

WATER PERMIT NO. 7500-3

Name of Applicant: Hillestad Farms

Address: c/o Rich Hillestad, 46259 218th St, Volga SD 57071 Phone: 605 826-4387

Amount of Water Claimed: 1.78 cfs Total Acres: 144 acres

Source of Water Supply: groundwater (2 wells)

Water to be used for: irrigation County: Brookings

Type of Waste Disposal System:

Location: 4 miles south of Volga

PRIORITY Date Received: 11-5-12 Application/License Fee: \$1050

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

Remarks:

Diversion Point: NW 1/4 SW 1/4 Sec 12-T109N-R51W

Land to be Irrigated: SW 1/4 Sec 12-T109N-R51W

Depth of Well: 30 feet deep

Well Driller: Lacey Well Drilling

Remarks:

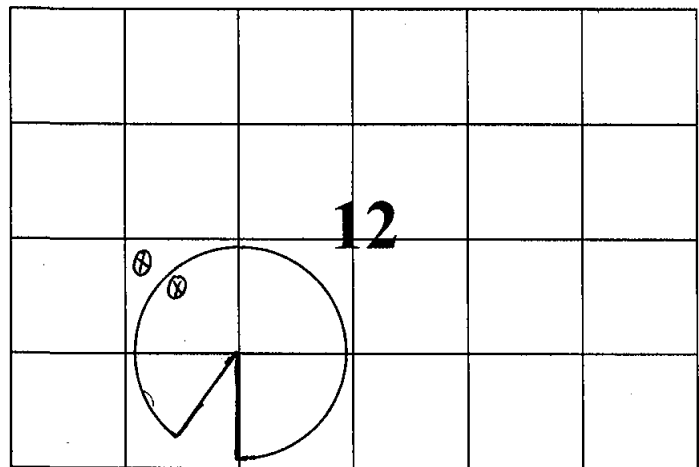
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 11-5-12

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. <u>7500-3</u> (office use only) Hydrologic Unit <u>10170202</u>	
	Basin <u>Loup River</u>	
	Newspaper <u>Brookings Register P.O. Box 177</u> <u>605-692-6271</u> <u>57006</u>	

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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 Hillestad Farms % Rich Hillestad

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

(name and complete address if different than above name)

 Mailing Address 46250 218th St.
(Address)
Volga
(City)
SD
(State)
57071
(Zip Code)

 Home Phone 605 826 4387 Cell 605 695-2552 Email _____

 2. Amount of water claimed 1.78 *CFS or 800 **GPM ***AF Total Acreage 144
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

 3. Source of water supply wells

 4. Location of point of diversion 2 wells in NW 1/4 of the SW 1/4 Sec 12 T109N R51W
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)

 County Brookings

 5. County or counties where water will be used Brookings

 6. Annual period during which water is to be used May 1 - Sept. 30

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

Land Description	Acres	Land Description	Acres
SW 1/4 of the SW 1/4 Sec 12 109N 51W	30		
NW 1/4 of the SW 1/4 Sec 12 109N 51W	38		
SE 1/4 of the SW 1/4 Sec 12 109N 51W	38		
NE 1/4 of the SW 1/4 Sec 12 109N 51W	38		

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

 I, Hillestad Farms by Rich Hillestad, 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. 7500-3**

Date of first receipt of application November 5, 2012.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7500-3 to Hillestad Farms, c/o Rich Hillestad, 46250 218th St, Volga SD 57071 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. 7500-3 appropriates 1.78 cubic feet of water per second from two wells to be completed into the Big Sioux-Brookings Aquifer (30 feet deep) located in NW 1/4 SW 1/4 Section12 for irrigation of 144 acres located in the SW 1/4 Section12; all in T109N-R51W.
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 November 5, 2012.
4. The date of approval of Permit No. 7500-3 is February 4, 2013.
5. One-fifth of the construction is to be completed on or before August 4, 2015.
6. All construction is to be completed on or before February 4, 2018.
7. Water is to be put to beneficial use on or before February 4, 2022.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The 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 wells authorized by Permit No. 7500-3 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: Garland Erbele

Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

MAR 28 2013
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 2 Have test holes been drilled ☒ Yes ☐ No Drilled by Lacey
(if yes, please provide copies of logs)
- b) If existing wells, how many 0 Provide copy of log(s), if available. Drilled by _____
- c) Well Depth 30 ft Depth to Top of Water Bearing Material 24 Depth to Water from Surface 6 ft
- d) Distance to nearest existing domestic well:

On applicant's property 0 On property owned by others _____

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

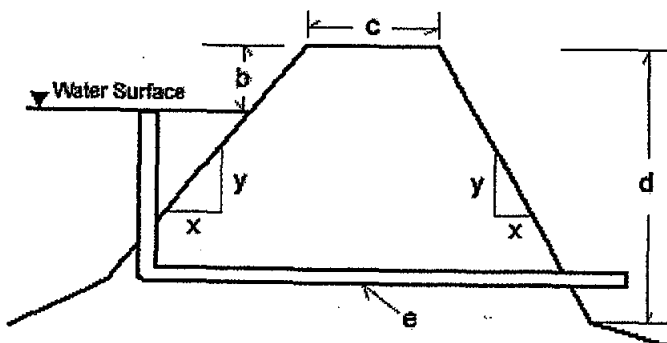
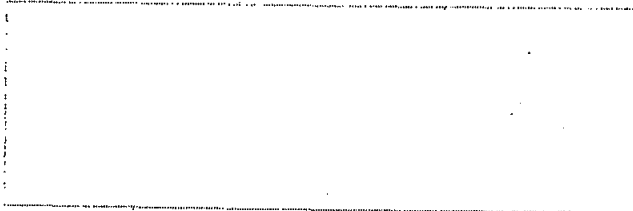
3. Dugout Information

- 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



PPLS: 12_109N_51W

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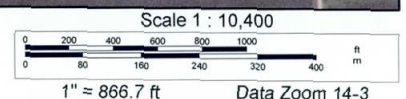
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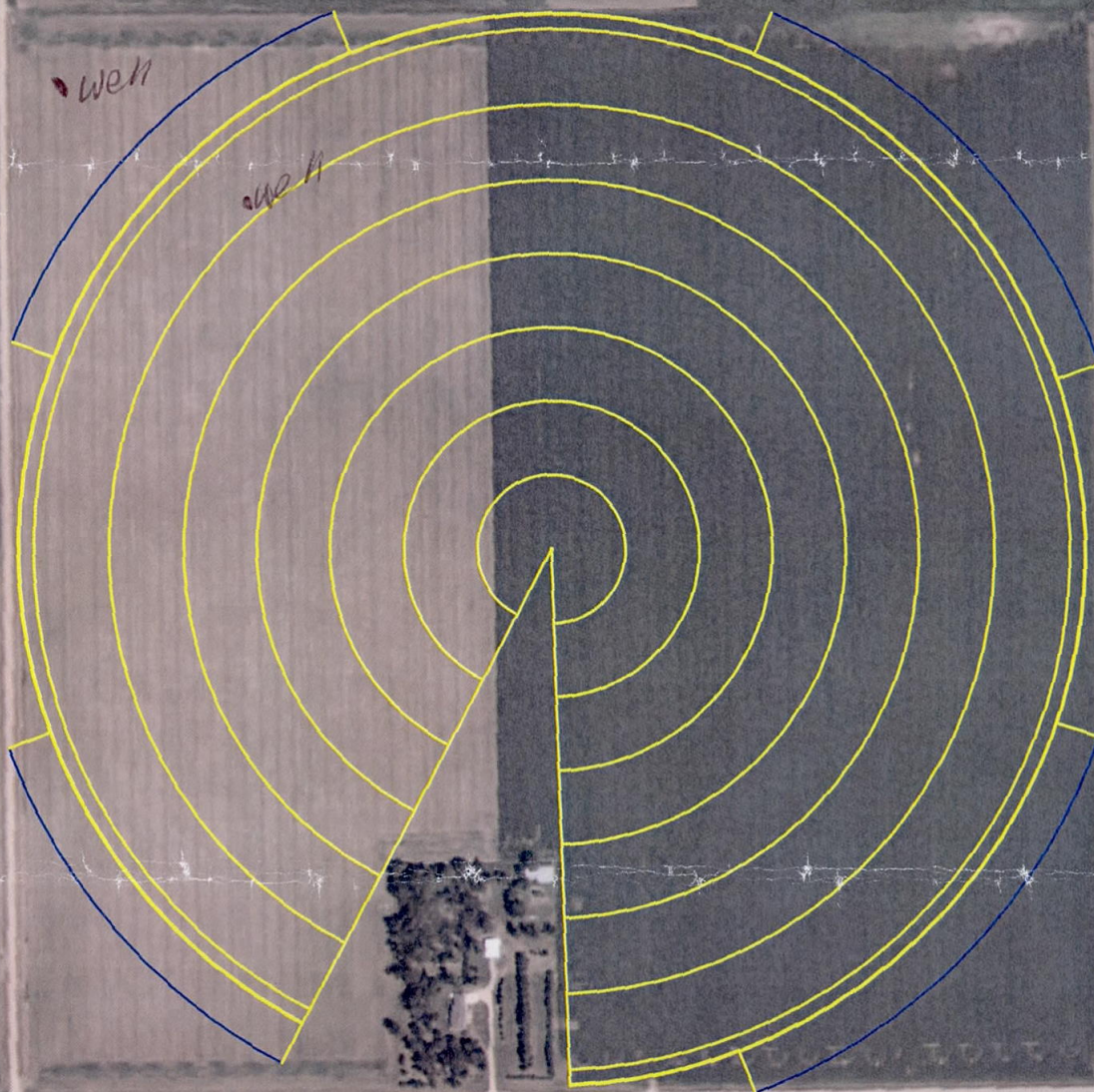
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2 Pivot + Flex Point
 180.0 | ALL Span
 180.0 | ALL Span
 180.0 | ALL Span
 180.0 | ALL Span
 180.0 | ALL Span
 184.8 | 7K-8K Span
 184.8 | 7K-8K Span
 36.2 | 7K-8K Overhang
 110 | SR100 EndGun
 Total : 1307.8 ft
 Irrigated Area : 124.5 ac

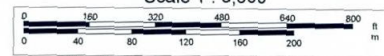


Farmers
 Implement and Irrigation
 Brookings, SD

VALLEY

The Leader in Precision Irrigation

Scale 1 : 5,600



1" = 466.7 ft

Data Zoom 15-2

Data use subject to license.

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10-26-12

Rich,

log on 2 best test bores in
NW4 of SW4 12 109-N 51 W

#2 0-6 till, 6-30 decent gravel gw 6'

#4 0-6 till, 6-29 gravel gw 6'

Thanks

Jim Lacey
SD #111

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 11/5, 20 12

RECEIVED OF Hillestad Farms 46250 218th St Volga SD 57071

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

Fee for Application for Permit No. <u>7500-3</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>7500-3</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. **05679**

By *Lance Erbe*
Chief Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7500-3, Hillestad Farms**

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. 7500-3, Hillestad Farms, c/o Rich Hillestad, 46250 218th Avenue, Volga SD 57071.

The Chief Engineer is recommending APPROVAL of Application No. 7500-3 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 wells authorized by Permit No. 7500-3 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.

A handwritten signature in black ink, appearing to read "Garland Erbele".

Garland Erbele, Chief Engineer
January 15, 2013

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 7500-3
HILLESTAD FARMS % RICH HILLESTAD
December 31, 2012

Water Permit Application No. 7500-3 proposes to appropriate up to 288 acre-feet annually (ac-ft/yr) at a maximum diversion rate of 1.78 cubic feet of water per second from two wells to be completed into the Brookings management unit of the Big Sioux aquifer. The wells are expected to be 30 feet deep and will be located in the NW¼ SW¼ of Section 12, T109N-R51W. The permit application proposes to irrigate 144 acres located in the SW¼ of Section 12, T109N-R51W in Brookings County.

AQUIFER: Brookings management unit of the Big Sioux aquifer (BS:B)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Big Sioux aquifer is an alluvium mantled glacial outwash deposit that consists of "well-sorted, very permeable glacial outwash sand and gravel, mostly medium to very coarse sand and very fine to medium gravel" (Hamilton, 1989). The aquifer is located primarily in the flood plain of the Big Sioux River and its tributaries. The Brookings management unit of the Big Sioux aquifer extends from near the center of Hamlin County where it is differentiated from the North management unit, south to northern Moody County where the management unit is distinguished from the Moody management unit. The Brookings management unit underlies parts of Hamlin, Deuel, Brookings, Kingsbury and Moody Counties. The Big Sioux: Brookings underlies approximately 74,500 acres of Brookings Counties alone and contains an estimated 245,850 acre-feet of recoverable water in storage in the county (Hedges and others, 1982). The thickness of the aquifer averages 30 feet in Brookings County (Hamilton, 1989). The average hydraulic conductivity of the Big Sioux aquifer, based on four aquifer tests, ranges from 500-1,000 feet per day (ft/d) (Koch, 1980). The test hole completion report submitted with this application identifies gravel from 6-30 feet below grade with a static water level of 6 feet below grade.

SDCL 46-2A-9

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

WATER AVAILABILITY:

This application proposes to appropriate 288 acre-feet annually from the Big Sioux: Brookings aquifer. The actual water use if this application is approved will likely be less than the appropriation. 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."

Recharge versus Discharge:

Recharge:

Recharge to the Big Sioux: Brookings occurs through infiltration and percolation of precipitation falling on the surface of the outwash. Since the aquifer is hydraulically connected to some area lakes and the Big Sioux River, recharge is also provided to the aquifer during times of high runoff when surface water levels are higher than groundwater levels. Recharge rates calculated for the various management units of the Big Sioux aquifer range from "2.7 to 6.9 in/yr if flow-net analysis is ignored" (Hedges and others, 1985). Given the area of the management unit in Brookings County, average annual recharge to the aquifer in Brookings County alone is estimated to be 16,762 – 42,838 acre-feet per year.

Discharge:

Discharge from the Big Sioux: Brookings aquifer is by evapotranspiration, discharge to streams and lakes, and withdrawal from wells. There are a number of completion reports on file with the DENR-Water Rights Program for domestic use wells completed into the Big Sioux: Brookings aquifer (Water Rights, 2012b) and there are currently 229 Water Rights/Permits appropriating water from the Big Sioux: Brookings aquifer. In addition, there are nine future use permits reserving water from the aquifer. There are 104 Water Rights/Permits appropriating water from Brookings County alone (Water Rights, 2012c). Five of the future use permits reserving water from the aquifer are from Brookings County. The distribution of appropriation types are shown in table 1.

Water Rights/Permits	Number
Commercial	4
Industrial	1
Irrigation	88
Municipal	4
Rural Water System	5
Suburban Housing Development	2
Future Use Permits	Number
Municipal	2
Rural Water System	3

Table 1 – Water Rights from the Big Sioux: Brookings aquifer in Brookings County (Water Rights, 2012b).

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

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

At the current appropriation amount, the total annual withdrawal from the Big Sioux: Brookings aquifer in Brookings and Hamlin County by non-irrigation use is expected to be less than 10,000 ac-ft/yr.

The reported water use from the Big Sioux: Brookings aquifer for irrigation is shown in Table 1.

YEAR	NO. OF PERMITS	APPROPRIATION (AC-FT/YR)	PUMPAGE REPORTED (AC-FT/YR)
2011	174	63494.4	8527.61
2010	172	62966.4	2713.39
2009	174	65098.4	9172.9
2008	166	62761.8	12505.85
2007	164	62374.8	14730.13
2006	161	61075.8	14325.04
2005	159	61435.8	11513.48
2004	156	60695.8	11809.91
2003	149	58970.8	11380.47
2002	149	59186.8	12410.94
2001	149	59312.8	8384.81
2000	153	60799.8	8933.72
1999	155	62181.3	7841.04
1998	157	63306.2	8109.71
1997	153	62281.7	5650
1996	154	62575.2	7220.95
1995	161	62961.2	3862.25
1994	160	64395.2	2854.62
1993	162	64963.7	1042.9
1992	162	64603.7	2331.6
1991	165	65534.97	7771.74
1990	175	71616.95	5862.92
1989	166	69391.27	13930.7
1988	167	74615.27	18521.4
1987	171	76624.07	10015
1986	179	80788.57	2854.7
1985	181	81385.57	4951.4
1984	188	84188.07	8177.6
1983	161	74854.57	8227.46
1982	155	77754.57	4551.86
1981	198	91361	9040
1980	187	87093	9837
1979	184	85701	6144
MIN	149	58970.8	1042.9
MAX	198	91361	18521.4
AVE	166	68677.29	8339.61

Table 1. Irrigation from the Big Sioux: Brookings (Water Rights, 1980-2012)

Comparison of the estimated average annual withdrawal from the entire Big Sioux: Brookings aquifer with the estimated average annual recharge for the aquifer in Brookings County alone indicated that in general the average annual withdrawals to the aquifer do not exceed the average annual recharge to the aquifer and unappropriated water is available from the Big Sioux: Brookings aquifer. Specifically, unappropriated water is available for the 288 acre-feet appropriation proposed by this application.

Observation Well Data:

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

The DENR-Water Rights Program monitors 80 observation wells completed into the Brookings management unit of the Big Sioux aquifer. Two of these observation wells are located within two miles of the well site proposed by this application. Hydrographs for these observation wells are shown in figures 1 and 2.

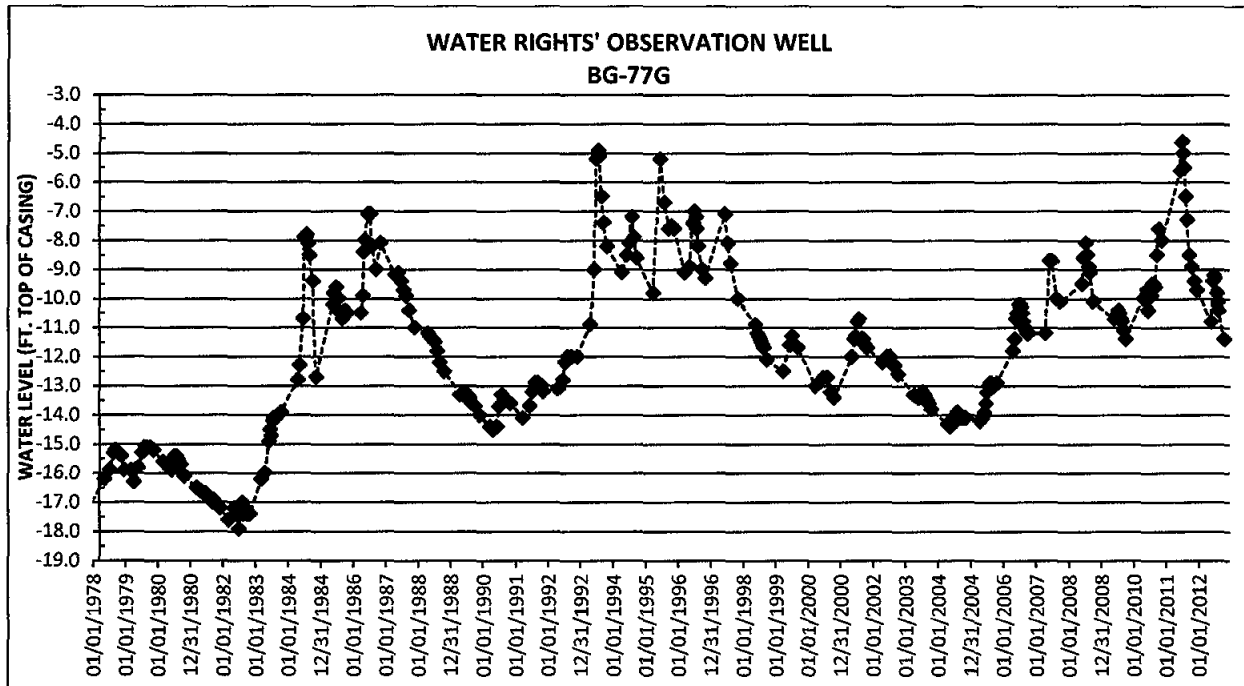


Figure 1. DENR-Water Rights' observation well completed into the Big Sioux: Brookings aquifer approximately one-half mile south of the well site proposed by Application No. 7500-3

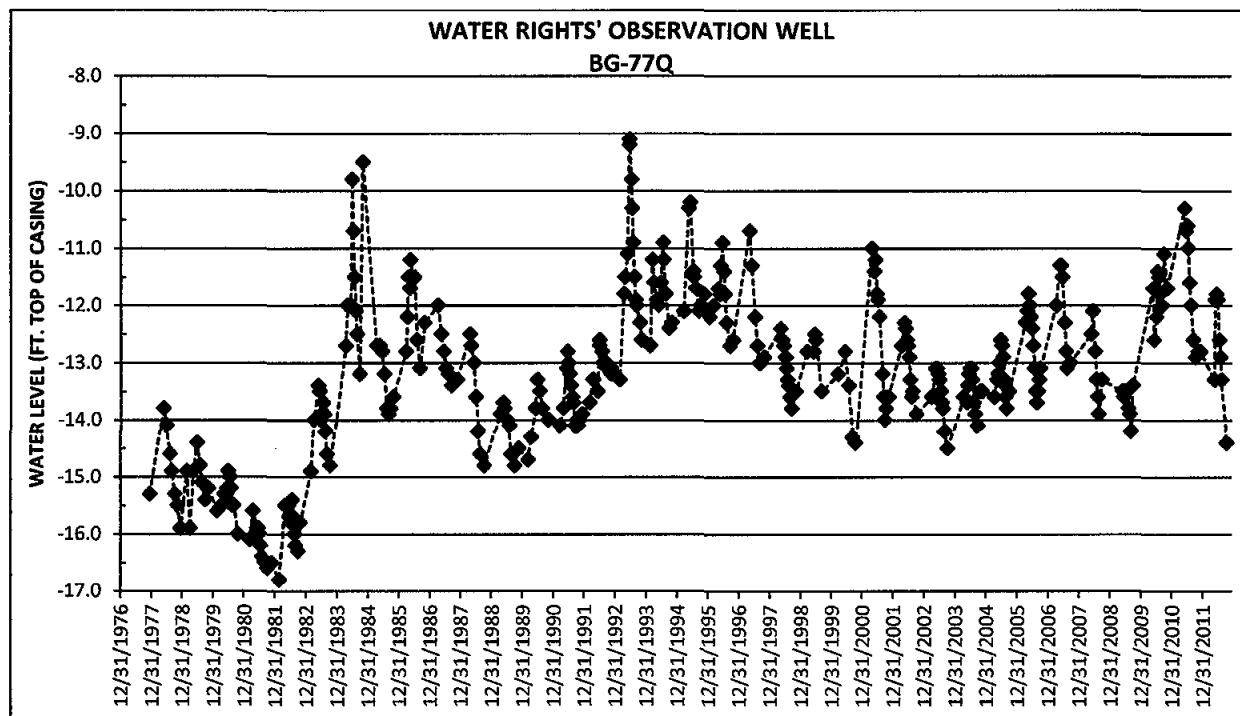


Figure 2. DENR-Water Rights' observation well completed into the Big Sioux: Brookings aquifer approximately one mile north of the well site proposed by Application No. 7500-3

The observation well data shows the aquifer responds well to climatic conditions with rising water levels during wet years and gradually declining water levels during dry years. The water level data verifies that over the period of record, withdrawals have not exceeded recharge. Most importantly, the observation well data shows that at the current level of development, climatic conditions greatly mask the temporal effects of well withdrawals. Therefore, recharge to and natural discharge from the Big Sioux: Brookings aquifer significantly exceeds pumping. Recognizing that natural discharge from the aquifer can be captured for pumping. The hydrographs document that there is unappropriated water available from the aquifer to support this appropriation.

EXISTING WATER RIGHTS:

The well site proposed by this application is located 2.7 miles from the Big Sioux River in a portion of the Big Sioux: Brookings aquifer that extends west of the Big Sioux River for approximately four miles to the edge of the aquifer. The river is a recharge boundary that would limit drawdown beyond it to the east. The nearest water rights/permits on the west side of the river have diversion points over one mile from the proposed well site. At the distance between wells and the relatively high transmissivity expected, drawdown is not expected to be significant nor likely to cause adverse impacts to existing water rights.

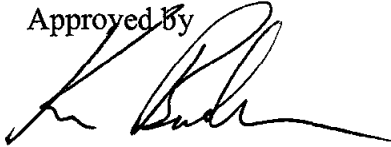
CONCLUSIONS:

1. This application proposes to appropriate up to 288 acre-feet annually from the Big Sioux: Brookings aquifer.
2. There is a reasonable probability that unappropriated water is available from the Big Sioux: Brookings aquifer to supply this proposed appropriation.
3. The Big Sioux: Brookings aquifer is under unconfined (water table) conditions in this area and drawdown from pumping is not expected to be significant very far from a production well.
4. There is a reasonable probability that the well proposed by this application will not adversely impact existing water rights.



Lynn Beck
Natural Resources Engineer III
SD DENR-Water Rights Program

Approved by



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Hamilton, L.J. 1989, Water Resources of Brookings and Kingsbury Counties, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 88-4185, 82 p.
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., Schoon, R.A., 1982, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185
- Hedges, L.S., Allen, J., Holly D.E., 1985, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185
- Koch, N.C., 1980, Appraisal of the Water Resources of the Big Sioux aquifer, Brookings, Deuel, and Hamlin Counties, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 80-100, 46 p.
- "Transmissivity from Specific Capacity." Aquifer Test Forum sponsored by HydroSOLVE, Inc. 15 Nov. 2012< <http://www.aqtesolv.com/forum/transcap.asp>
- Water Rights, 1980-2011, Irrigation Questioner Summaries 1980-2011, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2008-2012, Non-irrigation Water User Reporting 1997-2012, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2012a, Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2012b, Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2012c, Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

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Affidavit of Publication

State of South Dakota

WATER RIGHTS
PROGRAM

10/

Exhibit "A"

SS

County of Brookings

Chaylee Duis 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

Leg#930 Notice #7500-3-Hillestad Farms

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

January 23, 2013

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-two dollars and sixty-nine cents \$22.69



Laura Johnson

24th day of

January

2013

Chaylee Duis

Notary Public in and for the County of Brookings, South Dakota.
My Commission expires August 3, 2017.

Legal 930, 1x, 1/23
NOTICE OF APPLICATION NO. 7500-3 to
Appropriate Water
Notice is given that Hillestad Farms, c/o Rich Hillestad, 46250 218th Ave, Volga SD 57071 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second from two wells to be completed into the Big Sioux:Brookings Aquifer (30 feet deep) located in NW 1/4 SW 1/4 Section 12 for irrigation of 144 acres located in the SW 1/4 Section 12; all in T109N-R51W.
Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7500-3 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 February 4, 2013. The petition may be informal, but must include a statement describing the petition-

er'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 \$22.69.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

January 15, 2013

Brookings Register
PO Box 177
Brookings SD 57006

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7500-3 to Appropriate Water. Please publish the notice once on January 23, 2013. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Hillestad Farms, c/o Richard Hillestad, 46250 218th St., Volga SD 57071 (Ph # 605-826-4387).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

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

January 15, 2013

Hillestad Farms
Richard Hillestad
46250 218th St
Volga SD 57071

Dear Mr. Hillestad:

Water Permit Application No. 7500-3 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 January 23, 2013. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7500-3 to Appropriate Water

Notice is given that Hillestad Farms, c/o Rich Hillestad, 46250 218th Ave, Volga SD 57071 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second from two wells to be completed into the Big Sioux:Brookings Aquifer (30 feet deep) located in NW 1/4 SW 1/4 Section12 for irrigation of 144 acres located in the SW 1/4 Section12; all in T109N-R51W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7500-3 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 February 4, 2013.

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

PMB 2020
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denr.sd.gov

MAR 28 2013

Hillestad Farms
Rich Hillestad
46250 218th St
Volin SD 57071

Dear Mr. Hillestad:

Enclosed is Water Permit No. 7500-3 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,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

7500-3
RECEIVED
AUG 12 2013
WATER RIGHTS
PROGRAM

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

Date 8/9/13

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

FROM: Hillestad Farms Inc.

(name)

46250 218 St

(address)

Valley, SD, 57071

(city, state, zip)

605-695-2552

(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. 7500-3 states that the water use system is to be constructed by

8/2/13

(date)

, and water is to be put to beneficial use by

8/2/13

(date)

The water use system was completed on 8/2/13

(date)

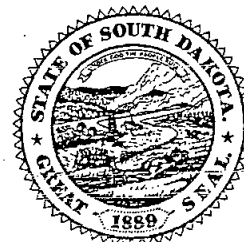
Applying the water to beneficial use was completed on 8/2/13

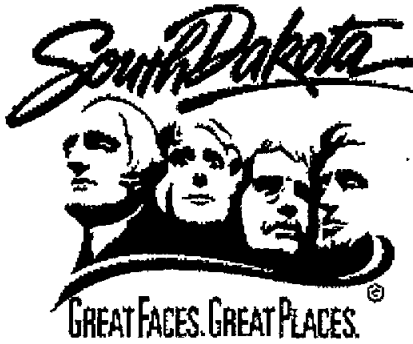
(date)

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

Anna Hillestad

(signature)





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

August 13, 2013

7500-3

Hillestad Farms Inc.
46250 218th St
Volga SD 57071

Dear Sir:

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,

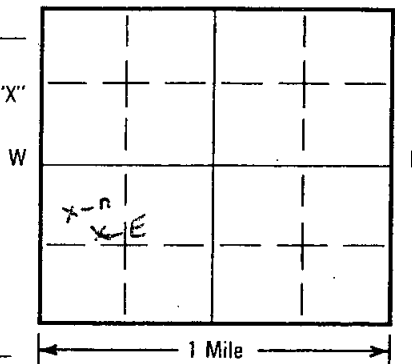
Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

SOUTH DAKOTA WATER WELL COMPLETION REPORT 7500-3 07-92

Location NW 1/4 SW 1/4 Sec 12 Twp 109 N Rg 51 W

County Brookings North

Please mark well location with an "X"



Well Completion Date

7-23-13

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 1/4 mile ft. from House w/ sewer (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

False Casing

CASING DATA: ☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>-20 LB/FT</u>	<u>14 IN</u>	<u>+2 FT</u>	<u>5-18 FT</u>	<u>20 IN</u>
<u>-20 LB/FT</u>	<u>14 IN</u>	<u>+112 FT</u>	<u>20 FT</u>	<u>20 IN</u>

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Concrete</u>		lb./gal	<u>0 ft</u>	<u>5 ft</u>
<u>Concrete</u>		lb./gal	<u>0 ft</u>	<u>5 ft</u>

Describe grouting procedure _____

SCREEN: ☐ Perforated pipe ☒ Manufactured

Diameter 14 IN Length 11'-N + 10'-E FEET

Material C150 PVC

Slot Size .080 Set From 18 Feet to 29 Feet = N

Other information 150 20 30 = E

WAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION: Was well disinfected upon completion?

X YES, How: _____

NO, Why Not? _____

Chlorine in pack

Laboratory sent to for water quality analysis

True

Well Owner: Rick Hillestad Hillestad

Business Name: _____

Address: 46250 218th St.

Volga S.D. 57071

WELL LOG:

FORMATION #1	DEPTH	
	FROM	TO
Till	0	5
Mixed Gravel	5	14
Coarse Gravel	14	20
Fine Sand	20	29
EAST #2		
Till to clay	0	5
Coarse Gravel	5	20
Fine Sand	20	30

STATIC WATER LEVEL N=5' E=5' Feet

If flowing, closed in pressure 0 PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? Yes

WELL TEST DATA:

☒ Pumped Describe: Sub

☐ Bailed _____

☐ Other _____

Pumping Level Below Land Surface

21 ft. After 1 Hrs. pumped 425 GPM

23'6" ft. After 1 Hrs. pumped 425 GPM

If pump installed, pump rate _____ GPM

REMARKS

RECEIVED

SEP 11 2013

WATER RIGHTS PROGRAM

This well was drilled under license # 111

And this report is true and accurate.

Drilling firm Lacey Well Drilling, Inc.

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Rick Hillestad

Date: 9-4-13

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7500-3

I have this day, October 27, 2014, made a thorough examination of the water use system constructed by Hillestad Farms c/o Rich Hillestad, 46259 218th St. Volga SD 57071 of Permit No. 7500-3, bearing the priority of November 5, 2012 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.

Inspection contact & relationship **Rich Hillestad**
to permit holder, if applicable:

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Lacey Well Drilling Inc
- 2) No. of Wells two
- 3) Depth(s) 29 and 30 feet respectively
- 4) Well logs are available YES

WELL NO. 1 (WEST WELL)

Casing:

- 1) Diameter 14 inches
- 2) Length 18 feet
- 3) Type PVC

Screen:

- 1) Type PVC
- 2) Length 11 feet
- 3) Static water level 5 feet (7/23/13)

Pump:

- 1) Make Grundfos (submersible)
- 2) Model 230S-100-4BC
- 3) Horsepower rating 10 hp
- 4) Capacity 225 GPM

WELL NO. 2 (EAST WELL)

Casing:

- 1) Diameter 14 inches
- 2) Length 20 feet
- 3) Type PVC

Screen:

- 1) Type PVC
- 2) Length 10 feet
- 3) Static water level 5 feet (7/23/13)

Pump:

- 1) Make Grundfos (submersible)
- 2) Model 230S-100-4BC
- 3) Horsepower rating 10 hp
- 4) Capacity 225 GPM

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

- 1) Type PIP
- 2) Size 6 inches
- 3) Length 300 feet

- 1) Type PIP 2) Size 8 inches 3) Length 485 feet

Comments: Six-inch diameter buried PIP between wells and eight-inch diameter buried PIP from well to pivot

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Valley
- 2) Overall length 1288 feet
- 3) Number of towers 7
- 4) End gun Nelson 100
- 5) Capacity 450 GPM

Chemigation Equipment:

- 1) Does chemigate Yes
- 2) Main line check valve Yes
- 3) Inspection port/air relief Yes
- 4) Low pressure drain Yes
- 5) Discharge is 20' from source Yes
- 6) Interlock type electrical
- 7) Injection pump type piston
- 8) Injection check valve Yes
- 9) Injection line check valve or positive displacement pump Positive displacement pump

Comments: na

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes

If no, describe: na

- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Yes

List any extended period of nonuse: na

- 3) Exceptions to compliance are: na

E. Condition and Location:

1. The system is in good condition with the points of diversion located as follows: two wells in the SE¼NW¼SW¼ Section 12, T109N-R51W

Well No. 1. 1815 feet north and 750 feet east of the SW corner of Sec. 12, T109N-R51W (Lat/Lon: 44.25863/-96.90651)

Well No. 2. 1720 feet north and 100 feet east of the SW corner of Sec. 12, T109N-R51W (Lat/Lon: 44.25838/-96.90543).

2. The works are capable of diverting and conveying to the place of use **1.00** 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:

legal description/acreage

NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec.12, T109N-R51W: 33.8 acres

NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec.12, T109N-R51W: 33.8 acres

SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec.12, T109N-R51W: 23.1 acres

SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec.12, T109N-R51W: 33.8 acres

comprising a total of **124.5** acres of land and the license should be issued for **1.00** cfs.

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

If no, describe: **na**



Ken Buhler

DENR, Water Rights Program

Date report completed: **November 16, 2014**

Legend

 Irrigated acres

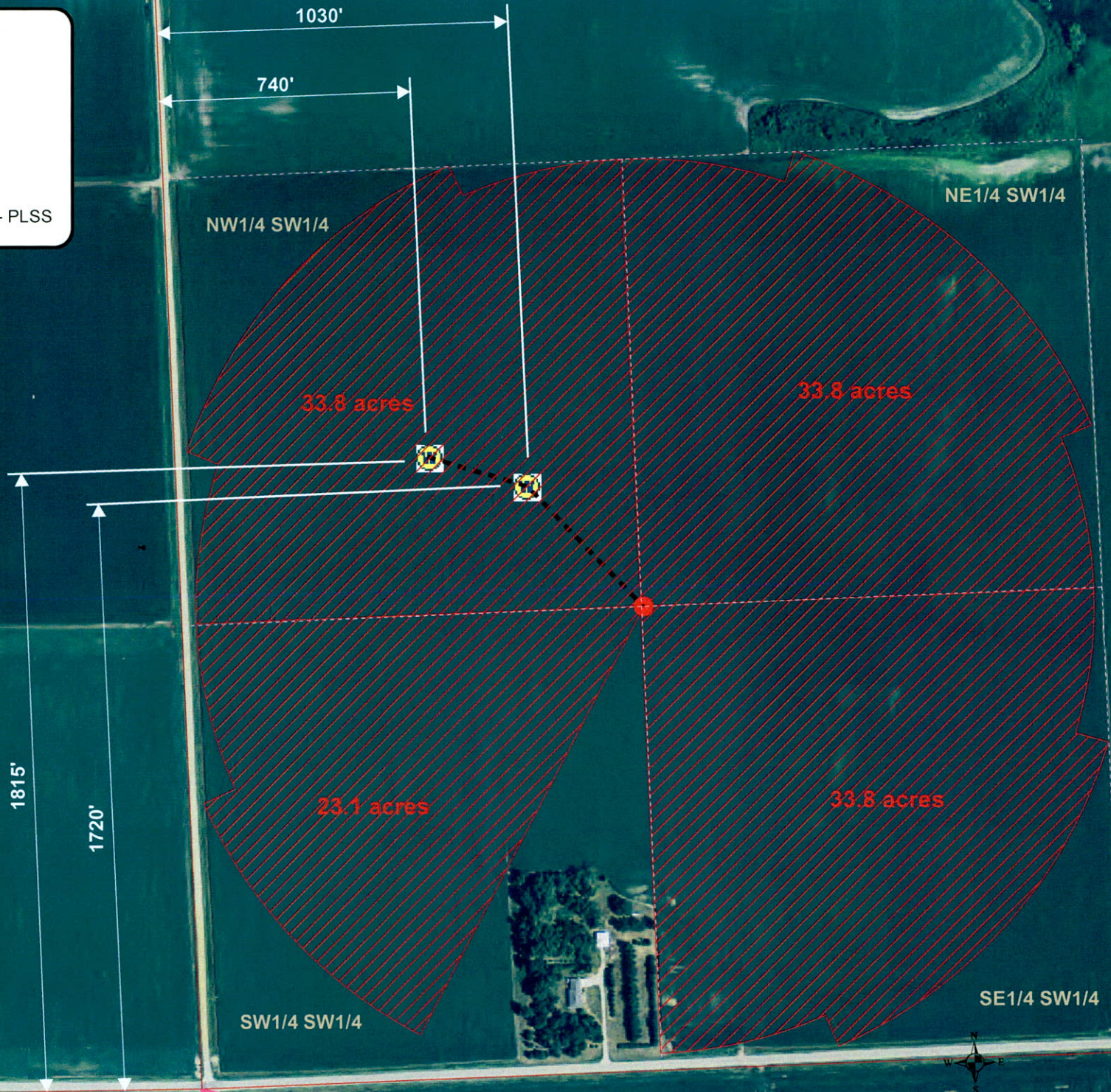
 Wells

 Center Pivot

 Buried PIP

 Section Boundaries - PLSS

7500-3



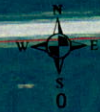
kb
18 Nov 2014

K. R. R. R.

SW corner Sec.12, T109N-R51W

750

375



750 Feet



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

FEB 17 2015

7500-3

Rich Hillestad
Hillestad Farms
46250 218th St
Volga SD 57071

Dear Mr. Hillestad:

Enclosed is Water License No. 7500-3. 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 the owner of an existing well, such as the well authorized by Water Right No. 7500-3, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

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

Sincerely,

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

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7500-3

(1) Hillestad Farms, 46250 218th St, Volga SD 57071 made Application No. 7500-3, November 5, 2012 for a water permit to divert 1.78 cubic feet of water per second from ground water (two wells - Big Sioux: Brookings Aquifer), Brookings County, South Dakota for irrigation purposes. Permit No. 7500-3, with a priority date of November 5, 2012 was approved February 4, 2013 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before February 4, 2018 and for the application to beneficial use of said water on or before February 4, 2022.

The Permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" on August 12, 2013. The "*Notice*" stated the water use system was completed and water placed to beneficial use on August 2, 2013.

(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 1.00 cubic feet of water per second for beneficial use. The location of the diversion points are:

- Well #1 – 1,815 feet N and 750 feet E of the SW corner of Section 12, T109N, R51W (NW $\frac{1}{4}$ SW $\frac{1}{4}$)
- Well #2 – 1,720 feet N and 100 feet E of the SW corner of Section 12, T109N, R51W (NW $\frac{1}{4}$ SW $\frac{1}{4}$)

(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:

T109N, R51W Section 12	NE $\frac{1}{4}$ SW $\frac{1}{4}$	33.8 acres
	NW $\frac{1}{4}$ SW $\frac{1}{4}$	33.8 acres
	SW $\frac{1}{4}$ SW $\frac{1}{4}$	23.1 acres
	SE $\frac{1}{4}$ SW $\frac{1}{4}$	33.8 acres
	Total	124.5 acres

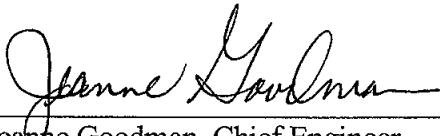
(4) Pursuant to South Dakota Water Law 46-5-30.1 Hillestad Farms, 46250 218th St, Volga SD 57071 the holder and/or owner of Water Right No. 7500-3 is issued a license to appropriate water, the right to use 1.00 cubic feet of water per second from ground water (two wells - Big Sioux: Brookings Aquifer) with a priority date of November 5, 2012 from the locations 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. 7500-3 and subject to the following qualifications:

- 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.

continued

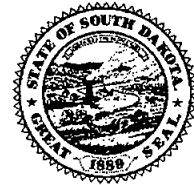
- The wells authorized by Permit No. 7500-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28. *(Both wells were drilled by Lacey Well Drilling in July, 2013 – copy of log on file with the Water Rights Program)*
- This Permit is approved subject to the irrigation water use questionnaire being submitted each year.



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

FEB 17 2015

date





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

October 31, 2016

7500-3

Rich Hillestad
Hillestad Farms
21580 464th Ave
Volga SD 57071 6921

Dear Mr. Hillestad:

Enclosed is a "Notice" dated October 21, 2016 concerning the 2016 irrigation questionnaire.

The notice was originally mailed to 46250 218th St, Volga SD. The post office notified us that your address has changed and I will update our records accordingly.

If you have any questions, please contact me.

Sincerely,

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

enclosures