

WATER PERMIT NO. 7770-3

Name of Applicant: **Robert & Theresa Geary**

Address: **32750 480th Ave, Elk Point SD 57025** Phone: **712 540 1633**

Amount of Water Claimed: **1.78 cfs** Total Acres: **70 acres**

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

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

Type of Waste Disposal System:

Location: **1/2 mile south of Jefferson**

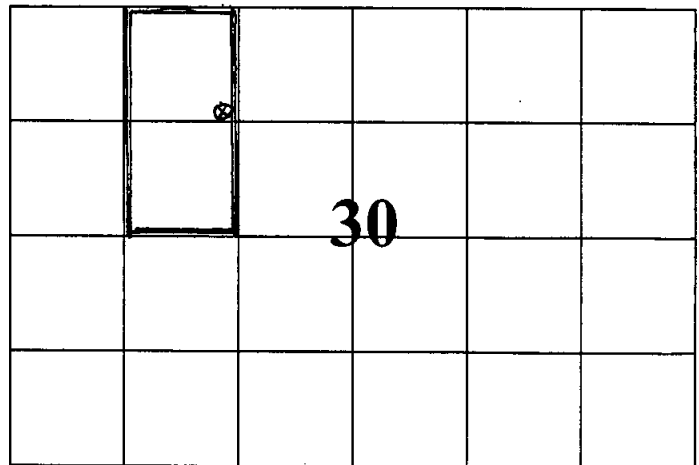
PRIORITY Date Received: **2-14-13** Application/License Fee: **\$ 950**

Corrected Application Received: **2-28-13** Period of Annual Use: **April 1 – October 31**

Remarks: **Requesting diversion rate greater than statutory limit**

Diversion Point: **NW 1/4 NW 1/4 Sec 30-T90N-R48W**

Land to be Irrigated: **W 1/2 NW 1/4 Sec 30-T90N-R48W**



Depth of Well: **120 feet deep**

Well Driller:

Remarks:

Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **3-4-13**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>7770-3</u> (office use only)	Hydrologic Unit <u>10170101</u>
	Basin <u>Missouri River</u>	
	Newspaper <u>Leader-Courier</u>	
	<u>Press & Dakotan</u>	

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FEB 14 2013
WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

Type of Application: + New Vested Right Amendment/Correction to Permit No.
(Use predates Mar 2, 1955)

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

1. Name of Applicant Robert & Theresa Gray Phone 712 646 1683
(check one) Owner Tenant/lessee
Mailing Address 32700 48th Ave Elk Point State SD 57228
(Street, RR, or Box and City) (Zip Code)

2. Amount of water claimed 1.78 *CFS or **GPM ***AF Total Acreage 70
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable

3. Source of water supply Ground water well

4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
1 well NW1/4 NW1/4 Sec-30 90 48
County Union

5. County or counties where water will be used Union

6. Annual period during which water is to be used spring to fall March 1 - Nov. 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
NW1/4 NW1/4	35		
SW1/4 NW1/4	35		
Sec 30- T90N- R48W			

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

center pivot Irrigation
800 GPM to meet to Run system

STATE OF SOUTH DAKOTA) SS
County of Union

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

I, , the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature Robert Gray

Subscribed and sworn to before me this 12th day of February 20 13

Jana Tots, Union County Register
Notary Public signature of Deeds

SOUTH DAKOTA
WATER PERMIT NO. 7770-3

Date of first receipt of application February 14, 2013.

Date of return to applicant for corrections, amendments or changes February 22, 2013.

Date of receipt of corrected application February 28, 2013.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7770-3 to Robert & Theresa Geary, 32750 480th Ave, 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. 7770-3 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 NW 1/4 Section 30 for irrigation of 70 acres located in the W 1/2 NW 1/4 Section 30; all in T90N-R48W.
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: March 1 – November 30.
3. The date from which applicant may claim right is February 14, 2013.
4. The date of approval of Permit No. 7770-3 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. 7770-3 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. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 7770-3 authorizes a maximum diversion rate of 1.78 cfs for the irrigation of 70 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. 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

JUN 20 2013

date



Supplemental Information

Nason

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 20" Depth 120'
- b) Casing Type Plastic Diameter 16" Thickness 5/8" FL
- c) Screen Type Plastic Diameter 16" Thickness 5/8" FL
- d) Gravel Pack Pea Gravel Length of Gravel Pack 50'
- e) Depth to Top of Water Bearing Material 60'
- f) Depth to Water (ground surface to water level) 16'
- g) Distance to nearest existing domestic well:
- On applicants property 0 On property owned by others 0

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System _____

3. Dugout Information

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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

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

- b) Freeboard _____

- c) Crest Width _____

Crest Length _____

- d) Height _____

- e) Primary Outlet Capacity _____

If pipe, diameter _____

- f) Secondary Spillway Capacity _____

Spillway Width _____

- g) X & Y Slope _____

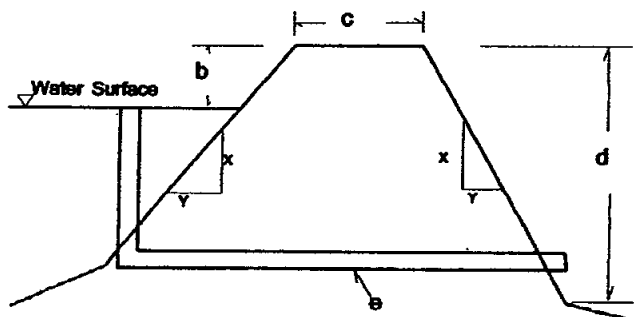
Upstream _____

Downstream _____

- h) Surface Area of Impoundment _____

- i) Storage _____ Acre Feet

- j) Drainage Area Above Dam _____ Acres





United States Department of Agriculture
Farm Service Agency

PLSS: 30_90N_48W
Farm: 5938

Union County

1:8,986



May 02, 2012

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

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RECEIPT
WATER RIGHTS PROGRAM
South Dakota Department of Environment and Natural Resources

Date 2/14, 20 13

RECEIVED OF Robert Geary 32750 480th Ave Elk Point SD 57025

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

Fee for Application for Permit No. <u>7770-11</u> to Appropriate Water, to construct and to put water to beneficial use	750	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>7770-11</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	950 00

No. **06135**

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

February 22, 2013

Robert & Theresa Geary
32750 480th Ave
Elk Point SD 57025

Dear Mr. & Mrs. Geary:

Thank you for submitting the nine *Applications for a Permit to Appropriate Water* for irrigation in Union County. In order to complete the applications, the following is required.

- Enclosed is a copy of each of your applications. Please review any changes on the applications (made in red) and see if you agree. It is important that legal descriptions on the applications accurately reflect your proposed projects.
- Attached to each application is the corresponding map. On each map, please outline the acres to be irrigated. The outlined acres need to correspond with those listed on the application.

Please return all of the applications and maps. If you have any questions, please contact me.

Sincerely,

Karen Schlaak
Water Rights Program
605 773-3352
karen.schlaak@state.sd.us

enclosures

Water Rights Program - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: Water Permit Application for Robert Geary

ADDRESS: COUNTY: Union

DATE: April 9, 2013 TELEPHONE: 712 540 1633

RE: diversion rate

I contacted Mr. Geary regarding each of his applications (7768-3 through 7776-3) uniformly requests a diversion rate of 800 gpm. That is understandable on the quarter section pivots that do not make full rotation. However, there are four applications for irrigation of between 35 to 48 acres. I asked if a 800 gpm diversion rate is really needed for these smaller pivots.

He indicated that these are all quarter section pivot that he is purchasing used. They all require 800 gpm to operate.

In addition, since they are used systems he wants them all to be set up the same so that he can interchange parts or use the same diesel motor for operating.

NAME: Eric Brinkley

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MAY 20 2013

WATER RIGHTS
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Water permits for

Robert Geary, Elk Point

He has been Irrigating

for 20 to 30 yrs without

some permits. I got all

my permits on time. I think

there should be big fine

or shut them off. Please

Come down and check

the nine permits.

Don Hansen

Gronlund, Eric

From: Scott Hanson <scott@missouririveroutdoors.com>
Sent: Tuesday, May 21, 2013 3:56 PM
To: Gronlund, Eric
Subject: Re: Letter received on Mr. Geary's applications

Hi Eric. I can definitely verify that this is not Dans handwriting and he in no way had anything to do with this letter even though it does look like it says Dan Hanson I will agree.

Thanks.

Scott

On May 21, 2013, at 3:32 PM, "Gronlund, Eric" <Eric.Gronlund@state.sd.us> wrote:

Scott – attached is the letter. Please confirm that it was not Dan Hanson that sent the letter. Also if you can help decipher the signature, it would be appreciated.

Eric Gronlund
Water Rights Program, DENR
605 773-3352
Eric.gronlund@state.sd.us
<Hansonletter.pdf>



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7770-3, Robert and Theresa Geary**

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. 7770-3, Robert and Theresa Geary, 32750 480th Avenue, Elk Point SD 57025.

The Chief Engineer is recommending APPROVAL of Application No. 7770-3 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. 7770-3 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. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 7770-3 authorizes a maximum diversion rate of 1.78 cfs for the irrigation of 70 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

for Eric Greenland
Jeanne Goodman, Chief Engineer
April 26, 2013

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NOS. 7770-3 & 7774-3
ROBERT & THERESA GEARY
MARCH 26, 2013

Water Permit Application No. 7770-3 proposes to appropriate water from one well to be completed into the Missouri: Elk Point aquifer at a maximum diversion rate of 1.78 cubic feet of water per second (cfs). The well will be located in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 30, T90N-R48W and is expected to be approximately 120 feet deep. This application proposes to irrigate 70 acres located in the W $\frac{1}{2}$ NW $\frac{1}{4}$ of Section 30, in T90N-R48W in Union County. The applicant is requesting a diversion rate greater than the statutory limit.

Water Permit Application No. 7774-3 proposes to appropriate water from one well to be completed into the Missouri: Elk Point aquifer at a maximum diversion rate of 1.78 cubic feet of water per second (cfs). The well will be located in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 20, T90N-R48W and is expected to be approximately 120 feet deep. This application proposes to irrigate 35 acres located in NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 20, in T90N-R48W in Union County. The applicant is requesting a diversion rate greater than the statutory limit.

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 Missouri: Elk Point 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 plain of the Missouri River (Bugliosi, 1986), and also below the flood plain of 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 of Union County. The proposed well sites are located in southern Union County approximately two miles west of the Big Sioux River and approximately six and one half miles east of the Missouri River. 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 in storage, of which an estimated 1,494,600 acre-feet of recoverable water is in storage in Union County (Hedges and others, 1982). The maximum thickness of the Missouri aquifer is 146 feet with an average thickness of 84 feet (Niehus, 1994). The transmissivity of the aquifer ranges from 20,700 to 24,700 square feet per day (ft^2/d) in Yankton County and it is reasonable to assume it will be similar here (Bugliosi, 1986). The specific capacity of wells completed into the aquifer ranges from approximately 124 to 173 gallons per minute per foot ($(\text{gal}/\text{min})/\text{ft}$) (Bugliosi, 1986). The aquifer can be under confined or unconfined (water-table) conditions, and is confined in the area of this application. The average saturated thickness

reported for nearby well sites is approximately 85 feet as shown in Table 1 (Water Rights, 2013a).

Well Log Identification	Saturated Thickness (ft)
Observation Well UN-87B	84
Observation Well UN-77P	68
Lithologic Log 090N48W19DDD	97
Domestic Well for Russ La Fleur	75
Domestic Well for Mark Bernard	101

Table 1. Reported saturated thickness for nearby wells (Water Rights, 2013a).

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 diversions 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 these applications are approved, it is likely that the actual water use will be less than 210 acre feet per year (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." If the source of the water is older or lower than the greenhorn formation and a public water system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Here, a public water system is not involved and the aquifer is not older or lower than the greenhorn formation therefore withdrawal/recharge issue must be considered.

Recharge versus Discharge:

Recharge:

Recharge to the Missouri: Elk Point aquifer occurs through seepage from streams and by infiltration of precipitation (Bugliosi, 1986; 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 ac-ft/yr. Recharge in Union County is estimated to be 36,480 ac-ft/yr based on the 115,200 acres that the aquifer underlies in the county (Hedges and others, 1982).

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 there are currently 557 water rights/permits appropriating water from the Missouri: Elk Point aquifer of which 309 are in Union County (Water Rights, 2013c). In addition, there are five future use permits in Clay County reserving 14,900 ac-ft/yr of water from the aquifer. The distribution of these appropriations for the entire aquifer and their types are shown in Table 2.

Water Rights/Permits	Number
Commercial	7
Domestic	2
Fish and Wildlife Propagation	4
Industrial	5
Irrigation	524
Municipal	10
Recreational	1
Rural Water System	2
Suburban Housing Development	2
Future Use Permits	Number
Lewis & Clark Rural Water System (13,000 ac-ft/yr)	4
City of Vermillion (1,900 ac-ft/yr)	1

Table 2. Water rights/permits from the 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.

Lewis and Clark Rural Water System currently reserves 13,000 ac-ft/yr for future use and has permits appropriating 32,165 ac-ft/yr (Water Rights, 2013b). These account for a significant portion of the annual water usage in Clay County, and most of the water from these wells will be induced from the Missouri River. More recharge can be induced with more pumping in particular from the Missouri River because it is hydraulically connected to the aquifer.

The annual reported water use from the Missouri: Elk Point aquifer for irrigation purposes is displayed in Table 3. The average pumpage reported, for irrigation purposes, over the 1979 to 2011 period of record in the Missouri Elk Point: aquifer in Union County 10,777.62 ac-ft/yr. The amount of water usage from domestic wells is not significant to the hydrologic budget.

YEAR	NO. OF PERMITS	APPROPRIATION (AC-FT/YR)	PUMPAGE REPORTED (AC-FT/YR)
1979	259	122980	9859
1980	262	124404.9	14586
1981	297	134477.6	13096
1982	269	122297.8	18822.35
1983	273	121483.1	10834.04
1984	281	126221.6	9194.3
1985	282	124546.7	13718.5
1986	286	125320.7	6252.1
1987	281	123601.7	13163.7
1988	282	123601.5	28184.55
1989	292	126354.7	25651.9
1990	297	127965.7	19425
1991	300	126471.7	18798.6
1992	295	125256.7	1881.95
1993	298	125576.3	1475.2
1994	295	122975.1	10221.43
1995	292	121644.3	18320.24
1996	296	124606.2	9412.78
1997	305	126518.2	17182
1998	313	127862.6	11127.24
1999	308	125225.6	14748.02
2000	309	124852.2	26640.12
2001	313	125537.4	19071.88
2002	315	125555.8	23547.22
2003	314	125379.8	26734.67
2004	322	126955.8	23862.25
2005	335	130046.6	23964.5
2006	353	136491.6	27974.54
2007	366	139826.6	30482.84
2008	396	151130.4	16261.88
2009	410	155245.4	6120.97
2010	419	155905.4	2723.87
2011	431	159700.8	12107.55
MIN	259	121483.10	1475.20
MAX	431	159700.80	30482.84
AVE	313.52	129879.40	15922.64

Table 3. Irrigation from the Missouri: Elk Point aquifer (Water Rights, 1979-2011)

There are a number of new permits and pending applications from the Missouri: Elk Point aquifer. Once they are developed, the average pumping for irrigation purposes is expected to increase significantly. Since January 1, 2012, there have been 87 permits issued from the Missouri: Elk Point aquifer authorizing irrigation for a total of 10,670.5 acres. The average annual withdrawal is still expected to be significantly less than the average annual recharge. As of March 26, 2013, an additional 19 permit applications have been submitted for appropriation of water from the Missouri: Elk Point aquifer. The pending permits have a total diversion rate of 32.79 cfs, and 1,700.85 acres of coverage as shown in Table 4 (Water Rights, 2013a). Recognizing that Lewis and Clark RWS withdraw 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 these applications.

PERMIT NO.	DIV. RATE (CFS)	ACRES
7693-3	0.67	27.7
7711-3	1.67	115
7712-3	1.78	74.54
7713-3	2.22	114.29
7714-3	1.67	59.32
7749-3	2.28	160
7768-3	1.78	48
7769-3	1.78	48
7770-3	1.78	70
7771-3	1.78	160
7772-3	1.78	120
7773-3	1.78	70
7774-3	1.78	35
7775-3	1.78	41
7776-3	1.78	140
7785-3	0.92	35
7800-3	2.22	110
7801-3	1.56	108
7802-3	1.78	165
TOTAL	32.79	1700.85

Table 4. List of pending permits from the Missouri: Elk Point aquifer (Water Rights, 2013a)

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 with two of these observation wells located within two miles of the well sites proposed by these applications (Water Rights, 2013a). Hydrographs for these wells are shown in Figures 1 and 2.

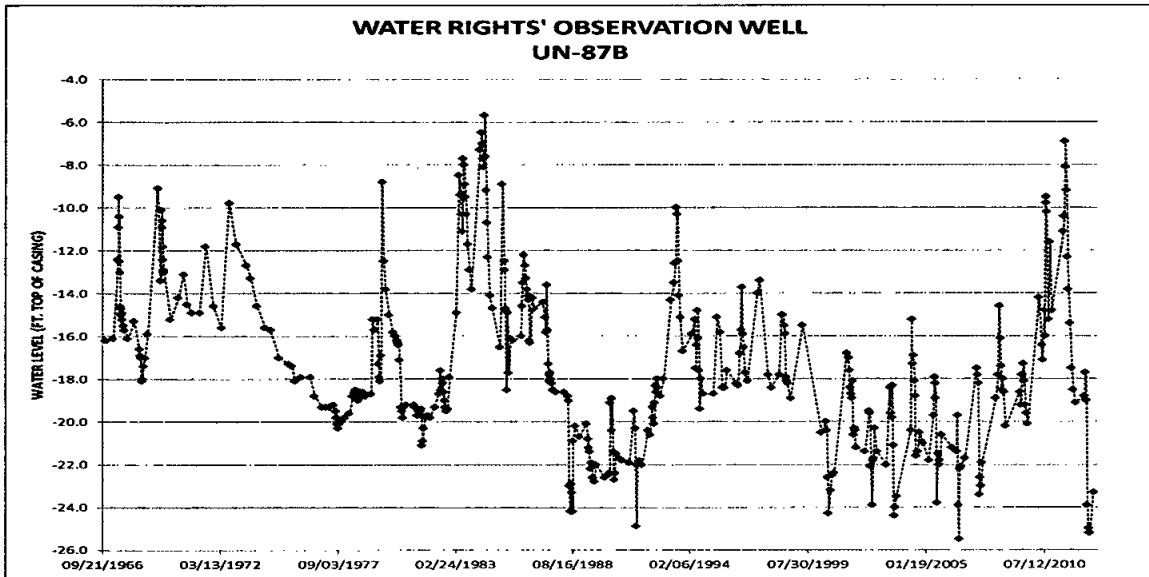


Figure 1. Hydrograph for SD DENR-Water Rights' Observation Well UN-87B completed into the Missouri: Elk Point aquifer approximately three quarter miles northwest of the well site proposed by Application No. 7774-3 (Water Rights, 2013b).

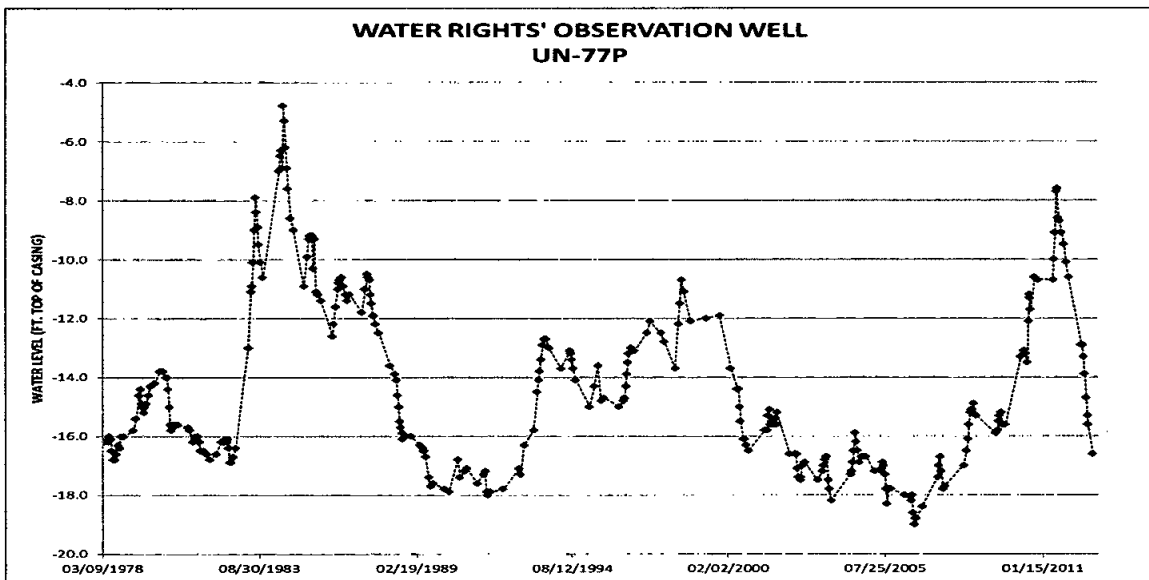


Figure 2. Hydrograph for SD DENR-Water Rights' Observation Well UN-77P completed into the Missouri: Elk Point aquifer less than one and one half miles northwest of the well site proposed by Application No. 7770-3 (Water Rights, 2013b).

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. The observation well data shows that 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, record 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 with additional pumping. Natural discharge from the aquifer can be captured for pumping. Additional pumping from the Missouri: Elk Point aquifer can also induce recharge from the underlying Dakota aquifer. Therefore, there is reasonable probability that unappropriated water is available from the aquifer to support these appropriations.

EXISTING WATER RIGHTS:

The proposed well sites are located in southern Union County approximately two miles west of the Big Sioux River and approximately six and one half miles east of the Missouri River. Figure 4 shows the nearby existing water rights located in the Missouri: Elk Point aquifer. The locations of the existing water rights/permits were determined using the best data reasonably available. The nearest water right/permit is Water Right No. 234-3, for Lynn R Mollet, located approximately 850 feet southwest and down-gradient of the well site proposed by Application No. 7774-3.

Observation Well UN-87B is located within 730 feet of Water Right No. 518-3, for Dale Bosse, and the hydrograph, shown in Figure 1, reports minimal drawdown at this distance due to pumping. Water-table conditions dictate that drawdown will be minimal at these distances. Based on the observation well data and the distance between wells, drawdown is not expected to be significant nor likely to cause adverse impacts to existing water rights or domestic wells. The precise drawdown cannot be quantified without aquifer testing. With that in mind, this permit should adhere to and include the standard permit qualification which applies to most groundwater permits/rights stating 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 water rights”.

SDCL 46-6-6.1 does not protect artesian head pressure as a means of delivery and the Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. To balance interests between irrigation use and delivery of water by artesian pressure, the Water Management Board has defined an “adversely impacted domestic well” in ARSD 74:02:04:20(7) as:

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

In reality, the assurance of reasonable domestic use provided by SDCL 46-6-6.1 and ARSD 74:02:04:20(7) generally ensures not only that interference will not be adverse to domestic well users but also in existing appropriative rights (i.e. in most cases, the protection afforded to adequate domestic wells by water law, would lead to enforcement of the “standard permit qualification” before there is a reduction of needed water supplies to appropriative rights). Although drawdown is expected to be minimal, as shown by the observation well hydrographs, some drawdown will occur. Depending on the extent of drawdown, some existing well owners

may need to lower their pumps to accommodate for deeper water levels. However, when considering the statute and rule, there is a reasonable probability that any well interference from these proposed applications will not be adverse to adequate domestic wells.

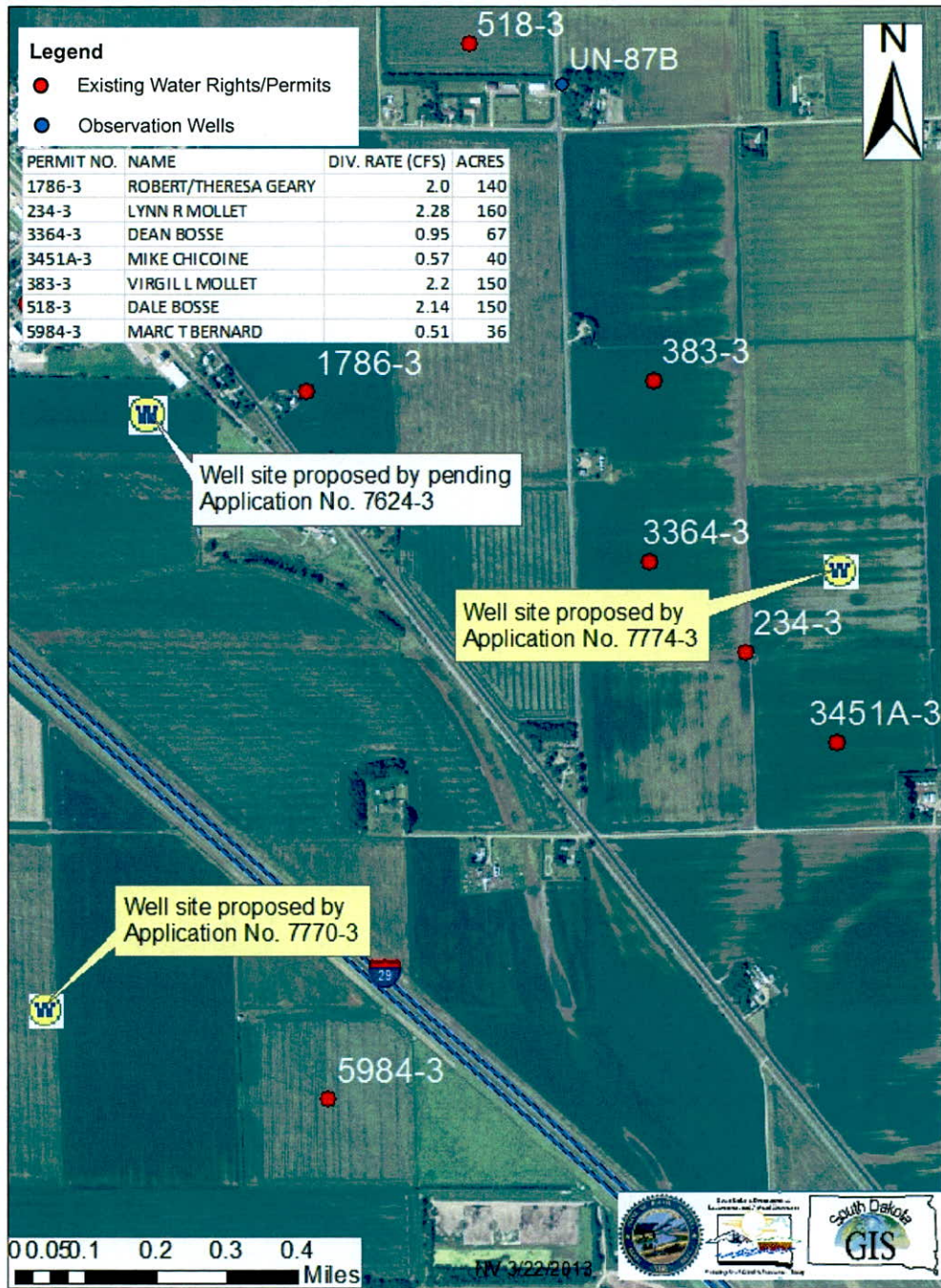


Figure 4. Existing water rights/permits located within close proximity to the well sites proposed by Application Nos. 7770-3 and 7774-3 (Water Rights, 2013c).

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. Water Permit Application No. 7770-3 proposes to divert at a rate of 1.78 cfs to irrigate 70 acres with a center pivot irrigation system. Water Permit Application No. 7774-3 proposes to divert at a rate of 1.78 cfs to irrigate 35 acres, or the equivalent of 3.56 cfs per 70 acres to a center pivot irrigation system. The applicant does not provide a justification for the diversion rates.

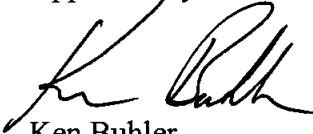
CONCLUSIONS:

1. These applications propose to appropriate water from the Missouri: Elk Point aquifer.
2. There is a reasonable probability that unappropriated water is available from the Missouri: Elk Point aquifer to supply these proposed appropriations.
3. The Missouri: Elk Point aquifer is unconfined in this area, but drawdown from pumping is not expected to be significant very far from a production well.
4. There is a reasonable probability that the wells proposed by these applications will not adversely impact existing water rights or domestic wells.



Nicole Van Dyk
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, 1979-2011, Irrigation Questionnaire Summaries 1979-2011, 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

State of South Dakota)

:SS

County of Union)

WATER RIGHTS
PROGRAM

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

\$ 51.47, 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

[Signature]

Notary Public

NOTICE OF APPLICATION NOS. 7768-3

THROUGH 7776-3 TO APPROPRIATE WATER

Notice is given that Robert & Theresa Geary, 32750 480th Ave, Elk Point SD 57025 has filed the following applications for a water permit.

Application No. 7768-3 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 W 1/2 Lot 1 (NE 1/4) Section 3 for irrigation of 48 acres located in the W 1/2 Lot 1 (NE 1/4) Section 3; all in T90N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7769-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in Gov't Lot 2 lying NE of railroad right of way (NW 1/4) Section 3 for irrigation of 48 acres located in the Gov't Lot 2 lying NE of railroad right of way (NW 1/4) Sections 3; all in T90N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7770-3 proposes to appropriate 1.78 cfs from

one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the NW 1/4 NW 1/4 Section 30 for irrigation of 70 acres located in the W 1/2 NW 1/4 Section 30; all in T90N-R48W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7771-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the center of the NW 1/4 Section 2 for irrigation of 160 acres located in the NW 1/4 Section 2; all in T90N-R49W.

Application No. 7772-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the NW 1/4 NE 1/4 Section 2 for irrigation of 120 acres located in the W 1/2 NE 1/4, SE 1/4 NE 1/4 Section 2; all in T90N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7773-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the a point between the NW 1/4 SE 1/4 and the NE 1/4 SE 1/4 Section 2 for irrigation of 70 acres located in the N 1/2 SE 1/4 Section 2; all in

T90N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7774-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the NE 1/4 SW 1/4 Section 20 for irrigation of 35 acres located in the NE 1/4 SW 1/4 Section 20; all in T90N-R48W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7775-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in Tract 1 N 1/2 SE 1/4 Section 3 for irrigation of 41 acres located in the Tract 1 N 1/2 SE 1/4 Section 3; T90N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7776-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the center of the SW 1/4 Section 35 for irrigation of 140 acres located in the SW 1/4 Section 35; all in T91N-R49W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 7768-3 through 7776-3 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 \$51.47

19-2-171

RECEIVED

MAY 13 2013

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

Notice is given that Robert & Theresa Geary, 32750 480th Ave., Elk Point SD 57025 has filed the following applications for a water permit.

Application No. 7768-3 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 W 1/2 Lot 1 (NE 1/4) Section 3 for irrigation of 48 acres located in the W 1/2 Lot 1 (NE 1/4) Section 3; all in T90N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7769-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in Gov't Lot 2 lying NE of railroad right of way (NW 1/4) Section 3 for irrigation of 48 acres located in the Gov't Lot 2 lying NE of railroad right of way (NW 1/4) Sections 3; all in T90N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7770-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the NW 1/4 NW 1/4 Section 30 for irrigation of 70 acres located in the W 1/2 NW 1/4 Section 30; all in T90N-R48W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7771-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the center of the NW 1/4 Section 2 for irrigation of 160 acres located in the NW 1/4 Section 2; all in T90N-R49W.

Application No. 7772-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the NW 1/4 NE 1/4 Section 2 for irrigation of 120 acres located in the W 1/2 NE 1/4, SE 1/4 NE 1/4 Section 2; all in T90N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7773-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the a point between the NW 1/4 SE 1/4 and the NE 1/4 SE 1/4 Section 2 for irrigation of 70 acres located in the N 1/2 SE 1/4 Section 2; all in T90N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

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 DEPOSES AND SAYS THAT HE IS THE MANAGING EDITOR OF, YANKTON MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED **Notice of Application Nos. 7768-3 & 7776-3**

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE NEWSPAPER ON THE 9th DAY OF May 2013 THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION OF SAID **NOTICE** TO WIT \$59.08 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: 5/9/2013

FILED ON: 5/9/2013

SUBSCRIBED AND SWORN TO BEFORE ME THIS 9th DAY OF May 2013

[Signature]
NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES 8/19/2015

Application No. 7774-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the NE 1/4 SW 1/4 Section 20 for irrigation of 35 acres located in the NE 1/4 SW 1/4 Section 20; all in T90N-R48W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7775-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in Tract 1 N 1/2 SE 1/4 Section 3 for irrigation of 41 acres located in the Tract 1 N 1/2 SE 1/4 Section 3; T90N-R49W. The applicant is requesting a diversion rate greater than the statutory limit.

Application No. 7776-3 proposes to appropriate 1.78 cfs from one well to be completed into the Missouri:Elk Point Aquifer (120 feet deep) located in the center of the SW 1/4 Section 35 for irrigation of 140 acres located in the SW 1/4 Section 35; all in T91N-R49W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 7768-3 through 7776-3 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. Pimer, Secretary, Department of Environment and Natural Resources.

Published once at the total approximate cost of \$59.08.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

April 29, 2013

Leader Courier
PO Box 310
Elk Point SD 57025

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 7768-3 through 7776-3 to Appropriate Water. Please publish the notice once on May 9, 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 Robert & Theresa Geary, 32750 480th Ave, Elk Point SD 57025 (Ph # 712-540-1633).

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

April 29, 2013

Press & Dakotan
319 Walnut
Yankton SD 57078

ATTENTION: Legal Public Notice

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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.

April 29, 2013

Robert & Theresa Geary
32750 480th Ave
Elk Point SD 57025

Dear Sir:

Water Permit Application Nos. 7768-3 through 7776-3 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 9, 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. 7768-3 through 7776-3 to Appropriate Water

Notice is given that Robert & Theresa Geary, 32750 480th Ave, Elk Point SD 57025 has filed the following applications for a water permit.

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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 20 2013

Robert & Theresa Geary
32750 480th Ave
Elk Point SD 57025

Dear Sir:

Enclosed are Water Permit Nos. 7768-3 thru 7776-3 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, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

7770-3

07-92

Location SW 1/4 NW 1/4 Sec 30 Twp 90N Rg 48W

County

North

Union

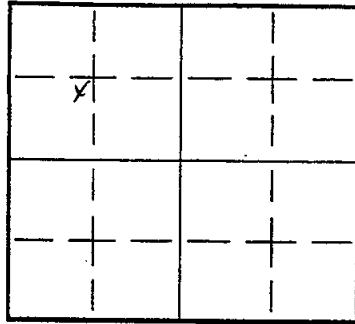
Please mark well location with an "X"

W

E

Well-Completion Date

12-3-12



LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 1300 ft. from Septic (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
<u>SCH 40</u> LB/FT	<u>12</u> IN	<u>0</u> FT	<u>126</u> FT	<u>17 1/2</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Bentonite</u>	_____	_____ lb./gal	<u>30</u> ft	<u>10</u> ft
_____	_____	_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure Pumped in from bottom

SCREEN: ☒ Perforated pipe ☐ Manufactured

Diameter 12 IN Length 46 FEET

Material PVC

Slot Size .60 Set From 80 Feet to 126 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? _____

Irrigation

Well Owner: Robert Geary

Business Name: _____

Address: 32750 480th Ave.

EIK Point, SD 57025

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Top soil</u>	<u>0</u>	<u>4</u>
<u>Yellow clay</u>	<u>4</u>	<u>9</u>
<u>Grey clay</u>	<u>9</u>	<u>34</u>
<u>Silt</u>	<u>34</u>	<u>42</u>
<u>Clay</u>	<u>42</u>	<u>69</u>
<u>Sand</u>	<u>69</u>	<u>71</u>
<u>Gravel + rocks</u>	<u>71</u>	<u>73</u>
<u>Med gravel + rocks</u>	<u>73</u>	<u>130</u>

STATIC WATER LEVEL 17 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

- ☐ Pumped Describe: Not Completed
☐ Bailed
☐ Other

Pumping Level Below Land Surface

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate Not Completed GPM

REMARKS

RECEIVED

FEB 11 2013

WATER RIGHTS PROGRAM

This well was drilled under license # 667

And this report is true and accurate.

Drilling firm Dakota Drilling & Backhoe, Inc.

Signature of License Representative:

Donna DeKor

Signature of Well Owner or Equitable Property Holder:

Date: _____



**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: ROBERT J GEARY, 32750 480TH AVE, 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 Questionnaires

Our records indicate your 2022 Irrigation Questionnaires have not been submitted. The request for the Questionnaires was dated October 21, 2022. The Water Management Board has directed owners of water permits who have not submitted the 2022 Irrigation Questionnaires be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine if Permit No(s) 1567A-3, 1786-3, 2109-3, 2345-3 & 2346-3 should be amended to require the Questionnaire to be submitted each year and to determine action to be taken for violation of Water Permit No(s) 5870-3, 6044-3, 6072-3, 7768-3, 7769-3, 7770-3, 7771-3, 7772-3, 7773-3, 7774-3, 7775-3, 7776-3 & 8332-3 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) 5870-3, 6044-3, 6072-3, 7768-3, 7769-3, 7770-3, 7771-3, 7772-3, 7773-3, 7774-3, 7775-3, 7776-3 & 8332-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Amend Permit No(s) 1567A-3, 1786-3, 2109-3, 2345-3 & 2346-3 to require the Irrigation Water Use Questionnaire to be submitted each year;
3. Postpone any action or 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 questionnaires 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 questionnaires 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: AVHJEY**

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, 2023

Robert Geary
32750 480th Ave
Elk Point SD 57025

RE: Water Right/Permit Nos. 1567A-3, 1786-3, 2109-3, 2345-3, 2346-3, 5870-3, 6044-3, 6072-3,
7768-3, 7769-3, 7770-3, 7771-3, 7772-3, 7773-3, 7774-3, 7775-3, 7776-3 & 8332-3

Dear Mr. Geary:

I am writing to acknowledge receipt of your 2022 irrigation questionnaires.

You may disregard the January 20, 2023, "Notice" concerning reporting requirements for the above listed Water Rights and/or Water Permits. 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: ROBERT J GEARY, 32750 480TH AVE, ELK POINT, SD 57025

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

SUBJECT: Reporting Requirement for 2023 Irrigation Questionnaires

Our records indicate your 2023 Irrigation Questionnaires have not been submitted. The request for the Questionnaires was dated October 20, 2023. The Water Management Board has directed owners of water permits who have not submitted the 2023 Irrigation Questionnaires be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine if Permit No(s) 1567A-3, 1786-3, 2109-3, 2345-3 & 2346-3 should be amended to require the Questionnaire to be submitted each year and to determine action to be taken for violation of Water Permit No(s) 5870-3, 6044-3, 6072-3, 7768-3, 7769-3, 7770-3, 7771-3, 7772-3, 7773-3, 7774-3, 7775-3, 7776-3 & 8332-3 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) 5870-3, 6044-3, 6072-3, 7768-3, 7769-3, 7770-3, 7771-3, 7772-3, 7773-3, 7774-3, 7775-3, 7776-3 & 8332-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Amend Permit No(s) 1567A-3, 1786-3, 2109-3, 2345-3 & 2346-3 to require the Irrigation Water Use Questionnaire to be submitted each year;
3. Postpone any action or 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 questionnaires 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 questionnaires 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: FXZKPW**

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 23, 2024

1567A-3, 1786-3, 2109-3, 2345-3
2346-3, 5870-3, 6044-3, 6072-3
7768-3, 7769-3, 7770-3, 7771-3
7772-3, 7773-3, 7774-3, 7775-3
7776-3 & 8332-3

Robert & Theresa Geary
32750 480th Ave
Elk Point SD 57025

Dear Mr. & Ms. Geary:

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). 1567A-3, 1786-3, 2109-3, 2345-3, 2346-3, 5870-3, 6044-3, 6072-3, 7768-3, 7769-3, 7770-3, 7771-3, 7772-3, 7773-3, 7774-3, 7775-3, 7776-3 & 8332-3. 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

**Report of Examination of Works and/or Application of Water to
Beneficial Use
For Permit No. 7770-3**

I have this day, March 26, 2025, made a thorough examination of the water use system constructed by Robert and Theresa Geary of 32750 480th Ave, Elk Point SD 57025 holder of Permit No. 7770-3-3, bearing the priority of February 14, 2013 authorizing the diversion of 1.78 cu. ft. per second of the waters of groundwater, Missouri:Elk Point Aquifer for irrigation purposes, in Union County.

Inspection contact & relationship Robert Geary, owner

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Dakota Drilling and Backhoe Inc
- 2) No. of Wells 1
- 3) Depth(s) 130 feet
- 4) Well log is available Y If no, explain in comments

Comments: none

Casing:

- 1) Diameter 12 inches
- 2) Length 80 feet
- 3) Type plastic

Screen:

- 1) Type PVC
- 2) Length 46 feet
- 3) Static water level 17 feet

Pump:

- 1) Make Grundfos
- 2) Model submersible
- 3) Capacity 600 GPM

Motor:

- 1) Make Grundfos
- 2) Model No. submersible
- 3) Horsepower rating 15 hp

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

- 1) Type steel
 - 2) Size 8 inches
 - 3) Length 20 feet
- Comments: none

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Reinke
- 2) Overall length 1280 feet
- 3) Number of towers 7
- 4) End gun Y
- 5) Capacity 600 GPM

Chemigation Equipment:

- 1) Does chemigate N

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
If no, describe: none
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Y
List any extended period of nonuse: 2014-2020, 2022-2024
- 3) Exceptions to compliance are: none

E. Condition and Location:

1. The system is in poor condition with the point(s) of diversion located as follows: from the NW corner of Sec 30 T90N-R48W 1,315 ft E and 1,140 ft S, latitude of 42.58755 and longitude of -96.56189, NW 1/4 NW 1/4.
2. The works are capable of diverting and conveying to the place of use 1.34 cu. ft. per second of water which is to be used for irrigation use. Water has been put to beneficial use to the maximum extent as follows: All land is located in Sec30 T90N-R48W NW 1/4 NW 1/4 - 33 ac SW 1/4 NW 1/4 - 33 ac comprising a total of 66 acres of land and the license should be issued for 1.34 cfs.
3. All structures, wells and lands on map Y
If no, describe: none

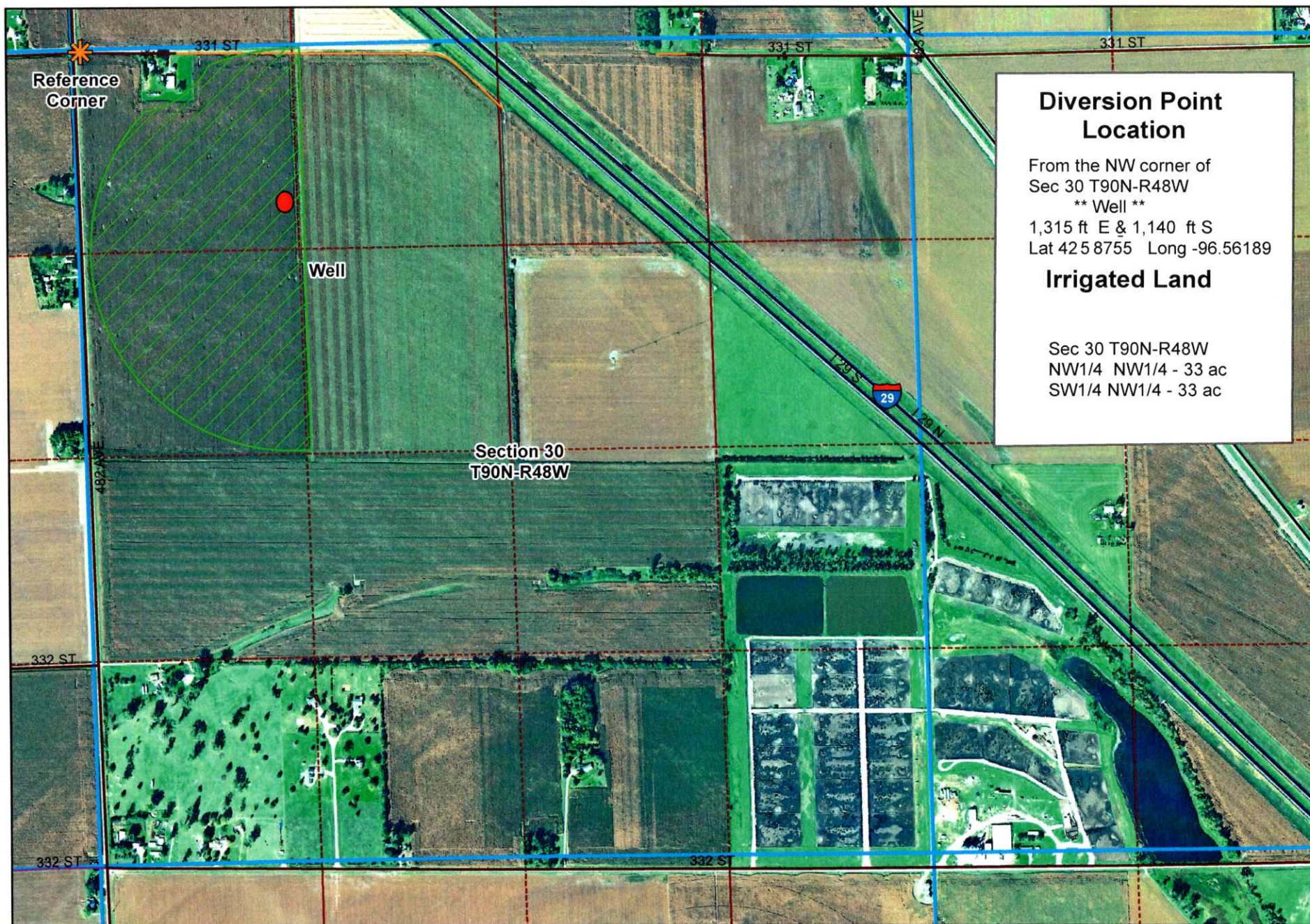
F. Comments or other permit(s) associated with the project:

The irrigation system was severely damaged in the 2024 flood.



Mark D Rath
Water Right Inspector
DANR, Water Rights Program

Date report completed: May 28, 2025



Diversion Point Location

From the NW corner of
Sec 30 T90N-R48W

** Well **

1,315 ft E & 1,140 ft S

Lat 425 8755 Long -96.56189

Irrigated Land

Sec 30 T90N-R48W

NW1/4 NW1/4 - 33 ac

SW1/4 NW1/4 - 33 ac



0 0.125 0.25 0.5 0.75 1 Miles

Mark D Rath
Water Right Inspector
DANR-Water Rights Program



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUN 06 2025

Robert & Theresa Geary
32750 480th Ave
Elk Point, SD 57025

No. 7770-3

Dear Mr. & Mrs. Geary:

Enclosed is Water License No. 7770-3. 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.

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

Sincerely,

Mark Mayer, PE
Director of Office of Water
(605) 773-3352

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 7770-3**

(1) Robert and Theresa Geary, 32750 480th Ave, Elk Point, SD 57025, made Application No. 7770-3, February 14, 2013, for a water permit to divert 1.78 cubic feet of water per second from groundwater, one well (Missouri: Elk Point Aquifer), Union County, South Dakota for irrigation purposes. Permit No. 7770-3, with a priority date of February 14, 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 holders have complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and are entitled to divert 1.34 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 1,315 feet E and 1,140 feet S from the NW corner of Section 30, T90N, R48W
(NW ¼ NW ¼) (Latitude 42.58755 and Longitude -96.56189)

(3) The amount of 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: March 1 – November 30.

(4) The permit holders have complied with the provisions of South Dakota State Law relating to the application of water to beneficial use to irrigate to following land:

Section 30, T90N, R48W
NW ¼ NW ¼ - 33 acres
SW ¼ NW ¼ - 33 acres
Total – 66 acres

(5) Pursuant to South Dakota Water Law 46-5-30.1 Robert and Theresa Geary, the holders and/or owners of Water Right No. 7770-3 are issued a license to appropriate water, the right to use 1.34 cubic feet of water per second from groundwater, one well (Missouri: Elk Point Aquifer), with a priority date of February 14, 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. 7770-3 and subject to 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. 7770-3 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. *(The well was drilled in 2012 by Dakota Drilling & Backhoe Inc. A copy of the well completion report is on file with the Water Rights Program.)*

3. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 7770-3 authorizes a maximum diversion rate of 1.78 cfs for the irrigation of 70 acres with an annual volume not to exceed 2 acre-feet of water per acre per year. *(The diversion rate was reduced from 1.78 cfs to 1.34 cfs, and the number of acres authorized for irrigation was reduced to 66, based on the system as constructed.)*

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

Mark Mayer

Mark Mayer, PE
Director of Office of Water

6/6/25

date

