

WATER PERMIT NO. 8410-3

Name of Applicant: Jason Harmelink

Address: 55334 Hwy 121, Crofton NE 68730

Phone: 605 661-0245

Amount of Water Claimed: 0.29 cfs (additional)

Total Acres: NA

Source of Water Supply: groundwater (three wells)

Water to be used for: commercial

County: Yankton

Type of Waste Disposal System:

Location: 7 miles northwest of Yankton

PRIORITY

Date Received: 9-24-19

Application/License Fee: \$ 500

Corrected Application Received:

Period of Annual Use: January 1 – December 31

Remarks: Existing feedlot operation – increasing diversion rate authorized by No. 6637-3

Diversion Point: NW 1/4 SW 1/4 Sec 35-T94N-

R57W

Land to be Irrigated: NA

Depth of Well: 915, 835, 950 feet deep

Well Driller:

Remarks:

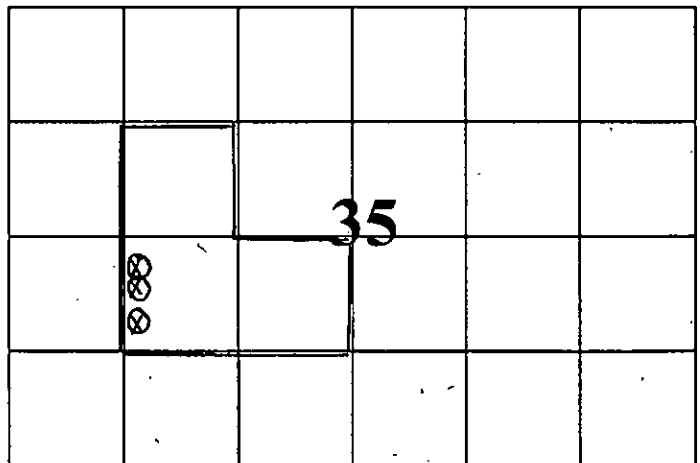
Type of Map: aerial

Prepared by: Keith DeYoung

Reviewed and the Number Assigned on: 9-24-19

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



PAID

SEP 24 2019

Ck# 3346

RECEIVED

SEP 24 2019

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8410-3</u> (office use only) Hydrologic Unit <u>10170101</u>
	Basin <u>Missouri R</u>
	Newspaper <u>Press & Dakotan, Yankton</u>

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

Check use(s) of water:

☐ Municipal	☐ Water Distribution System	☐ Recreational	☐ Institutional
☐ Rural Water System	☒ Commercial	☐ Fish & Wildlife	☐ Geothermal
☐ Domestic (over 18 gpm)	☐ Industrial	☐ Other	

Type of Application:
(check one)

☒ New	☐ Vested Right (Use predates Mar 2, 1955)	☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____		
☐ Amendment/Correction to Permit No. _____		

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

Additional diversion rate authority, additional well and clarification of well location to what is authorized by
Water Permit No. 6637-31. Name to Appear on Water Permit Jason HarmelinkMailing Address 55334 Hwy 121 Crofton NE 68730
(Address) (City) (State) (Zip Code)Phone _____ Mobile 605-661-0245 Email _____2. Amount of water claimed 0.29 *CFS or 130 add 489 gpm **GPM and 77 AF Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity or dam/dugout or annual use)3. Source of water supply Dakota Formation4. Location of point of diversion 3 wells - NW 1/4 SW 1/4 Section 35 - 94N-R57W County Yankton
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☒ Yes ☐ NoIf "Yes," where will water be used? N 1/2 SW 1/4, SW 1/4 NW 1/4 Section 35-T94N-R57W
(example - NW1/4 section 12-T104N-R53W)5. County or counties where water will be used Yankton6. Annual period during which water is to be used January 1 - December 31

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

Requesting additional diversion rate authority, additional well and clarification of well locations to what is authorized by Water Permit No. 6637-3 to reflect the level of development based on the licensing investigation conducted September 5, 2019

I, Jason Harmelink owner, the applicant, certify under
Name of Person Title (if applicable)

penalty of perjury that I have read this application, examined the attached map, and that the matters stated are true. I further certify, if acting on behalf of an entity or individual other than myself, that I am authorized to submit this application.

SOUTH DAKOTA
WATER PERMIT NO. 8410-3

Date of first receipt of application September 24, 2019.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8410-3 to Jason Harmelink, 55334 Hwy 121, Crofton NE 68730 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. 8410-3 increases the diversion rate authority, authorizes an additional well and clarifies well locations authorized by Water Permit No. 6637-3. Water Permit No. 6637-3 appropriates 0.13 cubic feet of water per second (cfs) from two wells completed into the Dakota Aquifer located in the SW 1/4 NW 1/4 and NW 1/4 SW 1/4 Section 35-T94N-R57W. An investigation of the permit found the system capable of diverting an additional 0.29 cfs from three wells completed into the Dakota Aquifer (940, 930 and 950 feet deep) all located in the NW 1/4 SW 1/4 Section 35 for commercial use in a livestock facility located in the N 1/2 SW 1/4, SW 1/4 NW 1/4 Section 35; all in T94N-R57W. This permit and Water Permit No. 6637-3 authorize a total of 77 acre-feet of water annually at a maximum pump rate of 0.42 cfs from the three wells. This site is located approximately 7 miles northwest of Yankton SD.
2. The water appropriated shall be used for the purpose of commercial use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 8410-3 is December 16, 2019.
5. The date from which applicant may claim right is September 24, 2019.
6. 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 wells approved under Water Permit Nos. 6637-3 and 8410-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Permit Nos. 6637-3 and 8410-3 are subject to compliance with requirements of the Department's Water Pollution Control Permit issued pursuant to SDCL 34A-2-36 or 34A-2-36.2 or 34A-2-112 or 34A-2-124 for concentrated animal feeding operations.
3. Water Permit Nos. 6637-3 and 8410-3 is subject to compliance with all existing and applicable Water Management Board Rules including but not limited to:
 - a) Chapter 74:54:01 Ground Water Quality Standards,
 - b) Chapter 74:54:02 Ground Water Discharge Permit,
 - c) Chapter 74:51:01 Surface Water Quality Standards,
 - d) Chapter 74:51:02 Uses Assigned to Lakes,
 - e) Chapter 74:51:03 Uses Assigned to Streams, and
 - f) Chapter 74:52:01 through 74:52:11 Surface Water Discharge Provisions

(continued)

4. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Dakota aquifer.
5. Water Permit Nos. 6637-3 and 8410-3 authorizes a total annual diversion 77.0 acre feet of water from the Dakota aquifer.

WATER MANAGEMENT BOARD

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

FEB 05 2020
date



RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date September 24, 2019

RECEIVED OF Jason & Renae Harmelink 214 Capitol St., Ste. 4 Yankton, SD 57078

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

Fee for Application for Permit No. <u>8410533</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. **09212**

By Jeanne Goodman
Chief Engineer vm

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE 1/4 Sec 35 Twp 93 Rg 57County N/w 5/w

Yankton

Please mark well location with an "X"

W

E

Well Completion Date

7/15/2011

1 Mile

Distance to nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.)

? ft. from (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Forward

CASING DATA:

If other describe

☐ Steel☒ Plastic☐ Other

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
21.0 LB/FT	5.00 IN	0.0 FT	200.0 FT	8.75 IN
17.0 LB/FT	5.00 IN	200.0 FT	480.0 FT	8.75 IN
LB/FT	2.00 IN	480.0 FT	740.0 FT	4.50 IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
		Lb/gal	ft	ft
		Lb/gal	ft	ft

Describe grouting procedure

SCREEN:

☐ Perforated pipe☒ ManufacturedDiameter 2.50 Inches Length 200.0 FeetMaterial PVCSlot Size .016 Set From 740.0 Feet to 940.0 Feet

Other information

WAS A PACKER OR SEAL USED?

☒ Yes☐ No

If so, what material?

Shale Cup

Describe packer(s) and location

2 Shale Cups at 720 and 740

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How?☐ No, Why Not?

Lab sample sent to for water quality analysis

Well Owner: Joe Tacke

Business Name:

Address: 30837 432nd AveCity, State, Zip: Yankton SD 57078

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Yellow Clay	0	55
Blue Clay	55	100
Sandy Blue Clay	100	115
Shale	115	750
Good Sand	750	760
Fair Sand w/ Shale Breaks	760	835
Good Sand w/ Hard Spots	835	880
Fair Sand	880	895
Good Sand w/ Tight Spots	895	915

STATIC WATER LEVEL 390.0 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: 30 GPM with Air at 450'☐ Bailed☐ Other

Pumping Level Below Land Surface

_____ FL After _____ Hrs. pumped _____

_____ FL After _____ Hrs. pumped _____

If pump installed, pump rate: _____ GPM

REMARKS

Fair Sand w/ Hard Spots 915-930 Tight Sand w/ Shale Breaks 930-940 Shale 940This well was drilled under license # 440

And this report is true and accurate.

Drilling firm: Pullman Drilling Inc.

Signature of License Representative:

Ken Palmer

Signature of Well Owner or Equitable Property Holder:

Date: _____

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SEP 26 2011
WATER RIGHTS
GPM PROGRAM

SOUTH DAKOTA WATER WELL COMPLETION REPORT

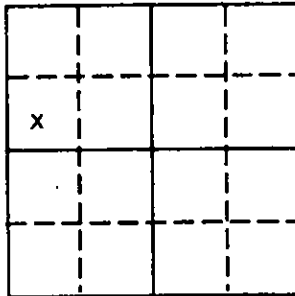
11-02

Location SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 35 Twp 93 Rg 57

County

Yankton

North



Please mark well location with an "X"

Well Completion Date

7/5/2011

1 Mile

Distance to nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.)

? _____ ft. from _____ (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Forward

CASING DATA:

If other describe 5" SDR-21-SDR-17 Sch 80

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	5.00 IN	0.0 FT	490.0 FT	8.75 IN
LB/FT	2.00 IN	490.0 FT	730.0 FT	4.50 IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

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 2.50 Inches Length 200.0 FeetMaterial PVCSlot Size .016 Set From 730.0 Feet to 930.0 Feet

Other information

WAS A PACKER OR SEAL USED?

☒ Yes ☐ NoIf so, what material? 2 Shale Cup

Describe packer(s) and location

at 710 and 730

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How?
☐ No, Why Not?

Lab sample sent to for water quality analysis

Well Owner: Joe Tacke

Business Name:

Address: 304 Greenwood DrCity, State, Zip: Yankton SD 57078

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Yellow Clay	0	70
Blue Clay w/ Sand Streaks	70	80
Yellow Chalk	80	115
Shale	115	745
Fair Sand w/ Few Tight Spots	745	760
Shale w/ Hard Sand STreaks	760	775
Fair Sand w/ Hard Spots	775	780
Tight Shale	780	799
Fair Sand	799	835

STATIC WATER LEVEL 330.0 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: 60 GPM with Air at 460☐ Bailed☐ Other

Pumping Level Below Land Surface

_____ FL After _____ Hrs. pumped _____ GPM

_____ FL After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

Hard Sand 835-850 Shale w/ Small Sand Streaks 850-865
 Tight Sand 865-870 Fair Sand 870-880 Tight Sand 880-915
 Shale w/ Tight Sand STreaks 915-930 Hard Sand 930

This well was drilled under license # 440

And this report is true and accurate.

Drilling firm: Pullman Drilling Inc.

Signature of License Representative:

Ken Palmer

Signature of Well Owner or Equitable Property Holder:

Date: _____

RECEIVED
 SEP 26 2011
 WATER RIGHTS
 PROGRAM

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

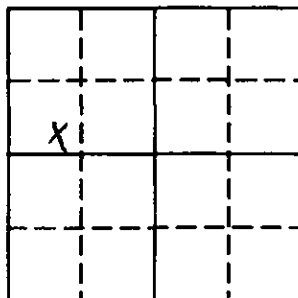
Location SW 1/4 NW 1/4 Sec 35 Twp 93 Rg 57
94N

County

North

Yankton Yankton

Please mark well location with an "X"



Well Completion Date

2/19/2005

Distance to nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.)

? _____ ft. from _____ (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Forward

CASING DATA:

☐ Steel
 ☒ Plastic
 ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	5.00 IN	0.0 FT	225.0 FT	7.88 IN
LB/FT	5.00 IN	225.0 FT	425.0 FT	7.88 IN
LB/FT	2.00 IN	425.0 FT	805.0 FT	4.50 IN

GROUTING DATA:

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 2.50 Inches Length 145.0 FeetMaterial PVCSlot Size .025 Set From 805.0 Feet to 945.0 Feet

Other information _____

WAS A PACKER OR SEAL USED?

☒ Yes ☐ NoIf so, what material? Rubber

Describe packer(s) and location

Shale Cup@805

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How?Tromms Line☐ No, Why Not?

Lab sample sent to for water quality analysis

Well Owner: Joe Tacke

Business Name: _____

Address: 30837 432 AveCity, State, Zip: Yankton SD 57078

WELL LOG:

DEPTH

FORMATION	FROM	TO
Yellow clay	0	55
Blue Clay	55	90
Shale	90	290
Chalk	290	440
Shale	440	725
Tight To Fair Sand	725	785
Shale	785	805
Sand /few shale Brks	805	950
Shale	950	

STATIC WATER LEVEL 325.0 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: w/air☐ Bailed☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

This well was drilled under license # 440

And this report is true and accurate.

Drilling firm: Pullman Well Drilling

Signature of License Representative:

Ken Palmer

Signature of Well Owner or Equitable Property Holder:

RECEIVED

JUN 19 2006

WATER RIGHTS PROGRAM

Date: _____

6-19-06

North

94N

West

East

South

ZIP : 57078

LAB

Well # 147



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

September 16, 2019

Jason Harmelink
55334 Hwy 121
Crofton NE 68730

Dear Mr. Harmelink:

Water Permit No. 6637-3 held in the name of Harold Tacke appropriated 0.13 cubic feet of water per second (58 gpm) from two wells to supply a cattle feeding operation in Yankton County. A on-site visit was conducted recently by Keith DeJong, a water right inspector, for the purpose of licensing the permit to reflect the level of development. That visit found that you now own the cattle feeding operation and that three wells are developed capable of supplying 0.42 cfs (182 gpm) for the operation.

First, enclosed is a notice of transfer of ownership from for the current Water Permit No. 6637-3. Please complete the form by putting in the name the water permit should be held in, sign, and submit along with the \$50 filing fee made payable to the Water Rights Program.

Secondly, attached is a partially completed water permit application form to appropriate additional water and correct the well issues so you have permitting in place to reflect the water use system. Please review the information carefully. Under the highlighted area of Item No. 2 on the application, provide an estimate of the yearly volume of water to be diverted in either total gallons or acre feet of water. When estimating the water use be reasonable but estimate on the high side so you don't short yourself. Then sign the application. The application filing fee will be \$500 made payable to the Water Rights Program. Once the application is reviewed, it will need to be public noticed at that applicant's expense (approximately \$70). We'll walk you through the public notice process when we get to that point.

A self-addressed stamped envelope is enclosed for your use in returning in the notice of transfer of ownership and application form.

Please let me know if you have any questions.

Sincerely,

Eric Gronlund COPY
Eric Gronlund
Water Rights Program, DENR
605 773-3352
Eric.gronlund@state.sd.us

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8410-3, Jason Harmelink**

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. 8410-3, Jason Harmelink, 55334 Hwy 121, Crofton NE 68730.

The Chief Engineer is recommending APPROVAL of Application No. 8410-3 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 wells approved under Water Permit Nos. 6637-3 and 8410-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Permit Nos. 6637-3 and 8410-3 is subject to compliance with requirements of the Department's Water Pollution Control Permit issued pursuant to SDCL 34A-2-36 or 34A-2-36.2 or 34A-2-112 or 34A-2-124 for concentrated animal feeding operations.
3. Water Permit Nos. 6637-3 and 8410-3 is subject to compliance with all existing and applicable Water Management Board Rules including but not limited to:
 - a) Chapter 74:54:01 Ground Water Quality Standards,
 - b) Chapter 74:54:02 Ground Water Discharge Permit,
 - c) Chapter 74:51:01 Surface Water Quality Standards,
 - d) Chapter 74:51:02 Uses Assigned to Lakes,
 - e) Chapter 74:51:03 Uses Assigned to Streams, and
 - f) Chapter 74:52:01 through 74:52:11 Surface Water Discharge Provisions

(continued)

4. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Dakota aquifer.
5. Water Permit Nos. 6637-3 and 8410-3 authorizes a total annual diversion 77.0 acre feet of water from the Dakota aquifer.

See report on application for additional information.

A handwritten signature in black ink, appearing to read "Jeanne Goodman". The signature is fluid and cursive, with the first name "Jeanne" being more prominent than the last name "Goodman".

Jeanne Goodman, Chief Engineer
November 20, 2019

Note: The wells in use were constructed using an alternative method of construction allowed only for private and reasonable domestic use wells and for noncommercial water wells. Since your cattle confinement operation's water use exceeds reasonable domestic use it is deemed a commercial use of water. Therefore, the wells are not considered to be adequate wells. The wells as constructed will not be afforded protection under South Dakota law if impaired by neighboring diversions from the Dakota aquifer. Should a replacement well be needed in the future, the well shall be constructed in a manner that meets South Dakota well construction standards.

**Report to the Chief Engineer
Water Permit Application No. 8410-3**

Jason Harmelink
15 November 2019

Water Permit Application No. 8410-3 seeks to increase the diversion rate authority, request an additional well, and clarify well locations authorized by Water Permit No. 6637-3. Water Permit No. 6637-3 appropriates 0.13 cubic feet of water per second (cfs) from two wells completed into the Dakota aquifer located in SW $\frac{1}{4}$ NW $\frac{1}{4}$ and NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 35-T94N-R57W. An investigation of the permit found the system capable of diverting an additional 0.29 cfs from three wells completed into the Dakota Aquifer (940, 930, and 950 feet deep) all located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 35 for commercial use in a livestock facility located in the N $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 35; all in T94N-R57W. This application, if approved, and Water Permit No. 6637-3 will authorize a total of 77 acre-feet of water annually at a maximum pump rate of 0.42 cfs from the three wells. This site is located approximately 7 miles northwest of Yankton, South Dakota.

Aquifer: Dakota (DKOT)

Hydrogeologic characteristics

The Dakota Formation is composed of sandstone, siltstone, and clay/shale deposited during the late Cretaceous Period, which extends throughout most of South Dakota. It lies directly below the Mowry Shale and Graneros Shale and overlies the Skull Creek Shale in most of South Dakota (Fahrenbach, et al., 2010). Where the Skull Creek shale is not present, the Dakota Formation overlies older sedimentary rocks which are aquifers in some places (Schoon, 1971). A stratigraphically equivalent formation to the Dakota formation, called the Newcastle formation, outcrops near the Black Hills. In South Dakota, the Dakota aquifer is composed of the saturated and permeable portions of the Dakota and Newcastle Formations. It underlies approximately 66,500 square miles in South Dakota with an average thickness of at least 150 feet (Schoon, 1971). The amount of water in storage within the Dakota aquifer can be estimated by conservatively assuming a porosity estimate of 15% and multiplying the porosity (Rahn, 1979), average thickness, and areal extent of the aquifer together, resulting in at least 960 million acre-feet of water in storage in South Dakota. The Dakota aquifer is under confined conditions except near the outcrops of the Newcastle Formation in the Black Hills and the Dakota Formation near Dakota City, Nebraska (Schoon, 1971). Figure 1 shows Dakota aquifer water rights/permits (SD Water Rights, 2019a) and observation wells in the area of the application (SD Water Rights, 2019d).

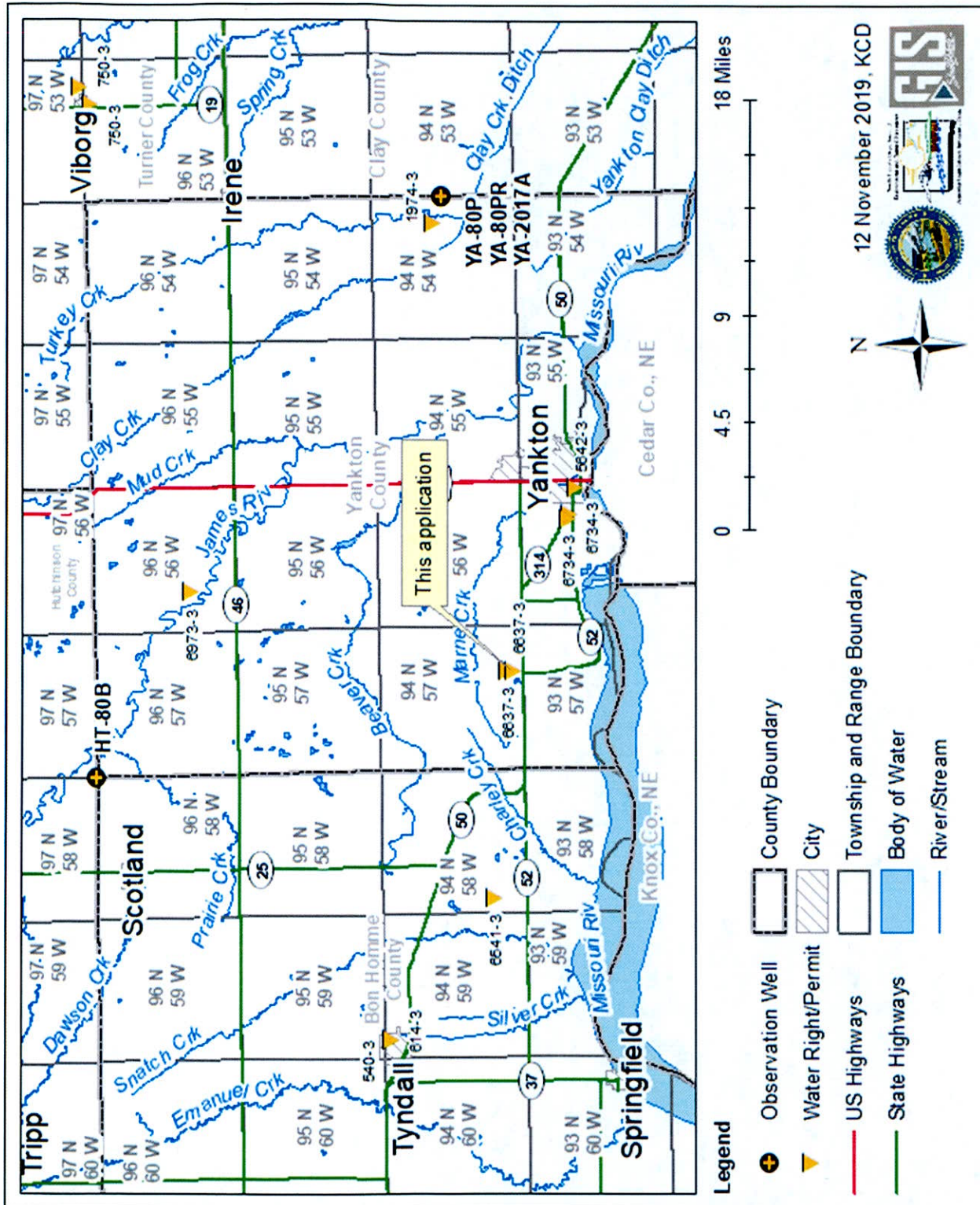


Figure 1: Map of area of interest including nearby Dakota aquifer observation wells (SD Water Rights, 2019d) and water rights/permits (SD Water Rights, 2019a).

Three wells were drilled for this application and Water Permit No. 6637-3. The north well was completed July 15, 2011, to a total depth of 940 feet with a static water level of 390 feet below

grade at the time of drilling. The middle well was completed July 5, 2011, to a total depth of 930 feet with a static water level of 330 feet below grade at the time of drilling. The south well was completed February 19, 2005, to a total depth of 950 feet with a static water level of 325 feet below grade at the time of drilling. On his report of Examination of Works for Water Permit No. 6637-3, the inspector lists the 2011 wells as being 915 and 835 feet deep, respectively, but those depths correspond to the last line on the "Well log" section on the well completion reports for those wells. There was not enough space to put all the formation information in the "Well log" section, so the rest of the formation information is in the "Remarks" section of the well completion report. This is why some well depths listed in this report do not match the well depths listed in the inspector's report.

Applicable South Dakota Codified Law (SDCL)

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued 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 assess the availability of water and possibility of developing this application without unlawful impairment of existing rights only.

Pursuant to SDCL 46-6-3.1, 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 the water to the groundwater source. An exception allows water distribution systems to withdraw from groundwater sources older or stratigraphically lower than the Greenhorn Formation regardless of the results of a hydrologic budget. The Dakota aquifer is older and stratigraphically lower than the Greenhorn Formation. However, Mr. Harmelink's livestock facility is not a water distribution system as defined in SDCL 46-1-6(17). Therefore, it is necessary to find that recharge exceeds withdrawals to approve this application.

Availability of water

Hydrologic budget

Recharge

Recharge to the Dakota aquifer is by seepage from lower aquifers and infiltration from precipitation where the Newcastle formation crops out at the edge of the Black Hills (Bredehoeft, et al., 1983). Bredehoeft, et al. (1983) calibrated a multidimensional computer model to match the modeled potentiometric surface of the Dakota aquifer to the one mapped by Darton (1909) and estimated that before development of the Dakota aquifer, recharge was approximately 79.4 cfs (approximately 57,500 ac-ft/yr). However, that model is based on a number of incorrect or outdated assumptions. For example, Bredehoeft et al. (1983) assumed there is no flow across state boundaries, and the recharge estimates used for the Madison aquifer are significantly less than estimates found by more recent research (Carter, et al., 2002). Bredehoeft et al.'s (1983) estimate may provide a sense of scale of the aquifer's recharge rate, but it cannot be used as a precise value for water management purposes. The number of confounding factors make it uncertain whether the true recharge rate to the Dakota aquifer is higher or lower than the Bredehoeft et al. (1983) estimate.

Discharge

Discharge from the Dakota aquifer is by outflow to the Dakota Formation in other states, outflow to adjacent aquifers when the potentiometric surface of the Dakota aquifer is higher than the adjacent aquifers, outflow to uncontrolled/uncontrollable flowing wells to the land surface or stratigraphically higher aquifers, and outflow to rivers when the potentiometric surface of the Dakota aquifer is higher than the stage of the rivers (Schoon, 1971). The Water Management Board does not consider uncontrolled flow from wells a withdrawal, but rather as discharge available for capture (SD Water Rights, 2019a). There are 241 active water rights/permits authorized to withdraw from the Dakota aquifer and 7 future use permits associated with the Dakota aquifer, two of which reserve no water (SD Water Rights, 2019a). The total amount of water reserved for future use is 4,287 ac-ft/yr. Table 1 shows the number of each kind of permit withdrawing from the Dakota aquifer (SD Water Rights, 2019a).

Table 1: Number and kinds of Dakota aquifer water rights/permits (SD Water Rights, 2019a)

Primary Use Type:	Number of Licenses/Permits:
Commercial	95
Domestic	11
Fish and Wildlife Propagation	4
Geothermal	2
Industrial	6
Institutional	2
Irrigation	17
Municipal	89
Recreation	2
Rural Water System	6
Suburban Housing Development	7
Total:	241

Additionally, Water Permit Application No. 2804-2 is pending and seeks to withdraw 60.5 ac-ft/yr from the Dakota aquifer at a maximum instantaneous pump rate of 0.13 cfs for commercial purposes in Tripp County (Drennon, 2019). The rest of the hydrologic budget section of this report relies heavily upon Drennon's (2019) analysis, as it was completed approximately four weeks prior to this report. Irrigation water right holders generally are required to submit an annual irrigation report. However, two irrigation water rights withdrawing from the Dakota aquifer are not required to report their withdrawals (SD Water Rights, 2019a). The two water rights not required to report comprise 31.2 of the 1,013.8 acres authorized to irrigate from the Dakota aquifer. Figure 2 shows the irrigation reported from the Dakota aquifer over the entire period of record (SD Water Rights, 2019b). The average irrigation reported over the period of record is 147.0 ac-ft/yr. By conservatively assuming the two non-reporting irrigation water rights apply water at a rate of 1 acre-foot per acre, the total estimated average annual use for irrigation is 178.2 ac-ft/yr.

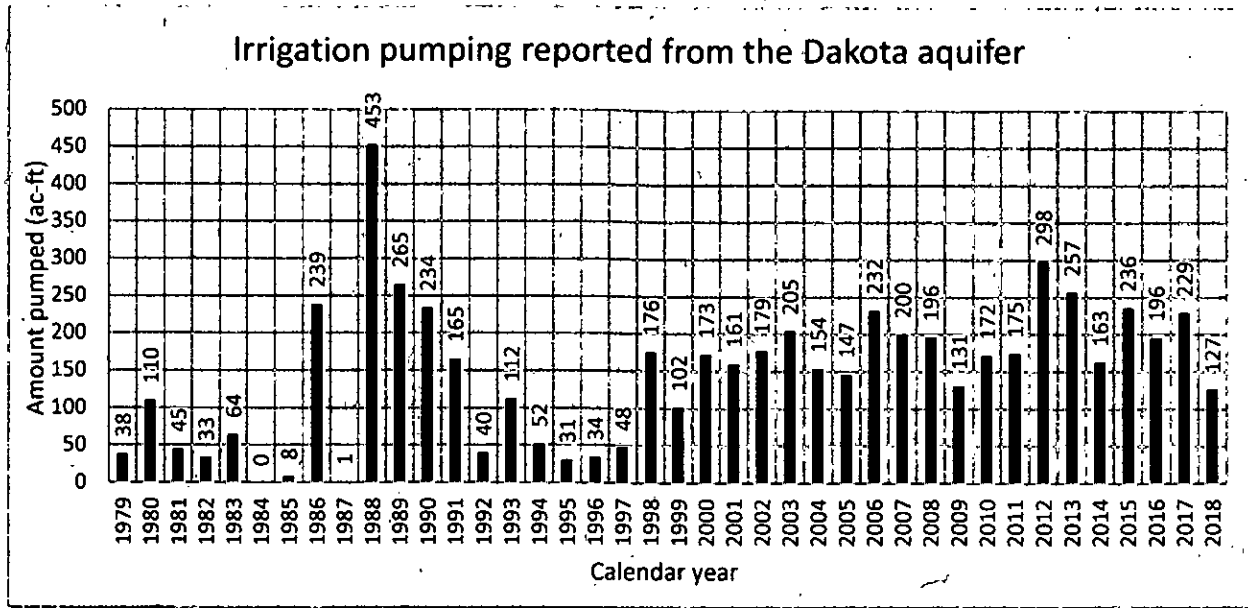


Figure 2: Irrigation reported in the Dakota aquifer (SD Water Rights, 2019b)

Of the non-irrigation water rights/permits, some are required to report annual use, some are limited to an annual volume, and some have neither requirement. Water rights for municipal users, rural water systems, and suburban housing developments that are known to purchase their water from a different water distribution system were assumed to withdraw a negligible amount of water (Friedeman, 2019b). For water rights/permits with an annual volume limit that were also required to report, the greater value between their annual volume limit and their average annual use was used in this withdrawal estimate (SD Water Rights, 2019c). This method increases the estimated use from the Dakota aquifer considerably above the actual average annual reported use, but some water right/permit holders report increased use each year while remaining below their permitted volume limit. This method of estimation accounts for the full volume of water appropriated for them. Non-irrigation water rights/permits only required to report their annual use are assumed to use their average annual reported use. Non-irrigation water rights only limited by an annual volume and not required to report their annual use are assumed to use their entire permitted annual volume. The rest of the non-irrigation permits, or those only required to report their average annual use but have not reported enough years to find an average, are conservatively assumed to pump their maximum pump rate licensed/permitted 60% of the time. Water Permit No. 6637-3, had been estimated by assuming they pumped at their permitted pump rate 60% of the time, yielding an estimated annual use of 56.5 ac-ft/yr. Therefore, the total annual use for non-irrigation water rights/permits currently authorized to withdraw is estimated to be 19,733.4 ac-ft/yr. Table 2 summarizes the estimated annual use calculations for non-irrigation water rights/permits in the Dakota aquifer. Including the annual volume limit indicated in Water Permit Application No. 2804-2, the average annual withdrawal estimate for non-irrigation use increases to 19,793.9 ac-ft/yr.

Table 2: Summary of non-irrigation withdrawal estimates currently authorized in the Dakota aquifer

Estimation method	No. Licenses/ Permits	Total pump rate (cfs)	Estimated use (ac-ft/yr)
Annual volume limit	27	N/A	8,625.1
Average reported use	11	N/A	603.2
Pumps 60% of the time	109	24.168	10,505.1
Purchased from other systems	94	0	0
Total	224		19,733.4

Balance of hydrologic budget

There is no certain estimate of the average annual recharge available. Bredehoeft et al. (1983) estimated a recharge rate on the order of 57,500 ac-ft/yr but several confounding factors make it uncertain if that is a high or low estimate. The estimated average annual use by irrigation water rights/permits is 178.2 ac-ft/yr. The estimated average annual use by non-irrigation water rights/permits is 19,793.9 ac-ft/yr. The amount of water reserved for future use is 4,287 ac-ft/yr. Therefore, the total estimated withdrawal from the Dakota aquifer is 24,259.1 ac-ft/yr, including the amount reserved for future use. This application limits withdrawals for this application and Water Permit No. 6637-3 to 77 ac-ft/yr from the Dakota aquifer, which is 20.5 ac-ft/yr more than had been estimated for Water Permit No. 6637-3 in the past. The total estimated withdrawal is less than 0.01 percent of the water stored in the Dakota aquifer in South Dakota. Therefore, based on the hydrologic budget, there is reasonable probability unappropriated water is available for this application.

Observation wells

Administrative Rule of South Dakota (ARSD) 74:02:05:07 requires that the Water Management Board must rely upon observation well measurements in addition to other information to determine the availability of unappropriated water for a groundwater use permit. The SD DENR Water Rights Program maintains 46 observation wells completed into the Dakota aquifer (SD Water Rights, 2019d). The nearest DENR Dakota aquifer observation to the well for this application is Observation Well HT-80B, located approximately 17 miles northwest of the wells for this application (SD Water Rights, 2019d). The next nearest DENR Dakota aquifer observation wells are a set of observation wells, named YA-80P, YA-80PR, and YA-2017A located approximately 20 miles east of the wells for this application. The hydrograph for HT-80B shows a 4.6-foot decline between October 14, 2012 and May 6, 2013 and a 5.6-foot decline between May 6, 2013 and May 21, 2013. The reason for that decline is unclear, and the data from 2012 to present is under review for that well. The other observation wells mentioned above are all within 100 feet from each other. Observation Well YA-80PR is located approximately 8 feet south of Observation Well YA-80P and is planned to replace it, but both are being measured until it is confirmed that YA-80PR serves as an accurate replacement for YA-80P (SD Water Rights, 2019d). Observation Well YA-2017A is located approximately 66 feet south of YA-80PR. While all three wells are completed into the same aquifer, YA-2017A is completed into a stratigraphically higher layer of the Dakota Formation, whereas YA-80P and YA-80PR are completed into a stratigraphically lower section of the Dakota Formation (SD Water Rights, 2019d).

Report on Water Permit Application No. 8410-3

Most DENR observation wells completed into the Dakota aquifer show a steady decline in water level that appears to level off as time goes on. Some observation wells in the southeastern part of South Dakota and Observation Well ED-85A in Edmunds County show increases in water levels over the period of record (SD Water Rights, 2019d). In confined aquifers, declining water levels do not indicate a significant loss of water in storage, but a decline in hydraulic head in the aquifer. In the March 2010 hearing on the matter of Water Permit Application No. 7165-3, the Water Management Board determined that DENR observation well data indicated that recharge exceeded withdrawals and that the aquifer was approaching a new equilibrium as withdrawals increased (SD Water Rights, 2019a). General trends for observation well water levels have not changed much since then (SD Water Rights, 2019d). Therefore, based on observation well data, there is reasonable probability unappropriated water is available for this application.

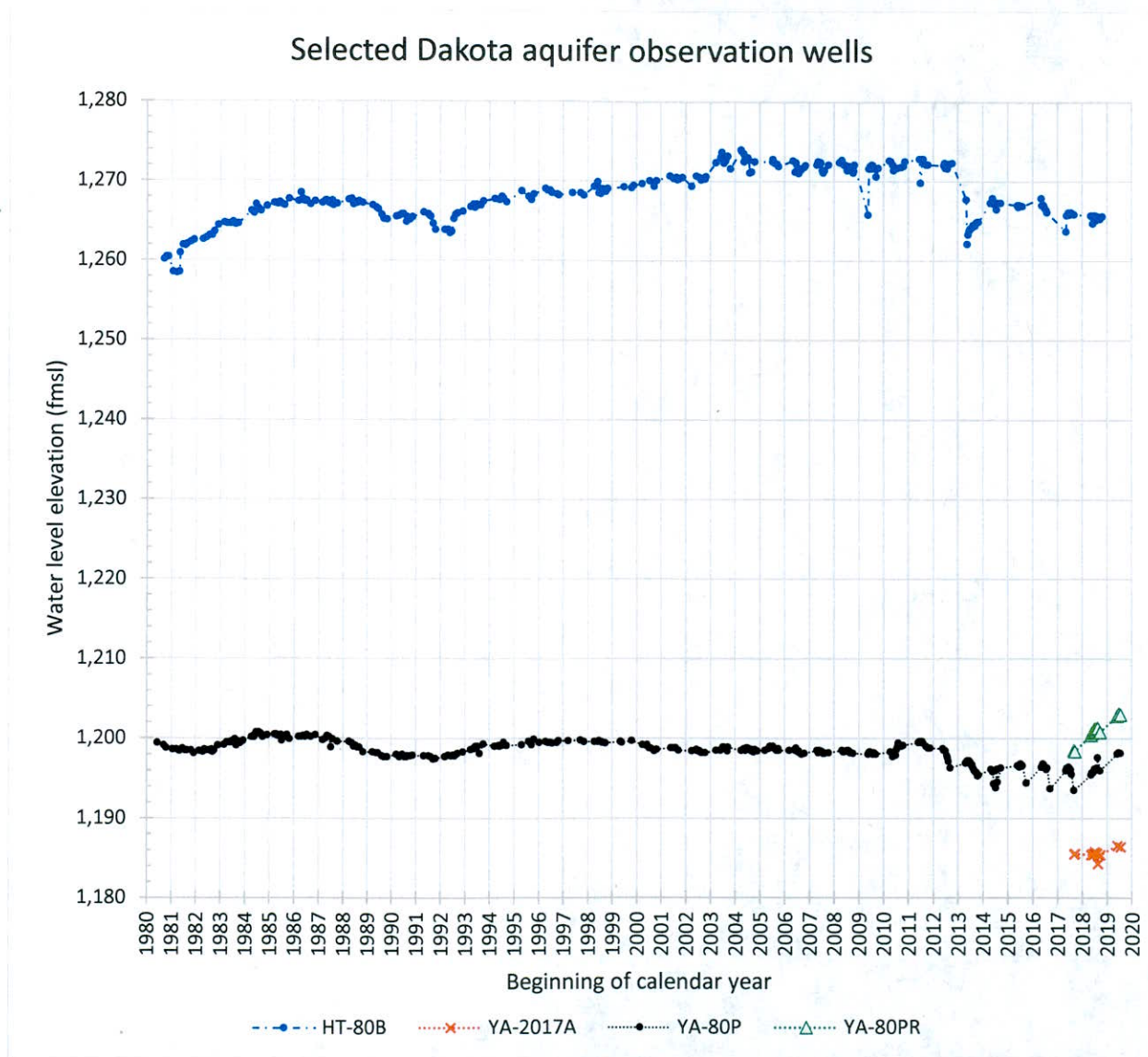


Figure 3: Hydrographs for Dakota aquifer Observation Wells HT-80B, YA-2017A, YA-80P, YA-80PR (SD Water Rights, 2019d)

Existing users

The nearest domestic well on file with the DENR Water Rights Program that could be completed into the Dakota aquifer is located approximately 0.5 miles southwest of the wells for this application. The nearest Dakota water right/permit other than the one held by the applicant is Water Right No. 6734-3, held by Avera Sacred Heart Health Services for lawn irrigation, located approximately 6.7 miles southeast of the wells for this application. The exact drawdown behavior of the well cannot be known without an aquifer pumping test. However, in order to put the waters of the state to maximum beneficial use, SDCL 46-6-6.1 does not protect hydraulic head and well owners may be required to lower their pumps. In order to protect well owners, ARSD 74:02:04:20(6) defines an adequate well as:

“a well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet.”

There are no complaints on file regarding well interference in Yankton County for wells likely to be completed into the Dakota aquifer (SD Water Rights, 2019e). Given the lack of complaints and the fact that the wells for this application have existed and been in use since at least 2011, there is reasonable probability this application can be developed without unlawful impairment of senior water rights/permits or domestic users.

Special considerations

All three wells for this application have a casing and screen diameter of 2 inches where the well penetrates the Dakota Formation, and therefore do not meet the ARSD 74:02:04:20(6) definition of an adequate well. The wells do meet alternative construction requirements for domestic and noncommercial livestock watering wells as described in ARSD 74:02:04:35. However, only one of the wells existed prior to the original application date for Water Permit No. 6637-3, July 28, 2005.

Conclusions

1. Water Permit Application No. 8310-3 proposes to increase the diversion rate authority, request an additional well, and clarify well locations authorized for Water Permit No. 6637-3.
2. Water Permit No. 6637-3 appropriates 0.13 cfs from two wells located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ and NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 35-T94N-R57W.
3. An investigation of the permit found the system capable of diverting an additional 0.29 cfs from three wells completed into the Dakota aquifer (940, 930, and 950 feet deep) all located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 35-T94N-R57W for commercial use in a livestock facility. If approved, this application and Water Permit No. 6637-3 will authorize a total of 77 acre-feet of water annually at a maximum pump rate of 0.42 cfs from the three wells.
4. Based on a hydrologic budget and observation well analysis, there is reasonable probability withdrawals from the Dakota aquifer will not exceed recharge if this application is approved.

5. There is reasonable probability this application can be developed without unlawful impairment of senior water rights/permits and existing adequate domestic wells.



Kimberly C. Drennon
Natural Resources Engineer

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- . **2019b.** *Irrigation questionnaire summaries*. Joe Foss Bldg., Pierre, South Dakota : SD DENR Water Rights Program, 2019b.
- . **2019c.** *Non-irrigation reports*. Joe Foss Bldg., Pierre, South Dakota : SD DENR Water Rights Program, 2019c.
- . **2019d.** *Observation wells*. [Electronic database] Joe Foss Bldg., Pierre, South Dakota : SD DENR Water Rights Program, 2019d.
- . **2019a.** *Water rights/permits*. [Electronic database] Pierre, South Dakota : SD DENR Water Rights Program, 2019a.

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

RECEIVED

DEC 09 2019

WATER RIGHTS
PROGRAM

JASON HARMELINK
55334 HWY 121
CROFTON NE 68730

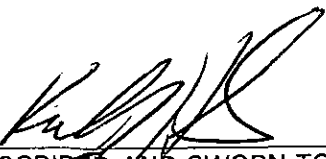
STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

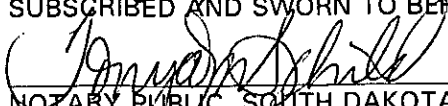
KELLY HERTZ, BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT (S)HE IS THE MANAGING EDITOR OF YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID
COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
12 + 4 NOTICE OF APPLICATION

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 4th DAY OF December, 2019
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$30.70 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: 12/04/2019

FILED ON: 12/04/2019



SUBSCRIBED AND SWORN TO BEFORE ME THIS 4th DAY OF December, 2019


NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES 08/19/2021

Ad text : 12+4

NOTICE OF APPLICATION
NO. 8410-3 to Appropriate Water

RECEIVED

DEC 09 2019

WATER RIGHTS
PROGRAM

Notice is given that Jason Harmelink, 55334 Hwy 121, Crofton NE 68730 has filed an application for a water permit to increase the diversion rate authority, request an additional well and clarify well locations authorized by Water Permit No. 6637-3. Water Permit No. 6637-3 appropriates 0.13 cubic feet of water per second (cfs) from two wells completed into the Dakota Aquifer located in the SW 1/4 NW 1/4 and NW 1/4 SW 1/4 Section 35-T94N-R57W. An investigation of the permit found the system capable of diverting an additional 0.29 cfs from three wells completed into the Dakota Aquifer (940, 930 and 950 feet deep) all located in the NW 1/4 SW 1/4 Section 35 for commercial use in a livestock facility located in the N 1/2 SW 1/4, SW 1/4 NW 1/4 Section 35; all in T94N-R57W. This application, if approved, and Water Permit No. 6637-3 will authorize a total of 77 acre-feet of water annually at a maximum pump rate of 0.42 cfs from the three wells. This site is located approximately 7 miles northwest of Yankton SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8410-3 with qualifications 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. The Chief Engineers recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

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 December 16, 2019.

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.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. 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.

Published once at the total approximate cost of \$30.70 .

Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, November 20, 2019 12:46 PM
To: Jackie Lammers (jackie.lammers@yankton.net)
Subject: 8410-3, Jason Harmelink
Attachments: 8410-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on December 4, 2019.

Jason Harmelink, 55334 Hwy 121, Crofton NE 68730 (605 661-0245) has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP to the Water Rights Program, 523 E Capitol, Pierre SD 57501.

Let me know if you have questions. Please acknowledge receipt of this email.

Karen Schlaak
SD DENR, Water Rights Program
(605) 773-3352





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 RIGHT AWAY.**

November 20, 2019

Jason Harmelink
55334 Hwy 121
Crofton NE 68730

Dear Mr. Harmelink:

Water Permit Application No. 8410-3 for commercial 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 newspapers 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 to authorize publication of your Notice and to arrange for payment. Early contact with the paper 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.

NOTICE OF APPLICATION NO. 8410-3 to Appropriate Water

Notice is given that Jason Harmelink, 55334 Hwy 121, Crofton NE 68730 has filed an application for a water permit to increase the diversion rate authority, request an additional well and clarify well locations authorized by Water Permit No. 6637-3. Water Permit No. 6637-3 appropriates 0.13 cubic feet of water per second (cfs) from two wells completed into the Dakota Aquifer located in the SW 1/4 NW 1/4 and NW 1/4 SW 1/4 Section 35-T94N-R57W. An investigation of the permit found the system capable of diverting an additional 0.29 cfs from three wells completed into the Dakota Aquifer (940, 930 and 950 feet deep) all located in the NW 1/4 SW 1/4 Section 35 for commercial use in a livestock facility located in the N 1/2 SW 1/4, SW 1/4 NW 1/4 Section 35; all in T94N-R57W. This application, if approved, and Water Permit No. 6637-3 will authorize a total of 77 acre-feet of water annually at a maximum pump rate of 0.42 cfs from the three wells. This site is located approximately 7 miles northwest of Yankton SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8410-3 with qualifications 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. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

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 December 16, 2019.

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.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. 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.

Published once at the total approximate cost of _____.

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 6637-3 (8410-3)

I have this day, September 5, 2019, made a thorough examination of the water use system constructed by Jason Harmelink, 55334 Hwy 121, Crofton, NE 68730, holder of Permit No. 6637-3, bearing the priority of July 28, 2005 authorizing the diversion of 0.13 cu. ft. per second of the waters of groundwater (Dakota Aquifer) for commercial use in a cattle feeding operation in Yankton County.

Inspection contact: Jason Harmelink

A. Works used to divert the water:

North Well Information:

- 1) Well Drilling Firm: Pullman Well Drilling
- 2) No. of Wells 1
- 3) Depth(s) 915 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 5 in. PVC from 0 ft. to 480 ft.
- 2) Diameter 2 in. PVC from 480 ft. to 740 ft.
- 3) Type Plastic

Screen:

- 1) Type Plastic
- 2) Diameter 2.5 inches
- 3) Length 200 feet
- 4) Static water level 390 feet

Pump:

- 1) Make Goulds
- 2) Model Unknown
- 3) Capacity 50 GPM

Motor:

- 1) Make Goulds
- 2) Model No. Unknown
- 3) Horsepower rating 5 hp

Middle Well Information:

- 1) Well Drilling Firm: Pullman Well Drilling
- 2) No. of Wells 1
- 3) Depth(s) 835 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 5 in. PVC from 0 ft. to 490 ft.
- 2) Diameter 2 in. PVC from 490 ft. to 730 ft.
- 3) Type Plastic

Screen:

- 1) Type Plastic
- 2) Diameter 2.5 inches
- 3) Length 200 feet
- 4) Static water level 330 feet

Pump:

- 1) Make Goulds
- 2) Model Unknown
- 3) Capacity 90 GPM

Motor:

- 1) Make Goulds
- 2) Model No. Unknown
- 3) Horsepower rating 7.5 hp

South Well Information:

- 1) Well Drilling Firm: Pullman Well Drilling
- 2) No. of Wells 1
- 3) Depth(s) 950 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 5 in. PVC from 0 ft. to 425 ft.
- 2) Diameter 2 in. PVC from 425 ft. to 805 ft.
- 3) Type Plastic

Screen:

- 1) Type Plastic
- 2) Diameter 2.5 inches
- 3) Length 140 feet
- 4) Static water level 325 feet

Pump:

- 1) Make Goulds
- 2) Model Unknown
- 3) Capacity 50 GPM

Motor:

- 1) Make Goulds
- 2) Model No. Unknown
- 3) Horsepower rating 5 hp

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

- 1) Type PVC 2) Size 2 inches 3) Length Unknown feet

C. Works used to apply water to beneficial use: Livestock Waterers

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by No (permit holder has obtained No. 8410-3 to cover the additional diversion rate, additional well and to clarify location of wells)
- 2) Exceptions to compliance are: There are three wells at the site instead of two and the combined flow is more than what was permitted. (No. 8410-3 authorizes the additional well and cfs)

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows:
The north well is 70 feet east and 2,290 feet north of the southwest corner of Section 35-T94N-R57W (Latitude 42.91495, Longitude -97.55567 – NW1/4 of the SW1/4).
The middle well is 80 feet east and 2,160 feet north of the southwest corner of Section 35-T94N-R57W (Latitude 42.91459, Longitude -97.55567 – NW1/4 of the SW1/4).
The south well is 80 feet east and 1,680 feet north of the southwest corner of Section 35-T94N-R57W (Latitude 42.91329, Longitude -97.55569 – NW1/4 of the SW1/4).
2. The works are capable of diverting and conveying to the place of use 0.42 cu. ft. per second of water which is to be used for commercial use for a cattle feeding operation. Water has been put to beneficial use to the maximum extent in the N1/2 of the SW1/4 and the SW1/4 of the NW1/4 of Section 35-T94N-R57W and the license should be issued for 0.42 cfs.
3. All structures, wells and lands on map Yes

F. Comments or other permit(s) associated with the project: There are three wells at the site instead of two. The two newest wells were installed in 2011 and the older well (south well) was installed in 2005. I did not see any other wells at the site. All three wells can be used at the same time and the combined flow is more than the permitted flow rate of 0.13 cfs.

Jason Harmelink is the current owner of the feedlot. He purchased it from Joseph Tacke. Joseph Tacke owned the feedlot after his father Harold Tacke passed away.



Keith DeJong
Water Rights Inspector
DENR, Water Rights Program

Date report completed: September 9, 2019

Note: After Permit No. 6637-3 was inspected, Water Permit No. 8410-3 was obtained to bring system into compliance by adding a well and diversion authority. No. 6637-3 and No. 8410-3 will be incorporated into one license. This inspection report was modified after approval of No. 8410-3.

Water Right No. 6637-3



0 165 330 660 990 1,320 Feet
SCALE



Keith DeJong
Keith DeJong, PE
Staff Engineer
September 9, 2019

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8410-3

(1) Jason Harmelink, 55334 Hwy 121, Crofton NE 68730 made Application No. 8410-3, September 24, 2019 for a water permit to divert an additional 0.29 cubic feet of water per second (cfs), an additional well, and clarified well locations from Dakota Aquifer, Yankton County, South Dakota to what is currently authorized under Water Permit No. 6637-3. Permit No. 8410-3, with a priority date of September 24, 2019 was approved December 16, 2019 and issued to the applicant for diversion of water with construction of the described water supply system and the application to beneficial use of water completed.

Water Permit No. 6637-3, with a priority date of July 28, 2005 authorized 0.13 cfs from two wells for commercial use. The applicable portions of Permit No. 6637-3 have been incorporated into this water license.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Incorporated Water Right No. 8410-3 is issued a license, bearing priority dates of July 28, 2005 (0.13 cfs) and September 24, 2019 (0.29 cfs) to appropriate 0.42 cfs from three wells (Dakota Aquifer) for commercial use in a cattle feeding operation.

The diversion points are located in the NW 1/4 SW 1/4 all from the SW corner of Section 35-T94N-R57W

North well: 70 ft E and 2,290 ft N	Latitude 42.91495 Longitude -97.55567
Middle well: 80 ft E and 2,160 ft N	Latitude 42.91459 Longitude -97.55567
South well: 80 ft E and 1,680 ft N	Latitude 42.91329 Longitude -97.55569

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Incorporated Water Permit No. 8410-3 including the following qualifications:

1. The wells approved under Water Permit Nos. 6637-3 and 8410-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Permit Nos. 6637-3 and 8410-3 are subject to compliance with requirements of the Department's Water Pollution Control Permit issued pursuant to SDCL 34A-2-36 or 34A-2-36.2 or 34A-2-112 or 34A-2-124 for concentrated animal feeding operations.
3. Water Permit Nos. 6637-3 and 8410-3 is subject to compliance with all existing and applicable Water Management Board Rules including but not limited to:
 - a) Chapter 74:54:01 Ground Water Quality Standards,
 - b) Chapter 74:54:02 Ground Water Discharge Permit,
 - c) Chapter 74:51:01 Surface Water Quality Standards,
 - d) Chapter 74:51:02 Uses Assigned to Lakes,
 - e) Chapter 74:51:03 Uses Assigned to Streams, and
 - f) Chapter 74:52:01 through 74:52:11 Surface Water Discharge Provisions

(continued)

4. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Dakota aquifer.
5. Water Permit Nos. 6637-3 and 8410-3 authorizes a total annual diversion 77.0 acre feet of water from the Dakota aquifer.

Jeanne Goodman

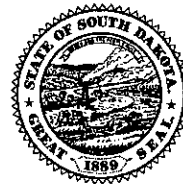
Jeanne Goodman, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

FEB 05 2020

date





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

FEB 05 2020

8410-3
6637-3

Jason Harmelink
55334 Hwy 121
Crofton NE 68730

Dear Mr. Harmelink:

Enclosed is Water Permit and License No. 8410-3. These are the final water right documents completing your process of obtaining a Water Right. Also, included with your license is a map prepared by the staff engineer who conducted the investigation.

For your information SDCL 46-6-27 requires that if in the future the owner drills a replacement well and has no plan to use the old existing 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

Note: The applicable portions of No. 6637-3 are incorporated into Water License No. 8410-3.

RECEIVED

AUG 14 2026

SD EForm - 0495LD V2

NOTICE OF TRANSFER OF OWNERSHIP

For assistance call (605) 773-3352

OFFICE OF
WATER

Mail to: PMB 2020
DENR - Water Rights Program
523 E Capitol Ave
Pierre, SD 57501-3182

Water Right/Permit No. 8410-3Date: 07/20/2026

I/We request that Water Right/Permit No. 8410-3 formerly owned by:
Iason Harmelink be transferred to:

New Owner Name: DMR, LLCAddress: 2801 Arlington AvenueCity, State, Zip Yankton SD 57078 Telephone No. 605-661-2880

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

West Half of the Northwest Quarter (W1/2NW1/4), Section Thirty-five (35), Township Ninety-four (94) North, Range Fifty-seven (57) West of the 5th P.M., Yankton County, South Dakota, less highways and roads.

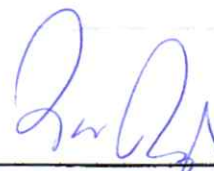
North Half of the Southwest Quarter (N1/2SW1/4), except Highway Lots H-2 and H-3 thereof, Section Thirty-five (35), Township Ninety-four (94) North, Range Fifty-seven (57) West of the 5th P.M., Yankton County, South Dakota, less highways and roads.

☒ I understand that the validity of Water Right/Permit No. 8410-3 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, DMR, LLC, the new owner, certify that the above information is true and correct.



(signed by new owner)

Lance Ryken, Member

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

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

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date August 24, 2026

RECEIVED OF Marlow, Woodward & Huff, PLLC PO Box 667 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 #8410-3 & #6637-3	\$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 Adam Mathisewicz
Chief Engineer

ATTORNEYS

MICHAEL F. MARLOW
SHEILA S. WOODWARD*+
STEVEN K. HUFF*
PAUL T. VAN OLSON
NATASHA M. ALLEN
PEYTON M. MUELLER
MICHAEL A. HANSON^

* ALSO ADMITTED IN IOWA

+ ALSO ADMITTED IN NEBRASKA

^ ALSO ADMITTED IN MINNESOTA
& INDIANA



PRACTICE AREAS

- PERSONAL INJURY
- ESTATE PLANNING
- COMMERCIAL LAW
- CIVIL LITIGATION
- REAL ESTATE

Sender's Email: michele@mwhlawyers.com
Sender's Direct Line: 605-655-2210

August 18, 2026

PMB 2020
DENR – Water Rights Program
523 E. Capitol Ave.
Pierre, SD 57501

To Whom it May Concern:

Enclosed is check# 37625 for \$100.00. This is payment for Transfer of Ownerships for Water Right No. 8410-3, and Water Permit No. 6637-3

Please let us know if you have any other questions, or if we need to give you any further information.

Sincerely,

Marlow, Woodward & Huff, Prof. LLC

Michele Schaefer
Office Manager

Enclosure

PAID

AUG 24 2026

Ck# 037625

Rec't# _____

RECEIVED

AUG 24 2026

OFFICE OF
WATER

RECEIVED

AUG 14 2026

OFFICE OF
WATER



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

August 25, 2026
DMR LLC
2801 Arlington Avenue
Yankton, SD 57078

8410-3, 6637-3

To Whom It May Concern:

The South Dakota Water Rights Program is in receipt of the "Notice of Transfer of Ownership" forms and the fees you submitted for Water Right No. 8410-3 & Water Permit No. 6637-3, enclosed is a \$100.00 receipt of payment for your records.

We discovered that Water Permit No. 6637-3 was incorporated into Water Right No. 8410-3 as stated on the License enclosed, therefore a duplicate payment was made.

A refund in the amount of \$50.00 will be provided to Marlow, Woodward & Huff, PLLC, by the State of South Dakota. Please allow up to two (2) weeks for the processing of that refund.

Water Right No. 8410-3, previously held by Jason Harmelink, is now listed under DMR, LLC. 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.

I am happy to answer any questions you may have.

Sincerely,

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

NOTE: The validity of Water Right No. 8410-3 has not been determined by this transfer action. Only the Water Management Board has the authority to determine if a water permit/right is valid.

CC: Marlow, Woodward & Huff, PLLC, PO Box 667, Yankton, SD 57078

enclosures