

FORM 2: Application for irrigation in South Dakota

(type or print)

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>7933-3</u> (office use only) Hydrologic Unit <u>10170102</u>		RECEIVED DEC 12 2013 WATER RIGHTS PROGRAM
	Basin <u>Vermillion River</u> <u>605-624-2695</u>		
	Newspaper <u>Plain Talk 201 W Cherry St. Vermillion</u> <u>57069</u> <u>605-665-7811</u>		
	<u>Press & Dakotan 319 Walnut Yankton</u> <u>57078</u>		

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.)

1. Name to Appear on Irrigation Permit Doug Bye(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent

(name and complete address if different than above name)

 Mailing Address 1559 Crestview Drive Vermillion sd 57069
 (Address) (City) (State) (Zip Code)
Home Phone 605-624-2580 Cell _____ Email _____
 2. Amount of water claimed 0.89 *CFS or 400 **GPM ***AF Total Acreage 90
 (*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 well drilled to the Missouri aquifer
 4. Location of point of diversion 1 well in the center of NW 1/4, Section 18, T92n, R52w
 (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
County Clay5. County or counties where water will be used Clay6. Annual period during which water is to be used April-September annually April 1 - Sept. 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
sw 1/4 of nw 1/4, sect 18, t92n, r52w	<u>40</u>	NW 1/4 NW 1/4 - 18-92N-52W	<u>5</u>
se 1/4 of nw 1/4, sect 18, t92n, r52w	<u>40</u>	NE 1/4 NW 1/4 18-92N-52W	<u>5</u>

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

Center pivot irrigation of crops on the property listed in item 7 above.

 I, Douglas Bye, 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. 7933-3

Date of first receipt of application December 12, 2013.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7933-3 to Douglas Bye, 1559 Crestview Drive, Vermillion SD 57069 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. 7933-3 appropriates 0.89 cubic feet of water per second from one well to be completed into the Missouri:Elk Point Aquifer (115 feet deep) located in the approximate center of the NW 1/4 Section 18 for irrigation of 90 acres located in the NW 1/4 Section 18; all in T92N-R52W.
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 December 12, 2013.
4. The date of approval of Permit No. 7933-3 is March 3, 2014.
5. One-fifth of the construction is to be completed on or before September 3, 2016.
6. All construction is to be completed on or before March 3, 2019.
7. Water is to be put to beneficial use on or before March 3, 2023.
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 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7933-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

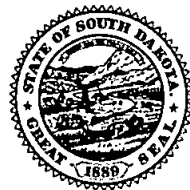
WATER MANAGEMENT BOARD

By: 

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

MAR 13 2014

date



Supplemental Information

(type or print)

1. Well Information

(check one or both as applicable) ☒ Drilling new well(s) ☐ Using existing well(s)

a) If new wells, how many 1 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)

b) If existing wells, how many _____ Provide copy of log(s), if available. Drilled by _____

c) Well Depth 115 Depth to Top of Water Bearing Material 70 Depth to Water from Surface 25

d) Distance to nearest existing domestic well:

On applicant's property NA

On property owned by others > 2000' ?

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) _____

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

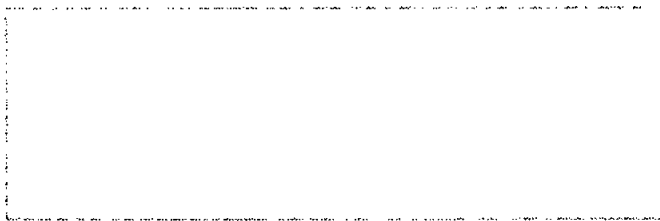
a) Surface Dimensions _____ Depth _____

b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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

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



b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

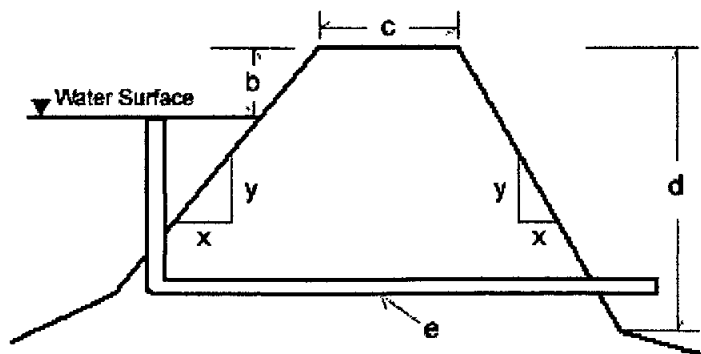
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres





United States Department of Agriculture
Farm Service Agency

PLSS: 18_92N_52W
Farm: 3101

Clay County, SD
1:8,359

Sherree Christensen
March 11, 2010
PT-12-6-13



Wetland Determination Identifiers

- Restricted Use
- ▽ Limited Restrictions
- Exempt from Conservation Compliance Provisions

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DEC 12 2013 Common Land Units

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

2008 Ortho-Photography - Not to Scale **WATER RIGHTS PROGRAM**



The Leader in Precision Irrigation

Prepared By: **Heine Electric and Irrigation, Inc.**
 For: **Bye Doug**

Pivot center at **42.790185, -97.03722**

Arc Start Bearing: 82.45

Arc Stop Bearing: 276.92

[E] Spray off at 70°, on at 110°.

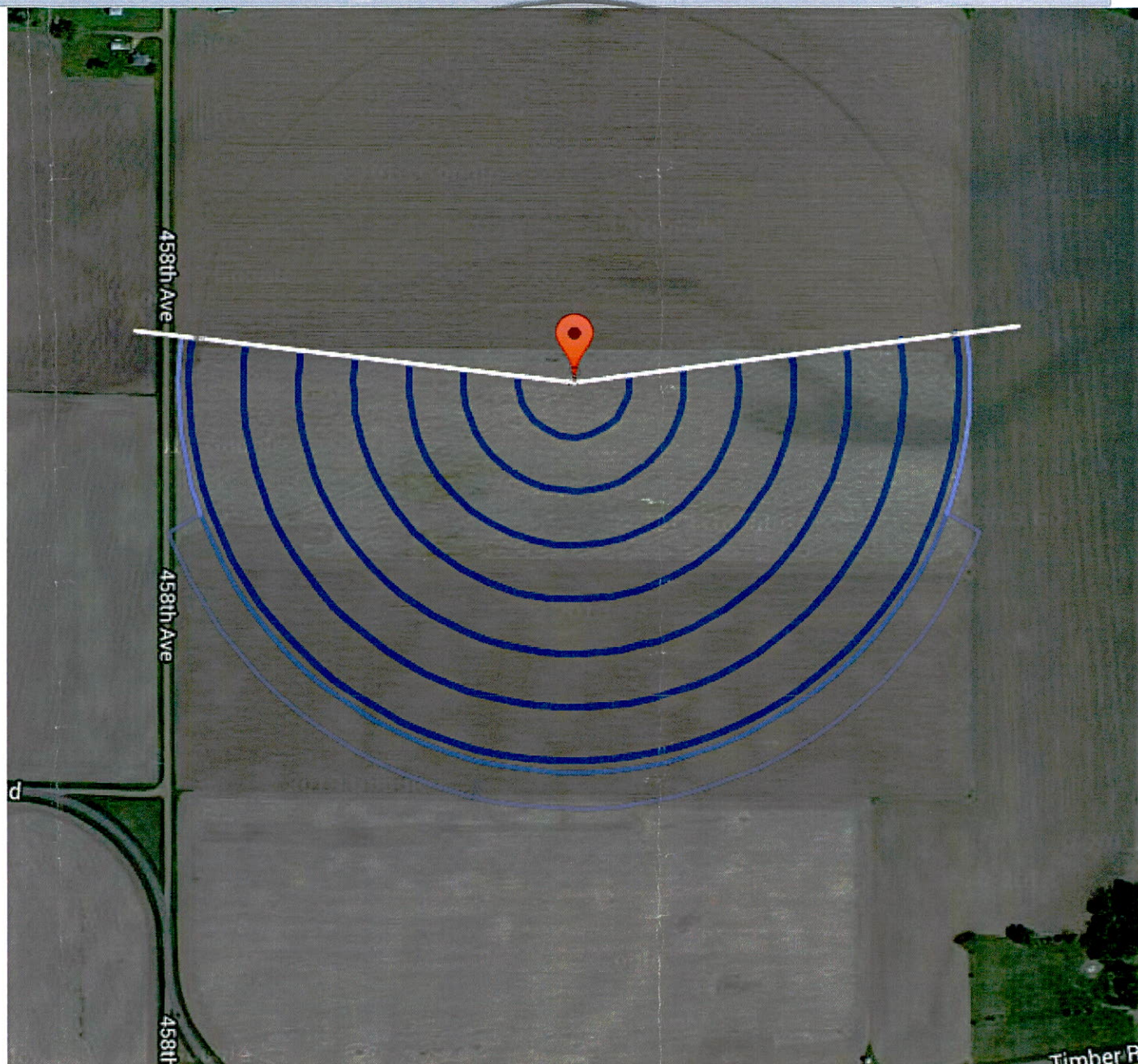
[W] Spray off at 250°, on at 290°.

- 1 180 ft. Total: 180 ft.
Acreage: 1.26. Total: 1.26 acres.
- 2 180 ft. Total: 360 ft.
Acreage: 3.78. Total: 5.04 acres.
- 3 180 ft. Total: 540 ft.
Acreage: 6.3. Total: 11.35 acres.
- 4 180 ft. Total: 720 ft.
Acreage: 8.83. Total: 20.19 acres.
- 5 180 ft. Total: 900 ft.
Acreage: 11.35. Total: 31.54 acres.
- 6 180 ft. Total: 1080 ft.
Acreage: 13.88. Total: 45.43 acres.
- 7 180 ft. Total: 1260 ft.
Acreage: 16.4. Total: 61.83 acres.
- Overhang** 36 ft. Total: 1296 ft.
Acreage: 3.58. Total: 65.42 acres.
- Spray** 120 ft. Total: **1416 ft.**
Acreage: 9.14. Total: **74.56 acres.**

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DEC 12 2013

WATER RIGHTS
PROGRAM



RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 12/12, 20 13

RECEIVED OF Douglas Bye 1559 Crestview Dr Vermillion SD 57069

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

Fee for Application for Permit No. <u>7933-3</u> to Appropriate Water, to construct and to put water to beneficial use	750	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>7933-3</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	950 00

No. **06519**

By *J. L. Hootman*
Chief Engineer

No. 7933-3

Water Rights Program - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: Water Permit Application No. 7933-3, Doug Bye

ADDRESS: 1559 Crestview Drive, Vermillion SD COUNTY: Clay County

DATE: December 12, 2013 TELEPHONE: 202-0177

RE: number of acres

I contacted Mr. Bye to state that Item No. 2 on the application states 80 acres, the acreage breakdown in Item No. 7 totals 90 acres and the map from Heine Electric defines the acreage as 74.56 acres.

Mr. Bye stated his landownership is 90 acres according to the FSA and that is what he wants to apply for understanding that the corners may not get irrigated. I indicated the application can get amended accordingly but that during licensing only the actual acres developed for irrigation will be licensed. He agreed to that approach. The acreage breakdown should be:

SW ¼ NW ¼ Section 18, T92N, R52W	40 acres
SE ¼ NW ¼ Section 18, T92N, R52W	40 acres
NW ¼ NW ¼ Section 18, T92N, R52W	5 acres
NE ¼ NW ¼ Section 18, T92N, R52W	5 acres

NAME: Eric Hummer



**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. 7933-3, Douglas Bye**

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. 7933-3, Douglas Bye, 1559 Crestview Drive, Vermillion SD 57069.

The Chief Engineer is recommending APPROVAL of Application No. 7933-3 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 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7933-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

A handwritten signature in black ink, reading "Jeanne Goodman". The signature is written in a cursive style.

Jeanne Goodman, Chief Engineer
February 11, 2014

REPORT TO THE CHIEF ENGINEER

WATER PERMIT APPLICATION NO. 7933-3

Doug Bye

January 8, 2014

Water Permit Application No. 7933-3 proposes to divert groundwater at a maximum rate of 0.89 cubic feet of water per second (cfs) from one well to be completed into the Elk Point management unit of the Missouri aquifer. The well is expected to be approximately 115 feet deep and located in the approximate center of the NW¼ of Section 18, T92N-R52W. Water will be used to irrigate 90 acres located in the NW¼ of Section 18, T92N-R52W in Clay County.

AQUIFER: Elk Point management unit of the Missouri aquifer (M:EP)

HYDROGEOLOGY:

The Elk Point management unit of the Missouri aquifer is an alluvium mantled outwash consisting of fine sand to very coarse gravel (Niehus, 1994; Stephens, 1967). The Missouri: Elk Point aquifer is located in southeastern South Dakota, underlying large portions of Yankton, Clay, and Union Counties. In total, the Missouri: Elk Point aquifer is estimated to underlie 210,100 acres and contain 3,287,100 acre feet (ac-ft) of recoverable water in storage (Hedges and others, 1982). The aquifer connects to the Lower Vermillion Missouri and Lower James Missouri aquifers to the north, often overlies the Dakota aquifer, and is hydraulically connected to the Vermillion, Big Sioux, and Missouri Rivers. Water in the aquifer generally moves from the northwest to the southeast and towards the Missouri River (Stephens, 1967).

A test hole log was not submitted with this application but the applicant anticipates a well depth of 115 feet. The proposed well is located approximately one mile from the Missouri River. The Missouri: Elk Point aquifer is predominately under water table conditions. Water levels in the aquifer in this area are directly related to the stage of the river. Due to the proximity of the proposed well site to the river, some of the water pumped will likely be induced (Stonesifer, in progress).

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 the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest. This report will address the availability of unappropriated water from the aquifer and the potential for impairment of existing rights.

WATER AVAILABILITY:

The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable 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. Here, a public water system is not involved and the aquifer is not older or lower than the Greenhorn Formation therefore withdrawal/recharge issue must be considered.

Hydrologic Budget:

The hydrologic budget of the Missouri: Elk Point aquifer was evaluated for groundwater appropriations as of June 10, 2013. Water rights/permits/future use permits are expected to use 81,108 ac-ft/yr, which includes expected use of new irrigation water permits. Recharge to the aquifer is estimated to be at least 91,964 ac-ft/yr, which considers induced recharge. Therefore, approximately 10,856 ac-ft/yr of unappropriated water was available at that stage of development (Stonesifer, in progress).

Since June 10, 2013, six water permits have been approved, all for irrigation use. These are shown in Table 1. Historically, irrigation use water rights/permits withdrawing water from this aquifer pump on average in total 13.7% of the total appropriation (Stonesifer, in progress). Applying this proportion to the new appropriation, estimated expected use is 250 ac-ft/yr. Also consider that a portion of this pumped groundwater is expected to be induced from surface water. Therefore, approximately 10,600 ac-ft/yr of unappropriated water is currently available considering induced recharge of current water rights/permits.

Table 1: Approved water permits from the Missouri Elk: Point aquifer since June 10, 2013 (Water Rights, 2014b)

Permit Number	Name	County	Priority Date	Permit CFS	Permit Acres	Permit Appropriation
7848-3	Missouri Valley Farms Inc	Union	05/31/2013	3.04	213	426
7856-3	Mike & Steve Allard	Union	07/01/2013	1.78	129.3	258.6
7895-3	Todd Hansen	Union	09/09/2013	1.89	180	360
7898-3	James Orr	Clay	09/12/2013	1.56	132	264
7899-3	Justin Orr	Clay	09/12/2013	1.56	97	194
7904-3	Craig S McInerney	Union	09/23/2013	1.78	160	320

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 Water Rights Program monitors 38 observation wells completed into the Missouri: Elk Point aquifer (Water Rights, 2014a). The nearest of these wells, CL-80B, is located approximately three miles west of the proposed well site. The hydrograph of this observation well is shown in Figure 1. The observation well data documents cyclic conditions of water levels, recharging during wet years and declining during dry years. The hydrograph also shows the effects of nearby pumping on the aquifer. Observation well data indicates that at the current level of development temporal well withdrawal is masked by climatic conditions, indicating that recharge to and natural discharge from the aquifer greatly exceeds well withdrawal.

In general, hydrographs of observation wells completed into the Missouri: Elk Point aquifer show a slight decline of water table. This has been attributed to entrenching the Missouri River

or controlling the flow of the Missouri River by the Gavins Point Dam, which no longer allows inundation of the floodplain (Goodman, 2007; Stephens, 1967). Since the drought in 2012, water levels in many observation wells completed into the Missouri: Elk Point aquifer have not yet returned to previous elevations. Also shown in the hydrograph is Missouri River water levels near the City of Yankton, approximately 15 miles west of the observation well. The trends in water levels between groundwater and surface are nearly identical. This indicates that a strong hydraulic connection exists, where groundwater levels are to some extent dependent on the Missouri River stage. Therefore, water levels in the aquifer are not decreasing due to well withdrawal and unappropriated water is available.

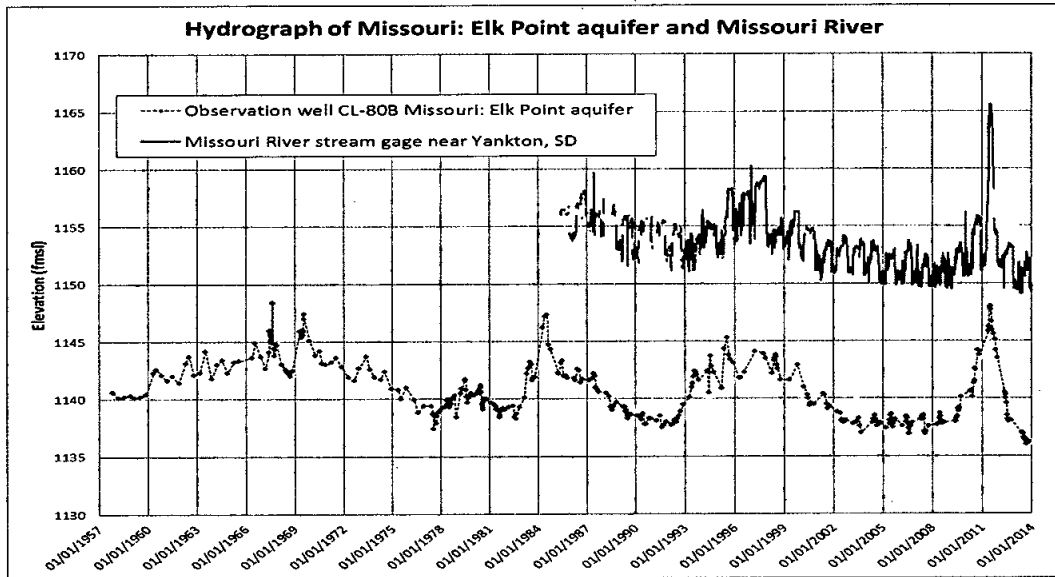


Figure 1: Hydrograph for observation well CL-80B and Missouri River stream gage near the City of Yankton (USGS, 2014; Water Rights, 2014a)

EXISTING WATER RIGHTS:

The proposed well will be located near other wells that obtain water from the same aquifer. The only well on record within one mile of the proposed well site is authorized to Water Permit No. 7553-3 John Freeburg. This well is located approximately three quarters of a mile northeast. The western edge of the future use area authorized to Lewis & Clark Rural Water System is located approximately one mile southeast (Water Rights, 2014b; Water Rights, 2014c).

The relatively large thickness, the areal extent, and the water table conditions of the aquifer indicate that the effects of drawdown due to pumpage would be minimal. The close proximity of wells to the Missouri River indicates that drawdown due to pumpage would be reduced due to the induced recharge. However, precise drawdown cannot be quantified without aquifer testing. The Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. Therefore, nearby adequate wells defined by ARSD 74:02:20(7) are not expected to be adversely or unlawfully impaired due to the proposed well.

or controlling the flow of the Missouri River by the Gavins Point Dam, which no longer allows inundation of the floodplain (Goodman, 2007; Stephens, 1967). Since the drought in 2012, water levels in many observation wells completed into the Missouri: Elk Point aquifer have not yet returned to previous elevations. Also shown in the hydrograph is Missouri River water levels near the City of Yankton, approximately 15 miles west of the observation well. The trends in water levels between groundwater and surface are nearly identical. This indicates that a strong hydraulic connection exists, where groundwater levels are to some extent dependent on the Missouri River stage. Therefore, water levels in the aquifer are not decreasing due to well withdrawal and unappropriated water is available.

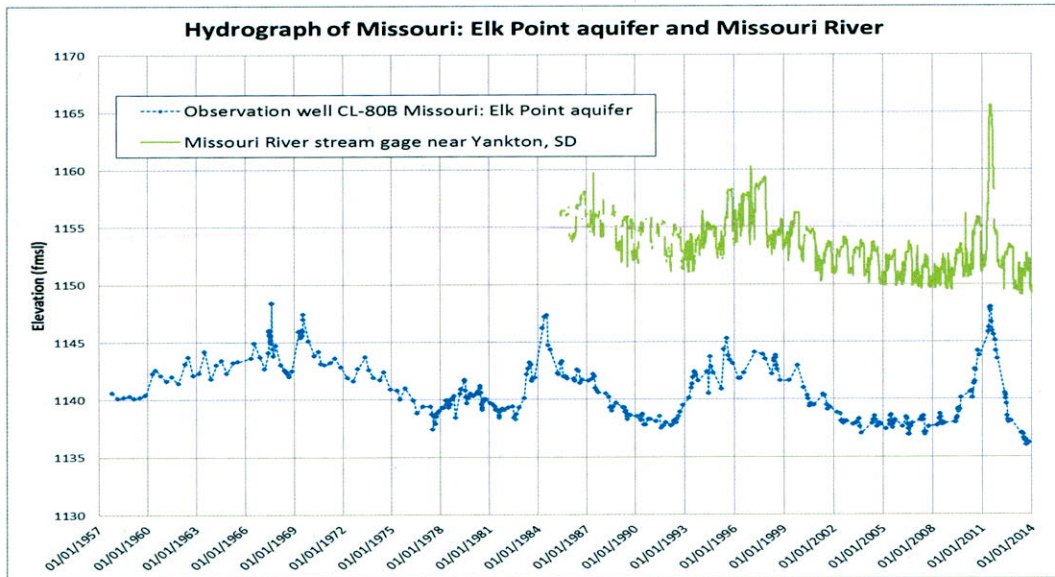


Figure 1: Hydrograph for observation well CL-80B and Missouri River stream gage near the City of Yankton (USGS, 2014; Water Rights, 2014a)

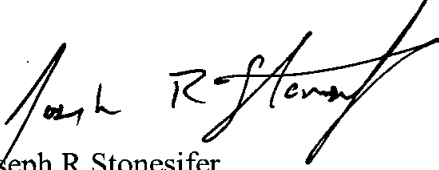
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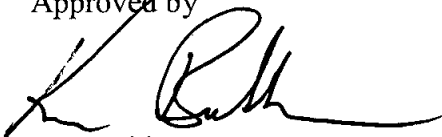
CONCLUSIONS:

1. The water permit application proposes to withdraw groundwater at a maximum diversion rate of 0.89 cfs from one well to be completed into the Missouri: Elk Point aquifer for the irrigation of 90 acres in Clay County.
2. Unappropriated water is available from the Missouri: Elk Point aquifer to supply the proposed appropriation.
3. This proposed diversion will not adversely or unlawfully impair existing nearby wells.



Joseph R Stonesifer
SD DENR-Water Rights Program

Approved by



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Goodman, J.A. 2007. Report on Water Permit Application No. 6869-3 for Lewis and Clark RWS: SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., and Schoon, R.A. 1982. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Niehus, C.A. 1994. Water Resources of Lincoln and Union Counties, South Dakota. U.S. Geological Survey Water-Resources Investigations Report 93-4195. U.S. Geological Survey, Rapid City, South Dakota.
- Stephens, J.C. 1967. Geology and Hydrogeology of Clay County, South Dakota, Part II: Water Resources. South Dakota DENR-Geological Survey Bulletin 19, 62 p. Vermillion, South Dakota.
- Stonesifer, J.R. in progress. Water Availability of the Missouri: Elk Point Aquifer. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- USGS. 2014. Surface Water Data for South Dakota: USGS Surface-Water Annual Statistics: USGS 06467500 Missouri River at Yankton, South Dakota, Water Years 1976-1995.

Water Rights. 2014a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2014b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2014c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

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FEB 26 2014

WATER RIGHTS
PROGRAM

NOTICE OF APPLICATION
NO. 7933-3 to Appropriate Water

AFFIDAVIT OF PUBLICATION

PLAIN TALK

Douglas Bye
1559 Crestview Dr.
Vermillion, SD 57069

STATE OF SOUTH DAKOTA
COUNTY OF CLAY

TERA SCHMIDT BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT SHE IS THE **CLASSIFIED MANAGER** OF YANKTON
MEDIA INC., A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
PLAIN TALK, A LEGAL WEEKLY NEWSPAPER PUBLISHED AND CIRCULATED
IN THE CITY OF VERMILLION, SAID COUNTY AND STATE, AND ONE OF THE
OFFICIAL NEWSPAPERS OF THE SAID COUNTY OF FACTS STATED IN THIS
AFFIDAVIT; THAT THE ANNEXED
Notice of Application No. 7933-3 to Appropriate Water

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 21 DAY OF February 2014
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID **NOTICE** TO WIT **\$27.80** ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS
BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF
HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 2/21/14

FILED ON: 2/20/14

Notice is given that Doug Bye, 1559 Crestview Drive, Vermillion SD 57069 has filed an application for a water permit to appropriate 0.89 cubic feet of water per second from one well to be completed into the Missouri: Elk Point Aquifer (115 feet deep) located in the approximate center of the NW 1/4 Section 18 for irrigation of 90 acres located in the NW 1/4 Section 18; all in T92N-R52W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7933-3 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 March 3, 2014.

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

Steven M. Pirner,

Secretary, Department of Environment and Natural Resources

Published once at the total approximate cost of \$27.80.
Published: February 21, 2014.

Tera A. Schmidt
SUBSCRIBED AND SWORN TO BEFORE ME THIS

24th DAY OF

February 2014

[Signature]
NOTARY PUBLIC, SOUTH DAKOTA

MY COMMISSION EXPIRES

8/19/2015

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FEB 26 2014

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

2+21

NOTICE OF APPLICATION
NO. 7933-3 to Appropriate Water

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. 7933-3

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 21st DAY OF February 2014
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$25.48 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: 2/21/2014

FILED ON: 2/24/2014

Notice is given that Doug Bye, 1559 Crestview Drive, Vermillion SD 57069 has filed an application for a water permit to appropriate 0.89 cubic feet of water per second from one well to be completed into the Missouri:Elk Point Aquifer (115 feet deep) located in the approximate center of the NW 1/4 Section 18 for irrigation of 90 acres located in the NW 1/4 Section 18; all in T92N-R52W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7933-3 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 March 3, 2014.

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

Published once at the total approximate cost of \$25.48.

SUBSCRIBED AND SWORN TO BEFORE ME THIS 24th DAY OF February

2014

NOTARY PUBLIC, SOUTH DAKOTA

MY COMMISSION EXPIRES

8/19/2015



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

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



February 12, 2014

Plain Talk
201 W Cherry
Vermillion SD 57069

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7933-3 to Appropriate Water. Please publish the notice once on February 21, 2014. 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 Doug Bye, 1559 Crestview Dr, Vermillion SD 57069 (Ph # 605-624-2580).

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



February 12, 2014

Press & Dakotan
319 Walnut
Yankton SD 57078

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Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT OF ENVIRONMENT
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PIERRE, SOUTH DAKOTA 57501-3182
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**NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER(S) RIGHT AWAY.**

February 12, 2014

Doug Bye
1559 Crestview Dr
Vermillion SD 57069

Dear Mr. Bye:

Water Permit Application No. 7933-3 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 Plain Talk printed at Vermillion SD (Ph # 605-624-2695) and 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
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 February 21, 2014. 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. 7933-3 to Appropriate Water

Notice is given that Doug Bye, 1559 Crestview Drive, Vermillion SD 57069 has filed an application for a water permit to appropriate 0.89 cubic feet of water per second from one well to be completed into the Missouri:Elk Point Aquifer (115 feet deep) located in the approximate center of the NW 1/4 Section 18 for irrigation of 90 acres located in the NW 1/4 Section 18; all in T92N-R52W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7933-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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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



MAR 13 2014

Douglas Bye
1559 Crestview Dr
Vermillion SD 57069

Dear Mr. Bye:

Enclosed is Water Permit No. 7933-3 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

7933-3
RECEIVED

MAY 21 2014

WATER RIGHTS
PROGRAM**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**Date 5/25/2014TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181FROM: Douglas Bye
(name)1559 Crestview Drive
(address)Vermillion SD 57069
(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. 7933-3 states that the water use system is to be constructed by 3/3/2019, and water is to be put to beneficial use by 3/3/2023.
(date) (date)

The water use system was completed on 3/20/2014.
(date)

Applying the water to beneficial use was completed on 5/10/2014.
(date)

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

Douglas Bye
(signature)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

May 21, 2014

7933-3

Douglas Bye
1559 Crestview Dr
Vermillion SD 57069

Dear Mr. Bye:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with your irrigation system.

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

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

Sincerely,

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

SOUTH DAKOTA WATER WELL COMPLETION REPORT

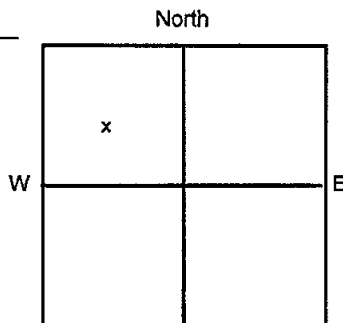
11-02

Location SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 18 Twp 92N Rg 52WWell Owner: DOUG BYE

Business Name:

Address: 1559 CRESTVIEW DRCity, State, Zip: VERMILLION SD 57069County CLAY

Please mark well location with an "X"



Well Completion Date

February 18, 2014

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
1,800.0 ft. from SEPTIC TANK (identify source)

PROPOSED USE:

☐ Domestic/Stock ☐ Municipal ☐ Business ☐ Test holes
☒ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well
METHOD OF DRILLING:
REVERSE ROTARY

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	<u>16.00</u> IN	<u>0.0</u> FT	<u>60.0</u> FT	<u>28.00</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>BENTONITE</u>	<u>45</u>	<u>9.5</u> Lb/gal	<u>0.0</u> Ft	<u>58.0</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
TREMIE METHOD

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 16.00 Inches Length 40.0 Feet
 Material PVC
 Slot Size .080 Set From 60.0 Feet to 100.0 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? HTH PELLETS☐ No, Why Not?

Lab to which water quality sample sent for analysis

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	1
BROWN CLAY	1	19
FINE SAND W/ CLAY	19	50
COARSE SAND	50	58
BLUE CLAY	58	62
COARSE GRAVEL	62	65
MEDIUM SAND	65	70
MEDIUM GRAVEL	70	90
MEDIUM SAND & GRAVEL	90	100

STATIC WATER LEVEL 18.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe:
☐ Bailed
☐ Other

Pumping Level Below Land Surface

23.0 Ft. After 1.0 Hrs. pumped 800.0 GPM25.0 Ft. After 2.0 Hrs. pumped 975.0 GPM

If pump installed, pump rate: _____ GPM

REMARKS

This well was drilled under license # 666 and this report is true and accurate.Drilling firm: HAMMOND-WETMORE DRILLING, INC

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

RECEIVED

Date: 3/31/14

APR - 2 2014

WATER RIGHTS PROGRAM

No. 7933-3

Water Rights Program - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: Water Permit. 7933-3, Douglas Bye

ADDRESS: COUNTY: Clay County

DATE: January 29, 2016 TELEPHONE:

RE: irrigation of acres not authorized by Permit No. 7933-3

Mr. Bye called in response to my letter. He indicated that the pivot has been allowed to make full rotation. He thought the permit authorized just the use of the well and did not limit the number of acres irrigated. I stated the permit limits the number of acres to what is identified on the permit.

He indicated that he is going to the auction on the 70 acres in the N $\frac{1}{2}$ NW $\frac{1}{4}$ of Section 18. He did not know if he would purchase those acres but now knows that he'd or the new owner of those acres would need to apply for water permit for those additional acres in order for the center pivot to make full rotation.

NAME: Eric Lundberg



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

7933-3

January 29, 2016

Douglas Bye
1559 Crestview Drive
Vermillion SD 57069

Dear Mr. Bye:

In 2013, you obtained Water Permit No. 7933-3 appropriating 0.89 cubic feet of water per second for irrigation of 90 acres located in the NW ¼ of Section 18, T92N, R52W. Specifically, eighty acres were authorized for irrigation in the S ½ NW ¼ and 10 acres in the very southern portion of the N ½ NW ¼ of the section. The irrigation system has been developed and you've reported 80 acres irrigated in 2015 and 90 acres irrigated in 2014.

DENR received an inquiry from a realtor regarding selling the northern 70 acres in the N ½ NW ¼ of Section 18 which is owned by someone else. He asked if there was an irrigation permit in place for these acres. Our records do not indicate a permit is in place for the irrigation of the northern 70 acres in the N ½ NW ¼ Section 18. However, looking at the 2014 FSA aerial imagery for the NW ¼ of this section, tire tracks from the irrigation system can be seen indicating that the center pivot had made full rotation. See attached map.

This letter is to inform you that under the existing permit you are only authorized to irrigate in a windshield wipe rotation that applies water to the S ½ NW ¼ and a very small portion of the N ½ NW ¼ of this section. There could be an easy explanation such that the pivot was allowed to rotate across this property with the neighbor's permission without applying water.

Please let me know if you believe there is a water permit in place that authorizes the center pivot in the NW ¼ of Section 18 to make full rotation.

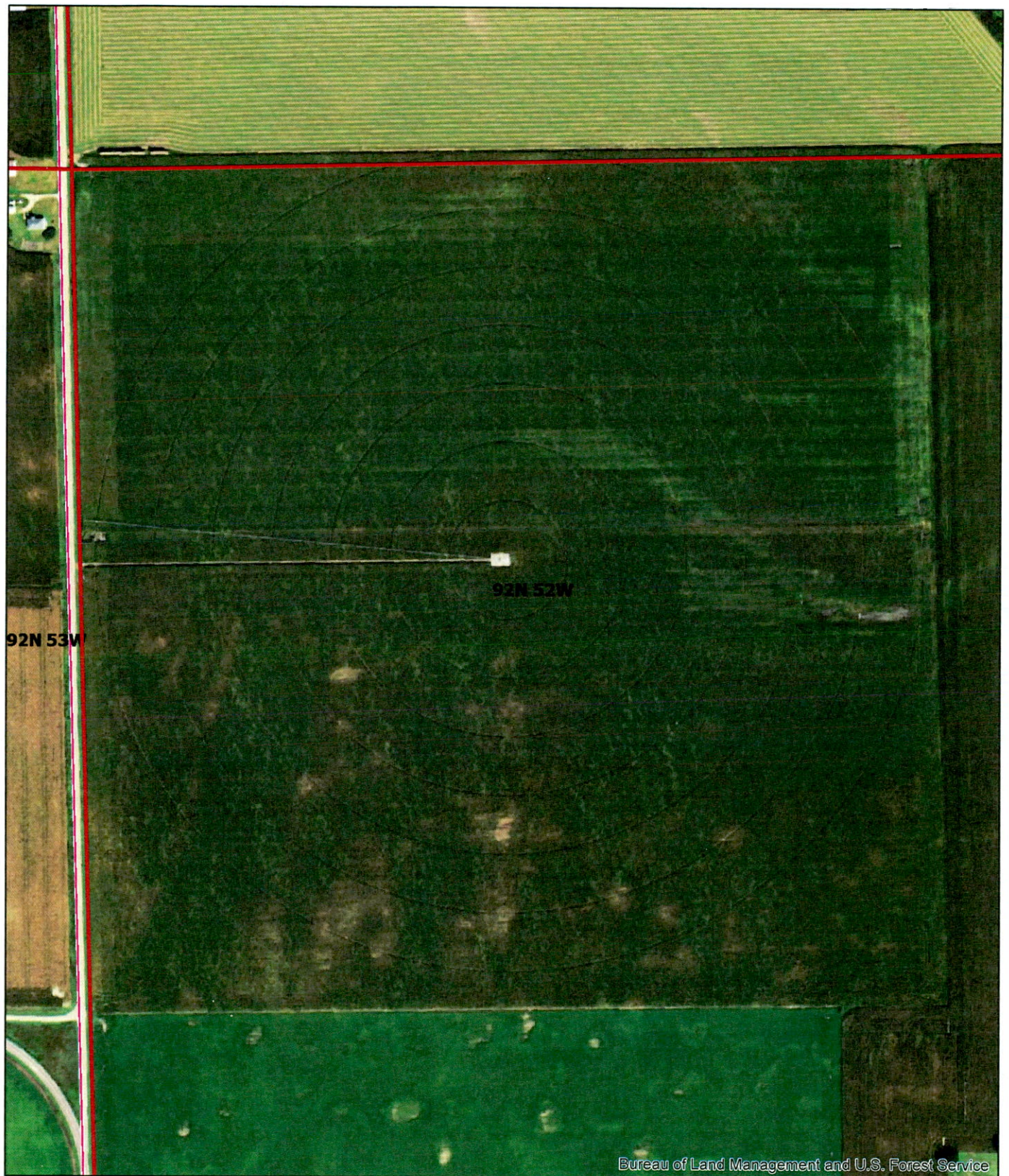
Sincerely,

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

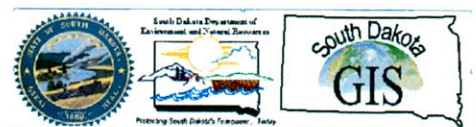
Eric Gronlund
Water Rights Program, DENR
605 773-3352
eric.gronlund@state.sd.us

enclosures

NE 1/4 Section 18, T92N, R52W



510 255 0 510 Feet





7933-3

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

NOV 13 2017

7933-3
8204-3

Douglas Bye
1559 Crestview Dr
Vermillion SD 57069

Dear Mr. Bye:

Enclosed is Water License No. 8204-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

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

enclosures

Note: Upon licensing, the applicable portions of Water Permit No. 7933-3 were incorporated into Water License No. 8204-3.