

WATER PERMIT NO. 8335-3

Name of Applicant: Gayle Slattery and Dakota Eastern Inc

Address: PO Box 398, elk Point SD 57065 Phone: 605 356-3373

Amount of Water Claimed: 1.84 cfs Total Acres: 158 ac

Source of Water Supply: groundwater (2 wells)

Water to be used for: irrigation County: Union

Type of Waste Disposal System:

Location: 9 miles north of Elk Point

PRIORITY Date Received: 3-1-18 Application/License Fee: \$ 1050

Corrected Application Received: Period of Annual Use: April 1 – October 31

Remarks: utilizing existing well authorized by Water Right No. 2938-3

Diversion Point: center of SW 1/4 and SE 1/4 Sec
3-T92N-R50W

Land to be Irrigated: SE 1/4 Sec 3-T92N-R50W

Depth of Well: 220

Well Driller: James Wetmore

Remarks:

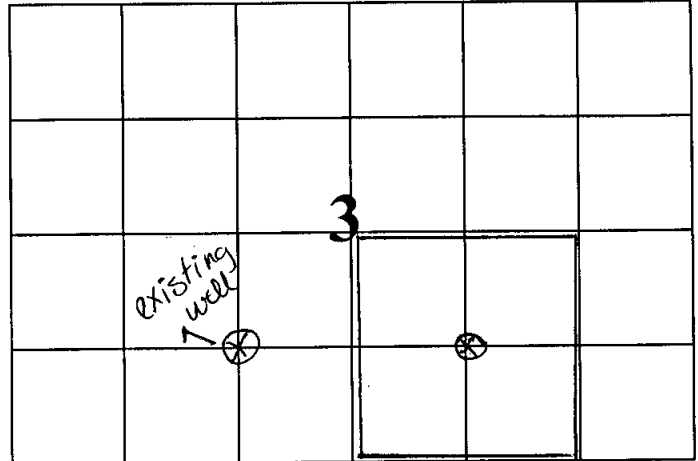
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 3-1-18

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



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

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8335-3</u> (office use only) Hydrologic Unit <u>10170203</u>
	Basin <u>Sioux River</u>
	Newspaper <u>Leader-Courier</u> <u>Press & Dakotan</u>

RECEIVED
MAR 01 2018
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 to Appear on Irrigation Permit Gayle Slattery, and Dakota Eastern, Inc., Gayle Slattery, President

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

Mailing Address P.O. Box 398 Elk Point SD 57025
(Address) (City) (State) (Zip Code)

Phone 605-356-3373 Mobile _____ Email _____

2. Amount of water claimed 1,84 *CFS or 830 **GPM ***AF Total Acreage 158
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Lower Vermillion:Missouri aquifer Water Right No. 2938-3

4. Location of point of diversion center,SW1/4 Sec3T92nR50w (existing) and center,SE1/4 Sec3.T92nR50w
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
(proposed); two wells total County Union

5. County or counties where water will be used Union

6. Annual period during which water is to be used April 1 to October 31

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
se of se of section 3, T92n R50w	38		
sw of se of section 3, T92n R50w	40		
nw of se of section 3, T92n R50w	40		
ne of se of section 3, T92n R50w	40		

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

Center pivot irrigation of the above listed cropland. This application would initially be provided water from a well owned by Maxene Bird in the center of the SW 1/4 of section 3, T92n,R50w, immediately adjacent to this proposed project (water right #2938-3). Mrs. Bird and Mrs. Slattery (present applicant) have agreed to this water sharing arrangement (Letter attached). We request a diversion rate above the statutory limit due to windshield wiper center pivot operation to accommodate differing crops on each of the properties.

I, Gayle Slattery, the applicant, certify under
Name of Person Title (if applicable)

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

**SOUTH DAKOTA
WATER PERMIT NO. 8335-3**

Date of first receipt of application March 1, 2018.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8335-3 to Gayle Slattery and Dakota Eastern Inc., PO Box 398, 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. 8335-3 appropriates 1.84 cubic feet of water per second from one existing well authorized by Water Right No. 2938-3 and one new well for irrigation of 158 acres located in the SE 1/4 Section 3-T92N-R50W. The permit holder is authorized to utilize the existing irrigation well located in the center of the SW 1/4 Section 3-T92N-R50W and may develop a new well to be completed into the Lower Vermillion Missouri Aquifer (approximately 220 feet deep) located in the center of the SE 1/4 Section 3; all in T92N-R50W. This site is located 9 miles north of Elk Point SD.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 – October 31.
3. The date from which applicant may claim right is March 1, 2018.
4. The date of approval of Permit No. 8335-3 is May 14, 2018.
5. One-fifth of the construction is to be completed on or before November 14, 2020.
6. All construction is to be completed on or before May 14, 2023.
7. Water is to be put to beneficial use on or before May 14, 2027.
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 wells 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 new well authorized by Permit No. 8335-3 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

MAY 17 2018

date



Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☒ Drilling new well(s) ☒ Using existing well(s)a) If new wells, how many 1 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)b) If existing wells, how many 1 Provide copy of log(s), if available. Drilled by James Wetmore

For either Existing or Proposed Wells:

c) Well Depth (required) 220 Depth to Top of Water Bearing Material 120 Depth to Water from Surface 100d) Distance to nearest domestic well on applicant's property NA Property owned by others >5000'**2. Wastewater Disposal System Information**

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

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

a) Surface Dimensions _____ Depth _____

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

4. Water Storage Dams

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

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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

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

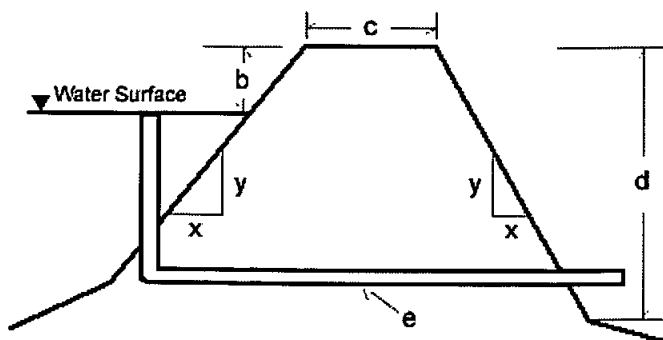
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



Feb. 26, 2018

We are all in agreement that the water from the SW1/4 sec 3-92-50 under the Maxine Bird irrigation permit can be pumped to supply irrigation water to the N1/2 SE1/4 sec 3-92-50 owned by Dakota Eastern Company and the S1/2 SE1/4 Sec 3 92-50 owned by Gayle Slattery.

Gayle Slattery
Gayle Slattery, Pres. Dakota Eastern Company

Gayle Slattery
Gayle Slattery

Maxine Bird
Maxine Bird



530437017

ANNUAL REPORT

South Dakota State Capitol
500 E. Capitol Ave
Pierre, SD 57501-5070
(605) 773-4845

Domestic Business Corporation
SDCL 59-11-24, 24.1

Please Type or Print Clearly in Ink
Please submit one Original
Make payable to the SECRETARY OF STATE

Filing Fee: \$50

Total Fee: \$50

2018
FILING YEAR

1. Business ID and Name:

DF007132
BUSINESS ID

DAKOTA EASTERN, LTD.
BUSINESS NAME

2. The jurisdiction under whose law it is formed **SOUTH DAKOTA**

3. The address of the principal executive office (business address):

Actual Street Address

**110 W MAIN
BOX 398
ELK POINT, SD 57025**

Mailing Address

**110 W MAIN
BOX 398
ELK POINT, SD 57025**

4. The South Dakota Registered Agent's Name:

South Dakota law permits the registered agent to be either (a) a noncommercial registered agent, (b) a commercial registered agent, or (c) an office holder.

(a) The South Dakota Noncommercial Registered Agent's name

Name **JOHN SLATTERY**

Actual Street Address in this State

**110 WEST MAIN
ELK POINT, SD 57025**

Mailing Address in this State

**PO BOX 398
ELK POINT, SD 57025-0398**

5. The names and business addresses of its principal officers.

Title	Name	Address
President	Gayle D Slattery	616 E St. Andrews Dakota Dunes, SD 57049
Secretary	John P Slattery	616 E St. Andrews Dakota Dunes, SD 57049

6. The names and business addresses of its directors (governors).

Name	Address
Gayle D Slattery	616 E St. Andrews Dakota Dunes, SD 57049
John P Slattery	616 E St. Andrews Dakota Dunes, SD 57049

7. Beneficial Owners (optional): A beneficial owner is a person who has or in some manner controls an equity security. Please consult an attorney for legal advice if you have any questions concerning this entry. Any question under this heading is considered a request for legal advice and the secretary of state's office is, by statute, not permitted, to provide legal advice.

No person may execute this report knowing it is false in any material respect. Any violation may be subject to a civil and/or criminal penalty (SDCL 47-1A-129; 22-39-36).

B0043-8467 11/02/2017 10:07AM Rec'd by SD SOS

Union

(I) WELL CONSTRUCTION

Location of well _____ 1/4 _____ 1/4 _____ Section 3 Township 92 Range 50

Well owner: RONALD BIRD (Name) ELK POINT, S.D. (Address)

Date well drilling completed 12-10-76 Purpose of well IRRIGATION
(domestic, irrigation, municipal, industrial, other)

Layers, top to top in feet	Description of layer	Depth to top of water producing aquifer _____ ft.
0-4'	top soil	Depth to static water level _____ 126' ft.
4- 126	CLAY	Name of producing aquifer (if known) _____
126- 217	SAND + GRAVEL	Total depth of drill hole _____ 217' ft.
		Depth to bottom of casing _____ 177' + 40' SCREEN ft.
		Casing Information: In the space below show kind, size, weight, lengths per diameter, etc., for production casing and surface casing, if used.
		177' 12" STEEL PIPE
		1275 wall
		Screen information: In the space below show length of screen below bottom of casing, diameter and kind of screen or casing perforations.
		410' 30 slot Johnson screen
		STAINLESS STEEL
		If a flowing well, flow at completed well _____ G.P.M.

Attach sheet if more space is needed

PUMP INSTALLATION

Company name and size of pump 7 stage 11 M Fairbanks HP. 100

Type of pump TURBINE Capacity of installed pump 900 G.P.M.

Depth of pump placement 160 ft., Date of pump installation 12-10-76

On some wells an air-tight water surface measuring tube is required: See Section 46.408 of Chapter 46.4, MINIMUM WELL CONSTRUCTION STANDARDS.

Show exact vertical length of water surface measuring tube, when installed _____ ft., tube diameter _____,
tube material _____.



James Wetmore
Name of Pump Installation Contractor

T92N R50W Section 3

Legend

 Bird Well

 Dakota Eastern 80 acres

 Gayle Slattery 80 acres

315th St

 Bird Well

 Proposed well

21

473rd Ave

474th Ave

R. Hammond CPG 82-72

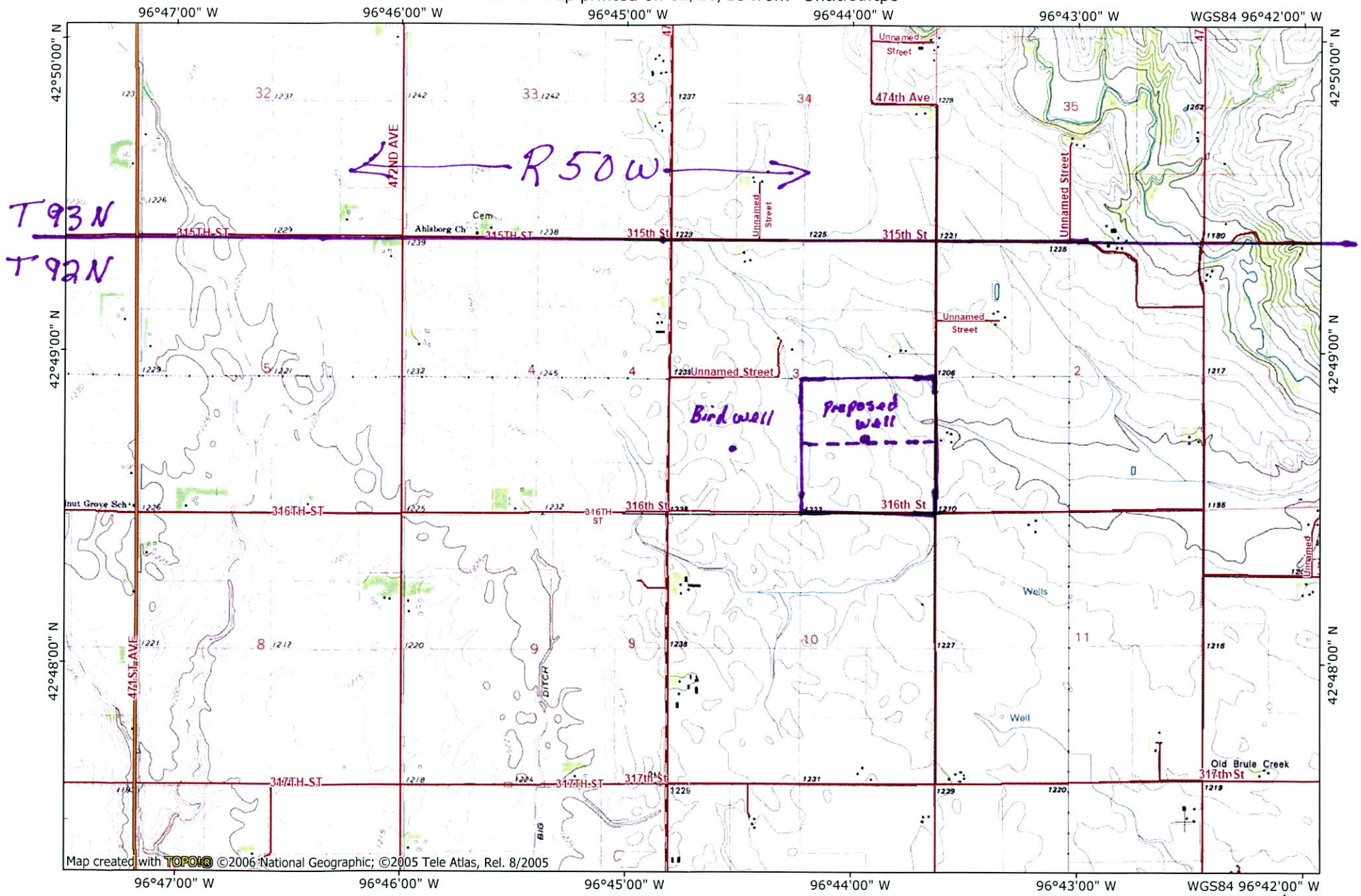
Google Earth

© 2018 Google

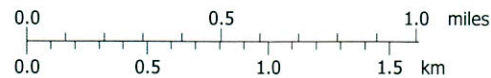


3000 ft

TOPO! map printed on 02/26/18 from "Untitled.tpo"



Map created with TOPO! ©2006 National Geographic; ©2005 Tele Atlas, Rel. 8/2005



WGS84 96°42'00\" W
TN MN
2 1/2°
02/26/18

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date March 2, 20 18

RECEIVED OF Reid & Collette Bird 31605 473rd 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>8335-3</u> 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. <u>8335-3</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	1050 00

No. **08613**

By

Jeanne Goodman
Chief Engineer

2721



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8335-3, Gayle Slattery and Dakota Eastern Inc.**

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. 8335-3, Gayle Slattery and Dakota Eastern Inc. c/o Gayle Slattery, President, PO Box 398, Elk Point SD 57065.

The Chief Engineer is recommending APPROVAL of Application No. 8335-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The wells approved under 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 new well authorized by Permit No. 8335-3 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, Chief Engineer
April 26, 2018

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 8335-3
GAYLE SLATTERY AND DAKOTA EASTERN INC.
APRIL 24, 2018

Water Permit Application No. 8335-3 proposes to irrigate 158 acres located in SE $\frac{1}{4}$ Sec. 3-T92N-R50W at a maximum instantaneous diversion rate of 1.84 cubic feet of water per second (cfs) from the Lower Vermillion Missouri aquifer from one well authorized by Water Right No. 2938-3 and one new well (approximately 220 feet deep) to be located in the center of the SE $\frac{1}{4}$ Sec. 3-T92N-R50W. Water Right No. 2938-3 authorizes the irrigation of 136 acres located in the SW $\frac{1}{4}$ Sec. 3-T92N-R50W from one well completed into the Lower Vermillion Missouri aquifer located in the approximate center of the SW $\frac{1}{4}$ Sec. 3-T92N-R50W at a maximum instantaneous diversion rate of 1.84 cfs. This irrigation project is located approximately 9 miles north of Elk Point, SD in Union County.

AQUIFER: Lower Vermillion Missouri (LVM)

Aquifer Characteristics:

The Lower Vermillion Missouri aquifer is a buried glacial outwash aquifer that is hydraulically connected to the Upper Vermillion Missouri aquifer to the north and the Missouri: Elk Point aquifer to the south, the underlying Dakota aquifer, and the Vermillion River (Niehus, 1994; Stephens, 1967; Stonesifer, 2013). The aquifer is comprised of materials ranging from coarse sand to coarse gravel (Niehus, 1994). The Lower Vermillion Missouri and the Missouri: Elk Point aquifers are essentially one large continuous outwash deposit and were delineated by Hedges and others (1982) at the transition from buried outwash (Lower Vermillion Missouri aquifer) to unburied outwash (Missouri: Elk Point aquifer). Hedges and others (1982) also delineated a boundary between the Upper Vermillion Missouri aquifer and the Lower Vermillion Missouri aquifer. After recent investigations, the boundary was identified to be some unspecified distance further south outside the scope of the investigations (Buhler, 2014; Holmes and Filipovic, 2015). Mathiowetz (2014) determined the Lower Vermillion Missouri aquifer likely underlies 106,000 acres at maximum based on the information available from Buhler (2014), and Holmes and Filipovic (2015). Mathiowetz's delineation of the aquifer is essentially Hedges and others' (1982) delineation minus Buhler's (2014) delineation of the Upper Vermillion Missouri: South aquifer.

The aquifer is primarily confined, but can be locally found under unconfined conditions especially near the Vermillion River in its flood plain (Niehus, 1994; Stephens, 1967). The Lower Vermillion Missouri aquifer averages 100 feet thick in Clay County (Niehus, 1994; Stephens, 1967). The well completion report for the existing well indicates sand and gravel were encountered 126 feet below ground surface. The static water level at the time of completion of the well (December, 1976) was 120 feet below ground surface. The Lower Vermillion Missouri aquifer is confined at the location of the existing well and would likely be confined at the proposed new well location. Figure 1 is a map of the historic aquifer boundaries of Hedges and others (1982) including observation wells currently labeled as completed into the Lower

Vermillion Missouri aquifer, the existing well location and proposed well location for this application, and water rights/permits.

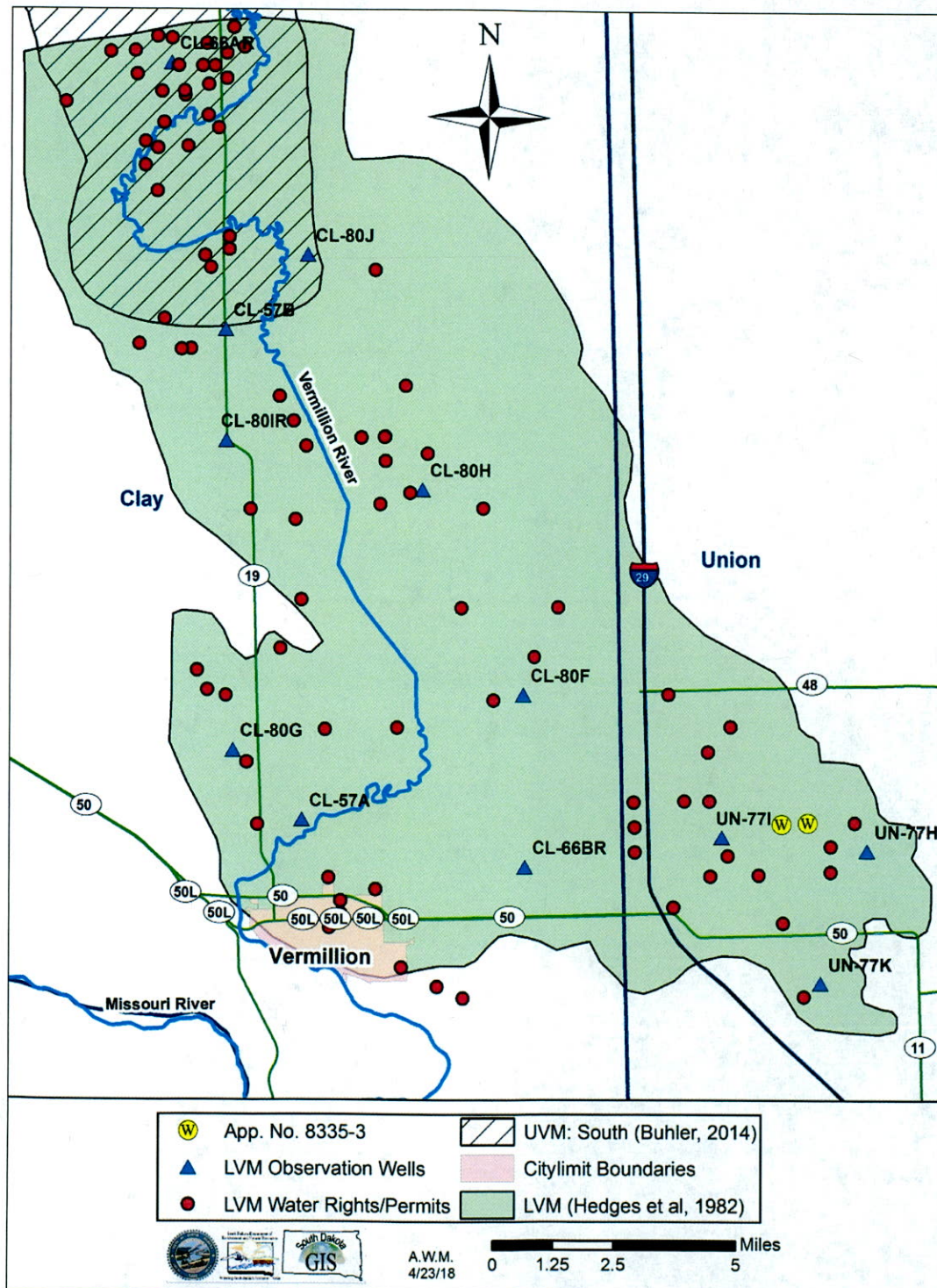


Figure 1- Map showing Lower Vermillion Missouri aquifer water rights/permits (Water Rights, 2018b), observation wells (Water Rights, 2018a), the well sites proposed by this application, the Lower Vermillion Missouri aquifer boundaries from Hedges and others (1982), and Buhler's (2014) Upper Vermillion Missouri: South boundary

SOUTH DAKOTA CODIFIED LAW (SDCL) 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for this applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest. This report will address the availability of unappropriated water and effects on existing rights from the aquifer that are pertinent to this application.

WATER AVAILABILITY:

This application proposes to appropriate water from the Lower Vermillion Missouri aquifer. The probability of unappropriated water available from the aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source." If the source of the water is older or lower than the Greenhorn Formation and a water distribution system has applied for a permit, the Board need not consider recharge compared to withdrawal. The aquifer is not stratigraphically lower than the Greenhorn Formation and the applicant is not a water distribution system. Therefore, the recharge compared to withdrawal does need to be considered.

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 in addition to other data to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge of the aquifer.

The DENR-Water Rights Program monitors 10 observation wells completed into the Lower Vermillion Missouri aquifer with 2 other observation wells that were within the Hedges and others' (1982) historic aquifer boundaries but are now within the Upper Vermillion Missouri: South aquifer boundaries as defined by Buhler (2014) (Water Rights, 2018a). Figures 2, 3, and 4 show the hydrographs for observation wells UN-77H, UN-77I, and UN-77K. These three observation wells are approximately 1.5 miles east, 1.5 miles west, and 3.3 miles south of the existing well and proposed well site for this application (Water Rights, 2018a). These three hydrographs are representative of the hydrographs for the other observation wells completed into the Lower Vermillion Missouri aquifer.

The observation well hydrographs show the cyclic periods of water level fluctuation caused by climatic conditions. The water levels rise during wetter periods when recharge exceeds withdrawals plus natural discharge and decline during drier periods when natural discharge plus withdrawals exceeds recharge. Mathiowetz (2014) noted the impacts the Missouri River had on water levels in the observation wells completed into the Missouri: Elk Point aquifer extend to the southern portion of the buried outwash of the Lower Vermillion Missouri aquifer. The overall slow decline of the water levels in the aquifers that are hydraulically connected to the Missouri River downstream of the Gavins Point dam have been tied to the ongoing entrenchment of the Missouri River downstream of the dam (Goodman, 2007; Iles, 1979; Stephens, 1967). Mathiowetz (2014) examined precipitation and irrigation data and compared the differences from

normal precipitation and average irrigation to changes in the water level as shown in the Lower Vermillion Missouri aquifer observation well hydrographs. Mathiowetz (2014) noted that some of the changes in water level of the aquifer were the result of the entrenchment of the Missouri River. However, the water level of the aquifer is still primarily affected by climatic conditions and not by pumping. The dominance of climatic conditions on overall changes in water level mean recharge to and natural discharge from the aquifer significantly exceeds withdrawals. Recognizing that natural discharge from an aquifer can be captured for pumping, the observation well data shows there is a reasonable probability unappropriated water is available for this proposed appropriation.

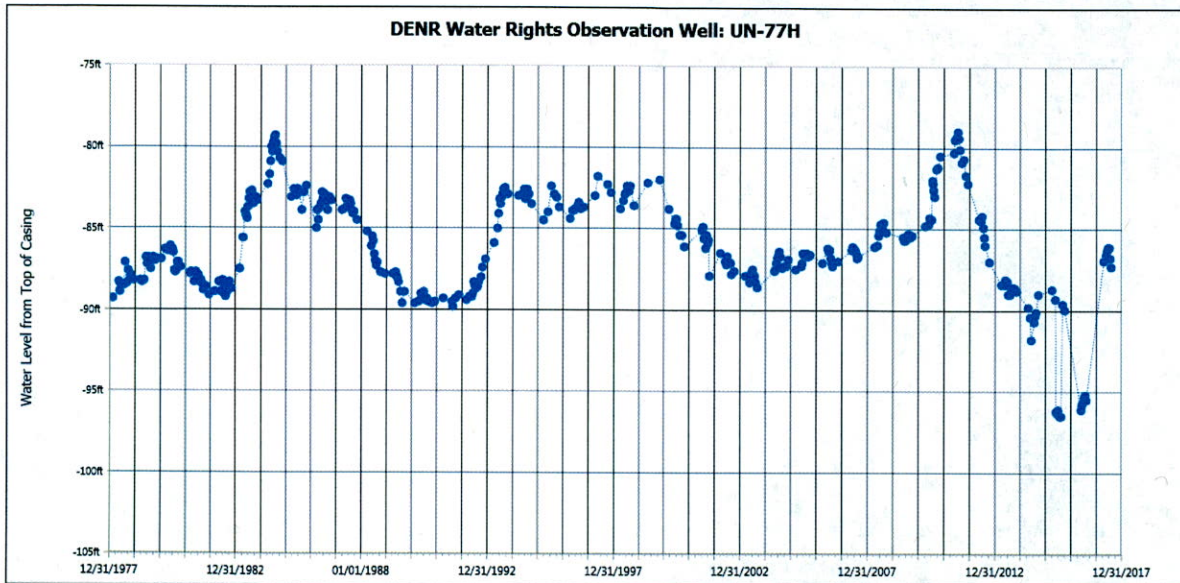


Figure 2- Hydrograph for observation well UN-77H located approximately 1.5 miles east of the well sites for Application No. 8335-3 (Water Rights, 2018a)

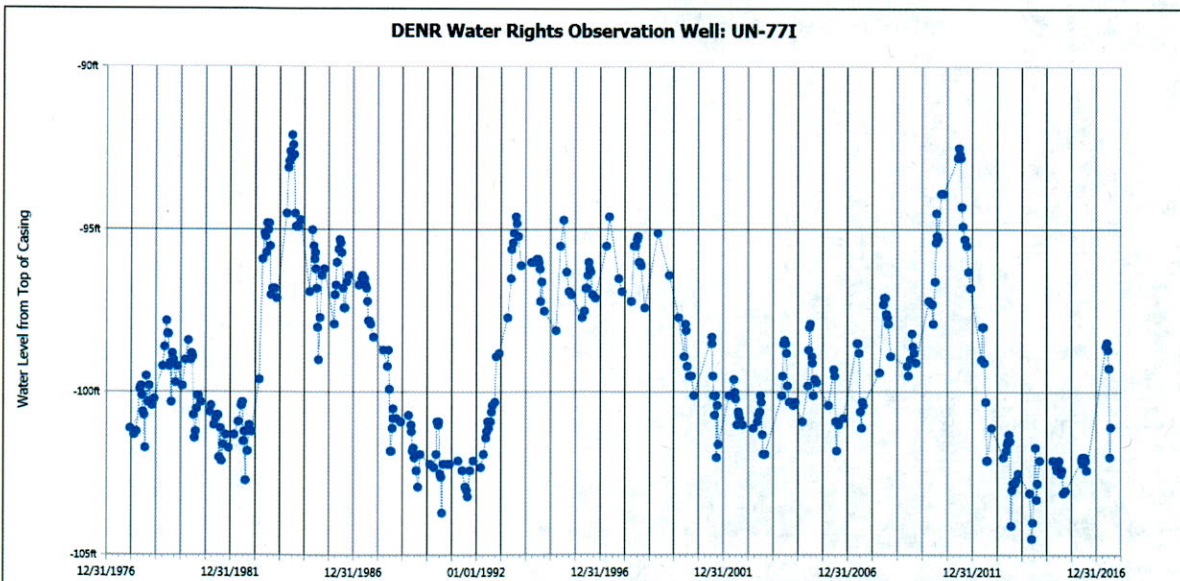


Figure 3- Hydrograph for observation well UN-77I located approximately 1.5 miles west of the well sites for Application No. 8335-3 (Water Rights, 2018a)

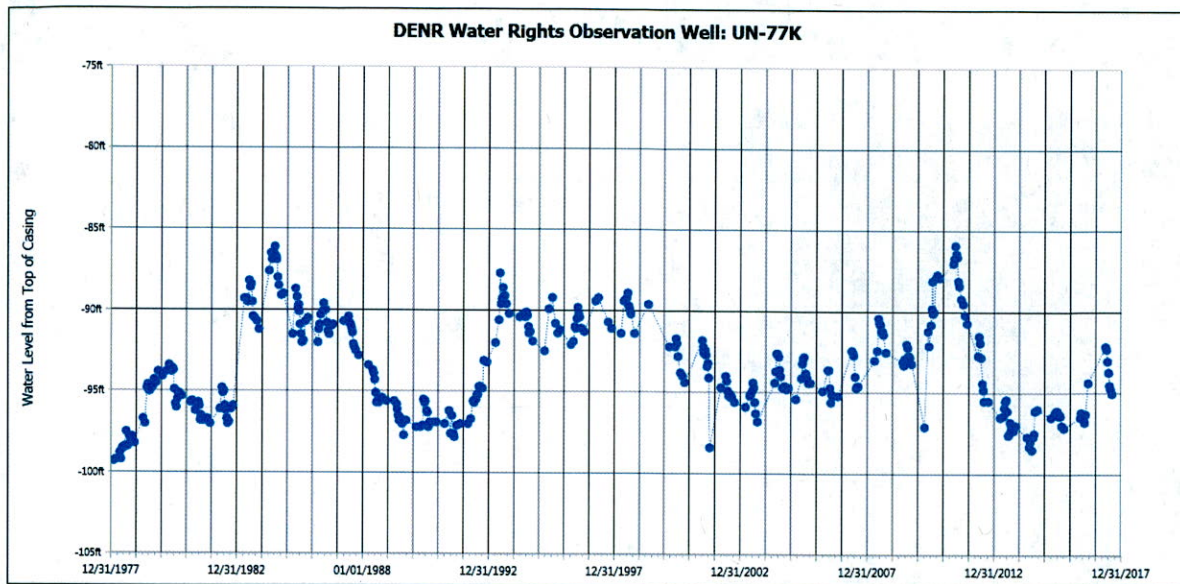


Figure 4- Hydrograph for observation well UN-77K located approximately 3.3 miles south of the well sites for Application No. 8335-3 (Water Rights, 2018a)

Hydrologic Budget:

Recharge:

The Lower Vermillion Missouri aquifer is recharged through infiltration of precipitation, especially in the unconfined portion of the aquifer in the Vermillion River floodplain, seepage from the Vermillion River, groundwater inflow from the Upper Vermillion Missouri aquifer, and leakage from the underlying Dakota aquifer (Niehus, 1994; Stephens, 1967). Hedges and others (1985) estimated a recharge rate of 3.8 inches per year (in/yr.) to the unconfined portions of the aquifer using observation well data analysis. Stonesifer (2013) recalculated Hedges and others (1985) estimate to be 4.58 in/yr. using the same methodology but using much more observation well data. Stonesifer (2013) noted that recharge and discharge/withdrawals occur simultaneously. Stonesifer (2013) notes that this results in a calculated recharge rate that is less than the actual recharge rate, because it is actually only accounting for the recharge rate in excess of discharge plus withdrawals. The unconfined area of the Lower Vermillion Missouri aquifer has been determined to be approximately 12,000 acres (Mathiowetz, 2014). Using Stonesifer's (2013) recharge rate and Mathiowetz's (2014) unconfined areal extent, recharge to the unconfined portion of the Lower Vermillion Missouri aquifer is estimated to be 4,580 ac-ft/yr.

Farmer (2017) estimated the recharge to the confined portion of the Lower Vermillion Missouri aquifer to be 1,960 ac-ft/yr. Farmer (2017) assumed the confined portions of the Lower Vermillion Missouri recharge at a rate similar to the confined portions of the Upper Vermillion Missouri which is hydrogeologically similar and used Mathiowetz's (2014) area for the confined portion of the aquifer. Hedges and others (1985) used a flow-net analysis to determine a recharge rate of 0.25 in/yr. to the confined portions of the Upper Vermillion Missouri aquifer. The total estimated average annual recharge to the Lower Vermillion Missouri aquifer is 6,540 ac-ft/yr.

Withdrawals:

Discharge from the Lower Vermillion Missouri aquifer occurs through well withdrawal, natural seepage to the Vermillion River when the stage of the river is lower than the potentiometric

surface of the aquifer, and groundwater outflow to the Missouri: Elk Point aquifer (Niehus, 1994; Stephens, 1967). There are 55 water rights/permits authorized to withdraw water from the Lower Vermillion Missouri aquifer within the boundaries of aquifer as currently delineated (Water Rights, 2018b). There are 30 water rights/permits within Hedges and others (1982) aquifer boundary that are also within Buhler's (2014) Upper Vermillion Missouri: South aquifer boundary that are still labeled as withdrawing water from the Lower Vermillion Missouri aquifer.

There are four non-irrigation permits within the current boundaries of the Lower Vermillion Missouri aquifer. These permits are estimated to pump 46.7 ac-ft/yr. There are two water rights (Water Right Nos. 3905-3 and 5979-3) that are completed within Hedges and others' (1982) historic Lower Vermillion Missouri aquifer boundary and Buhler's (2014) Upper Vermillion Missouri: South aquifer boundary. Table 1 shows the estimated average annual non-irrigation pumpage from the aquifer.

Table 1- Estimated average annual non-irrigation pumpage from the Lower Vermillion Missouri aquifer (Water Rights, 2018b)

PERMIT NO.	NAME	COUNTY	STATUS	USE	CFS	VOL. (AC-FT/YR)
1870-3	USD FACILITIES MGMT	CL	LC	INS	0.03	13.0
6397-3	SD DEPT OF TRANSPORTATION	UN	LC	INS	0.033	14.3
8222-3	SOUTHEAST FARMERS COOP	UN	PE	COM	0.167	18.4
8257-3	THEIN WELL CO INC	CL	PE	COM	0.089	1
					Total	46.7
3905-3*	CLAY RURAL WATER SYSTEM INC	CL	LC	RWS	2	434.4
5979-3*	CLAY RURAL WATER SYSTEM INC	CL	LC	RWS	2	307
					Total	741.4
* = Within Hedges and others' (1982) LVM boundary and Buhler's (2014) UVM:S boundary						

The average annual irrigation pumpage from the currently defined boundaries of the Lower Vermillion Missouri aquifer is 1,154.6 ac-ft/yr. (Water Rights, 2018d). The historic annual average irrigation pumpage for all of the water rights/permits labeled as withdrawing water from the Lower Vermillion Missouri aquifer within Hedges and others' (1982) historic aquifer boundaries is 1,732.4 ac-ft/yr. (Water Rights, 2018d). Table 2 shows the historic irrigation pumpage from both the current and historical boundaries. There are a number of domestic wells on file that appear to be completed into the Lower Vermillion Missouri aquifer (Water Rights, 2018c). However, due to the limited diversion rate of domestic wells and the presence of rural water systems in the area, the use by domestic wells completed into the Lower Vermillion Missouri aquifer is negligible to the hydrologic budget of the aquifer.

Table 2- Historic Lower Vermillion Missouri aquifer irrigation pumpage (Water Rights, 2018d)

LVM based on current boundary of UVM:S (Mathiowetz, 2014)				Historical boundary of LVM (Hedges et. al, 1982)		
Year	No. of Permits Reporting	Appropriation (ac-ft)	Pumpage (ac-ft)	No. of Permits Reporting	Appropriation (ac-ft)	Pumpage (ac-ft)
2016	51	15300.82	1779	79	23048.22	2187.54
2015	51	15362.82	1491.2	79	23110.22	1943.44
2014	48	14790.82	1006.38	75	22298.22	1576.28
2013	44	13438.9	2856.49	71	21090.3	4109.1
2012	32	10703.7	3355.27	61	19865.7	7759.51
2011	32	10703.7	1219.42	62	19987.7	2195.06
2010	29	10277.7	133.95	59	19561.7	144.56
2009	29	10277.7	444.86	58	18961.7	482.64
2008	26	8949.45	895.96	55	17587.5	4301.25
2007	24	8425.45	1282.46	50	16655.5	2909.12
2006	24	8425.45	1681.97	43	15254.45	2647.51
2005	25	8905.45	1056.36	45	15844.5	1410.24
2004	25	8905.45	1117.9	39	15013.5	1747.48
2003	26	9439.45	1311.99	40	15199.5	1800.56
2002	26	9439.45	1096.65	40	15199.5	1762.32
2001	24	8771.45	1654.56	38	14879.5	2036.96
2000	24	8771.45	1513.59	38	14879.5	2041.72
1999	24	8771.45	659.12	38	14879.5	900.63
1998	24	8771.45	752.51	36	14150.5	1032.91
1997	25	8819.14	542	36	13656.1	1085
1996	25	8819.14	572.48	36	14096	997.6
1995	26	9032.34	265.03	37	14307.2	506.61
1994	26	9032.34	268.92	39	14673.7	517.28
1993	32	11696.24	0	39	15308	506.61
1992	32	11696.24	136.7	39	15308.2	168.8
1991	32	11696.24	1365.1	39	15308.2	1670.1
1990	31	12045.34	1622.2	38	15657.3	2113.2
1989	31	12045.34	1786.1	38	15657.3	2301.2
1988	32	12477.34	1765.6	38	15657.3	2083.8
1987	31	12255.34	993.4	37	15435.3	1115.4
1986	38	16865.34	1007.5	45	20477.3	1047.5
1985	39	17049.34	1192.2	46	20661.3	1328.2
1984	40	17412.34	691	47	20754.3	691
1983	31	12138.34	716.3	38	15480.3	716.3
1982	30	12250.84	798.35	37	15862.8	871.04
1981	42	19661	1499.84	43	23003	1543
1980	40	19341	2317.72	47	22683	2417
1979	42	19341	1024.42	49	22683	1163
Min	24	8425.45	0	36	13656.1	144.56
Max	51	19661	3355.27	79	23110.22	7759.51
Avg	31.9	11897.5	1154.6	46.7	17477.3	1732.4

Hydrologic Budget:

The estimated average annual recharge to the Lower Vermillion Missouri aquifer as currently defined by Mathiowetz (2014) is estimated to be 6,540 ac-ft/yr. The estimated average annual use within the current aquifer boundary is 1,201.3 ac-ft/yr. Even if you add in the use by the water rights/permits labeled as Lower Vermillion Missouri aquifer but that are within the boundary of the Upper Vermillion Missouri: South aquifer as defined by Buhler (2014), the estimated average annual withdrawal from the aquifer is 2,520.5 ac-ft/yr. This application is estimated to use an irrigation application rate of less than 10 inches per acre. That is an estimated annual use of 131.7 ac-ft. The estimated average annual use plus the estimated use by this application is much less than the estimated average annual recharge. Therefore, there is a reasonable probability unappropriated water is available for this proposed appropriation.

EXISTING WATER RIGHTS:

There are 8 appropriative wells authorized to withdraw water from the Lower Vermillion Missouri aquifer within approximately 1.5 miles of the existing well and proposed well site for this application (Water Rights, 2018b). There are also a number of domestic wells on file with the DENR-Water Rights Program within approximately 1.5 miles of this application's well sites that appear to be completed into the Lower Vermillion Missouri aquifer (Water Rights, 2018c).

Observation wells UN-77H and UN-77I are both within one mile of at least three high capacity appropriative wells (see Figure 1). The hydrographs for these observation wells, Figures 2 and 3, respectively, document there is minimal drawdown created by pumping nearby high capacity wells. Furthermore, there is a history of irrigation in the area with no complaints filed with the DENR-Water Rights Program regarding well interference since 1989. The 1989 complaint investigation determined the affected well was likely having issues that were not caused by well interference from a nearby irrigation well. Therefore, due to low drawdown created by pumping high capacity wells completed into the Lower Vermillion Missouri aquifer and the development of irrigation from the aquifer without a history of well interference complaints, there is a reasonable probability this proposed diversion can be made without adversely impacting existing appropriative or domestic users.

Since the Lower Vermillion Missouri aquifer is confined at the well locations for this application, some drawdown is expected as a result of pumping this proposed diversion. In the past, the Water Management Board has recognized to place water to maximum beneficial use, a certain amount of drawdown may occur. The Water Management Board has promulgated rules that allow water to be placed to maximum beneficial use without the necessity of maintaining artesian head pressure for domestic use. The Water Management Board 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".

The Water Management Board considered the delivery of water by artesian head pressure versus maximum beneficial use of water issued for Water Right No. 2313-2 for Coca-Cola Bottling Company of the Black Hills. The Water Management Board adopted Findings of Facts and Conclusions of Law that noted reservation of artesian head pressure for delivery of water would be inconsistent with SDCL 46-1-4 which states, "general welfare requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable..." (Water Rights, 1995). Furthermore, the Water Management Board found if increased cost or decreased production as a result of impacts on artesian head pressure by legitimate users is to be considered an adverse impact it would also be in conflict with SDCL 46-1-4 (Water Rights, 1995). With that in mind, some existing well owners may need to lower their pumps to accommodate for deeper water levels depending on the specific characteristics of the Lower Vermillion Missouri aquifer at their location. However, when considering the statutes (SDCL 46-1-4 and 46-6-6.1), rule (ARSD 74:02:04:20(7)), the history of irrigation in the area without

complaints of well interference, and minimal drawdown created by pumping high capacity wells in the area of this application as shown by the hydrographs for UN-77H and UN-77I, well interference from this proposed diversion is not expected to cause an adverse impact. Therefore, there is a reasonable probability that any interference created by pumping this proposed appropriation will not be adverse.

CONCLUSIONS:

1. Application No. 8335-3 proposes to irrigate 158 acres in Union County using an existing well authorized by Water Right No. 2938-3 and one new well to be completed into the Lower Vermillion Missouri aquifer at a maximum instantaneous diversion rate of 1.84 cfs.
2. Water Right No. 2938-3 authorizes the irrigation of 136 acres at a maximum instantaneous diversion rate of 1.94 cfs from one well completed into the Lower Vermillion Missouri aquifer in Union County.
3. Based on the observation well data and hydrologic budget, there is a reasonable probability unappropriated water is available for this proposed appropriation.
4. There is a reasonable probability the appropriation proposed by this application can be made without adversely impacting existing appropriative or domestic users.



Adam Mathiowetz, PE
SD DENR-Water Rights Program

REFERENCES:

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- Water Rights. 2018a. Observation Well Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
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AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

RECEIVED

MAY 07 2018

WATER RIGHTS
PROGRAM

GAYLE SLATTERY AND DAKOTAN EASTER INC
PO BOX 398
TRENT SD 57065

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

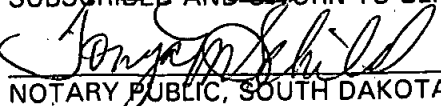
KELLY HERTZ, BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT (S)HE IS THE MANAGING EDITOR OF YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID
COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
5+3 NOTICE OF APPLICATION

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 3rd DAY OF May, 2018
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$28.38 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: 05/03/2018

FILED ON: 05/03/2018


SUBSCRIBED AND SWORN TO BEFORE ME THIS 3rd DAY OF May, 2018


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

Ad text : 5+3

NOTICE OF APPLICATION NO. 8335-3 to Appropriate Water

Notice is given that Gayle Slattery and Dakota Eastern Inc., PO Box 398, Elk Point SD 57065 have filed an application for a water permit to appropriate 1.84 cubic feet of water per second from one existing well authorized by Water Right No. 2938-3 and one new well for irrigation of 158 acres located in the SE 1/4 Section 3-T92N-R50W. The applicant proposes to utilize the existing irrigation well located in the center of the SW 1/4 Section 3-T92N-R50W and may develop a new well to be completed into the Lower Vermillion Missouri Aquifer (approximately 220 feet deep) located in the center of the SE 1/4 Section 3; all in T92N-R50W. This site is located 9 miles north of Elk Point SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8335-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineers recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352) and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by May 14, 2018.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Steven M. Pirner, Secretary, Department of Environment and Natural Resources.
Published once at the total approximate cost of \$28.38.

AFFIDAVIT OF PUBLICATION

State of South Dakota)

:ss

County of Union)

Bruce L. Odson,

the publisher 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 No. 8335-3

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 3 day of May, 2018

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

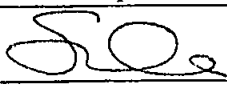
\$ 28.58, that the full amount of the fee charged insures to the benefit of the publisher of the said newspaper, that no agreement or understanding for the division thereof has been made with any other person and that no part thereof has been agreed to be paid to any other person whomsoever.



Subscribed and sworn to before me

this 3 day of May, 2018

My commission expires 7-12-23



Notary Public

NOTICE OF APPLICATION NO. 8335-3 TO APPROPRIATE WATER

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Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

Publish May 3, 2018

Published once, at the total approximate cost of \$28.58 18-3-93

Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, April 26, 2018 1:13 PM
To: 'Tera Schmidt'
Subject: 8335-3, Gayle Slattery
Attachments: 8335-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on May 3, 2018.

Gayle Slattery and Dakota Eastern Inc., PO Box 398, Elk Point SD 57065 (605 356-3373) has been notified to contact you to authorize publication and arrange for payment.

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

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

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



Schlaak, Karen

From: Schlaak, Karen
Sent: Thursday, April 26, 2018 1:12 PM
To: G5 (leader1@iw.net)
Subject: 8335-3, Gayle Slattery
Attachments: 8335-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on May 3, 2018.

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

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





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

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

April 26, 2018

Gayle Slattery
and Dakota Eastern Inc.
PO Box 398
Elk Point SD 57065

Dear Mr. Slattery:

Water Permit Application No. 8335-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Leader Courier printed at Elk Point SD (Ph # 605-356-2632) and the Press & Dakota printed at Yankton SD (Ph # 605-665-7811). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper(s) to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,


Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

NOTICE OF APPLICATION NO. 8335-3 to Appropriate Water

Notice is given that Gayle Slattery and Dakota Eastern Inc., PO Box 398, Elk Point SD 57065 have filed an application for a water permit to appropriate 1.84 cubic feet of water per second from one existing well authorized by Water Right No. 2938-3 and one new well for irrigation of 158 acres located in the SE 1/4 Section 3-T92N-R50W. The applicant proposes to utilize the existing irrigation well located in the center of the SW 1/4 Section 3-T92N-R50W and may develop a new well to be completed into the Lower Vermillion Missouri Aquifer (approximately 220 feet deep) located in the center of the SE 1/4 Section 3; all in T92N-R50W. This site is located 9 miles north of Elk Point SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8335-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

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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

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

MAY 17 2018

Gayle Slattery and Dakota Eastern Inc.
PO Box 398
Elk Point SD 57025

Dear Mr. Slattery:

Enclosed is Water Permit No. 8335-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

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

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

enclosures

8335-3
RECEIVED
AUG 02 2018
WATER RIGHTS
PROGRAM

NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE

Date 7/31/18

TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

FROM: Gayle Slattery & Dakota Eastern Inc.
(name)
Box 398
(address)
Elk Point, SD 57025 605-386-3373
(city, state, zip) (phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

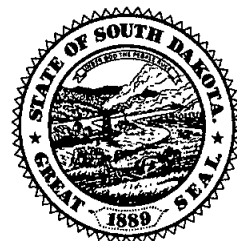
Water Permit No. 8335-3 states that the water use system is to be constructed by 5/14/23, and water is to be put to beneficial use by 5/14/27.
(date) (date)

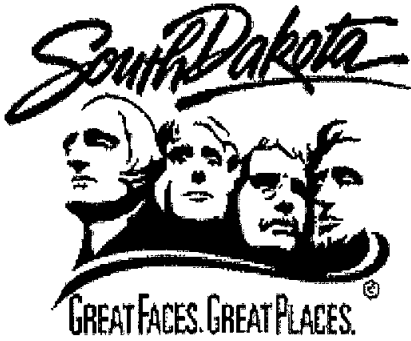
The water use system was completed on 7/27/18.
(date)

Applying the water to beneficial use was completed on 7/27/18.
(date)

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

Gayle Slattery
(signature)
by Gayle Slattery
7-98 pres. Dakota Eastern Ltd





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

August 2, 2018

8335-3

Gayle Slattery
Dakota Eastern Inc
PO Box 398
Elk Point SD 57025-0398

Dear Mr. Slattery:

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

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

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

Sincerely,

A handwritten signature in cursive script that reads "Genny McMath".

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

**Report of Examination of Works and/or Application of Water to
Beneficial Use
For Permit No. 8335-3**

I have this day, February 26, 2025, made a thorough examination of the water use system constructed by Gayle Slattery and Dakota Eastern of PO Box 398, Elk Point SD 57025 holder of Permit No. 8335-3, bearing the priority of March 1, 2018 authorizing the diversion of 1.84 cu. ft. per second of the waters of groundwater, Lower Vermillion:Missouri Aquifer for irrigation purposes, in Union County.

Inspection contact & relationship Brennan Bird, operator

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Wetmore
- 2) No. of Wells 1
- 3) Depth(s) 217 feet
- 4) Well log is available Y If no, explain in comments

Casing:

- 1) Diameter 12 inches
- 2) Length 177 feet
- 3) Type steel

Screen:

- 1) Type stainless
- 2) Length 40 feet
- 3) Static water level 126 feet

Pump:

- 1) Make Grundfos
- 2) Model submersible
- 3) Capacity 800 GPM

Motor:

- 1) Make Grundfos
- 2) Model No. submersible
- 3) Horsepower rating 40 hp

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

- 1) Type PVC
- 2) Size 8 inches
- 3) Length 2640 feet

Comments: none

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Valley
- 2) Overall length 1280 feet
- 3) Number of towers 7
- 4) End gun Y
- 5) Capacity 800 GPM

Chemigation Equipment:

- 1) Does chemigate N

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Y
List any extended period of nonuse: none
- 3) Exceptions to compliance are: none

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: from the SW corner of Sec 3 T92N-R50W 1320 ft N and 1320 ft E, latitude of 42.81176 and longitude of -96.74181 , center of SW ¼.
2. The works are capable of diverting and conveying to the place of use 1.78 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 Sec 3 T92N-R50W NW ¼ SE ¼ - 33 ac NE ¼ SE ¼ - 33 ac SE ¼ SE ¼ - 26 ac SW ¼ SE ¼ - 33 ac comprising a total of 125 acres of land and the license should be issued for 1.78.
All structures, wells and lands on map Y
If no, describe: none

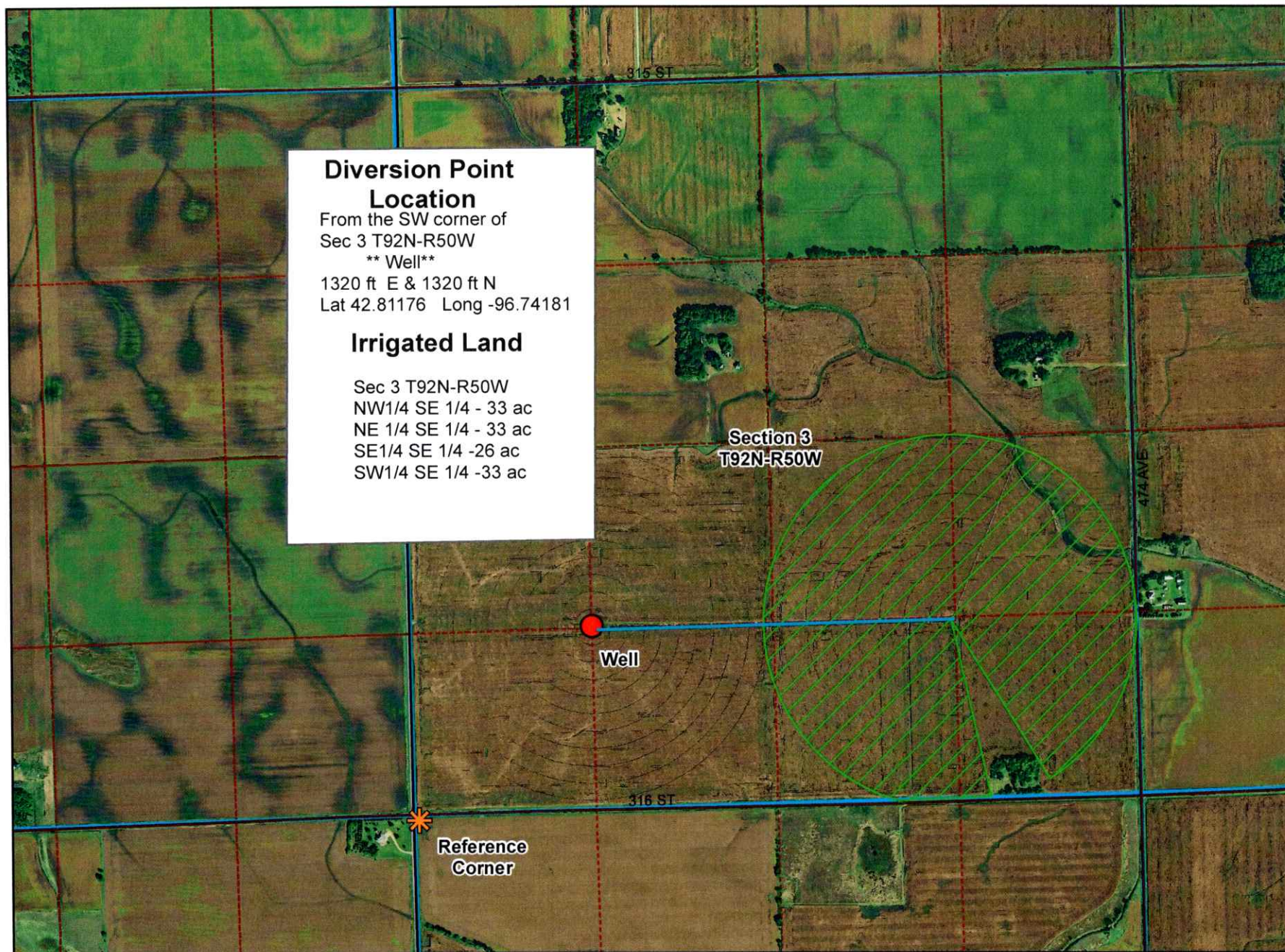
F. Comments or other permit(s) associated with the project:

Only used the existing well authorized by Water Right No. 2938-3 located in SW 1/4.



Mark D Rath
Water Right Inspector
DANR, Water Rights Program

Date report completed: May 8, 2025



0 0.15 0.3 0.6 0.9 1.2 Miles



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUN 06 2025

Gayle Slattery & Dakota Eastern Inc
PO Box 398
Elk Point, SD 57025

No. 8335-3

Dear Mr. Slattery:

Enclosed is Water License No. 8335-3. 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

Note: The well utilized for Water Right No. 8335-3 is authorized under Water Right No. 2938-3. Water Right No. 8335-3 does not guarantee access to the well, such arrangements should be made with the proper landowner.

Note: The number of acres authorized for irrigation under Water Right No. 8335-3 has been reduced to 125, and the maximum diversion rate has been reduced to 1.78 cfs (800 gpm), based on the system as constructed.

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8335-3**

(1) Gayle Slattery and Dakota Eastern Inc, PO Box 398, Elk Point, SD 57025, made Application No. 8335-3, March 1, 2018, for a water permit to divert 1.84 cubic feet of water per second from groundwater, two wells (Lower Vermillion Missouri Aquifer) one authorized by Water Right No. 2938-3 and one new well, Union County, South Dakota for irrigation purposes. Permit No. 8335-3, with a priority date of March 1, 2018, was approved May 14, 2018, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before May 14, 2023, and for the application to beneficial use of water on or before May 14, 2027.

The permit holders submitted a Notice of Completion of Works and Application of Water to Beneficial Use form on August 2, 2018. The Notice stated the diversion system was completed on July 27, 2018 and the water was placed to beneficial use on July 27, 2018.

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

- 1,320 feet N and 1,320 feet E from the SW corner of Section 3, T92N, R50W
(approx. center of SW ¼) (Latitude 42.81176 and Longitude -96.74181)

(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: April 1 – October 31.

(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 3, T92N, R50W
NE ¼ SE ¼ - 33 acres
NW ¼ SE ¼ - 33 acres
SW ¼ SE ¼ - 33 acres
SE ¼ SE ¼ - 26 acres
Total – 125 acres

(5) Pursuant to South Dakota Water Law 46-5-30.1 Gayle Slattery and Dakota Eastern Inc, the holders and/or owners of Water Right No. 8335-3 are issued a license to appropriate water, the right to use 1.78 cubic feet of water per second from groundwater, one well (Lower Vermillion Missouri Aquifer) authorized by Water Right No. 2938-3, with a priority date of March 1, 2018, 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. 8335-3 and subject to the following qualifications:

1. The wells 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 wells having prior water rights.

continued

2. The new well authorized by Permit No. 8335-3 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. *(No new well was constructed. Full diversion is obtained from the well authorized under Water Right No. 2938-3.)*

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



Mark Mayer, PE
Director of Office of Water



date





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

October 24, 2025

8335-3

Dakota Eastern Inc
c/o Gayle Slattery
616 E St Andrews Cir
N Sioux City SD 57049

Dear Ms. Slattery:

Enclosed is a "Notice" dated October 8, 2025, concerning the 2025 Irrigation Questionnaire.

The notice was originally mailed to you at PO Box 398, Elk Point SD 57025. The post office notified our office that your address has changed, and your records have been updated accordingly.

This is a time sensitive matter. Please complete and return the enclosed questionnaire or submit your report online at <https://danr.sd.gov/iq/> using this password **DJCKVE**.

If this change of address is in-correct, please contact our office immediately to update your contact information.

Sincerely,

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

enclosures

153 NFE 1141023C0010/18/25
RETURN TO SENDER
SLATTERY LAW
616 E SAINT ANDREWS CIR
N SIOUX CITY SD 57049-5552
RETURN TO SENDER