WATER PERMIT NO. 7778-3

Name of Applicant: **Roger Boldenow**

Address: **47758 323rd St, Elk Point SD 57025** Phone: **605 670-1084**

Amount of Water Claimed: **1.78 cfs** Total Acres: **126**

Source of Water Supply: **groundwater (one well)**

Water to be used for: **irrigation** County: **Union**

Type of Waste Disposal System:

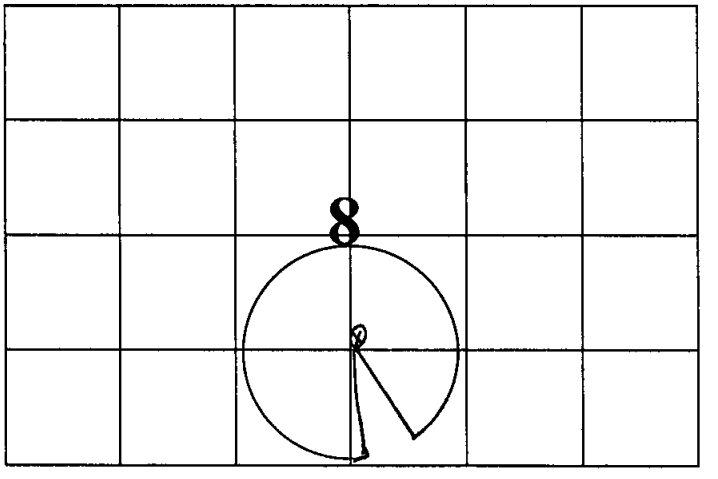
Location: **1 northwest of Elk Point**

PRIORITY Date Received: **3-4-13** Application/License Fee: **$ 1050**

Corrected Application Received: Period of Annual Use: **May 1 – September 30**

Remarks:

Diversion Point: **NW 1/4 SE 1/4 Section 8-T91N-R49W**



Land to be Irrigated: **W 1/2 SE 1/4, E 1/2 SW 1/4 Sec 8-T91N-R49W**

Depth of Well: **120 feet deep**

Well Driller: **Dakota Drilling**

Remarks:

Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **3-5-13** By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

SD EForm - 0499LD V4

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. 7778-3 (office use only) Hydrologic Unit 10170203 Basin Sioux River 605-356-2632 Newspaper Leader-Courier Box 310 Elk Point 57025 605-665-7811 Press & Dakotan 319 Walnut Yankton 57078

RECEIVED
MAR - 4 2013
WATER RIGHTS PROGRAM

Application For Permit To Appropriate Water For Irrigation

Type of Application: [X] **New** [ ] **Vested Right** (Use predates Mar 2, 1955) [ ] **Amendment/Correction to Permit No.** _____

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

1. Name to Appear on Irrigation Permit Roger Boldenow

(check one) [X] Owner [ ] Tenant/lessee [ ] Owner's Legal Agent _____ (name and complete address if different than above name)

Mailing Address 47758 323rd St. (Address) Elk Point (City) SD (State) 57025 (Zip Code)

Home Phone [redacted] Cell 605-670-1084 Email _____

2. Amount of water claimed 1.78 *CFS or 800 **GPM ***AF Total Acreage 126 (a)
(*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

4. Location of point of diversion 1 well SW corner of NWSE 8-91-49
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
County UNION

5. County or counties where water will be used UNION

6. Annual period during which water is to be used May 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
W1/2 SE; E1/2 SW 8-91-49	126(a)	NE SW	33
		SE SW	33
1050		NW SE	33
		SW SE	27

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

attached

I, Roger Boldenow, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

2012-09

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

SOUTH DAKOTA
WATER PERMIT NO. 7778-3

Date of first receipt of application March 4, 2013.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7778-3 to Roger Boldenow, 47758 323rd St, Elk Point SD 57025 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. 7778-3 appropriates 1.78 cubic feet of water per second (cfs) from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the NW 1/4 SE 1/4 Section 8 for irrigation of 126 acres located in the W 1/2 SE 1/4 and the E 1/2 SW 1/4 Section 8; all in T91N-R49W.

2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: May 1 – September 30.

3. The date from which applicant may claim right is March 4, 2013.

4. The date of approval of Permit No. 7778-3 is May 20, 2013.

5. One-fifth of the construction is to be completed on or before November 20, 2015.

6. All construction is to be completed on or before May 20, 2018.

7. Water is to be put to beneficial use on or before May 20, 2022.

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. 7778-3 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

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

JUN 21 2013
date

Form 2A
(Complete applicable portions only)

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 ___ Have test holes been drilled ☐ Yes ☐ No Drilled by Dakota Drilling will provide information
(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 120' Depth to Top of Water Bearing Material _____ Depth to Water from Surface _____

d) Distance to nearest existing domestic well:

On applicant's property 1000' feet On property owned by others _____

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) N/A

b) System Capacity (gallons) N/A Year Constructed _____

c) Connected to the City of N/A Sanitary System

3. Dugout Information

a) Surface Dimensions N/A Depth _____

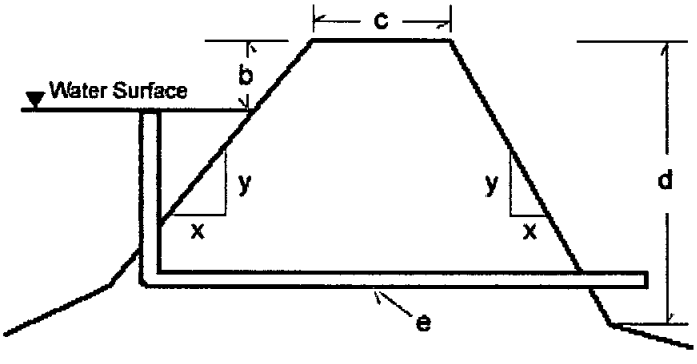
b) Depth to water (ground surface to water level) _____

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:

N/A



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)

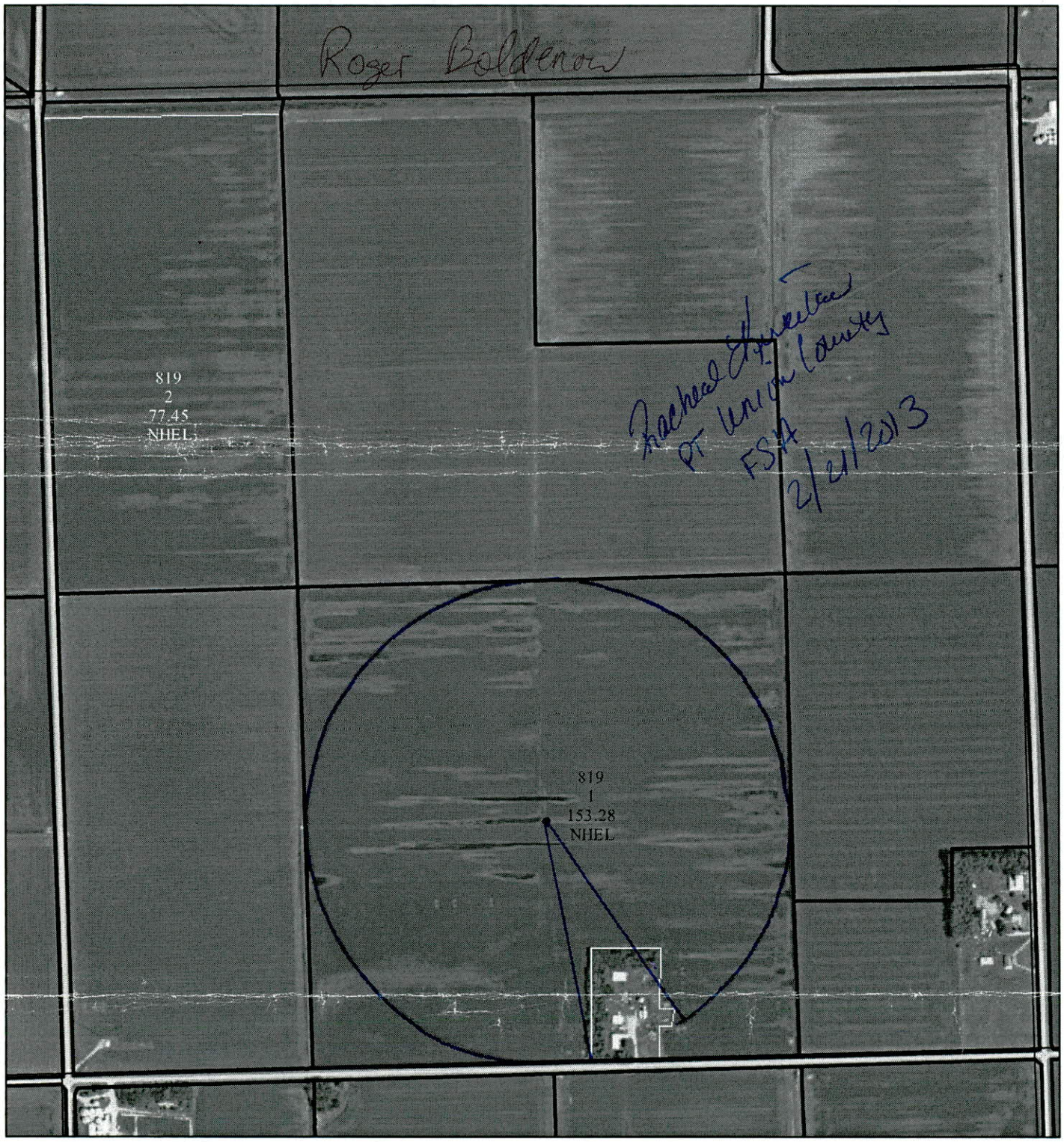
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



USDA United States Department of Agriculture
Farm Service Agency

April 30, 2012

PLSS: 8_91N_49W
Farm: 5939

Union County

1:8,804

N

RECEIVED
MAR - 4 2013
WATER RIGHTS PROGRAM

Wetland Determination Identifiers
- Restricted Use
- Limited Restrictions
- Exempt from Conservation Compliance Provisions

Common Land Units

Non Cropland

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

2010 Ortho-Photography - Not to Scale

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 3/5, 20 13

RECEIVED OF Roger Boldenow 47758 323rd St Elk Point SD 57025

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

Fee for Application for Permit No. 7778-3 to Appropriate Water, to construct and to put water to beneficial use	850	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. 7778-3	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	1050	00

No. 06210

By [signature]
Chief Engineer

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT APPLICATION NO. 7778-3, Roger Boldenow

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. 7778-3, Roger Boldenow, 47758 323rd Street, Elk Point SD 57025.

The Chief Engineer is recommending APPROVAL of Application No. 7778-3 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. 7778-3 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.

Jeanne Goodman

Jeanne Goodman, Chief Engineer
May 3, 2013

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NOS. 7778-3, 7779-3, AND 7780-3
ROGER BOLDENOW
MARCH 28, 2013

Water Permit Application No. 7778-3 proposes to appropriate water at a maximum diversion rate of 1.78 cubic feet of water per second (cfs) from one well to be completed into the Missouri: Elk Point aquifer located in the NW ¼ SE ¼ of Section 8 for irrigation of 126 acres located in the W ½ SE ¼ and E ½ SW ¼ of Section 8; all in T91W-R49W, Union County. The well is expected to be 120 feet deep.

Water Permit Application No. 7779-3 proposes to appropriate water at a maximum diversion rate of 1.33 cfs from one well to be completed into the Missouri: Elk Point aquifer located in the SW ¼ NW ¼ of Section 8 for irrigation of 66 acres located in the W ½ NW ¼ of Section 8; all in T91W-R49W, Union County. The well is expected to be 78 feet deep. The applicant is requesting a diversion rate greater than the statutory limit.

Water Permit Application No. 7780-3 proposes to appropriate water at a maximum diversion rate of 1.78 cfs from one well to be completed into the Missouri: Elk Point aquifer located in the SW ¼ NE ¼ of Section 17 for irrigation of 132 acres located in the E ½ NW ¼ and W ½ NE ¼ of Section 17; all in T91W-R49W, Union County. The well is expected to be 115 feet deep.

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

GEOLOGY AND AQUIFER CHARACTERISTICS:
Bugliosi (1986) refers to the Elk Point management unit of the Missouri aquifer as the southern portion of the Lower James-Missouri aquifer. For water management purposes, the Water Management Board and the SD DENR-Water Rights Program refer to this aquifer as the Missouri: Elk Point. The aquifer is a surficial aquifer composed of unconsolidated glacial outwash material ranging from fine sand to coarse gravel (Niehus, 1994). The aquifer generally lies below the flood plains of the Missouri River (Bugliosi, 1986) and the Big Sioux River in the southern part of Union County (Niehus, 1994). Bugliosi (1986) reported that the aquifer directly overlies and is hydraulically connected to the Dakota aquifer and is hydraulically connected at its northern boundary to the Lower James-Missouri and the Lower Vermillion-Missouri aquifers as well as the Missouri and Vermillion Rivers. Niehus (1994) found the aquifer is also hydraulically connected to the Big Sioux aquifer in the northeast.

The Elk Point management unit of the Missouri aquifer encompasses approximately 234,700 acres of Clay, Union, and Yankton Counties, as determined by Hedges and others (1982), and Niehus (1994). The aquifer contains an estimated 3,287,100 acre-feet of recoverable water, of which an estimated 1,494,600 acre-feet of recoverable water is in storage in Union County (Hedges and others, 1982). Bugliosi (1986) found the aquifer can be up to 150 feet thick while Niehus (1994) identified the average thickness of the aquifer in Union County at 84 feet. The transmissivity of the aquifer ranges from 20,700 to 24,700 square feet per day (ft^2/d) (Bugliosi, 1986). The specific capacity of wells completed into the aquifer ranges from approximately 124

to 173 gallons per minute per foot ((gal/min)/ft) (Bugliosi, 1986). The aquifer is generally under unconfined (water-table) conditions and is under water-table conditions in the area of this application.

SDCL 46-2A-9

In accordance with SDCL 46-2A-9, a permit may be issued to appropriate water only if there is reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest. This report will review the availability of unappropriated water and existing rights within the Missouri: Elk Point aquifer.

WATER AVAILABILITY:

These applications propose to appropriate water from the Missouri: Elk Point aquifer. If this application is approved, it is likely that the actual water use will be less than 648 ac-ft/yr. The probability of unappropriated water available from the aquifer can be evaluated using SDCL 46-6-3.1 which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source."

Recharge versus Discharge:

Recharge:

Recharge to the Missouri: Elk Point aquifer occurs through seepage from streams and by infiltration of precipitation (Niehus, 1994). Recharge is also provided to the aquifer from the Big Sioux, Lower Vermillion-Missouri, and Dakota aquifers as well as during times of high flow, from the Big Sioux and Missouri Rivers. The average annual recharge rate to the Missouri: Elk Point aquifer is estimated to be 3.8 in/yr based on observation well analysis (Hedges and others, 1985). Given the area of the management unit in Clay, Union, and Yankton Counties of 234,700 acres, average annual recharge to the aquifer is estimated to be 74,322 acre-feet per year (ac-ft/yr). Recharge in Union County alone is estimated to be 36,480 ac-ft/yr.

Discharge:

Discharge from the Missouri: Elk Point aquifer is by evapotranspiration, discharge to the Big Sioux and Missouri Rivers during low flow, to the underlying Dakota aquifer, and withdrawal from wells (Niehus, 1994). There are a number of completion reports on file with the SD DENR-Water Rights Program for domestic use wells completed into the Missouri: Elk Point aquifer (Water Rights, 2013b), and as of March 26, 2013, there are 543 water rights/permits appropriating water from the Missouri: Elk Point aquifer of which 307 are in Union County alone (Water Rights, 2013c). In addition, there are five future use permits in Clay County reserving water from the aquifer. The distribution of these appropriations for the entire aquifer and their types are shown in Table 1.

Water Rights/Permits	Number
Commercial	7
Domestic	2
Fish and Wildlife Propogation	4
Industrial	5
Irrigation	505
Municipal	10
Recreational	1
Rural Water System	2
Suburban Housing Development	2
Future Use Permits	**Number**
Lewis and Clark Rural Water System	4
City of Vermillion	1

Table 1. Water Rights from the entire Missouri: Elk Point aquifer (Water Rights, 2013c).

The amount of water that can be expected to be withdrawn through water rights/permits authorizing water use for non-irrigation purposes at the current appropriation level can be estimated by assuming:

1. Water rights/permits limited by an annual volume will pump the entire volume appropriated.
2. Water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time.
3. Future use permits can be fully developed.

The expected water use for non-irrigation purposes, including that reserved for future use, from the Missouri: Elk Point aquifer is less than 61,300 ac-ft/yr based on current water appropriations. Union County accounts for less than 5,700 ac-ft/yr of this based on current water appropriations.

The annual reported water use from the Missouri: Elk Point aquifer for irrigation purposes is displayed in Table 2. The average pumpage reported over the 1979 to 2011 period of record in Union County is 10,778 acre-feet per year.

YEAR	NO. OF PERMITS	APPROPRIATION (AC-FT/YR)	PUMPAGE REPORTED (AC-FT/YR)
1979	259	122,980.0	9,859.0
1980	262	124,404.9	14,586.0
1981	297	134,477.6	13,096.0
1982	269	122,297.8	18,822.4
1983	273	121,483.1	10,834.0
1984	281	126,221.6	9,194.3
1985	282	124,546.7	13,718.5
1986	286	125,320.7	6,252.1
1987	281	123,601.7	13,163.7
1988	282	123,601.5	28,184.6
1989	292	126,354.7	25,651.9
1990	297	127,965.7	19,425.0
1991	300	126,471.7	18,798.6
1992	295	125,256.7	1,882.0
1993	298	125,576.3	1,475.2
1994	295	122,975.1	10,221.4
1995	292	121,644.3	18,320.2
1996	296	124,606.2	9,412.8
1997	305	126,518.2	17,182.0
1998	313	127,862.6	11,127.2
1999	308	125,225.6	14,748.0
2000	309	124,852.2	26,640.1
2001	313	125,537.4	19,071.9
2002	315	125,555.8	23,547.2
2003	314	125,379.8	26,734.7
2004	322	126,955.8	23,862.3
2005	335	130,046.6	23,964.5
2006	353	136,491.6	27,974.5
2007	366	139,826.6	30,482.8
2008	396	151,130.4	16,261.9
2009	410	155,245.4	6,121.0
2010	419	155,905.4	2,723.9
2011	431	159,700.8	12,107.6
MIN	**259**	**121,483.1**	**1,475.2**
MAX	**431**	**159,700.8**	**30,482.8**
AVE	**313.5**	**129,879.4**	**15,922.6**

Table 2. Irrigation from the entire Missouri: Elk Point aquifer (Water Rights, 1980-2012).

There are also new permits and pending applications for water use from the Missouri: Elk Point aquifer that is expected to significantly increase the total volume of water appropriated for irrigation. Since January 1, 2012, 71 new permits have been issued authorizing the irrigation of 8954.4 acres. As of March 27, 2013, an additional 19 permit applications were pending for appropriation of water from the Missouri: Elk Point. The pending permits are shown in Table 3 and have a total diversion rate of 33.55 cfs and 2311.1 acres of coverage.

Permit No.	Diversion Rate (CFS)	Acres
6895A-3	1.56	135.5
7634-3	2.0	296
7635-3	2.0	320
7644-3	1.78	160
7659-3	2.0	37.25
7660-3	1.56	82
7661-3	2.22	24
7663-3	1.44	132
7669-3	1.33	70
7670-3	1.78	120
7671-3	1.55	92.25
7675-3	3.56	115
7676-3	2.0	157.1
7677-3	2.55	200
7684-3	1.78	160
7686-3	1	70
7687-3	1	70
7689-3	1	70
7703-3	1.44	N/A
TOTAL	**33.55**	**2311.1**

Table 3. List of pending permits and their appropriations from the Missouri: Elk Point aquifer (Water Rights, 2013c).

Lewis and Clark Rural Water System (LCRWS) currently reserves 13,000 acre feet per year for future use and has permits appropriating 32,165 acre feet per year (Water Rights, 2013b). This accounts for a significant portion of the annual water usage in Clay County and the aquifer as a whole, and most of the water from these wells will be induced from the Missouri River. That is, more recharge can be induced with more pumping, in particular from the Missouri River because it is hydraulically connected to the aquifer. Recognizing that LCRWS withdraws water from the Missouri: Elk Point aquifer that is induced from the Missouri River, and considering the remaining hydrologic budget, there is reasonable probability that unappropriated water is available for this application.

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 to the aquifer".

The SD DENR-Water Rights Program monitors 37 observation wells completed into the Missouri: Elk Point aquifer. There are three observation wells within about two miles of the well sites proposed by this application (Water Rights, 2013a). A hydrograph for each well is shown in Figures 1 through 3; Figure 4 indicates the location of the observation wells in relation to the proposed wells.

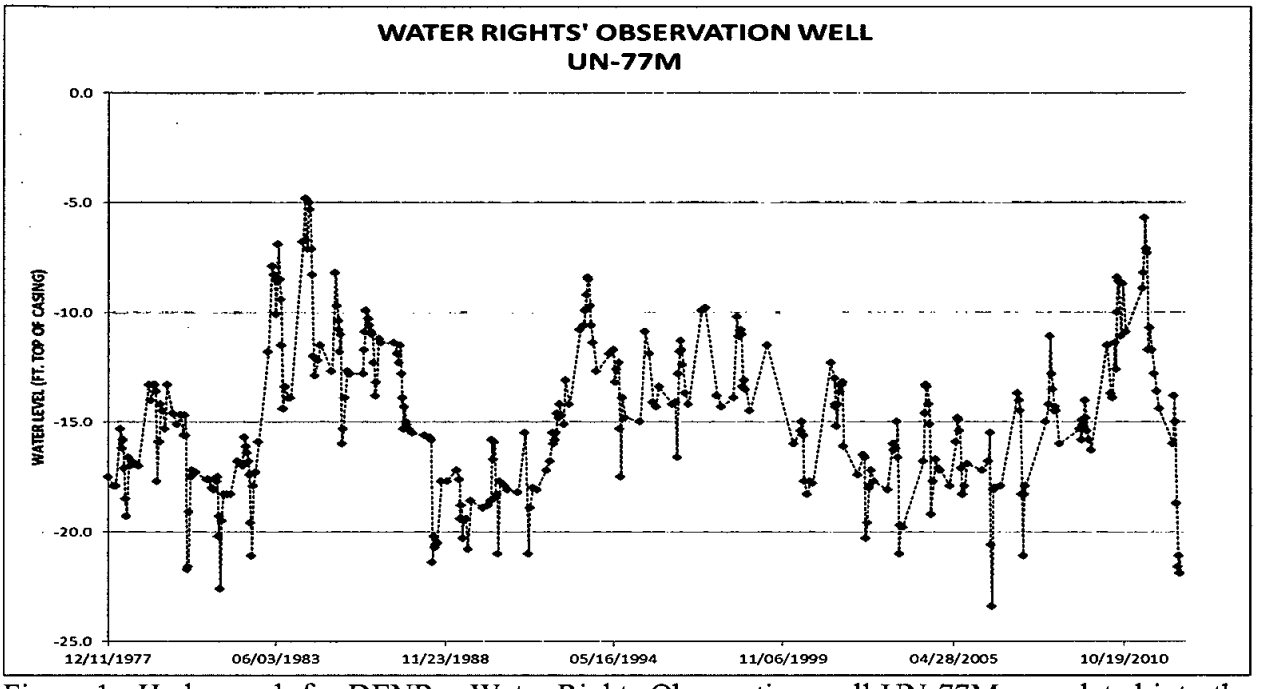


Figure 1. Hydrograph for DENR – Water Rights Observation well UN-77M completed into the Missouri: Elk Point aquifer approximately 0.8 miles south-southwest of the well site proposed by Water Permit Application 7780-3 (Water Rights, 2013a).

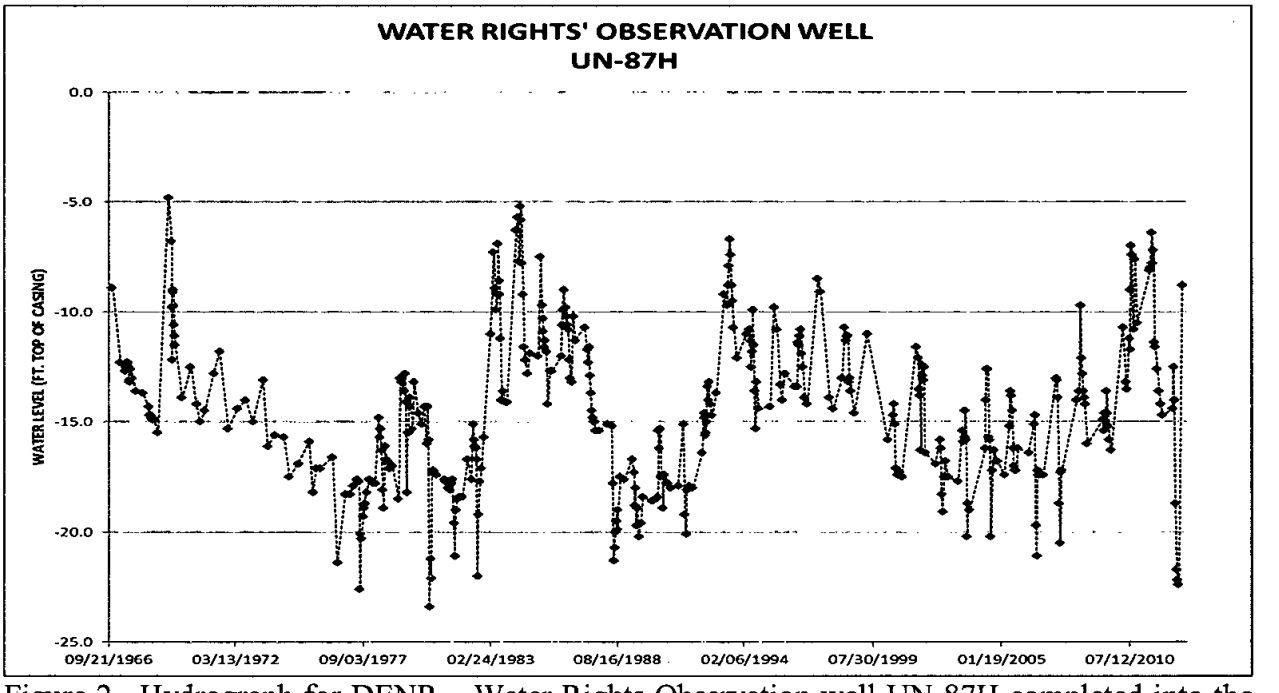


Figure 2. Hydrograph for DENR – Water Rights Observation well UN-87H completed into the Missouri: Elk Point aquifer approximately 0.3 miles north of the well site proposed by Water Permit Application 7779-3 (Water Rights, 2013a).

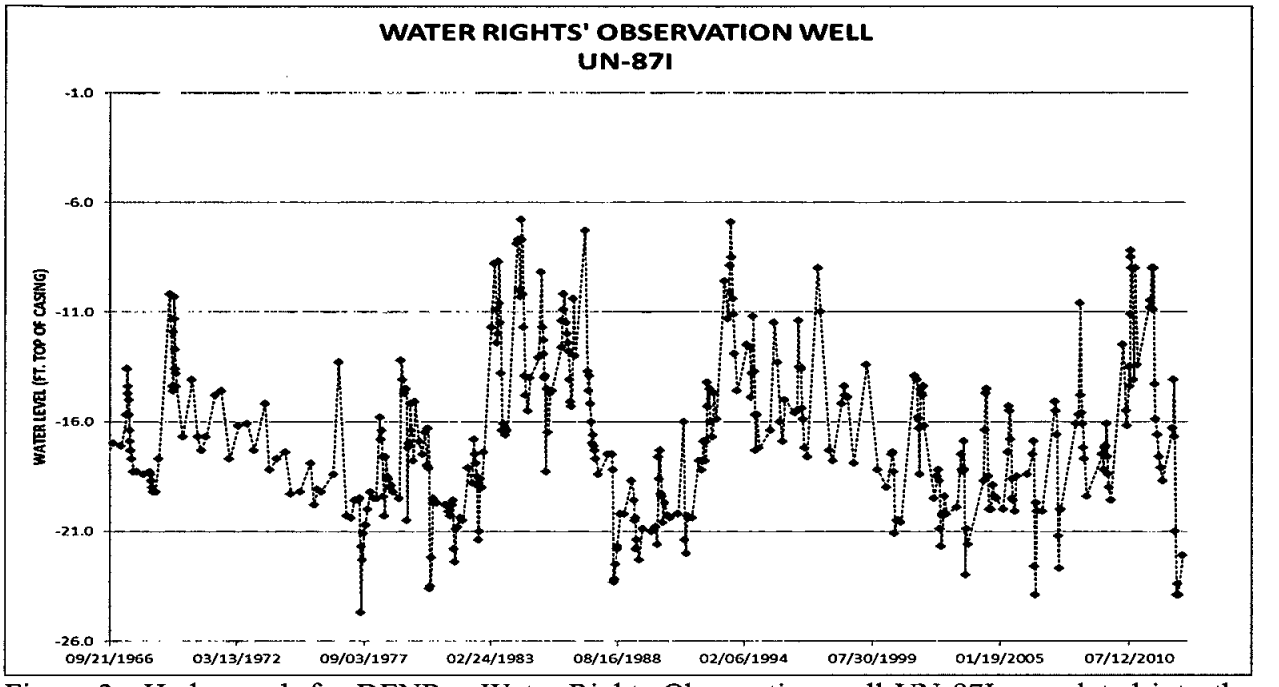


Figure 3. Hydrograph for DENR – Water Rights Observation well UN-87I completed into the Missouri: Elk Point aquifer approximately 0.9 miles northeast of the well site proposed by Water Permit Application 7778-3 (Water Rights, 2013a).

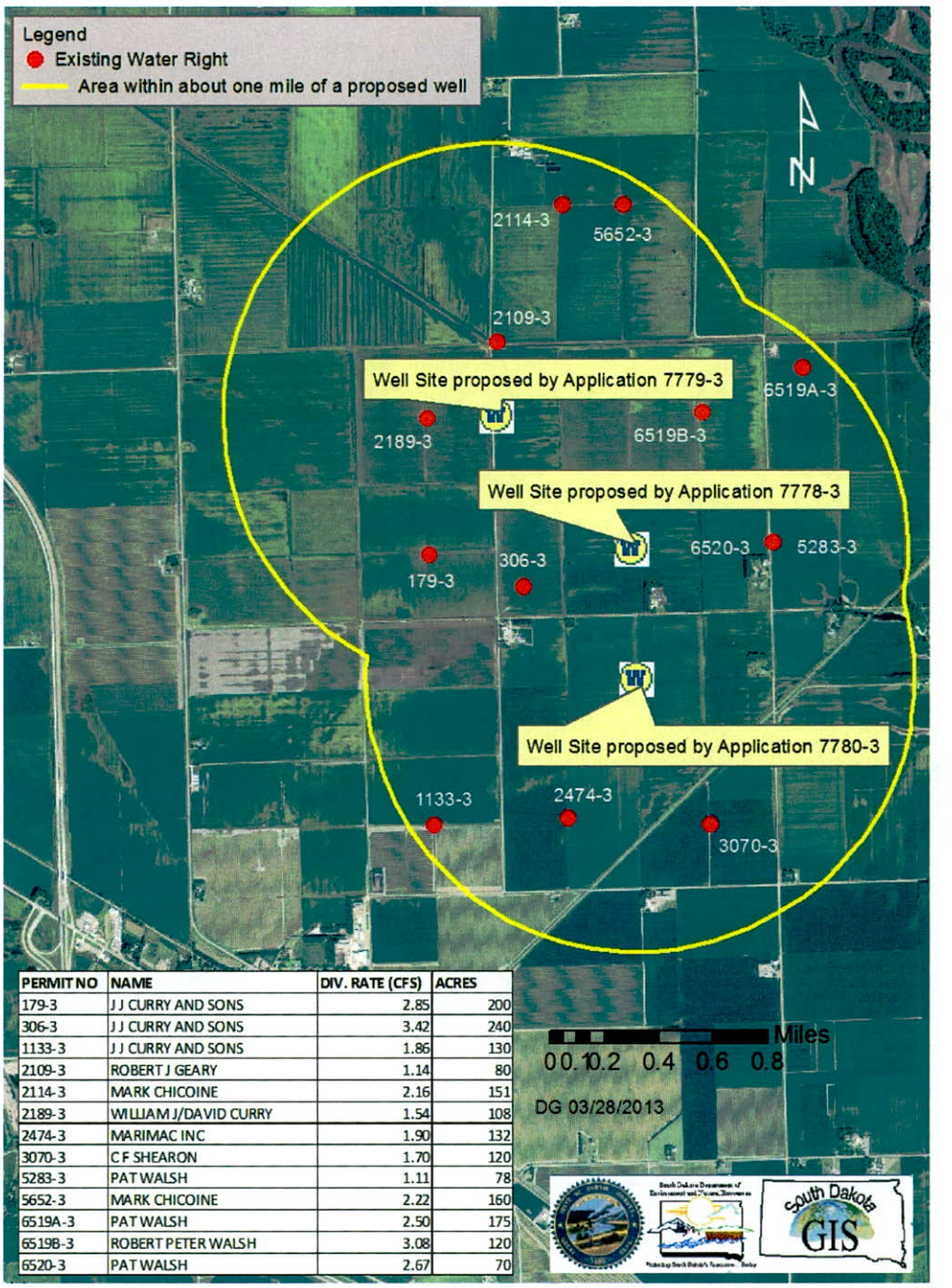
Figure 4. Location of Observation Wells UN-77M, UN-87H, and UN-87I; and proposed well sites (Water Rights, 2013a).

The observation well data shows the aquifer responds well to climatic conditions with rising water levels during wet years and gradually declining water levels during dry years. At the current level of development, climatic conditions mask the temporal effects of well withdrawals. The observation well data documents the hydraulic connection between the Missouri: Elk Point aquifer and the Missouri River (e.g. in particular, high groundwater levels associated with flooding in 2011).

Because of this obvious hydraulic connection between Missouri: Elk Point aquifer and the Missouri River and the availability of water in the Missouri River, there is a reasonable probability that additional recharge to the Missouri: Elk Point will be induced from the Missouri River with additional pumping. Therefore, there is reasonable probability that unappropriated water is available from the aquifer to support this appropriation.

EXISTING WATER RIGHTS:

The well sites proposed by these applications are located in the southeast portion of the Missouri: Elk Point aquifer. The aquifer lies between the Missouri and Big Sioux Rivers in this area and varies from five to nine miles wide; the proposed applications are approximately 3.7 to 4.3 miles northeast of the Missouri River and 1.2 to 1.6 miles west of the Big Sioux River. There are 12 water rights/permits within a one mile radius of the proposed well sites, these are shown on Figure 5. The locations of the water rights/permits were determined using the best data reasonably available.



PERMIT NO	NAME	DIV. RATE (CFS)	ACRES
179-3	J J CURRY AND SONS	2.85	200
306-3	J J CURRY AND SONS	3.42	240
1133-3	J J CURRY AND SONS	1.86	130
2109-3	ROBERT J GEARY	1.14	80
2114-3	MARK CHICOINE	2.16	151
2189-3	WILLIAM J/DAVID CURRY	1.54	108
2474-3	MARIMAC INC	1.90	132
3070-3	C F SHEARON	1.70	120
5283-3	PAT WALSH	1.11	78
5652-3	MARK CHICOINE	2.22	160
6519A-3	PAT WALSH	2.50	175
6519B-3	ROBERT PETER WALSH	3.08	120
6520-3	PAT WALSH	2.67	70

Figure 5. Water Rights / Permits within about one mile of the wells proposed by Water Permit No. 7778-3, 7779-3, and 7780-3 (Water Rights, 2013c).

Additional drawdown caused by the proposed well could be measurable in the wells shown on Figure 5. There are also domestic wells on file with the DENR – Water Rights Program that could have measureable drawdown as well; the closest well is less than 0.2 miles distant from the well site proposed by Water Permit application No. 7778-3 and is owned by the applicant. It is possible there are other nearby domestic wells that could have measureable drawdown as well. The precise drawdown cannot be quantified without aquifer testing. With that in mind, a standard permit qualification to most groundwater permits/rights states that:

"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 rights."

In reality, the assurance of reasonable domestic use provided by SDCL 46-6-6.1 and ARSD 74:02:04:20(7) generally ensures that interference will not be adverse to domestic well users and those with existing appropriative rights. Depending on the characteristics of the Missouri: Elk Point aquifer at the proposed well site, some existing well owners may need to lower their pumps to accommodate lower water levels. When considering SDCL 46-6-6.1 and ARSD 74:02:04:20(7) in combination with observation well measurements and the expected aquifer transmissivity, the proposed increase in diversion rate is not likely to lead to significant interference or adversely affect existing wells.

SDCL 46-5-6

Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of one cubic foot of water per second for every seventy acres, or "the equivalent thereof." The statute provides that the Water Management Board may allow a greater diversion if the method of irrigation so requires. The applicant has shown on the submitted application that this is a "windshield wiper" type system that may require a higher diversion rate to operate efficiently.

CONCLUSIONS:

1. Water Permit Application Nos. 7778-3, 7779-3, and 7780-3 propose to appropriate water from the Missouri: Elk Point aquifer at a maximum diversion rate of 1.78 cfs, 1.33 cfs, and 1.78 cfs respectively for irrigation of 324 acres. This results in a maximum combined diversion rate of 4.89 cfs.
2. The applicant is seeking a diversion rate that would be in excess of the statutory limit of 1.0 cfs per 70 acres for Water Permit Application No. 7779-3.
3. There is reasonable probability that unappropriated water is available from the Missouri: Elk Point aquifer to supply these proposed appropriations.
4. The Missouri: Elk Point is under unconfined (water-table) conditions in the proposed areas and drawdown is not expected to be significant very far from a production well.
5. There is a reasonable probability that the well proposed by this application will not adversely impact existing water rights or domestic users.

Dan Gerhardt
SD DENR-Water Rights Program

Approved by

Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

Bugliosi, E.F., 1986, Water Resources of Yankton County, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 84-4241. 41 p.

Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., Schoon, R.A., 1982, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185

Hedges, L.S., Allen, J., 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

Niehus, C.A., 1994, Water Resources of Lincoln and Union Counties, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 93-4195, 57p.

Water Rights, 1980-2012, "Irrigation Questionnaire Summaries by County", SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2013a, Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2013b, Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2013c, Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

AFFIDAVIT OF PUBLICATION

RECEIVED
MAY 13 2013
WATER RIGHTS PROGRAM

State of South Dakota)
:ss
County of Union)

Kelly Kruithoff,
an employee of the Leader-Courier, deposes and says that

The Leader-Courier

is a legal weekly newspaper of a general circulation, printed and published in Elk Point, County of Union, State of South Dakota, and has been such legal newspaper during the time hereinafter mentioned, and that affiant is and was during all the time hereinafter mentioned in charge of the advertising department thereof, and has personal knowledge of all the facts stated in this affidavit: and that the notice and advertisement headed:

Notice of Application

a printed copy of which is hereunto attached and made a part hereof, was printed and published in the said newspaper at least once in

each week for 1 successive weeks; that said newspaper at the time of the first publication of said notice hereinafter stated, had, and still has, a bona fide circulation of over two hundred paid copies weekly, and had been published in the said County of Union for more than one year immediately prior to the date of the said publication of said notice, and that said newspaper during said times, was, and is, printed in part in an office maintained at said city of Elk Point, the said place of publication; that the first publication of said notice in said newspaper was

on Thursday, the 9 day of May, 2013

and that the succeeding publications were

on Thursday, the _____ day of _____, _____

on Thursday, the _____ day of _____, _____

on Thursday, the _____ day of _____, _____

that the fees for the printing and publishing of said notice and advertisement in said newspaper as aforesaid were

$ 30.70, that the full amount of the fee charged insures to the benefit of the publisher of the said newspaper, that no agreement or 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 other person whomsoever.

Kelly Kruithoff

Subscribed and sworn to before me

this 9 day of May, 2013

My commission expires 6-21-17

SUSAN ODSON
NOTARY PUBLIC
SOUTH DAKOTA

Notary Public

NOTICE OF APPLICATION NOS. 7778-3, 7779-3 AND 7780-3 TO APPROPRIATE WATER

Notice is given that Roger Boldenow, 47758 323rd St., Elk Point SD 57025 has filed the following applications for a water permit.

Application No. 7778-3 proposes to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the NW 1/4 SE 1/4 Section 8 for irrigation of 126 acres located in the W 1/2 SE 1/4 and the E 1/2 SW 1/4 Section 8; all in T91N-R49W.

Application No. 7779-3 proposes to appropriate 1.33 cfs from one well to be completed into the Missouri:Elk Point Aquifer (78 feet deep) located in the SW 1/4 NW 1/4 Section 8 for irrigation of 66 acres located in the W 1/2 NW 1/4 Section 8; all in T91N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7780-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (115 feet deep) located in the SW 1/4 NE 1/4 Section 17 for irrigation of 132 acres located in the E 1/2 NW 1/4, W 1/2 NE 1/4 Section 17; all in T91N-R49W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 7778-3, 7779-3 and 7780-3 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 these applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. 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 20, 2013.

The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, 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 these applications.

Steven M. Pirner, Secretary
Department of Environment and Natural Resources.
Publish May 9, 2013
Published once at the total approximate cost of $30.70
19-6-102

RECEIVED

MAY 13 2013

WATER RIGHTS PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

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

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

KELLY HERTZ BEING FIRST DULY SWORN ON OATH DEPO
AND SAYS THAT HE IS THE **MANAGING EDITOR** OF, YAN
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
Notice of Application Nos. 7778-3, 7779-3 & 7780-3

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE NEWSPAPER ON THE **10th** DAY OF **May** 2013
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION OF SAID **NOTICE** TO WIT **$34.59** 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: **5/10/2013**

FILED ON: **5/10/2013**

SUBSCRIBED AND SWORN TO BEFORE ME THIS **10th** DAY OF **May** 2013

NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES **8/19/2015**

The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, 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 these applications. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

Published once at the total approximate cost of $34.59.

5+10

NOTICE OF APPLICATION
NOS. 7778-3, 7779-3 and 7780-3
to Appropriate Water

Notice is given that Roger Boldenow, 47758 323rd St., Elk Point SD 57025 has filed the following applications for a water permit.

Application No. 7778-3 proposes to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the NW 1/4 SE 1/4 Section 8 for irrigation of 126 acres located in the W 1/2 SE 1/4 and the E 1/2 SW 1/4 Section 8; all in T91N-R49W.

Application No. 7779-3 proposes to appropriate 1.33 cfs from one well to be completed into the Missouri:Elk Point Aquifer (78 feet deep) located in the SW 1/4 NW 1/4 Section 8 for irrigation of 66 acres located in the W 1/2 NW 1/4 Section 8; all in T91N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7780-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (115 feet deep) located in the SW 1/4 NE 1/4 Section 17 for irrigation of 132 acres located in the E 1/2 NW 1/4, W 1/2 NE 1/4 Section 17; all in T91N-R49W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 7778-3, 7779-3 and 7780-3 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 these applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. 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 20, 2013.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

May 3, 2013

Leader-Courier
PO Box 310
Elk Point SD 57025

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 7778-3, 7779-3 and 7780-3 to Appropriate Water. Please publish the notice once on May 10, 2013. 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 Roger Boldenow, 47758 323rd St, Elk Point SD 57025 (Ph # 605-670-1084).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

May 3, 2013

Press & Dakotan
319 Walnut
Yankton SD 57078

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 7778-3, 7779-3 and 7780-3 to Appropriate Water. Please publish the notice once on May 10, 2013. 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 Roger Boldenow, 47758 323rd St, Elk Point SD 57025 (Ph # 605-670-1084).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

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

May 3, 2013

Roger Boldenow
47758 323rd St
Elk Point SD 57025

Dear Mr. Boldenow:

Water Permit Application Nos. 7778-3, 7779-3 and 7780-3 for irrigation use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Leader-Courier printed at Elk Point SD (Ph # 605-356-2632) 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 recommendations of the Chief Engineer and reports on the applications 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(s) has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the applications.

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 applications.

Instruction to Newspaper - Publish the Notice on May 10, 2013. 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 NOS. 7778-3, 7779-3 and 7780-3 to Appropriate Water

Notice is given that Roger Boldenow, 47758 323rd St., Elk Point SD 57025 has filed the following applications for a water permit.

Application No. 7778-3 proposes to appropriate 1.78 cubic feet of water per second (cfs) from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the NW 1/4 SE 1/4 Section 8 for irrigation of 126 acres located in the W 1/2 SE 1/4 and the E 1/2 SW 1/4 Section 8; all in T91N-R49W.

Application No. 7779-3 proposes to appropriate 1.33 cfs from one well to be completed into the Missouri:Elk Point Aquifer (78 feet deep) located in the SW 1/4 NW 1/4 Section 8 for irrigation of 66 acres located in the W 1/2 NW 1/4 Section 8; all in T91N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7780-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (115 feet deep) located in the SW 1/4 NE 1/4 Section 17 for irrigation of 132 acres located in the E 1/2 NW 1/4, W 1/2 NE 1/4 Section 17; all in T91N-R49W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 7778-3, 7779-3 and 7780-3 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 these applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. 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 20, 2013.

The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, 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 these applications.
Steven M. Pirner, Secretary, Department of Environment and Natural Resources.
Published once at the total approximate cost of_____.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

JUN 2 1 2013

Roger Boldenow
47758 323rd St
Elk Point SD 57025

Dear Mr. Boldenow:

Enclosed are Water Permit Nos. 7778-3, 7779-3 and 7780-3 authorizing construction of your water diversion systems and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

Form 10's, *Notice of Completion of Works and Application of Water to Beneficial Use*, are enclosed. Please return the completed forms after you have finished the systems and have put the water to beneficial use. An investigation can then be scheduled so the water licenses 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

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

enclosures

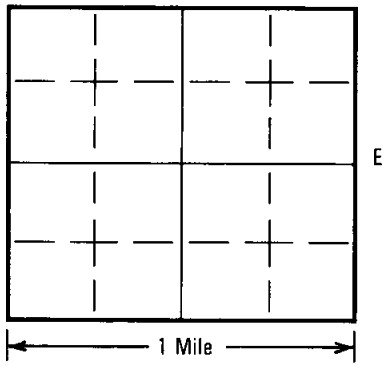
7778-3

SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location SE ¼ SW ¼ Sec 8 Twp 91 Rg 49
County Union
JS via phone w/ Roger B 3/24/14

Please mark well location with an "X"



Well Completion Date
JS via phone w/ Roger
August, 2013 3/24/14

Well Owner: Roger Bakkenow
Business Name:
Address: 47758 323rd St.
Elk point, SD 57025

WELL LOG:

FORMATION	DEPTH FROM	DEPTH TO
Top Soil	0	2
Dark Brown Clay	2	16
Gray Glacia Till	16	23
Shale	23	28
Blue Clay	28	36
pebbley Gravel	36	51
Small to Pebbley	51	57
pebbley Gravel	57	92

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

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

METHOD OF DRILLING: Mud Rotary

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

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
Sch40 LB/FT	14 IN	0 FT	92 FT	18 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite Chips	20	lb./gal	20 ft.	0 ft.
		lb./gal	ft.	ft.

Describe grouting procedure Bentonite Chips

SCREEN: ☒ Perforated pipe ☐ Manufactured
Diameter 14 IN Length 40 FEET
Material PVC
Slot Size 80 Set From 92 Feet to 52 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: _____
Laboratory sent to for water quality analysis ✓ NO, Why Not? Irr.

4-8-14

STATIC WATER LEVEL 23 Feet
If flowing: closed in pressure _____ PSI
GPM flow 800 through 6 inch pipe
Controlled by ☐ Valve ☐ Reducers ☐ Other _____
Reduced Flowrate _____ GPM
Can well be completely shut in? _____

WELL TEST DATA:
☒ Pumped ☐ Bailed ☐ Other
Describe: Pumped to Clear Sand Free Water.
Pumping Level Below Land Surface
33 ft. After 12 Hrs. pumped 800 GPM
_____ ft. After _____ Hrs. pumped _____ GPM
If pump installed, pump rate 800 GPM

REMARKS

RECEIVED
DEC 30 2013
WATER RIGHTS PROGRAM

This well was drilled under license # 586
And this report is true and accurate.
Drilling firm Siouxland Well Co Inc
Signature of License Representative:
Dennis Walsh

Signature of Well Owner or Equitable Property Holder:

Date: _____

7778-3

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

January 16, 2015

NOTICE

TO: ROGER BOLDENOW, 47758 323RD ST, ELK POINT, SD 57025

FROM: Ron Duvall, Natural Resources Engineer
for Garland Erbele, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2014 Irrigation Questionnaire(s)

Our records indicate your 2014 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 7778-3, 7779-3 & 7780-3. The request for the Questionnaire was dated October 17, 2014. The Water Management Board has directed that owners of water permits who have not submitted the 2014 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 7778-3, 7779-3 & 7780-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held at **10:00 am, March 4, 2015** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation, or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1 Suspend or cancel Permit No(s) 7778-3, 7779-3 & 7780-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 4, 2015** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. If you prefer, you can complete the questionnaire online at the following link: http://denr.sd.gov/iq.aspx

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES

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

denr.sd.gov

January 28, 2015

7778-3
7779-3
7780-3

Roger Boldenow
47758 323rd St
Elk Point SD 57025

Dear Mr. Boldenow:

I am writing to acknowledge receipt of your 2014 irrigation questionnaires.

You may disregard the January 16, 2015, "Notice" concerning reporting requirements for Water Permit Nos. 7778-3, 7779-3 & 7780-3. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

Genny McMath

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

7778-3

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

January 20, 2017

NOTICE

TO: ROGER BOLDENOW, 47758 323RD ST, ELK POINT, SD 57025

FROM: Ron Duvall, Natural Resources Engineer
for Jeanne Goodman, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2016 Irrigation Questionnaire(s)

Our records indicate your 2016 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 7778-3, 7779-3 & 7780-3. The request for the Questionnaire was dated October 21, 2016. The Water Management Board has directed that owners of water permits who have not submitted the 2016 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 7778-3, 7779-3 & 7780-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held at **Wednesday, March 1, 2017 at 11:00 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation, or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1 Suspend or cancel Permit No(s) 7778-3, 7779-3 & 7780-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 1, 2017** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. If you prefer, you can complete the questionnaire online at the following link: http://denr.sd.gov/iq.aspx

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.

7778-3

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES

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

denr.sd.gov

February 3, 2017

7778-3
7779-3
7780-3

Roger Boldenow
47758 323rd St
Elk Point SD 57025

Dear Mr. Boldenow:

I am writing to acknowledge receipt of your 2016 irrigation questionnaires.

You may disregard the January 20, 2017, "Notice" concerning reporting requirements for Water Permit Nos. 7778-3, 7779-3 & 7780-3. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

Genny McMath

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

Form 12

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7778-3

I have this day, **July 12, 2018**, made a thorough examination of the water use system constructed by **Roger Boldenow, 47758 323rd St, Elk Point SD 57025** of Permit No. **7778-3**, bearing the priority of **March 4, 2013** authorizing the diversion of **1.78** cu. ft. per second of the waters of **Missouri:Elk Point Aquifer** for **irrigation** purposes, of **126** acres, in **Union** County.

Inspection contact & relationship to permit holder, if applicable: **Scott Hanson, tenant**

A. Works used to divert the water:

Well Information:

1) Well Drilling Firm: **Siouxland Well Co, Inc.**
2) No. of Wells **1**
3) Depth(s) **92** feet
4) Well log is available **Yes**

Comments: **Siouxland Well Co. drilled the well and Dakota Drilling & Backhoe, Inc. installed the pump/motor.**

Casing:

1) Diameter **14** inches
2) Length **52** feet
3) Type **PVC**

Screen:

1) Type **PVC Perforated**
2) Length **40** feet
3) Static water level **23** feet

Pump:

1) Make **Unknown**
2) Model **Submersible**
3) Capacity **800** GPM

Motor:

1) Make **Unknown**
2) Model No. **Submersible**
3) Horsepower rating **40** hp

C. Works used to apply water to beneficial use:

Center pivot:

1) Make **Valley 6000**
2) Overall length **1259** feet
3) Number of towers **7**
4) End gun **Yes**
5) Capacity **800** GPM

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, began irrigating in 2013.**

   List any extended period of nonuse: **Did not use in 2014 due to flooding.**

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: **West 2630', North 1340' from SE Corner of Sec 8-T91N-R49W; Lat 42.71116/Long -96.65534; NW ¼ SE ¼ Sec 8-T91N-R49W**.

2. The works are capable of diverting and conveying to the place of use **1.78 cfs or 800 gpm** of water which is to be used for **irrigation**. Water has been put to beneficial use to the maximum extent as follows:

   All land is located in **Sec 8-T91N-R49W**.

NE ¼ SW ¼ - 34 ac	**NW ¼ SE ¼ - 34 ac**
SE ¼ SW ¼ - 32 ac	**SW ¼ SE ¼ - 23 ac**

   comprising a total of **123** acres of land and the license should be issued for **1.76 cfs or 789 gpm** which is the statutory limit of 1 cfs per 70 acres irrigated.

3. All structures, wells and lands on map **Yes**

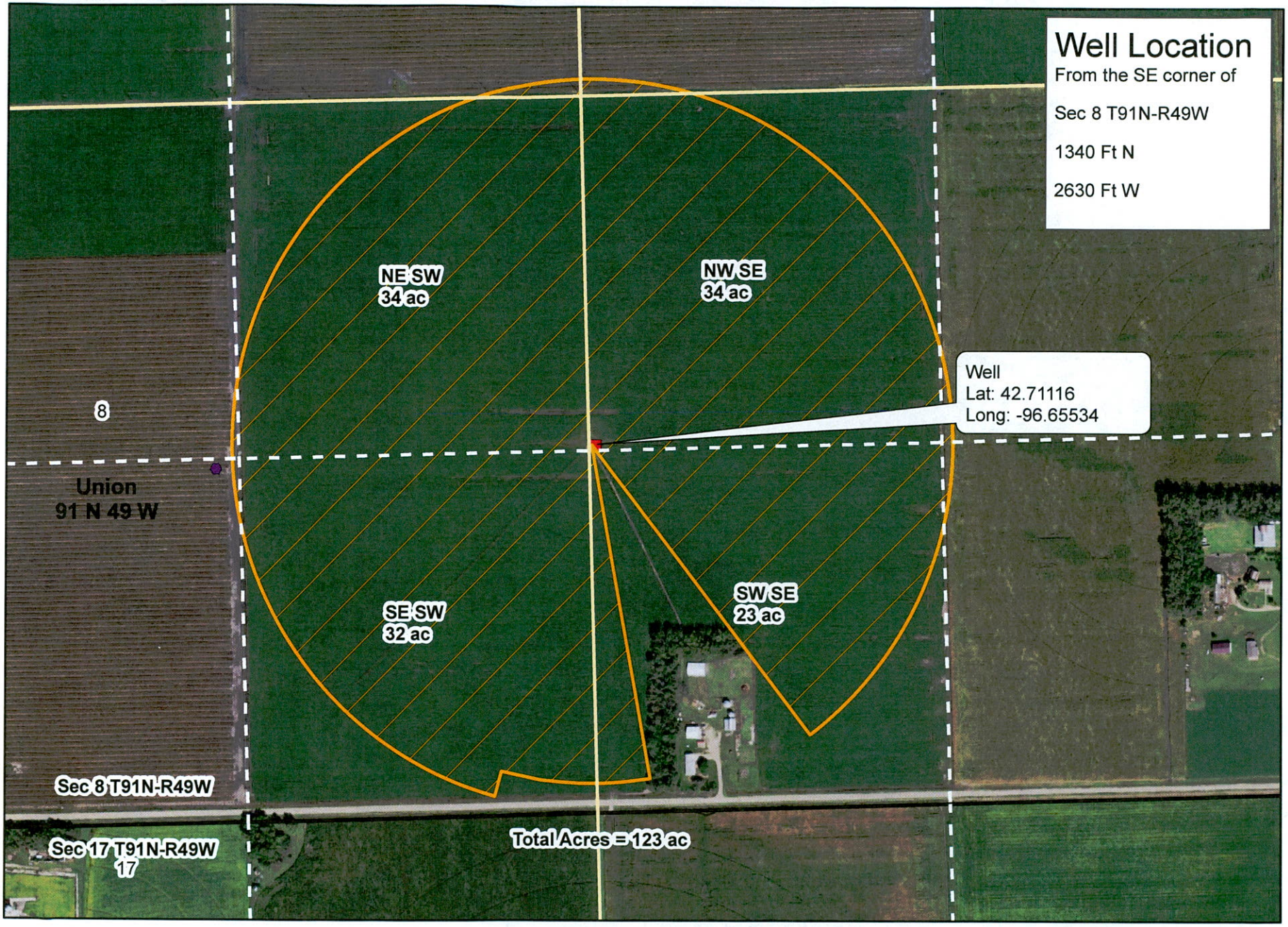
F. Comments or other permit(s) associated with the project: none

Harold Holoch

Harold Holoch, PE
Staff Engineer
DENR, Water Rights Program

Date report completed: **August 30, 2018**

7778-3



0 165 330 660 990 1,320 Feet

SCALE

Harold Holoch, PE
Staff Engineer
August 2, 2018

7778-3

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

SEP 25 2018

7778-3
7779-3
7780-3

Roger Boldenow
47758 323rd St
Elk Point SD 57026

Dear Mr. Boldenow:

Enclosed are Water License Nos. 7778-3, 7779-3 and 7780-3. They are the final water right documents completing your process of obtaining Water Rights. Included with each license is a map prepared by the staff engineer who conducted the field investigations.

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 Licenses, 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

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

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 7778-3

---

(1) Roger Boldenow, 47758 323rd St., Elk Point SD 57025 made Application No. 7778-3, March 4, 2013 for a water permit to divert 1.78 cubic feet of water per second from ground water, one well (Missouri Elk Point Aquifer), Union County, South Dakota for irrigation purposes. Permit No. 7778-3, with a priority date of March 4, 2013 was approved May 20, 2013 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before May 20, 2018 and for the application to beneficial use of water on or before May 20, 2022.

(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 1.76 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 2,630'W and 1,340'N of the SE Corner of Section 8, T91N, R49W (NW ¼ SE ¼)
  Latitude 42.71116, Longitude -96.65534

(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:

T91N, R49W Section 8	NE ¼ SW ¼	34 acres	NW ¼ SE ¼	34 acres
	SE ¼ SW ¼	32 acres	SW ¼ SE ¼	23 acres

Total 123 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Roger Boldenow, 47758 323rd St., Elk Point SD 57025 the holder and/or owner of Water Right No. 7778-3 is issued a license to appropriate water, the right to use 1.76 cubic feet of water per second from ground water, one well (Missouri Elk Point Aquifer) with a priority date of March 4, 2013 from the location specified in (2) of this license for irrigation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 7778-3 and subject to the following qualifications:

- The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

- The well authorized by Permit No. 7778-3 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 2013 by Siouxland Well Company. A copy of the well completion report is on file with the Water Rights Program.***

- This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

Jeanne Goodman

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

SEP 25 2018
date

7778-3

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

January 22, 2021

NOTICE

TO: ROGER BOLDENOW, 47758 323RD ST, ELK POINT, SD 57025

FROM: Ron Duvall, Natural Resources Engineer
for Jeanne Goodman, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2020 Irrigation Questionnaire(s)

Our records indicate your 2020 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 7778-3, 7779-3 & 7780-3. The request for the Questionnaire was dated October 23, 2020. The Water Management Board has directed that owners of water permits who have not submitted the 2020 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 7778-3, 7779-3 & 7780-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held at **Wednesday, March 3, 2021 at 10:00 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation, or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1 Suspend or cancel Permit No(s) 7778-3, 7779-3 & 7780-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 3, 2021** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. **If you prefer, you can complete the questionnaire online at the following link: https://denr.sd.gov/iq using this password: BYBCLJ**

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.

7778-3

DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

February 8, 2021

7778-3
7779-3
7780-3

Roger Boldenow
47758 323rd St
Elk Point SD 57025

Dear Mr. Boldenow:

I am writing to acknowledge receipt of your 2020 irrigation questionnaire.

You may disregard the January 22, 2021, "Notice" concerning reporting requirements for Water Permit Nos. 7778-3, 7779-3 and 7780-3. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

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

7778-3

DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

January 20, 2023

NOTICE

TO: ROGER BOLDENOW, 47758 323RD ST, ELK POINT, SD 57025

FROM: Ron Duvall, Water Rights Permitting Administrator
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2022 Irrigation Questionnaire(s)

Our records indicate your 2022 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 7778-3, 7779-3 & 7780-3. The request for the Questionnaire was dated October 21, 2022. The Water Management Board has directed owners of water permits who have not submitted the 2022 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 7778-3, 7779-3 & 7780-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held at **Wednesday, March 8, 2023 at 9:30 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1 Suspend or cancel Permit No(s) 7778-3, 7779-3 & 7780-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 8, 2023** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. **If you prefer, you can complete the questionnaire online at the following link: https://danr.sd.gov/iq using this password: KZDAAB**

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.

7778-3

DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

January 24, 2023

7778-3
7779-3
7780-3

Roger Boldenow
47758 323rd St
Elk Point SD 57025

Dear Mr. Boldenow:

I am writing to acknowledge receipt of your 2022 irrigation questionnaires. Scott submitted them online on January 23rd.

You may disregard the January 20, 2023, "Notice" concerning reporting requirements for Water Right Nos. 7778-3, 7779-3 & 7780-3. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

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

DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

January 19, 2024

NOTICE

TO: ROGER BOLDENOW, 47758 323RD ST, ELK POINT, SD 57025

FROM: Ron Duvall, Engineer III
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2023 Irrigation Questionnaire(s)

Our records indicate your 2023 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 7778-3, 7779-3 & 7780-3. The request for the Questionnaire was dated October 20, 2023. The Water Management Board has directed owners of water permits who have not submitted the 2023 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 7778-3, 7779-3 & 7780-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held at **Wednesday, March 6, 2024 at 9:30 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1 Suspend or cancel Permit No(s) 7778-3, 7779-3 & 7780-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 6, 2024** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Amanda Dewell at (605) 773-3352 or email at amanda.dewell@state.sd.us. **If you prefer, you can complete the questionnaire online at the following link: https://danr.sd.gov/iq using this password: RNLIVT**

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.

DEPARTMENT of AGRICULTURE and NATURAL RESOURCES
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

January 30, 2024

7778-3
7779-3
7780-3

Scott Hanson, Op
47674 327th St
Elk Point SD 57025

Dear Mr. Hanson:

I am writing to acknowledge the receipt of your 2023 irrigation questionnaire(s).

You may disregard the January 19, 2024, "Notice" concerning the reporting requirements for Water Permit No(s). 7778-3, 7779-3 & 7780-3. The information was received prior to the March 6, 2024, Water Management Board meeting and these permit numbers have been removed from the agenda.

If you have any questions, please contact me.

Sincerely,

Amanda Dewell
Water Rights Program
605 773-3352
Amanda.Dewell@state.sd.us

cc: ROGER BOLDENOW, 47758 323RD ST, ELK POINT SD 57025