

POCHES AND LEE

By 
Thomas E. Lee
Attorney for Paul Zeeb
PO Box 610
Ft. Pierre, SD 57532
605 223-2572

CERTIFICATE OF SERVICE

The undersigned hereby certifies that he served a true and correct copy of the foregoing petition upon applicant J. Wm. Ulmer at 403½ Main Street, Brookings, SD 57006, and the original petition was mailed to the Water Rights Division, Foss Building, 523 E. Capitol, Pierre, SD 57501 on this 12 day of July, 1990.


Thomas E. Lee

We the undersigned residents of Sweet Township (T 97 N -
R 57 W) wish to have our water interests protected. We
are all farmers who live in this immediate community
and want to be assured that our water needs for domestic
use and livestock uses will not be adversely affected
by the appropriation of water by J Wm Ulmer.

Paul Zeb

Mary K Zeeb

Emergiz Zeeb

Harold Zeeb

Peter C. Zeeb

James M. Zeeb

Marybeth

Edwin Saylor

T.W. Hering

Grandma's Farm
by John Saylor, owner

Larry Zeeb

Marjorie Zeeb

Linda Zeeb

Carl F. Zeeb

Loyd Zeeb

Earl Zeeb

Mary A Zeeb

William Zeeb

Ronald Luthmiller

Calvin Hegge

Milo Saylor

Donald Saylor

Barbara Saylor

Edward Saylor

Alvin Saylor

Walter Saylor



Paul Zeeb	Rt 2, Box 149A	Menno, SD 57045
Mary K Zeeb	Rt 2, Box 149A	Menno, SD 57045
Harold Zeeb	Rt 2, Box 147	Menno, SD 57045
Evelyn Zeeb	Rt 2, Box 147	Menno, SD 57045
Peter E Zeeb	Rt 2, Box 148	Menno, SD 57045
Irene M Zeeb	Rt 2, Box 148	Menno, SD 57045
Mary Hertz	Rt 1, Box 111	Menno, SD 57045
T W Hertz	Rt 1, Box 111	Menno, SD 57045
Elsie Sayler	Rt 1, Box 111	Menno, SD 57045
Grandview Farms, Inc Diana Sayler, Treas	Rt 1, Box 111	Menno, SD 57045
Larry Zeeb	Rt 1, Box 106	Menno, SD 57045
Marjorie Zeeb	Rt 1, Box 106	Menno, SD 57045
Carl F Zeeb	Rt 1, Box 105	Menno, SD 57045
Linda Zeeb	Rt 1, Box 105	Menno, SD 57045
Layton Woehl	Rt 2, Box 149	Menno, SD 57045
Earl Zeeb	Rt 1, Box 168	Menno, SD 57045
Mary A Zeeb	Rt 1, Box 168	Menno, SD 57045
Wilmar Zeeb	Box 481	Menno, SD 57045
Ronald Guthmiller	Rt 2, Box 146	Menno, SD 57045
Calvin Hagge	Rt 2, Box 145	Menno, SD 57045
Milo Sayler	Rt 1, Box 110	Menno, SD 57045
Donald Sayler	Rt 1, Box 174	Menno, SD 57045
Barbara Sayler	Rt 1, Box 174	Menno, SD 57045
Edward Sayler	Rt 1, Box 107	Menno, SD 57045
Arlyn Sayler	Rt 1, Box 107	Menno, SD 57045
Walter J Sayler	Rt 1, Box 167	Menno, SD 57045





Department of Water & Natural Resources

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

July 16, 1990

J. Wm. Ulmer
403.5 Main St.
Brookings, SD 57006

Dear Mr. Ulmer:

Attached is another petition to your water permit application No. 5457-3. This petition was received July 16, 1990.

If you have any questions regarding the upcoming board meeting, please do not hesitate to call

Sincerely,

Eric Gronlund
Water Rights Division
(605) 773-3352

enc.



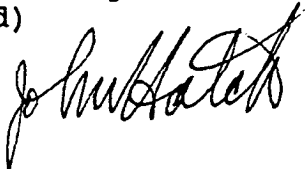
Department of Water & Natural Resources

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

July 30, 1990

NOTICE

TO: Ulmer Brothers J. Wm. Ulmer
Box 433 403.5 Main St
Menno SD 57045 Brookings SD 57006
(and Parties of Record)

FROM: John Hatch, Chief Engineer 
Water Rights Division
605 773-3352

SUBJECT: Preparation of Findings of Fact, Conclusions of Law and
Final Decision

The Water Management Board has directed John Guhin, the Board's attorney to prepare proposed Findings of Fact, Conclusions of Law and a Final Decision on approval of Water Permit Application No. 5456-3 and Water Permit Application No. 5457-3. The Board will consider the proposed Findings, Conclusions and Final Decision at 1:00 pm, October 3, 1990, Room 216, Joe Foss Building, Pierre SD. The agenda time is an estimate. The actual time of consideration may be delayed due to prior agenda items.

The Board has requested that copies of the proposed Findings, Conclusions and Final Decision be mailed to each Board member and all Parties of Record and their attorneys (copy enclosed) by September 13, 1990. Any comments pertaining to the proposed Findings, Conclusions and Decision are to be mailed to each Board member, the Board attorney and all Parties of Record by September 24, 1990.

The public hearing was completed on July 25, 1990. No additional testimony will be received on these applications.

cc: John Guhin, Assistant Attorney General
John Haak, Assistant Attorney General

Parties of Record
Water Permit Application Nos. 5456-3 and 5457-3
Ulmer Brothers and J. Wm. Ulmer
July 30, 1990

Ulmer Bros. c/o Dan Ulmer	Box 433	Menno SD 57045
M.E. Ulmer	Box 427	Menno SD 57045
J. Wm. Ulmer	403.5 Main St	Brookings SD 57006
Thomas Lee, Attorney	PO Box 802	Pierre SD 57501
Paul Zeeb	Rt 2, Box 149A	Menno SD 57045
Wilmar Zeeb	Box 481	Menno SD 57045
Harold Zeeb	Rt 2, Box 147	Menno SD 57045
Peter E. Zeeb	RR 2, Box 148	Menno SD 57045

STATE OF SOUTH DAKOTA

BEFORE THE WATER MANAGEMENT BOARD

IN THE MATTER OF THE APPLICATION	)	FINDINGS OF FACT
FOR WATER PERMIT NO. 5457-3, J.WM.	)	CONCLUSION OF LAW
ULMER.	)	AND FINAL DECISION

FINDINGS OF FACT

I

This is an application to irrigate 152 acres of land in Hutchinson County.

II

The land will be irrigated with water from one well approximately 240 feet deep in the Lower James Missouri Aquifer at a rate of 2.17 cfs.

III

The Lower James Missouri Management Unit (LJM) is a glacial sand and gravel aquifer that underlies 191,700 acres in Hutchinson, Clay and Yankton Counties. The aquifer contains an estimated 2,795,400 acre feet of recoverable water.

IV

There is a reasonable probability that there is unappropriated water available for the applicant's proposed use.

V

There are concerns that the pumping of the proposed well will cause drawdowns in domestic wells within the area.

VI

Based on the hydrology and geology of the area, it is highly unlikely that any domestic well defined as "adequate" by ARSD 74:02:04:20(7) will be deprived of water by pumping under this permit.

VII

There may, nonetheless, be drawdowns within domestic wells both defined as "adequate" and not defined as "adequate" by ARSD 74:02:04:20(7). At the same time, however, no convincing proof was adduced that, even with regard to the wells identified, that the pumps would necessarily have to be lowered.

VIII

Peter, Harold and Paul Zeeb apparently have a domestic well defined as adequate by South Dakota regulation in which the pump may be lowered to twenty feet below the top of the aquifer. In none of these cases is it likely that there will be a substantial expense as a result of pumping under the proposed permit because (1) it is unlikely that the lowering will have to occur because of the hydrology of the area and (2) because the wells are adequate, and the expense of lowering the pumps will not be great. There could, however, be additional cost from the requirement for pumping the water an additional number of feet to the surface.

XII

The record with regard to drawdown in other wells is speculative. The persons who questioned the permit did not submit sufficient evidence to allow the Board to determine how much affect there would be on such wells, or whether such wells were "adequate" or not "adequate" as defined by regulation.

XIII

When the affect on the Zeeb wells and the speculative affect on the other wells is considered, it is clear that the use of water for irrigation in this instance outweighs the interest in preserving all of the existing artesian head pressure in the formation.

CONCLUSIONS OF LAW

1. This Board has jurisdiction of this matter.
2. There is a reasonable probability that there is unappropriated water available for the applicant's proposed use.
3. The proposed diversion can be developed without unlawful impairment of existing rights, including any right to artesian head pressure.
4. It is unnecessary in this case to determine whether artesian head pressure in pre-1972 wells need be considered under the rule of Frazier v. Water Rights Commission, 294 N.W.2d 784 (S.D. 1980). The evidence as to ending artesian head pressure in such wells and the evidence

as to the effect of pumping on such wells is only speculative in this record.

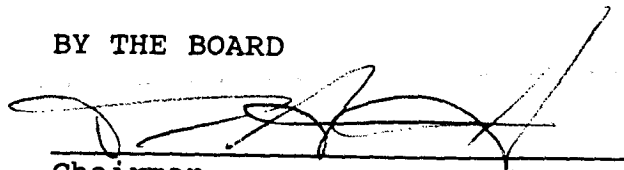
5. The proposed use for irrigation is a beneficial use and the proposed use is in the public interest.

FINAL DECISION

The application for Water Permit No. 5457-3 is granted subject to the following conditions:

1. The well authorized by Permit No. 5457-3 shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, ch. 74:02:04 with the well casing pressure grouted with cement (bottom to top) from the producing formation to the surface pursuant to section 74:02:04:29.
2. The well approved under this permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
3. This permit is approved subject to the irrigation water use questionnaire being submitted each year.

BY THE BOARD



Chairman
Water Management Board

10/16/90
(date)

a:m-pld4.jpg



Department of Water & Natural Resources

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

DEC 19 1990

J Wm Ulmer
403 1/2 Main
Brookings, South Dakota 57006

Dear Mr. Ulmer:

Enclosed is Water Permit No. 5457-3 as approved by the Water Management Board authorizing you to construct your water diversion system and put the water to beneficial use, not exceeding the limits as specified in the Water Permit.

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 the Water License may be issued, thus completing your acquisition of a Water Right.

Very truly yours,

A handwritten signature in black ink, appearing to read "John Hatch".

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

enclosures

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.

PLEASE FILL OUT AND RETURN
BEFORE DECEMBER 18, 1992

5457-3
JIM ULMER
403 1/2 MAIN
BROOKINGS
SD 57006

Telephone No. _____

Type of Power	No. of acres Irrigated
1. Electric	106
2. Gravity	
3. Gasoline	
4. Nat. Gas pipeline	
5. Diesel	
6. Propane	
7. Other	
Type of System	
1. Hand moved sprinklers	
2. Portable booms	
3. Center pivots (# of)	1
4. Gated pipes	
5. Sidewheels	
6. Towlines	
7. Big gun	
8. Siphons	
9. Flood	
10. Other	

Owner or address change, if any: _____

OCTOBER 1992 WATER MANAGEMENT BOARD IRRIGATION QUESTIONNAIRE

1. SURFACE WATER _____ GROUNDWATER ☒
2. Did you irrigate during 1992? Yes ☒ No _____
3. Number of acres irrigated in 1992 106
4. Has your system been constructed? Yes ☒ No _____
5. Are chemicals, including fertilizer, applied through your irrigation system? Yes _____ No ☒
6. Is acreage covered by this permit in the federal CRP program? Yes _____ No ☒
7. If yes, is ALL irrigated acreage in the program? Yes ☒ No _____
8. If yes, list first full year after CRP program expires 19 _____

HT/JR

G

Month	# days pumped	Average # hours per day	Average pump rate (gpm)	Crop	Acres	Water Used	Crop	Acres
April	0			corn	106	1 1/2"		
May	0							
June	4	24	800	corn	106	1 1/2"		
July	4	24	800	corn	106	1 1/2"		
August	—	—						
Sept.								
Oct.								
Other Months								

COMMENTS: *Land has been purchased by John + Dan Ulmer so no change mailing address to John Ulmer Rt 1 Box 109 Mouno SD 57045*

Complete & return to:
Water Rights Division
Joe Foss Building
523 E Capitol
Pierre SD 57501-3181
(605) 773-3352





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

November 12, 1992

No. 5457-3

John Ulmer
Rt 1, Box 109
Menno, SD 57045

Dear Mr. Ulmer:

Enclosed is a partially completed "Notice of Transfer" form for use in filing an ownership change on Water Permit No. 5457-3. The water permit is currently listed in the name of J. Wm Ulmer.

The transfer form should be checked over for accuracy and signed by the new owner in the presence of a notary public. Upon completion, return the form to our office with a required filing fee of \$2.50.

South Dakota Water Law 46-5-30.3 requires Notice of any sale, grant, lease, conveyance or other transfer of a water permit or water right to appropriate water to be filed with this office within ninety days.

If you have any questions, please contact me.

Sincerely,

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

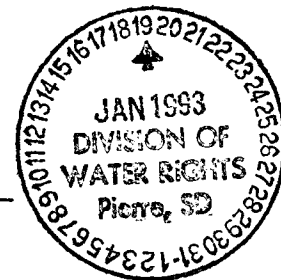
enclosure

NOTICE OF TRANSFER OF OWNERSHIP

To: Chief Engineer
Water Rights Division, DENR
523 E. Capitol
Pierre, SD 57501-3181

No. 5457-3

Date: 1-4-93



I/We request that Water Permit No. 5457-3

formerly owned by: J Wm Ulmer, 403 1/2 Main, Brookings, SD 57006

be transferred to: (name & address) John Ulmer Rt 1 Box 109 Menno S.D. 57045
(Telephone No) 605-387-5460

Title to the following described land(s)/property has been transferred as described above:

NE 1/4 Section 29, T97N, R57W

I/We understand that the validity of Water Permit No. 5457-3 has not been determined by this transfer action. If I/We have any questions on validity, I/We understand that only the Water Management Board has the authority to determine if a water permit/right is valid (see note).

You are requested to file this "Notice of Transfer" in the appropriate file at the Division of Water Rights, as evidence of the change of ownership.

A fee of Two Dollars and Fifty Cents (\$2.50) is attached to cover the filing fees as required under SDCL 46-2-13.

STATE OF SOUTH DAKOTA)
County of Hutchinson)

I/We John Ulmer being first duly sworn on my oath depose and say that my relation to the above described undertaking is that of Owner, that I have read the above foregoing statement, and that I know of my own personal knowledge that the information herein stated is true.

John Ulmer
(Signed)

Subscribed and sworn to before me this 14th day of Jan, 19 93

Gary J. Schulte
(Notary Public)

NOTE: Water permits may be cancelled for nonconstruction within the five year construction period. Once a water permit is developed and the water used, the permit becomes a right. A water right may be lost for three reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three year period without legal excuse.
3. For a third violation of a condition of a water permit/right.

RECEIPT

413598

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, _____, January 19_____, 1993

RECEIVED OF John Ulmer, RR 1 Box 109, Menno, SD 57045

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. _____		
Fee for Filing Transfer Form _____ Water Permit No. 5457-3		2 50
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	2 50

By John Hatch
Chief Engineer



January 20, 1993

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

No. 5457-3

John Ulmer
Rt 1, Box 109
Menno, SD 57045

Dear Mr. Ulmer:

Enclosed is a receipt in the amount of \$2.50 which you paid for the transfer of Water Permit No. 5457-3.

Our records now show you as the owner of Water Permit No. 5457-3.

Sincerely,

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

enclosure

**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**

Date 4-5-95

TO: Water Rights Division, DENR
523 E. Capitol
Pierre, SD 57501-3181

FROM: John Ulmer Rt 1, Box 109
(name) (address)
Menno, SD 57045 387-5660
(city) (state) (zip) (phone)

I have completed the construction of the water diversion system and I have put the water to beneficial use to the maximum extent it is going to be used. I have not exceeded the amounts specified in Water Permit No. 5457-3.

Water Permit No. 5457-3 states that the diversion system is to be constructed by July 25, 1995, and that the water is put to beneficial use by July 25, 1999.
(date) (date)

The diversion system was completed on June 25, 1991.
(date)

Applying the water to beneficial use was completed on June 25, 1991.
(date)

You may schedule an inspection so that the Water License may be issued.

John Ulmer
(signature)

Permit No. 5457-3
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, April 5, 1995, made a thorough examination of the water use system constructed by John Ulmer of Rt. 1, Box 109, Menno, SD 57045 holder of Permit No. 5457-3, bearing the priority of June 8, 1990 authorizing the diversion of 2.17 cu. ft. per second from groundwater for irrigation purposes, in Hutchinson County.

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

A. Works used to divert the water:

A 75 HP Pacemaker electric motor with an 850 GPM Berkeley pump.

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

N/A

C. Works used to apply water to beneficial use:

An 8 tower T&L center pivot system rated at 850 GPM.

The system is in the following condition good. The point of diversion is located 1320 feet S and 1320 feet W from the NE corner of Section 29; T97N R 57W. The works are capable of diverting and conveying to the place of use 1.88 cu. ft. of water per second which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:

T97N R57W	SECTION 29	NW1/4 NE1/4	33 acres
		NE1/4 NE1/4	33 acres
		SW1/4 NE1/4	33 acres
		SE1/4 NE1/4	33 acres

comprising a total of 132 acres of land and the license should be issued for 1.88 cfs.

Applicable permit qualifications have been complied with: Yes ☒ No

Exceptions to compliance are: None Date Report Completed: November 9, 1995


Barry A. McLaury
Natural Resources Scientist
DENR, Water Rights Program

REPORT ON INSPECTION OF PERMIT NO. 5457-3

Other permit(s) associated with the project: None

DATE OF INSPECTION: April 5, 1995

NAME & ADDRESS OF INSPECTION CONTACT/

RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE: John Ulmer, Rt. 1, Box 109, Menno, SD 57045

NAME & ADDRESS OF PERMIT HOLDER: Same as above.

DIVERSION POINT LEGAL LOCATION: 1320 feet S and 1320 feet W from the NE corner of Section 29; T97N R 57W.

WELL INFORMATION:

- 1) Well Drilling Firm: Christensen Well Company, Inc.
- 2) No. of Wells 1
- 3) Depth(s) 230 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 16 inches
- 2) Length 190 feet
- 3) Type PVC

Screen:

- 1) Type PVC
- 2) Length 40 feet
- 3) Static water level 125 feet

Pump:

- 1) Make Berkeley
- 2) Serial No. 570046 1-1
- 3) Capacity 850 GPM

Motor:

- 1) Make Pacemaker
- 2) Model No. 19325J11M170
- 3) Horsepower rating 75 hp

SYSTEM TYPE:

Center pivot:

- 1) Make T&L
- 2) Overall length 1300 feet
- 3) Number of towers 8
- 4) Distance between towers 163 feet
- 5) End gun Y
- 6) High or low pressure High
- 7) Capacity 850 GPM

CHEMIGATION EQUIPMENT:

- 1) Does chemigate Y
- 2) Main line check valve Y
- 3) Inspection port/air relief Y
- 4) Low pressure drain Y
- 5) Discharge is 20' from source Y
- 6) Interlock type **Electrical**
- 7) Injection pump type **Triple piston**
- 8) Injection check valve Y
- 9) Injection line check valve or positive displacement pump Y
- 10) All chemigation equipment appears to be installed in the proper position and complies with chemigation laws and rules Y
- 11) Comments: **Injection pump & discharge hose were not at the site.**

PERMIT QUALIFICATIONS AND REGULATIONS:

- 1) Special qualifications to permit being abided by Y
- 2) All structures, wells and lands on map Y
- 3) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Y



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

November 29, 1995

5457-3

John Ulmer
Rt 1, Box 109
Menno, SD 57045

Dear Mr. Ulmer:

The inspection of your water use system and the inspection of the extent of application of water to beneficial use, as developed under Water Permit No. 5457-3, 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.

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.

RECEIPT

414776

Division of Water Rights

South Dakota Department of Environment and Natural Resources

February 5, 1996

Pierre, _____, 19____

RECEIVED OF John Ulmer, RR 1, Box 109, Menno, SD 57045

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. <u>5457-3</u>	50	00
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	50 00

By John Hatcher
Chief Engineer

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 5457-3

(1) J. Wm. Ulmer, 403 1/2 Main St, Brookings SD 57006 made Application No. 5457-3, June 8, 1990 for a water permit to appropriate 2.17 cubic feet of water per second from groundwater (one well), Hutchinson County, South Dakota for irrigation purposes. Permit No. 5457-3, with a priority date of June 8, 1990 was approved July 25, 1990 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before July 25, 1995 and for the application to beneficial use of said water on or before July 25, 1999.

Water Permit No. 5457-3 was transferred on January 19, 1993 to John Ulmer.

On April 5, 1995, a "Notice of Completion of Works and Application of Water to Beneficial Use" was filed. The "Notice" stated that the diversion system was completed on June 25, 1991 and the water applied to beneficial use on June 25, 1991.

(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 1.88 cubic feet of water per second for beneficial use. The location of the diversion point is 1320 feet south and 1320 feet west of the northeast corner of Section 29-T97N-R57W (center of NE 1/4).

(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:

Section 29-T97N-R57W	NW 1/4 NE 1/4	33 acres
	NE 1/4 NE 1/4	33 acres
	SW 1/4 NE 1/4	33 acres
	SE 1/4 NE 1/4	33 acres
Total		132 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 John Ulmer, Rt 1, Box 109, Menno SD 57045 the holder and/or owner of Water Permit No. 5457-3 is issued a license to appropriate water, the right to use 1.88 cubic feet of water per second from groundwater (one well) with a priority date of June 8, 1990 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 Permit No. 5457-3 and subject to South Dakota State Law.


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

APR 4 1996
date





5457-3

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

February 4, 1997

NOTICE

TO: JOHN ULMER
42963 MAXWELL ROAD
MENNO SD 57045

FROM: Ron Duvall, Natural Resources Engineer
for John Hatch, Chief Engineer
Water Rights Program

RE: Failure to Report Chemical Use under Water Permit No(s) 5457-3 & 5911-3

The first notice to file chemigation report(s) for Permit No(s) 5457-3 & 5911-3 was dated 12/23/96. Our records indicate that we have not received the 1996 chemigation report for Permits No(s) 5457-3 & 5911-3. The Water Management Board has directed that owners of water permits who have not submitted the 1996 chemigation report(s) be given notice of violation and hearing before the board. The hearing held by the board is to determine what action is to be taken concerning violation of Administrative Rule 74:02:09:02(3). This rule requires chemigation users to report the type of chemical applied, the dates, hours and amount of chemical applied.

The hearing will be held at 2:30 PM on March 5, 1997, in the Floyd Matthew Training Center, Joe Foss Building, 523 East Capitol, Pierre, SD and will be conducted pursuant to SDCL 34A-2A through 34A-2A-5; 46-1-12, 46-1-14, 46-2-11, 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 or up to three years for the 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). 5457-3 & 5911-3 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 chemigation report(s) is(are) received by this office on/or before February 28, 1997 your name will be deleted from the board agenda.

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 East 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.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

John Ulmer
42963 Maxwell Road
Menno SD 57045

4a. Article Number

R378 080596

4b. Service Type

- | | |
|---|---|
| ☐ Registered | ☒ Certified |
| ☐ Express Mail | ☐ Insured |
| ☐ Return Receipt for Merchandise | ☐ COD |

7. Date of Delivery

2-11-97

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)

X

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1994

Domestic Return Receipt

Thank you for using Return Receipt Service.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

February 14, 1997

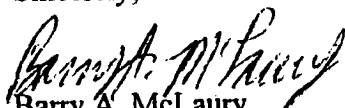
JOHN ULMER
42963 MAXWELL ROAD
MENNO SD 57045

Dear Mr. Ulmer:

I am writing to acknowledge receipt of your 1996 chemigation questionnaires. You may disregard the February 4, 1997 notice of "Failure To Submit Chemigation Questionnaire." The questionnaires have been received and your name has been deleted from the Water Management Board agenda.

If you have any questions, please contact me at 605-773-3352.

Sincerely,


Barry A. McLaury
Water Rights Program



5457-3

January 30, 1996

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181**NOTICE**

TO: JOHN ULMER, RR 1 BOX 109, MENNO, SD 57045

FROM: Ron Duvall, Natural Resources Engineer
for John Hatch, Chief Engineer
Water Rights Program

SUBJECT: Violation of Water Permit No(s) 5457-3, 5392A-3

Our records indicate that the 1995 Irrigation Questionnaire has not been submitted for Permit No(s) 5457-3, 5392A-3. The request for the Questionnaire was dated October 20, 1995. The Water Management Board has directed that owners of water permits who have not submitted the 1995 Irrigation Questionnaire be given notice of permit violation and a hearing to be held by the Board. The hearing held by the Board will determine the action to be taken for violation of Water Permit No(s) 5457-3, 5392A-3 qualification:

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

The hearing will be held at 9:45 am, March 6, 1996 in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol, 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) 5457-3, 5392A-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 on/or before March 1, 1996, you will no longer be in violation of your permit and your name will be deleted from the Board agenda. If you have questions or need assistance in completion of the irrigation questionnaire(s), please contact Genny McMath at (605) 773-3352.

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.

ed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

JOHN ULMER
RR 1 BOX 109
MENNO SD 57045

4a. Article Number

Z 161 984 100

4b. Service Type

- | | |
|---|---|
| ☐ Registered | ☒ Certified |
| ☐ Express Mail | ☐ Insured |
| ☐ Return Receipt for Merchandise | ☐ COD |

7. Date of Delivery

5. Received By: (Print Name)

X *[Signature]*

6. Signature: (Addressee or Agent)

X

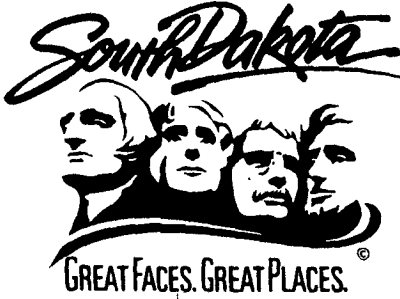
8. Addressee's Address (Only if requested and fee is paid)

Is your RETURN?

PS Form 3811, December 1994

Domestic Return Receipt

Thank you for using Return Receipt Service.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

February 6, 1996

5392A-3
5457-3

John Ulmer
RR 1 Box 109
Menno, SD 57045

Dear Mr. Ulmer:

I am writing to acknowledge receipt of your 1995 irrigation questionnaires. You may disregard the January 30, 1996, **Notice of Violation of Water Permit Nos. 5392A-3 and 5457-3.**

The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

APR 4 1996

5457-3

John Ulmer
Rt 1, Box 109
Menno, SD 57045

Dear Mr. Ulmer:

Enclosed is Water License No. 5457-3. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 414776 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. 5457-3, 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,

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

ks
enclosures



5457-3

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

January 9, 1998

NOTICE

TO: JOHN ULMER, 42963 MAXWELL RD, MENNO SD 57045

**FROM: Ron Duvall, Natural Resources Engineer
for John Hatch, Chief Engineer
Water Rights Program**

RE: Requirement to Report 1997 Chemical Use

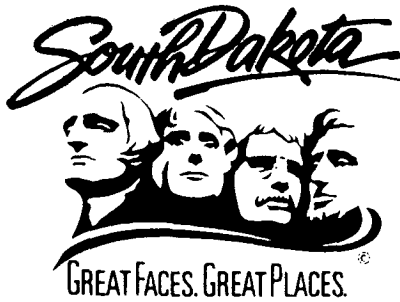
The first notice to file chemigation report(s) for Permit No(s) **5457-3 & 5911-3** was dated October 17, 1997. Our records indicate that we have not received your 1997 chemigation report(s). The Water Management Board has directed that owners of water permits who have not submitted the 1997 chemigation report(s) be given notice of violation and of hearing before the Board. The hearing is to determine what action is to be taken concerning violation of Administrative rule 74:02:09:02(3). This rule requires chemigation users to report the type of chemical applied, the dates, hours and amount of chemical application

The hearing will be held at 9:45 am, February 25, 1998, Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol, Pierre, SD and will be conducted pursuant to SDCL 34A-2A through 34A-2A-5; 46-1-12, 46-1-14, 46-2-11, 46-2-17. These are contested case hearings pursuant to SDCL 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 or up to three years for the 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). **5457-3 & 5911-3** 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. Prior to February 20, 1998, contact the Water Rights Program, 523 E. Capitol, Pierre, SD 57501-3181 (605 773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.

NOTE: If the chemigation report(s) is(are) received by this office prior to February 20, 1998 you will no longer be in violation and your name will be deleted from the Board agenda.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

January 9, 1998

NOTICE

TO: JOHN ULMER, 42963 MAXWELL RD, MENNO, SD 57045

FROM: Ron Duvall, Natural Resources Engineer
for John Hatch, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 1997 Irrigation Questionnaire(s)

Our records indicate that the 1997 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 5392A-3, 5457-3, 5911-3 & 5912-3. The request for the Questionnaire was dated October 17, 1997. The Water Management Board has directed that owners of water permits who have not submitted the 1997 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) 5392A-3, 5457-3, 5911-3 & 5912-3 qualification:

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

The hearing will be held at 9:45 am, February 25, 1998 in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol, 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) 5392A-3, 5457-3, 5911-3 & 5912-3 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 on/or before February 20, 1998, you will no longer be in violation of your permit and your name will be deleted from the Board agenda. If you have questions or need assistance in completion of the irrigation questionnaire(s), please contact Genny McMath at (605) 773-3352.

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 ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

January 22, 1998

John Ulmer
42963 Maxwell Rd
Menno, SD 57045

RE: Water Permit Nos. 5392A-3, 5457-3, 5911-3 and 5912-3

Dear Mr. Ulmer:

I am writing to acknowledge receipt of your 1997 irrigation questionnaires and chemical reporting forms. You may disregard the January 9, 1998, "Notices" concerning reporting requirements for Water Permit Nos. 5392A-3, 5457-3, 5911-3 and 5912-3.

The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

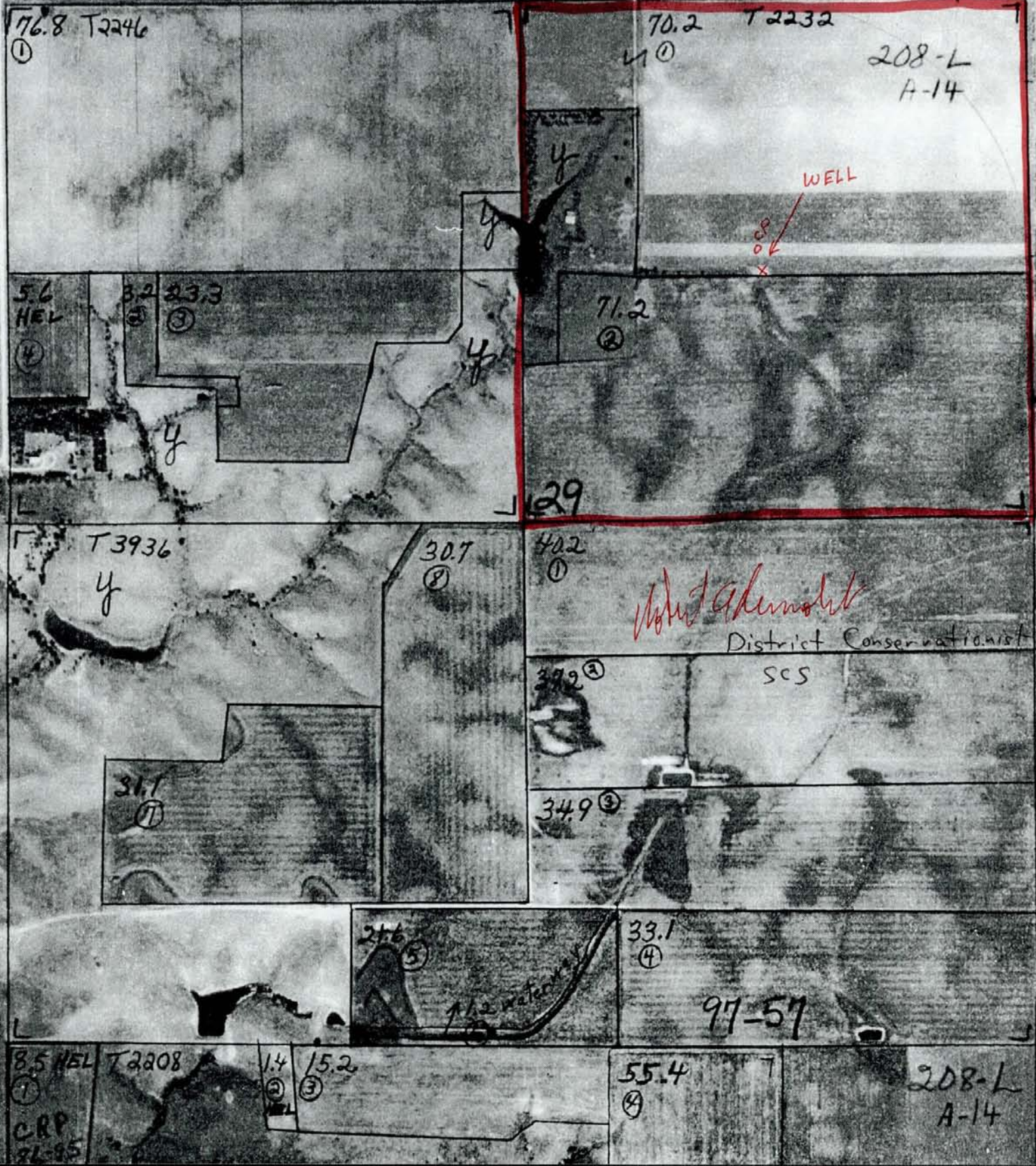
If you have any questions, please contact me.

Sincerely,

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

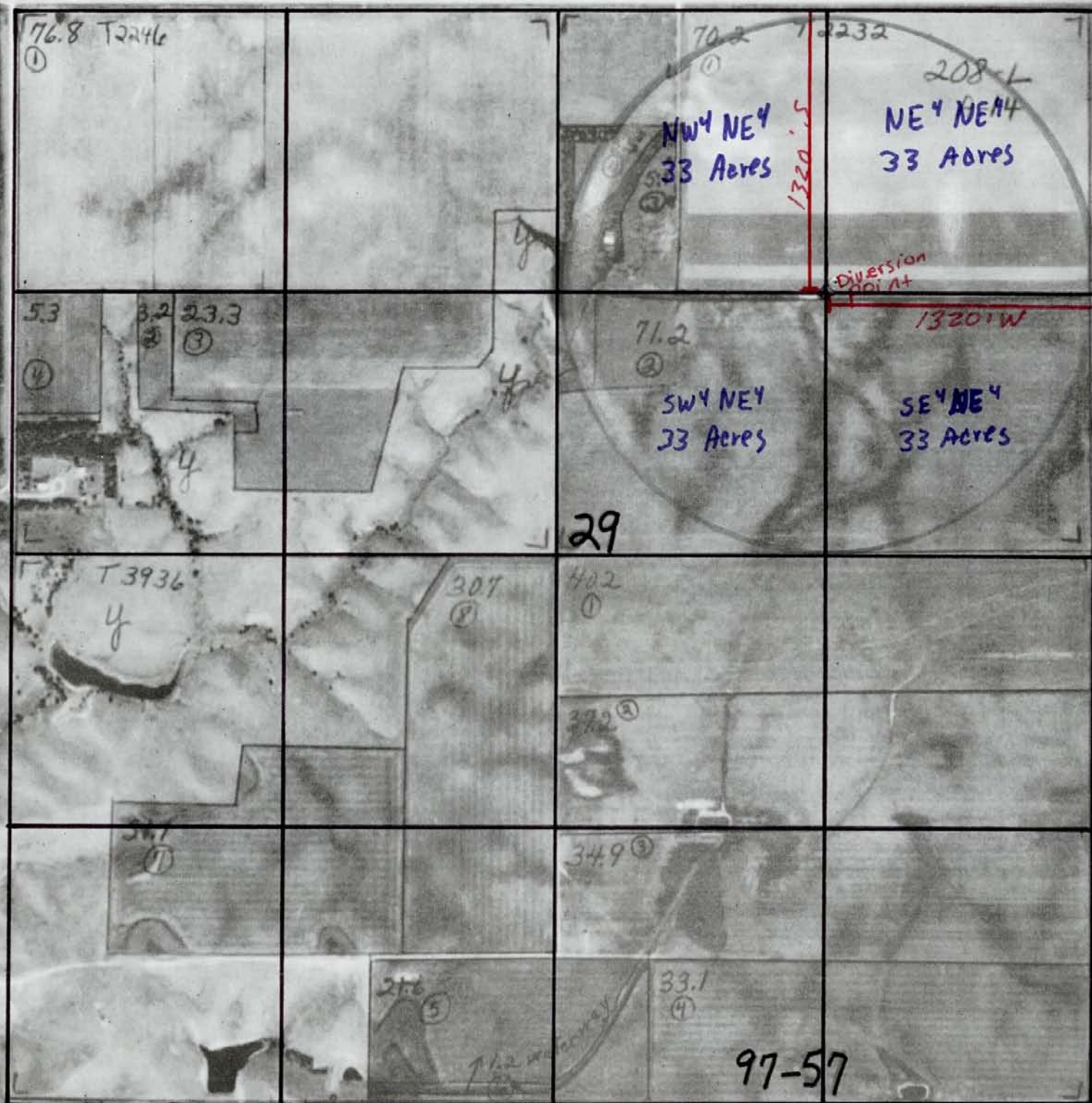


NOT TO SCALE



5457-3

NOT TO SCALE



Barry McLaury *Barry McLaury*
 Environmental Scientist
 Division of Water Rights
 Date November 9, 1995

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6212-3
5457-3
**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

August 24, 2012

JOHN ULMER
42963 MAXWELL RD
MENNO, SD 57045

Dear Mr. Ulmer:

I am writing as a follow up to the conversation we had on August 21, 2012 concerning Water Permit No. 6212-3, which you obtained in 2000 to irrigate the corners of the NE ¼ of Section 29-T97N-R57W. The water source for this permit is the well previously authorized by Water Right No. 5457-3, and the small dam located on the property line shared with your neighbor, Mr. Leroy Zeeb.

As we discussed, Mr. Zeeb contacted us with concerns about seepage and erosion on the downstream slope of the dam. He had also contacted the Natural Resources Conservation Service (NRCS) and a copy of their letter is attached. I observed the same seepage/erosion as the NRCS did and would have the following suggestions to correct the problem. The seepage is more than likely occurring either around or through the spillway conduit. The conduit should be further investigated and replaced or maybe slip lined as we discussed. Another source of seepage may be along trees roots and possibly associated to higher than normal reservoir levels. It appears that the primary spillway inlet elevation has been raised and I would recommend that it be lowered to an elevation at least one foot lower than the current secondary spillway elevation. The NRCS letter also mentions this. I would also like to suggest that your practice of blocking off the spillway riser with boards when refilling the dam from the well be stopped. As I mentioned before, the increased reservoir level is not doing the embankment any good.

Trees and brush on the embankment pose a hazard due to the possibility of seepage along decayed root systems. The trees and brush and root systems of the larger trees should be removed and the holes backfilled with impervious material. This should especially include any trees located below the reservoir elevation.

Since this is a shared embankment, any changes or modification to the dam should be agreed upon between you and your neighbor, Mr. Zeeb. Please feel free to contact me if you have any questions.

Sincerely,

Timothy G. Schaal, P.E.

Engineer IV

SD DENR, Water Rights Program

(605) 773-3352

C: Leroy Zeeb, 28944 429th Ave., Menno SD 57045

United States Department of Agriculture



Natural Resources Conservation Service
1820 North Kimball, Suite 4
Mitchell, South Dakota 57301

Phone: (605) 996-1564 Ext. 5
Fax: (605) 996-6930

Subject: Erosion

Date: 8/03/12

To: Leroy Zabe
28944 429th Ave
Menno, SD 57045

Leroy,

After visiting your pond on 8/02/12, I had a few suggestions to help with the erosion problems on or near the embankment. First, the inlet riser seems to be set too high. The water level appeared to be near the crest of the emergency spillway, but it was still a few inches below the top of the riser. This will cause the emergency spillway to run more often therefore more erosion could occur. A solution that may help is lowering the inlet riser at least one foot below the emergency spillway crest.

On the downstream side of the embankment, I noticed cattails growing. After a little inspection, there was erosion occurring at this spot on the embankment. I believe seepage through the dam is the cause of the erosion. The seep is also causing the saturated soils which are the reason cattails are growing in this location. To fix this problem the dam would need to be breached, the seepage area removed, and backfilled with good clay material. There is no guarantee this would fix the seep, or another seep could occur elsewhere in the embankment.

We also looked at the cattle trail on the side hill next to the dam. The erosion in this area could be helped by diverting the water upstream away from the cattle trail towards more stable areas. A small earthen berm could be used to redirect the water flowing towards the cattle trail. In addition, could the cattle be fenced off from this area until it became stable with vegetation again? The cattle trail should be backfilled with soil and seeded with western wheatgrass (or another rhizomatous grass) to help with the recovery.

Please contact me if you have any questions.

Sincerely,

Jared Gelderman
Agricultural Engineer