

WATER PERMIT NO. 8081-3

Name of Applicant: David G Sternhagen

Address: 30455 438th Ave, Yankton SD 57078

Phone: 605 760-3021

Amount of Water Claimed: no additional

Total Acres: 58 acres

Source of Water Supply: groundwater (one existing well)

Water to be used for: irrigation

County: Yankton

Type of Waste Disposal System:

Location: 5 miles northwest of Yankton

PRIORITY

Date Received: 1-23-15

Application/License Fee: \$ 500

Corrected Application Received:

Period of Annual Use: April 1 – September 30

Remarks: Utilizing well authorized by Water Permit No. 7459-3

Diversion Point: NE 1/4 SE 1/4 Sec 10-T94N-
R56W

Land to be Irrigated: W 1/2 NE 1/4 Sec 10-T94N-
R56W

Depth of Well: 240 feet deep

Well Driller: Hammond-Wetmore Drilling

Remarks:

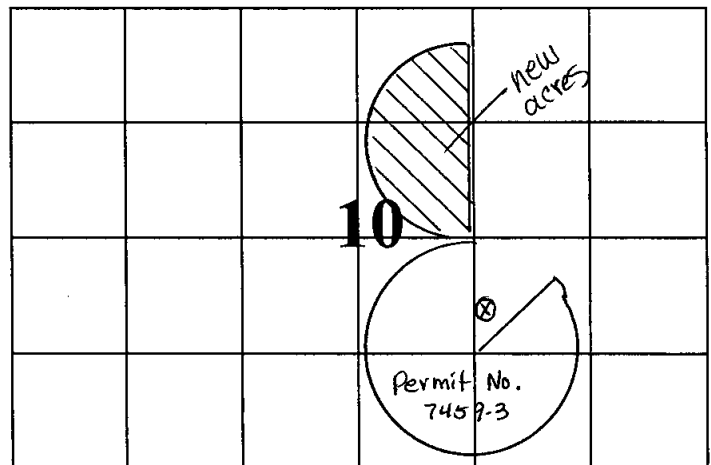
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 1-23-15

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. 8081-3 (office use only)
Hydrologic Unit 10160011
Basin James River
Newspaper Press & Dakotan 319 Walnut
Yankton 57078 605-665-7811

RECEIVED
JAN 23 2015
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.)

utilizing well authorized by Permit No. 7459-3

1. Name to Appear on Irrigation Permit David G Sternhagen
(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent
(name and complete address if different than above name)

Mailing Address 30455 438 Ave Yankton S.D 57078
(Address) (City) (State) (Zip Code)

Home Phone 665-7945 Cell 760-3021 Email davestern@byelectric.com

2. Amount of water claimed _____ *CFS or no add **GPM ***AF Total Acreage 58
(*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply 1 groundwater well

4. Location of point of diversion one well in the NE 1/4 of SE 1/4 of section 10
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
T94N R56W County Yankton

5. County or counties where water will be used Yankton

6. Annual period during which water is to be used April to September 30

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>SW 1/4 of NE 1/4 sec 10 T94N R56W</u>	<u>33</u>		
<u>NW 1/4 of NE 1/4 sec 10 T94N R56W</u>	<u>25</u>		

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

Irrigate cropland using a pivot through the months of April to September.

I, David G Sternhagen, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

SOUTH DAKOTA
WATER PERMIT NO. 8081-3

Date of first receipt of application January 23, 2015.

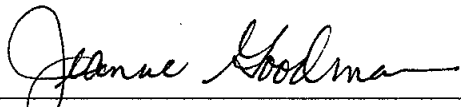
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8081-3 to David G Sternhagen, 30455 438th Ave, Yankton SD 57078 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 8081-3 authorizes irrigation of 58 new acres. Water Permit No. 7459-3 appropriates 1.78 cubic feet of water per second from one well completed into the Lower James:Missouri Aquifer (240 feet deep) located in the NE 1/4 SE 1/4 Section 10 to irrigate 113 acres located in the SE 1/4 Section 10; all in T94N-R56W. This permit authorizes irrigation of 58 new acres located in the W 1/2 NE 1/4 Section 10-T94N-R56W from the existing well. This permit does not authorize any increase in the diversion rate.
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 – September 30.
3. The date from which applicant may claim right is January 23, 2015.
4. The date of approval of Permit No. 8081-3 is April 6, 2015.
5. One-fifth of the construction is to be completed on or before October 6, 2017.
6. All construction is to be completed on or before April 6, 2020.
7. Water is to be put to beneficial use on or before April 6, 2024.
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 this Permit Nos. 7459-3 and 8081-3 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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

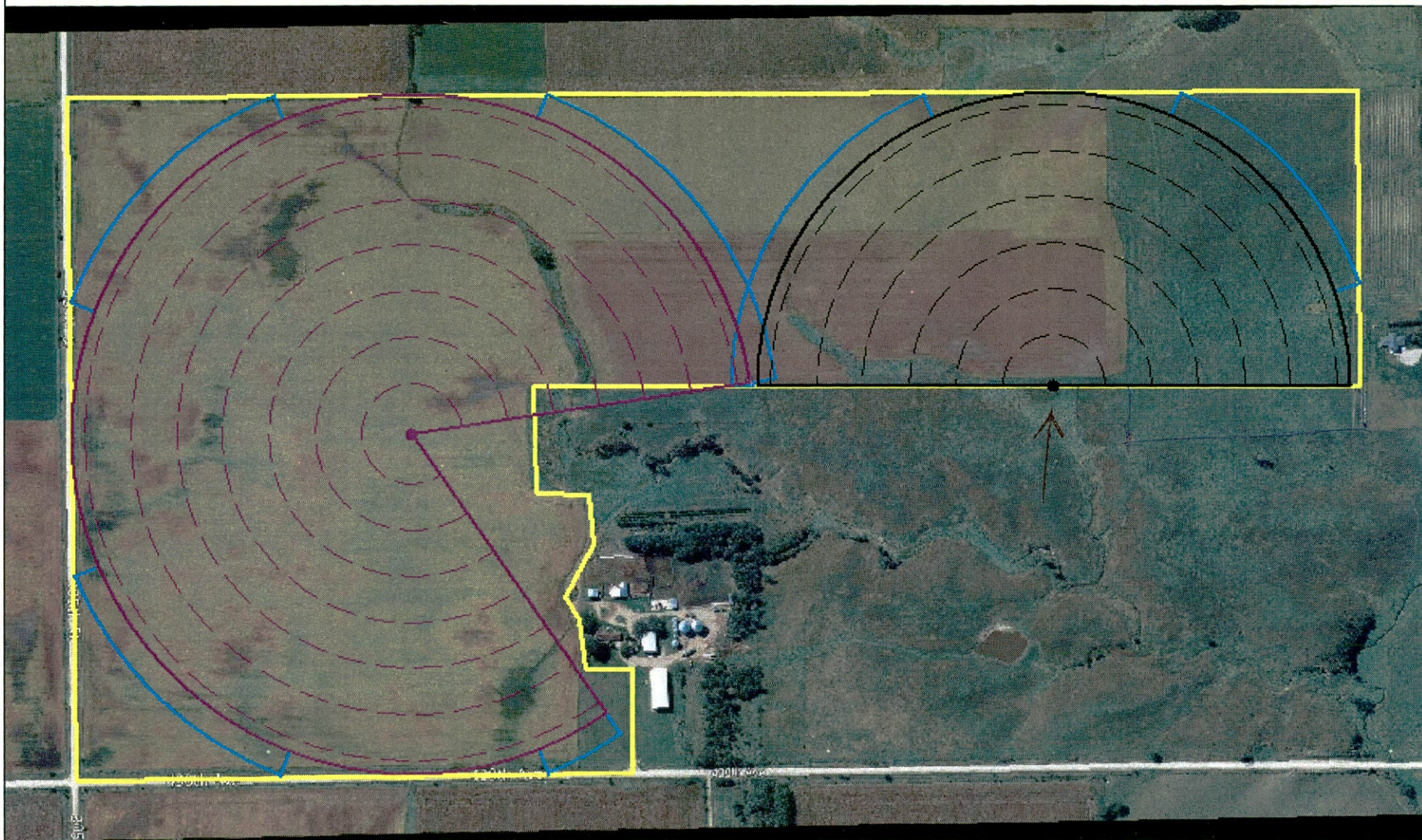
By: 

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

APR 23 2015

date





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JAN 23 2015

WATER RIGHTS
PROGRAM

7459-3

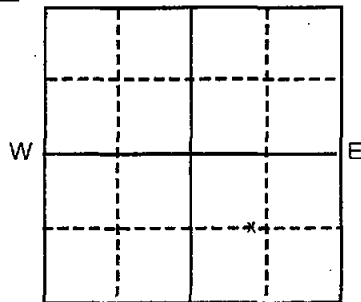
SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location nw 1/4 se 1/4 Sec 10 Twp 94n Rg 56wCounty Yankton

North

Please mark well
location with an "X"

Well Completion Date

October 10, 2012

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
1,500.0 ft. from septic tank (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Direct rotary

CASING DATA:

If other describe sdr 21

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	0.0 FT	178.0 FT	18.00 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
bent grout	12	9.6 Lb/gal	0.0 Ft	170.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
tremie

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 12.00 inches Length 60.0 Feet
 Material pvc
 Slot Size 0.60 Set From 178.0 Feet to 238.0 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?☒ No, Why Not? naLab to which water
quality sample sent for analysisWell Owner: David Sternhagen

Business Name:

Address: 30455 438th AveCity, State, Zip: Yankton SD 57078

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Silt, yellow brn, Loess	0	7
Clay, yellow brn to gray, silty, pebbly	7	94
Chalk, gray, silty,	94	129
Clay, gray, silty, pebbly	129	155
gravel, coarse, rocky	155	170
Sand, coarse, pebbly	170	248
Silt, gray, clayey	248	262

STATIC WATER LEVEL 144.0 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: not yet completed
☐ Bailed
☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

RECEIVED

FEB - 1 2013

WATER RIGHTS
PROGRAMThis well was drilled under license # 666 and this
report is true and accurate.Drilling firm: Hammond Wetmore Drilling

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: 12-12-12

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 1/23, 20 15

RECEIVED OF David Sternhagen 30455 438th Ave Yankton SD 57078

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

Fee for Application for Permit No. <u>8081-3</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. _____		
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	500 00

No. 07180

By 
Chief Engineer

Schlaak, Karen

From: David Sternhagen <davestern@byelectric.com>
Sent: Sunday, January 25, 2015 3:25 PM
To: Schlaak, Karen
Subject: Re: Application to Appropriate Water

Yes this is correct. I will not be increasing the rate from the existing well. The plan is to irrigate an additional 58 acres.

David Sternhagen

----- Original Message -----

From: Schlaak, Karen

To: 'davestern@byelectric.com'

Sent: Friday, January 23, 2015 9:55 AM

Subject: Application to Appropriate Water

Mr. Sternhagen,

We received your water permit application. Your existing Permit No. 7459-3 is for 800 gallons per minute. We are assuming you will not be increasing this diversion rate from the existing well. You are just proposing to irrigate 58 additional acres. Is this correct?

If you have questions, please let me know.

Karen Schlaak

Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8081-3, David G Sternhagen**

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. 8081-3, David Sternhagen, 30455 438th Avenue, Yankton, SD 57078.

The Chief Engineer is recommending APPROVAL of Application No. 8081-3 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 this Permit Nos. 7459-3 and 8081-3 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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
March 18, 2015

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 8081-3
DAVID G STERNHAGEN
MARCH 18, 2015

Water Permit Application No. 8081-3 proposes to irrigate 58 new acres in addition to the acreage authorized for irrigation by Permit No. 7459-3. Water Permit No. 7459-3 appropriates 1.78 cubic feet of water per second (cfs) from one well completed into the Lower James Missouri aquifer (240 feet deep) located in the NE ¼ SE ¼ Section 10 for the irrigation of 113 acres located in the SE ¼ Section 10; all in T94N-R56W in Yankton County. This application proposes to irrigate 58 new acres located in the W ½ NE ¼ Section 10; T94N-R56W using the same well. This application, if approved, does not authorize any increase in the diversion rate authorized by Permit No. 7459-3.

AQUIFER: Lower James Missouri (LJM)

Aquifer Characteristics:

The Lower James Missouri aquifer is composed of glacial outwash consisting of fine sand to cobble gravel and can be found under water table or artesian conditions depending on location (Bugliosi, 1986; Lindgren and Hansen, 1990). The aquifer is generally under confined conditions. The Lower James Missouri aquifer is estimated to underlie 191,700 acres and contains an estimated 2,795,400 acre-feet (ac-ft) of recoverable water in storage (Hedges et. al, 1982). The aquifer extends from Yankton County north into Hutchinson County and southeast into a small portion of Clay County. The aquifer is hydraulically connected to the Choteau, Lower James Missouri: Scotland, Niobrara, and the Missouri: Elk Point aquifers, and the James and Missouri Rivers (Bugliosi, 1986; Lindgren and Hansen, 1990).

The well completion report provided for the well authorized by Water Permit No. 7459-3 identified sand and gravel from 155 feet to 248 feet below grade. The well had a static water level of 144 feet below ground surface in October, 2012.

South Dakota Codified Law (SDCL) 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for this 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 availability of unappropriated water and effects on existing rights from the aquifer that are pertinent to this application.

WATER AVAILABILITY:

This application proposes to appropriate water from the Lower James Missouri aquifer. The probability of unappropriated water available from the 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.” If the source of the water is older or lower than the Greenhorn Formation and a public water system has applied for a permit, the Board need not consider the recharge/withdrawal issue. In this case, the aquifer is not stratigraphically lower than the Greenhorn Formation and the applicant is not a public water system.

In applying SDCL 46-6-3.1, the Sixth Judicial Circuit Court ruled in 2005 that if the Water Management Board uses average annual recharge, then it should also use average annual withdrawals to determine if unappropriated water is available from the aquifer (*Hines v. South Dakota Dept. of Environ. and Nat'l Resources, Hughes County 04-37*) (Memorandum Decision, April 29, 2005).

A 2012 First Judicial Circuit Court’s rulings ultimately stated that data must be present to show it is probable the average annual recharge exceeds the average annual discharge by at least the amount requested by the water permit application being considered (*Hanson County Dairy v. Robert Bender and Stace Nelson*) (Memorandum Decision, April 11, 2012).

Later in 2012, the First Judicial Circuit Court stated that in deciding whether or not it is probable that the quantity of water withdrawn will exceed the quantity of the average estimated annual recharge is to be based according to the best information reasonably available, and that nothing in South Dakota law requires a recharge study (*Longview Farms, LLP v. South Dakota Dept. of Environ. and Nat'l Resources*) (Memorandum Decision, May 17, 2012).

Observation Well Data:

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 of the aquifer.

The DENR-Water Rights Program monitors 31 observation wells completed into the Lower James Missouri aquifer (Water Rights, 2015a). Water levels in the observation wells show response to climatic conditions. The water levels rise (recharge) during wet years and gradually decline during dry years. However, the hydrographs for 14 of the observation wells have a declining trendline across the period of record (see Figure 1).

To explain the declining trendline in the observation wells, the wells need to be divided into two groups: observation wells north of line A-A’ and observation wells south of A-A’ (see Figure 1). All of the observation wells north of line A-A’ with a negative trendline have had recent development nearby, and the water level has yet to equilibrate. Also, the temporal effects of pumping are skewing the trendline downward. Observation wells HT-81D and HT-82C (see Figures 2 and 3), in the northeast corner of the aquifer, are very good examples of this.

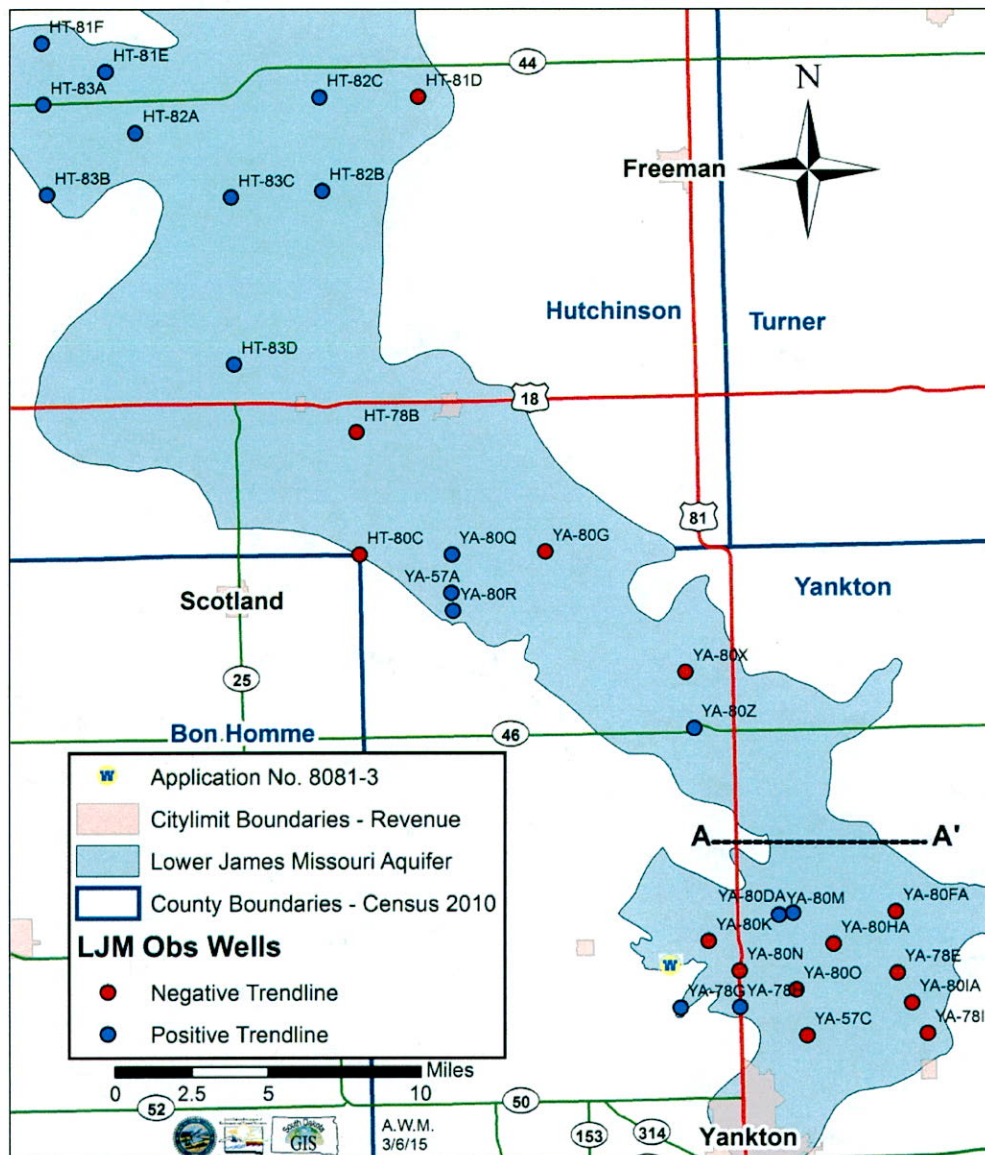


Figure 1- Map of the Lower James Missouri aquifer observation wells (Water Rights, 2015a)

Observation wells HT-81D and HT-82C are 3.2 miles apart. Observation well HT-81D has a decreasing trendline and HT-82C has an increasing trendline (see Figure 2). There are seven water rights/permits authorized to withdraw water from the Lower James Missouri aquifer within approximately 1.25 miles of HT-81D (Water Rights, 2015b). The nearest water rights/permits authorized to withdraw water from the Lower James Missouri aquifer to HT-82C are approximately two miles away. Figure 2 shows the hydrographs for the observation wells in feet above mean sea level (fmsl).

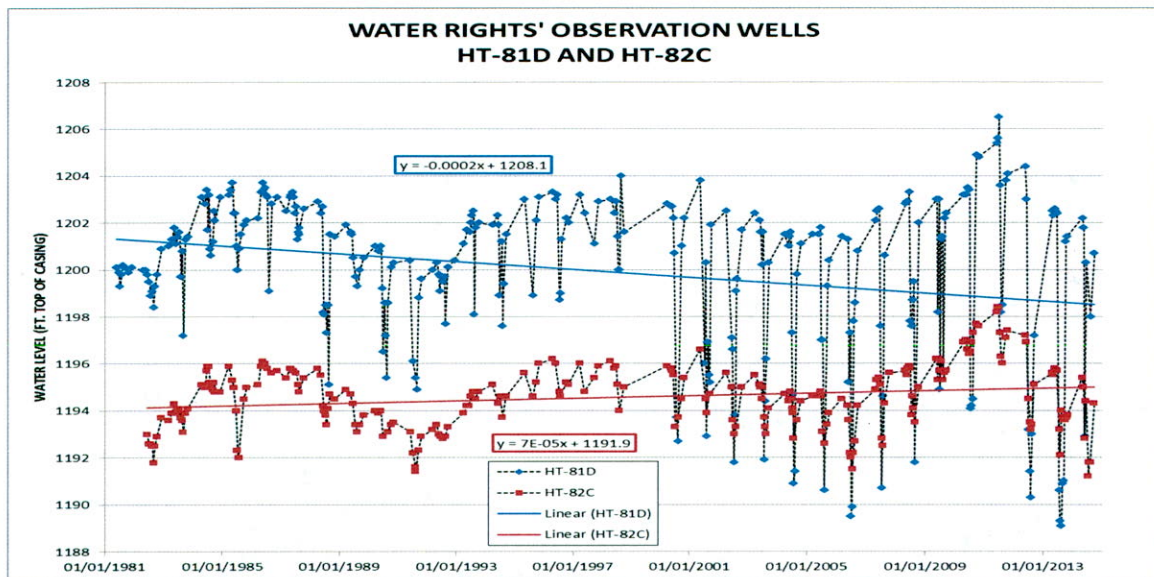


Figure 2- Hydrographs for observation wells HT-81D and HT-82C in fmsl (Water Rights, 2015a)

Overlays of the hydrographs for these two wells show the only difference in water levels is from the effects of local pumping on HT-81D (see Figure 3). Therefore, the decreasing trendline of these wells is attributed to the localized pumping and does not indicate overall annual water levels in the aquifer are decreasing. North of the line A-A' in Figure 1 the potentiometric surface of the aquifer has not significantly changed over the period of record showing no change in the stress on the aquifer.

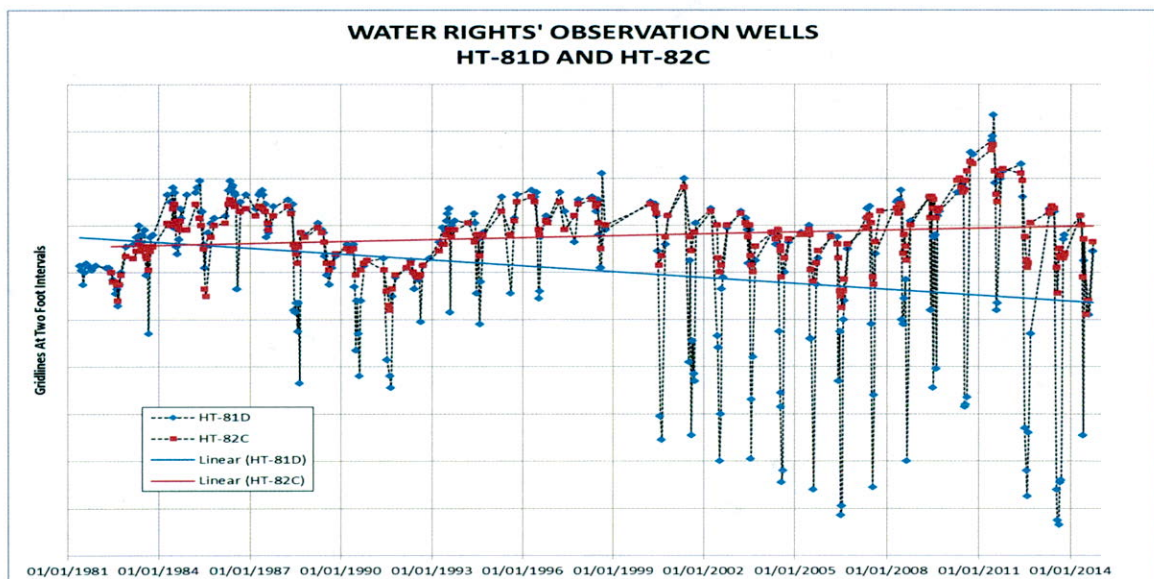


Figure 3- Overlay of observation wells HT-81D and HT-82C hydrographs (Water Rights, 2015a)

The Lower James Missouri aquifer south of line A-A' from Figure 1 has a significant hydraulic connection to the Missouri: Elk Point aquifer. South of line the potentiometric surface of the Lower James Missouri aquifer follows the gradual decline of the potentiometric surface of the Missouri: Elk Point aquifer.

The Missouri: Elk Point aquifer shares a significant hydraulic connection to the Missouri River. As the Missouri River has entrenched, the water level in the aquifer has declined. Figure 4 shows the stage trend curves of the Missouri River at Yankton from 1931 to 2007 (Cowman, 2014). Since the Gavins Point Dam was closed off, the Missouri River has entrenched approximately 10 feet. Therefore, the declining water levels in the observation wells completed into the Lower James Missouri aquifer south of line A-A' in Figure 1 of this report are attributed to the entrenchment of the Missouri River and are not due to withdrawals exceeding recharge to the aquifer.

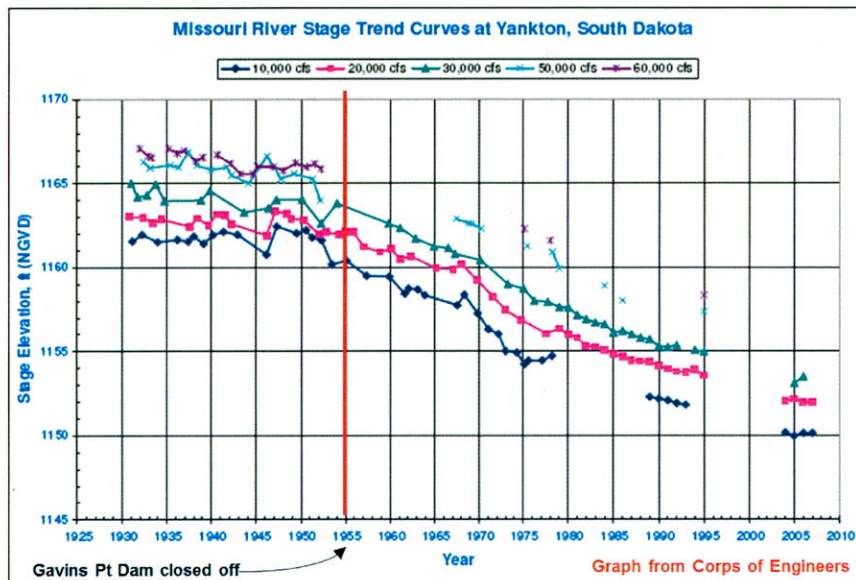


Figure 4- Missouri River Stage Trend Curves at Yankton, South Dakota (Cowman, 2014)

During 2012, 2013, and 2014, the cumulative annual precipitation was below normal by several inches. From January 2012 through December 2014, the weather station at the Yankton airport reported 71.78 inches of precipitation (NOAA, 2015). The normal precipitation for that area for two years is 75.27 inches of precipitation (SDSU, 2015).

On March 3, 2015, the U.S. Drought Monitor indicated the area of Lower James Missouri aquifer was “Abnormally Dry” (“Drought Monitor”, 2015). During most of the period from 2012 through 2014, the area of the aquifer was under “Abnormally Dry” conditions or worse according to the U.S. Drought Monitor (see Table 1) (“Drought Monitor”, 2015). The U.S. Drought monitor is released once per week. This continuing dry period may have kept the water levels in the observation wells from rebounding to pre-2012 drought levels. The count value is whenever approximately 25 percent or more of the areal extent of the aquifer was within a drought category. The count value was always placed in the higher category.

Category	Count	Percent	Total %
None	46	29.30	70.70
D0 Abnormally Dry	48	30.57	
D1 Moderate Drought	18	11.46	
D2 Severe Drought	7	4.46	
D3 Extreme Drought	7	4.46	
D4 Exceptional Drought	31	19.75	

Table 1- U.S. Drought Monitor category for area of Lower James Missouri aquifer from 2012 through 2014 ("Drought Monitor", 2015)

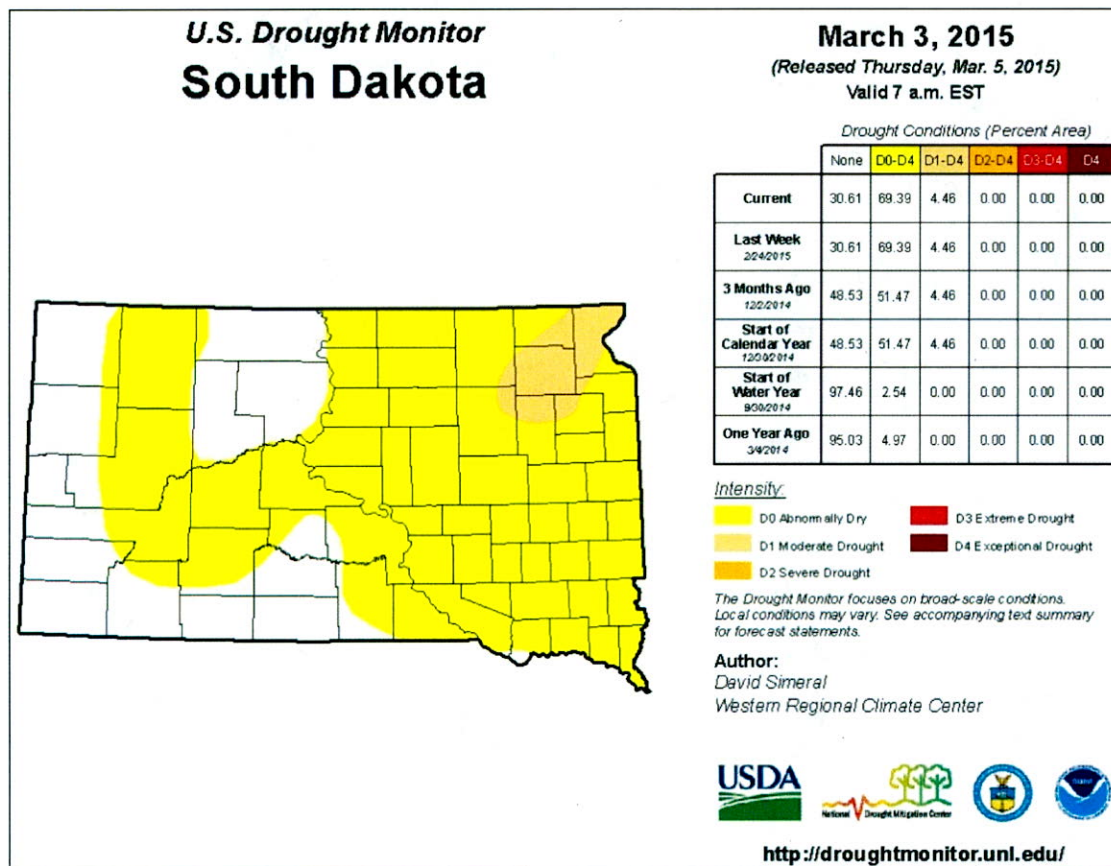


Figure 5- U.S. Drought Monitor: South Dakota for March 3, 2015 ("Drought Monitor", 2015)

The nearest observation wells to the proposed well site are YA-78G and YA-80K. The observation wells are approximately 1.4 miles south and northeast, respectively. The observation wells are south of line A-A' in Figure 1. Observation well YA-80K shows a declining trendline while YA-78G has an increasing trendline. The hydrographs show the cyclic nature of climatic effects on the water level as well as the temporal effects of well withdrawal (see Figures 6 and 7). However, the water levels in both wells do recover somewhat after the end of the irrigation season.

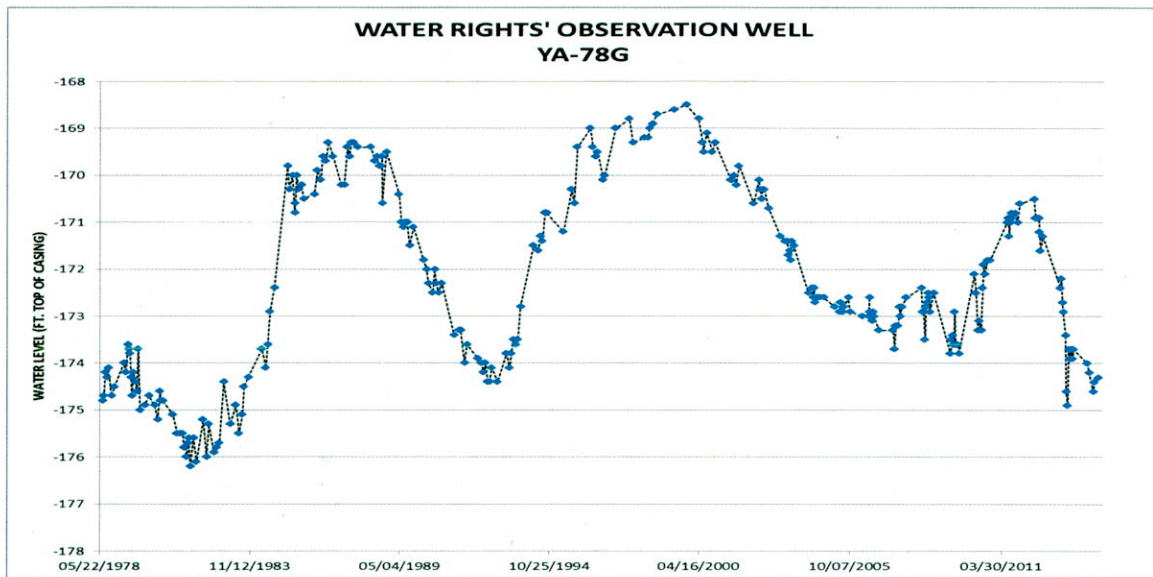


Figure 6- Hydrograph of DENR-Water Rights' observation well YA-78G (Water Rights, 2015a)

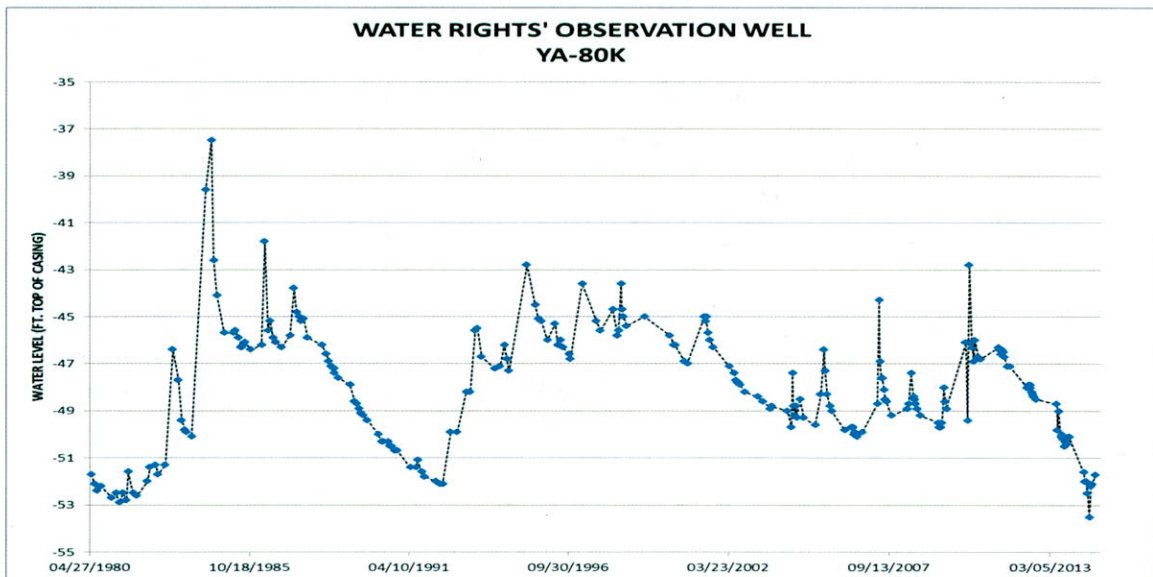


Figure 7- Hydrograph of DENR-Water Rights' observation well YA-80K (Water Rights, 2015a)

Recharge and Discharge:

Recharge:

The Lower James Missouri aquifer recharges due to infiltration of precipitation where the aquifer is at or near land surface, upward leakage from underlying bedrock aquifers, and inflow from surrounding glacial aquifers (Bugliosi, 1986). Hedges and others (1985) estimated the recharge rate, based on a regional flow-net analysis of the aquifer, to be 1.5 inches per year (in/yr) for the unconfined portion of the aquifer. Hedges and others (1985) put the Lower James Missouri aquifer in the "Buried Unconfined" category for use in the flow-net analysis, but the Lower James Missouri aquifer is primarily under confined conditions. That would mean the recharge rate of Hedges and others (1985) is likely higher than the actual recharge rate.

The minimum approximate unconfined area of the Lower James Missouri aquifer was determined using the first occurrence of aquifer materials map for Hutchinson (Jensen, 2007) and Yankton (McCormick, 2003) counties. The approximate minimum unconfined area of the Lower James Missouri aquifer is 56,083 acres. Using that area and the area for the aquifer from Hedges and others (1982), the recharge rate to the Lower James Missouri aquifer is between 7,010 and 23,963 ac-ft/yr. The actual average annual recharge likely is toward the bottom half of that range.

Discharge:

Discharge from the Lower James Missouri aquifer occurs due to evapotranspiration in areas where the aquifer is at or near land surface, seepage to the James River, and well withdrawals (Bugliosi, 1986). Currently, there are 135 water rights/permits appropriating water from the Lower James Missouri aquifer (Water Rights, 2015b). There are also many well completion reports on file with the SD DENR-Water Rights Program for domestic wells that appear to be completed in the Lower James Missouri aquifer (Water Rights, 2015c). However, the annual withdrawal for water for domestic use is a small fraction of the total withdrawal from the aquifer.

Expected annual use by non-irrigation appropriations is calculated by assuming pumping at maximum allowed capacity for 60 percent of the time. The expected annual use by non-irrigation appropriation from the Lower James Missouri aquifer is 1,322.7 ac-ft/yr

Water use from the Lower James Missouri aquifer by irrigation water rights/permits is shown in Table 2. The 1979-2013 average annual irrigation withdrawal from the Lower James Missouri aquifer is 2,680.4 ac-ft/yr (Water Rights, 1980-2014). It should be noted that there has been constant development from this aquifer. The average annual withdrawal from 2000-2013 is 4,149.3 ac-ft/yr.

Hydrologic Budget:

Expected average annual withdrawal from the Lower James Missouri aquifer is 4,003 ac-ft/yr. Estimated average annual recharge to the Lower James Missouri aquifer ranges from 7,010 to 23,963 ac-ft/yr. Even when considering the recent development of irrigation appropriations from the Lower James Missouri aquifer, there is a reasonable probability that unappropriated water is available for this proposed appropriation.

Year	Permits Reporting	Appropriation (ac-ft/yr)	Pumpage Reported (ac-ft/yr)
2013	118	33664.1	7855.75
2012	93	28626.7	13058.45
2011	89	27367.1	4147.47
2010	85	25731.1	665.37
2009	84	25451.1	1463.27
2008	79	23891.7	4494.03
2007	56	17477.7	3425.91
2006	50	15627.1	3630.92
2005	48	14749.1	2866.63
2004	47	14525.1	2886.65
2003	53	17373.1	2843.15
2002	53	17108.1	4061.52
2001	53	17208.1	2940.09
2000	51	17048.1	3751.08
1999	50	15992.1	2102.15
1998	53	16915.1	2787.03
1997	50	17072.1	2320
1996	49	17240.1	2102.99
1995	41	15088.1	1483.32
1994	45	17094.1	1918.17
1993	45	16241.9	230.44
1992	45	16791.9	1159
1991	42	15497.9	2599
1990	35	12673.1	2928.1
1989	31	10909.1	2144.8
1988	31	11769.5	2744.9
1987	30	11613.5	1041.6
1986	30	11613.5	989.6
1985	27	10033.1	1483
1984	28	12283.1	1360
1983	27	9883.1	1306.54
1982	23	9440.1	1301.25
1981	27	13053	1835
1980	23	11561	1299
1979	22	11265	588
Max	118	33664.1	13058.45
Min	22	9440.1	230.44
Avg.	48.94	16567.96	2680.41

Table 2- Irrigation water use from the Lower James Missouri aquifer (Water Rights, 1980-2013)

EXISTING WATER RIGHTS:

There are four water permits within approximately 1.25 miles of the well this application will use authorizing wells to withdraw water from the Lower James Missouri aquifer (Water Rights, 2015b). One of those permits is Water Permit No. 7459-3 which authorizes the well this application proposes to use. The water permits are shown in Table 3. The nearest well authorized by a water right/permit, excluding the well authorized by Permit No. 7459-3, is approximately 1.1 miles south of the well used for this application.

There are a number of domestic wells on file with the SD DENR-Water Rights Program for wells completed into the Lower James Missouri aquifer within approximately 1.25 miles of the well the applicant proposes to use (Water Rights, 2015c).

Permit No.	Name	Status	Use	CFS	Acres
7214-3	Marquardt Farms	PE	IRR	2	350
7397-3	Frank Kralicek	PE	IRR	1.56	249
7398-3	Frank Kralicek	PE	IRR	1.56	114
7459-3*	David G Sternhagen	PE	IRR	1.78	113
PE= Water Permit, IRR= Irrigation, *= Permit No. 7459-3 authorizes the well that Application No. 8081-3 proposes to use					

Table 3- Water rights/permits authorizing wells within approximately 1.25 miles of the well proposed to be used by Application No. 8081-3 (Water Rights, 2015b)

This application does not propose to increase the diversion rate authorized by Water Permit No. 7459-3. However, by irrigating 58 more acres the average diversion rate used will increase to apply the same amount of water per acre. Assuming the applicant applies 12 inches of water per acre the average annual diversion rate from the well authorized by Water Permit No. 7459-3 will increase by 0.08 cfs. That rate is small especially when compared to the permitted rate of 1.78 cfs. That small increase in average annual diversion rate is not expected to adversely impact existing appropriative or domestic users.

SDCL 46-6-6.1 does not protect artesian head pressure as a means of delivery, and the Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. The South Dakota Supreme Court has ruled SDCL 46-6-6.1 does not require regulation of irrigation “to absolutely protect artesian pressure for domestic use, reasonable domestic use must be assured before irrigation is allowed” (*Fraser et. al v. Water Rights Commission of the Department of Natural Resource Development, 1980, 294 N.W.2d 784*). To balance interests between high capacity well use and domestic use, the Water Management Board defined an “adversely impacted domestic well” in ARSD 74:02:04:20(7) as:

“a well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient water for the well owner’s needs”

Depending on the specific characteristics of the Lower James Missouri aquifer at the well site proposed by this application, some existing well owners may need to lower their pumps to accommodate deeper water levels. The Water Management Board has considered this issue in the matter of Water Permit Application No. 2313-2, Coca-Cola Bottling Company of the Black Hills (Water Rights, 1995). The Board adopted findings of fact and conclusions of law that basically states if lowering a pump when there is artesian head pressure available below the current pump setting is considered an adverse impact, it could be in conflict with SDCL 46-1-4, which requires South Dakota’s water resources to be put to beneficial use to the fullest extent possible. Therefore when considering the statutes (SDCL 46-6-6.1 and SDCL 46-1-4), rule (ARSD 74:02:04:20(7)), and the Water Management Boards’ prior rulings, well interference from this proposed appropriation is not likely to cause a significant impact. Therefore, there is a reasonable probability that any interference will not be adverse.

CONCLUSIONS:

1. This application proposes to appropriate water from the Lower James Missouri aquifer for the irrigation of 58 acres using the well and diversion rate authorized by Water Permit No. 7459-3.
2. Water Permit No. 7459-3 authorizes the diversion of water from the Lower James Missouri aquifer at a rate of 1.78 cfs for the irrigation of 113 acres in Yankton County.
3. There is a reasonable probability that unappropriated water is available from the Lower James Missouri aquifer for this proposed appropriation.
4. There is a reasonable probability that the increase in average diversion rate from the additional pumping required to irrigate the proposed acreage can be made without adversely impacting existing appropriative or domestic users.


for Adam Mathiowetz
SD DENR-Water Rights Program

Approved by:


Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

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RECEIVED

MAR 30 2015

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

Department of Environment and Natural Resources
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
Application No. 8081-3

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 26th DAY OF March 2015
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$29.13 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: 3/26/2015

FILED ON: 3/26/2015

SUBSCRIBED AND SWORN TO BEFORE ME THIS 26th DAY OF March

NOTARY PUBLIC, SOUTH DAKOTA

MY COMMISSION EXPIRES 8/19/2015

3+26
NOTICE OF APPLICATION NO.
8081-3 to Appropriate Water

Notice is given that David G Sternhagen, 30455 438th Ave, Yankton SD 57078 has filed an application for a water permit to irrigate 58 new acres. Water Permit No. 7459-3 appropriates 1.78 cubic feet of water per second from one well completed into the Lower James:Missouri Aquifer (240 feet deep) located in the NE 1/4 SE 1/4 Section 10 to irrigate 113 acres located in the SE 1/4 Section 10; all in T94N-R56W. This application proposes to irrigate 58 new acres located in the W 1/2 NE 1/4 Section 10-T94N-R56W from the existing well. This application, if approved, does not authorize any increase in the diversion rate.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8081-3 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 April 6, 2015.

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. Information concerning this application is available at <http://denr.sd.gov/public>. 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 the total approximate cost of \$29.13.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

March 18, 2015

Press & Dakotan
319 Walnut
Yankton SD 57078

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 8081-3 to Appropriate Water. Please publish the notice once on March 26, 2015. 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 David G Sternhagen, 30455 438th Ave, Yankton SD 57078 (Ph # 605-665-7945).

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

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

denr.sd.gov

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

March 18, 2015

David G Sternhagen
30455 438th Ave
Yankton SD 57078

Dear Mr. Sternhagen:

Water Permit Application No. 8081-3 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 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
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 March 26, 2015. 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. 8081-3 to Appropriate Water

Notice is given that David G Sternhagen, 30455 438th Ave, Yankton SD 57078 has filed an application for a water permit to irrigate 58 new acres. Water Permit No. 7459-3 appropriates 1.78 cubic feet of water per second from one well completed into the Lower James:Missouri Aquifer (240 feet deep) located in the NE 1/4 SE 1/4 Section 10 to irrigate 113 acres located in the SE 1/4 Section 10; all in T94N-R56W. This application proposes to irrigate 58 new acres located in the W 1/2 NE 1/4 Section 10-T94N-R56W from the existing well. This application, if approved, does not authorize any increase in the diversion rate.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8081-3 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 April 6, 2015.

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. Information concerning this application is available at <http://denr.sd.gov/public>. 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 the total approximate cost of _____.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

APR 23 2015

David G Sternhagen
30455 438th Ave
Yankton SD 57078

Dear Mr. Sternhagen:

Enclosed is Water Permit No. 8081-3 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,

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

enclosures

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit Nos. 7459-3 and 8081-3

I have this day, July 23, 2021 made a thorough examination of the water use system owned by David G. Sternhagen, 30455 438th Ave., Yankton, SD 57078, holder of Permit Nos. 7459-3 and 8081-3, bearing the priority dates of October 12, 2012 and January 23, 2015 respectively, authorizing the diversion of 1.78 cu. ft. per second of the waters of groundwater (Lower James Missouri: Aquifer) for the irrigation of 113 acres and 58 acres respectively, located in Yankton County.

Inspection contact: David Sternhagen

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Hammond Wetmore Drilling, LLC
- 2) No. of Wells: 1
- 3) Depth(s): 262 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 12 inches
- 2) Length: 178 feet
- 3) Type: Plastic

Screen:

- 1) Diameter: 12 inches
- 2) Length: 60 feet
- 3) Type: PVC
- 4) Static water level: 144 feet

Pump:

- 1) Make: Grundfos
- 2) Model: 625s600-3
- 3) Capacity: 700 gpm

Motor:

- 1) Make: Franklin
- 2) Model No.: Unknown
- 3) Horsepower rating: 60 hp

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

- | | | |
|---------------------|--------------------------|--|
| 1) Type: <u>PVC</u> | 2) Size: <u>8</u> inches | 3) Length: <u>430 feet to Water Right No. 7459-3</u> |
| 2) Type: <u>PVC</u> | 2) Size: <u>8</u> inches | 3) Length: <u>2,090 feet to Water Right No. 8081-3</u> |

C. Works used to apply water to beneficial use:

Water Right No. 7459-3 Center Pivot:

- 1) Make: Lindsey
- 2) Overall length: 1,324 feet
- 3) Number of towers: 7
- 4) End gun: Yes
- 5) Capacity: 700 gpm

Chemigation Equipment:

- 1) Does chemigate: No

Water Right No. 8081-3 Center Pivot:

- 1) Make: Lindsey
- 2) Overall length: 1,102 feet
- 3) Number of towers: 6
- 4) End gun: Yes
- 5) Capacity: 700 gpm

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:
The well is 1,350 feet west and 1,790 feet north of the southeast corner of Section 10-T94N-R56W (Latitude 42.97171, Longitude -97.44209 – NW1/4 of the SE1/4).
- 2) The works are capable of diverting and conveying to the place of use 1.56 cu. ft. per second of water which is to be used for irrigation purposes. Water has been put to beneficial use to the maximum extent as follows: Section 10-T94N-R56W

Water Right No. 7459-3

<u>NW1/4SE1/4</u>	<u>33 acres</u>
<u>NE1/4SE1/4</u>	<u>11 acres</u>
<u>SW1/4SE1/4</u>	<u>34 acres</u>
<u>SE1/4SE1/4</u>	<u>32 acres</u>

Water Right No. 8081-3

<u>NW1/4NE1/4</u>	<u>25 acres</u>
<u>SW1/4NE1/4</u>	<u>29 acres</u>

comprising a total of 164 acres of land and the license should be issued for 1.56 cfs.

- 3) All structures, wells and lands on map Yes

F. Comments or other permit(s) associated with the project: The well appears to be in the NW1/4 of the SE1/4 instead of the NE1/4 of the SE1/4. Also, the two water rights have separate priority dates, but they could be combined into one license since they use the same well and have the same owner.

Keith DeJong

Keith DeJong
Water Rights Inspector
DENR, Water Rights Program

Date report completed: July 23, 2021

Approval of Location Change and/or Additional Diversion Point(s)

NAME: David Sternhagen

ADDRESS: 30455 438th Ave, Yankton SD 57078

DATE: July 27, 2021

COUNTY: Yankton

GENERAL DESCRIPTION OF AUTHORIZED PROJECT:

The permit holder is authorized to construct a one well into the Lower James:Missouri Aquifer in the NE ¼ SE 1/4 of Section 10 T94N-R56W.

AUTHORITY:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed or additional diversion points may be licensed provided the following conditions are met and the potential for interference with other existing diversions is not increased:

- **Developed water source same as permitted source and no additional water appropriated**

The developed well is in the same Lower James:Missour Aquifer as was permitted and no additional water is appropriated.

- **If irrigation, no new land is irrigated**

There is no new land irrigated other than what was permitted in the W ½ NE ¼ and SE ¼ of Sec 10 T94N-R56W.

- **Review of Existing Diversions**

The well was drilled into the Lower James:Missouri Aquifer in the NW ¼ SE 1/4 of Section 10 T94N-R56W. there are nine existing water permits/rights with wells constructed in to the Lower James:Missour Aquifer within a two miles of this well with the nearest located one mile south. Adverse impacts to these existing wells by these wells are not expected.

RECOMMENDED ACTION

Based on the above criteria, it is recommended that the diversion point(s) be licensed as developed.



Mark D. Rath, Natural Resources Engineer III
Water Rights Program

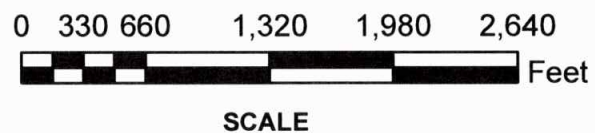
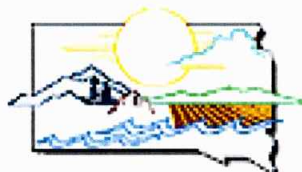
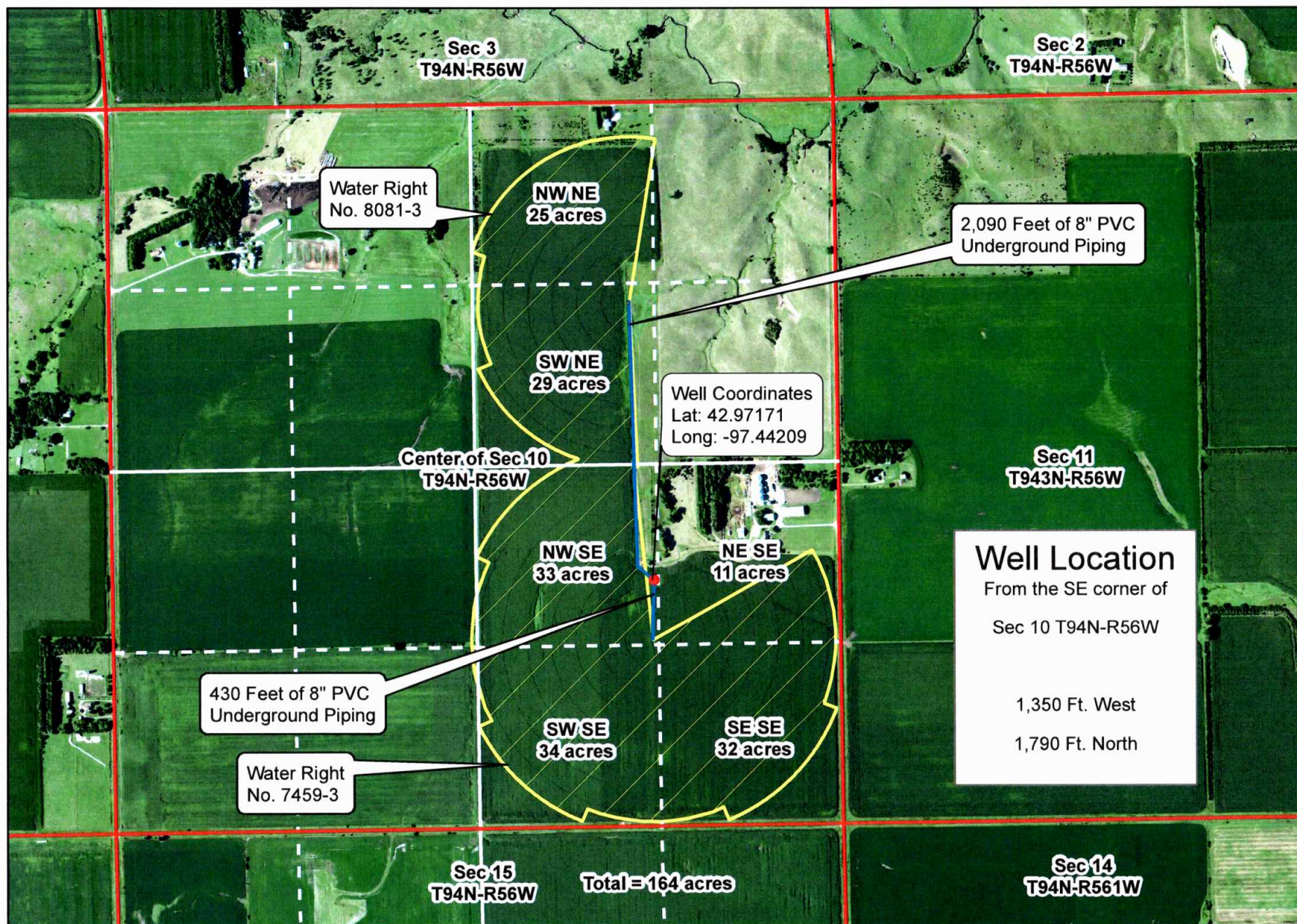
The Chief Engineer makes a finding pursuant SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that:

This change in location and/or additional diversion point(s) does not increase the potential for adverse effects to existing diversions.



Eric Gronlund, Chief Engineer
Water Rights Program

Water Right Nos. 7459-3 and 8081-3



Keith DeJong
Keith DeJong, PE
Staff Engineer
July 23, 2021

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

Date 7-23-21

MAIL TO: PMB 2020
DANR - Water Rights Program
523 E. Capitol Ave
Pierre, SD 57501-3182

Ph: (605) 773-3352

FROM: David Sternhagen
(name)30455 438th Ave.
(address)

<u>Yankton</u>	<u>SD</u>	<u>57078</u>	<u>605-760-3021</u>
(city)	(state)	(zip)	(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. 8081-3 states that the water use system is to be constructed by
April 6, 2020, and water is to be put to beneficial use by April 6, 2022.
(date) (date)

The water use system was completed on May 2015.
(date)

Applying the water to beneficial use was completed on May 2015.
(date)

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

David M. Sternhagen
(signature)





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

7459-3
8081-3

JUL 30 2021

David G Sternhagen
30455 438th Ave
Yankton SD 57078

Dear Mr. Sternhagen:

Enclosed is Water License No. 8081-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

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

enclosures

Note: Upon licensing, the applicable portions of Water Permit No. 7459-3 were incorporated into Water Right No. 8081-3.

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8081-3**

(1) David G Sternhagen, 30455 438th Ave., Yankton SD 57078 made Application No. 8081-3, January 23, 2015 for a water permit to add 58 acres to an existing irrigation system authorized under Water Permit No. 7459-3. The project is located in Yankton County, South Dakota. Permit No. 8081-3, with a priority date of January 23, 2015 was approved April 6, 2015 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before April 6, 2020 and for the application to beneficial use of said water on or before April 6, 2024.

A "Notice of Completion of Works" was submitted indicating the water use system described in Water Permit No. 7459-3 and Water Permit No. 8081-3 was completed in 2013 and 2015 respectively.

Water Permit No. 7459-3, with a priority date of October 12, 2012 appropriates 1.78 cfs from one well to irrigate 113 acres located in the SE $\frac{1}{4}$ Section 10, T94N R56W. Water Permit No. 8081-3, with a priority date of January 23, 2015 added 58 acres in the W $\frac{1}{2}$ NE $\frac{1}{4}$ Section 10 from the existing well. The applicable portions of Water Permit No. 7459-3 are incorporated into this Water License No. 8081-3.

The authorized well was to be located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 10, T94N, R56W. An investigation of the water use system found the well was in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 10, T94N, R56W. Pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14.01, the Chief Engineer made a finding the change in location of the diversion point did not increase the potential for adverse effects to existing diversions.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 1.56 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 1,350'W and 1,790'N of the SE corner of Section 10, T94N, R56W (NW $\frac{1}{4}$ SE $\frac{1}{4}$)
Latitude 42.97171, Longitude -97.44209

(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 10, T94N, R56W			
NW $\frac{1}{4}$ SE $\frac{1}{4}$	33 acres	NW $\frac{1}{4}$ NE $\frac{1}{4}$	25 acres
NE $\frac{1}{4}$ SE $\frac{1}{4}$	11 acres	SW $\frac{1}{4}$ NE $\frac{1}{4}$	29 acres
SW $\frac{1}{4}$ SE $\frac{1}{4}$	34 acres		
SE $\frac{1}{4}$ SE $\frac{1}{4}$	32 acres	Total	164 acres

**Note: The SE $\frac{1}{4}$ Section 10 retains a priority date of October 12, 2012, established under No. 7459-3
The NE $\frac{1}{4}$ Section 10 retains a priority date of January 23, 2015, established under No. 8081-3**

(4) Pursuant to South Dakota Water Law 46-5-30.1 David G Sternhagen, 30455 438th Ave., Yankton SD 57078 the holder and/or owner of Incorporated Water Right No. 8081-3 is issued a license to appropriate water, the right to use 1.56 cubic feet of water per second from ground water, one well (Lower James Missouri Aquifer) with priority dates of October 12, 2012 and January 23, 2015 from the location specified in (2) of this license for irrigation purposes.

continued

Water License No. 8081-3

Page 2

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8081-3 and subject to the following qualifications:

- The well approved under Nos. 7459-3 & 8081-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this water right 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.
- This Water Right is approved subject to the irrigation water use questionnaire being submitted each year.

Eric Gronlund

Eric Gronlund, Chief Engineer
Water Rights Program
Department of Agriculture and Natural Resources

JUL 30 2021

date





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

No. 8081-3

July 5, 2022

David Sternhagen
30455 438th Ave
Yankton SD 57078

Dear Mr. Sternhagen:

The irrigation season is in full swing. This has led to the Department of Agriculture and Natural Resources (DANR) fielding inquiries regarding end gun overspray on to roads. This is just a reminder that a water right holder is not allowed to operate an irrigation system in violation of state water law, which includes end gun overspray upon land not authorized by the water right.

DANR received an inquiry alleging the irrigation system located in the SE 1/4 Section 10-T94N-R56W had irrigation water from the end gun hitting the road. The water right for this system is held in your name under Water Right No. 8081-3.

You indicated in our phone conversation that you were aware of the overspray problem and were taking steps to ensure end gun stops are functioning properly so there is not direct overspray on to the road. Thank you for addressing the overspray as soon as possible.

Sincerely,

Ron Duvall
Water Rights Program, DANR
605 773-3352

Dewell, Amanda

From: Dewell, Amanda
Sent: Thursday, October 31, 2024 2:20 PM
To: Nicholas Sternhagen
Subject: FW: [EXT] 8081-3 IQ Reported Use in 2024, Yes, 179.00 acres irrigated

Mr. Sternhagen,

The Water Rights Program has received the 2024 Irrigation Questionnaire you submitted online for [Water Right No. 8081-3](#). On this year's questionnaire, you indicated the irrigation of 179 acres, while the water right only authorizes irrigation of 164 acres. If it was simply an entry error, please let me know so that I may correct the report. However, if 15 new acres have been developed, [additional permitting](#) would be required.

Thank you,

Amanda Dewell

DANR - Water Rights Program
 Permitting Administrator
 Main Phone: 605 773-3352
 Website: danr.sd.gov



From: Caspio <noreply@caspio.app>
Sent: Wednesday, October 30, 2024 8:59 AM
To: Duvall, Ron <Ron.Duvall@state.sd.us>; Dewell, Amanda <Amanda.Dewell@state.sd.us>
Subject: [EXT] 8081-3 IQ Reported Use in 2024, Yes, 179.00 acres irrigated

Permit Holder:

DAVID G STERNHAGEN
 30455 438TH AVE
 YANKTON SD 57078

nsternha@hotmail.com

If water used, reported in following months:

Month	Crop 1	Crop 2	Crop 3	Crop 4
Mar	,	,	,	,
Apr	,	,	,	,
May	,	,	,	,

RECEIVED

JUL 16 2026

Water Rights
Program

NOTICE OF TRANSFER OF OWNERSHIP

For assistance call (605) 773-3352

Mail to: SD DANR, Water Rights Program
523 E Capitol Ave
Pierre, SD 57501-3182

Water Right/Permit No. 8081-3

Date: 7-14-26

I/We request that Water Right/Permit No. 8081-3 formerly owned by:
David G Sternhagen be transferred to:

New Owner Name: Nicholas Sternhagen
Address: 43769 304th St mobile: 605-760-3020
City, State, Zip: Yankton SD 57078 email: nsternha@hotmail.com

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

SE 1/4 - 110 acres W1/2 NE 1/4 - 54 acres
All in; Section 10-T94N-R56W
TOTAL: 164 acres

☒ I understand that the validity of Water Right/Permit No. 8081-3 has not been determined by this transfer action. If I have any questions on validity, I understand that only the Water Management Board has the authority to determine if a water right/permit is valid (see note below).

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

A fee of Fifty Dollars (\$50.00) is included to cover the filing fee as required by SDCL 46-2-13.

I, Nicholas Sternhagen, the new owner, certify that the above information is true and correct.


(signed by new owner)

NOTE: Water permits may be cancelled for nonconstruction after the five-year construction period has expired. Once a water permit is developed, an inspection is conducted to issue a water right license for the project as developed. A water permit/right may be cancelled for one or more of the following 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

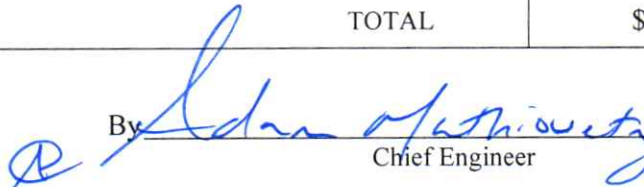
WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date August 07, 2026

RECEIVED OF Nicholas Sternhagen 43769 304th St Yankton, SD 57078

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 #8736-3, #8081-3	\$100.00
Fee for _____	\$ _____
Fee for Issuing New Well Driller's License No. _____	\$ _____
Fee for Renewal of Well Driller's License No. _____	\$ _____
Fee for Issuing Well Pump Installer's License No. _____	\$ _____
Fee for Renewal of Well Pump Installer's License No. _____	\$ _____
(Any Other Work Provided by Law)	
TOTAL	\$100.00

By  Chief Engineer



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

August 10, 2026

8736-3, 8081-3

Nicholas Sternhagen
43769 304th st
Yankton, SD 57078

Dear Mr. Sternhagen:

The South Dakota Water Rights Program is in receipt of the "Notice of Transfer of Ownership" forms and the fees you submitted for Water Permit No. 8736-3 & Water Right No. 8081-3, enclosed is a \$100.00 receipt of payment for your records.

Water Permit No. 8736-3 & Water Right No. 8081-3, previously held by David G Sternhagen, are now listed under your name. I have also updated your contact information in our system.

As a reminder, so long as you use the water beneficially, as stated in the Permit/License (copy enclosed), State Water Laws provide that you have a continuing right to use the water. Should the water not be put to beneficial use for a period longer than 3 consecutive years, without legal excuse, the Permit/License will be subject to cancellation.

If you have any questions, please contact me.

Sincerely,

Shannon Konst
Water Rights Program
605 773-3352
Shannon.konst@state.sd.us

NOTE: The validity of Water Permit No. 8736-3 & Water Right No. 8081-3 have not been determined by this transfer action. Only the Water Management Board has the authority to determine if a water permit/right is valid.

enclosures