

WATER PERMIT NO. 7844-3

Name of Applicant: **Craig Bass**

Address: **17949 459th Ave, Castlewood SD 57223**

Phone: **605 793-2169**

Amount of Water Claimed: **1.78 cfs**

Total Acres: **235**

Source of Water Supply: **groundwater (two wells)**

Water to be used for: **irrigation**

County: **Hamlin**

Type of Waste Disposal System:

Location: **4 miles north of Castlewood**

PRIORITY

Date Received: **5-23-13**

Application/License Fee: **\$ 1150**

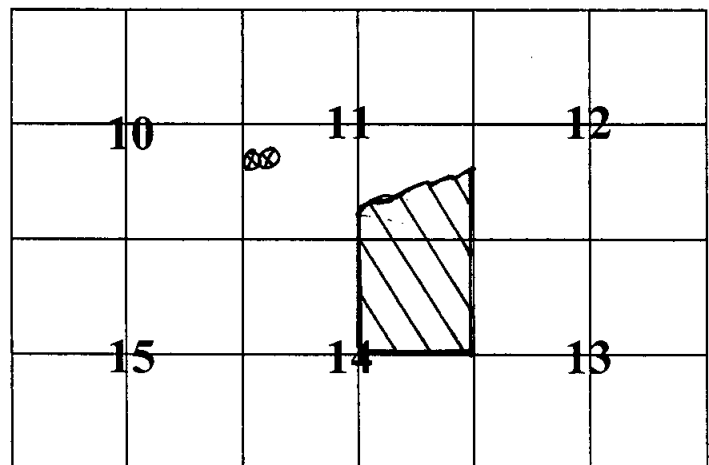
Corrected Application Received:

Period of Annual Use: **April 1- October 31**

Remarks:

Diversion Point: **NW 1/4 SW 1/4 Sec 11-T115N-R52W**

Land to be Irrigated: **E 1/2 SE 1/4, SW 1/4 SE 1/4
Sec11 and NE 1/4 Sec 14; all in T115N-R52W**



Depth of Well: **22 & 28 feet deep**

Well Driller: **Steffl Drilling & Pump Inc.**

Remarks:

Type of Map: **aerial**

Prepared by:

Reviewed and the Number Assigned on: **5-23-13**

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. 7844-3 (office use only)
Hydrologic Unit 10170201
Basin Sioux River 605-793-2293
Newspaper Hamlin Co. Republican Box 50
605-886-6901 Castlewood 57223
Public Opinion Box 10 Watertown 57201

RECEIVED

MAY 23 2013

WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

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

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

1. Name to Appear on Irrigation Permit Craig Bass

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

(name and complete address if different than above name)

Mailing Address 17949 459th Ave Castlewood SD 57223
(Address) (City) (State) (Zip Code)

Home Phone 605 793 2169 Cell 605 881-0880 Email _____

2. Amount of water claimed 1.78 *CFS or 800 **GPM ***AF Total Acreage 235
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply 2 wells

4. Location of point of diversion #1 well TH 44 46 39.0N 97 02 40.5W
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

#2 well TH 44 46 39.6N 97 02 48.5W (NW1/4 SW1/4) County Hamlin

5. County or counties where water will be used Hamlin Sec 11 - T115N - R52W

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

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

Land Description	Acres	Land Description	Acres
SE 1/4 of the SE 1/4 Sec 11 115N 52W	40	SE 1/4 of the NE 1/4 Sec 14 115N 52W	40
NE 1/4 of the SE 1/4 Sec 11 115N 52W	10	SW 1/4 of the NE 1/4 Sec 14 115N 52W	40
SW 1/4 of the SE 1/4 Sec 11 115N 52W	25	NE 1/4 of the NE 1/4 Sec 14 115N 52W	40
		NW 1/4 of the NE 1/4 Sec 14 115N 52W	40

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

I, Craig Bass, 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. 7844-3

Date of first receipt of application May 23, 2013.

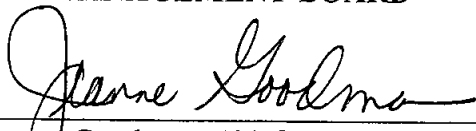
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7844-3 to Craig Bass, 17949 459th Ave, Castlewood SD 57223 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 7844-3 appropriates 1.78 cubic feet of water per second from two wells to be completed into the Big Sioux:North Aquifer (22 and 28 feet deep) located in the NW 1/4 SW 1/4 Section 11 for irrigation of 235 acres located in the E 1/2 SE 1/4, SW 1/4 SE 1/4 Section 11 and NE 1/4 Section 14; all in T115N-R52W.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 – October 31.
3. The date from which applicant may claim right is May 23, 2013.
4. The date of approval of Permit No. 7844-3 is July 29, 2013.
5. One-fifth of the construction is to be completed on or before January 29, 2016.
6. All construction is to be completed on or before July 29, 2018.
7. Water is to be put to beneficial use on or before July 29, 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. 7844-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: 
Jeanne Goodman, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

AUG 30 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 Sto PFL
(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 27-28 Depth to Top of Water Bearing Material 5 Depth to Water from Surface 22-28

d) Distance to nearest existing domestic well:

On applicant's property 1500ft On property owned by others 2000ft

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)

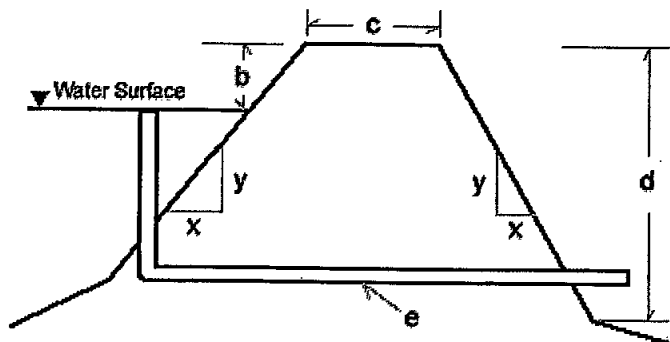
Upstream

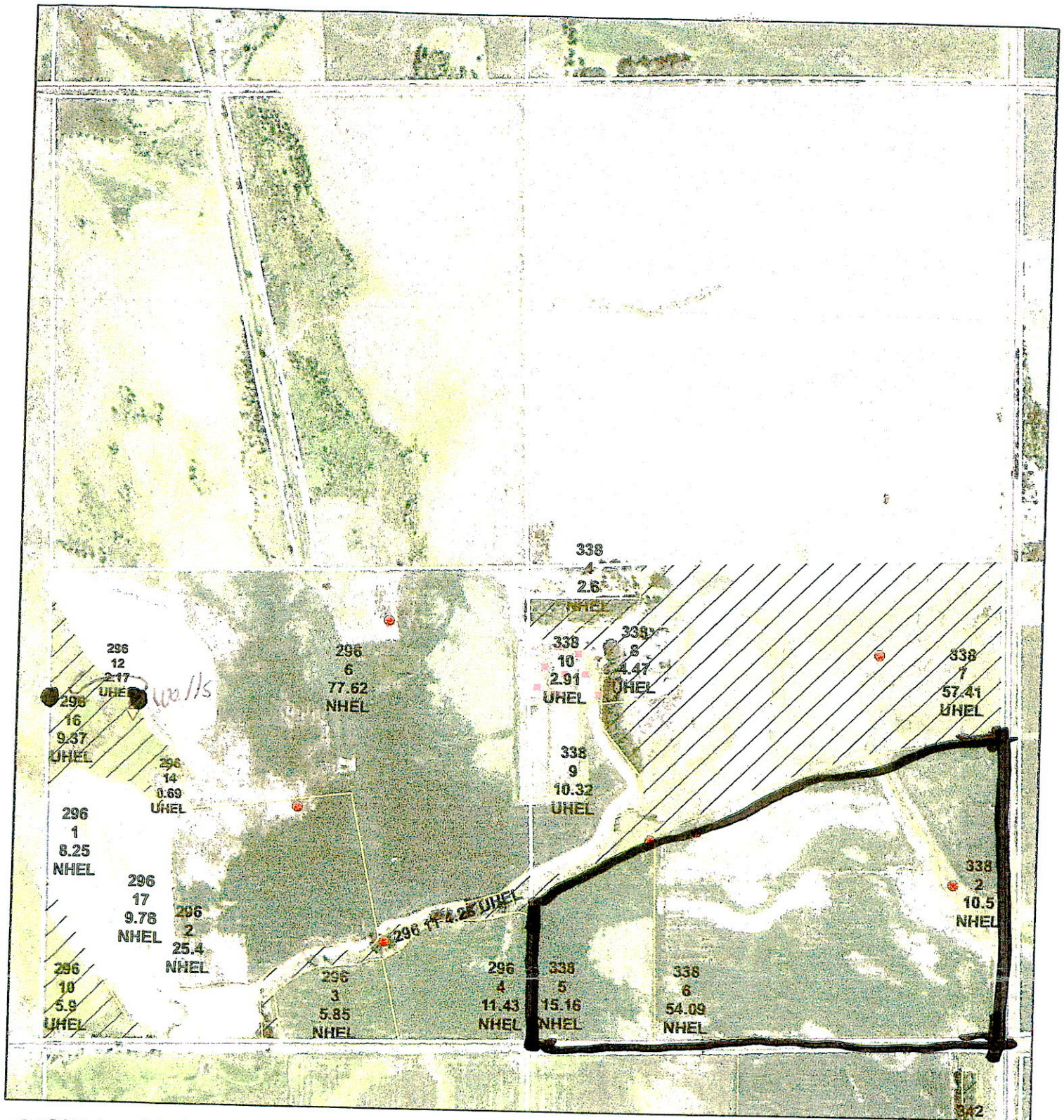
Downstream

h) Surface Area of Impoundment

i) Storage Acre Feet

j) Drainage Area Above Dam Acres





United States Department of Agriculture
Farm Service Agency

PLSS: 11_115N_52W
Farm: 3713

Hamlin County, SD
1:8,679

January 23, 2012



RECEIVED

MAY 23 2013

WATER RIGHTS PROGRAM

Wetland Determination Identifiers

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

Common Land Units

Non Cropland

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

2010 Ortho-Photography - Not to Scale

335

craig bass

T115N R52W

PPLS: 14_T115W_R52

RECEIVED

Data use subject to license.

© DeLorme, XMap® 7.

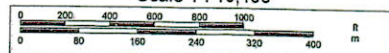
www.delorme.com



MAY 23 2013

WATER RIGHTS
PROGRAM

Scale 1 : 10,400



1" = 866.7 ft

Data Zoom 14-3

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

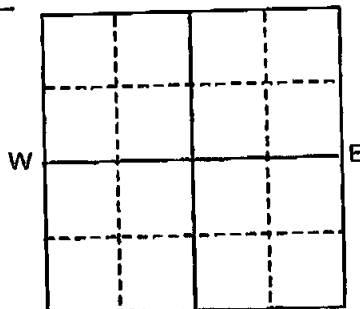
Location SE 1/4 SW 1/4 Sec 11 Twp 115N Rg 52WWell Owner: Craig Bass

Business Name: _____

Address: 17949 459th AVECity, State, Zip: Castlewood SD 57223County Hamlin

North

Please mark well location with an "X"



Well Completion Date

May 3, 2013

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

mud rotary

CASING DATA:

☐ Steel ☐ Plastic ☐ Other
 If other describe _____

WEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
HS Bentonite	3	Lb/gal	0.0 Ft	40.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
Tremmy

SCREEN:

☐ Perforated pipe ☐ Manufactured
 Diameter _____ Inches Length _____ Feet
 Material _____
 Slot Size _____ Set From _____ Feet to _____ Feet
 Other information _____
WAS A PACKER OR SEAL USED? ☐ Yes ☐ No

If so, what material? _____

Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How? _____☐ No, Why Not? _____

to which water _____

Quality sample sent for analysis _____

WELL LOG:

DEPTH

FORMATION			FROM	TO
topsoil/clay	brown	M	0	3
clay	tan	M	3	5
gravel	sand/tan	12-80st	5	22
clay	blue/gray	M	22	40

STATIC WATER LEVEL

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: _____☐ Bailed☐ Other _____

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

 TH #1 #2
 44 46 39.6N
 97 02 48.5W

 RECEIVED
 MAY 23 2013
 WATER RIGHTS
 PROGRAM
This well was drilled under license # 463 and this report is true and accurate.Drilling firm: Steffl Drilling & Pump Inc

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: _____

SOUTH DAKOTA WATER WELL COMPLETION REPORT

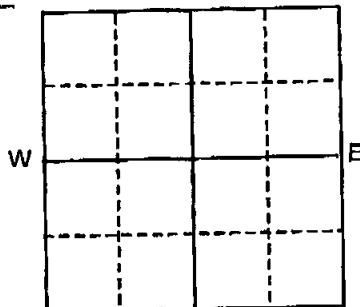
11-02

Location SE ¼ SW ¼ Sec 11 Twp 115N Rg 52W

nty Hamlin

North

Please mark well location with an "X"



Well Completion Date

May 3, 2013

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

mud rotary

CASING DATA:

☐ Steel ☐ Plastic ☐ Other

If other describe

WEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
HS Bentonite	3	Lb/gal	0.0 Ft	100.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

Tremmy

SCREEN:

☐ Perforated pipe ☐ Manufactured
 Diameter _____ Inches Length _____ Feet
 Material _____
 Slot Size _____ Set From _____ Feet to _____ Feet
 Other information _____
WAS A PACKER OR SEAL USED? ☐ Yes ☐ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How?☐ No, Why Not?

to which water

ity sample sent for analysis

Well Owner: Craig Bass

Business Name:

Address: 17949 459th AVE

City, State, Zip: Castlewood SD 57223

WELL LOG:

			DEPTH	
FORMATION			FROM	TO
topsoil/clay	brown	M	0	3
clay	tan	S-M	3	5
sand/gravel	tan	20-100slt	5	28
clay	blue	M	28	70
clay	tan	H-gummy	70	100

STATIC WATER LEVEL

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:☐ Balled☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

 TH #8/
 44 46 39.0N
 97 02 40.5W

This well was drilled under license # 463 and this report is true and accurate.

Drilling firm: Steffl Drilling & Pump Inc

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 5/23, 2013

RECEIVED OF Farmer's Implement (C Bass) 3023 E Hwy 14 Brookings SD 57006

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

Fee for Application for Permit No. <u>7844-3</u> to Appropriate Water, to construct and to put water to beneficial use	950	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>7844-3</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	1150 00

No. **06348**

By *Joanna Holman*
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. 7844-3, Craig Bass**

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. 7844-3, Craig Bass, 17949 459th Avenue, Castlewood SD 57223.

The Chief Engineer is recommending APPROVAL of Application No. 7844-3 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. 7844-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
July 8, 2013

REPORT TO THE CHIEF ENGINEER

WATER PERMIT APPLICATION NO. 7844-3

Craig Bass

May 29, 2013

Water Permit Application No. 7844-3 proposes to withdraw groundwater at a maximum diversion rate of 1.78 cubic feet of water per second (cfs) from two wells to be completed into the North management unit of the Big Sioux aquifer. The wells are expected to be 22 and 28 feet deep and located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 11, T115N-R52W. Water will be used to irrigate 235 acres located in the E $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 11 and the NE $\frac{1}{4}$ Section 14, all in T115N-R52W in Hamlin County.

AQUIFER: North management unit of the Big Sioux aquifer (BS:N)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The test hole logs submitted with this application document sand and gravel from five to 22 or 28 feet below ground surface. Only the Big Sioux: North aquifer has been documented at this specific location and depth (Kume, 1985).

The North management unit of the Big Sioux aquifer is a surficial outwash located in the flood plain of the Big Sioux River (Kume, 1985). The aquifer underlies approximately 83,500 acres of Codington, Grant, Hamlin, and Roberts Counties and contains approximately 187,880 acre-feet (ac-ft) of recoverable water in storage (Hedges and others, 1982). The aquifer is generally under water table conditions and is underlain by till and often overlain by silt and clay. The aquifer is hydraulically connected to area lakes, streams, and the Big Sioux River. Water movement is to the south and toward the Big Sioux River. At the proposed well sites, the Big Sioux aquifer is expected to be surficial, less than 20 feet thick, and have a static water level within 20 feet of ground surface (Kume, 1985). A portion of the Big Sioux: North aquifer, which underlies Mud Creek, is considered fully appropriated (Water Rights, 2013b). The proposed well sites are not located within this subunit.

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 from the aquifer and the potential for impairment of existing rights.

WATER AVAILABILITY:

The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source." If the source of the water is older

or lower than the greenhorn formation and a public water system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Here, a public water system is not involved and the aquifer is not older or lower than the Greenhorn Formation therefore withdrawal/recharge issue must be considered.

Hydrologic Budget:

Recharge:

Recharge to the Big Sioux aquifer occurs through infiltration of precipitation, and inflow from the Big Sioux River during wet years (Kume, 1985). Hedges and others (1985) estimated recharge to the Big Sioux aquifer to be 1.0 to 6.9 inches per year (in/yr). Putnam and Thompson (1996) estimated recharge to the North management unit of the Big Sioux aquifer to be 2.9 to 5.8 in/yr with a conservative recharge estimate of 5.53 in/yr when under steady state conditions, which is currently considered the best estimate. Using the area of the aquifer and the best estimate of recharge rate, recharge equals 38,480 ac-ft/yr.

Discharge:

Discharge from the Big Sioux occurs through outflow to the Big Sioux River during dry years, and well withdrawals (Kume, 1985). There are currently 94 water rights/permits appropriating water and three future use permits reserving water from the Big Sioux: North aquifer (Water Rights, 2013b).

The future use permits, Nos. 1218-3, 2107-3, 5862-3, are all held by the City of Watertown, reserving a total of 3,469 ac-ft from the aquifer (Water Rights, 2013b). Water Right No. 5158-3, Sioux Rural Water System (RWS), is a back-up supply that has not withdrawn water since 1998. No current withdrawal is expected (Water Rights, 2013b).

Water Right No. 4932-3, Northern Con-Agg Inc. is for non-consumptive use, indicating no net withdrawal from the aquifer (Water Rights, 2013b). The reported pumpage for the City of Watertown is authorized by two water permits, Nos. 6856-3 and 7055-3, that appropriate water originally reserved in future use permits. Any undeveloped water will be reverted back to the future permits. Therefore, full use of these permits is expected, totaling 5,427 ac-ft (Water Rights, 2013b).

Clark RWS has reported pumpage on the same order of magnitude from 2008 to 2011, averaging 145 ac-ft/yr. While the water permits authorizes 404 ac-ft/yr, Clark RWS would have to pump continuously at the authorized diversion rate of 0.56 cfs to reach this volume. Therefore, the average current use is the best projection of water use (Water Rights, 2013b).

The amount of water than can be expected to be withdrawn by the remainder of non-irrigation use water rights/permits at the current appropriation amount, which are all limited by diversion rate, can be estimated by assuming these water rights/permits pump at the maximum authorized diversion rate 60 percent of the time. This amounts to 7,478 ac-ft/yr (Water Rights, 2013b).

Figure 1 shows the historic irrigation data for the Big Sioux: North aquifer. Annual withdrawal from this aquifer fluctuates, which is due to several factors, but most likely correlated closest to annual growing season precipitation. The average pumpage reported over the entire period of

record is 2,036 ac-ft/yr (Water Rights, 1980-2012). The development has remained fairly steady since 1991. However, 12 water permits have been approved since 2011, appropriating water to 1,962 acres. Therefore, irrigation use is expected to increase to some extent.

In addition, there are many well completion reports on file with the SD DENR-Water Rights Program for domestic wells that appear to be completed into the Big Sioux: North aquifer (Water Rights, 2013c). The withdrawal due to domestic use is not significant to the hydrologic budget.

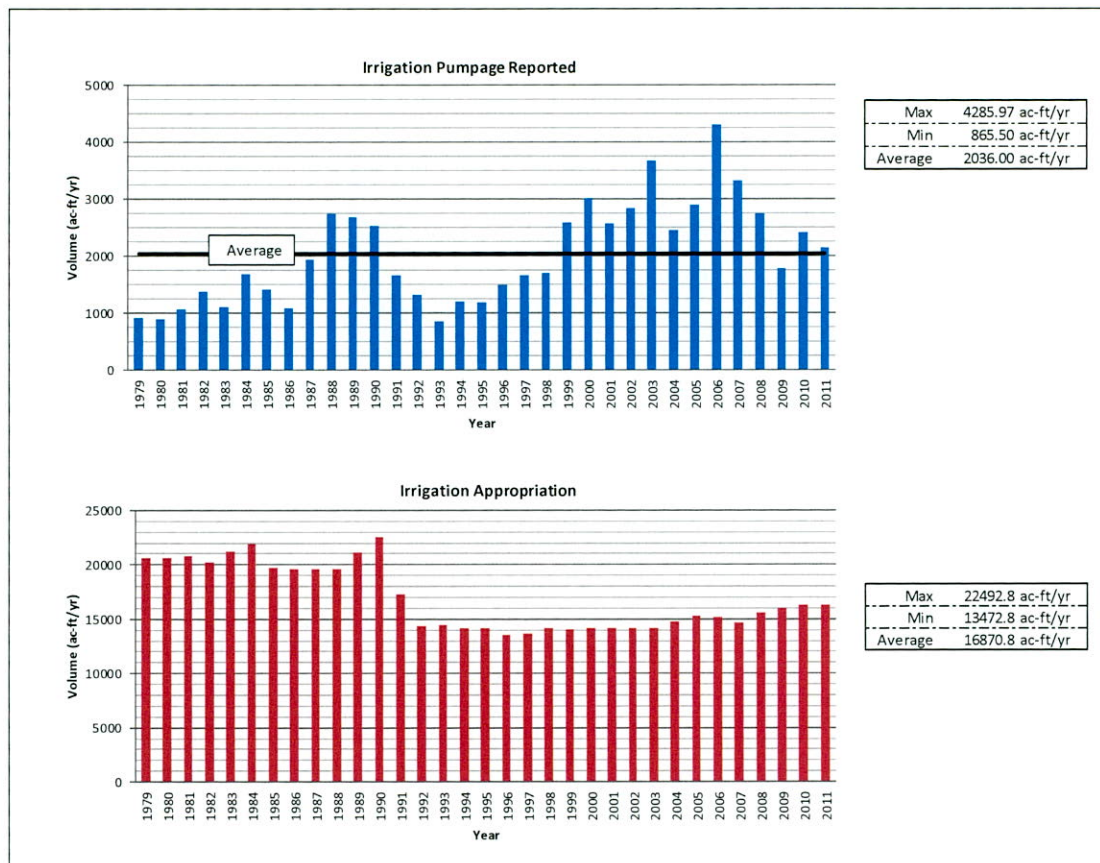


Figure 1: Historic irrigation water use from the Big Sioux: North aquifer (Water Rights, 1980-2012)

Water Balance:

Total withdrawal from the Big Sioux: North aquifer is estimated to be 18,555 ac-ft/yr, while recharge is estimated to be 38,480 ac-ft/yr. The addition of the newly approved water permits, plus this water permit application will not cause withdrawal to exceed recharge. Therefore, unappropriated water is available from the Big Sioux: North aquifer.

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 SD DENR-Water Rights Program monitors 27 observation wells completed into the Big Sioux: North aquifer. The nearest observation well, CD-57B, is located approximately four miles north-northwest of the proposed well sites. The hydrograph for this observation well is shown in Figure 2.

The observation well data documents cyclic conditions of water levels, recharging during wet years and declining during dry years. Temporal well withdrawal in the aquifer is masked by climatic conditions, indicating that recharge to and natural discharge from the aquifer greatly exceeds well withdrawal. All but two observation wells record steady or increasing water levels, indicating that over the period of record recharge has exceeded withdrawal at these locations. The observation wells with decreasing trends are located near water rights/permits authorized to the City of Watertown (Water Rights, 2013a). Therefore, this decreasing trend is a localized event due to pumpage of high capacity wells, and unappropriated water is available from the Big Sioux: North aquifer.

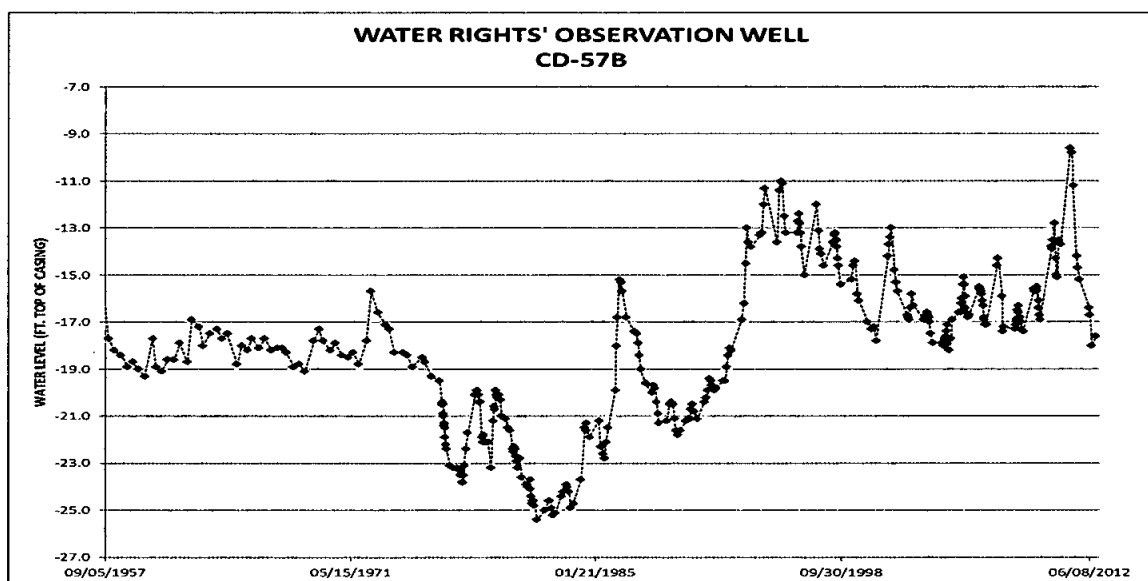


Figure 2: Hydrograph of observation well CD-57B (Water Rights, 2013a)

EXISTING WATER RIGHTS:

If approved, the proposed wells will be located near other wells that obtain water from the same aquifer. The nearest well is authorized to Water Permit No. 7007-3, Gordon Little. This well, located approximately one half mile east-northeast of the proposed well sites, is currently labeled as appropriating water the Big Sioux: North aquifer. However, the well appears to be completed into aquifer materials that could be the Prairie Coteau or Big Sioux aquifer (Water Rights, 2013b). In any case, the outwash could be hydraulically connected to the Big Sioux aquifer at the location of the proposed well sites. If impairment issues do arise, further study should be conducted to determine the connection. The next nearest well on file is located further than one mile from the proposed well sites (Water Rights, 2013b; Water Rights, 2013c).

The predominate water table conditions of the aquifer in this area dictate that drawdown due to pumping would probably not be significant far from the proposed well sites. However, precise drawdown cannot be quantified without aquifer testing. The Water Management Board has

consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. However, reasonable domestic use must be assured before irrigation use is allowed. At the distances involved, a nearby adequate well defined by ARSD 74:02:20(7) is not expected to be adversely or unlawfully impaired.

Water Permit No. 7555-3, Craig Bass, proposes to irrigate the same acres proposed by Water Permit Application No. 7844-3. Water Permit No. 7555-3 is currently in deferred status pending an aquifer pump test to allow evaluation of the potential aquifer. If Water Permit No. 7555-3 is approved, the appropriation rate of these two permits combined cannot exceed two acre-feet per acre pursuant to SDCL 46-5-6.

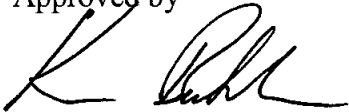
CONCLUSIONS:

1. The water permit application proposes to withdraw groundwater at a maximum diversion rate of 1.78 cfs from two wells to be completed into the Big Sioux: North aquifer for the irrigation of 235 acres.
2. Unappropriated water is available from the Big Sioux: North aquifer to supply the proposed appropriation.
3. The proposed wells will not adversely or unlawfully impair existing nearby wells.
4. Water Permit Application No. 7555-3, which is on deferred status pending an aquifer pump test, proposes to irrigate the same acres proposed by this application. The appropriation rate of these two permits combined cannot exceed two acre-feet per acre.



Joseph R Stonesifer
SD DENR-Water Rights Program

Approved by



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Kume, J. 1985. Water Resources of Deuel and Hamlin Counties, South Dakota. Water-Resources Investigations Report 84-4069. USGS, Huron, South Dakota.
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., and Schoon, R.A. 1982. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Hedges, L.S., Allen, J., and Holly, D.E. 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Task 7: Ground Water Recharge.
- Putnam, L.D. and R.C. Thompson. 1996. Appraisal of the Water Resources of the Big Sioux aquifer, Codington and Grant Counties, South Dakota: U.S. Geological Survey Water Resources Investigations No. 96-4275. U.S. Geological Survey, Huron, South Dakota.
- Water Rights, 1980-2012. "Irrigation Report Summaries." SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2013a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2013b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2013c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

RECEIVED

JUL 22 2013

Form 8

WATER RIGHTS
PROGRAM

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Hamlin) SS
I, LeeAnne Dufek

certify that the attached printed Notice was
taken

from the Hamlin County
Republican

printed and published in Castnewood

County of Hamlin and

state of South Dakota. The notice was
published

in the newspaper on the following date:

July 17, 2013

Cost of Printing \$ 22.77

LeeAnne Dufek
(Signature)

Publisher
(Title)

7-19-13
(Date Signed)

NOTICE OF APPLICATION NO.
7844-3 TO APPROPRIATE WATER

Notice is given that Craig Bass, 17949 459th Ave, Castlewood SD 57223 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 North Aquifer (22 and 28 feet deep) located in the NW 1/4 SW 1/4 Section 11 for irrigation of 235 acres located in the E 1/2 SE 1/4, SW 1/4 SE 1/4 Section 11 and NE 1/4 Section 14; all in T115N-R52W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7844-3 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 July 29, 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 July 17, 2013, at total cost \$22.77.

RECEIVED

JUL 25 2013

WATER RIGHTS
PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Codington) SS

I, Monica K. Saathoff

certify that the attached printed Notice was
taken

from the Watertown Public Opinion

printed and published in Watertown

County of Codington and

state of South Dakota. The notice was
published

in the newspaper on the following date:

July 17th, 2013

Cost of Printing 57.29

Monica K. Saathoff
(Signature)

Bookkeeper

(Title)

July 17th, 2013

(Date Signed)

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 July 29, 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 approximate cost of \$52.25. (July 17, 2013)

All legal notices in the Public Opinion and other South Dakota newspapers can be found at
www.sdpublishnotices.com

DEPARTMENT OF ENVIRON- MENT AND NATURAL RESOURCES

NOTICE OF APPLICATION NO. 7844-3 to Appropriate Water

Notice is given that Craig Bass, 17949 459th Ave, Castlewood SD 57223 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:North Aquifer (22 and 28 feet deep) located in the NW 1/4 SW 1/4 Section 11 for irrigation of 235 acres located in the E 1/2 SE 1/4, SW 1/4 SE 1/4 Section 11 and NE 1/4 Section 14; all in T115N-R52W. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7844-3 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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

July 9, 2013

Hamlin County Republican
PO Box 50
Castlewood SD 57223

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7844-3 to Appropriate Water. Please publish the notice once on July 17, 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 Craig Bass, 17949 459th Ave, Castlewood SD 57223 (Ph # 605-793-2169).

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

July 9, 2013

Public Opinion
PO Box 10
Watertown SD 57201

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7844-3 to Appropriate Water. Please publish the notice once on July 17, 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 Craig Bass, 17949 459th Ave, Castlewood SD 57223 (Ph # 605-793-2169).

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 DATES, CONTACT
THE NEWSPAPER RIGHT AWAY.**

July 9, 2013

Craig Bass
17949 459th Ave
Castlewood SD 57223

Dear Mr. Bass:

Water Permit Application No. 7844-3 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 Hamlin County Republican printed at Castlewood SD (Ph # 605-793-2293) and the Public Opinion printed at Watertown SD (Ph # 605-886-6901). 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,

A handwritten signature in cursive script that reads 'Eric Gronlund'.

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

Enclosures

c: Dave Gullickson, Farmer's Implement, 3023 US Hwy 14 Byp, Brookings SD 57006

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 July 17, 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. 7844-3 to Appropriate Water

Notice is given that Craig Bass, 17949 459th Ave, Castlewood SD 57223 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:North Aquifer (22 and 28 feet deep) located in the NW 1/4 SW 1/4 Section 11 for irrigation of 235 acres located in the E 1/2 SE 1/4, SW 1/4 SE 1/4 Section 11 and NE 1/4 Section 14; all in T115N-R52W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7844-3 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 July 29, 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
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

AUG 30 2013

Craig Bass
17949 459th Ave
Castlewood SD 57223

Dear Mr. Bass:

Enclosed is Water Permit No. 7844-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

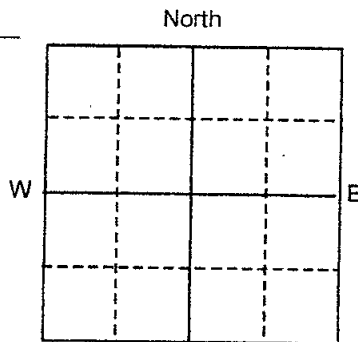
7844-3 SD EForm - 1621LD V1

11-02

Location SE 1/4 SW 1/4 Sec 11 Twp 115N Rg 52W

County Hamlin

Please mark well location with an "X"



Well Completion Date

September 25, 2013

← 1 Mile →

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

PROPOSED USE:

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

METHOD OF DRILLING:

mud rotary

CASING DATA:

If other describe ☐ Steel ☒ Plastic ☐ Other

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	FT	FT	IN
12.00	12.00	2.0	17.0	17.50
12.00	12.00	22.0	32.0	17.50
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
		Lb/gal	0.0 Ft	8.0 Ft
Quick Grout	2			
Red Flint		Lb/gal	8.0 Ft	32.0 Ft

Describe grouting procedure
Tremmy

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 12.00 Inches Length 5.0 Feet

Material Stainless Steel

Slot Size 100 Set From 17.0 Feet to 22.0 Feet

Other information

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How? ☒ No, Why Not? irrigation

Lab to which water quality sample sent for analysis

Well Owner: Craig Bass

Business Name:

Address: 17949 459th AVE

City, State, Zip: Castlewood SD 57223

WELL LOG:

			DEPTH	
FORMATION			FROM	TO
topsoil/clay	brown	M	0	3
clay	tan	M	3	5
gravel	sand/tan		5	22
clay	blue/gray	M	22	32

STATIC WATER LEVEL

7.5 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: submersible

☐ Bailed

☐ Other

Pumping Level Below Land Surface

16.2 Ft. After 6.0 Hrs. pumped 130.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

Production #3

44 46 39.7N

97 02 48.8W

RECEIVED

DEC 23 2013

WATER RIGHTS
PROGRAM

This well was drilled under license # 463 and this report is true and accurate.

Drilling firm: Steffl Drilling & Pump Inc / Kris VanHeuveln

Signature of License Representative:

Signature of Well Owner or Equitable Property Hold:

Date: 11-12-13

12-30-13

SOUTH DAKOTA WATER WELL COMPLETION REPORT

SD EForm - 1621LD V1

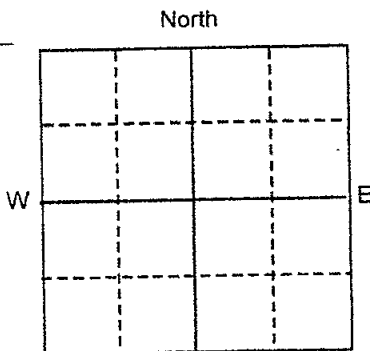
11-02

7844-3

Location SE 1/4 SW 1/4 Sec 11 Twp 115N Rg 52W

County Hamlin

Please mark well location with an "X"



1 Mile

Well Completion Date

July 12, 2013

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

PROPOSED USE:

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

METHOD OF DRILLING:

mud rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	2.0 FT	20.0 FT	17.50 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	28.0 FT	38.0 FT	17.50 IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Quick Grout	5	Lb/gal	0.0 Ft	10.0 Ft
Red Flint		Lb/gal	10.0 Ft	38.0 Ft

Describe grouting procedure
Tremmy

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 12.00 Inches Length 8.0 Feet
Material stainless steel
Slot Size 100 Set From 20.0 Feet to 28.0 Feet
Other information _____

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No
If so, what material? _____
Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How? _____
☒ No, Why Not? irrigation well
Lab to which water quality sample sent for analysis _____

Well Owner: Craig Bass

Business Name: _____

Address: 17949 459th AVE

City, State, Zip: Castlewood SD 57223

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
top soil clay brown/blk	0	3
clay tan	3	5
sand/gravel	5	28
clay/ blue	28	38

STATIC WATER LEVEL

5.6 FEET
If flowing: closed in pressure _____ PSI
GPM flow _____ through _____ Inch pipe
Controlled by ☐ Valve ☐ Reducers ☐ Other _____
Reduced flow rate _____ GPM
Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: submersible
☐ Bailed RECOVERY 1hr 6'10"
☐ Other _____
Pumping Level Below Land Surface
Ft. After 6.0 Hrs. pumped 500.0 GPM
19'10" Ft. After _____ Hrs. pumped _____ GPM
If pump installed, pump rate: _____ GPM

REMARKS

44 46 39.0N Production #2(TH #8)
97 02 40.5W
Kris VanHeuveln

RECEIVED

DEC 23 2013

WATER RIGHTS PROGRAM

This well was drilled under license # 463 and this report is true and accurate.

Drilling firm: Steffl Drilling & Pump Inc

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: 11-12-13

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7844-3

I have this day, April 26, 2022, made a thorough examination of the water use system constructed by Craig Bass 17949 459th Ave, Castlewood, SD 57223 of Permit No. 7844-3, bearing the priority of May 23, 2013 authorizing the diversion of 1.78 cu. ft. per second of the waters of the Big Sioux-North Aquifer for irrigation purposes, in Hamlin County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Steffl Drilling & Pump Inc
- 2) No. of Wells 2
- 3) Depth(s) Well #1 - 22 & #2 - 28 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 12 inches
- 2) Length #1 - 17; #2 - 20 feet
- 3) Type Plastic

Screen:

- 1) Type Stainless steel
- 2) Length #1 - 5; #2 - 8 feet
- 3) Static water level 7.5 & 5.6 feet

Pumps:

- 1) Make Submersibles
- 2) Model & Size unknown
- 3) Capacity 650 total GPM

Motor information – unknown

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

- 1) Type Underground PVC
- 2) Size 8 inches
- 3) Length 4,070 ft to N Pivot & 1340 from N Pivot to S Pivot feet

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make 2 same
- 2) Overall length 1300 feet
- 3) Number of towers 7
- 4) End gun Y
- 5) Capacity 650 GPM

Chemigation Equipment: none

D. Compliance with Permit Requirements:

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

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: **WELL LOCATIONS**
From the SW corner Sec 11 T115N R52W; WELL #1: 950 ft N & 20 ft E, Lat 44.77776 Long -
97.04691 (SW ¼ SW ¼) WELL #2: 860 ft N & 560 ft E, Lat 44.77757 Long -97.04465 (SW ¼ SW ¼).
2. The works are capable of diverting and conveying to the place of use 1.44 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:

Land in Section 11 T115N R52W
SW ¼ SE ¼ – 32 acres
SE ¼ SE ¼ – 32 acres

Land in Section 14 T115N R52W
NW ¼ NE ¼ – 33 acres
NE ¼ NE ¼ – 32 acres
SE ¼ NE ¼ – 34 acres
SW ¼ NE ¼ – 34 acres

comprising a total of 197 acres of land and the license should be issued for 1.44 cfs

3. All structures, wells and lands on map Y

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

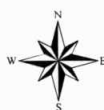
The irrigated acreage was determined with the aid of FSA imagery and ArcMAP software.

The telephone number and the mailing address in the permit materials are current.



Darrell W DeBoer
Water Rights Inspector
DANR, Water Rights Program

Date report completed: April 30, 2022



0 0.1 0.2 0.4 0.6 0.8 Miles



Darrell DeBoer
Water Right Inspector
DANR-Water Rights Program

Approval of Location Change and/or Additional Diversion Point(s)

NAME: Craig Bass

ADDRESS: 17949 459th Ave, Castlewood SD 57223

DATE: May 12, 2022

COUNTY: Hamlin

GENERAL DESCRIPTION OF AUTHORIZED PROJECT:

The permit holder is authorized to construct two 22 and 28 feet deep wells into the Big Sioux:North Aquifer in the NW ¼ SW ¼ of Section 11 for irrigation of 235 acres in the E ½ SE ¼, SW ¼ SE ¼, of Section 11 and NE ¼ of Section 14; all in T115N-R52W.

AUTHORITY:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed or additional diversion points may be licensed provided the following conditions are met and the potential for interference with other existing diversions is not increased:

- **Developed water source same as permitted source and no additional water appropriated**

The permit holder constructed two 22 and 28 feet deep wells into the Big Sioux:North Aquifer in the SW ¼ SW ¼ of Section 11 T115N-R52W.

- **If irrigation, no new land is irrigated**

The permit holder developed 197 acres of the 235 acres authorized in the in the SE ½ SE ¼, SW ¼ SE ¼, of Section 11 and NE ¼ of Section 14; all in T115N-R52W.

- **Review of Existing Diversions**

There are 7 existing water permits/rights within a mile and a half of where the wells were developed. Five of these were authorized before this permit was issued and two were issued within a few years after this permit. It was determined that there was reasonable probability any well interference due to pumping of this well would not adversely or unlawfully impair existing rights. The same would be expected for these wells constructed in the new location.

RECOMMENDED ACTION

Based on the above criteria, it is recommended that the diversion point(s) be licensed as developed.



Mark D. Rath, Natural Resources Engineer
Water Rights Program

The Chief Engineer makes a finding pursuant SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that:

This change in location and/or additional diversion point(s) does not increase the potential for adverse effects to existing diversions.



Eric Gronlund, Chief Engineer
Water Rights Program



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

MAY 16 2022

7844-3

Craig Bass
17949 459th Ave
Castlewood SD 57223

Dear Mr. Bass:

Enclosed is Water License No. 7844-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

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

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7844-3

(1) Craig Bass, 17949 459th Ave., Castlewood SD 57223 made Application No. 7844-3, May 23, 2013 for a water permit to divert 1.78 cubic feet of water per second from ground water, two wells (Big Sioux North Aquifer), Hamlin County, South Dakota for irrigation purposes. Permit No. 7844-3, with a priority date of May 23, 2013, was approved July 29, 2013, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before July 29, 2018, and for the application to beneficial use of water on or before July 29, 2022.

An investigation found the two wells authorized in the NW ¼ SW ¼ Section 11, T115N, R52W were drilled in the SW ¼ SW ¼ Section 11, T115N, R52W. Pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14.01, the Chief Engineer made a finding that the change in the diversion point locations did not increase the potential for adverse effects to existing diversions.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the water supply system and is entitled to divert 1.44 cubic feet of water per second for beneficial use. The two wells are located as follows:

- **Well #1:** 950'N & 20'E of the SW corner of Section 11, T115N, R52W (SW ¼ SW ¼)
Latitude 44.77776, Longitude -97.04691
- **Well #2:** 860'N & 560'E of the SW corner of Section 11, T115N, R52W (SW ¼ SW ¼)
Latitude 44.77757, Longitude -97.04465

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

Section 11, T115N, R52W		Section 14, T115N, R52W	
SW ¼ SE ¼	32 acres	NW ¼ NE ¼	33 acres
SE ¼ SE ¼	32 acres	NE ¼ NE ¼	32 acres
		SE ¼ NE ¼	34 acres
		SW ¼ NE ¼	34 acres

Total 197 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Craig Bass, 17949 459th Ave., Castlewood SD 57223 the holder and/or owner of Water Right No. 7844-3 is issued a license to appropriate water, the right to use 1.44 cubic feet of water per second from ground water, two wells (Big Sioux North Aquifer) with a priority date of May 23, 2013, from the locations specified in (2) of this license for irrigation purposes.

continued

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 7844-3 and subject to the following qualifications:

- The wells approved under this water right will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this water right shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The wells authorized by Permit No. 7844-3 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 in 2013. Copies of the well completion reports are on file with the Water Rights Program.***
- This Water Right is approved subject to the irrigation water use questionnaire being submitted each year.

Eric Gronlund

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

MAY 16 2022

date

