

WATER PERMIT NO. 8204-3

Name of Applicant: **Douglas Bye**

Address: **1559 Crestview, Vermillion SD 57069**

Phone: **605 624-2580**

Amount of Water Claimed: **0.89 cfs**

Total Acres: **70 acres**

Source of Water Supply: **groundwater (1 existing well)**

Water to be used for: **irrigation**

County: **Clay**

Type of Waste Disposal System:

Location: **4 miles west of Vermillion**

PRIORITY

Date Received: **2-24-16**

Application/License Fee: **\$ 750**

Corrected Application Received:

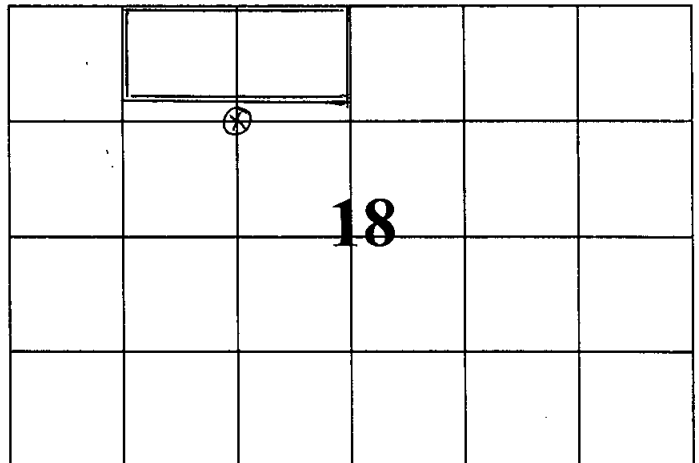
Period of Annual Use: **April 1 – September 30**

Remarks: **Utilizing well authorized by No. 7933-3 and will allow pivot to make a complete rotation**

Diversion Point: **approximate center of NW 1/4**

Sec 18-T92N-R52W

Land to be Irrigated: **N 1/2 NW 1/4 Sec 18-T92N-R52W**



Depth of Well: **100 feet deep**

Well Driller: **Hammond-Wetmore Drilling**

Remarks:

Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **2-24-16**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

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

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8204-3</u> (office use only)	Hydrologic Unit <u>10170102</u>
	Basin <u>Vermillion River</u>	
	Newspaper <u>Plain Talk - Vermillion</u>	<u>605-624-2695</u>
	<u>Press & Dakotan - Yankton</u>	<u>605-665-7811</u>

RECEIVED
FEB 24 2016
WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

Type of Application: ☒ New ☐ Vested Right ☒ Amendment/Correction to Permit No. 7933-3
(Use predates Mar 2, 1955)

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

Additional acres to above permit

1. Name to Appear on Irrigation Permit Douglas Bye

Note: The "Name to Appear on Irrigation Permit" must be the name in which the property to be irrigated is held in.

Mailing Address 1559 Crestview Vermillion SD 57069
(Address) (City) (State) (Zip Code)

Phone 605-624-2580 Mobile _____ Email _____

2. Amount of water claimed add 0.89 *CFS or Total 800 **GPM ***AF Total Acreage add 70 acre
(*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Existing Well authorized by permit 7933-3

4. Location of point of diversion 1 well at approximately center of nw 1/4 Section 18, T 92n, R 52w
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County Clay

5. County or counties where water will be used Clay

6. Annual period during which water is to be used April 1 to September 30

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

Land Description	Acres	Land Description	Acres
NW 1/4 of NW 1/4 of Section 18, T92nR52w	35		
NE 1/4 of NW 1/4 of Section 18, T92nR52w	35		

8. Give a description of the project. (Attach sheet if more space is needed)
Add acreage to permit 7933-3

I, Douglas Bye by Brock Bye
Name of Person

Title (if applicable)

, the applicant, certify under

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. 8204-3**

Date of first receipt of application February 24, 2016.

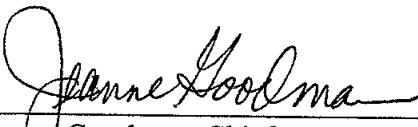
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8204-3 to Douglas Bye, 1559 Crestview, Vermillion SD 57069 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 8204-3 appropriates 0.89 cubic feet of water per second (cfs) from one existing well completed into the Missouri:Elk Point Aquifer (100 feet deep) located in the approximate center of the NW 1/4 Section 18 for irrigation of 70 acres located in the N 1/2 NW 1/4 Section 18; all in T92N-R52W. This will allow the pivot authorized by Water Permit No. 7933-3 to make a complete rotation. This permit and Water Permit No. 7933-3 will authorize a total diversion rate of 1.78 cfs to irrigate 160 acres.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 – September 30.
3. The date from which applicant may claim right is February 24, 2016.
4. The date of approval of Permit No. 8204-3 is May 9, 2016.
5. One-fifth of the construction is to be completed on or before November 9, 2018.
6. All construction is to be completed on or before May 9, 2021.
7. Water is to be put to beneficial use on or before May 9, 2025.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit Nos. 7933-3 and 8204-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: 

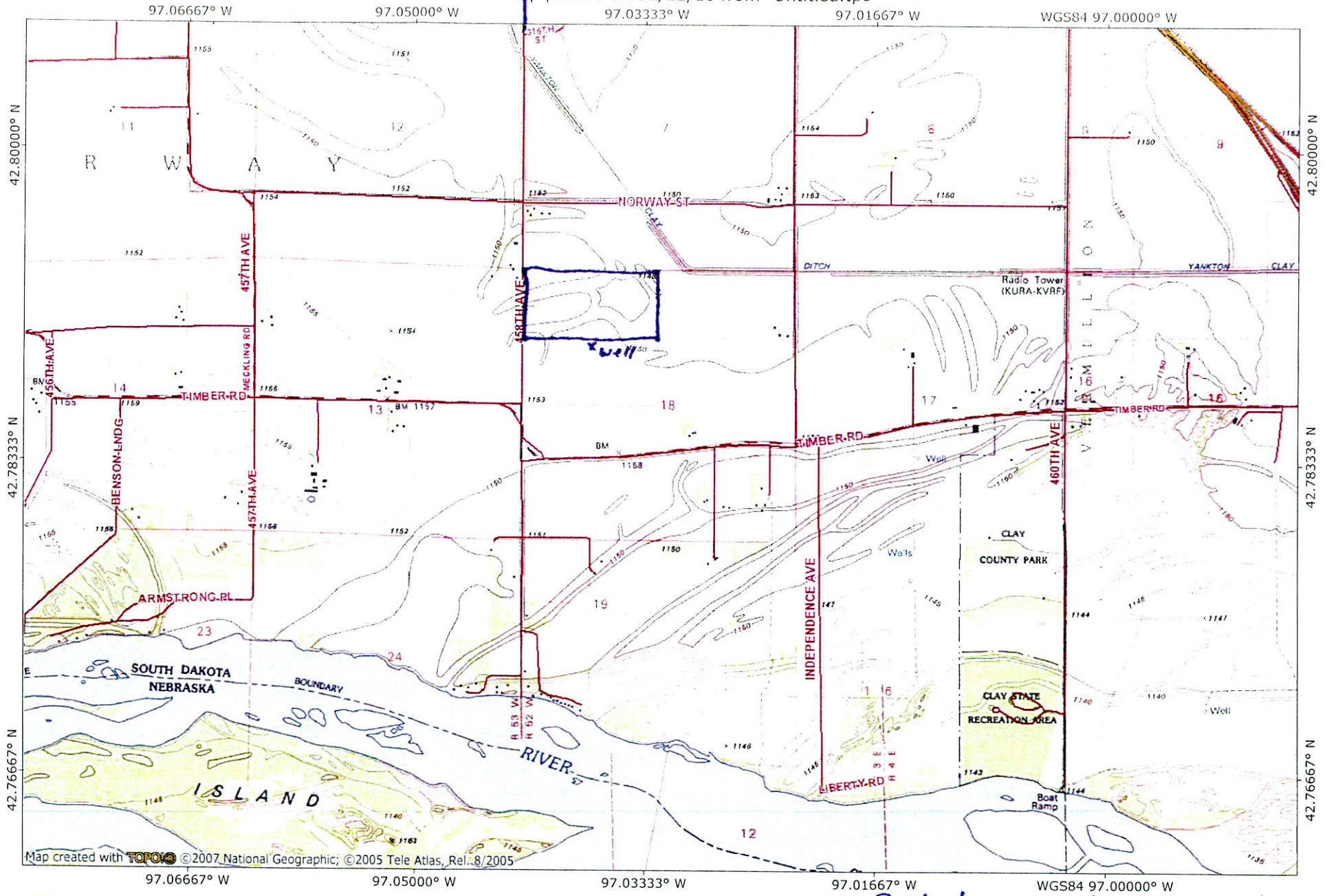
Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

MAY 12 2016
date



R53W R52W All INT 92N

TOPO! map printed on 02/22/16 from "Untitled.tpo"

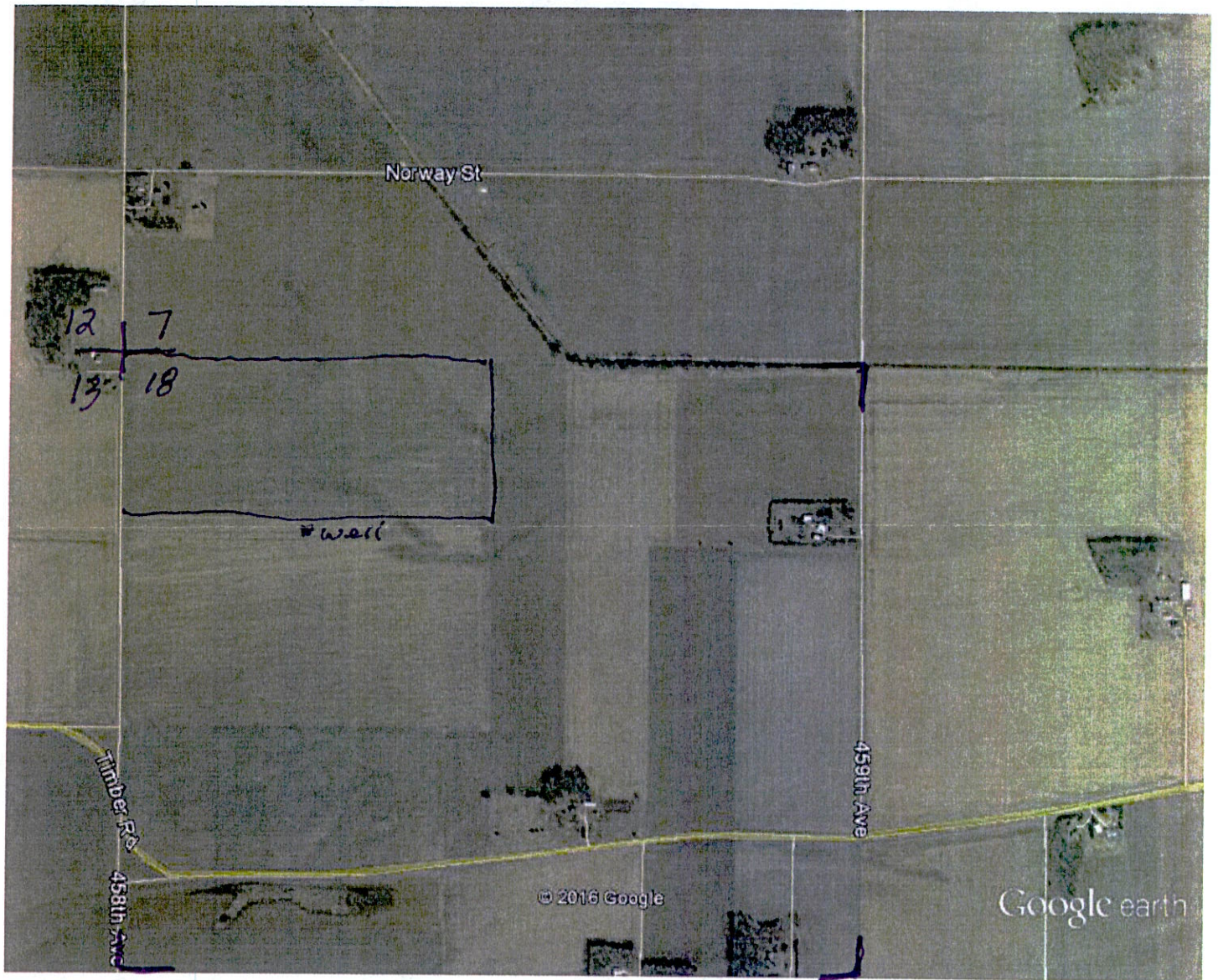


Map created with TOPO! © 2007 National Geographic; © 2005 Tele Atlas, Rel.: 8/2005



RH Hammond
2/22/2016

TN MN
3°
02/22/16



Google earth

feet 4000
km 1



R.H. Arnold
2/22/2016

7933-3

SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SW 1/4 NW 1/4 Sec 18 Twp 92N Rg 52W Well Owner: DOUG BYE

County CLAY North
Please mark well location with an "X"
W E
1 Mile

Business Name: _____
Address: 1559 CRESTVIEW DR
City, State, Zip: VERMILLION SD 57069

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 BENTONITE No. of Sacks 45 Grout Weight 9.5 Lb/gal From 0.0 Ft To 58.0 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 GPM
25.0 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]
 Signature of Well Owner or Equitable Property Holder: _____

RECEIVED
 Date: 3/31/14 **APR - 2 2014**
WATER RIGHTS PROGRAM

4-8-14

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 2-24, 20 16

Douglas Bye, 1559 Crestview Dr, Vermillion SD 57069

RECEIVED OF _____

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

Fee for Application for Permit No. <u>8204-3</u> to Appropriate Water, to construct and to put water to beneficial use	7500	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	750.00

No. **07766**

By Jeannie Goodman
Chief Engineer

(KS)



**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. 8204-3, 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. 8204-3, Douglas Bye, 1559 Crestview Drive, Vermillion SD 57069.

The Chief Engineer is recommending APPROVAL of Application No. 8204-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under Water Permit Nos. 7933-3 and 8204-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
April 20, 2016

Report of the Chief Engineer
Water Permit 8204-3
Douglas Bye
April 5, 2016

Water Permit Application No. 8204-3 proposes to appropriate water at a maximum diversion rate of 0.89 cubic feet per second (cfs) from one existing well completed into the Elk Point management unit of the Missouri aquifer. The well is 100 feet deep located in the approximate center of the NW ¼ Section 18 in T92N-R52W in Clay County. The appropriation is to be used for the irrigation of 70 acres located in the N ½ NW ¼ Section 18 in T92N-R52W in Clay County. This will allow the pivot authorized by Water Permit No. 7933-3 to complete a full rotation. When this permit, if approved, is used in conjunction with Water Permit No. 7933-3 a maximum diversion rate of 1.78 cfs for the irrigation of 160 acres will be authorized.

Aquifer: Elk Point Management unit of the Missouri aquifer

Aquifer Characteristics and Hydrogeology

The Elk Point management unit of the Missouri aquifer underlies portions of Clay, Union, and Yankton counties (Hedges et al., 1982 and 1985). It is comprised primarily of glacial outwash consisting of fine sand to coarse gravel underlying alluvium on the floodplain of the Missouri River. Much of the floodplain alluvium is permeable and forms a single aquifer where the outwash underlies the floodplain (Stephens, 1967). Elsewhere the management unit underlies glacial till (Niehus, 1994; Bugliosi, 1986; and Stephens, 1967). The management unit can be found under both water table and artesian conditions (Stephens, 1967). The management unit has an area of about 219,100 acres and contains an estimated 3,287,100 acre-feet of recoverable water (Hedges, 1982). The Elk Point management unit of the Missouri aquifer is hydraulically connected to the Missouri River along its southern boundary, the Lower-Vermillion-Missouri aquifer, the Big Sioux River, the Vermillion River, and the Lower James-Missouri aquifer (Niehus, 1994; Bugliosi, 1986; and Stephens, 1967). Groundwater movement in the management unit is generally southeast toward the Missouri River (Stephens, 1967).

The well completion report for the well that this application proposes to utilize reported a static water level of 18 feet below grade (02/18/2014). The completion report notes "brown clay" from 1 to 19 feet below grade, and from 19 to 50 feet below grade the completion report notes "fine sand with clay". Therefore, this well can be considered to be under confined conditions. In reviewing other area lithologic information, this well site is likely in an area where the management unit transitions from unconfined conditions (located closer to the Missouri River) to confined conditions (Geological Survey Program, 2015 and Water Rights Program, 2016). The well site for this application is located about 1.4 miles from the Missouri River.

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

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

Water Availability

Water Permit Application No. 8204-3 proposes to appropriate water from the Elk Point management unit of the Missouri aquifer for irrigation use. The probability of unappropriated water being available from an aquifer can be evaluated by considering SDCL 46-6-3.1 which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source." If the source of the water is older or lower than the Greenhorn Formation and the application is for a water distribution system defined pursuant to SDCL 46-1-6 (17), the Board need not consider the recharge/withdrawal issue. Here, a water distribution system is not involved and the Elk Point management unit of the Missouri aquifer is not older or lower than the Greenhorn Formation, therefore the withdrawal/recharge issue must be considered.

Hydraulic Budget*Recharge*

Recharge to the Missouri: Elk Point occurs by infiltration of precipitation, seepage from rivers/streams, and leakage from other aquifers (Bugliosi, 1986). Hedges et al. (1985) estimated that recharge to the aquifer was approximately 3.8 inches per year, based on observation well data. Utilizing this information and the area of the aquifer, average annual natural recharge can be estimated at 69,382 acre-feet. Stonesifer (2013) estimated induced recharge to the aquifer from the Missouri River due to the operation of the Lewis and Clark Water Treatment System to be 22,582 acre-feet per year. This results in an estimated average annual recharge of 91,964 acre-feet per year. Additionally, Stonesifer (2013) notes the further potential for induced recharge to the management unit from the Missouri, Vermillion, James, and Big Sioux Rivers.

Withdrawals

Withdrawals from the Elk Point management unit of the Missouri aquifer includes well withdrawals, outflow to the Missouri and Big Sioux Rivers, and evapotranspiration in locations where the aquifer is near the land's surface (Niehus, 1994; Bugliosi, 1986; and Stephens, 1967). Withdrawals from the Elk Point management unit of the Missouri aquifer as of June 10, 2013, were extensively examined in Stonesifer (2013), which estimated average annual withdrawals at

81,108 acre-feet per year. Therefore, Stonesifer (2013) estimated that average annual recharge exceeded average annual withdrawal by 10,856 acre-feet.

The water availability for this application can be evaluated considering the water permits issued since June 10, 2013, in conjunction with the water availability analysis of Stonesifer (2013). There have been 35 water permits issued, two reinstated permits (7074A-3 and 7009A-3) and one pending application in the management unit since Stonesifer (2013). There are also two deferred applications for the management unit. These water permits/rights/applications are summarized in Table 1, along with the amount of water appropriated for each permit in the case of irrigation permits and the annual volume for non-irrigation permits limited by an annual volume.

For new irrigation permits the average annual pumping can be estimated in a similar manner to Stonesifer (2013), where the average ratio of pumpage to appropriation from developed appropriations was applied to new appropriations, and developed appropriations were considered to be permits authorized prior to 2006. In Stonesifer (2013) this percentage was 13.7%. In updating the pumpage to appropriations ratio to reflect additional irrigation data collected since Stonesifer (2013), developed appropriations were considered to be those past their five year construction period in a similar manner to Mathiowetz (2014). With the inclusion of the irrigation data from 2014 the updated percentage of pumpage to appropriation for developed appropriations is 13.8%. By applying this percentage of pumpage to developed appropriation to the irrigation permits issued and pending applications since June 10, 2013, the average annual withdrawal from these appropriations can be estimated to be about 1,015 acre-feet.

Table 1: Water Rights/Permits Issued Since Stonesifer (2013) for the Elk Point Management Unit of the Missouri Aquifer (Water Rights, 2016a)

Irrigation						
Permit No.	Name	Status	Use	Rate (cfs)	Acres	Appropriation (ac-ft/yr)
7848-3	MISSOURI VALLEY FARMS INC	PE	IRR	3.04	213.0	426.0
7856-3	MIKE & STEVE ALLARD	PE	IRR	1.78	129.3	258.6
7895-3	TODD HANSON	PE	IRR	1.89	180.0	360.0
7898-3	JAMES ORR	PE	IRR	1.56	132.0	264.0
7899-3	JUSTIN ORR	PE	IRR	1.56	97.0	194.0
7904-3	CRAIG S MCINERNEY	PE	IRR	1.78	160.0	320.0
7933-3	DOUGLAS G BYE	PE	IRR	0.89	90.0	180.0
7936-3	DONALD JOHNSON	PE	IRR	1.39	83.0	166.0
7938-3	RUSSELL M HALL	PE	IRR	0	53.0	106.0
7941-3	JOSEPH F CHICOINE	PE	IRR	1	37.7	75.4
7074A-3	CALVIN HANSON	PE	IRR	1.78	162.0	324.0
7951-3	ALLEN PACE	PE	IRR	1.78	150.0	300.0
7955-3	KARL M SCHENK	PE	IRR	1.78	140.0	280.0
7971-3	BARRY VAN OSDEL	PE	IRR	1.11	68.0	136.0
7980-3	FRANCIS HEINE	PE	IRR	0	5.0	10.0
7987-3	FRANCIS M ARMSTRONG LIVING TRUST	PE	IRR	1.78	102.0	204.0
8010-3	RYAN RUSHER	PE	IRR	0.1	2.5	5.0
8016-3	AMELIA BERTRAND TRUST	PE	IRR	1.67	66.0	132.0
8022-3	REDWOOD SOUTH DAKOTA HOLDINGS LLP	PE	IRR	1.91	134.0	268.0
8023-3	REDWOOD SOUTH DAKOTA HOLDINGS LLP	PE	IRR	4.14	290.0	580.0
8024-3	REDWOOD SOUTH DAKOTA HOLDINGS LLP	PE	IRR	3.36	235.2	470.4
8025-3	REDWOOD SOUTH DAKOTA HOLDINGS LLP	PE	IRR	3.82	267.2	534.4
8029-3	DAKOTA DUNES COMM IMPROVEMENT DISTRICT	PE	IRR	0.78	17.8	35.6
7009A-3	ROGER D HANSON	PE	IRR	1.78	120.0	240.0
8040-3	HEINE ELECTRIC & IRRIGATION INC	PE	IRR & COM	0.33	3.0	6.0
8079-3	MELVIN & LARRY DONNELLY	PE	IRR	1.78	160.0	320.0
8080-3	LARRY & MELVIN DONNELLY	PE	IRR	1.78	160.0	320.0
8175-3	GAYVILLE-VOLIN SCHOOL DISTRICT 63-1	PE	IRR	0.058	4.0	8.0
8176-3	CALVIN & MARY HANSON	LC	IRR	1.113	31.0	62.0
8177-3	D A OLSON & SONS	PE	IRR	1.23	62.0	124.0
8181-3	MARC T BERNARD	PE	IRR	0.89	40.0	80.0
8192-3	STOP DROP LOCK INC	PE	IRR	2.22	152.0	304.0
8202-3	GERALD BENJAMIN	PA	IRR	1.89	132.0	264.0
Total					3678.7	7357.4
Non-Irrigation						
Permit No.	Name	Status	Use	Rate (cfs)	Acres	Annual Volume (ac-ft)
5749-3	STOCKMENS LIVESTOCK	DF	COM	0.03		
5750-3	STOCKMENS LIVESTOCK	DF	COM	0.09		
8031-3	DAKOTA PROTEIN CONVERSION INC	PE	COM	0.22		
8069-3	CIMPLS LLC	PE	COM	0.44		452*
8147-3	DOUG LAFLEUR	PE	COM/LCO	1		160

LC=Water Rights, PE= Water Permit, PA=Pending Application DF=deferred application, COM=commercial, IRR= Irrigation, LCO=live stock confinement operation

*total when combined with Water Right No. 5616-3

Historically, water use by non-irrigation appropriations limited by instantaneous diversion rate has been less than 60% of full time pumping at the permitted authorize diversion rate. For water rights/permits limited to an annual volume, full use of that volume is assumed for estimation of average annual withdrawal. The water permit for Cimply's LLC limits the total annual volume of both Water Right No. 5616-3 and Water Permit No. 8069-3 to 452 acre-feet. The hydraulic budget for the Elk Point management unit of the Missouri aquifer prepared by Stonesifer (2013) considered the appropriation associated with Water Right No. 5616-3 to be 191 acre-feet per year. This would result in an additional appropriation from the aquifer of 261 acre-feet per year. Water Permit No. 8040-3 is for both irrigation and commercial use, the diversion

rate for this permit appears to be more reflective of the need (for commercial use) to fill their water trucks in a timely manner rather than actual water use (Water Rights, 2014). The 2015 Irrigation Questionnaire for Water Permit No. 8040-3 also reported their commercial use for March 2015 to October 2015 totaled about 0.5 acre-feet. To estimate the water use from the commercial portion of this permit the highest reported monthly water use was used to estimate an average annual water use for the commercial portion of this permit as 1.5 acre-feet per year (Water Rights, 2015-2016). Therefore the annual withdrawal for non-irrigation appropriations since Stonesifer (2013) and the two deferred permits can be estimated at 761 acre-feet.

Balance

In considering new appropriations since June 10, 2013, the two deferred applications, and the one pending application the average annual withdrawal associated with them is estimated to be 1,776 acre-feet. When examining this estimated average annual withdrawal in conjunction with the hydraulic budget analysis in Stonesifer (2013) average annual withdrawals are estimated to be about 82,884 acre-feet. When compared with recharge, estimated average annual recharge to the aquifer exceeds this by 9,080 acre-feet. Therefore there is a reasonable probability that water is available to meet the needs of this application. Furthermore, as Stonesifer (2013) noted there is potential for induced recharge to the management unit from the Missouri River.

Observation Wells

In determining the availability of unappropriated water for a permit application Administrative Rule 74:02:05:07 requires the Water Management Board to rely on the record of observation well measurements, in addition to other data, to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated annual recharge. When considered together observation wells can offer insight into the overall hydraulic conditions in an aquifer, and when considered singularly or in spatial groups, can offer insights into localized hydraulic conditions.

The Water Rights Program monitors 37 observation wells in the Elk Point management unit of the Missouri aquifer. The nearest observation well to the well that this application proposes to utilize is observation well CL-80B located approximately 3.3 miles to the west (hydrograph shown in Figure 1). Observation well CL-80C is located approximately 6.3 miles to the southeast (hydrograph shown in Figure 2).

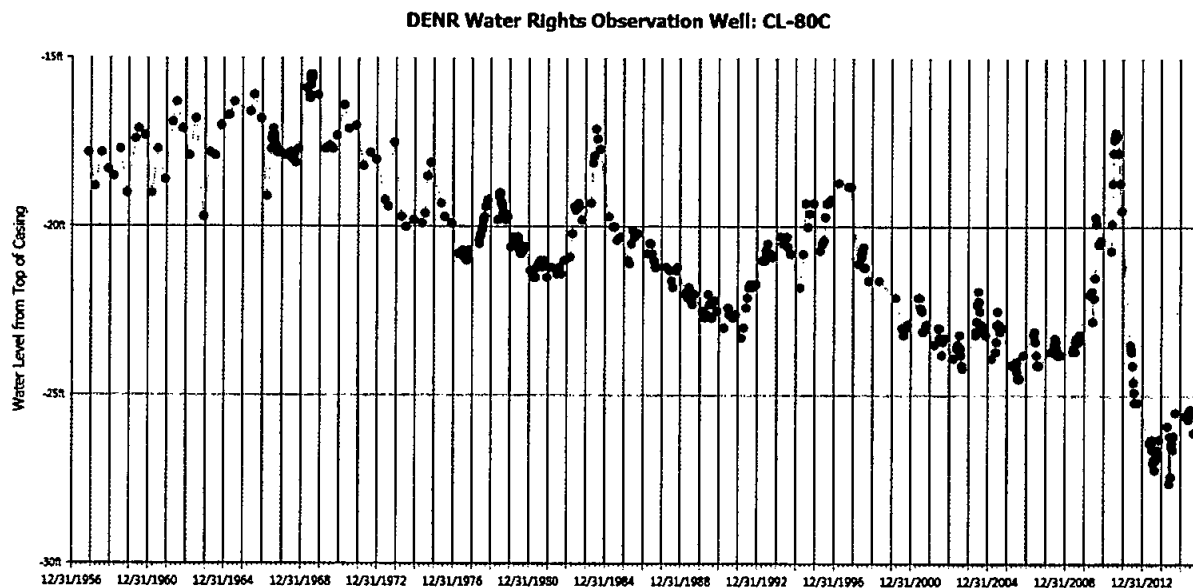


Figure 1: Hydrography of Observation Well CL-80C (Water Rights, 2016b)

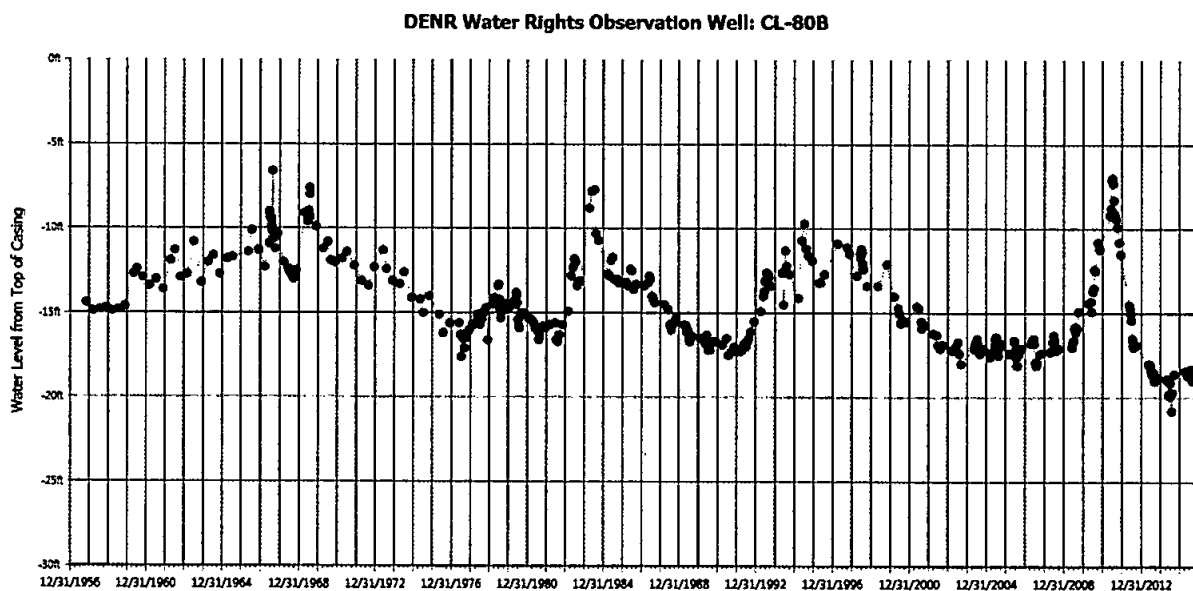


Figure 2: Hydrography of Observation Well CL-80B (Water Rights, 2016b)

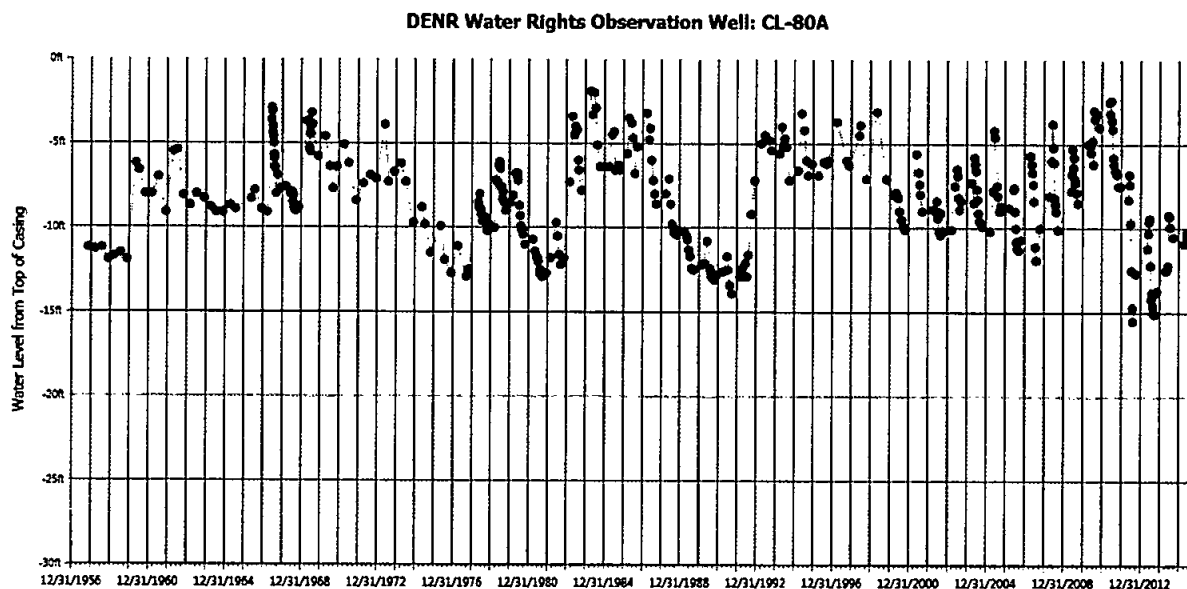


Figure 3: Hydrography of Observation Well CL-80A (Water Rights, 2016b)

The observation well hydrographs show cyclic periods based on the effect of climatic conditions on the management unit. Increases in water levels occur during wetter periods (when recharge exceeds discharge), and decreases in water levels occur during drier periods (when discharge exceeds withdrawals). Additionally, Stephens (1967) notes the close relation of the water table under the floodplain to Missouri River water levels and the lowering of the water table in response to the closure of Gavins Point Dam. Furthermore, Iles (1979) notes that the ongoing entrenchment of the Missouri River below the Gavins Point Dam is also tied to lowering water table levels in the aquifer, and this has been linked by Goodman (2007) to the declining water levels in observation wells in this aquifer near the Missouri River. The hydrograph for the Missouri River at the USGS gaging station near Yankton, SD, is shown in Figure 4. By examining Figure 4, the relationship between trends in the Missouri River water levels and trends in the water levels in the observation wells can be observed. Additionally, the effect of the entrenchment of the Missouri River on water levels within the aquifer can be observed in these hydrographs. Furthermore, the impact of the Missouri River on water levels within the management unit can also be noted in Figure 4 by the correspondence of increases in water levels in the management unit with water levels increases in the Missouri River (most notably during the summer 2011 flood event). At the current level of development the temporal effects of pumping are masked by the strong hydraulic connection between the management unit and the Missouri River and the impacts of climatic conditions on the aquifer. This shows that the management unit is dominated by natural conditions, and water is available for capture. Therefore, there is a reasonable probability that there is water available to support this application.

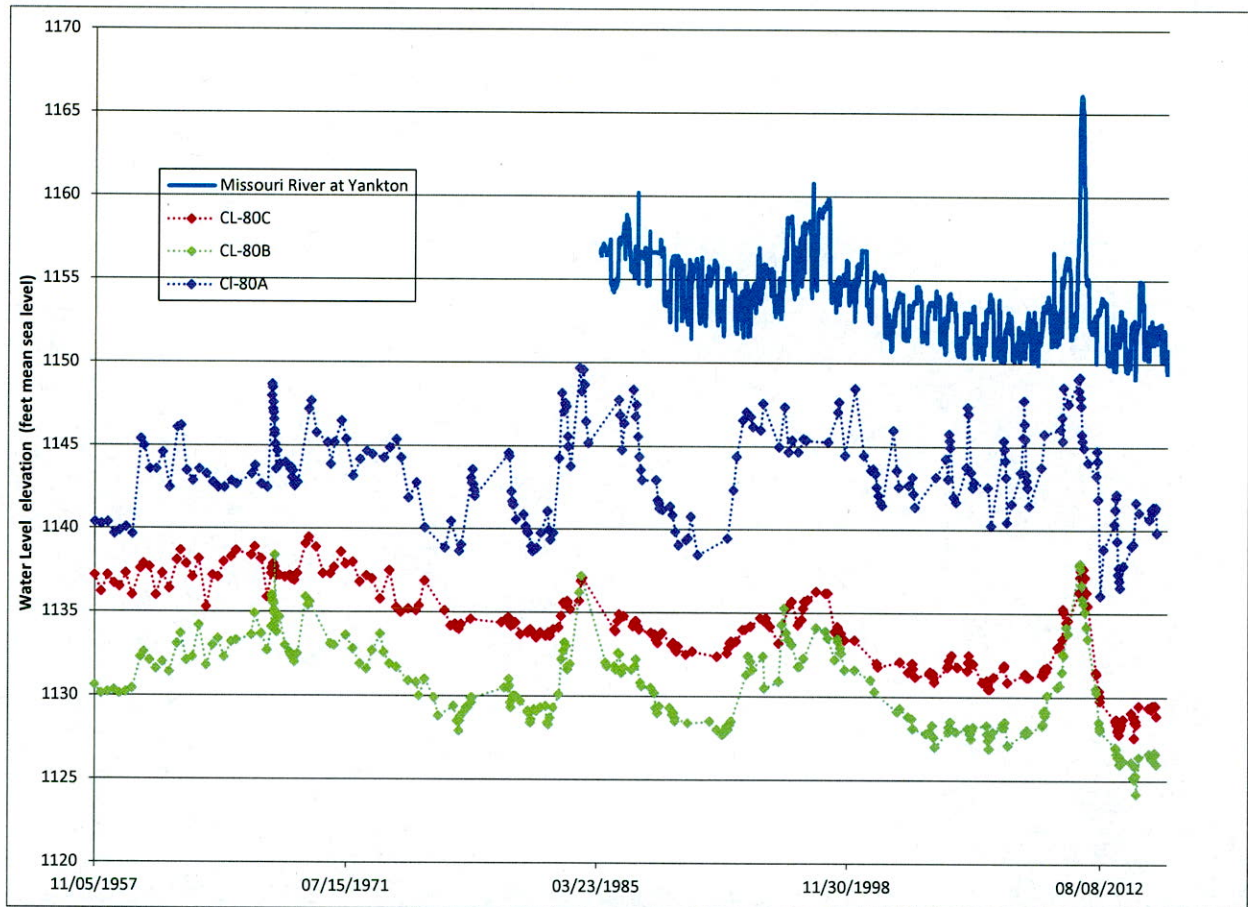


Figure 4: Trends in observation well water levels in relation to the Missouri River gaging station near Yankton, SD (USGS, 2016 and Water Rights, 2016b)

Existing Users

The diversion points for water rights/permits in the vicinity of the well site for this application are shown in Figure 5. The nearest water right/permit diversion point to the well location for this application is Water Right No. 7553-3 for irrigation located approximately 0.7 miles to the northeast of the well location for this application. The well that this application proposes to use is located about one mile from the western border of a Lewis and Clark RWS future use area.

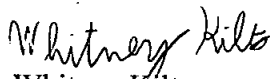
There are several domestic wells on file with the SDDENR-Water Rights Program within two miles of the well location for this application, most of which are likely completed into this management unit. The Water Rights Program Observation Wells CL-80C, CL-80B, and CL-80A are all within a mile of at least one or more high capacity irrigation wells completed into the management unit. The hydrographs for these wells show very little if any impact from the pumping of these wells, and instead show a correlation between the Missouri River and water levels in the management unit. Therefore, the appropriation requested by this application is not expected to adversely impact existing water rights/permits with adequate wells or nearby adequate domestic wells.

The Water Management Board has promulgated rules that allow water to be placed to maximum beneficial use without the necessity of maintaining artesian head pressure for domestic use. The board has defined an adversely impacted domestic well as “a well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient

water for the well owner's needs." In the case of Water Permit Application No. 2313-2 for the Coca-Cola Bottling Company of the Black Hills the Water Management Board adopted findings that noted that if the increased costs or decreased production as a result of the impacts of legitimate users on artesian head pressure could be considered an adverse impact it would conflict with SDCL 46-1-4 (Water Rights, 1995). SDCL 46-1-4 requires the water resources of the state be put to beneficial use to the maximum extent of which they are capable (Water Rights, 1995).

Conclusions

1. Permit Application No. 8204-3 proposes to appropriate water at a maximum diversion rate of 0.89 cfs from one existing well completed into the Elk point management unit of the Missouri aquifer located in the approximate center of the NW $\frac{1}{4}$ Section 18 in T92N-R52W for the irrigation of 70 acres located in the N $\frac{1}{2}$ NW $\frac{1}{4}$ Section 18 in T92N-R52W.
2. When this permit, if approved, is used in conjunction with Water Permit No. 7933-3 a maximum diversion rate of 1.78 cfs for the irrigation of 160 acres will be authorized.
3. There is a reasonable probability that there is unappropriated water available to meet the requested appropriation of this application.
4. There is a reasonable probability that the appropriation and the diversion point this application proposes to use will not adversely impact existing water rights/permits with adequate wells.


Whitney Kilts

SDDENR-Water Rights Program

Approved by



Ken Buhler

SDDENR-Water Rights Program

References

- Bugliosi, E. F. 1986. Water Resources of Yankton County, South Dakota. USGS Water-Resources Investigations Report 84-4241. USGS. Huron, SD.
- 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, SD.
- 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.
- Hedges, L.S., Allen, J. and Holly, D.E. 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota, and Iowa. Task 7: Ground-Water Recharge. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Iles, D. L. 1979. Ground-water Study for Southern Union County. Open File Report UR-28. SDGS. Vermillion, SD.
- Mathiowetz, A. 2014. Report to the Chief Engineer on Water Permit Application No. 8040-3: Heine Electric & Irrigation Inc. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Niehus, C. A. 1994. Water Resources of Lincoln and Union Counties, South Dakota. USGS Water Resources Investigations Report 93-4195. USGS. Rapid City, SD.
- Geological Survey Program. 2015. *Lithologic logs database*: South Dakota Department of Environment and Natural Resources. <http://cf.sddenr.net/lithdb/>. Retrieved April 2016.
- Stephens, J. C. 1967. Geology and Water Resources of Clay County, South Dakota. Part II Water Resources. SDGS. Vermillion, SD.
- Stonesifer, J. R. 2013. Water Availability of the Missouri: Elk Point Aquifer. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- USGS. 2016. National Water Information System: Web Interface. USGS 06467500 Missouri River at Yankton, SD. Retrieved Apr 2016.
http://waterdata.usgs.gov/sd/nwis/uv/?site_no=06467500&PARAMeter_cd=00065,00060,00010.
- Water Rights. 1980-2015. "1979-2014 Irrigation Summaries by Aquifer": SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 1995. Water Rights File No. 2313-2 Coca-Cola Bottling Company of the Black Hills. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2014. Water Permit File No. 8040-3. Heine Electric & Irrigation Inc. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2015-2016. 2015 Irrigation Questionnaires. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.

Water Rights. 2016a. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2016b. Water Rights Program Observation Well Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights Program. 2016. Well Completion Reports Database South Dakota Department of Environment and Natural Resources.

<http://arcgis.sd.gov/server/denr/wellLogs/default.aspx>. Retrieved April 2016.

AFFIDAVIT OF PUBLICATION

PLAIN TALK

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WATER RIGHTS
PROGRAM

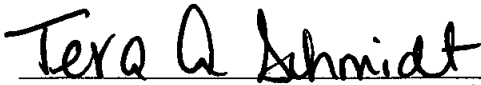
DOUGLAS BYE
1559 CRESTVIEW DR
VERMILLION SD 57069

STATE OF SOUTH DAKOTA
COUNTY OF CLAY

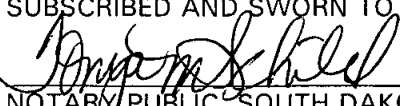
TERA SCHMIDT, BEING FIRST DULY SWORN ON OATH DEPOSES
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MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
PLAIN TALK, A LEGAL WEEKLY NEWSPAPER PUBLISHED AND CIRCULATED
IN THE CITY OF VERMILLION, SAID COUNTY AND STATE, AND ONE OF
THE OFFICIAL NEWSPAPERS OF THE SAID COUNTY OF FACTS STATED IN
THIS AFFIDAVIT; THAT THE ANNEXED
NOTICE OF APPLICATION NO
8204-3 APPROPRIATE WATER
TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 29th DAY OF April, 2016
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$27.03 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: 04/29/2016

FILED ON: 04/29/2016



SUBSCRIBED AND SWORN TO BEFORE ME THIS 29th DAY OF April, 2016


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

Ad text : NOTICE OF APPLICATION

NO. 8204-3

to Appropriate Water

Notice is given that Douglas Bye, 1559 Crestview Dr. Vermillion SD 57069 has filed an application for a water permit to appropriate 0.89 cubic feet of water per second (cfs) from one existing well completed into the Missouri:Elk Point Aquifer (100 feet deep) located in the approximate center of the NW 1/4 Section 18 for irrigation of 70 acres located in the N 1/2 NW 1/4 Section 18; all in T92N-R52W. This will allow the pivot authorized by Water Permit No. 7933-3 to make a complete rotation. This application, if approved and Water Permit No. 7933-3 will authorize a total diversion rate of 1.78 cfs to irrigate 160 acres.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8204-3 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 May 9, 2016.

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.

Steven M. Pirner, Secretary, Department of Environment and Natural Resources.
Published once at the total approximate cost of \$27.03.
Publish: April 29, 2016.

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

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MAY - 2 2016

WATER RIGHTS
PROGRAM

DOUGLAS BYE
1559 CRESTVIEW DR
VERMILLION SD 57069

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

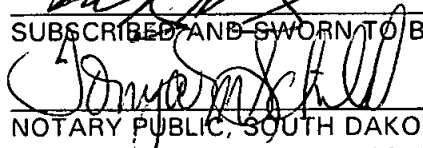
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HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 04/29/2016

FILED ON: 04/29/2016


SUBSCRIBED AND SWORN TO BEFORE ME THIS 29th DAY OF April, 2016


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

NOTICE OF APPLICATION NO. 8204-3 to Appropriate Water

Notice is given that Douglas Bye, 1559 Crestview Dr. Vermillion SD 57069 has filed an application for a water permit to appropriate 0.89 cubic feet of water per second (cfs) from one existing well completed into the Missouri:Elk Point Aquifer (100 feet deep) located in the approximate center of the NW 1/4 Section 18 for irrigation of 70 acres located in the N 1/2 NW 1/4 Section 18; all in T92N-R52W. This will allow the pivot authorized by Water Permit No. 7933-3 to make a complete rotation. This application, if approved and Water Permit No. 7933-3 will authorize a total diversion rate of 1.78 cfs to irrigate 160 acres.

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Steven M. Pirner, Secretary, Department of Environment and Natural Resources.
Published once at the total approximate cost of \$.27.31.

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, April 21, 2016 8:20 AM
To: classifieds@plaintalk.net
Subject: 8204-3, Douglas Bye
Attachments: 8204-3publicnov2015.short1.docx; FORM8.FRM.doc

Attached is a notice to be published on April 29, 2016.

Douglas Bye, 1558 Crestview, Vermillion SD 57069 (605 624-2580) 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.

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

Karen Schlaak

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

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, April 21, 2016 8:21 AM
To: 'Tera Schmidt'
Subject: 8204-3, Douglas Bye
Attachments: 8204-3publicnov2015.short1.docx; FORM8.FRM.doc

Attached is a notice to be published on April 29, 2016.

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

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

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

April 20, 2016

Douglas Bye
1559 Crestview Dr
Vermillion SD 57069

Dear Mr. Bye:

Water Permit Application No. 8204-3 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,

A handwritten signature in black ink that reads "Eric Gronlund".

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

NOTICE OF APPLICATION NO. 8204-3 to Appropriate Water

Notice is given that Douglas Bye, 1559 Crestview Dr. Vermillion SD 57069 has filed an application for a water permit to appropriate 0.89 cubic feet of water per second (cfs) from one existing well completed into the Missouri:Elk Point Aquifer (100 feet deep) located in the approximate center of the NW 1/4 Section 18 for irrigation of 70 acres located in the N 1/2 NW 1/4 Section 18; all in T92N-R52W. This will allow the pivot authorized by Water Permit No. 7933-3 to make a complete rotation. This application, if approved and Water Permit No. 7933-3 will authorize a total diversion rate of 1.78 cfs to irrigate 160 acres.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8204-3 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 May 9, 2016.

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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.

Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of _____.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

MAY 12 2016

Douglas Bye
1559 Crestview
Vermillion SD 57069

Dear Mr. Bye:

Enclosed is Water Permit No. 8204-3 authorizing construction of the 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

8204-3
RECEIVED

JUN 16 2016

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 6/14/2016TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

FROM:

Brook Byer
(name)
31472 458th Ave.
(address)
Vermilion SD 57069 1-605-670-9132
(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.

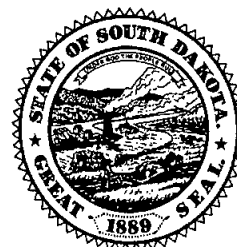
Water Permit No. 8204-3 states that the water use system is to be constructed by
2021 (date), and water is to be put to beneficial use by May 9 (date).

The water use system was completed on May 11 2016 (date)

Applying the water to beneficial use was completed on May 19 2016 (date)

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

Brook Byer
(signature)





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

June 16, 2016

8204-3

Brook Bye
31472 458th Ave
Vermillion SD 57069

RE: Water Permit No. 8204-3 – Douglas Bye

Dear Mr. Bye:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you submitted to let us know the irrigation system authorized under No. 8204-3 has been completed.

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 the project and the staff inspection has no bearing on the 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

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7933-3 & 8204-3

I have this day, October 3, 2016, made a thorough examination of the water use system constructed by Douglas Bye, 1559 Crestview Dr, Vermillion SD 57069 of Permit No. 7933-3 & 8204-3, bearing the priority of December 12, 2013 authorizing the diversion of 0.89 cu. ft. per second of the waters of Missouri:Elk Point Aquifer for irrigation purposes, of 90 acres for Permit No. 7933-3, and bearing the priority of February 24, 2016 authorizing the diversion of 0.89 cu. ft. per second from the existing well for irrigation of 70 new acres for Permit No. 8204-3, all in Clay County. Both permits will authorize a total diversion rate of 1.78 cfs to irrigate 160 acres.

Inspection contact & relationship to permit holder, if applicable: **Brook Bye-son, Douglas Bye-permit holder**

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Hammond-Wetmore Drilling, LLC
- 2) No. of Wells 1
- 3) Depth(s) 100 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 16 inches
- 2) Length 60 feet
- 3) Type PVC

Screen:

- 1) Type PVC Manufactured
- 2) Length 40 feet
- 3) Static water level 18 feet

Pump:

- 1) Make Grundfos Submersible
- 2) Model 625S300-2aa
- 3) Capacity 700 GPM

Motor:

- 1) Make Grundfos
- 2) Model No. Submersible
- 3) Horsepower rating 30 hp

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

- 1) Type **PVC** 2) Size **8** inches 3) Length **60** feet

Comments: See map for approximate location.

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Valley
- 2) Overall length 1296 feet
- 3) Number of towers 7
- 4) End gun Yes
- 5) Capacity 700 GPM

Comments: Water Permit 7933-3 appropriated 0.89 cfs or 400 gpm, and Water Permit 8204-3 appropriated 0.89 cfs or 400 gpm however only 1.56 cfs or 700 gpm was developed.

Chemigation Equipment:

- 1) Does chemigate **No**

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Yes, Water Permit 7933-3 began irrigating in 2014, and Water Permit 8204-3 began irrigating in 2016.

List any extended period of nonuse: **None**

- 3) Exceptions to compliance are: **None**

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: East 1330', South 1200' from NW Corner of Sec 18-T92N-R52W; Lat 42.79025/Long -97.03728; N ½ NW ¼ Sec 18-T92N-R52W.
2. The works are capable of diverting and conveying to the place of use 1.56 cfs or 700 gpm of water which is to be used for irrigation for Water Permit 7933-3 and Water Permit 8204-3 combined.
 - Water has been put to beneficial use to the maximum extent as follows:

All land is located in Sec 18-T92N-R52W.

<u>Water Permit 7933-3/74 ac</u>	
<u>NW ¼ NW ¼ - 5 ac</u>	<u>NE ¼ NW ¼ - 5 ac</u>
<u>SW ¼ NW ¼ - 32 ac</u>	<u>SE ¼ NW ¼ - 32 ac</u>

Report of Examination of Works
Permit No. 7933-3 & 8204-3

Water Permit No. 8204-3/59 ac
NW ¼ NW ¼ - 29 ac

NE ¼ NW ¼ - 30 ac

comprising a total of 133 acres of land and the license should be issued for 1.56 cfs or 700 gpm for Water Permit 7933-3 and Water Permit 8204-3 combined.

3. All structures, wells and lands on map Yes

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

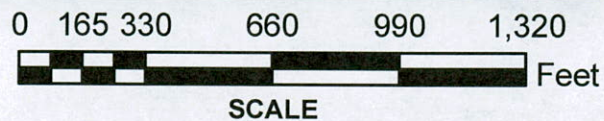
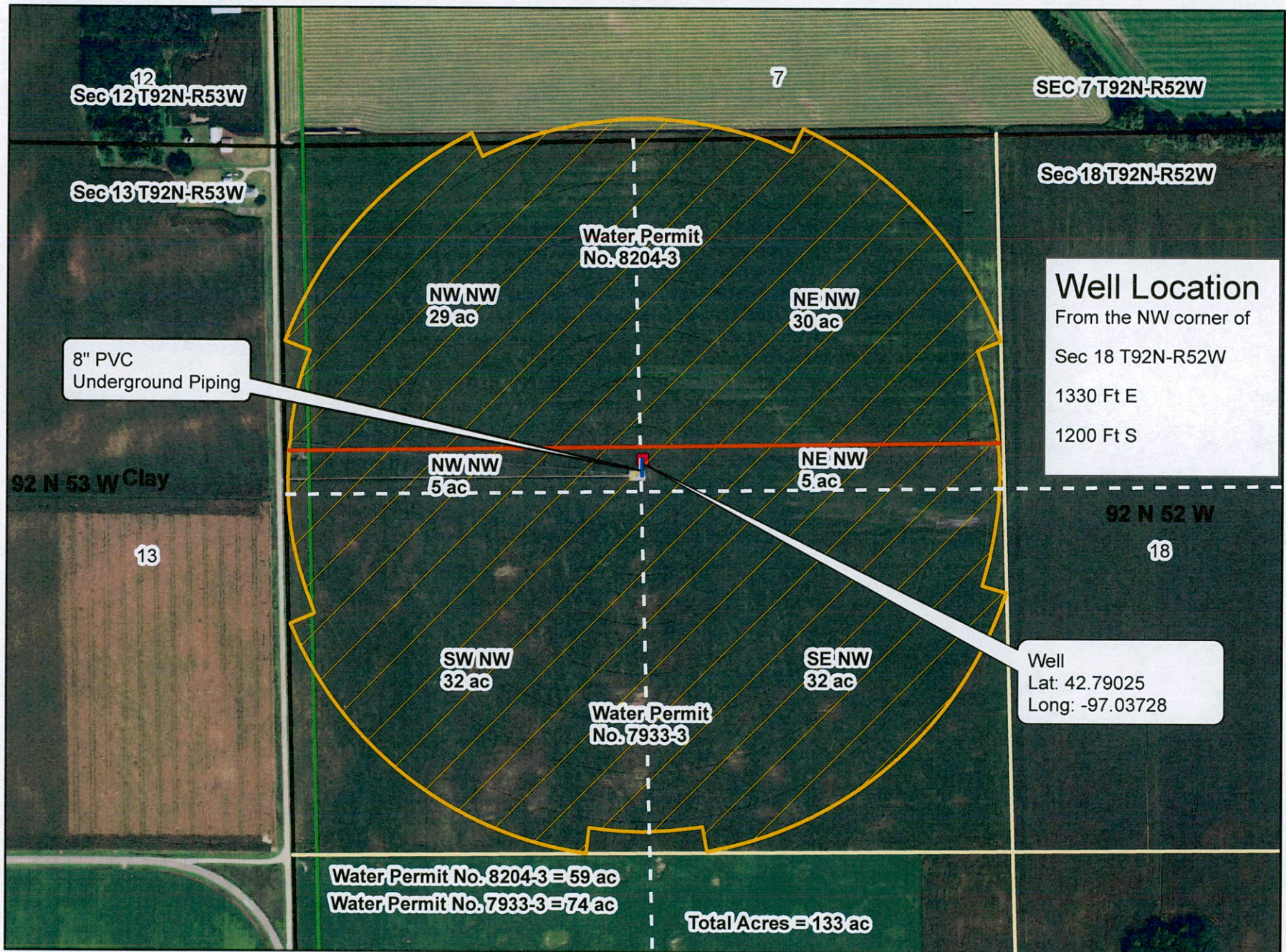
Permit holder recently purchased the North 70 acres of the NW ¼ Section 18-T92N-R52W and was issued Water Permit 8204-3 that will allow the pivot authorized by Water Permit 7933-3 to make a complete rotation. The final inspection, report and license for Water Permit 7933-3 had yet to be completed prior to issuance of Water Permit 8204-3.

Harold Holoch

Harold Holoch, PE
Staff Engineer
DENR, Water Rights Program

Date report completed: October 30, 2017

7933-3 & 8204-3



Harold Holoch
Harold Holoch, PE
Water Rights Inspector
January 5, 2017

8204-3



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.

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8204-3

(1) Douglas Bye, 1559 Crestview Dr., Vermillion SD 57069 made Application No. 8204-3, February 24, 2016 for a water permit to divert 0.89 cubic feet of water per second from ground water, one existing well (Missouri Elk Point Aquifer), Clay County, South Dakota for irrigation purposes. Permit No. 8204-3, with a priority date of February 24, 2016 was approved May 9, 2016 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before May 9, 2021 and for the application to beneficial use of said water on or before May 9, 2025.

The Permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" on June 14, 2016. The "*Notice*" stated the water use system was completed on May 11, 2016 and the water placed to beneficial use on May 19, 2016.

Water Permit No. 7933-3, with a priority date of December 12, 2013, authorized diversion of 0.89 cfs from one well to irrigate 90 acres within the NW ¼ Section 18, T92N, R52W. Water Permit No. 8204-3 was obtained to add acreage and diversion authority to Water Permit No. 7933-3, utilizing the existing well. The addition of the acreage allowed the existing pivot to make a full rotation.

The applicable portions of Water Permit No. 7933-3 are incorporated into Water License No. 8204-3.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 1.56 cubic feet of water per second for beneficial use. The location of the diversion point is 1,330'E and 1,200'S of the NW corner of Section 18, T92N, R52W (N ½ NW ¼) Latitude 42.79025, Longitude -97.03728

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

Section 18, T92N, R52W	NW ¼ NW ¼	34 acres	December 12, 2013 priority (5 acres)* February 24, 2016 priority (29 acres)*
	NE ¼ NW ¼	35 acres	December 12, 2013 priority (5 acres) February 24, 2016 priority (30 acres)
	SW ¼ NW ¼	32 acres	December 12, 2013 priority
	SE ¼ NW ¼	32 acres	December 12, 2013 priority
	Total	133 acres	

* *December 12, 2013 priority date was established under Water Permit No. 7933-3 (for 74 acres)*

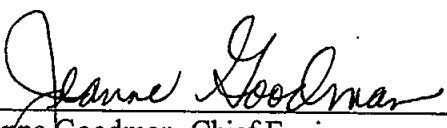
* *February 24, 2016 priority date was established under Water Permit No. 8204-3 (for 59 acres)*

(4) Pursuant to South Dakota Water Law 46-5-30.1 Douglas Bye, 1559 Crestview Dr., Vermillion SD 57069 the holder and/or owner of Incorporated Water Right No. 8204-3 is issued a license to appropriate water, the right to use 1.56 cubic feet of water per second from ground water, one well (Missouri Elk Point Aquifer) with priority dates of December 12, 2013 (0.89 cfs) and February 24, 2016 (0.67 cfs) from the location specified in (2) of this license for irrigation purposes.

continued

This license is subject to South Dakota Water Law, any limitations or conditions listed in Incorporated Water Right No. 8204-3 and subject to the following qualifications:

- The well approved under Permit Nos. 7933-3 and 8204-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- ***(Taken from No. 7933-3)*** 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 the Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28. ***The well was drilled in February, 2014 by Hammond Wetmore Drilling LLC. A copy of the well log is on file with the Water Rights Program.***
- This Permit is approved subject to the irrigation water use questionnaire being submitted each year.



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

NOV 13 2017

date





8204-3

**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

October 28, 2022

7454-3
7475-3
8204-3

Brook Bye
31472 458th Ave
Vermillion SD 57069-6613

Dear Mr. Bye:

Thank you for taking the time to visit with me about Water Right Nos. 7454-3, 7475-3 & 8204-3 listed under Douglas Bye.

Enclosed are partially completed "Notice of Transfer of Ownership" forms for use in filing ownership changes. Please review and complete as needed. Upon completion, please sign and return the forms to our office with a required filing fee of \$50 each (total of \$150). The check or money order for the fee can be made payable to the Water Rights Program.

I have also included the 2022 irrigation questionnaires and copies of the water rights themselves. Keep in mind the questionnaires are due back by December 5th. If you have any questions, please let me know.

Sincerely,

Genny McMath
Water Rights Program
605 773-3352
Genny.mcmath@state.sd.us

enclosures

8204-3

RECEIPT**WATER RIGHTS PROGRAM**

South Dakota Department of Agriculture and Natural Resources

Date December 5, 2022RECEIVED OF Bye Family Rvoc. Trust 31472 458th Ave., Vermillion SD 57069

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 <u>8204-3</u>	<u>\$50.00</u>
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	<u>\$50.00</u>

By *Eric Gronlund*
Chief Engineer
vm

PAID

DEC 5 2022

Ck# 1052

Rec't# _____

NOTICE OF TRANSFER OF OWNERSHIP

RECEIVED

DEC 5 2022

Dept. of Agriculture
& Natural Resources

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

RECEIVED

DEC 05 2022

OFFICE OF
WATER

No. 8204-3

Date: 12/2/2022

I/We request that Water Right No. 8204-3

formerly owned by: Douglas Bye

be transferred to: (name & address)

Brook Bye 31472
458th Ave. Vermillion SD 57069
Telephone No. 605-670-9132

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

133 acres – NW ¼ Section 18, T92N, R52W

I/We understand that the validity of Water Right No. 8204-3 has not been determined by this transfer action. If I/We have any questions on validity, I/We understand that only the Water Management Board has the authority to determine if a water permit/right is valid (see note).

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

A fee of Fifty Dollars (\$50.00) is required to cover the filing fees as required under SDCL 46-2-13. This form must be signed by the new owner.

I/We Brook Bye, the new owner, certify that the above information is true and correct.

Brook Bye
(Signed by new owner)

NOTE: Water permits may be cancelled for nonconstruction after the five year construction period has expired. Once a water permit is developed 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.



8204-3

**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

December 19, 2022

7454-3
7475-3
8204-3

Brook Bye
31472 458th Ave
Vermillion SD 57069

Dear Mr. Bye:

Thank you for following up on the ownership changes for Water Right Nos. 7454-3, 7475-3 and 8204-3.

The ownership changes have been completed. The above listed water rights formerly held by Douglas Bye are now listed in your name.

Enclosed for your records are receipts for the filing fees you paid. If I can answer any questions, please let me know.

Sincerely,

Genny McMath
Water Rights Program
605 773-3352
Genny.mcmath@state.sd.us

enclosures