

WATER PERMIT NO. 7486-3

Name of Applicant: Bottolfson Bros

Address: 1834 Constance Dr, Vermillion SD 57069

Phone: 605 624 8249

Amount of Water Claimed: no additional cfs

Total Acres: 70 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation

County: Clay

Type of Waste Disposal System:

Location: 2 west of Vermillion

PRIORITY

Date Received: 10-29-12

Application/License Fee: \$ 950

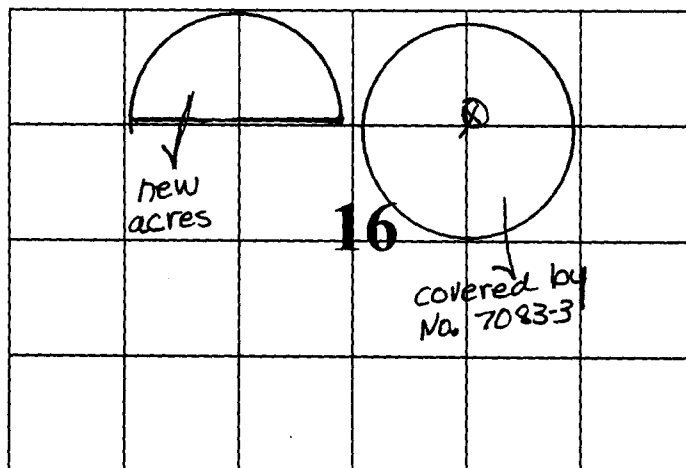
Corrected Application Received:

Period of Annual Use: May 1 – September 30

Remarks: Utilitizing well and diversion authority authorized by Water Permit No. 7083-3

Diversion Point: NE 1/4 NE 1/4 Sec 16-T92N-
R52W

Land to be Irrigated: N 1/2 NW 1/4 Sec 16-T92N-
R52W



Depth of Well: 93

Well Driller: Hammond-Wetmore Drilling

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 10-29-12

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>7486-3</u>	(office use only) Hydrologic Unit <u>10170102</u>
	Basin <u>Vermillion River</u>	<u>605-624-2695</u>
	Newspaper <u>Plain Talk 319 Walnut Vermillion 57069</u>	<u>605-665-7811</u>
	<u>Press & Dakota 319 Walnut Yankton 57028</u>	

RECEIVED

OCT 29 2012

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 Bottolfson Bros
(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent _____
(name and complete address if different than above name)
- Mailing Address 1834 Constance Dr Vermillion SD 57069
(Address) (City) (State) (Zip Code)
- Home Phone 605 624 8249 Cell 605 202 0966 Email jbottolfson@valyou sat.net
2. Amount of water claimed no additional 1 ***GPM ***AF Total Acreage 70
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
3. Source of water supply agwater well authorized by permit # 7083-3
4. Location of point of diversion 1 well in NE 1/4 NE 1/4 sect 16 - T92N - R52W
existing (example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W) County Clay
5. County or counties where water will be used Clay
6. Annual period during which water is to be used May 1 - September 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>NW 1/4 NW 1/4 sect 16 T92N R52W</u>	<u>35</u>		
<u>NE 1/4 NW 1/4 sect 16 T92N R52W</u>	<u>35</u>		

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

irrigation pivot

I, Bottolfson Bros by Jay Bottolfson, 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. 7486-3**

Date of first receipt of application October 29, 2012.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7486-3 to Bottolfson Brothers, c/o Jay Bottolfson, 1834 Constance Dr., Vermillion SD 57069 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. 7486-3 authorizes irrigation of 70 additional acres. Water Permit No. 7083-3 authorizes 1.56 cubic feet of water per second (cfs) from one well completed into the Missouri:Elk Point Aquifer (115 feet deep) located in the NE 1/4 NE 1/4 Section 16 for irrigation of 103.5 acres located in the N 1/2 NE 1/4, SE 1/4 NE 1/4 Section 16; all in T92N-R52W. This permit authorizes irrigation of 70 additional acres located in the N 1/2 NW 1/4 Section 16-T92N-R52W from the existing well. This permit does not authorize any increase in the diversion rate.
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 October 29, 2012.
4. The date of approval of Permit No. 7486-3 is January 28, 2013.
5. One-fifth of the construction is to be completed on or before July 28, 2015.
6. All construction is to be completed on or before January 28, 2018.
7. Water is to be put to beneficial use on or before January 28, 2022.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Water Permit Nos. 7083-3 and 7486-3 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. 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

FEB 19 2013
date



Supplemental Information

(type or print)

well authorized by Permit #7083-3

1. Well Information (check one or both as applicable) ☐ Drilling new well(s) ☒ Using existing well(s)

a) If new wells, how many _____ Have test holes been drilled ☐ Yes ☐ No Drilled by _____
(if yes, please provide copies of logs)

b) If existing wells, how many _____ Provide copy of log(s), if available. Drilled by _____

c) Well Depth _____ Depth to Top of Water Bearing Material _____ Depth to Water from Surface _____

d) Distance to nearest existing domestic well:

On applicant's property _____ 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)

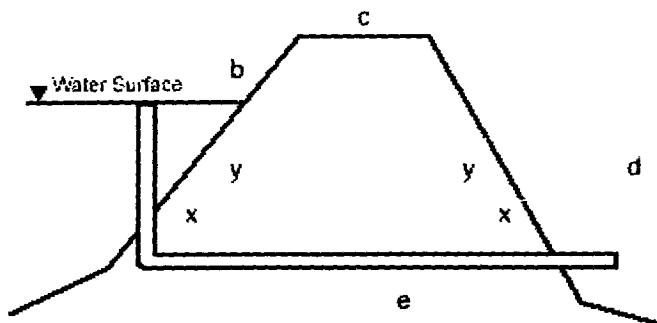
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres





United States Department of Agriculture
Farm Service Agency

PLSS: 16_92_52
Farm: 4068

Clay County, SD
1:8,290

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April 14, 2010

Wetland Determination Identifiers

- Restricted Use
- ▼ Limited Restrictions
- Exempt from Conservation Compliance Provisions

□ Common Land Units

Disclaimer: 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.

2008 Ortho-Photography - Not to Scale

SOUTH DAKOTA WATER WELL COMPLETION REPORT

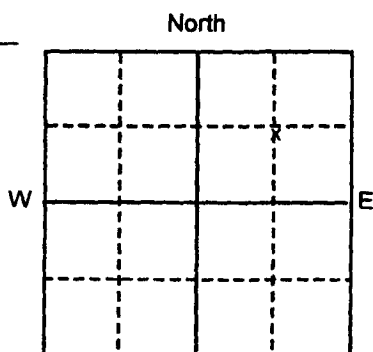
SD EForm - 1621LD V1

11-02

Location se 1/4 ne 1/4 Sec 16 Twp 92n Rg 52w

County clay

Please mark well location with an "X"



Well Completion Date

8/15/09

1 Mile

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

1,500.0 ft. from septic tank

(identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

rotary

CASING DATA:

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	<u>16.00</u> IN	<u>0.0</u> FT	<u>53.0</u> FT	<u>22.00</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>bent grt</u>	<u>16</u>	<u>9.5</u> Lb/gal	<u>0.0</u> Ft	<u>46.0</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
tremie

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 16.00 Inches Length 40.0 Feet

Material pvc

Slot Size .080 Set From 53.0 Feet to 93.0 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? hth tablets

Lab to which water ☐ No, Why Not?
 quality sample sent for analysis

Well Owner: Jay Bottolfson

Business Name: Bottolfson Farms

Address: 45723 Timber Road

City, State, Zip: Vermillion sd 57069

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Silt, brown, sandy	0	15
sand, fine to medium, silty	15	46
Gravel, medium to coarse, sandy	46	93

STATIC WATER LEVEL 17.0 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 development

☒ Bailed

☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped

_____ Ft. After _____ Hrs. pumped

If pump installed, pump rate: _____ GPM

REMARKS

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This well was drilled under license # 666 and this report is true and accurate.

Drilling firm: Hammond-wetmore Drilling

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: _____

01-1-10

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

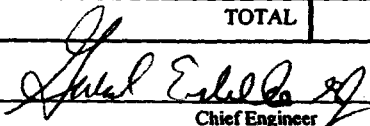
Date 10/29, 2012

RECEIVED OF Bottolfson Brothers 1834 Constance Dr Vermillion SD 57069

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

Fee for Application for Permit No. <u>7486-3</u> to Appropriate Water, to construct and to put water to beneficial use	750	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>7486-3</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	950 00

No. **05656**

By 
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. 7486-3, Bottolfson Brothers**

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. 7486-3, Bottolfson Brothers, c/o Jay Bottolfson Brothers, 1834 Constance Drive, Vermillion SD 57069.

The Chief Engineer is recommending APPROVAL of Application No. 7486-3 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 Water Permit Nos. 7083-3 and 7486-3 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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Garland Erbele, Chief Engineer
January 4, 2013

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 7486-3
BOTTOLFSO BROTHERS
c/o JAY BOTTOLFSO
JANUARY 2, 2013

Water Permit Application No. 7486-3 proposes to appropriate up to 140 acre-feet per year (ac-ft/yr) to irrigate an additional 70 acres located in the N½ NW¼ of Section 16, T92N-R52W using the existing well authorized by Water Permit No. 7083-3. Water Permit No. 7083-3 appropriates up to 207 ac-ft/yr at a maximum diversion rate of 1.56 cubic feet of water per second (cfs) from one well 115 feet deep completed into the Missouri: Elk Point aquifer. The well is located in the NE¼ NE¼ of Section 16 for irrigation of 103.5 acres located in the N½ NE¼, SE¼ NE¼ of Section 16, all in T92N-R52W in Clay County. This application does not propose to increase the diversion rate authorized for this well by Water Permit No. 7083-3.

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

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Missouri: Elk Point is an alluvium mantled outwash consisting of clay and silt with sand and gravel (Jenson, 2000). The Missouri: Elk Point aquifer extends from Clay County east into Union County and west into Yankton County. In total, the Missouri: Elk Point aquifer is estimated to underlie 219,100 acres and contain 3,287,100 acre-feet (ac-ft) of recoverable water in storage. The well site is located in south central Clay County, approximately two and a quarter miles north of the Missouri River. In Clay County alone, the aquifer is estimated to underlie 74,500 acres and contain 1,117,000 ac-ft of recoverable water in storage (Hedges and others, 1982). The aquifer connects to the Lower Vermillion-Missouri aquifer to the northeast, overlies the Dakota aquifer in portions of Clay County, and is hydraulically connected to the Vermillion River to the east and Missouri River to the south. Water in the aquifer generally moves from the northwest to the southeast and towards the Missouri River (Stephens, 1967).

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 a beneficial use and in the public interest. This report will address the availability of unappropriated water and existing rights from the aquifer and pertinent to this application.

WATER AVAILABILITY:

This application proposes to appropriate up to 140 ac-ft/yr from the Missouri: Elk Point aquifer. If this application is approved, the actual water use will likely be less than the appropriation. 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.”

HYDROLOGIC BUDGET:

Recharge:

Recharge to the Missouri: Elk Point aquifer is due to infiltration of precipitation in areas where the aquifer is near land surface, inflow from the Lower Vermillion-Missouri aquifer at the Missouri: Elk Point aquifer’s northern boundary, inflow from the Missouri and Vermilion Rivers during periods of high flow, inflow from the aquifer in surrounding counties, and leakage from the underlying Dakota aquifer.

Hedges and others (1985) estimated recharge, based on observation well data, of the Missouri: Elk Point aquifer to be 3.8 inches per year. Using this recharge rate and the area of the aquifer, the recharge for the Missouri: Elk Point aquifer in Clay County estimated to equal 23,600 ac-ft/yr. Consider also that Stephens (1967) indicated that additional discharge by wells would induce additional recharge from the Missouri River.

Discharge:

Discharge from the Missouri: Elk Point aquifer occurs due to evapotranspiration in areas where the aquifer is near land surface, outflow to the Missouri and Vermillion Rivers during periods of low flow, outflow from the aquifer to surrounding counties, and well withdrawals from domestic use, commercial use, industrial use, fish and wildlife propagation, municipal use, recreational use, rural water systems, suburban housing development, and irrigation. Currently there are a total of 112 water rights/permits appropriating water from the Missouri: Elk Point aquifer in Clay County (Water Rights, 2012b). There are also several water permits for the Missouri: Elk Point aquifer that are pending authorization.

From the Missouri: Elk Point aquifer in Clay County, water rights/permits for non-irrigation use that are limited only by diversion rate currently authorize a total of 5.242 cfs. Water rights/permits for non-irrigation use that are limited by an annual volume currently appropriate a total of 33,326 ac-ft/yr (Water Rights, 2012b). Future use permits reserve a total of 14,900 ac-ft/yr (Water Rights, 2012b).

The amount of water than can be expected to be withdrawn by the non-irrigation use water rights/permits at the current appropriation amount can be estimated by assuming: 1) water rights/permits limited by an annual volume will pump the entire volume appropriated annually, 2) water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time, and 3) future use permits can be fully developed. Therefore, the total annual withdrawal from the Missouri: Elk Point aquifer in Clay County by non-irrigation use is currently expected to total at maximum 48,232 ac-ft/yr (Water Rights, 2012b).

Lewis and Clark RWS’s expected water use is a significant portion of the annual volume of water anticipated to be used under current appropriations. In Clay County, the Lewis and Clark RWS currently has two permits appropriating a total of 32,165 ac-ft/yr and four future use permits reserving a total of 13,000 ac-ft/yr, all from the Missouri: Elk Point aquifer (Water

Rights, 2012b). Recognizing that due to the proximity of the wells to the Missouri River and the design of the wells, most of the water that will be withdrawn from the Lewis and Clark RWS wells will be induced from the Missouri River.

Figure 1 shows the Missouri: Elk Point aquifer's historic irrigation data for Clay County. The development of this aquifer has been steadily increasing over the last decade. The number of permits and the amount of appropriations for irrigation in Clay County has approximately doubled in this time period. The annual withdrawal due to irrigation use fluctuates greatly, which seems to be more dependent on growing season climatic conditions than on the increase in amount of appropriations. The average pumpage reported equals 2,706 ac-ft/yr. The maximum pumpage reported was in 2007 for 7,085 ac-ft/yr (Water Rights, 1979-2012).



Figure 1: Historic irrigation water use from the Missouri: Elk Point aquifer in Clay County (Water Rights, 1979-2011)

In addition, there are many completion reports on file with the SD DENR-Water Rights Program in Clay County for domestic wells that appear to be completed into the Missouri: Elk Point aquifer (Water Rights, 2012c). However, the annual withdrawal due to domestic use is not significant to the hydrologic budget of the aquifer.

Hydrologic Budget:

Recognizing that the Lewis and Clark RWS withdraws water from the Missouri: Elk Point aquifer that is induced from the Missouri River and considering the remaining hydrologic budget, there is a reasonable probability that unappropriated groundwater is available from the Missouri: Elk Point aquifer for the proposed appropriation of 140 ac-ft/yr.

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 monitors five observation wells completed into the Missouri: Elk Point aquifer in Clay County. The nearest of these wells, CL-80B and CL-80C, are located approximately six miles west and four miles southeast of the existing well, respectively (Water Rights, 2012a). Hydrographs of these observation wells are shown in Figures 2 and 3.

The observation well data documents cyclic conditions of water levels, recharging during wet years and declining during dry years. Water levels may also be influenced by the aquifer’s connection to the Missouri River. For example, high flows in the Missouri River during the summer of 2011 and the current drought conditions are evident in the hydrographs, which are both located approximately one and a half miles from the Missouri River. These hydrographs show a slight decline of the Missouri: Elk Point aquifer’s water table, as indicated by the trend line. This gradual decline has been attributed to entrenching the Missouri River (Goodman, 2007) or controlling the flow of the Missouri River by the Gavins Point Dam, which no longer allows inundating of the floodplain (Stephens, 1967). Regardless of cause, the declining water table levels demonstrate the hydraulic connection between the aquifer and the Missouri River. Pumping from the aquifer will induce recharge supplied by the Missouri River or capture discharge before outflowing to the river (Stephens, 1967).

The hydrographs also show the effects of nearby pumping on the 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, there is a reasonable probability that unappropriated water is available from the Missouri: Elk Point aquifer to support the proposed appropriation of 140 ac-ft/yr.

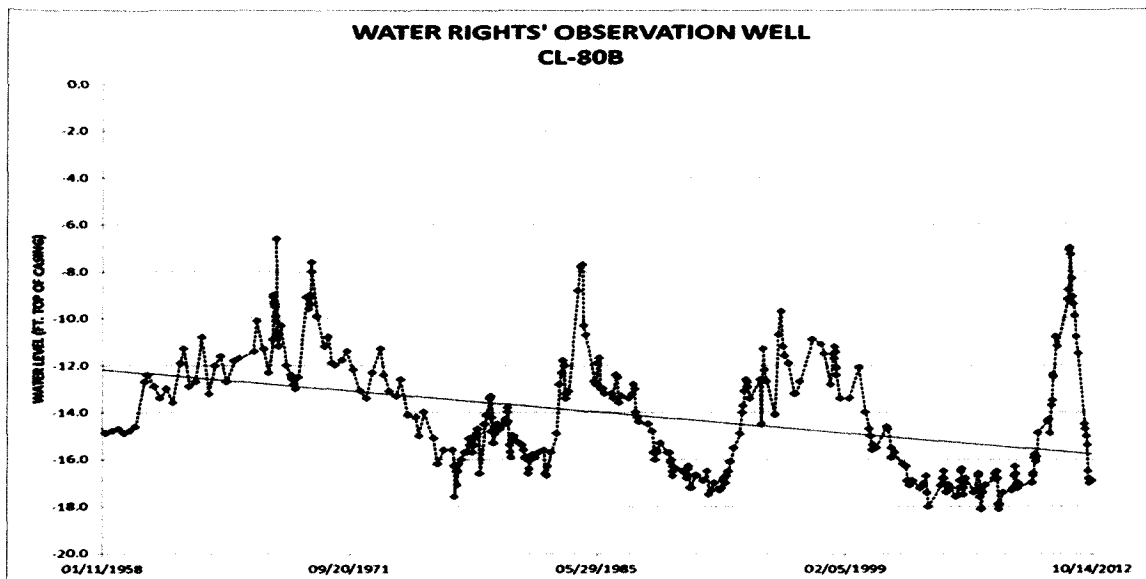


Figure 2: Hydrograph for DENR-Water Rights' observation well CL-80B (Water Rights, 2012a)

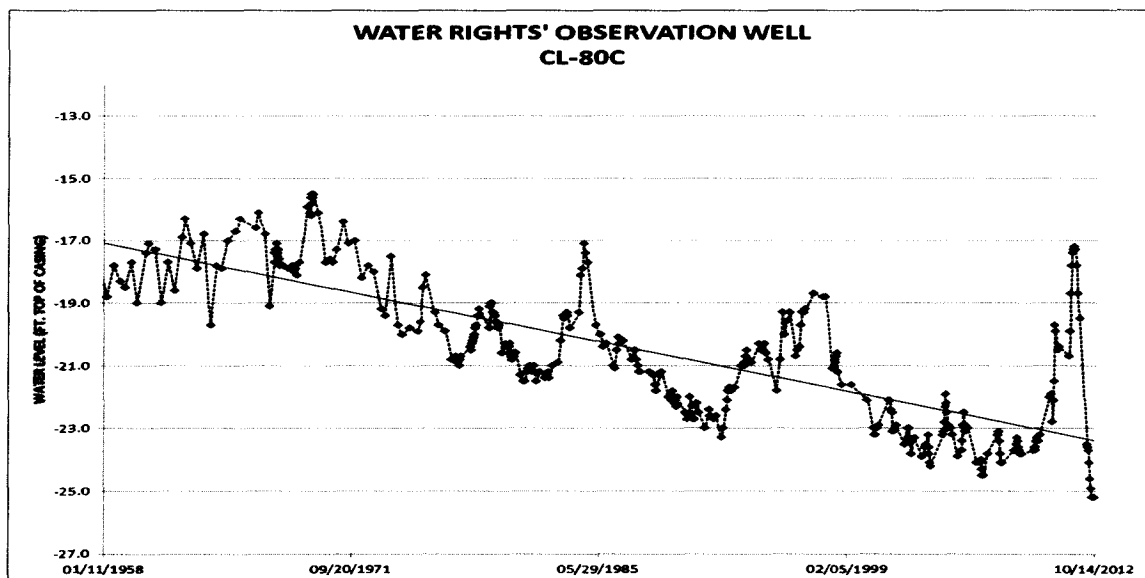


Figure 3: Hydrograph for DENR-Water Rights' observation well CL-80C (Water Rights, 2012a)

EXISTING WATER RIGHTS:

There are ten water rights/permits appropriating or reserving water from the Missouri: Elk Point aquifer within two miles of the existing well (Water Rights, 2012b). A future use area, reserved for Future Use Permit 6869-3, is located approximately one quarter mile south of the existing well. There are several domestic wells on file with the SD DENR-Water Rights Program within two miles of the existing well that could be completed into and withdrawing from the Missouri: Elk Point aquifer (Water Rights, 2012c). The nearest well is located approximately a third of a mile from the existing well.

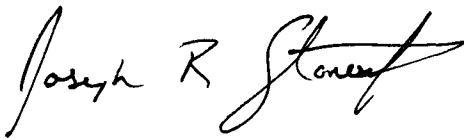
While this permit is not requesting to increase the maximum diversion rate of 1.56 cfs authorized by Water Permit No. 7083-3, the average actual diversion rate used will probably increase due to

the additional pumping that will be necessary to irrigate the additional acres. Well interference has not been a problem in the Missouri: Elk Point aquifer and the water table conditions of the aquifer in this area dictates that any drawdown due to pumping would probably not extend far from the proposed well sites (i.e. less than half a mile). As previously discussed, the hydrographs for observation wells completed into the aquifer document the effects of pumping; however, these are minimal relative to climatic conditions. Over the period of record, water levels in the two nearest observation wells fluctuated at maximum 12 feet (Water Rights, 2012a). This amount of fluctuation is probably the worst case scenario for the aquifer in this area and is due more likely to the aquifer's connection to the Missouri River than pumping from wells. According to the test hole log, there is approximately 90 feet of aquifer materials in this area. Therefore, at the distances involved between the existing well and wells of existing water rights/permits and domestic users, interference is not expected to be a concern.

Considering that the Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur, a nearby adequate well defined by ARSD 74:02:20(7), which states that the pump intake must be set 20 feet below the top of the aquifer or, if the aquifer is less than 20 feet thick, as near to the bottom of the aquifer as is practical, is not expected to be adversely or unlawfully impaired.

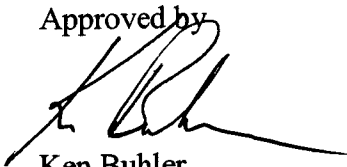
CONCLUSIONS:

1. The application proposes to authorize the irrigation of 70 additional acres using an existing well authorized by Water Permit No. 7083-3.
2. Most of the water that will be withdrawn from the Lewis and Clark RWS wells will be induced from the Missouri River.
3. There is a reasonable probability that unappropriated water is available from the Missouri: Elk Point aquifer to supply the proposed appropriation.
4. There is a reasonable probability that the proposed irrigation of additional acres, and possible additional diversion rate, will not cause interference in existing nearby wells.



Joseph R Stonesifer
SD DENR-Water Rights Program

Approved by



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Goodman, J.A. 2007. Report on Water Permit Application No. 6869-3 for Lewis and Clark RWS: SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- 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. South Dakota DENR-Geological Survey, Vermillion, SD.
- Jensen, A.R. 2000. Aquifer Materials Map 1. South Dakota DENR-Geological Survey, Vermillion, SD.
- Stephens, J.C. 1967. Geology and Hydrogeology of Clay County, South Dakota, Part II: Water Resources. South Dakota DENR-Geological Survey Bulletin 19, 62 p.
- Water Rights. 1979-2012. "Annual Irrigation Summary by Aquifer": 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 Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2012c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.

NOTICE OF APPLICATION
NOS. 7486-3, 7487-3, 7488-3 to
Appropriate Water

Notice is given that Bottolfson Brothers, c/o Jay Bottolfson, 1834 Constance Dr, Vermillion SD 57069 has filed the following applications for a water permit.

AFFIDAVIT OF PUBLICATION

PLAIN TALK

DENR
Division of Environmental Services
Air Quality Program
Joe Foss Building, 523 East Capitol
Pierre, SD 57501

STATE OF SOUTH DAKOTA
COUNTY OF CLAY

TERA SCHMIDT BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT SHE IS THE CLASSIFIED MANAGER OF YANKTON
MEDIA INC., A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
PLAIN TALK, A LEGAL WEEKLY NEWSPAPER PUBLISHED AND CIRCULATED
IN THE CITY OF VERMILLION, SAID COUNTY AND STATE, AND ONE OF THE
OFFICIAL NEWSPAPERS OF THE SAID COUNTY OF FACTS STATED IN THIS
AFFIDAVIT; THAT THE ANNEXED
NOTICE OF APPLICATION FOR AIR QUALITY CONSTRUCTION PERMIT

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 18 DAY OF JANUARY 2013
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$38.73 ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS
BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF
HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 1/18/13

FILED ON: 1/18/13

Application No. 7486-3 proposes to irrigate 70 additional acres. Water Permit No. 7083-3 authorizes 1.56 cubic feet of water per second (cfs) from one well completed into the Missouri:Elk Point Aquifer (115 feet deep) located in the NE 1/4 NE 1/4 Section 16 for irrigation of 103.5 acres located in the N 1/2 NE 1/4, SE 1/4 NE 1/4 Section 16; all in T92N-R52W. This application proposes to irrigate 70 additional acres located in the N 1/2 NW 1/4 Section 16-T92N-R52W from the existing well. This application, if approved, does not authorize any increase in the diversion rate.

Application No. 7487-3 proposes to appropriate 1.56 cfs from one well to be completed into the Lower Vermillion:Missouri Aquifer (180 feet deep) located in the SW 1/4 SW 1/4 Section 13 to irrigate 140 acres located in the SW 1/4 Section 13; all in T93N-R52W.

Application No. 7488-3 proposes to appropriate 1.56 cfs from one well to be completed into the Missouri:Elk Point Aquifer (100 feet deep) located in the approximate center of the NE 1/4 Section 17 to irrigate 210 acres located in the NE 1/4 Section 17 and NW 1/4 Section 16; all in T92N-R53W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 7486-3, 7487-3 and 7488-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on these applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Tera A. Schmidt
SUBSCRIBED AND SWORN TO BEFORE ME THIS 22 DAY OF

Kristen M. Schild
NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES 8/19/2015

January

Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by January 28, 2013.

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

Published once at the total approximate cost of \$38.73.

Published: January 18, 2013

RECEIVED

JAN 22 2013

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

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

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

KELLY HERTZ BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT HE IS THE MANAGING EDITOR OF, YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID
COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
Notice of Application Nos. 7486-3 & 7487-3

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 18th DAY OF January 2013
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$37.24 ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS
BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF
HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 1/18/2013

FILED ON: 1/18/2013

[Signature]
SUBSCRIBED AND SWORN TO BEFORE ME THIS 18th DAY OF January

[Signature]
NOTARY PUBLIC, SOUTH DAKOTA

MY COMMISSION EXPIRES 8/19/2015

2013

Notice is given that Bottolfson
Brothers, c/o Jay Bottolfson, 1834
Constance Dr, Vermillion SD
57069 has filed the following ap-
plications for a water permit.

Application No. 7486-3 proposes
to irrigate 70 additional acres.
Water Permit No. 7083-3 author-
izes 1.56 cubic feet of water per
second (cfs) from one well com-
pleted into the Missouri:Elk Point
Aquifer (115 feet deep) located in
the NE 1/4 NE 1/4 Section 16 for
irrigation of 103.5 acres located in
the N 1/2 NE 1/4, SE 1/4 NE 1/4
Section 16; all in T92N-R52W.
This application proposes to irri-
gate 70 additional acres located in
the N 1/2 NW 1/4 Section
16-T92N-R52W from the existing
well. This application, if ap-
proved, does not authorize any in-
crease in the diversion rate.

Application No. 7487-3 proposes
to appropriate 1.56 cfs from one
well to be completed into the
Lower Vermillion:Missouri Aquif-
er (180 feet deep) located in the
SW 1/4 SW 1/4 Section 13 to irri-
gate 140 acres located in the SW
1/4 Section 13; all in
T93N-R52W.

Application No. 7488-3 proposes
to appropriate 1.56 cfs from one
well to be completed into the Mis-
souri:Elk Point Aquifer (100 feet
deep) located in the approximate
center of the NE 1/4 Section 17 to
irrigate 210 acres located in the
NE 1/4 Section 17 and W 1/2 NW
1/4 Section 16; all in
T92N-R53W.

Pursuant to SDCL 46-2A-2, the
Chief Engineer recommends AP-
PROVAL of Application Nos.
7486-3, 7487-3 and 7488-3 be-
cause 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 ac-
cordance with SDCL 46-2A-23,
the Chief Engineer will act on
these applications, as recom-
mended, unless a petition is filed
opposing the applications or the
applicant files a petition contest-
ing the Chief Engineer's recom-
mendations. If a petition oppos-
ing the applications or contesting
the recommendations is filed, then
a hearing will be scheduled and
the Water Management Board
will consider these applications.
Notice of the hearing will be
given to the applicant and any
person filing a petition.

Any person interested in opposing
or supporting these applications or
recommendations must file a writ-
ten petition with BOTH the appli-
cant and Chief Engineer. The ap-
plicant must file a petition if con-
testing the Chief Engineer's rec-
ommendations. The Chief Engi-
neer'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 inter-
ested person or the applicant must
be filed by January 28, 2013.

The petition may be informal, but
must include a statement describ-
ing the petitioner's interest in the
applications, the petitioner's rea-
sons for opposing or supporting
the applications, and the signature
and mailing address of the peti-
tioner or the petitioner's legal
counsel, if legal counsel is ob-
tained. Contact Eric Gronlund at
the above Water Rights Program
address to request copies of infor-
mation pertaining to these appli-
cations. Steven M. Pirner, Secre-
tary, Department of Environment
and Natural Resources.

Published once at the total ap-
proximate cost of \$37.24.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

January 7, 2013

Plain Talk
201 W Cherry St
Vermillion SD 57069

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 7486-3, 7487-3 and 7488-3 to Appropriate Water. Please publish the notice once on January 18, 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 Bottolfson Brothers, c/o Jay Bottolfson, 1834 Constance Dr., Vermillion SD 57069 (Ph # 605-624-8249).

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

January 7, 2013

Press & Dakotan
319 Walnut
Yankton SD 57078

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 7486-3, 7487-3 and 7488-3 to Appropriate Water. Please publish the notice once on January 18, 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 Bottolfson Brothers, c/o Jay Bottolfson, 1834 Constance Dr., Vermillion SD 57069 (Ph # 605-624-8249).

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Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

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

January 7, 2013

Bottolfson Brothers
Jay Bottolfson
1834 Constance Dr
Vermillion SD 57069

Dear Mr. Bottolfson:

Water Permit Application Nos. 7486-3, 7487-3 and 7488-3 for irrigation use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Plain Talk printed at Vermillion SD (Ph # 605-624-2695) and the Press & Dakotan printed at Yankton SD (Ph # 605-665-7811). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and reports on the applications are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

Instruction to Newspaper - Publish the Notice on January 18, 2013. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NOS. 7486-3, 7487-3, 7488-3 to Appropriate Water

Notice is given that Bottolfson Brothers, c/o Jay Bottolfson, 1834 Constance Dr, Vermillion SD 57069 has filed the following applications for a water permit.

Application No. 7486-3 proposes to irrigate 70 additional acres. Water Permit No. 7083-3 authorizes 1.56 cubic feet of water per second (cfs) from one well completed into the Missouri:Elk Point Aquifer (115 feet deep) located in the NE 1/4 NE 1/4 Section 16 for irrigation of 103.5 acres located in the N 1/2 NE 1/4, SE 1/4 NE 1/4 Section 16; all in T92N-R52W. This application proposes to irrigate 70 additional acres located in the N 1/2 NW 1/4 Section 16-T92N-R52W from the existing well. This application, if approved, does not authorize any increase in the diversion rate.

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Application No. 7488-3 proposes to appropriate 1.56 cfs from one well to be completed into the Missouri:Elk Point Aquifer (100 feet deep) located in the approximate center of the NE 1/4 Section 17 to irrigate 210 acres located in the NE 1/4 Section 17 and W 1/2 NW 1/4 Section 16; all in T92N-R53W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 7486-3, 7487-3 and 7488-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on these applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by January 28, 2013.

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

FEB 19 2013

Bottolfson Brothers
Jay Bottolfson
1834 Constance Dr
Vermillion SD 57069

Dear Mr. Bottolfson:

Enclosed are Water Permit Nos. 7486-3, 7487-3 and 7488-3 authorizing construction of your water diversion systems and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

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

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

Sincerely,

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

enclosures

7486-3

RECEIVED

JUL 29 2013

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 7-25-13TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181FROM: Bottolfson Bros

(name)

1834 Constance Dr

(address)

Vermillion SD 57069

(city, state, zip)

605624-2404

(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. 7486-3 states that the water use system is to be constructed by7-28-18

(date)

, and water is to be put to beneficial use by 1-28-22

(date)

The water use system was completed on 7-3-13

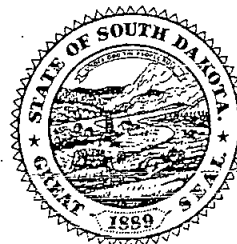
(date)

Applying the water to beneficial use was completed on 7-3-13

(date)

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

Mark Bottolfson owner/partner
(signature)
Bottolfson





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

July 29, 2013

7486-3
7487-3
7488-3

Bottolfson Brothers
1834 Constance Dr
Vermillion SD 57069

Dear Mr. Bottolfson:

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

The systems are 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 the projects and the staff inspection has no bearing on your water permits.

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

Sincerely,

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

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

Form 12

**Water Permit Nos. 7083-3 and 7486-3
Clay County**

Report of Examination of Works and/or Application of Water to Beneficial Use

To: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, September 22, 2014 made a thorough examination of the water system used by the Bottolfson Brothers, 1834 Constance Dr., Vermillion SD 57069, holder of Water Permit Nos. 7083-3 and 7486-3, bearing the priority date of October 29, 2008 and October 29, 2012, respectively. Water Permit No. 7083-3 authorizes the diversion of 1.56 cubic feet per second (cfs) from one well completed into the Missouri: Elk Point aquifer at approximately 115 feet below ground surface for the purposes of irrigating 103.5 acres in Clay County as follows: 34.5 acres in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 16, 34.5 acres in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 16, 34.5 acres in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 16, all in T92N-R52W. Water Permit No. 7486-3 utilizes the well constructed under Water Permit No. 7083-3 and does not authorize an increase in the maximum diversion rate of 1.56 cfs. Water from the well is used to irrigate 35 acres in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 16 and 35 acres in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 16, all in T92N-R52W.

I have the following conditions to report for the system in question:

- 1) Works used to divert water:
One irrigation pump, manufactured by Kroy-Midwest
- 2) Works used to transport water to a place of use:
Underground pipes, 8 inch diameter.
- 3) Works used to apply water to beneficial use:
One Valley 8000 Pivot.

The system is in the following condition: well maintained. The well associated with Water Permit No. 7083-3 is located in the center of the NE $\frac{1}{4}$ of Section 16, T92N-R52W. The exact location the well is as follows:

- 1) **1,300 feet west and 1,300 feet south of the northeast corner of Section 16, T92N-R52W.
Lat 42.79021N Lon 96.98810W.**

The lands irrigated by the fore mentioned well are as follows:

- 1) 34.5 acres in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 16, T92N-R52W.
- 2) 34.5 acres in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 16, T92N-R52W.
- 3) 34.5 acres in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 16, T92N-R52W.

For a total of 103.5 acres under Water Permit No. 7083-3.

- 4) 35 acres in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 16, T92N-R52W.
- 5) 35 acres in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 16, T92N-R52W.

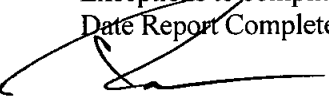
For a total of 70 acres under Water Permit No. 7486-3.

License should be issued for the developed diversion rate of: **1.56 cfs or 700 gpm.**

Applicable permit qualifications have been complied with: **Yes**

Exceptions to compliance are: **None**

Date Report Completed: **May 27, 2015**


Bracken Capen
Natural Resources Engineer
DENR, Water Rights Program

FIELD INVESTIGATION REPORT FOR WATER PERMIT NOS. 7083-3 and 7486-3

DATE OF INVESTIGATION:	September 22, 2014
NAME & ADDRESS OF PERMIT HOLDER:	Bottolfson Brothers 1834 Constance Dr. Vermillion SD 57069
NAME & ADDRESS OF INVESTIGATION CONTACT/ RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE	Mark Bottolfson
DIVERSION POINT LEGAL LOCATIONS	1,300 feet east and 1,300 feet north of the southwest corner of Section 16, T92N-R52W. Lat 42.78223N Lon 96.99803W.

WELL INFORMATION:

- 1) Well Drilling Firm:
Hammond Wetmore Drilling
- 2) Number of Wells: **1**
- 3) Depth: **93 feet**
- 4) Well Log Available: **Yes**
- 5) Comment:

Pumps

- 1) Make: **Kroy Midwest (x2)**
- 2) Model:
- 3) Size:
- 4) Capacity: **700 gpm (1.56 cfs)**

Casing

- 1) Diameter: **16 inches**
- 2) Length: **53 feet**
- 3) Type: **Plastic**

Screen

- 1) Type: **Manufactured**
- 2) Length: **40 feet**
- 3) Static Water Level: **17**

Motor

- 1) Make: **Kroy-Midwest**
- 2) Model No:
- 3) Power: **35 hp (x2)**

System Type

- 1) Make: **Valley 8000 (x2)**
- 2) Overall length: **1,300 feet (x2)**
- 3) Number of Towers: **7 Towers (x2)**
- 4) Distance Between Towers:
- 5) End Gun: **Yes (x2)**
- 6) Pressure:
- 7) Capacity: **700 gpm (x2)**

CHEMIGATION EQUIPMENT:

Yes, Mobile System

- 1) Mainline Check Valve: **Yes**
- 2) Low Pressure Drain: **No**
- 3) Inspection Port/Air Relief: **Yes**
- 4) Discharge 20 Feet Away: **No discharge**
- 5) Injection Line Check Valve or Positive
Displacement Pump: **Piston Pump**
- 6) Injection Check Valve: **Yes**
- 7) Properly Installed: **Yes**

PERMIT QUALIFICATIONS:

- 1) Special qualifications to permit being abided by: **N/A**
- 2) All structures, wells, and lands on map: **Yes**
- 3) Irrigation Questionnaires checked to determine if permit owner started irrigation by end of construction period: **Yes, irrigation in 2009 to present for 7083-3 and 2013 to present for 7486-3**

COMMENTS: None



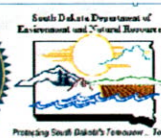
Legend

- Irrigated_Acres
- Section Boundaries - PLSS
- Well Site



0 0.05 0.1 0.2 Miles

Prepared by Bracken Capen
Natural Resources Engineer
DENR, Water Rights Program





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

JUN 11 2015

Jay Bottolfson
Bottolfson Brothers
1834 Constance Dr
Vermillion SD 57069

RE: Water License Nos. 6899-3, 7082-3, 7486-3, 7487-3 and 7488-3

Dear Mr. Bottolfson:

Enclosed are Water License Nos. 6899-3, 7082-3, 7486-3, 7487-3 and 7488-3. They are the final water right documents completing your process of obtaining Water Rights. Included with each license is a map prepared by the staff engineer who conducted the field investigation.

For your information SDCL 46-6-27 requires that if the owner of an existing well, such as the wells authorized by each water right, 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.

In regard to the equipment used for applying chemicals and/or fertilizer through your irrigation systems, the staff engineer indicated he spoke with you about the absence of a low pressure drain. Enclosed is a copy of Water Management Board rules dealing with chemigation. "Appendix A" shows the minimum requirements for the equipment. Low pressure drains are required and must be in place to prevent contamination of the water source. If after reading through the rules you have questions concerning placement of the equipment, please contact Ron Duvall with our program (his card is attached).

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

Sincerely,

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

enclosures

Note: Water Permit Nos. 7083-3 and 7486-3 authorized irrigation of acreage using the same well. Upon licensing, the applicable portions of Water Permit No. 7083-3 were incorporated into Water License No. 7486-3.

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7486-3

(1) Bottolfson Brothers, 1834 Constance Dr., Vermillion SD 57069 made Application No. 7486-3, October 29, 2012 for a water permit to authorize irrigation of an additional 70 acres to an existing water use system located in Clay County, South Dakota. Permit No. 7486-3, with a priority date of October 29, 2012 was approved January 28, 2013 and issued to the applicants for diversion of water with construction of the described water supply system to be completed on or before January 28, 2018 and for the application to beneficial use of said water on or before January 28, 2022.

Water Permit No. 7083-3, with a priority date of October 29, 2008, authorizes diversion of 1.56 cfs from ground water (one well – Missouri Elk Point Aquifer) to irrigate 103.5 acres. Water Permit No. 7486-3 was obtained to add 70 acres to the existing system utilizing the same well with no increase in the diversion rate.

A "*Notice of Completion of Works and Application of Water to Beneficial Use*" is on file for both Water Permit Nos. 7083-3 and 7486-3 indicating the water use system has been completed and water placed to beneficial use.

Water Permit No. 7083-3 is incorporated into Water License No. 7486-3. A priority date of October 29, 2008 is retained for the original 103.5 acres and a priority date of October 29, 2012 is retained for the remaining 70 acres.

(2) It is certified that the permit holders have complied with the provisions of South Dakota State Law relating to completion of the water supply system and are entitled to divert 1.56 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 1,300 feet W and 1,300 feet S the NE corner of Section 16, T92N, R52W (approximate center of the NE ¼).

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

Section 16, T92N, R52W	NE ¼ NE ¼	34.5 acres	October 29, 2008
	NW ¼ NE ¼	34.5 acres	October 29, 2008
	SE ¼ NE ¼	34.5 acres	October 29, 2008
	NW ¼ NW ¼	35.0 acres	October 29, 2012
	NE ¼ NW ¼	35.0 acres	October 29, 2012
	Total	173.5 acres	

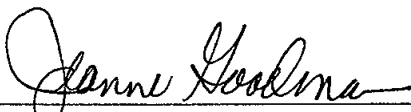
Priority dates: **October 29, 2008** – established under Water Permit No. 7083-3 for NE ¼
October 29, 2012 – established under Water Permit No. 7486-3 for NW ¼

continued

(4) Pursuant to South Dakota Water Law 46-5-30.1 Bottolfson Brothers, 1834 Constance Dr., Vermillion SD 57069 the holders and/or owners of Incorporated Water Right No. 7486-3 are issued a license to appropriate water, the right to use 1.56 cubic feet of water per second from ground water (one well, Missouri Elk Point Aquifer) with priority dates of October 29, 2008 (103.5 acres) and October 29, 2012 (70 acres) 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 Incorporated Water Right No. 7486-3 and subject to the following qualifications:

- The well approved under Water Permit Nos. 7083-3 and 7486-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The well authorized by Permit No. 7083-3 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 constructed in August, 2009 by Hammond Wetmore Drilling. A copy of the log is on file with the Water Rights Program.**
- This Permit is approved subject to the irrigation water use questionnaire being submitted each year.



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

JUN 11 2015

date

