

WATER PERMIT NO. 7944-3

Name of Applicant: **Joe Eckert – Blue Silo Pheasant**

Address: **2509 S Roosevelt Circle, Sioux Falls SD 57106** Phone: **605 376-0963**

Amount of Water Claimed: **1.78 cfs** Total Acres: **160 acres**

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

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

Type of Waste Disposal System:

Location: **8 miles northwest of Bruce**

PRIORITY Date Received: **1-16-14** Application/License Fee: **\$1050**

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

Remarks:

Diversion Point: **approximate center of NE 1/4 Sec**
12-T112N-R52W

Land to be Irrigated: **NE 1/4, N 1/2 SE 1/4 Sec 12-**
T112N-R52W

Depth of Well: **70 feet deep**

Well Driller:

Remarks:

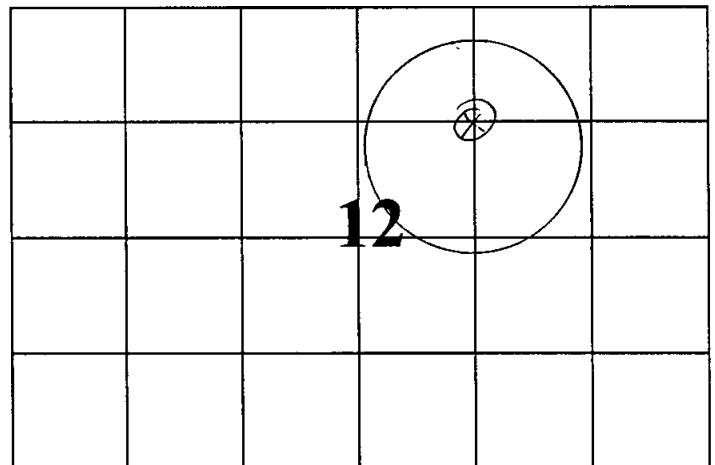
Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **1-16-14**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



FORM 2: Application for irrigation in South Dakota

(type or print)

Mail to:
PMB 2020
DENR - Water Rights
523 E Capitol Ave
Pierre, SD 57501-3182
ph. (605) 773-3352

No. 7944-3 (office use only)
Hydrologic Unit 10170201
Basin Vermillion River
Newspaper Brookings Register Box 177
Brookings 57086 605-692-6271

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JAN 16 2014

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 Joe Eckert- Blue Silo Pheasant

(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent

(name and complete address if different than above name)

Mailing Address 2509 S Roosevelt Circle Sioux Falls SD 57106
376-0963 (Address) (City) (State) (Zip Code)

Home Phone 605-793-2240 Cell _____ Email _____

2. Amount of water claimed 1.78*CFS or 800 **GPM ***AF Total Acreage 160
(*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply 1 NEW WELL

4. Location of point of diversion NE 1/4 N 1/2 SECTION 12 T112N 52W (approximate center)
(example - 3 wells in SW1/4 NE1/4 section 12-T114N-R53W)

County BROOKINGS

5. County or counties where water will be used BROOKINGS

6. Annual period during which water is to be used MAY-SEPT 30

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

Land Description	Acres	Land Description	Acres
<u>NE 1/4 Sec 12 - T112N - R52W</u>	<u>140</u>		
<u>NW 1/4 SE 1/4</u>	<u>10</u>		
<u>NE 1/4 SE 1/4</u>	<u>10</u>		

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

IRRIGATION PIVOT AND NEW WELL

I, Joe Eckert Blue Silo Pheasant LLC, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

**SOUTH DAKOTA
WATER PERMIT NO. 7944-3**

Date of first receipt of application January 16, 2014.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7944-3 to Joe Eckert – Blue Silo Pheasant, 2509 S Roosevelt Circle, Sioux Falls SD 57106 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. 7944-3 appropriates 1.78 cubic feet of water per second from one well to be completed into the Big Sioux:Brookings Aquifer (70 feet deep) located in the approximate center of the NE 1/4 Section 12 for irrigation of 160 acres located in the NE 1/4, N 1/2 SE 1/4 Section 12; all in T112N-R52W.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: May 1 – September 30.
3. The date from which applicant may claim right is January 16, 2014.
4. The date of approval of Permit No. 7944-3 is March 31, 2014.
5. One-fifth of the construction is to be completed on or before September 30, 2016.
6. All construction is to be completed on or before March 31, 2019.
7. Water is to be put to beneficial use on or before March 31, 2023.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7944-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: 

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

APR 24 2014

date



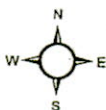


United States Department of Agriculture Farm Service Agency

= TELEPHONE POLES



South Dakota Brookings County



1:7,951

USDA FSA maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership, rather it depicts the information provided directly from the producer and/or the 2008 orthorectified imagery for South Dakota. The producer accepts the data 'as is' and assumes all risks associated with its use. The USDA Farm Service Agency assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data outside of FSA Programs.

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

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Farm Number
6669

JAN 16 2014

Township-Range
112N52W12

WATER RIGHTS
PROVISION

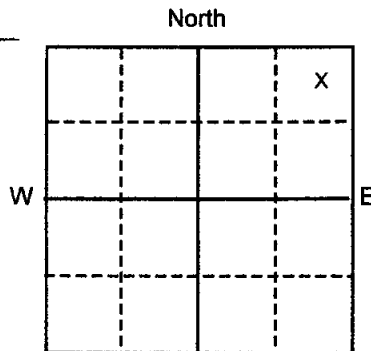
Legend

- Restricted Use
- ▽ Limited Restrictions
- Exempt from Conservation Compliance Provisions
- CLU Field Boundary
- Tract Boundary

Apr 03, 2009

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE ¼ N ¼ Sec 12 Twp 112N Rg 52WCounty BrookingsPlease mark well
location with an "X"

Well Completion Date

12-2-2013

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

PROPOSED USE:

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

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
40.0 LB/FT	3.00 IN	0.0 FT	60.0 FT	6.00 IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Grt Well DF	3	54.0 Lb/gal	0.0 Ft	60.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure _____

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 3.00 Inches Length 10.0 FeetMaterial PVCSlot Size 80 Set From 60.0 Feet to 70.0 Feet

Other information _____

WAS A PACKER OR SEAL USED? ☐ Yes ☒ No

If so, what material? _____

Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How? _____☐ No, Why Not? _____Lab to which water
quality sample sent for analysisWell Owner: JOE ECKERTBusiness Name: BLUE SILO PHEASNATAddress: 2509 S ROOSEVELT CIRCLECity, State, Zip: SIOUX FALLS SD 57106

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	1
YELLOW CLAY	1	3
MIXED	3	10
BLUE CLAY	10	36
GREY MED/COURSE	36	50
MED	50	65
ROCKS	65	70

STATIC WATER LEVEL 6.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☒ Pumped Describe: AIR LIFT 100 GPM ++☐ Bailed☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

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JAN 16 2014

WATER RIGHTS
PROGRAMThis well was drilled under license # 689 and this
report is true and accurate.Drilling firm: KAISER WELL DRILLING INC

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Joe Eckert Blue Silo Pheasants LLC
 Date: 12/14/13

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 1/16, 20 14

RECEIVED OF Blue Silo Pheasants LLC J Eckert 2509 S Roosevelt Cr S Falls SD 57106

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

Fee for Application for Permit No. <u>7944-3</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>7944-3</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. **06643**

By James Goodman
Chief Engineer

Water Rights Program - File Documentation

NAME: Joe Eckert – Blue Silo Pheasant

ADDRESS: Sioux Falls

DATE: 1-16-14 **COUNTY:** BG **TELEPHONE:** 605 376-0963

RE: Pending application

COMMENTS:

I called Joe Eckert to clarify the number of acres to be irrigated. Mr. Eckert stated he would like to apply for 160 acres. He stated the pivot may swing down and cover a few acres in the upper half of the N 1/2 SE 1/4 Section 12-T112N-R52W. Mr. Eckert stated he would agree with 20 acres located in the N 1/2 SE 1/4 and 140 acres located in the NE 1/4 Section 12.

Mr. Eckert stated the proposed well location would be the approximate center of the NE 1/4 Section 12-T112N-R52W.



Karen Schlaak
Water Rights Program



**DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES**

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



**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7944-3, Joe Eckert, Blue Silo Pheasant**

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. 7944-3, Joe Eckert, Blue Silo Pheasant, 2509 S Roosevelt Circle, Sioux Falls SD 57106.

The Chief Engineer is recommending APPROVAL of Application No. 7944-3 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. 7944-3 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
March 11, 2014

REPORT TO THE CHIEF ENGINEER

WATER PERMIT APPLICATION NO. 7944-3

Joe Eckert

February 7, 2014

Water Permit Application No. 7944-3 proposes to divert water at a maximum rate of 1.78 cubic feet per second (cfs) from a single well completed into the Brookings Management Unit of the Big Sioux aquifer at a depth of approximately 70 feet below ground surface. The well will be located near the center of the NE ¼ of Section 12, T112N-R52W. The water will be used to irrigate 160 acres located in the NE ¼ (140 acres), N ½ SE ¼ (20 acres) of the same section.

AQUIFER: Brookings Management Unit of the Big Sioux aquifer (BS: B)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Brookings Management Unit of the Big Sioux aquifer underlies approximately 323,000 acres in Brookings, Codington, Deuel, Hamlin, Kingsbury, and Moody Counties (Hamilton, 1989; Hansen, 1988; Hedges and others, 1982; Kume, 1985; Stonesifer, 2013). The Brookings Management Unit is hydraulically connected to the North Management Unit to the north, the Battle Creek aquifer to the west, the North Deer Creek, Unnamed Creek, Six Mile Creek, and Aurora Management Units to the east, and the Moody Management Unit to the South (Hedges et al., 1982). The aquifer is also hydraulically connected to several surface waters, specifically the Big Sioux River. Water in the aquifer generally moves from north to south and locally towards the river (Hamilton, 1989).

The Big Sioux: Brookings aquifer is an alluvium mantled outwash consisting of well-sorted, permeable, medium to coarse sand and fine to medium gravel. The aquifer is often under unconfined conditions near the Big Sioux River but is confined elsewhere (Hamilton, 1989). From the average thickness of 30 feet and a commonly assumed storativity of 0.15, the Big Sioux: Brookings aquifer is estimated to contain 1,453,000 acre-feet (ac-ft) of recoverable water in storage (Hedges and others, 1982; Hamilton, 1989; Kume, 1985; Stonesifer, 2013).

Generally, the aquifer is underlain by till and, when buried, overlain by till. In the area of the proposed well, aquifer materials are generally encountered within 40 feet of ground surface (Water Rights, 2014c; SD Geological Survey, 2014).

SDCL 46-2A-9

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

WATER AVAILABILITY:

The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source." If the source of the water is older or lower than the Greenhorn Formation and a public water system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Here, a public water system is not involved and the formation is not older than or below the Greenhorn Formation. Therefore, withdrawal/recharge issue must be considered.

HYDROLOGIC BUDGET:

Recharge

Recharge to the Big Sioux: Brookings aquifer occurs through infiltration of precipitation in areas where the aquifer is at or near the ground surface, as well as seepage through till, lake deposits and underlying aquifers, and inflow from the Big Sioux River and its tributaries during times of relatively high stage (Hamilton, 1989; Kume 1985).

Average recharge to the Big Sioux aquifer as a whole was estimated to be 6.5 inches per year (Hedges et al., 1985). Similarly, Koch (1980) estimated average recharge to the Big Sioux aquifer in Brookings, Deuel, and Hamlin Counties to be 6.57 inches per year to the unconfined portions. In the Brookings Management Unit specifically, recharge was estimated to be 4.0 inches per year (Hedges et al., 1985). Applying this last rate to the area of the management unit, calculated recharge is approximately 107,000 acre feet per year. In addition, and as a result of induced recharge from surface waters resulting from pumping and water capture, Koch (1980) indicates that diversion could exceed the calculated recharge rate without depleting the aquifer.

Discharge

Discharge from the aquifer occurs through evapotranspiration in areas where the aquifer is at or near the ground surface, outflow to the Big Sioux River and its tributaries during times of low stage in the river, and well withdrawals (Hamilton, 1989; Kume, 1985). There are a total of 259 water rights/permits appropriating water from the aquifer (16 for rural water systems, 21 for municipal water systems, two industrial uses, two for housing developments, one for geothermal, 10 for commercial use, nine future use permits, and 198 for irrigation purposes) as well as one pending application. Non-irrigation water rights/permits limited by diversion rate currently appropriate water at a total maximum diversion rate of 18.939 cfs.

The amount of water that can be expected to be withdrawn by non-irrigation use water rights/permits can be estimated by assuming:

- 1) Water rights/permits limited by an annual volume will pump the entire appropriated volume annually,
- 2) Water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time (totaling approximately 8,227 ac-ft/yr),
- 3) Water rights/permits authorized to municipalities using rural water systems as a primary source will not withdraw water.

In the case of the rural water systems and municipal water systems that reported volumes pumped in 2012 (accounting for approximately 86% of the appropriated water by volume), only 71% of the appropriated water (by volume) was diverted. This means the assumption that the entities listed will utilize their entire appropriated amount is estimating an amount of water pumped which is higher than reality.

In addition, there are a total of nine future use permits reserving a total of 7,327 ac-ft/yr of water from the aquifer (Water Rights, 2014b), which are assumed to be fully developable. Considering expected water use by all non-irrigation rights and permits, including future use permits, non-irrigation water appropriations are expected to account for 20,588 ac-ft/yr of withdrawal from the Big Sioux: Brookings aquifer (Water Rights, 2014b).

Several municipalities are connected to a rural water system that is either used as a primary or standby source. The municipalities of Clear Lake, Hayti, and Bruce currently use a rural water system as a primary source, and their water rights/permits are retained as a standby source for security, such as fire protection. These water rights are all limited by diversion rate, totaling 2.81 cfs (Water Rights, 2014b).

While there are numerous domestic wells on file, many are no longer used as primary sources and have been replaced by rural water systems in the area. This fact, combined with the relatively small withdrawal by individual domestic wells, means the annual quantity of water withdrawn by domestic wells is not a significant component of the hydrologic budget for the Big Sioux: Brookings aquifer (Water Rights, 2014c).

The average annual amount of water diverted for irrigation purposes was calculated to be 8,684 ac-ft/yr, but varies from a minimum of 1,043 ac-ft/yr to a maximum of 19,483 ac-ft/yr for the time period of 1979-2012 (Water Rights, 1980-2013). This data indicates a large variability in the amount water diverted annually, illustrated below in Figure 1. The annual variation in irrigation withdrawal can be attributed to climatic and economic conditions. However, given the large difference between discharge from and recharge to the aquifer, it is not expected that the aquifer has reached a stage of total appropriation since the time period that these averages reflect.

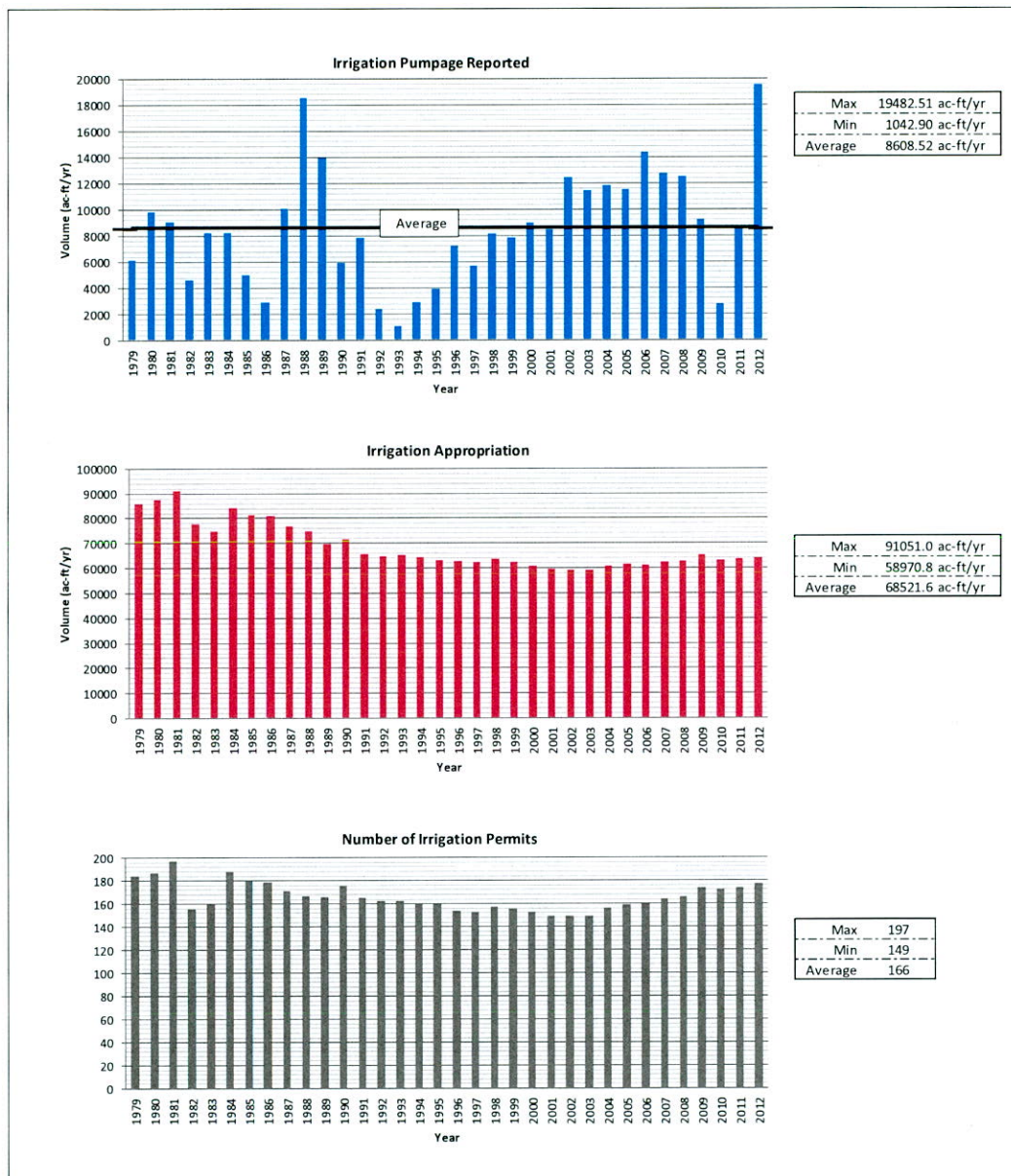


Figure 1: Historic irrigation water use from the Big Sioux: Brookings aquifer (Water Rights, 1980-2012)

OBSERVATION WELL DATA:

Administrative Rule of South Dakota Section 74:02:05:07 requires that “the [Water Management Board] shall rely upon the record of observation well measurements... to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge of the aquifer.”

The DENR Water Rights Program currently monitors 54 observation wells completed into the Big Sioux: Brookings aquifer. Observation well data indicates that at the current level of development temporal well withdrawal is masked by climatic conditions, indicating that recharge to and natural discharge from the aquifer greatly exceeds well withdrawal. Therefore, water is available for the proposed appropriation.

The closest of these wells to the diversion sites in this application is HN-76A (Water Rights, 2014a) located approximately 1.4 miles to the north of the proposed well site submitted with this application. HN-76A is representative of conditions throughout the aquifer seen in the various observation wells completed into the Big Sioux: Brookings aquifer. It shows water levels that vary historically between 16 and 39 feet below the top of the casing, which are influenced by seasonal pumping but show significant climatic variations (See Figure 2).

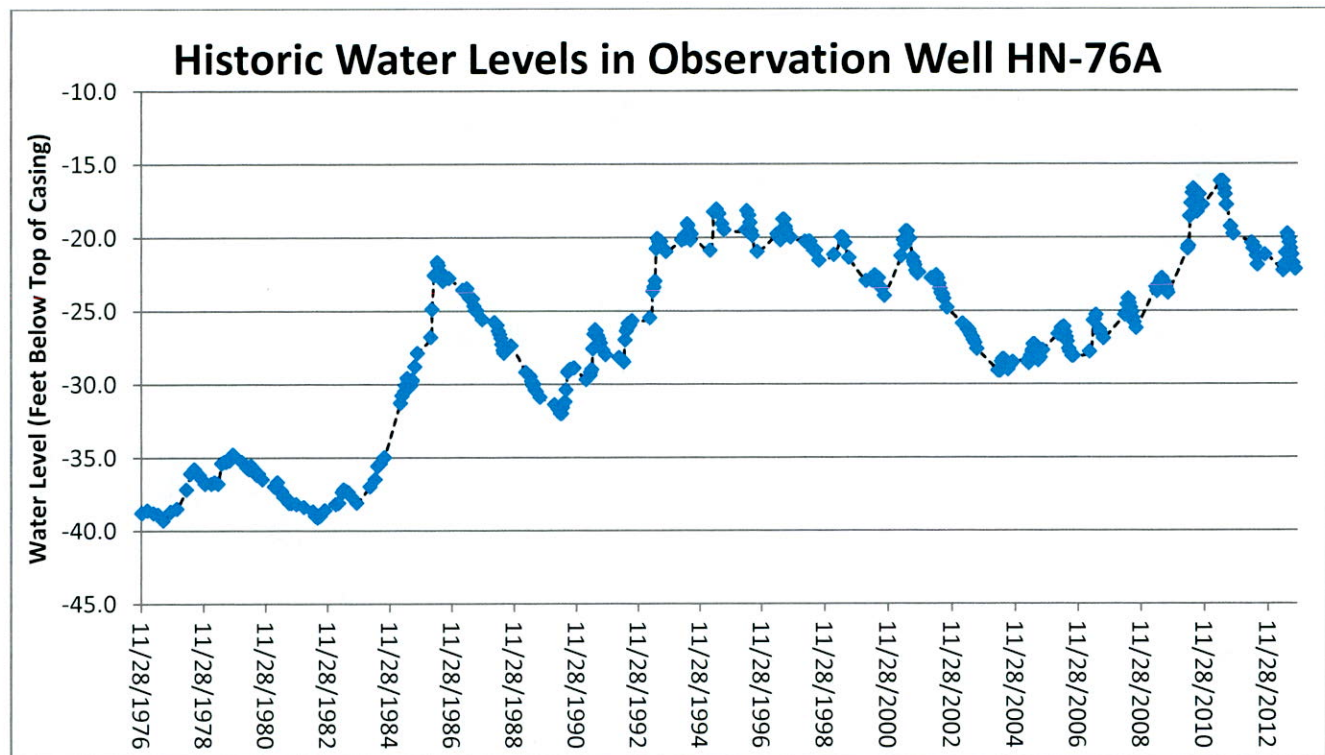


Figure 2: Historic Water Levels in Observation Well HN-76A (Water Rights, 2014a)

EXISTING WATER RIGHTS:

As mentioned earlier, there are currently 248 water rights/permits authorizing diversions of water from the Big Sioux: Brookings aquifer. The closest water right/permit (Water Permit No. 2123-3) to the proposed diversion site is located approximately 2,000 feet to the northwest of the proposed well site. The nearest domestic well is located approximately 4,400 feet to the west of the proposed well site. Interference is not expected to be a concern at these distances.

CONCLUSIONS:

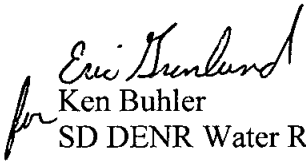
1. This water permit application proposes to appropriate water at an additional maximum diversion rate of 1.78 cfs from three wells completed into the Big Sioux: Brookings aquifer for irrigation of 160 acres.
2. Unappropriated water is available from the Big Sioux: Brookings aquifer to supply the proposed appropriation.

3. The proposed diversion at the well location is not expected to adversely or unlawfully impair existing nearby adequate wells.



Bracken Capen
SD DENR Water Rights Program

Approved by



for Ken Buhler
SD DENR Water Rights Program

REFERENCES:

- Hamilton, L.J. 1989. Water Resources of Brookings and Kingsbury Counties, South Dakota. Water-Resources Investigations Report 88-4185, 82 p. USGS, Huron, South Dakota.
- Hansen, H.S. 1988. Appraisal of the Water Resources of the Big Sioux Aquifer, Moody County, South Dakota. Water-Resources Investigations Report 87-4057. USGS, Huron, South Dakota.
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., and Schoon, R.A. 1982. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Hedges, L.S., Allen, J., and Holly, D.E. 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Task 7: Ground Water Recharge. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Koch, N.C. 1980. Appraisal of the Water Resources of the Big Sioux Aquifer, Brookings, Deuel, and Hamlin Counties, South Dakota. Water-Resources Investigations Report 80-100. USGS, Huron, South Dakota.
- Kume, J. 1985. Water Resources of Deuel and Hamlin Counties, South Dakota. Water-Resources Investigations Report 84-4069. USGS, Huron, South Dakota.
- SD Geological Survey. 2013. Lithologic Logs Database, South Dakota Department of Environment & Natural Resources Geological Survey, Vermillion, South Dakota.
- Stonesifer, J. 2013. Report on Water Permit Application No. 7887-3 for Novita Aurora, LLC, c/o Rick Eggebrecht: SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 1980-2013. "Annual Irrigation Summary by Aquifer": SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2014a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2014b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2014c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

RECEIVED

MAR 27 2014

WATER RIGHTS
PROGRAM

10/

Affidavit of Publication

State of South Dakota

ss

Exhibit "A"

County of Brookings

Jennifer Milligan of said county, first duly sworn, on oath, says: That she is the office clerk of THE BROOKINGS REGISTER, a daily newspaper, printed and published in the City of Brookings, in said County of Brookings, and State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper and has a bona fide circulation of at least two hundred copies of each issue daily; that said newspaper has been published within the said County of Brookings and State of South Dakota, for more than one year prior to the first publication of Exhibit "A," hereto attached and herein mentioned, and was and is printed that the

Legal 336, 1x, 3/19
NOTICE OF APPLICATION NO. 7944-3 to
Appropriate Water
Notice is given that Joe Eckert, Blue Silo Pheasant, 2509 S. Roosevelt Circle, Sioux Falls SD 57106 has filed an application for a water permit to appropriate 1.78 cubic feet of

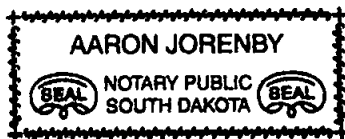
Leg#336 Notice of Application- No 7944-3

same was published, is hereto attached marked Exhibit
said newspaper for _____ 1 times, to-wit:

March 19, 2014

said Exhibit "A" inures to the sole benefit for the publishers of 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 person whomsoever; that the fees charged for the publication thereof are:

twenty-three dollars and twenty-three cents \$23.23



March

20th

day of

2014

Notary Public in and for the County of Brookings, South Dakota.
My Commission expires February 22, 2020.

water per second from one well to be completed into the Big Sioux:Brookings Aquifer (70 feet deep) located in the approximate center of the NE 1/4 Section 12 for irrigation of 160 acres located in the NE 1/4,N 1/2 SE 1/4 Section 12; all in T112-R52W.
Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7944-3 because 1) unappropriated water is available, 2) existing right will not be unlawfully impaired, 3) it is a beneficial use of water, 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition. Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by March 31, 2014.
The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of \$23.23.



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

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



March 11, 2014

Brookings Register
PO Box 177
Brookings SD 57006

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7944-3 to Appropriate Water. Please publish the notice once on March 19, 2014. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Joe Eckert, Blue Silo Pheasant, 2509 S Roosevelt Circle, Sioux Falls SD 57106 (Ph # 605-376-0963).

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

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

Sincerely,


Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

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



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

March 11, 2014

Joe Eckert
Blue Silo Pheasant
2509 S Roosevelt Circle
Sioux Falls SD 57106

Dear Mr. Eckert:

Water Permit Application No. 7944-3 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 Brookings Register printed at Brookings SD (Ph # 605-692-6271). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352
enclosures

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

Instruction to Newspaper - Publish the Notice on March 19, 2014. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7944-3 to Appropriate Water

Notice is given that Joe Eckert, Blue Silo Pheasant, 2509 S Roosevelt Circle, Sioux Falls SD 57106 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second from one well to be completed into the Big Sioux:Brookings Aquifer (70 feet deep) located in the approximate center of the NE 1/4 Section 12 for irrigation of 160 acres located in the NE 1/4, N 1/2 SE 1/4 Section 12; all in T112N-R52W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7944-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by March 31, 2014.

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

Published once at the total approximate cost of_____.



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

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PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



APR 24 2014

Joe Eckert
Blue Silo Pheasant
2509 S Roosevelt Circle
Sioux Falls SD 57106

Dear Mr. Eckert:

Enclosed is Water Permit No. 7944-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

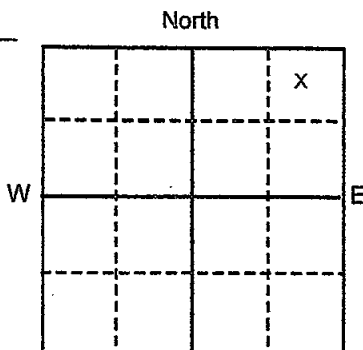
7944-3 SD EForm - 1621LD V1

11-02

Location NE ¼ N ¼ Sec 12 Twp 112N Rg 52W

County BROOKINGS

Please mark well location with an "X"



Well Completion Date

9-23-16

← 1 Mile →

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?

1,500.0 ft. from SLUE (identify source)

PROPOSED USE:

☒ Domestic/Stock ☐ Municipal ☐ Business ☐ Test holes
☒ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well

METHOD OF DRILLING:

DIRECT ROTARY

CASING DATA:

If other describe ☐ Steel ☒ Plastic ☐ Other

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>40.0</u> LB/FT	<u>16.00</u> IN	<u>0.0</u> FT	<u>60.0</u> FT	<u>24.00</u> IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>GRTWELDF</u>	<u>27</u>	<u>54.0</u> Lb/gal	<u>0.0</u> Ft	<u>55.0</u> Ft

Describe grouting procedure

TREMIE LINE

SCREEN:

Diameter 16.00 Inches Length 10.0 Feet

Material STAINLESS

Slot Size .080 Set From 60.0 Feet to 70.0 Feet

Other information

WAS A PACKER OR SEAL USED?

☐ Yes ☐ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How?
☐ No, Why Not?

Lab to which water quality sample sent for analysis

Well Owner: JOE ECKERT

Business Name: BLUE SILO PHEASANT

Address: 2509 S ROOSEVELT CIRCLE

City, State, Zip: SIOUX FALLS SD 57106

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	1
YELLOW CLAY	1	3
MIXED	3	10
BLUE CLAY	10	36
GREY MED-COARSE	36	50
MEDIUM	50	65
ROCKS	65	70

STATIC WATER LEVEL

6.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: SUBMERSIBLE PUMP

☐ Bailed

☐ Other

Pumping Level Below Land Surface

40.0 Ft. After 10.0 Hrs. pumped 1,000.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

Big Sioux: Brookings AB

This well was drilled under license # 689 and this report is true and accurate.

Drilling firm: KAISER WELL DRILLING INC

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

RECEIVED

FEB - 1 2017

Date: _____

WATER RIGHTS
PROGRAM

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7944-3

I have this day, May 26, 2021, made a thorough examination of the water use system constructed by Joe Eckert – Blue Silo Pheasant, 2509 S Roosevelt Circle, Sioux Falls, SD 57106 of Permit No. 7944-3, bearing the priority of January 16, 2014 authorizing the diversion of 1.78 cu. ft. per second of the waters of the Big Sioux: Brookings Aquifer for irrigation purposes, in Brookings County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Kaiser Well Drilling Inc
- 2) No. of Wells 1
- 3) Depth(s) 70 feet
- 4) Well log is available Y

Casing:

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

Screen:

- 1) Type Stainless steel
- 2) Length 10 feet
- 3) Static water level 6.0 feet

Pump:

- 1) Make NA
- 2) Model Submersible
- 3) Size NA
- 4) Capacity 800 GPM

Motor:

- 1) Make NA
- 2) Model No. NA
- 3) Horsepower rating NA hp

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

- 1) Type Buried
- 2) Size NA inches
- 3) Length 1200 feet

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Valley
- 2) Overall length 1210 feet
- 3) Number of towers 7
- 4) End gun Y
- 5) Capacity 800 GPM (Source: Farmers Impl/Irrigation)

Chemigation Equipment: none

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
- 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 NE corner of Sec 12 T112N-R52W 630 ft S & 1755 ft W Lat 44.52635 Long -97.01462 (NW ¼ NE ¼ Sec 12)
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. Water has been put to beneficial use to the maximum extent as follows:

All land in Sec 12-T112N-R52W

NW1/4 NE 1/4 - 18 ac
NE 1/4 NE 1/4 - 18 ac
SE 1/4 NE 1/4 - 34.5 ac
SW 1/4 NE 1/4 - 34.5 ac
NW1/4 SE 1/4 - 5 ac
NE 1/4 SE 1/4 - 5 ac

comprising a total of 115 acres of land and the license should be issued for 1.64 cfs. (Statutory limit for 115 acres)

3. All structures, wells and lands on map Y

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

There is no evidence that the pivot went a full circle due to the presence of open water bodies and sloughs shown in all available FSA photos and a recent field visit. However, if dry conditions permit the irrigation of a full circle (115 acres) in the future, then an appropriate license should be issued for 1.64 cfs (115/70). The irrigated acreage was determined by using FSA maps the ArcMAPS software.



Darrell W DeBoer
Water Rights Inspector
DANR, Water Rights Program

Date report completed: June 7, 2021

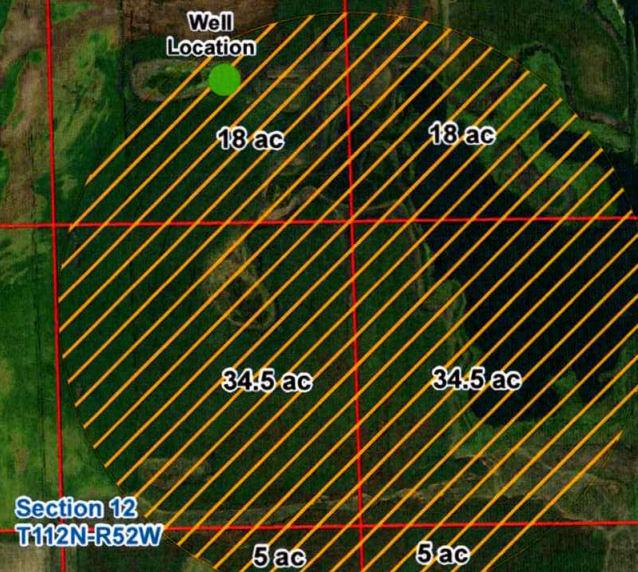
Well Location

From the NE corner of
Sec12 T110N-R47W
630 ft S & 1755 ft W
Lat 44.52635
Long -97.01462

Irrigated Acres

All acres in Sec 12
T112N-R52W

NW1/4 NE1/4 -18 ac
NE1/4 NE1/4 -18 ac
SE1/4 NE1/4 -34.5 ac
SW1/4 NE1/4 -34.5 ac
NW1/4 SE1/4 -5 ac
NE1/4 SE1/4 -5 ac



0 0.125 0.25 0.5 0.75 1 Miles

WATER RIGHTS PROGRAM -- FILE DOCUMENTATION

NAME & ADDRESS: Joe Eckert – Blue Silo Pheasant, Sioux Falls SD

DATE: June 8, 2021

RE: licensing of Water Permit No. 7944-3

COMMENTS:

Water Permit No. 7944-3 authorized diversion of 1.78 cfs to irrigate 160 acres in the NE ¼ and N ½ SE ¼ Section 12, T112N, R52W.

An investigation of the project for licensing purposes found the pivot covering 85 acres within the above area however it could cover 115 acres if the eastern part of the acreage was not currently a slough.

Discussion with staff determined the entire pivot area of 115 acres should be licensed because the permit holder had legal excuse for not irrigating the slough area.

RECOMMENDED ACTION:

Issue water license for 115 acres with a diversion rate of 1.64 cfs (statutory limit for acreage)



Genny McMath
Water Rights Program



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

7944-3

JUL 26 2021

Joe Eckert
Blue Silo Pheasant
2509 S Roosevelt Circle
Sioux Falls SD 57106

Dear Mr. Eckert:

Enclosed is Water License No. 7944-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

Eric Gronlund, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Note: The investigation of your water use system found the well and pivot capable of 1.78 cfs or approximately 800 gpm. The statutory limit for the 115 acres developed for irrigation is 1.64 cfs or approximately 736 gpm. Diversion of water under this water license is limited to 1.64 cfs.

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7944-3

(1) Joe Eckert, Blue Silo Pheasant, 2509 S Roosevelt Circle, Sioux Falls SD 57106 made Application No. 7944-3, January 16, 2014 for a water permit to divert 1.78 cubic feet of water per second from ground water, one well (Big Sioux Brookings Aquifer), Brookings County, South Dakota for irrigation purposes. Permit No. 7944-3, with a priority date of January 16, 2014 was approved March 31, 2014 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before March 31, 2019 and for the application to beneficial use of said water on or before March 31, 2023.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 1.64 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 630'S and 1,755'W of the NE corner of Section 12, T112N, R52W (NW ¼ NE ¼ Section 12)
Latitude 44.52635, Longitude -97.01462

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

Section 12, T112N, R52W	NW ¼ NE ¼	18.0 acres	NW ¼ SE ¼	5.0 acres
	NE ¼ NE ¼	18.0 acres	NE ¼ SE ¼	5.0 acres
	SE ¼ NE ¼	34.5 acres		
	SW ¼ NE ¼	34.5 acres	Total irrigated -	115 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Joe Eckert, Blue Silo Pheasant, 2509 S Roosevelt Circle, Sioux Falls SD 57106 the holder and/or owner of Water Right No. 7944-3 is issued a license to appropriate water, the right to use 1.64 cubic feet of water per second from ground water, one well (Big Sioux Brookings Aquifer) with a priority date of January 16, 2014 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. 7944-3 and subject to the following qualifications:

- The well approved under this water right will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this water right shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The well authorized by Permit No. 7944-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28. ***The well was drilled in September, 2016 by Kaiser Well Drilling Inc. A copy of the well completion report is on file with the Water Rights Program.***

Water License No. 7944-3
Page 2

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

Eric Gronlund

Eric Gronlund, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JUL 26 2021

date

