

WATER PERMIT NO. 8076-3

Name of Applicant: Tim Grabow

Address: 15689 456th Ave, South Shore SD 57263 Phone: 605 880-1487

Amount of Water Claimed: 0.52 cfs Total Acres: 33 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation County: Codington

Type of Waste Disposal System:

Location: 10 miles west of South Shore

PRIORITY Date Received: 1-9-15 Application/License Fee: \$700

Corrected Application Received: 1-13-15 Period of Annual Use: May 1 – September 30

Remarks: Application No. 8077-3 will utilize same well

Diversion Point: SW 1/4 NW 1/4 Sec 36-T120R-
R52W

Land to be Irrigated: SW 1/4 NW 1/4 Sec 36-
T120R-R52W

Depth of Well: 138 feet deep

Well Driller:

Remarks:

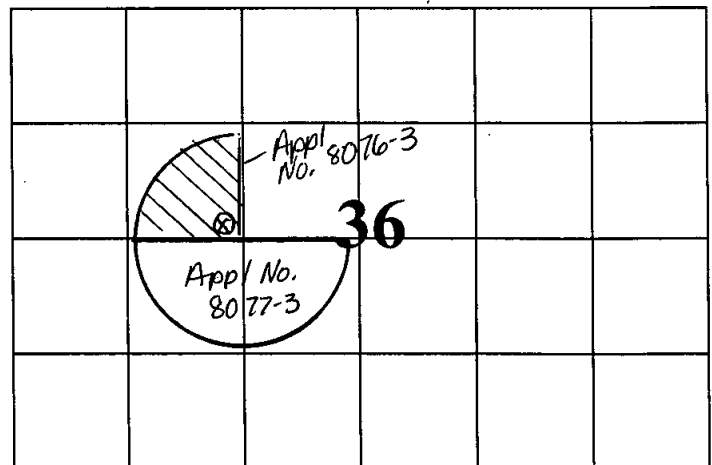
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 1-13-15

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>8076-3</u> (office use only)	Hydrologic Unit <u>07020001</u>
	Basin <u>Minnesota Whitestone</u>	
	Newspaper <u>Public Opinion Box 10</u>	
	<u>Waterman 57201 605-886-6901</u>	

RECEIVED
JAN 09 2015
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 Tim Grabow
(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent _____
(name and complete address if different than above name)

Mailing Address 15689 456th Ave South Shore SD 57263
(Address) (City) (State) (Zip Code)

Home Phone 605-884-8654 Cell 605-880-1489 Email 1-grabow@yahoo.com

2. Amount of water claimed 0.52*CFS or _____) **GPM _____ ***AF Total Acreage 33
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply ground water

4. Location of point of diversion one proposed well to be located in
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
SE corner of SW1/4 of NW1/4 36-120-52R County Codington

5. County or counties where water will be used Codington

6. Annual period during which water is to be used May - September

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
SW1/4 of NW1/4 36-120-52R	33		

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

Irrigate 33 acres in SW1/4 of NW1/4 36-120-52R. Unable to dig test hole due to weather. See enclosed well located 1/3 mile west in 35-120-52R under permit # 7305-3. Proposed well to be dug this spring to be located SE corner of SW1/4 of NW1/4 36-120-52R. Requesting diversion rate greater than statutory limit.

I, Tim Grabow, 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. 8076-3**

Date of first receipt of application January 9, 2015.

Date of return to applicant for corrections, amendments or changes January 13, 2015.

Date of receipt of corrected application January 13, 2015.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8076-3 to Tim Grabow, 15689 456th Ave, South Shore SD 57263 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. 8076-3 appropriates 0.52 cubic feet of water per second (cfs) from one well to be completed into the Prairie Coteau Aquifer (138 feet deep) located in the SW 1/4 NW 1/4 Section 36 for irrigation of 33 acres located in the SW 1/4 NW 1/4 Section 36; all in T120N-R52W within the former boundaries of the Sisseton Wahpeton Indian Reservation. Permit No. 8077-3 and this permit propose to use the same well.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: May 1 – September 30.
3. The date from which applicant may claim right is January 9, 2015.
4. The date of approval of Permit No. 8076-3 is March 30, 2015.
5. One-fifth of the construction is to be completed on or before September 30, 2017.
6. All construction is to be completed on or before March 30, 2020.
7. Water is to be put to beneficial use on or before March 30, 2024.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit Nos. 8076-3 and 8077-3 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. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit Nos. 8076-3 and 8077-3, combined, authorize a maximum diversion rate of 1.56 cfs for the irrigation of 99 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: 

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

APR 23 2015

date



Supplemental Information

(type or print)

1. Well Information

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

a) If new wells, how many 1 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)

b) If existing wells, how many _____ 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 1/2 mile SW + 1/2 mile NE

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)

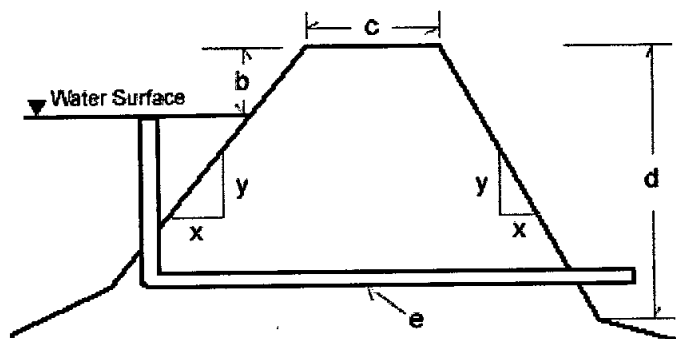
Upstream _____

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: 36_120R_52R
Farm: 4442

Codington County

1:8,733



April 16, 2012

Wetland Determination Identifiers

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

RECEIVED

JAN 09 2015

WATER RIGHTS
PROGRAM

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

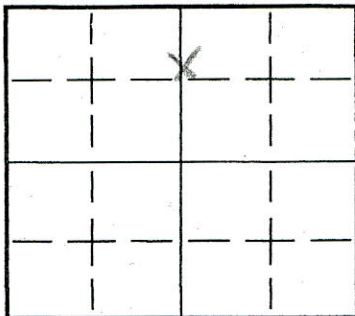
SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location $\frac{1}{4}$ $\frac{1}{4}$ Sec 35 Twp 119N Rg 52WCounty Codington

Please mark well location with an "X"

W



1 Mile

Well-Completion Date

7-17-08

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 1100 ft. from lowland (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Direct RotaryCASING DATA: ☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>5440</u> LB/FT	<u>12</u> IN	<u>2991</u> FT	<u>118</u> FT	<u>18 3/4</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>Portland Cement</u>	<u>75</u>	<u>54</u> lb./gal	<u>0</u> ft.	<u>100</u> ft.
_____	_____	_____ lb./gal	_____ ft.	_____ ft.

Describe grouting procedure pressure pull methodSCREEN: ☐ Perforated pipe ☒ ManufacturedDiameter 12 IN Length 20 FEETMaterial Stainless SteelSlot Size 10100 Set From 118 Feet to 138 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: 1+TH Tabs☐ NO, Why Not? _____

Laboratory sent to for water quality analysis _____

Well Owner: Tim Grabow

Business Name: _____

Address: 15689 4516 Ave
Watertown SD 57301

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top Soil	0	2
yellow clay	2	10
blue clay	10	118
soft yellow clay	118	119
yellow med gravel	119	138

STATIC WATER LEVEL 2 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☒ Pumped Describe: Sub☐ Bailed _____☐ Other _____

Pumping Level Below Land Surface

80 ft. After 12 Hrs. pumped 700 GPM80 ft. After 24 Hrs. pumped 700 GPMIf pump installed, pump rate 650 THC-3 4011 GPM

REMARKS

RECEIVED

JAN 09 2015

WATER RIGHTS
PROGRAMThis well was drilled under license # 1689

And this report is true and accurate.

Drilling firm Kaiser Well Drilling IncSignature of License Representative: [Signature]Signature of Well Owner or Equitable Property Holder: Lynae GrabowDate: 3-6-09

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 1/13, 20 15

RECEIVED OF Tim Grabow 15689 456th Ave South Shore SD 57263

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

Fee for Application for Permit No. <u>8076-3</u> to Appropriate Water, to construct and to put water to beneficial use	500	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>8076-3</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	700	00

No. 07125

By Jeanne Goodman
Chief Engineer

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, January 13, 2015 10:16 AM
To: 'l_grabow@yahoo.com'; 'grabow@tnics.com'
Subject: Irrigation Applications

We have received your two *Applications for a Permit to Appropriate Water* for irrigation. DENR has a question about the amount of water claimed on each application.

Both applications request 700 gallons per minute (gpm). DENR presumes the combined diversion rate is the 700 gpm to run a center pivot you are partnering on.

Our suggestion would be to pro rate the amount of water based on the number of acres to be irrigated on each application. This would equate to 0.52 cfs or 234 gpm for 33 acres. The amount of water claimed for irrigation of 33 acres in the SW 1/4 NW 1/4 Section 36 (Tim) would be 0.52 cfs. The amount of water claimed for irrigation of 66 acres in the N 1/2 SW 1/4 Section 36 (Jeff) would be 1.04 cfs.

Please let me know if you agree with this change on the applications or how you wish to proceed.

Karen Schlaak
Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352

Water Rights Program - File Documentation

NAME: Lynae Grabow

ADDRESS: South Shore

DATE: 1-13-15 **COUNTY:** Codington **TELEPHONE:**

RE: Pending applications

COMMENTS:

Lynae Grabow called regarding my email. She said she prepared the applications for Jeff (her husband) and Tim (her son) Grabow.

Mrs. Grabow stated they were in concurrence with amending the applications for the prorated water amounts. The total amount of water claimed on the two applications should be 700 gpm.

Karen Schlaak

Karen Schlaak
Water Rights Program



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8076-3, Tim Grabow**

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. 8076-3, Tim Grabow, 15689 456th Avenue, South Shore SD 57263.

The Chief Engineer is recommending APPROVAL of Application No. 8076-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit Nos. 8076-3 and 8077-3 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. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit Nos. 8076-3 and 8077-3, combined, authorize a maximum diversion rate of 1.56 cfs for the irrigation of 99 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Eric Thumler
for Jeanne Goodman, Chief Engineer
March 9, 2015

Report to the Chief Engineer

Application No. 8076-3 and No. 8077-3

Tim & Jeff Grabow

February 18, 2015

Water Permit Application Number 8076-3 proposes to appropriate water from the Prairie Coteau aquifer at a maximum diversion rate of 0.52 cfs. The water is to be used for the irrigation of 33 acres located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 36 in T120N-R52W. The requested diversion rate is greater than the statutory limit of 1 cfs per 70 acres. The proposed well location is the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 36 in T120N-R52W within the former boundaries of the Sisseton Wahpeton Indian Reservation and estimated to be about 138 feet deep. This application proposes to utilize the same well as Application No. 8077-3.

Water Permit Application Number 8077-3 proposes to appropriate water from the Prairie Coteau aquifer at a maximum diversion rate of 1.04 cfs. The water is to be used for the irrigation of 66 acres located in the N $\frac{1}{2}$ SW $\frac{1}{4}$ Section 36 in T120N-R52W within the former boundaries of the Sisseton Wahpeton Indian Reservation. The requested diversion rate is greater than the statutory limit of 1 cfs per 70 acres. This application proposes to utilize the same well as Application No. 8076-3.

Aquifer: Prairie Coteau (PCO)

Aquifer Characteristics and Hydrogeology

The Prairie Coteau aquifer was investigated in the Grant and Codington counties by Hansen (1990) and Roberts County and the Lake Traverse Reservation by Thompson (2001). The Prairie Coteau consists of coarse to very coarse sand and fine gravel ranging in color from brown to grey (Hansen 1990). The Prairie Coteau aquifer is a discontinuous aquifer, consisting of a group of outwash deposits located in elevation from 1,610 to 1,800 feet of varying depths and thickness (Thompson, 2001).

The areal extent of this portion of the Prairie Coteau aquifer was estimated by Stonesifer (2013) and is shown in Figure 1. This portion of the Prairie Coteau aquifer primarily underlies portions of Codington, Grant, and Roberts Counties with an areal extent of about 184,500 acres. This portion of the Prairie Coteau aquifer is under confined conditions (Water Rights, 2015a and Water Rights, 2015c), and water movement is from north to south (Hanson, 1990).

Based on the information submitted by the applicants the estimated well depth is 138 feet deep. This is based on the depth of another well belonging to the applicant located about 0.6 of a mile west of the proposed well sites for this application. Other irrigation wells depths within two miles range from 138 to 176 feet deep. The aquifer is expected to be under confined conditions in the area of the proposed well sites for this application (Water Rights, 2015c).

South Dakota Codified Law (SDCL) 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for 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 that are pertinent to this application.

Water Availability

Water Permit Applications No. 8076-3 and 8077-3 both propose to appropriate water from the Prairie Coteau aquifer. Approval of these applications is likely to result in an average annual water use of less than 99 acre-feet annually (ac-ft/yr). 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 that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source." If the source of the water is older or lower than the Greenhorn Formation and a 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 Prairie Coteau aquifer is not older or lower than the Greenhorn Formation, therefore the withdrawal/recharge issue must be considered.

In applying SDCL 46-6-3.1, the Sixth Judicial Circuit Court ruled in 2005 that if the Water Management Board uses average annual recharge, then it should also use average annual withdrawals to determine if unappropriated water is available from the aquifer (*Hines v. South Dakota Dept. of Environ. and Nat'l. Resources, Hughes County 04-37*) (Memorandum Decision, April 29, 2005).

A 2012 First Judicial Circuit Court's rulings basically stated that data must be presented to show it is probable the average annual recharge exceeds the average annual discharge by at least the amount requested by the water permit application being considered (*Hanson County Dairy v. Robert Bender and Stace Nelson*) (Memorandum Decision, April 11, 2012).

Later in 2012, the First Judicial Circuit Court stated that in deciding whether or not it is probable that the quantity of water withdrawn will exceed the quantity of the average estimated annual recharge is to be based according to the best information reasonably available, and that nothing in South Dakota law requires a recharge study (*Longview Farms, LLP v. South Dakota Dept. of Environ. and Nat'l. Resources*) (Memorandum Decision, May 17, 2012).

Hydraulic Budget

Recharge

This portion of the Prairie Coteau aquifer is recharged by leakage through the till and leakage from the Big Sioux and Coteau Lakes aquifers in areas where they overlie this portion of

the Prairie Coteau aquifer (Hansen, 1990). Recharge to this portion of the Prairie Coteau aquifer has not been quantified. However for confined aquifers, Hedges et al. (1985) recommends utilizing a range of recharge rate from 0.15 to 0.60 inches per year for management and development programs to estimate recharge. When applying this rate to the areal extent of this portion of the Prairie Coteau aquifer, recharge can be estimated to range from 2,306 acre-feet per year to 9,225 acre-feet per year. However, due to the general nature of this estimate the importance of utilizing the observation well data in considering water availability for this application is emphasized.

Withdrawals

Withdrawals from this portion of the Prairie Coteau aquifer are primarily due to wells (Hanson, 1990). There are currently 27 water rights/permits appropriating water from this portion of the Prairie Coteau aquifer (Water Rights, 2015b). These water rights/permits are summarized in Table 1. Withdrawals from domestic wells are not considered a significant portion of the hydraulic budget for this aquifer.

Table 1: Water rights/permits in the same portion of the Prairie Coteau aquifer and Application No. 8076-3 & No. 8077-3 (Water Rights, 2015b)

Permit No.	Name	Status	Use	Rate (cfs)	Acres
3229-3	DON ENDRES	LC	IRR	2.66	224
3665-3	FLORENCE DAVIS	PE	IRR	9	640
4184-3	JABE KAHNKE	LC	IRR	2.67	243
4417-3	FALK FARMS INC	LC	IRR	6	770
4588-3A	DON ENDRES	LC	IRR	1.77	170
4749-3	LUVERN J MILLER	LC	IRR	3.77	264
5165-3	JEFF L & LYNAE GRABOW	LC	IRR	1.77	132
5166A-3	JOHN T NORDGAARD	LC	IRR	1.87	131
5166B-3	NORTHERN CON-AGG INC	LC	IRR	0.84	59
5174-3	DONALD L ENDRES	LC	IRR	1.77	130
5376-3	DONALD L ENDRES	LC	IRR	1.11	83
5378-3	ENDRES FAMILY TRUST	LC	IRR	1	70
5807-3	MICHAEL JOHN MEYER	LC	IRR	1	95
6100-3	NORSWISS DAIRY	LC	COM	0.267	0
6533-3	REDLIN FARMS	PE	COM	0.033	0
6906-3	TIM J GRABOW	PE	IRR	0	180
6907-3	JEFF L GRABOW	PE	IRR	4	440
7036-3	JAMES AND JOHNNYLEE WOHLLEBER	PE	IRR	2	130
7065-3	JAMES AMDAHL	PE	IRR	3.78	264
7242-3	ROLLIN J MOREHOUSE	PE	IRR	4.29	300
7305-3	TIM GRABOW	PE	IRR	1.57	110
7328-3*	MARVIN AMDAHL	PE	IRR	1.78	162
7351-3	MICHAEL JOHN MEYER	PE	IRR	0.68	0
7629-3	WILLIAM BUCKLIN	PE	IRR	0.63	44
7680-3	WENDELL FALK	PE	IRR	2	140
7681-3	MICHAEL JOHNSON	PE	IRR	1.56	133.65
7783-3	MARVIN AMDAHL	PE	IRR	1.78	132
Total					5046.65

LC= license, PE=permit, IRR=irrigation, COM=commercial

There are two water rights/permits for non-irrigation uses appropriating water from this aquifer. For non-irrigation use, average annual use can be estimated by assuming that pumping will occur at the maximum diversion rate 60% of the time for water rights/permits limited by rate only. For water rights/permits limited to an annual volume, full use of that volume is assumed for estimation of average annual withdrawal. The annual withdrawals due to non-irrigation use can be estimated at 131 acre-feet.

There are 25 water rights/permits for irrigation use appropriating water from this aquifer. The annual reported pumpage for the aquifer for 1979 to 2013 is shown in Figure 2. In considering the period of record both wet and dry years as well as both high and low economic conditions are present within the period of record, thus the estimated average annual withdrawal due to irrigation is reflective of these different conditions. The average annual reported irrigation pumpage for this aquifer is 941 acre-feet. The annual reported pumpage and the number of acres irrigated each year can be utilized to calculate an average application rate for the aquifer. This

is shown in Figure 3. When updating the application rate of Stonesifer (2013) to include data from 2012 and 2013, the average application rate for this aquifer is 5.63 inches per acre per year. By applying this application rate to the total number of acres irrigated by the current water rights/permits for irrigation use in this aquifer and the number of acres requested by this application the annual withdrawal due to irrigation for this aquifer can be estimated at 2,414 acre-feet.

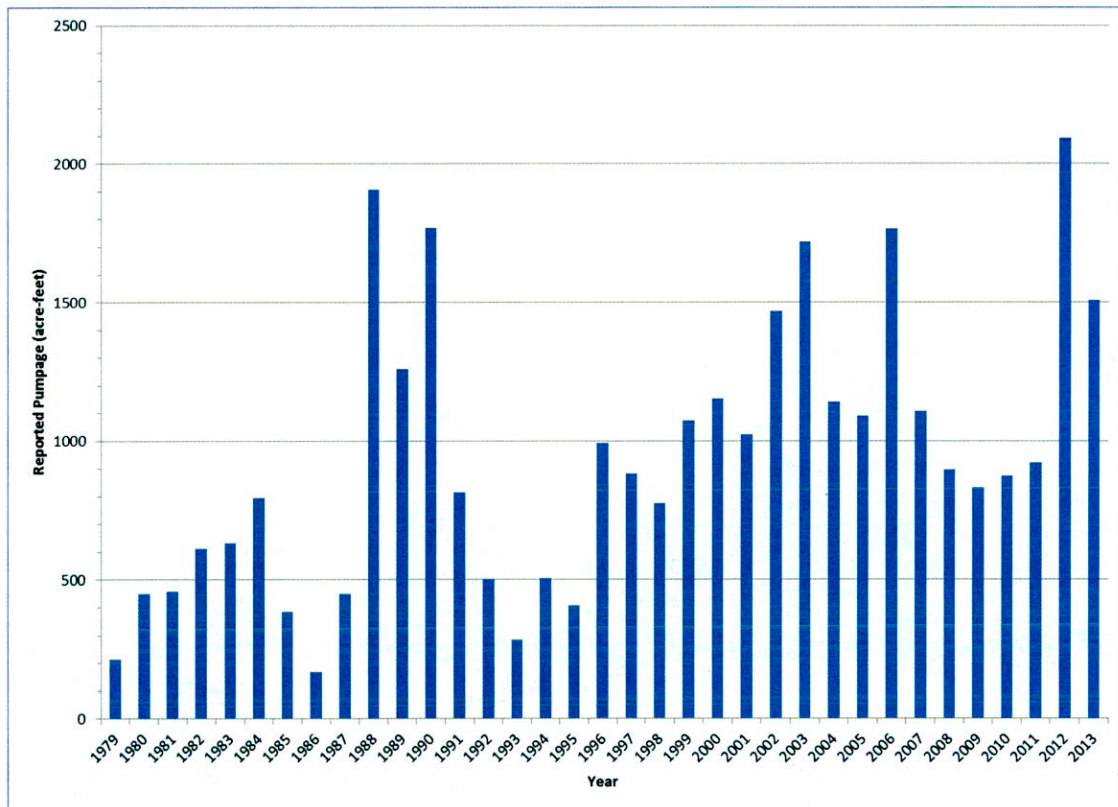


Figure 2: Annual reported pumpage for this part of the Prairie Coteau aquifer (Water Rights, 1980-2014 and Stonesifer, 2013)

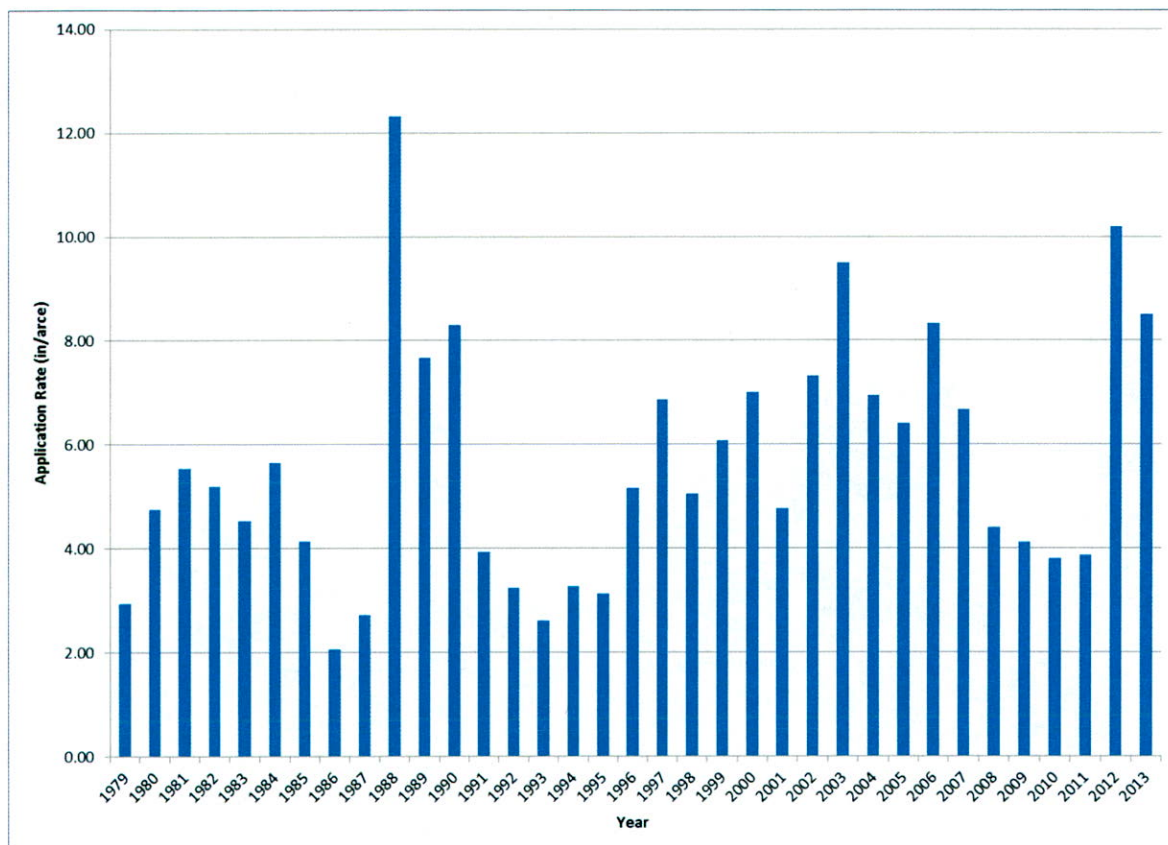


Figure 3: Application rate by year (Water Rights, 1980-2014 and Stonesifer, 2013)

For this portion of the Prairie Coteau aquifer estimated average annual withdrawals from irrigation and non-irrigation use total 2,545 acre feet per year. When compared to the estimated range of average annual recharge (2,306 acre-feet per year to 9,225 acre-feet per year) estimated average annual withdrawals, include estimated average annual withdrawal from this application, for the aquifer is at the very bottom of this range. Therefore there is a reasonable probability that there is water available to support this application.

Observation Wells

In determining the availability of unappropriated water for a permit application Administrative Rule 74:02:05:07 requires the Water Management Board to rely on the record of observation well measurements, in addition to other data, to determine that average annual withdrawals from the aquifer do not exceed the estimated annual recharge. Observation well data offers a picture of conditions in the aquifer over the period of record.

The Water Rights Program monitors 55 observation wells in the Prairie Coteau aquifer, of these 13 are completed into this portion of the Prairie Coteau aquifer. The hydrographs for these observation wells are shown in Figure 4. The closest observation to the location of the proposed well site for this application is observation well CD-76D, which is about 1.9 miles to the west northwest.

The observation well hydrographs shows cyclic patterns based on the effect of climatic conditions on the aquifer. Increases in water levels occur during wetter periods (recharge), and decreases in water levels occur during drier periods. Though some of the observation well hydrographs do show the effects of seasonal pumping from nearby irrigation wells, water levels recover after irrigation has ceased. Over the period of record water levels have remained relatively steady throughout the aquifer. Therefore, at the current level of development the temporal effects of pumping are masked by climate conditions. This shows that the hydrographs are dominated by natural conditions, and water is available for capture. Therefore, there is a reasonable probability that water is available to support this application.

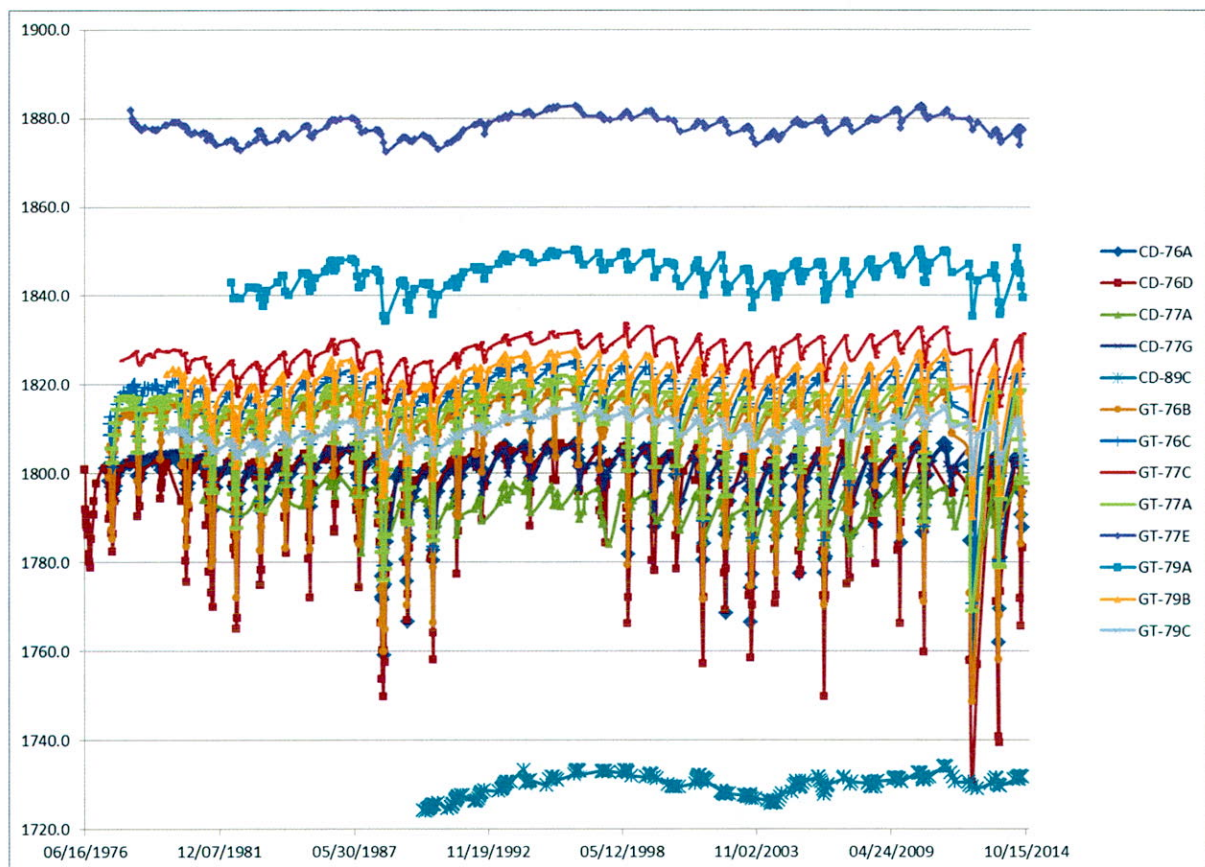


Figure 4: Observation Well Hydrographs for this portion of the Prairie Coteau aquifer (Water Rights, 2015a)

Existing Water Rights/Permits

There are five existing water rights/permits within two miles of this application. These water rights/permits are summarized in Table 2, and their locations are shown in Figure 5. The nearest water right/permit to the location of these applications is Water Permit No. 6906-3 and No. 6907-3 located about 0.6 miles to the west of the location of this application both belong to the applicants. The nearest water right/permit to the location of these applications not belonging to the applicants is Water Permit No. 7680-3 about 1.7 miles north of this location. Water Permit

No. 7680-3 was a contested case that appeared before the Water Management Board in Oct. 2013. The interveners were concerned that approval of Water Permit No. 7680-3 would negatively impact their domestic/stock wells, jeopardize their stock dams, and concern over aquifer recharge time (Water Rights, 2015d). In the matter of Water Permit No. 7680-3 it was determined the intervener's domestic well located about 4,500 feet away would not be adversely impacted based on analysis utilizing the Theis equation, that the stock dams were not adequate wells, and that water was available (Water Rights, 2015d).

Table 2: Water Rights/Permits with Two Miles of Application No. 8076-3 & No. 8077-3
(Water Rights, 2015b)

Permit No.	Name	Status	Use	Rate (cfs)	Acres
6906-3	Tim J Grabow	PE	IRR	0	180
6907-3	Jeff L Grabow	PE	IRR	4	440
7305-3	Tim J Grabow	PE	IRR	1.57	110
7351-3	Michael John Meyer	PE	IRR	0.68	0
7680-3	Wendell Falk	PE	IRR	2	140

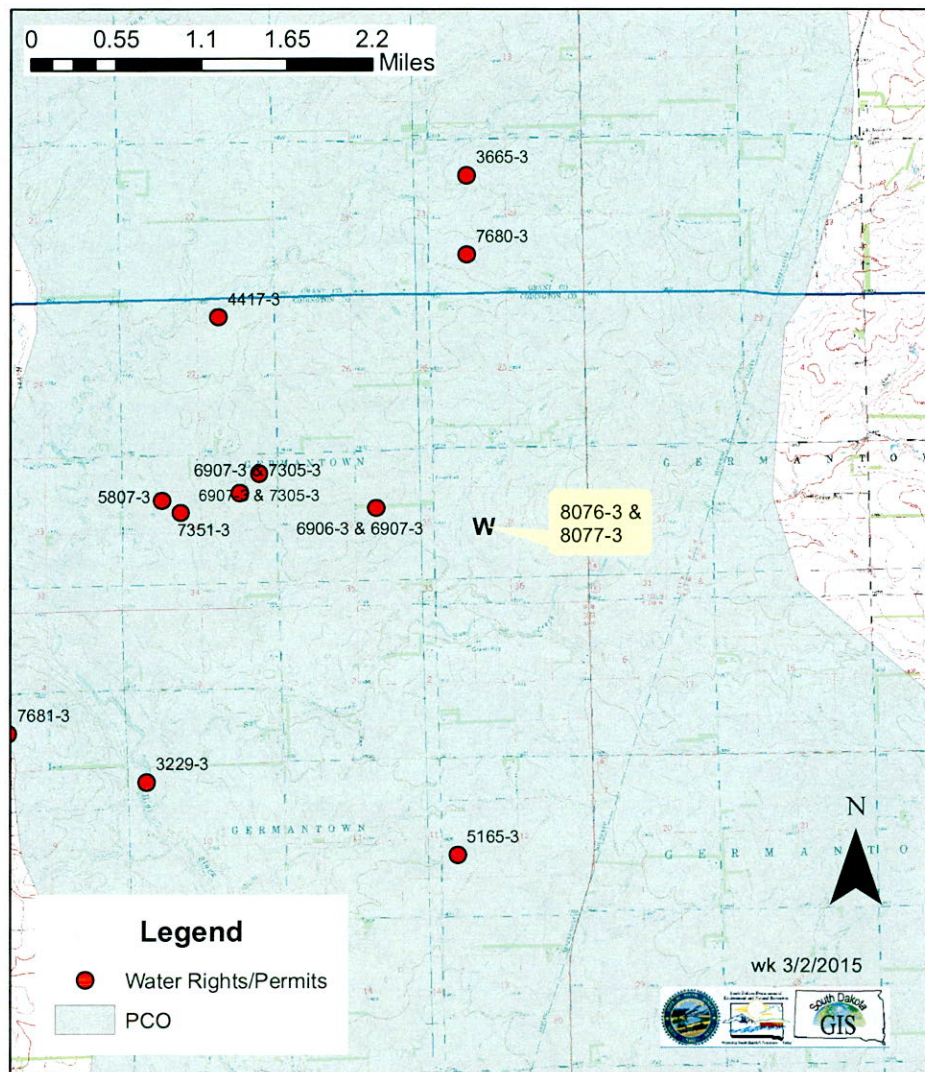


Figure 5: Approximate Location of Water Rights/Permits Diversion Points in this portion of the Prairie Coteau aquifer in the Area of Application No. 8076-3 and No. 8077-3 (cancelled water rights not shown) (Water Rights, 2015b)

There are several domestic wells on file with the SDDENR-Water Rights Program within two miles of this application that could be completed into this portion of the Prairie Coteau aquifer. Since the aquifer is under confined conditions at this location, drawdown as a result of pumping is likely. However, a precise amount of drawdown cannot be quantified without aquifer testing. Due to the distances involved this application, if approved, it is unlikely to adversely impact existing water rights/permits not belonging to the applicants. An adequate well as defined by South Dakota Administrative Rules is “a well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near as possible to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet.” In the past the Water Management Board has recognized that to

place water to maximum beneficial use a certain amount of drawdown may occur. Additionally pursuant to SDCL 46-6-6.1 artesian head pressure is not protected as a means of groundwater delivery. However, in the case of irrigation since reasonable domestic use must be insured first, the Water Management Board does need to give consideration to artesian head pressure.

SDCL 46-5-6

Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of one cfs for every 70 acres, or “the equivalent thereof.” The statute does provide that the Water Management Board may allow a greater diversion rate if the method of irrigation so requires. Water Permit Application No. 8076-3 proposes to divert up to 0.52 cfs for the irrigation of 33 acres, or the equivalent of 1.10 cfs per 70 acres. Water Permit Application No. 8077-3 proposes to divert up to 1.04 cfs for the irrigation of 66 acres, or the equivalent of 1.10 cfs per 70 acres. The applicant did not state a reason for the request. However, the maps submitted with the applications show the center pivots to be used for these irrigation projects will only make partial rotations. In the past, it has been accepted that a center pivot only making a partial rotation often requires a diversion rate in excess of the statutory limit.

Conclusions

1. Water Permit Application Number 8076-3 proposes to appropriate water from the Prairie Coteau aquifer at a maximum diversion rate of 0.52 cfs for the irrigation of 33 acres located in the SW ¼ NW ¼ Section 36 in T120N-R52W within the former boundaries of the Sisseton Wahpeton Indian Reservation. Water Permit Application Number 8077-3 proposes to appropriate water from the Prairie Coteau aquifer at a maximum diversion rate of 1.04 cfs for the irrigation of 66 acres located in the N ½ SW ¼ Section 36 in T120N-R52W within the former boundaries of the Sisseton Wahpeton Indian Reservation. For both applications the requested diversion rate is greater than the statutory limit of 1 cfs per 70 acres.
2. These applications propose to utilize the same well.
3. There is reasonable probability that water is available to meet the needs of these applications.
4. These applications are unlikely to adversely impact adequate wells in the area.



Whitney Kilts

SDDENR-Water Rights Program

Approved by


for Ken Buhler

SDDENR-Water Rights Program

References

- Hansen, D. S. 1990. Water Resources of Codington and Grant Counties, South Dakota. Water-Resources Investigations Report 89-4147. USGS. Huron, 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. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- In the Matter of Water Permit Application No. 6431-3, by Phillip W. Hines v. SD Department of Environment and Natural Resources, South Dakota Sixth Judicial Court Civ. No. HU04-37 (Memorandum Decision, April 29, 2005)
- In the Matter of Water Permit Application No. 7239-3, by Hanson County Dairy v. Robert Bender and Stace Nelson, South Dakota First Judicial Court Civ. No. 11-54 (Memorandum Decision, April 11, 2012)
- In the Matter of Water Permit Application 7209-3, Longview Farms, LLP v. South Dakota Dept. of Environment and Natural Resources, South Dakota First Judicial Court Civ. No. 11-146 (Memorandum Decision, May 17, 2012)
- SD Geological Survey. 2014. Lithological Logs Database, SD DENR-Geological Survey Program, Vermillion, SD.

- Stonesifer, J. 2013. Water Permit No. 7629-3. SD DENR-Water rights Program, Joe Foss Bldg., Pierre, SD.
- Thompson, R. F. 2001. Water Resources of the Lake Traverse Reservation South and North Dakota, and Roberts County, South Dakota: U.SGS Water-Resources Report 01-4219.
- Water Rights. 1980-2014. "1979-2013 Irrigation Summaries by Aquifer": SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2015a Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2015b. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2015c. Well Completion Reports. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2015d. Water Permit File No. 7680-3. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

RECEIVED

MAR 25 2015

WATER RIGHTS
PROGRAM

Form 8

**SOUTH
DAKOTA**

**NOTICE OF APPLICATION
NO. 8076-3 to Appropriate
Water**

Notice is given that Tim Grabow, 15689 456th Ave, South Shore SD 57263 has filed an application for a water permit to appropriate 0.52 cubic feet of water per second (cfs) from one well to be completed into the Prairie Coteau Aquifer (138 feet deep) located in the SW 1/4 NW 1/4 Section 36 for irrigation of 33 acres located in the SW 1/4 NW 1/4 Section 36; all in T120N-R52W within the former boundaries of the Sisseton Wahpeton Indian Reservation. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. Application No. 8077-3 and this application propose to use the same well. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8076-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application.

Notice of the hearing will be given to the applicant and any person filing a petition. Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by March 30, 2015.

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. Information concerning this application is available at <http://denr.sd.gov/public>. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pimer, Secretary, Department of Environment and Natural Resources.

(March 18, 2015)

61.65

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

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:

March 18th, 2015

Cost of Printing \$61.65

Monica K. Saathoff
(Signature)

Bookkeeper

(Title)

March 18th, 2015

(Date Signed)



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

March 9, 2015

Public Opinion
PO Box 10
Watertown SD 57201

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 8076-3 to Appropriate Water. Please publish the notice once on March 18, 2015. 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 Tim Grabow, 15689 456th Ave, South Shore SD 57263 (Ph # 605-884-8654).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

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

March 9, 2015

Tim Grabow
15689 456th Ave
South Shore SD 57263

Dear Mr. Grabow:

Water Permit Application No. 8076-3 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 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,

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

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

Instruction to Newspaper - Publish the Notice on March 18, 2015. 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. 8076-3 to Appropriate Water

Notice is given that Tim Grabow, 15689 456th Ave, South Shore SD 57263 has filed an application for a water permit to appropriate 0.52 cubic feet of water per second (cfs) from one well to be completed into the Prairie Coteau Aquifer (138 feet deep) located in the SW 1/4 NW 1/4 Section 36 for irrigation of 33 acres located in the SW 1/4 NW 1/4 Section 36; all in T120N-R52W within the former boundaries of the Sisseton Wahpeton Indian Reservation. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. Application No. 8077-3 and this application propose to use the same well.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8076-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by March 30, 2015.

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. Information concerning this application is available at <http://denr.sd.gov/public>. 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

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

denr.sd.gov

APR 23 2015

Tim Grabow
15689 456th Ave
South Shore SD 57263

Dear Mr. Grabow:

Enclosed is Water Permit No. 8076-3 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

07-92

Date: 9-14-15

FORM #30

8076-3

RECEIVED

APR 13 2016

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 4-9-16

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

FROM: Tim Grabow
(name)
15689 456th Ave
(address)
South Shore, SD 57263
(city, state, zip) (phone)

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

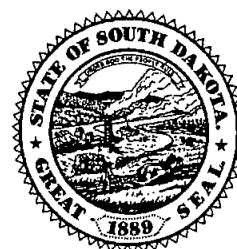
Water Permit No. 8076-3 states that the water use system is to be constructed by
3-30-20 (date), and water is to be put to beneficial use by 3-30-24 (date).

The water use system was completed on 8-1-15 (date).

Applying the water to beneficial use was completed on 8-1-15 (date).

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

Tim Del
(signature)





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

April 14, 2016

8076-3

Tim Grabow
15689 456th Ave
South Shore SD 57263

Dear Mr. Grabow:

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

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

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

Sincerely,

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

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



8076-3

**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUN 28 2023

Tim Grabow
15689 456th Ave
South Shore SD 57263

6906-3
7305-3
8076-3

Dear Mr. Grabow:

Enclosed are Water License Nos. 6906-3, 7305-3, & 8076-3. These are the final water right documents completing your process of obtaining Water Rights. Included with your licenses 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 Licenses, 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

NOTE: The investigation into Water Right No. 8076-3 found your irrigation system is capable of diverting 1.56 cubic feet of water per second (cfs) (equivalent to 700 gpm). Water Right No. 8076-3 authorizes 0.52 cfs while the remaining 1.04 cfs is authorized by Water Right No. 8077-3.

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8076-3**

(1) Tim Grabow; 15689 456th Ave, South Shore SD 57263, made Application No. 8076-3, January 9, 2015, for a water permit to divert 0.52 cubic feet of water per second from ground water, one well (Prairie Coteau Aquifer), Codington County, South Dakota for irrigation purposes. Permit No. 8076-3, with a priority date of January 9, 2015, was approved March 30, 2015, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before March 30, 2020, and for the application to beneficial use of water on or before March 30, 2024.

This well also supplies water for the irrigation authorized under Water Right No. 8077-3.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 0.52 cubic feet of water per second for beneficial use. The location of the diversion point is: *(within former boundaries of the Sisseton Wahpeton Indian Reservation)*

- Well #4: 2,650 ft S & 1,315 ft W of the SW corner of Section 36, T120N, R52W (SW $\frac{1}{4}$ NW $\frac{1}{4}$)
(Latitude 45.12982 Longitude -97.11874)

(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 36, T120N, R52W
(within former boundaries of the Sisseton Wahpeton Indian Reservation)
SW $\frac{1}{4}$ NW $\frac{1}{4}$ 33.0 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Tim Grabow, the holder and/or owner of Water Right No. 8076-3 is issued a license to appropriate water, the right to use 0.52 cubic feet of water per second from ground water, one well (Prairie Coteau Aquifer), with a priority date of January 9, 2015, from the location specified in (2) of this license for irrigation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8076-3 and subject to the following qualifications:

1. The well approved under this water right will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this water right shall control their withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8076-3 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.
3. Pursuant to SDCL 46-5-6 which allows a greater diversion rate is the methods of irrigation, time constraints, or type of soils so requires, Water Right Nos. 8076-3 & 8077-3, combined, authorize a maximum diversion rate of 1.56 cfs for the irrigation of 99 acres with the annual volume not to exceed 2 acre feet of water per acre per year.

continued

4. 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

JUN 28 2023

date



Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8076-3

I have thses days, May 8 & 10, 2023, made a thorough examination of the water use system constructed by Tim Grabow 15689 456th St, South Shore, SD 57263 of Permit No. 8076-3, bearing the priority of January 9, 2015 authorizing the diversion of 0.52 cu. ft. per second of the waters of the Prairie Coteau Aquifer for irrigation purposes, in Codington County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: L. T. P. Enterprises, Inc
- 2) No. of Wells 1
- 3) Depth(s) 167 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 12 inches
- 2) Length 137 feet
- 3) Type Steel

Screen:

- 1) Type Stainless
- 2) Length 30 feet
- 3) Static water level 46 feet

Pump:

- 1) Make Submersible
- 2) Model Unknown
- 3) Size Unknown
- 4) Capacity 700 GPM

Motor:

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

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

- 1) Type Above ground Aluminum
- 2) Size 8 inches
- 3) Length 30 feet

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Zimmatic
- 2) Overall length 1300 feet
- 3) Number of towers 9
- 4) End gun Y
- 5) Capacity 700 GPM

Chemigation Equipment:

- 1) Does chemigate N

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by ???

If no, describe: **Pumping 1.56 cfs while permitted 0.52 cfs (See Section F)**

- 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 LOCATION**
From the NE corner Sec 35 T120N R52W WELL #4: 2,650 ft S & 1,315 ft W, Lat 45.12982 Long -
97.11874 (SW 1/4 NW 1/4).
2. The works are capable of diverting and conveying to the place of use 1.56 cu. ft. per second of water which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:
legal description/acreage
Land in Sec 36 T120N R52W
SW 1/4 NW 1/4 - 33.0 acres

comprising a total of 33.0 acres of land and the license should be issued for 0.52 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 ArcMAPS software.

The pump rate reported in a recent Irrigation Questionnaire was used to establish the system flow capacity. NOTE: The authorized flow rate is 0.52 (Permit 8076 – 3) plus 1.06 (Permit 8077 – 3) for a total rate of 1.58 cfs which is what is being pumped.

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

I talked to Tim (son) during a field visit and with Jeff (Dad) via telephone.



Darrell W DeBoer
Water Rights Inspector
DANR, Water Rights Program

Date report completed: May 11, 2023

