

WATER PERMIT NO. 7401-3

Name of Applicant: Leon Vanderlei

Address: 40846 312th St, Springfield SD 57062

Phone: 605 369-2610

Amount of Water Claimed: 2.0 cfs

Total Acres: 60 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation

County: Bon Homme

Type of Waste Disposal System:

Location: 5 miles west of Springfield

PRIORITY

Date Received: 8-6-12

Application/License Fee: \$ 700.00

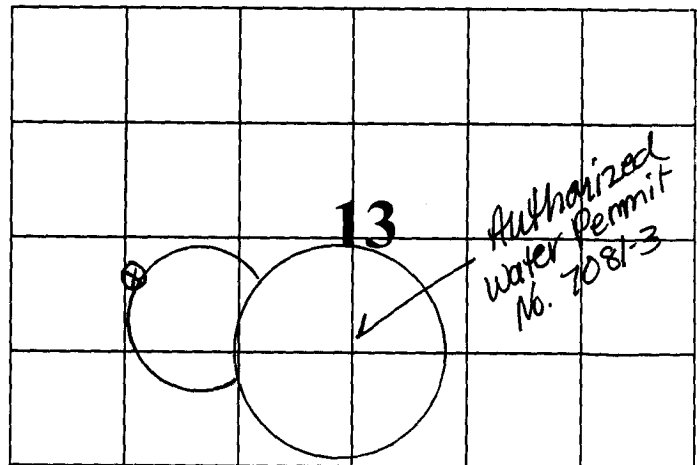
Corrected Application Received:

Period of Annual Use: May 1 – November 1

Remarks: Proposing to irrigate some of the same acreage as authorized by Water Permit No. 7081-3

Diversion Point: NW ¼ SW ¼ Sec 13-T93N-R61W

Land to be Irrigated: W ½ SW ¼ Sec 13-T93N-R61W



Depth of Well: 250 feet deep

Well Driller:

Remarks:

Type of Map: aerial

Prepared by: Mark Rohlbring, FSA

Reviewed and the Number Assigned on: 8-20-12

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

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

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>7401-3</u> (office use only)
	Hydrologic Unit <u>10170101</u>
	Basin <u>Missouri River</u> <u>605-589-3242</u>
	Newspaper <u>Tyndall Times Tribune PO Box 520 57066</u>
<u>Press & Dakota 319 Walnut Yankton 57078 605-7811</u>	

RECEIVED

AUG 06 2012

WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

Type of Application: ☒ New ☐ Vested Right ☐ Amendment/Correction to Permit No. _____
(Use predates Mar 2, 1955)

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

additional well - additional diversion rate authority + additional
60 acres

1. Name of Applicant Leon Vanderlei Phone 605-369-2610
(check one) Owner ☐ Tenant/lessee
Mailing Address 40846 312th Street Springfield SD 57062
(Address) (City) (State) (Zip Code)

2. Amount of water claimed 2.0 *CFS or 960 **GPM ***AF Total Acreage 60
(*Cubic Feet per Second), (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply aquifer - additional well permit 7081-3

4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Ben Homme
1 well in NW 1/4 SW 1/4 sec 13 T93N-R61W

5. County or counties where water will be used Ben Homme

6. Annual period during which water is to be used May 1 - Nov-1

7. List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

Land Description	Acres	Land Description	Acres
<u>NW 1/4 of SW 1/4 of sec 13</u>	<u>40</u>		
<u>SW 1/4 of SW 1/4 of sec 13</u>	<u>20</u>		
<u>existing acres authorized by 7081-3 in section 13</u>			

8. Give a description of the project. (Attach sheet if more space is needed)

we intend to drill additional well to irrigate lands authorized
by # 7081-3 and additional 60 acres. Will allow more efficiently
irrigate and expand system

STATE OF SOUTH DAKOTA)
County of Ben Homme) SS

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Also, attach map and any other technical information. (see instructions)

I, Leon Vanderlei, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature Leon Vanderlei

Subscribed and sworn to before me this 3 day of August 20 12

Nancy L Mesman
Notary Public signature

09-25-2012
Commission Expires

2010-01/13/15

**SOUTH DAKOTA
WATER PERMIT NO. 7401-3**

Date of first receipt of application August 6, 2012.

Date of return to applicant for corrections, amendments or changes August 6, 2012.

Date of receipt of corrected application August 20, 2012.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7401-3 to Leon Vanderlei, 40846 312st St, Springfield SD 57062 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. 7401-3 appropriates 2.0 cubic feet of water per second (cfs) from a new well to be completed into the Choteau West Aquifer (250 feet deep) located in NW 1/4 SW 1/4 Section 13 for irrigation of 60 acres located in the NW 1/4 SW 1/4 Section 13; all in T93N-R61W. The well will also be used to irrigate 140 acres authorized by Water Permit No. 7081-3 located in the W 1/2 SE 1/4, E 1/2 SW 1/4 Section 13-T93N-R61W. This permit authorizes a total diversion of 2.0 cfs for irrigation of 200 acres.
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: May 1 – November 1.
3. The date from which applicant may claim right is August 6, 2012.
4. The date of approval of Permit No. 7401-3 is November 12, 2012.
5. One-fifth of the construction is to be completed on or before May 12, 2015.
6. All construction is to be completed on or before November 12, 2017.
7. Water is to be put to beneficial use on or before November 12, 2021.
8. 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 approved under Water Permit No. 7401-3 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.
2. The well authorized by Water Permit No. 7401-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: Garland Erbele

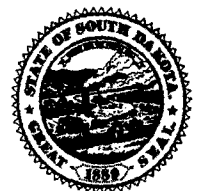
Garland Erbele, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

JAN 07 2013

date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 17 Depth 250
- b) Casing Type Plastic Diameter 12 Thickness 3/4
- c) Screen Type PVC 5-5 Diameter 12 Thickness 3/4
- d) Gravel Pack medium fine Length of Gravel Pack 40'
- e) Depth to Top of Water Bearing Material 210'
- f) Depth to Water (ground surface to water level) 120'
- g) Distance to nearest existing domestic well:
- On applicant's property _____ On property owned by others 1 mile

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System

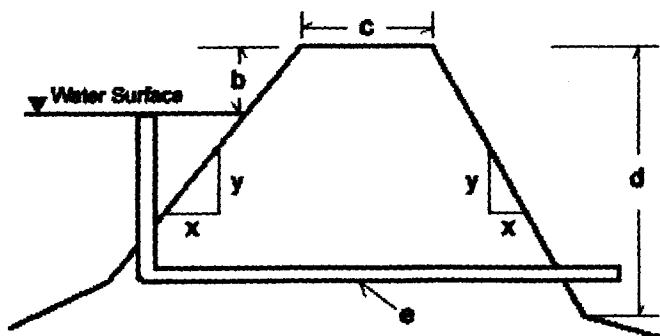
3. Dugout Information

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

4. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to 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 (e.g. 3 to 1 is a typical slope)
Upstream _____
Downstream _____
- h) Surface Area of Impoundment _____
- i) Storage _____ Acre Feet
- j) Drainage Area Above Dam _____ Acres

403
AVE

R 62 & 61 W



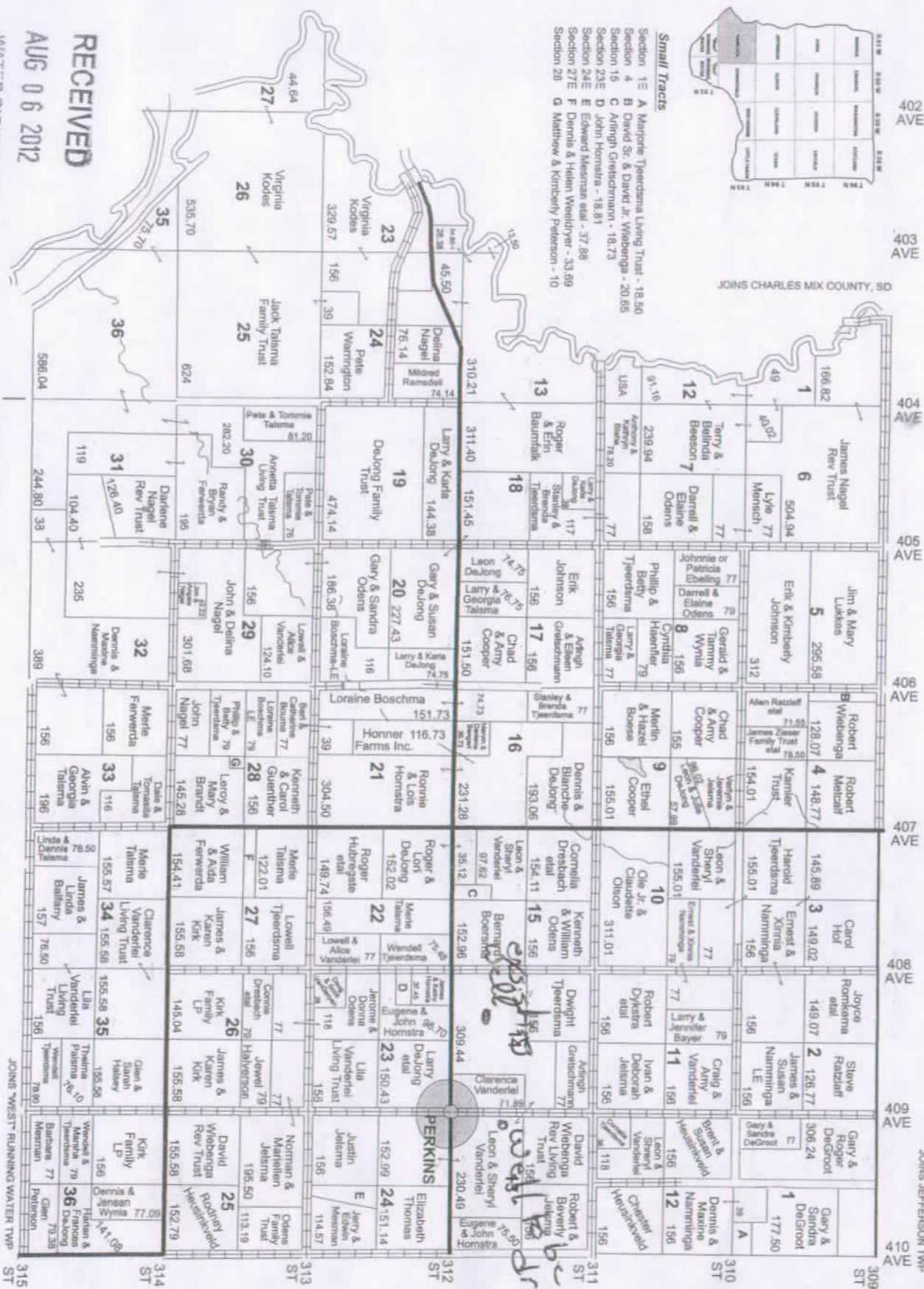
LAND OWNER & RURAL RESIDENT MAPS



JOINS CHARLES MIX COUNTY, SD

Small Tracts

Section 3 A Marjorie Theerdsma Living Trust - 18.34
Section 4 B David Sr. & David Jr. Willingba - 20.65
Section 15 C Ailmyh Gotschmann - 18.73
Section 23E D John Homstra - 18.81
Section 24E E Edward Meerman et al - 37.68
Section 27E F Dennis & Helen Weeldijer - 53.69
Section 28 G Matthew & Kimberly Paterson - 10



LAND OWNER

HANCOCK TWP

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WATER RIGHTS
PROGRAM

JOINS "WEST" RUNNING WATER TWIN

315
ST

BON HOMME COUNTY, SD



United States Department of Agriculture
Farm Service Agency

PLSS: 13_93N_61W
Farm: 3956

Bon Homme County

1:8,052



January 05, 2012

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.

Wetland Determination Identifiers
 ● Restricted Use
 ▼ Limited Restrictions
 ■ Exempt from Conservation Compliance Provisions

Common Land Units
 Non Cropland

*Made Rohlwing
NRCS, D.C.*

2010 Ortho-Photography - Not to Scale

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AUG 20 2012
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 PROGRAM

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 8/6, 20 12

RECEIVED OF Leon C Vanderlei 40846 312th St Springfield SD 57062

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

Fee for Application for Permit No. <u>7401-3</u> to Appropriate Water, to construct and to put water to beneficial use	500	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. <u>7401-3</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	700 00

No. **05516**

By *Leah Erbe*
Chief Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

August 6, 2012

Leon Vanderlei
40846 312th St
Springfield SD 57062

Dear Mr. Vanderlei:

Thank you for submitting the *Application for a Permit to Appropriate Water* for irrigation. In order to complete the application the following is required.

- Enclosed is the map submitted with the application. The map must be signed by one of the following: Registered Land Surveyor, Registered Professional Engineer or by any other government employee who normally prepares maps as a part of his assigned duties. Our suggestion is to visit your local NRCS or FSA office and ask for an aerial photo map. Someone with that office will be qualified to sign the application.
- Please outline the acres to be irrigated and mark the proposed well location.
- Your application states the well will be located in the SE $\frac{1}{4}$ Section 13-T93N-R61W. The map submitted shows the well to be drilled located in the SW $\frac{1}{4}$ Section 13? Which location is correct? Please make necessary correction.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
605 773-3352
karen.schlaak@state.sd.us

enclosure



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7401-3, Leon Vanderlei**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 7401-3, Leon Vanderlei, 40846 312th Street, Springfield SD 57062.

The Chief Engineer is recommending APPROVAL of Application No. 7401-3 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) it is in the public interest with the following qualifications:

1. The well approved under Water Permit No. 7401-3 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.
2. The well authorized by Water Permit No. 7401-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Garland Erbele, Chief Engineer
October 25, 2012

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO.7401-3
LEON VANDERLEI
OCTOBER 5, 2012

In 2004, Water Permit No. 6487-3 was approved authorizing diversions from a well completed into the Choteau: West aquifer at a maximum diversion rate of 1.89 cfs to irrigate 320 acres. The permit was inspected in 2006 and Water Right No. 6487-3 was issued on November 1, 2008, granting the right to use 1.89 cfs to irrigate 263 acres. In 2009, Water Permit No. 7081-3 was approved authorizing the irrigation of an additional 140 acres located in the W $\frac{1}{2}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$ of Section 13, T93N-R61W, using water from the well authorized by Water Right No. 6487-3, with no increase in the approved diversion rate. Water Permit Application No. 7401-3 proposes to appropriate water at a maximum diversion rate of 2.0 cubic feet per second (cfs) from a well approximately 250 feet deep, to be completed into the Choteau: West aquifer and located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 13, T93N-R61W. This application proposes to apply water to the 140 acres authorized for irrigation by Water Permit No. 7081-3 and to an additional 60 acres located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 13, T93N-R61W. If approved, this appropriation will authorize a maximum diversion rate from the new well of 2.0 cfs and irrigation of up to 200 acres. If this permit is approved, it will only appropriate an additional 120 acre-feet per year from the Choteau: West aquifer.

AQUIFER: West Management Unit of the Choteau Aquifer: (CH-W)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The West management unit of the Choteau is a buried aquifer consisting of glacial outwash and western derived stream deposits (Kume, 1977) that was deposited in the ancient Ponca Creek drainage (Christensen, 1974). The ancient Ponca Creek incised through the Pierre Shale bedrock into the Niobrara Formation and in places through the Niobrara into the Charlie Shale (Christensen, 1974). The Choteau: West aquifer underlies approximately 20,500 acres of Bon Homme County and extends into Charles Mix and Douglas Counties (Hedges and others, 1982) (see Figure 1). Jorgensen, (1971) estimated the Choteau: West aquifer contained 120,000 acre-feet of water in transient storage in Charles Mix County in 1968. Hedges and others, (1982) estimated the aquifer contained 121,480 acre-feet of recoverable water in storage in the county.

The well and test hole data to delineate the extent of the Choteau aquifer to the east and south of the well site proposed by this application is sparse (Water Rights, 2012b; and "Lithologic Logs Database"). However, Hedges and others, (1982) show the south edge of the aquifer within approximately 0.5 miles and the east edge of the aquifer within approximately 0.75 miles of this proposed well site. Completion reports on file with the DENR-Water Rights Program for two irrigation wells, one well located approximately 0.8 miles west-northwest and the other located approximately 0.8 miles west-southwest of the well site proposed by this application, reported the thickness of the Choteau aquifer at 62 and 32 feet respectively. Test pumping of these two wells identified a specific capacity of 106.25 gallons per minute per foot of drawdown (gpm/ft) for the northern well and a specific capacity of 21.87 (gpm/ft) for the southern well. Based on

the specific capacities the transmissivity of the Choteau aquifer in this area ranged from 212,500 gallons per day per foot (gpd/ft) to 43,740 gpd/ft ("Transmissivity From Specific Capacity").

The Choteau: West aquifer is under confined conditions and although the potentiometric surface appears to be relatively flat in this area the groundwater movement in the area appears to be from the northwest to the southeast. The static water level at the well site proposed by this application is expected to be 100-150 feet below grade.

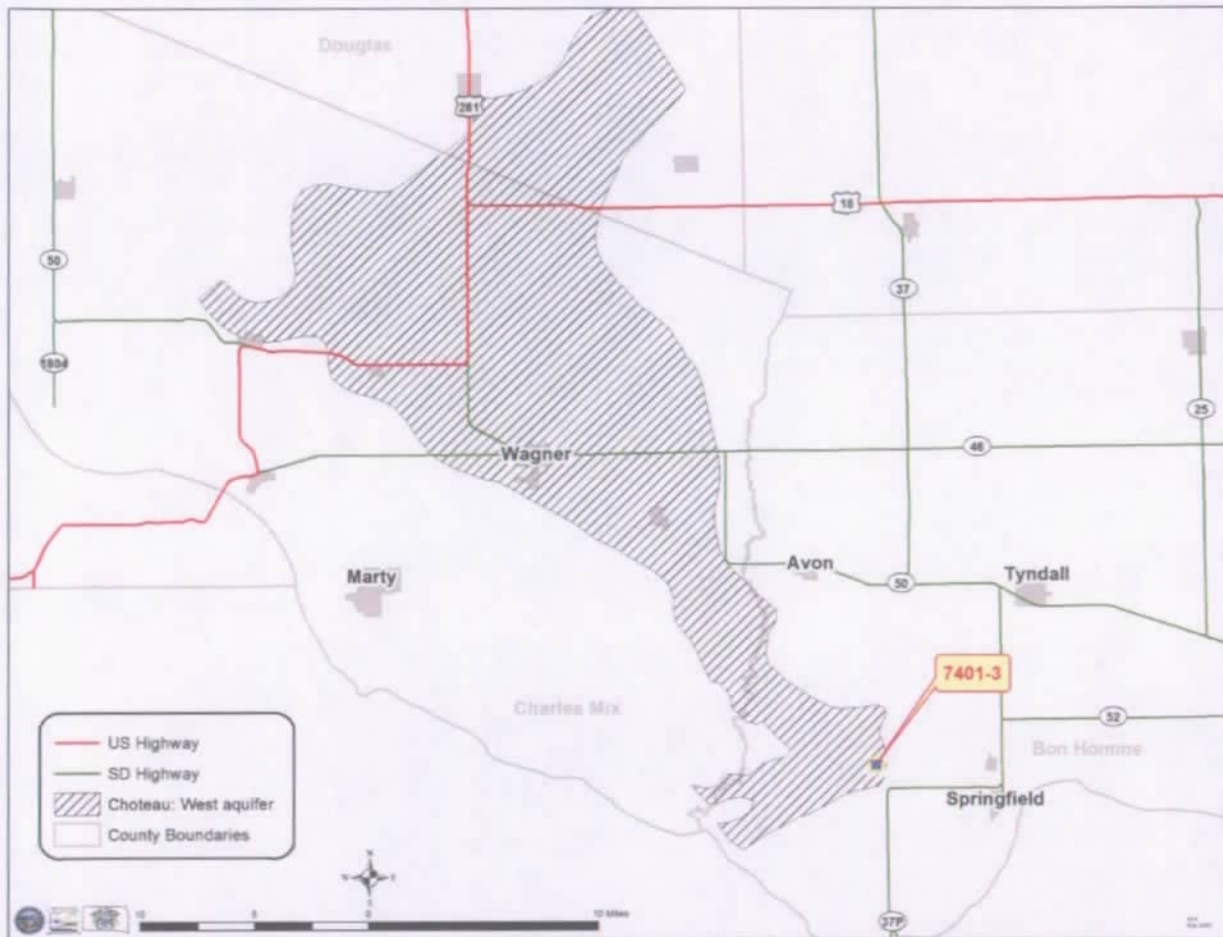


Figure 1. The location of the Choteau: West aquifer (modified from Hedges and others, 1982) and the well site proposed by Water Permit Application No. 7401-3

SDCL 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest. This report will address the water availability and existing rights issues pertinent to this application.

WATER AVAILABILITY:

This application proposes to appropriate an additional 120 acre-feet annually from the Choteau: West aquifer. Although the actual water use if this application is approved will be less than 120 acre-feet/year. The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1 which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source."

Recharge versus Withdrawals:**Recharge:**

Recharge to the Choteau: West aquifer comes mostly from leakage from the adjacent glacial till and possibly from inflow from the Niobrara and Codell aquifers. The average annual recharge to the Choteau: West aquifer has not been quantified. For confined aquifers in Eastern South Dakota, Hedges and others, (1985) concluded that "for management and development programs the minimum recharge rate to confined aquifer is estimated to be 0.15 inches per year and the maximum rate is 0.60 inches per year." Using the recharge rate suggested by Hedges and others, (1985), the annual recharge to the Choteau: West aquifer would be 2,730 ac-ft/yr to 10,920 ac-ft/yr.

Withdrawal:

Some natural discharge may occur from the Choteau: West aquifer through leakage to adjacent aquifers, however withdrawals from the Choteau: West aquifer are primarily through pumping. There are currently 40 water rights/permits appropriating water from the Choteau: West aquifer, with four of these in Bon Homme County (Water Rights, 2012c). Water rights/permits from the Choteau: West appropriate water for commercial use (one permit for a CAFO), municipal use (two Water Rights for Wagner) [Note: Wagner is currently on rural water (Friedeman)], recreational use (two water rights), and irrigation use. Historic Choteau: West irrigation data is shown in table 1.

YEAR	NO.PMTS	APPROPRIATION (ac-ft. /yr.)	PUMPAGE (ac-ft. /yr.)
1979	49	21477	2933
1980	47	21477	2644
1981	48	21657	3132
1982	39	20935.8	1647.15
1983	40	21761.8	1368.89
1984	44	24770.8	1692
1985	43	23810.8	2377
1986	42	23108.8	2986
1987	42	23080.8	2198
1988	44	23245.8	4537.4
1989	45	23565.8	3984.1
1990	45	23400.8	3716
1991	45	23080.8	4056.5
1992	46	23224.8	1682.6
1993	45	21835.8	334.2
1994	41	20146.8	2026.03
1995	42	20410.8	999.46
1996	42	19087.8	1795.61
1997	42	19087.8	1509
1998	42	18975.8	697.51
1999	40	19675.8	1248.07
2000	33	16475.8	3009.11
2001	33	16475.8	1625.24
2002	33	15995.8	3223.92
2003	33	15696	2526.26
2004	34	18843.8	2819.08
2005	36	19563.8	2896.82
2006	34	19943.8	3598.83
2007	34	19108.12	3363.59
2008	34	19212.12	2443.95
2009	35	19492.12	1163.81
2010	35	19324.12	614.83
2011	35	19324.12	1872.77
<i>MAX</i>	<i>49</i>	<i>24770.8</i>	<i>4537.4</i>
<i>MIN</i>	<i>33</i>	<i>15696</i>	<i>334.2</i>
<i>AVE</i>	<i>40.1</i>	<i>20523.4</i>	<i>2324.9</i>

Table 1. Historic irrigation from the Choteau: West aquifer (Water Rights, 1980-2012)

Observation Well Data:

The best information that is reasonably accessible to evaluate the availability of unappropriated water from the Choteau: West aquifer is the DENR-Water Rights' observation well network. In addition, Administrative Rule of South Dakota Section 74:02:05:07 requires that "the Water Management Board shall rely upon the record of observation well measurements to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge to the aquifer".

The DENR-Water Rights Program monitors 24 observation wells completed into the Choteau: West aquifer, with three of these wells in Bon Homme County (Water Rights, 2012a). Hydrographs for the observation wells are shown in figures 2-4.

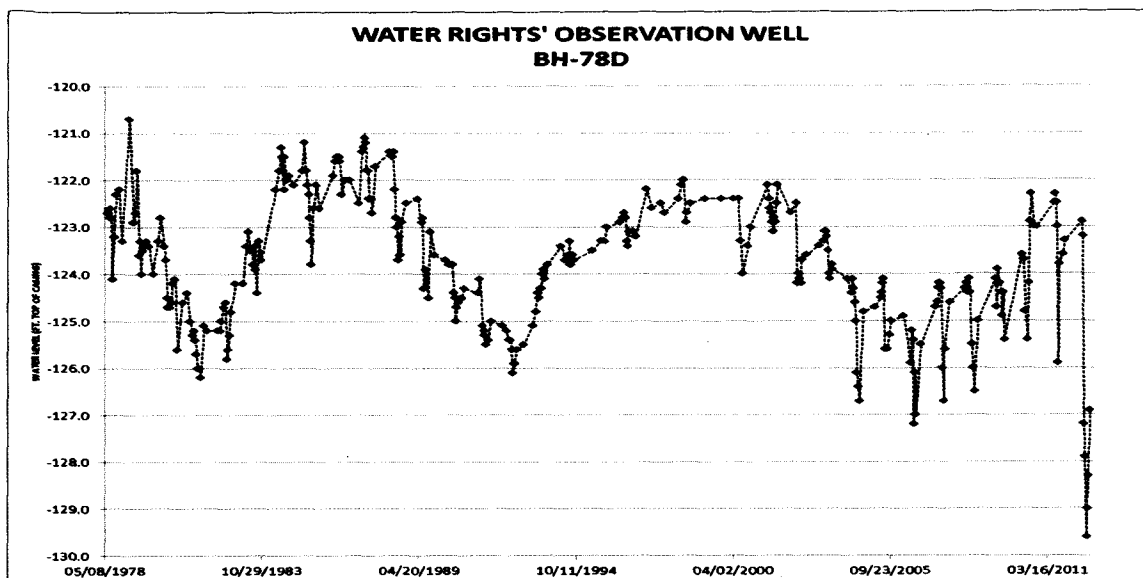


Figure 2. Hydrograph for DENR-Water Rights Observation Well BH-78D located approximately 1.6 miles north of the well site proposed by Application No. 7401-3

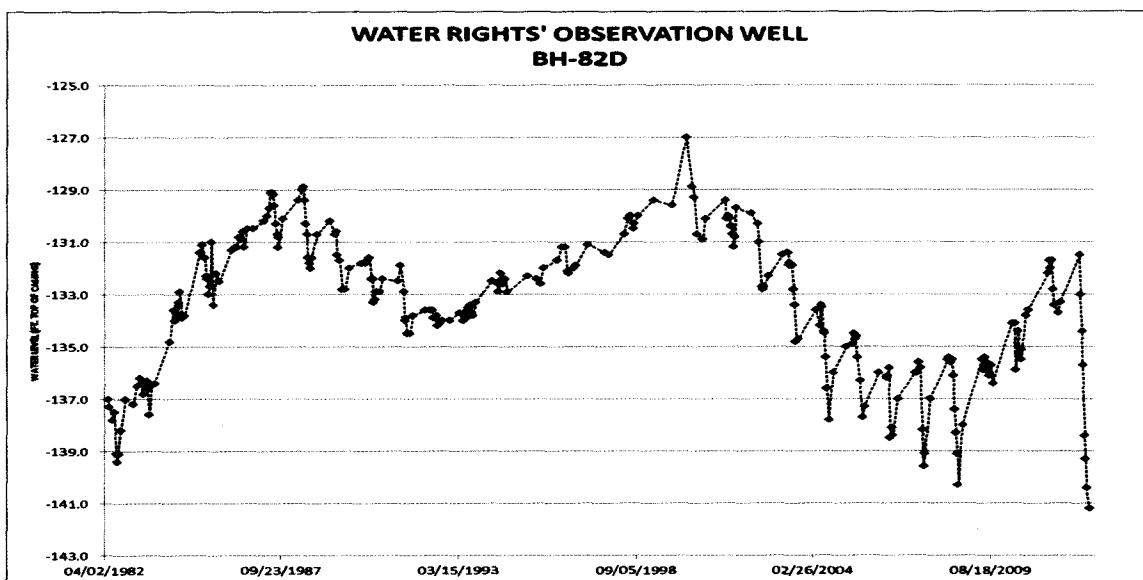


Figure 3. Hydrograph for DENR-Water Rights Observation Well BH-82D located approximately 2.6 miles northwest of the well site proposed by Application No. 7401-3

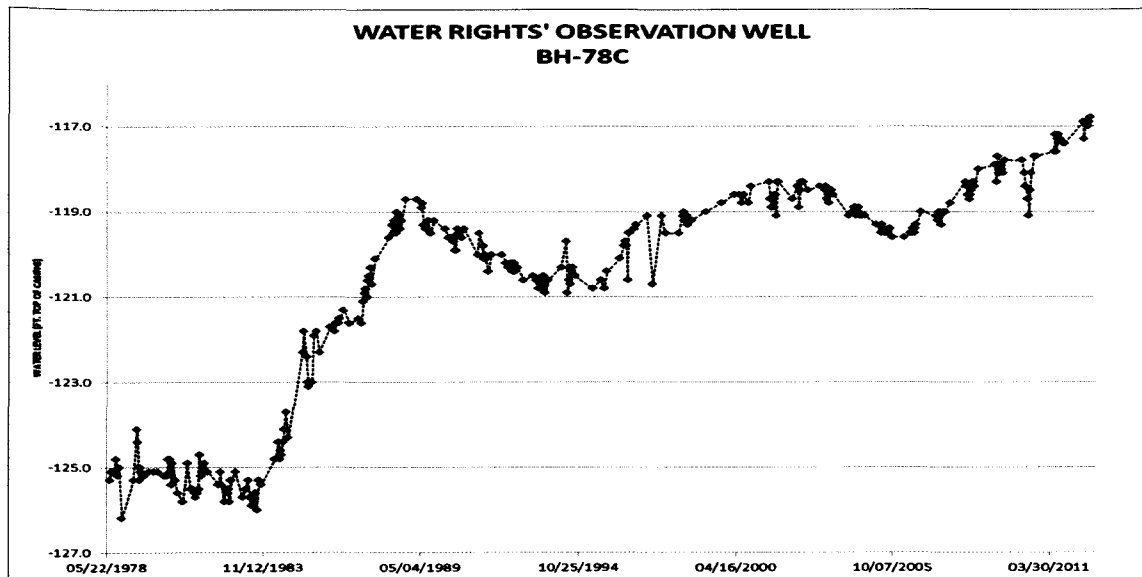


Figure 4. Hydrograph for DENR-Water Rights Observation Well BH-78C located approximately 3.6 miles northwest of the well site proposed by Application No. 7401-3

The observation well data shows the aquifer readily recharges and clearly documents the cyclic climatic conditions with wet and dry periods. The hydrographs also shows the aquifer's response to nearby pumping. The observation well data shows that at the current level of development, climatic conditions greatly mask the temporal effects of irrigation pumping. Therefore, recharge to and natural discharge from the Choteau: West aquifer significantly exceeds pumping. The hydrographs document that there is unappropriated water available from the aquifer to support this appropriation.

EXISTING WATER RIGHTS:

Early irrigation development (i.e. 1950's) in this area was controversial. Irrigation well pumping caused water level fluctuations in domestic wells that resulted in some wells no longer free flowing at the surface and caused other wells to have pumps lowered. Early controversies have been resolved and there have not been any issues in this area for a number of years. In addition, a change in SD Water Law has been made so that artesian head pressure is no longer protected as a means of delivery. The earlier controversies would have been non-issues with the change in water law.

The only Water Rights/Permits that appropriate water from the Choteau: West aquifer from Bon Homme County are shown in Figure 5 along with the well site proposed by this application.



Figure 5. Water Rights/Permits appropriating water from the Choteau: West aquifer from Bon Homme County and the location of the well site proposed by Application No. 7401-3.

Although the Choteau: West aquifer is under confined conditions, historically, drawdown from high capacity wells has not been significant. For example, the hydrograph for Observation Well BH-78D which is located approximately 0.4 miles from the 900 gallon per minute (gpm) well that supplies Water Permit No. 7195-3 and about 0.8 miles from the 800 gpm well that supplies Water Permit No. 6920-3 (see Figure 2) shows only a few feet of drawdown from the diversions. Given the distance between the wells and the minor interference historically documented by the observation wells, well interference will not adversely affect existing users.

CONCLUSIONS:

1. This application proposes to appropriate up to 120 acre-feet annually for irrigation but the amount of water that actually will be used is expected to be considerably less.
2. The well site proposed by this application appears to be near the edge of the Choteau: West aquifer.
3. There is a reasonable probability that unappropriated water is available from the Choteau: West aquifer to supply this proposed diversion.

4. There is a reasonable probability that the diversion requested by this application can be made without adversely effecting existing water rights.



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Christensen, C.M., 1970, Major Ground-Water Aquifers in Bon Homme County, South Dakota: S.D. Geological Survey Water Information Circular 4, 7 p.
- Christensen, C.M. 1974, Geology and Water Resources of Bon Homme County South Dakota, Part I; Geology: S.D. Geological Survey Bulletin 21(1), 48 p.
- Friedeman, Barbara. Environmental Scientist, SD DENR-Drinking Water Program. Personal correspondence. 7 May 2012
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., Schoon, R.A., 1982, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185
- Hedges, L.S., Allen, J., and Holly, D.E., 1985, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge, Final Report: U.S. Army Corps of Engineers Contract DACW 45-80-C-0185
- Kume, J., 1977, Geology and Water Resources of Charles Mix and Douglas Counties, South Dakota, Bon Homme County, South Dakota; Part II: Water Resources: S.D. Geological Survey Bulletin 21, 31 p.
- "Lithologic Logs Database." South Dakota Department of Environment & Natural Resources Geological Survey. 30 Sept. 2012
- Jorgensen, D.G., 1971, Geology and Water Resources of Bon Homme County, South Dakota, Part II; Water Resources: S.D. Geological Survey Bulletin 21(2), 61p.
- "Transmissivity from Specific Capacity." Aquifer Test Forum sponsored by HydroSOLVE, Inc. 6 May 2011< <http://www.aqtesolv.com/forum/transcap.asp>
- Water Rights, 1980-2012, "Annual Irrigation Summary by Aquifer": SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD

Water Rights, 2012a, Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2012b, Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2012c, Well Completion Report Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Affidavit of Publication

RECEIVED

NOV - 5 2012

**WATER RIGHTS
PROGRAM**

State of South Dakota }
County of Bon Homme } SS

Rebecca Tycz Being first duly sworn
says that the **Tyndall Tribune & Register** is a legal
weekly newspaper for publication of legal and other official
notices as required by Chapter 298 of the Session
Laws of South Dakota, 1939; that it has bona fide paid
circulation of more than two hundred copies weekly;
that it is published in English language in the City of
Tyndall, Bon Homme County, South Dakota, and has
been admitted to the United States mail under second
class mailing privilege for more than one year prior to
the first publication of the notice herein mentioned, and
that it is printed in an office maintained at the place of
publication at Tyndall, South Dakota, and that dep-
onent is the publisher in charge of the advertising depart-
ment of said newspaper; that the advertisement headed

Notice of Application No. 7401-3
72-2372

a printed copy of which is hereto attached, was printed
and published in said newspaper for one successive
weeks, upon the following dates:

Oct 31.....2012.....20.....
.....20.....20.....
.....20.....20.....
.....20.....20.....

That the full amount of the fee charged for the publica-
tion of said notice, \$26.78, inures to the benefit
of the publisher of said newspaper, that no agreement or
understanding for the division thereof has been made
with any other person, and that no part has been agreed
to be paid to any person whomsoever.

Rebecca Tycz
Subscribed and sworn to before me this
31 day of October, 2012.
Legg Schelske
Notary Public, South Dakota

My Commission Expires: Oct 24, 2015

OK

NOTICE OF APPLICATION

NO. 7401-3 to Appropriate Water

Notice is given that Leon Vanderlei, 40846 312th Street, Springfield, SD 57062 has filed an application for a water permit to appropriate 2.0 cubic feet of water per second from a new well to be completed into the Choteau West Aquifer (250 feet deep) located in NW1/4 SW1/4 Section 13 for irrigation of 60 acres located in the NW1/4 SW1/4 Section 13; all in T93N-R61W. The applicant also proposes to use this well to irrigate 140 acres authorized by Water Permit No. 7081-3 located in the W1/2 SE1/4, E1/2 SW1/4 Section 13-T93N-R61W. This application, if approved will authorize a total diversion of 2.0 cfs for irrigation of 200 acres.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7401-3 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E. Capitol, Pierre, SD 57501 (605-773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 12, 2012.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petition's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application.

Steven M. Pirner, Secretary
Department of Environment
and Natural Resources

Published once at an approximate cost
of \$26.78

(October 31)

RECEIVED
NOV - 2 2012
WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

Department of Environment and Natural Resources
PMB 2020
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

KELLY HERTZ BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT HE IS THE **MANAGING EDITOR** OF YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID
COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
Notice of Application No 7401-3

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE **31st** DAY OF **October** 2012
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID **NOTICE** TO WIT **\$27.80** ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS
BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF
HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: **10/31/2012**

FILED ON: **10/31/2012**

SUBSCRIBED AND SWORN TO BEFORE ME THIS **31st** DAY OF **October**

2012

Murrel R. Root
NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES **6/11/2013**

10+31
NOTICE OF APPLICATION
NO. 7401-3 to Appropriate Water

Notice is given that Leon Vanderlei, 40846 312th St, Springfield SD 57062 has filed an application for a water permit to appropriate 2.0 cubic feet of water per second from a new well to be completed into the Choteau West Aquifer (250 feet deep) located in NW 1/4 SW 1/4 Section 13 for irrigation of 60 acres located in the NW 1/4 SW 1/4 Section 13; all in T93N-R61W. The applicant also proposes to use this well to irrigate 140 acres authorized by Water Permit No. 7081-3 located in the W 1/2 SE 1/4, E 1/2 SW 1/4 Section 13-T93N-R61W. This application, if approved will authorize a total diversion of 2.0 cfs for irrigation of 200 acres.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7401-3 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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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 the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirmer, Secretary, Department of Environment and Natural Resources.

Published once at the total approximate cost



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

October 25, 2012

Tyndall Times & Tribune
PO Box 520
Tyndall SD 57066

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7401-3 to Appropriate Water. Please publish the notice once on October 31, 2012. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Leon Vanderlei, 40846 312th St., Springfield SD 57062 (Ph # 605-369-2610).

Please send the Water Rights Program an affidavit or the enclosed Proof of Publication form immediately.

The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

October 25, 2012

Daily Press & Dakotan
319 Walnut
Yankton SD 57078

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7401-3 to Appropriate Water. Please publish the notice once on October 31, 2012. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

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Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATE, CONTACT
THE NEWSPAPER(S) RIGHT AWAY.

October 25, 2012

Leon Vanderlei
40846 312th St
Springfield SD 57062

Dear Mr. Vanderlei:

Water Permit Application No. 7401-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Tyndall Times & Tribune printed at Tyndall SD (Ph # 605-589-3242) and the Daily Press & Dakotan printed at Yankton SD (Ph # 605-665-7811). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are 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(s) to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

Instruction to Newspaper - Publish the Notice on October 31, 2012. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7401-3 to Appropriate Water

Notice is given that Leon Vanderlei, 40846 312th St, Springfield SD 57062 has filed an application for a water permit to appropriate 2.0 cubic feet of water per second from a new well to be completed into the Choteau West Aquifer (250 feet deep) located in NW 1/4 SW 1/4 Section 13 for irrigation of 60 acres located in the NW 1/4 SW 1/4 Section 13; all in T93N-R61W. The applicant also proposes to use this well to irrigate 140 acres authorized by Water Permit No. 7081-3 located in the W 1/2 SE 1/4, E 1/2 SW 1/4 Section 13-T93N-R61W. This application, if approved will authorize a total diversion of 2.0 cfs for irrigation of 200 acres.

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Published once at the total approximate cost of _____.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

JAN 07 2013

Leon Vanderlei
40846 312th St
Springfield SD 57062

Dear Mr. Vanderlei:

Enclosed is Water Permit No. 7401-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

7401-3

NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USERECEIVED
OCT 25 2013
WATER RIGHTS
PROGRAMDate Sept 14-13TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181FROM: Leon Vandenberg
(name)
40846 312th St
(address)
Springfield SD 57062
(city, state, zip)369-2610
(phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

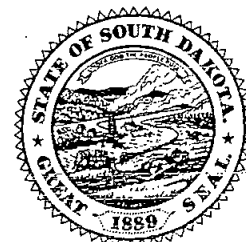
Water Permit No. 7401-3 states that the water use system is to be constructed by Nov. 12 - 17, and water is to be put to beneficial use by Nov 12 2021.
(date) (date)

The water use system was completed on April 20 - 2012.
(date)

Applying the water to beneficial use was completed on April 20 - 2012.
(date)

You may schedule an investigation so that the water license may be issued.

Leon Vandenberg
(signature)





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

October 31, 2013

7401-3

Leon Vanderlei
40846 312th St
Springfield SD 57062

Dear Mr. Vanderlei:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with your irrigation system as authorized under Water Permit No. 7401-3.

The system is now ready for inspection. Inspections are done on a county-by-county basis as staff time permits. You have done everything you need to do and the intervening time between the completion of your project and the staff inspection has no bearing on your water permit.

Someone from our office will contact you prior to the inspection to set up a time that is convenient for you. If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink that reads "Genny McMath". The signature is written in a cursive, flowing style.

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

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7401-3

I have this day, February 22, 2018, made a thorough examination of the water use system constructed by Leon Vanderlei, 40846 312th St., Springfield, SD 57062, holder of Permit No. 7401-3, bearing the priority of August 6, 2012 authorizing the diversion of 2.0 cu. ft. per second of the waters of ground water (Choteau West aquifer) for irrigation purposes, in Bon Homme County.

Inspection contact: Leon Vanderlei, Owner

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Thein Well Co. Inc.
- 2) No. of Wells 1
- 3) Depth(s) 250 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 12 inches
- 2) Length 210 feet
- 3) Type Plastic

Screen:

- 1) Type PVC Slotted and Stainless Steel
- 2) Length 20/20 feet
- 3) Static water level 153 feet

Pump:

- 1) Make Mid America
- 2) Model Unknown
- 3) Capacity 900 GPM

Motor:

- 1) Make GE
- 2) Model No. Unknown
- 3) Horsepower rating 100 hp

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

- 1) Type PVC
- 2) Size 8 inches
- 3) Length 1,390 feet

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make T&L
- 2) Overall length 988 feet
- 3) Number of towers 6
- 4) End gun Yes
- 5) Capacity 900 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 Yes with hose
- 6) Interlock type mechanical
- 7) Injection pump positive displacement
- 8) Injection check valve Y
- 9) Injection line check valve or positive displacement pump Y

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Yes
- 3) Exceptions to compliance are: None

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: Well: 2,310 feet north and 45 feet east from the SW corner of Section 13-T93N-R61W (Latitude 42.87198, Longitude -98.01053).
2. The works are capable of diverting and conveying to the place of use 2.0 cu. ft. per second of water which is to be used for irrigation purposes. Water has been put to beneficial use to the maximum extent as follows: all in Section 13-T93N-R61W

<u>NW1/4SW1/4</u>	<u>33 acres</u>
<u>SW1/4SW1/4</u>	<u>17 acres</u>
<u>NE1/4SW1/4</u>	<u>4 acres** (use 3 acres)</u>

**There are 37 acres described in the NE ¼ SW ¼ under No. 7081-3. Reduce acreage described to the left to 3 acres to come up to a 40 acre parcel. Total of the acreage described on this form would be 53 acres. Genny

comprising a total of 54 acres of land and the license should be issued for 2.0 cfs.

3. All structures, wells and lands on map Yes

F. Comments or other permit(s) associated with the project:

Water Permit Nos. 7401-3 and 7081-3 should be incorporated into one water license since the same well supplies both irrigation systems.

Although included in the original application, the SW ¼ of the SW ¼ of Section 13-T93N-R61W was omitted from the permit. The acreage can be included in the water license under 46-5-30.5 since it is contiguous to the permitted acreage, owned by the same property owner and developed as part of the original irrigation project if the chief engineer makes a finding that existing water rights will not be impaired and is consistent with the original application.

The well associated with this permit also supplies water for Permit No. 7081-3 at a rate of 2.0 cfs. The latitude and longitude coordinates for this well were obtained using a handheld GPS unit.

Because Permit No. 6487-3 provided water for Permit No. 7081-3 for a time in the past, the center pivots for Permits 8271-3, 6487-3, 7401-3 and 7081-3 are all tied together with 8 inch plastic pipe. If necessary, all of the pivots can be fed from the well associated with Permit No. 6487-3 or Permit No. 7401-3 if one well or the other is temporarily out of service. Also, water from the holding pond for the Vanderlei CAFO in the SW1/4 of Section 13 is occasionally pumped through the center pivot piping to lower the water level in the holding pond. The piping used to accomplish this task is placed above the ground and is only used temporarily.

Keith DeJong

Keith DeJong
Water Rights Inspector
DENR, Water Rights Program

Date report completed: May 30, 2018

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7081-3

I have this day, February 22, 2018, made a thorough examination of the water use system constructed by Leon Vanderlei, 40846 312th St., Springfield, SD 57062, holder of Permit No. 7081-3, bearing the priority of November 17, 2008 utilizing diversion rate authority of 1.89 cu. ft. per second held under Water Right no. 6487-3 of the waters of ground water (Choteau West aquifer) for irrigation purposes, in Bon Homme County.

Inspection contact: **Leon Vanderlei, Owner**

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Thein Well Co. Inc.
- 2) No. of Wells 1
- 3) Depth(s) 250 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 12 inches
- 2) Length 210 feet
- 3) Type Plastic

Screen:

- 1) Type PVC Slotted and Stainless Steel
- 2) Length 20/20 feet
- 3) Static water level 153 feet

Pump:

- 1) Make Mid America
- 2) Model Unknown
- 3) Capacity 900 GPM

Motor:

- 1) Make GE
- 2) Model No. Unknown
- 3) Horsepower rating 100 hp

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

- 1) Type PVC
- 2) Size 8 inches
- 3) Length 2,750 feet

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make T&L
- 2) Overall length 1,296 feet
- 3) Number of towers 8
- 4) End gun Yes
- 5) Capacity 900 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 Yes with hose
- 6) Interlock type mechanical
- 7) Injection pump positive displacement
- 8) Injection check valve Y
- 9) Injection line check valve or positive displacement pump Y

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Yes
- 3) Exceptions to compliance are: None

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: Well: 2,310 feet north and 45 feet east from the SW corner of Section 13-T93N-R61W (Latitude 42.87198, Longitude -98.01053).
2. The works are capable of diverting and conveying to the place of use 2.0 cu. ft. per second of water which is to be used for irrigation purposes. Water has been put to beneficial use to the maximum extent as follows: all in Section 13-T93N-R61W

NW1/4SW1/4	3 acres
NE1/4SW1/4	37 acres
NW1/4SE1/4	31 acres

SW1/4SW1/4	3 acres
SE1/4SW1/4	35 acres
SW1/4SE1/4	28 acres

comprising a total of 137 acres of land and now utilizes the 2.0 cfs of diversion rate authority under Water Permit No. 7401-3.

3. All structures, wells and lands on map Yes

F. Comments or other permit(s) associated with the project:

Water Permit Nos. 7401-3 and 7081-3 should be incorporated into one water license since the well supplies both irrigation systems.

This permit originally used the well that is associated with Permit No. 6487-3 with a capacity of 1.89 cfs. Now, this permit is using water from the well associated with Permit No. 7401-3 at a rate of 2.0 cfs. The latitude and longitude coordinates are for the well associated with Permit No. 7401-3 and were obtained using a handheld GPS unit.

Because Permit No. 6487-3 provided water for Permit No. 7081-3 for a time in the past, the center pivots for Permits 8271-3, 6487-3, 7401-3 and 7081-3 are all tied together with 8 inch plastic pipe. If necessary, all of the pivots can be fed from either well if one well or the other is temporarily out of service. Also, water from the holding pond for the Vanderlei CAFO in the SW1/4 of Section 13 is occasionally pumped through the center pivot piping to lower the water level in the holding pond. The piping used to accomplish this task is placed above the ground and is only used temporarily.

Keith DeJong

Keith DeJong
Water Rights Inspector
DENR, Water Rights Program

Date report completed: May 30, 2018

7401-3

SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

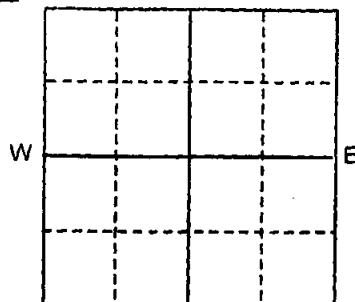
11-02

Location SW 1/4 SW 1/4 Sec 13 Twp 93N Rg 61W

County Bon Homme

North

Please mark well location with an "X"



Well Completion Date

July 31, 2012

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
50.0 ft. from septic (identify source)

PROPOSED USE:

☐ Domestic/Stock ☐ Municipal ☐ Business ☐ Test holes
☒ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well

METHOD OF DRILLING:

Rotary

CASING DATA:

If other describe ☐ Steel ☒ Plastic ☐ Other

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	0.0 FT	210.0 FT	15.00 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite	48	Lb/gal	0.0 Ft	195.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
tremie piped

SCREEN:

☒ Perforated pipe ☒ Manufactured
 Diameter 12.00 Inches Length 20.0/20 Feet
 Material PVC slotted pipe and stainless steel
 Slot Size .040 Set From 210.0 Feet to 250.0 Feet

Other information

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? chlorinated☐ No, Why Not?Lab to which water
quality sample sent for analysis
owner to obtain

Well Owner: Leon Vanderlei

Business Name:

Address: 40846 312th St

City State Zip: Springfield SD 57062

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top soil	0	1
Yellow clay w/sand seams	1	40
Blue clay	40	176
Tight dirty sand	176	182
Clay w/sand	182	187
Blue clay	187	209
Fine to Med sand	209	245
Med to coarse sand	245	247
continued on next page		

STATIC WATER LEVEL 153.0 FEET

If flowing: closed in pressure PSI

GPM flow through Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe:☐ Bailed☐ Other

Pumping Level Below Land Surface

153.6 Ft. After 2.0 Hrs. pumped 1,200.0 GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

RECEIVED

DEC 17 2012

WATER RIGHTS

This well was drilled under license # 475 PROGRAM and this report is true and accurate.

Drilling firm: Thein Well Co., Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: 12-10-2012

11-02

Well Owner: Leon Vanderlei

Address: 40846 312th St

City, State, Zip: Springfield SD 57062

North

Please mark well
location with an "X"

W

E

Well Completion Date

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? _____ ft. from _____ (Identify source)

☐ Domestic/Stock ☐ Municipal ☐ Business ☐ Test holes
☐ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring wells

CASING DATA: ☐ Steel ☐ Plastic ☐ Other
If other describe _____

PIPEWEIGHT	DIAMETER		FROM		TO		HOLE DIAMETER	
_____ LB/FT	_____	IN	_____	FT	_____	FT	_____	IN
_____ LB/FT	_____	IN	_____	FT	_____	FT	_____	IN
_____ LB/FT	_____	IN	_____	FT	_____	FT	_____	IN

Grout Type	No. of Sacks	Grout Weight	From	To
		Lb/gal	Ft	Ft
		Lb/gal	Ft	Ft
Describe grouting procedure				

SCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter _____ Inches Length _____ Feet

Material _____

Slot Size _____ Set From _____ Feet to _____ Feet

Other information _____

If so, what material? _____
Describe packer(s) and location _____

☐ Yes, How? chlorinated

Lab to which water ☐ No, Why Not?
quality sample sent for analysis

DEPTH

FORMATION

FROM

TO

Boulder	247	250
---------	-----	-----

Blue clay	250	-
-----------	-----	---

FEET

If flowing: closed in pressure PSI

GPM flow	through	Inch pipe
100	100	100
200	200	200
300	300	300
400	400	400
500	500	500
600	600	600
700	700	700
800	800	800
900	900	900
1000	1000	1000
1100	1100	1100
1200	1200	1200
1300	1300	1300
1400	1400	1400
1500	1500	1500
1600	1600	1600
1700	1700	1700
1800	1800	1800
1900	1900	1900
2000	2000	2000
2100	2100	2100
2200	2200	2200
2300	2300	2300
2400	2400	2400
2500	2500	2500
2600	2600	2600
2700	2700	2700
2800	2800	2800
2900	2900	2900
3000	3000	3000
3100	3100	3100
3200	3200	3200
3300	3300	3300
3400	3400	3400
3500	3500	3500
3600	3600	3600
3700	3700	3700
3800	3800	3800
3900	3900	3900
4000	4000	4000
4100	4100	4100
4200	4200	4200
4300	4300	4300
4400	4400	4400
4500	4500	4500
4600	4600	4600
4700	4700	4700
4800	4800	4800
4900	4900	4900
5000	5000	5000
5100	5100	5100
5200	5200	5200
5300	5300	5300
5400	5400	5400
5500	5500	5500
5600	5600	5600
5700	5700	5700
5800	5800	5800
5900	5900	5900
6000	6000	6000
6100	6100	6100
6200	6200	6200
6300	6300	6300
6400	6400	6400
6500	6500	6500
6600	6600	6600
6700	6700	6700
6800	6800	6800
6900	6900	6900
7000	7000	7000
7100	7100	7100
7200	7200	7200
7300	7300	7300
7400	7400	7400
7500	7500	7500
7600	7600	7600
7700	7700	7700
7800	7800	7800
7900	7900	7900
8000	8000	8000
8100	8100	8100
8200	8200	8200
8300	8300	8300
8400	8400	8400
8500	8500	8500
8600	8600	8600
8700	8700	8700
8800	8800	8800
8900	8900	8900
9000	9000	9000
9100	9100	9100
9200	9200	9200
9300	9300	9300
9400	9400	9400
9500	9500	9500
9600	9600	9600
9700	9700	9700
9800	9800	9800
9900	9900	9900
10000	10000	10000

Controlled by ☐ Valve ☐ Reducers ☐ Other

	GPM
Reduced flow rate	

Can well be completely shut in?

☐ Pumped Describe:☐ Bailed☐ Other

Pumping Level Below Land Surface

	Ft. After	Hrs. pumped	GPM
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	Ft. After	Hrs. pumped	GPM
1	10	1	10
2	20	2	20
3	30	3	30
4	40	4	40
5	50	5	50
6	60	6	60
7	70	7	70
8	80	8	80
9	90	9	90
10	100	10	100
11	110	11	110
12	120	12	120
13	130	13	130
14	140	14	140
15	150	15	150
16	160	16	160
17	170	17	170
18	180	18	180
19	190	19	190
20	200	20	200
21	210	21	210
22	220	22	220
23	230	23	230
24	240	24	240
25	250	25	250
26	260	26	260
27	270	27	270
28	280	28	280
29	290	29	290
30	300	30	300
31	310	31	310
32	320	32	320
33	330	33	330
34	340	34	340
35	350	35	350
36	360	36	360
37	370	37	370
38	380	38	380
39	390	39	390
40	400	40	400
41	410	41	410
42	420	42	420
43	430	43	430
44	440	44	440
45	450	45	450
46	460	46	460
47	470	47	470
48	480	48	480
49	490	49	490
50	500	50	500
51	510	51	510
52	520	52	520
53	530	53	530
54	540	54	540
55	550	55	550
56	560	56	560
57	570	57	570
58	580	58	580
59	590	59	590
60	600	60	600
61	610	61	610
62	620	62	620
63	630	63	630
64	640	64	640
65	650	65	650
66	660	66	660
67	670	67	670
68	680	68	680
69	690	69	690
70	700	70	700
71	710	71	710
72	720	72	720
73	730	73	730
74	740	74	740
75	750	75	750
76	760	76	760
77	770	77	770
78	780	78	780
79	790	79	790
80	800	80	800
81	810	81	810
82	820	82	820
83	830	83	830
84	840	84	840
85	850	85	850
86	860	86	860
87	870	87	870
88	880	88	880
89	890	89	890
90	900	90	900
91	910	91	910
92	920	92	920
93	930	93	930
94	940	94	940
95	950	95	950
96	960	96	960
97	970	97	970
98	980	98	980
99	990	99	990
100	1000		

If pump installed, pump rate: _____ GPM

REMARKS

RECEIVED

AUG 24 2012

**WATER RIGHTS
PROGRAM**

This well was drilled under license # _____ and this report is true and accurate.

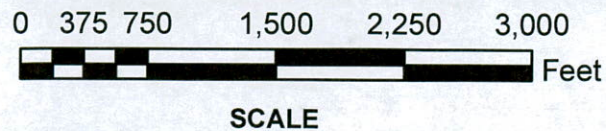
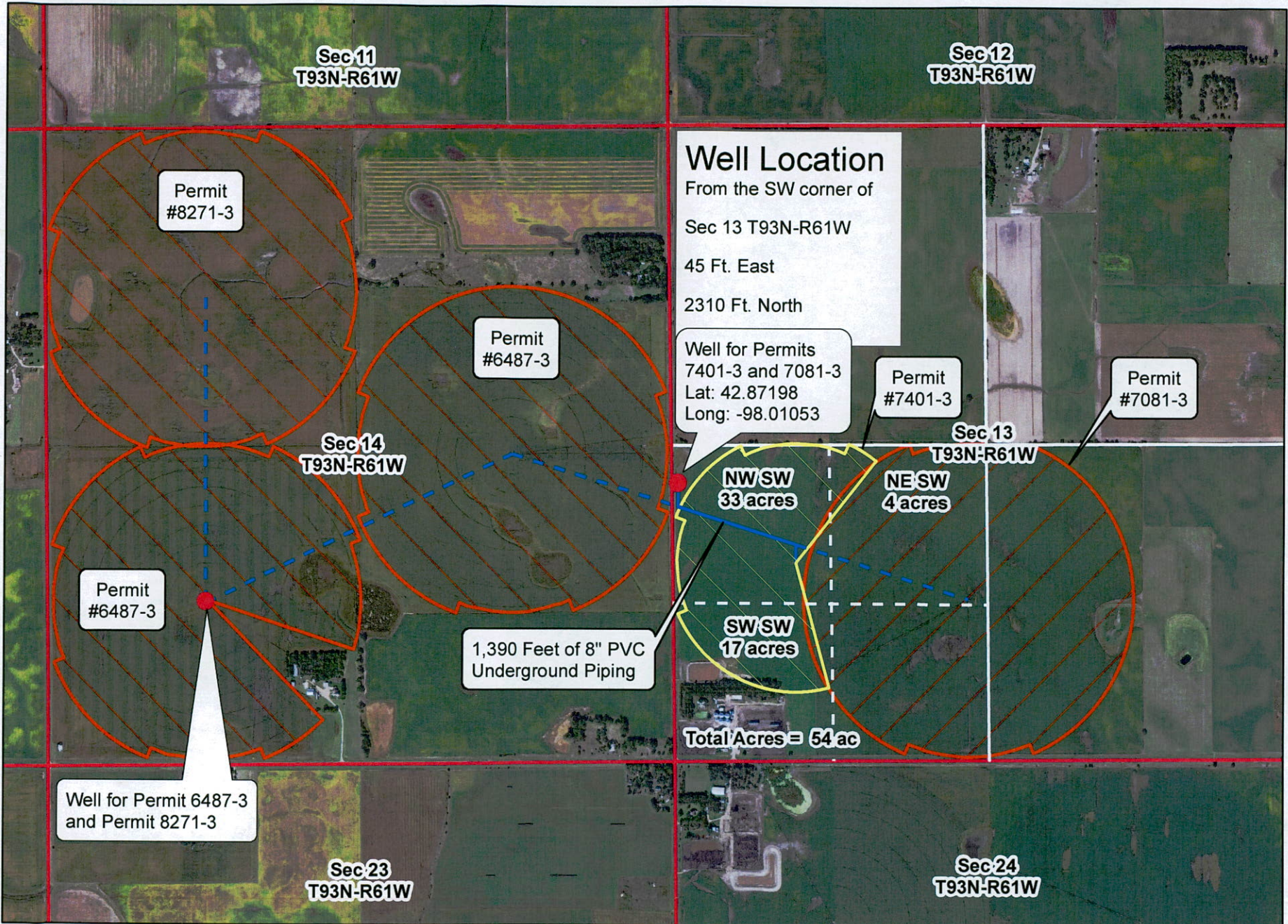
Drilling firm:

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

Water Right No. 7401-3



Keith DeJong
Keith DeJong, PE
Staff Engineer
April 6, 2018

Licensing of Acreage Outside of Permitted Area

NAME: Leon Vanderlei

ADDRESS: 40846 312th Street, Springfield SD 57062

DATE: May 18, 2018

COUNTY: Bon Home

TELEPHONE:

AUTHORITY

Pursuant to SDCL 46-5-30.5, acreage developed for irrigation outside of the area described on the permit may be licensed provided the following conditions are met:

NO INCREASE IN PERMITTED ACREAGE OR WATER APPROPRIATED:

Water Permit No. 7401-3 was filed to irrigate 60 acres in the W ½ SW ¼ Section 13-T93N-R63W. Forty acres are listed to be located in the NW ¼ SW ¼ and 20 acres in the SW ¼ SW ¼ of Section 13. During the processing and public notice the 20 acres located in the SW ¼ SW ¼ of the section were inadvertently omitted from the permit. The licensing investigation found 17 acres being irrigated in the SW ¼ SW ¼ of Section 13. Therefore this necessitates following the procedures in SDCL 46-5-30.5 to authorize prior to licensing.

UNPERMITTED ACREAGE:

- **Contiguous to Permitted Acreage**
Yes
- **Owned by Same Property Owner**
Yes
- **Developed Prior to Expiration of Construction Period**
Yes

RECOMMENDED ACTION

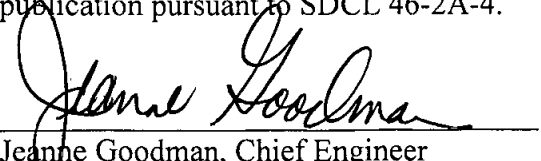
Based on the above criteria, it is recommended that the 17 acre area be included in the water license.



Eric Gronlund, Natural Resource Engineer
Water Rights Program

The Chief Engineer makes a finding pursuant to SDCL 46-5-30.5 that:

This acreage change does not impair existing water rights and the overall project, as developed, is consistent with the original application. Licensing of the unpermitted acreage may occur without application or publication pursuant to SDCL 46-2A-4.



Jeanne Goodman, Chief Engineer
Water Rights Program

7401-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

JUN 29 2018

7081-3
7401-3

Leon Vanderlei
40846 312th St
Springfield SD 57062

Dear Mr. Vanderlei:

Enclosed is Water License No. 7401-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Note: Upon licensing, the applicable portions of Water Permit No. 7081-3 were incorporated into Water License No. 7401-3.

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7401-3

(1) Leon Vanderlei, 40846 312th St., Springfield SD 57062-6217 made Application No. 7401-3, August 6, 2012 for a water permit to divert 2.00 cubic feet of water per second (cfs) from ground water (one well, Choteau West Aquifer), Bon Homme County, South Dakota for irrigation purposes. Permit No. 7401-3, with a priority date of August 6, 2012 was approved November 12, 2012 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before November 12, 2017 and for the application to beneficial use of said water on or before November 12, 2021.

The initial permit application for No. 7401-3 requested authorization to irrigate 60 acres in the W ½ SW ¼ Section 13, T93N, R63W. During processing of the application and the public notice of the acreage, 20 acres in the SW ¼ SW ¼ Section 13 was left off the permit. The licensing investigation found 17 acres in the SW ¼ SW ¼ Section 13 had been developed needs to be included. The Chief Engineer of the Water Rights Program made a finding pursuant to SDCL 46-5-30.5 that the additional acreage does not impair existing water rights and the overall project is consistent with the original application.

Water Permit No. 7081-3 originally authorized use of a well described in No. 6487-3 to irrigate 140 acres in the W ½ SE ¼ and E ½ SW ¼ Section 13, T93N, R61W. Water Permit No. 7401-3 authorized use of a new well to irrigate an additional 60 acres and included authorization to irrigate acreage described in Permit No. 7081-3 from the new well. **The applicable portions of Water Permit No. 7081-3 are incorporated into Water License No. 7401-3.**

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 2.00 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 2,310'N and 45'E of the SW corner of Section 13, T93N, R61W (NW ¼ SW ¼)
Latitude 42.87198, Longitude -98.01053

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

Section 13, T93N, R61W			
NW ¼ SW ¼	36 acres	NW ¼ SE ¼	31 acres
SW ¼ SW ¼	20 acres	SW ¼ SE ¼	28 acres
NE ¼ SW ¼	40 acres		
SE ¼ SW ¼	35 acres		190 acres

Acreage is irrigated under two pivots which slightly overlap each other. One full pivot located in the E ½ SW ¼ and W ½ SE ¼; second pivot makes a partial rotation covering the W ½ SW ¼.

Priority dates:

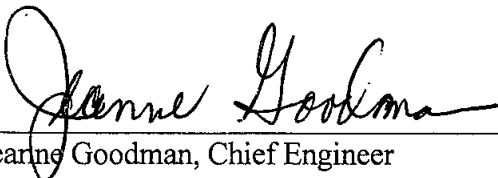
- November 17, 2008 (7081-3) for full pivot in E ½ SW ¼ and W ½ SE ¼ Section 13;
- August 6, 2012 (7401-3) for partial pivot located in W ½ SW ¼ Section 13 & 2.00 cfs

continued

(4) Pursuant to South Dakota Water Law 46-5-30.1 Leon Vanderlei, 40846 312th St., Springfield SD 57062-6217 the holder and/or owner of Incorporated Water Right No. 7401-3 is issued a license to appropriate water, the right to use 2.00 cubic feet of water per second from ground water, one well (Choteau West Aquifer) with priority dates of November 17, 2008 and August 6, 2012 from the location specified in (2) of this license for irrigation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Incorporated Water Right No. 7401-3 and subject to the following qualifications:

- 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.
- **From No. 7401-3:** The well authorized by Permit No. 7401-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28. *Well drilled by Thein Well Company, Inc. in July, 2012. A copy of the well completion report is on file with the Water Rights Program.*
- This Permit is approved subject to the irrigation water use questionnaire being submitted each year.



Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JUN 29 2018

date

