

WATER PERMIT NO. 7431-3

Name of Applicant: Michael G Williams

Address: 5901 N Ditch Rd, Sioux Falls SD 57104

Phone: 605 360-1353

Amount of Water Claimed: 1.11 cfs

Total Acres: 90 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation

County: Minnehaha

Type of Waste Disposal System:

Location: approximate 3 miles north of Sioux Falls

PRIORITY

Date Received: 9-10-12

Application/License Fee: \$ 950

Corrected Application Received:

Period of Annual Use: May 1 – September 30

Remarks:

Diversion Point: SE 1/4 NW 1/4 Sec 16-T102N-
R49W

Land to be Irrigated: NW 1/4 Sec 16-T102N-
R49W

Depth of Well: 35 feet deep

Well Driller:

Remarks:

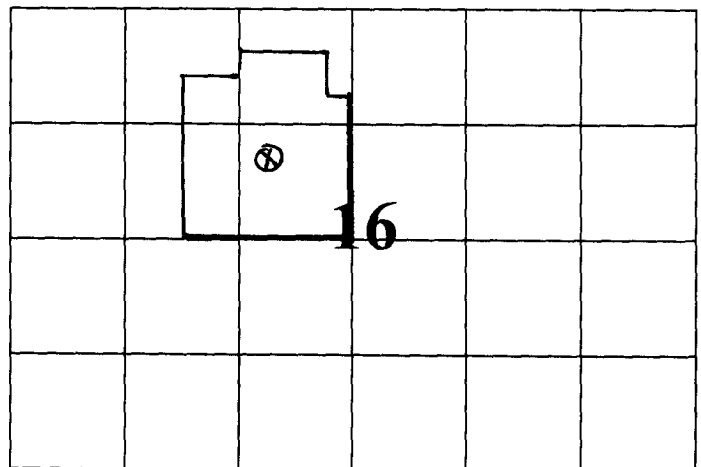
Type of Map: aerial

Prepared by: Mary Lou Lacey

Reviewed and the Number Assigned on: 9-14-12

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>7431-3</u> (office use only)	Hydrologic Unit <u>10170203</u>
	Basin <u>Sioux River</u>	
	Newspaper <u>Argus Leader</u>	

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SEP 10 2012
WATER RIGHTS
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Application For Permit To Appropriate Water For Irrigation

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

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

- Name of Applicant Michael G. Williams ^{CP 11} Phone 605-360-1353
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 5901 N Ditch Rd Sioux Falls State SD 57104-6535
(Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 1.11 *CFS or 500 **GPM ***AF Total Acreage _____
(*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply Well
- Location of point of diversion (example - 3 wells in SW 1/4 NE 1/4 section 12-T104N R53W) County Minnehaha
Center of the quarter-SE 1/4 NW 1/4 Sec 16, T102N R49W
- County or counties where water will be used Minnehaha
- Annual period during which water is to be used May 1 - September 30
- 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
NW 1/4 of the NW 1/4 Sec 16	15	all in T102N R49W	
SW 1/4 of the NW 1/4 Sec 16	15		
NE 1/4 of the NW 1/4 Sec 16	30		
SE 1/4 of the NW 1/4 Sec 16	30		

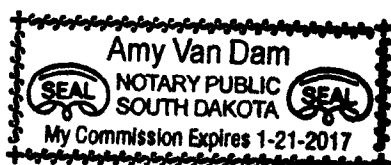
B. Give a description of the project. (Attach sheet if more space is needed)

STATE OF SOUTH DAKOTA) SS
County of Minnehaha

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Attach map and any other technical information. (see instructions)

I, Amy Van Dam, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature Michael G. Williams
Subscribed and sworn to before me this 5 day of September 20 12



Amy Van Dam
Notary Public signature

SOUTH DAKOTA
TEMPORARY USE WATER PERMIT NO. 7431-3

Date of first receipt of application September 10, 2012.

The Chief Engineer, on behalf of the Water Management Board, issues Temporary Use Water Permit No. 7431-3 to Michael G Williams, 5901 N Ditch Rd, Sioux Falls SD 57104 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. Temporary Use Water Permit No. 7431-3 appropriate 1.11 cubic feet of water per second from one well to be completed into the Big Sioux:Sioux Falls Aquifer (35 feet deep) located in the SE 1/4 NW 1/4 Section 16 for irrigation of 90 acres located in the NW 1/4 Section 16; all in T102N-R49W.
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 September 10, 2012.
4. The date of approval of Temporary Use Permit No. 7431-3 is December 3, 2012.
5. One-fifth of the construction is to be completed on or before June 3, 2015.
6. All construction is to be completed on or before December 3, 2017.
7. Water is to be put to beneficial use on or before December 3, 2021.
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 city of Sioux Falls has priority right to this water under future use withdrawal permits. This permit is issued as a temporary use permit pursuant to SDCL 46-5-39 and is subject to Sioux Falls prior rights if or when the city develops the reserve water supply. The permit may be subject to cancellation when the city puts to beneficial use water reserved by their future use permit. The Chief Engineer must provide the permit holder six month notice prior to cancellation of this temporary use permit.
2. If development and pumping of the Sioux Falls Management Unit of the Big Sioux Aquifer water appropriated by the temporary use permit results in adverse impairment of adequate domestic wells or adequate wells having prior rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use over appropriative rights does so without regard to 1) whether lowered ground water levels are due to drought, 2) the location of the domestic wells in the aquifer, or 3) the thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04.
3. The well authorized by Temporary Use Permit No. 7431-3 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.

(continued)

Water Permit No. 7430-3
Michael G Williams
Page 2

4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

DEC 13 2012

date



(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 24" Depth 35 ft
- b) Casing Type PVC Diameter 12" Thickness 3/8
- c) Screen Type 5 Steel Diameter 12" Thickness 1/8
- d) Gravel Pack per Rock Length of Gravel Pack 10 ft
- e) Depth to Top of Water Bearing Material 25 ft
- f) Depth to Water (ground surface to water level) 10 ft
- g) Distance to nearest existing domestic well:

On applicants property 2600 ft

On property owned by others ?

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System _____

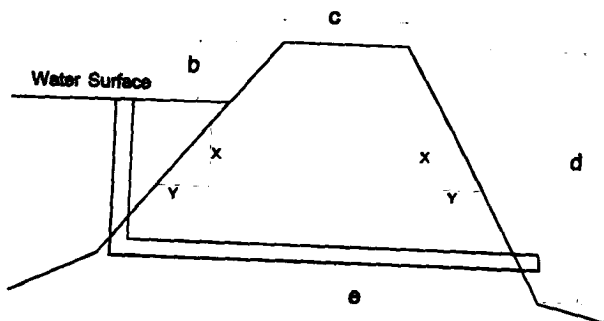
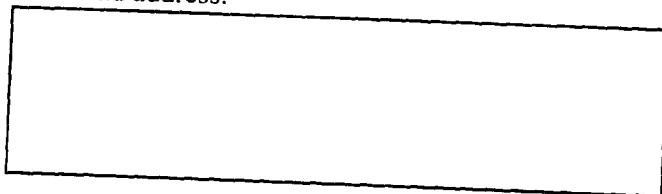
3. Dugout Information

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:



- b) Freeboard _____
- c) Crest Width _____
Crest Length _____
- d) Height _____
- e) Primary Outlet Capacity _____
If pipe, diameter _____
- f) Secondary Spillway Capacity _____
Spillway Width _____
- g) X & Y Slope _____
Upstream _____
Downstream _____
- h) Surface Area of Impoundment _____
- i) Storage _____ Acre Feet
- j) Drainage Area Above Dam _____ Acres



United States Department of Agriculture
Farm Service Agency

PLSS: 16_102N_49W
Farm: 11428

Minnehaha, SD

1:8,819

April 04, 2012



Legend

- Section-Township-Range
- Tract Boundary
- Rangeland
- Field Boundary

GIS_SD.SDE.Wet_P_sd099

Wetland Determination Identifiers

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

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.

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In Water Since 1946

LACEY WELL DRILLING, INC.
47582 - 240th St.
Dell Rapids, South Dakota 57022
Telephone (605) 428-5979

Wells — Pumps
Dewatering Work
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OCT 25 2012

WATER RIGHTS
PROGRAM Camera
Water Specialists
Irrigation Supplies

10-22-12

To: Mike Williams
Mapleton Twp T102N R49W section 16

T.H. on property SE of Monarch Steakhouse
0-5' Topsoil 5-14' GRAY CLAY 14-50'
GRAY, MIXED SAND.

Mapleton Twp T102N R49W section 8

T.H. on property N up Ditch Road
West of Ditch
0-4' till 4-12' GRAY CLAY 12-38' Good
COARSE GRAVEL.

Thanks,

Jim Lacey
S.D. Lic # 111

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 9/10, 20 12

RECEIVED OF Michael C Williams 5901 N Ditch Rd Sicou Falls SD 57104

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

Fee for Application for Permit No. <u>7430-3</u> to Appropriate Water, to construct and to put water to beneficial use	750	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>7430-3</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	950 00

No. 05570

By David Erbe
Chief Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

September 10, 2012

Dave Gullickson
E Hwy 14 Bypass
Brookings SD 57006

RE: Application for Michael G Williams

Dear Mr. Gullickson:

Thank you for submitting the two *Applications for a Permit to Appropriate Water* for irrigation for Michael Williams. In order to complete the applications, the following is required.

- Enclosed are the aerial photo maps submitted with the applications. Please mark the proposed well locations with an "X". The applications state the wells are proposed to be located in the center of the quarter. I am questioning if that location is correct based on the acreage outlined.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak
Water Rights Program
605 773-3352
karen.schlaak@state.sd.us

enclosures



**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. 7431-3, Michael G Williams**

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. 7431-3, Michael G Williams, 5901 N Ditch Road, Sioux Falls SD 57104.

The Chief Engineer is recommending APPROVAL of Application No. 7431-3 as a TEMPORARY USE PERMIT pursuant to SDCL 46-5-39 because 1) water is available to be appropriated as a temporary use permit until the city of Sioux Falls develops water reserved from its future use permit, 2) the proposed diversion can be developed as a temporary use permit 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 city of Sioux Falls has priority right to this water under future use withdrawal permits. This permit is issued as a temporary use permit pursuant to SDCL 46-5-39 and is subject to Sioux Falls prior rights if or when the city develops the reserve water supply. The permit may be subject to cancellation when the city puts to beneficial use water reserved by their future use permit. The Chief Engineer must provide the permit holder six month notice prior to cancellation of this temporary use permit.
2. If development and pumping of the Sioux Falls Management Unit of the Big Sioux Aquifer water appropriated by the temporary use permit results in adverse impairment of adequate domestic wells or adequate wells having prior rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use over appropriative rights does so without regard to 1) whether lowered ground water levels are due to drought, 2) the location of the domestic wells in the aquifer, or 3) the thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04.
3. The well authorized by Permit No. 7431-3 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.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Garland Erbele, Chief Engineer
November 14, 2012

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NOS. 7430-3 AND 7431-3
MICHAEL G. WILLIAMS
NOVEMBER 7, 2012

Water Permit Application No. 7430-3 proposes to appropriate up to 172 acre-feet annually (ac-ft/yr) at a maximum diversion rate of 1.11 cubic feet of water per second (cfs) from one well completed into the Sioux Falls management unit of the Big Sioux aquifer. The well is expected to be approximately 38 feet deep and is to be located in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 8, T102N-R49W. This permit application proposes to irrigate 86 acres located in the W $\frac{1}{2}$ NE $\frac{1}{4}$ Section 8, T102N-R49W and the E $\frac{1}{2}$ NE $\frac{1}{4}$ Section 9, T102N-R49W.

Water Permit Application No. 7431-3 proposes to appropriate up to 180 ac-ft/yr at a maximum diversion rate of 1.11 cfs from one well completed into the Sioux Falls management unit of the Big Sioux aquifer. The well is expected to be approximately 50 feet deep and is to be located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 16, T102N-R49W. This permit application proposes to irrigate 90 acres located in the NW $\frac{1}{4}$ Section 16, T102N-R49W.

AQUIFER: Big Sioux: Sioux Falls (BS:SF)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Sioux Falls management Unit of the Big Sioux aquifer is an alluvium mantled, glacial outwash deposit, which consists of silt, fine to coarse sand, and gravel. The management unit underlies approximately 22,900 acres in Minnehaha County and contains an estimated 103,050 acre-feet of recoverable water in storage in the county (Hedges and others, 1982). The aquifer is restricted to the Big Sioux Alluvial Valley, and is bounded both to the north (near Dell Rapids) and on the south (Sioux Falls) by the relatively impermeable Sioux Quartzite (see Figure 1). The aquifer is predominately under unconfined conditions. The direction of water movement in the aquifer is generally to the south and towards the Big Sioux River (Lindgren and Niehus, 1992). The aquifer attains a maximum thickness of approximately 48 feet. Test hole logs submitted with these applications indicate 26 feet of "good coarse gravel" at the well site proposed by Application No. 7430-3 and 36 feet of "gray, mixed sand" at the well site proposed by Application No. 7431-3.

SDCL 46-2A-9

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

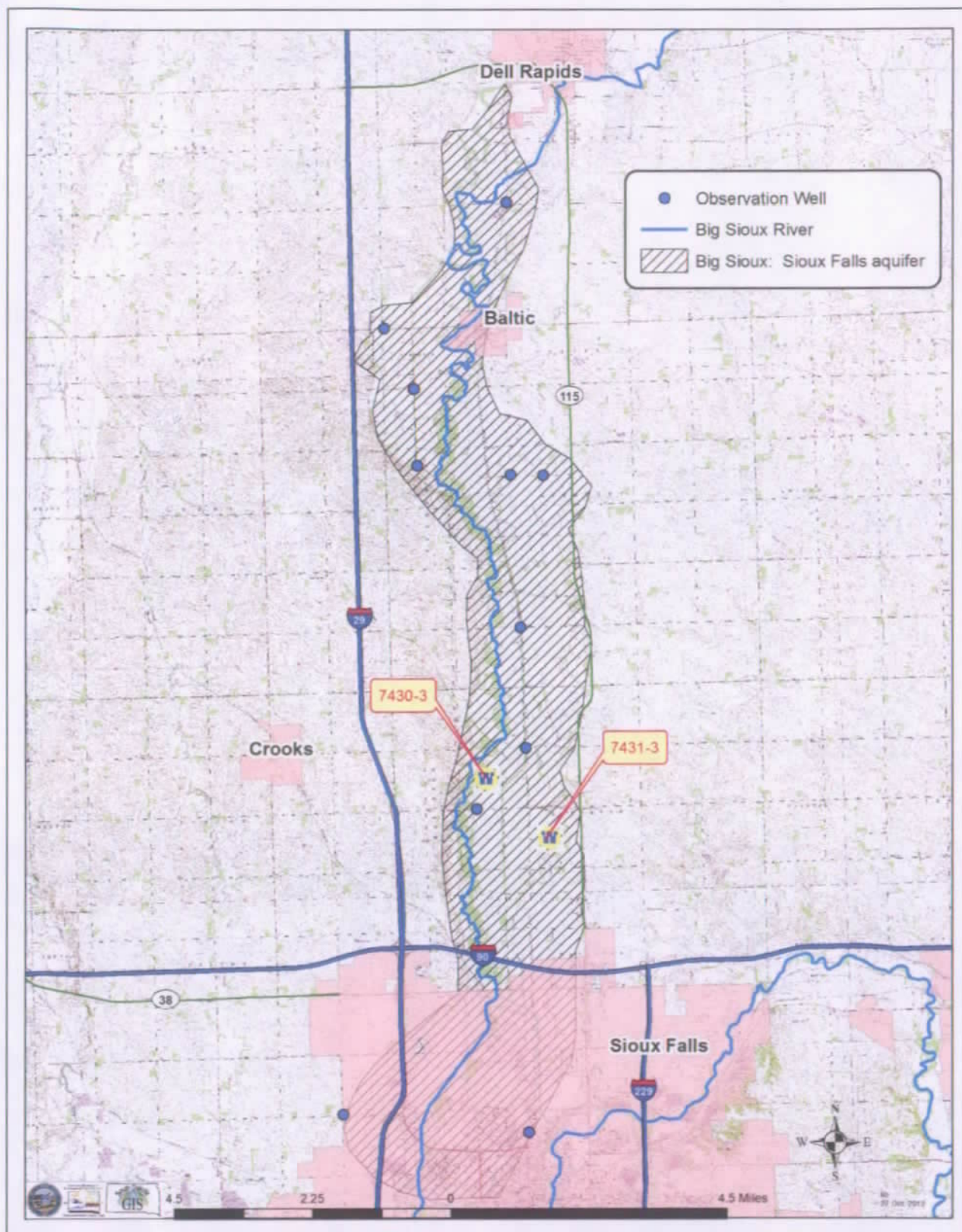


Figure 1. Location map of the Big Sioux: Sioux Falls aquifer, DENR-Water Rights' Observation wells, and the well sites proposed by Application Nos. 7430-3 and 7431-3

WATER AVAILABILITY:

In the Sioux Falls management unit water availability must be evaluated in two ways: (1) by considering SDCL 46-6-3.1, which requires that:

“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.”

and (2) by considering the appropriation with respect to the November 14, 1991, Water Management Board declaratory ruling (“Declaratory Ruling on Establishment of a Maximum Annual Withdrawal Limitation for the Big Sioux Aquifer: Sioux Falls Management Unit”).

SDCL 46-6-3.1:

Observation Well Analysis

The analysis of observation well data provides a qualitative means of assessing the aquifer and provides the best information reasonably available to evaluate the Sioux Falls management unit of the Big Sioux aquifer. In addition, Administrative Rule of South Dakota Section 74:02:05:07 requires that “the Water Management Board shall rely upon the record of observation well measurements to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge to the aquifer”.

The DENR-Water Rights Program monitors 12 observation wells completed into the Big Sioux: Sioux Falls (see Figure 1). A hydrograph for the observation wells is shown in Figure 2.

Two observation wells are located within approximately one and three-fourths of a mile from the well site proposed by this application. Hydrographs for these wells are shown in Figures 3 and 4.

The observation well data shows that at the current level of development, climatic conditions greatly mask the temporal effects of well withdrawals. Therefore, recharge to and natural discharge from the Big Sioux: Sioux Falls aquifer significantly exceeds pumping. Recognizing that natural discharge from the aquifer can be captured for pumping. The hydrographs document that additional water can be pumped from the aquifer.

DENR-WATER RIGHTS' OBSERVATION WELLS IN THE BIG SIOUX: SIOUX FALLS AQUIFER

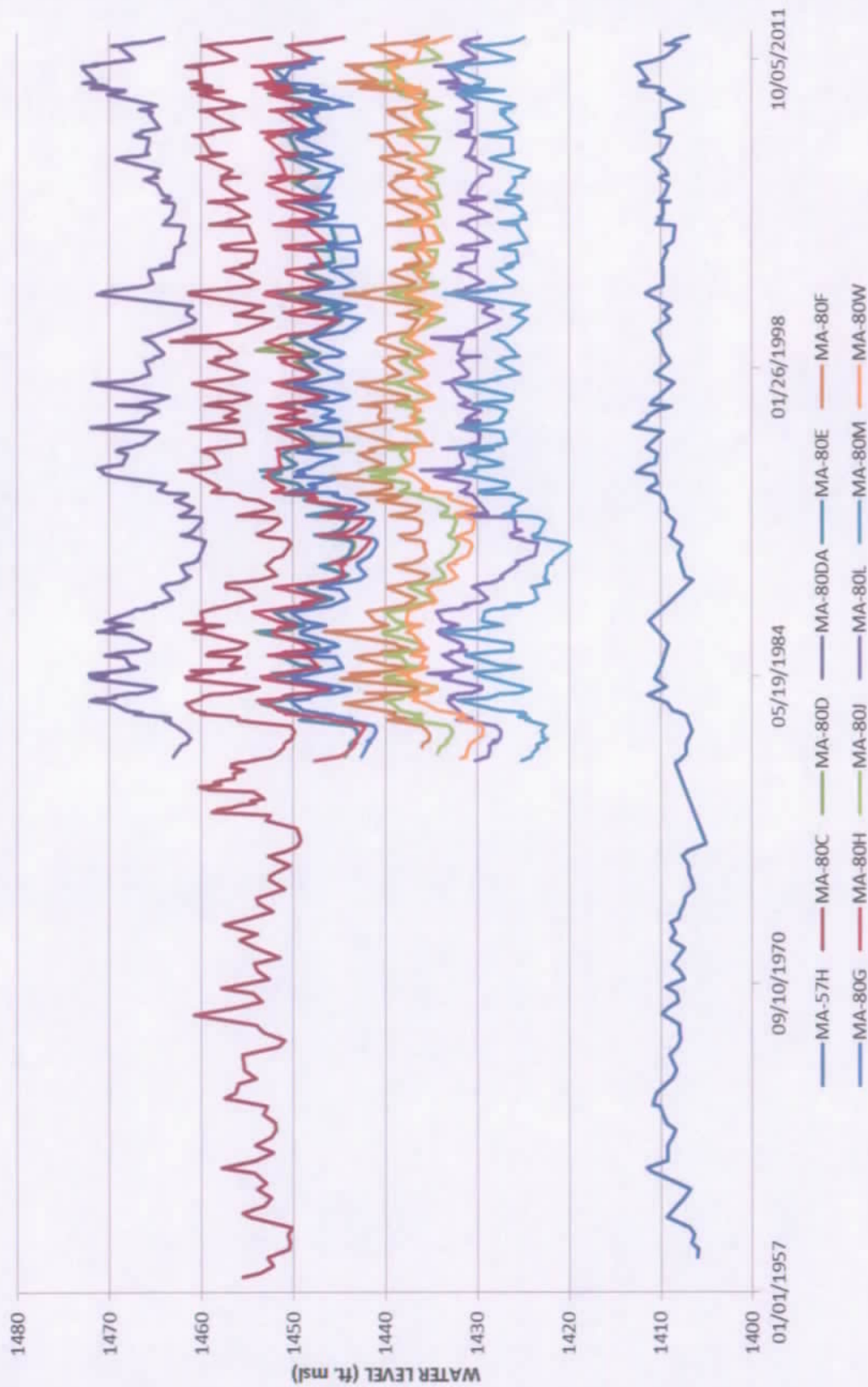


Figure 2. Hydrograph of observation wells completed into the Big Sioux: Sioux Falls aquifer (Water Rights, 2012a)

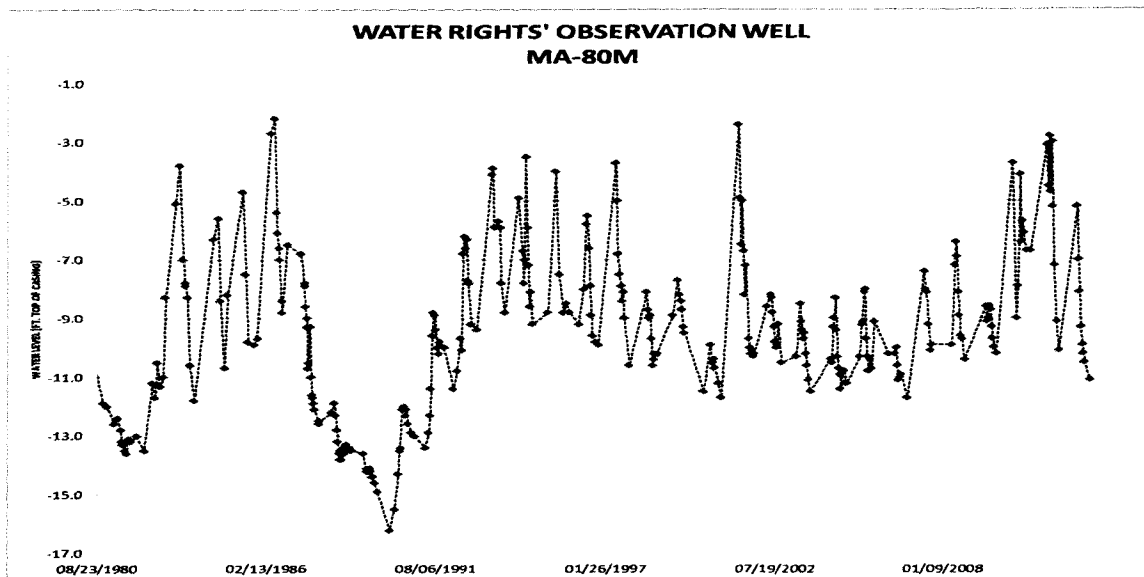


Figure 3. Big Sioux: Sioux Falls observation well located 0.5 miles south-southwest of the well site proposed by Application No. 7430-3 and 1.25 miles west-northwest of the well site proposed by Application No. 7431-3.

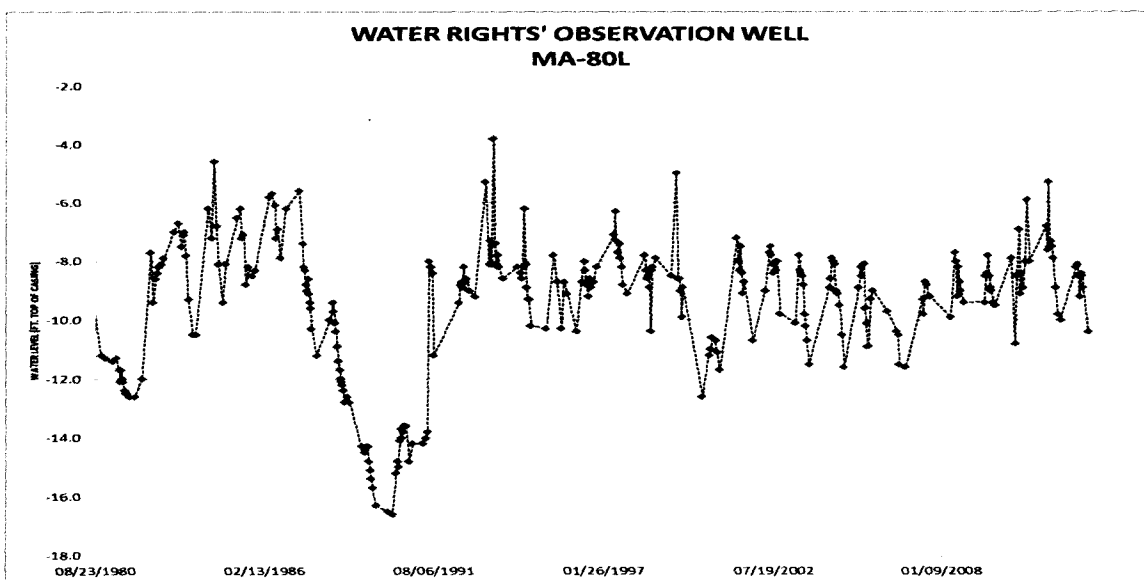


Figure 4. Big Sioux: Sioux Falls observation well located 0.8 miles northeast of the well site proposed by Application No. 7430-3 and 1.5 miles north of the well site proposed by Application No. 7431-3.

Recharge Estimates:

Recharge to the Sioux Falls management unit occurs primarily through infiltration of precipitation, and streamflow losses. Estimates of average annual recharge to the Sioux Falls management unit are shown in Table 1.

METHOD OF ANALYSIS	INVESTIGATOR	AVE. ANNUAL RECHARGE
Base flow recession	Hedges(1985)	12,404 ac-ft/yr
Observation well	Hedges(1985)	10,686 ac-ft/yr
Flow net	Hedges(1985)	1,908 ac-ft/yr
Computer model	Koch (1982)	13,200 ac-ft/yr

Table 1. Average annual recharge estimates for the Sioux Falls management unit of the Big Sioux aquifer.

Discharge:

Withdrawals from the aquifer occur through evapotranspiration, discharge to the Big Sioux River, possibly through leakage to underlying aquifers, and pumpage. There are a number of domestic wells on file with the DENR-Water Rights Program which are supplied by the aquifer; however, the majority of water use from the aquifer is by appropriative uses.

There are currently a total of 71 appropriations from Sioux Falls management unit of the Big Sioux aquifer, including 56 water rights, 10 water permits, and five future use permits. Included in these appropriations are three that were issued as temporary use water permits pursuant to SDCL 46-5-39.

Although there are a number of water rights/permits appropriating water from the Sioux Falls management unit, historically the average annual use has been less than 15% of the maximum that could be pumped based on the appropriations. Average annual pumpage (total) from the management unit was estimated in 1983 to be 17,370 acre-feet per year (Hedges, and others 1983). The average daily use (total) from the aquifer was estimated in 1989 to be 20.0 MGD (22,627 ac-ft/yr) (Barari, and others 1989).

The major water users of the Sioux Falls management unit are: 1) the City of Sioux Falls, 2) Minnehaha Community Water Corporation (MCWC) and 3) irrigators. Reported withdrawals in acre-feet annually from the Sioux Falls Management Unit by these three users are shown in Table 2.

	City of Sioux Falls (ac-ft/yr)	MCWC (ac-ft/yr)	Irrigation (ac-ft/yr)	TOTAL (ac-ft/yr)
1990	17,788	1,253	473	19,514
1991	10,257	1,400	409	12,066
1992	12,334	1,458	160	13,952
1993	9,956	1,489	124	11,569
1994	10,597	1,722	253	12,572
1995	8,211	1,752	240	10,203
1996	10,586	1,967	246	12,799
1997	12,382	1,841	467	14,690
1998	11,647	1,967	294	13,908
1999	11,507	2,098	414	14,019
2000	9,014	2,219	494	11,727
2001	12,873	2,314	359	15,546
2002	6,788	2,405	459	9,652
2003	11,402	2,630	440	14,472
2004	12,284	2,636	421	15,341
2005	16,712	2,661	473	19,847
2006	17,540	2,888	374	20,802
2007	14,992	2,722	341	18,055
2008	13,113	2,725	331	16,169
2009	16,713	2,552	231.81	19,496.81
2010	19,999.8	2,468	144.02	22,611.82
2011	22,278.2	2,662	330.39	25,270.59
<i>max</i>	22,278.2	2,888	494	25,270.59
<i>min</i>	6,788	1,253	124	9,652.00
<i>ave</i>	13,135	2,174	339.9	15,649

Table 2. Water Use Reported from the Sioux Falls management Unit (Modified from Buhler, 2010) (Water Rights, 2012a, Water Rights, 2012b, Water Rights 2012a and Water Rights 2012b).

In addition, to the major water users shown in Table 2, there are six other water users with water rights/permits appropriating water from the Sioux Falls management unit of the Big Sioux aquifer, they are shown in Table 3. The total water use under these appropriations is expected to be less than 500 ac-ft/yr.

PERMIT NO	NAME	STATUS	USE 1	USE 2	CFS	ACRES
4843-3	KOA KAMPGROUNDS OF SIOUX FALLS	LC	COM	DOM	0.15	
5019-3	MIDWEST LAWN CARE CORP	LC	COM		0.23	
5681-3	ST MICHAEL CEMETERY	LC	COM		0.06	
7174-3	THE TRUCK WASHOUT	LC	COM		0.5	
4620-3	CLIMATE SYSTEMS INC	LC	GEO	IRR	0.4	1.25
4880-3	HENRY CARLSON	LC	GEO		0.06	
7247-3	SIOUX FALLS REGIONAL AIRPORT	PE	IRR	COM	0.18	8

Table 3. Water rights/permits appropriating water from the Big Sioux: Sioux Falls that are not accounted for in water use figures shown in Table 2.

Hydrologic Budget:

A comparison of average annual recharge estimates for the Sioux Falls management unit (Table 1) and the average annual usage from the aquifer (see Table 2) plus the estimated use from users listed in Table 3 (approximately 500 ac-ft/yr) indicates that the quantity of water withdrawn annually from the Sioux Falls management unit exceeds the calculated average estimated annual recharge by at least 2,949 ac-ft/yr. By these estimates, the amount of water in storage in the aquifer would decrease by at least 2,949 ac-ft/yr on average. This amounts to 2.86 % of the estimated recoverable water in storage in the aquifer. A reduction of recoverable water in storage would be apparent by lowering water levels. Since a sustained downward trend in the water level of the aquifer has not been observed in the observation wells (see Figure 2), it is apparent that the physical evidence (water level readings) does not support the estimates for average annual recharge.

DECLARATORY RULING:

On November 14, 1991, through a declaratory ruling, the Water Management Board (Board) established a limitation on the annual withdrawals due to pumping by Water Permit/Right holders from the Sioux Falls Management Unit of 32,200 acre-feet per year (ac-ft/yr).

Water use from the Sioux Falls Management Unit in the future will be limited to a total withdrawal of 32,200 ac-ft/yr. When this limit is approached, water use will be restricted on a priority basis until withdrawals do not exceed 32,200 ac-ft/yr. The practical effect of the 32,200 ac-ft/yr limit allows for management of the aquifer, and on a priority basis if necessary.

At the current level of development, it is not likely that withdrawals from appropriative users will equal 32,200 acre-feet per year. However, development of the 8.675 acre-feet per year that has been reserved for future use from the management unit (see table 4) could cause pumping to approach the established annual limitation. When pumping approaches this limit water use will be restricted on a priority basis so withdrawals do not exceed 32,200 acre-feet annually.

Permit No.	Holder	Reservation (ac-ft/yr)
448-3	Sioux Falls	3,842
4838-3	MCWC	33
5523-3	Sioux Falls	4,050
5716-3	MCWC	750
Total		8,675

Table 4. Future Use Permits from the Big Sioux: Brookings aquifer.

Temporary Use Permits:

On June 28, 1957 the Water Rights Commission (now known as the Water Management Board) approved Future Use Permit No. 448-3. This permit reserved 46.8 cfs from the Sioux Falls Management Unit for future use by the City of Sioux Falls. Currently, 3,842 ac-ft/yr remains reserved by this permit from a future use area shown in Figure 4.

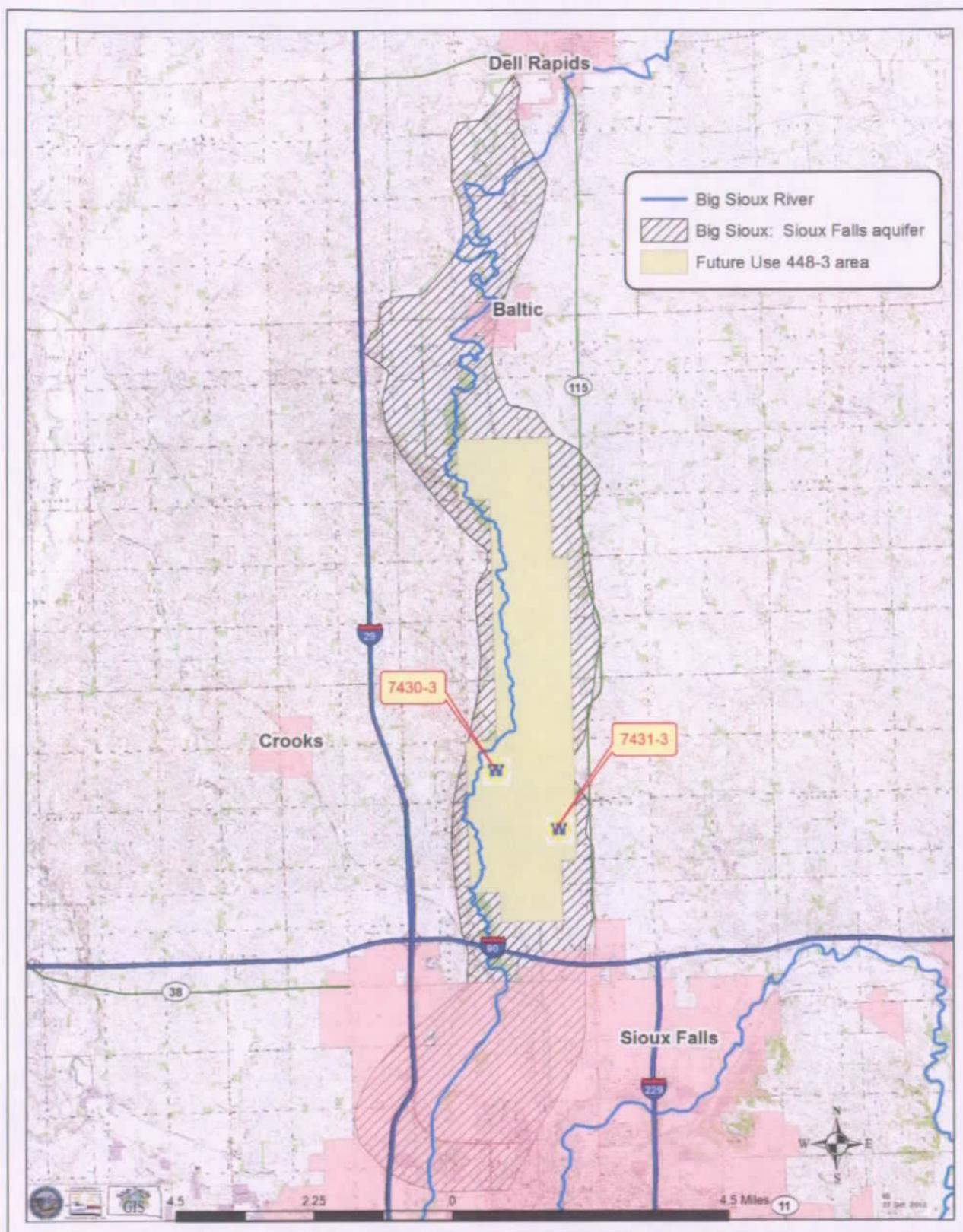


Figure 4. Map showing the Big Sioux: Sioux Falls aquifer, the area reserved for future use by Future Use Permit No. 448-3, and the location of the proposed well sites.

Twelve previous applications have been filed by other parties to appropriate water from within the area specified by Future Use Permit No. 448-3. They are shown in Table 5.

APPLICATION NO.	NAME	PRIORITY DATE
656-3	CLARENCE MACHMILLER	08/28/1959
1270-3	R C SWEETMAN	02/23/1966
1271-3	E M SWEETMAN	02/23/1966
1790-3	LINCOLN COUNTY RWS	11/23/1970
1968-3	GENE WILLIAMS	NA
1969-3	GENE WILLIAMS	NA
2047-3	VAL K. BECKMAN, MIDWAY FARMS, INC	02/13/1974
2244-3	DALE SWARTZ	04/08/1975
4034-3	E M SWEETMAN	05/13/1977
5966-3	MICHAEL G WILLIAMS	11/06/1996
5967-3	MICHAEL G WILLIAMS	11/06/1996
6008-3	HERMAN BRENDE	06/06/1997
Application No. 1968-3 was withdrawn in 1975 and Application No. 1969-3 was withdrawn as a condition to approval of Temporary Permit Nos. 5966-3 and 5967-3 in 1997.		

Table 5. Water Permit Applications made by others for diversion points within the area defined by Future Use 448-1.

With the exception of Application No. 1790-3, applications shown in Table 5 with priority dates 05/13/1977 and earlier were approved with the following condition:

“The City of Sioux Falls has priority rights to this water under future use withdrawal permits, and this application is approved subject to these prior rights if or when the city develops the reserved water supplies.”

Water Permit Application Nos. 5966-3, 5967-3 and 6008-3 were approved as Temporary Use Permits pursuant to SDCL 46-5-39. SDCL 46-5-39 allows the Water Management Board to authorize a temporary appropriation of the water from the unused portion of a future use permit; however, 46-5-40 states that the temporary use permits would be effective only until such time as the future use holder wants to use the water covered by the temporary use permit. The temporary use permit holder would then be given six months' notice and the permit would be canceled at the end of six months.

If the future use permits from the Sioux Falls Management Unit become completely developed, and there is an increase in lawful use of water already under permit (e.g., greater volume withdrawn at currently permitted diversion rate) the annual withdrawals due to pumping by Water Permit/Right holders from the Sioux Falls Management Unit could approach or exceed 32,200 acre-feet per year. If pumping from the management unit exceeds 32,200 ac-ft/yr, junior water right holders will be limited in their pumping.

EFFECTS ON EXISTING WATER RIGHTS

Unlawful impairment of groundwater rights may be due to "well interference", which is the overlapping of drawdown cones of depression of two or more wells; or from a "cumulative affect" in which the water level throughout the entire aquifer are lowered, as the result of an extended interim between withdrawal and recharge causing an "overdraft" from storage. In either case mitigation may be necessary, if the pumping authorized by junior priority rights is to continue.

Well interference:

There are a number of wells authorized by water rights/permits near the well sites proposed by these applications. The well site proposed by Application No. 7430-3 is located approximately 1,100 feet east of Sioux Falls well No. 53 (authorized by Water Right No. 5127A-3) and approximately 1,800 feet southwest of Sioux Falls well No. 54 (also authorized by Water Right No. 5127A-3). The nearest water right/permit diversion point that does not belong to the applicant, to the well site proposed by Application No. 7131-3 is the City of Sioux Falls' well No. 43 (authorized by Water Right No. 4099-3), which is located approximately 3,300 to the west. The well that supplies Water Permit No. 5966-3, Michael G. Williams is located approximately 2,200 feet west of the well site proposed by Application No. 7131-3. Interference is likely to occur, however since the Big Sioux: Sioux Falls aquifer is under unconfined conditions, the cone of depression caused by pumping is not expected to be significant very far from the pumped well. The actual effect of withdrawals will cause only a few feet of drawdown in any of the other wells. Any interference caused by this appropriation is not expected to be adverse due to the distances involved.

Cumulative affect:

Annual withdrawal limitation:

Although the Board has established an annual withdrawal limitation of 32,200 ac-ft/yr, the potential of adverse impact to existing rights is independent of the amount of water that can be appropriated from the aquifer. Water rights could be adversely impacted even though substantially less than 32,200 acre-feet per year is pumped. This is especially the case during drought conditions, when water levels in the aquifer are already below average. The Board adopted a declaratory ruling on November 14, 1991 stating (in part):

"That private domestic wells are being impacted and deprived of reasonable use of water for domestic purposes by appropriative permit holders' withdrawals from the Big Sioux Aquifer: Sioux Falls Management Unit."

The City of Sioux Falls offered a seven point proposal that would eliminate the problem addressed in the declaratory ruling issued November 14, 1991. Since the problem was addressed and corrected through the proposal, the board did not need to order mitigation.

Following the declaratory ruling, the Board approved a reservation for future use by the City of Sioux Falls, (Permit No. 5523-3). The consequence of the declaratory ruling was the inclusion of the following qualification on the permit:

"If development and pumping of Sioux Falls Management Unit of the Big Sioux Aquifer water reserved by Future Use Permit No. 5523-3 results in adverse impairment of adequate domestic wells or adequate wells having prior rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use

over appropriative rights does so without regard to 1) whether lowered groundwater levels are due to drought, 2) the location of the domestic wells in the aquifer, or 3) the thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04."

Since the Water Management Board's November 14, 1991 "Declaratory Ruling Regarding the Decline of the Water Levels in Private Domestic Wells in the Big Sioux Aquifer: Sioux Falls Management Unit", new appropriations from the management unit have included the following qualification:

"If development and pumping of Sioux Falls Management Unit of the Big Sioux Aquifer water appropriated by this permit results in adverse impairment of adequate domestic wells or adequate wells having prior rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use over appropriative rights does so without regard to 1) whether lowered groundwater levels are due to drought, 2) the location of the domestic wells in the aquifer, or 3) the thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04."

CONCLUSIONS:

1. The Sioux Falls management unit of the Big Sioux aquifer is a viable aquifer in this area.
2. The Big Sioux: Sioux Falls aquifer is heavily appropriated.
3. DENR-Water Rights observation well data shows that average annual withdrawals do not exceed average annual recharge.
4. Average annual recharge from the Big Sioux: Sioux Falls aquifer exceeds average annual recharge estimates.
5. DENR-Water Rights observation well data does not support average annual recharge estimates.
6. The Water Management Board has established a limit to the amount of water pumped annually from the Big Sioux: Sioux Falls aquifer of 32,200 ac-ft/yr.
7. If withdrawals from the Big Sioux: Sioux Falls approach 32,200 ac-ft/yr, water use will be restricted on a priority basis.
8. Given the current level of development, if the future use reservations are fully developed, annual withdrawals from the Big Sioux: Sioux Falls will likely exceed 32,200 ac-ft/yr.
9. Based on the November 14, 1991 Water Management Board Declaratory ruling that established a maximum annual withdrawal from the management unit of 32,200 ac-ft/yr, there is not a reasonable probability that unappropriated water is available for this proposed appropriation.
10. Water is available from the Big Sioux: Sioux Falls aquifer through a temporary use permit issued pursuant to SDCL 46-5-39.
11. Pursuant to SDCL 46-5-40, a temporary use permit would be effective only until such time as the future use holder wants to use the water.
12. A temporary use permit can be canceled after a six month notice is given.

13. There is a reasonable probability that the diversions proposed by Water Permit Application Nos. 7430-3 and 7431-3 can be made without unlawful impairment of existing rights


Ken Buhler
DENR-Water Rights Program

REFERENCES:

- Barari, A., Iles, D., Cowman, T., 1989, Assessment of Water Resources and Conceptual Evaluation of a Regional Water Supply for Southeastern South Dakota, SD Dept. of Environment and Natural Resources, Geological Survey Program, Open-File Report 60-UR, 18.p
- Buhler, K.A., 2010, Report for Water Permit Application No. 7174-3, The Truck Washout, February 3, 20120: SD DENR-Water Rights Program
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., Schoon, R.A., 1982, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185
- Hedges, L.S., S.Burch, D.Iles, 1983, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 6: Average Annual Water Use by Aquifer; U.S.Army Corps of Engineers Contract DACW 45-80-C-0185
- Hedges, L.S., Allen, J., and Holly, D.E, 1985, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge, South Dakota DENR-Geological Survey, Vermillion, SD
- Koch, N.C., 1982, A Digital-Computer Model of the Big Sioux Aquifer in Minnehaha County, South Dakota, USGS, Water-Resources Investigations Report 82-4064, 56 p.
- Lindgren, R.J., Niehus ,C., 1992, Water Resources of Minnehaha County, South Dakota, U.S. Geological Survey Water-Resources Investigations Report 91-4101, 80 p.
- Water Rights, 2012a, "Unpublished Non-irrigation Water User Reporting 2010, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD
- Water Rights, 2012b, "Unpublished Irrigation Summary by Aquifer for the years 1987-2011", DENR-Water Rights Program, Joe Foss Building, Pierre, SD

Water Rights, 2012a, "Unpublished Non-irrigation Water User Reporting 2011, SD DENR-
Water Rights Program, Joe Foss Bldg, Pierre, SD

RECEIVED

NOV 28 2012

WATER RIGHTS
PROGRAM

CUSTOMER NUMBER:	078200	Argus Leader	
AD ORDER NUMBER:	1400472		
	11/23, 2012	P.O. Box 677349, Dallas, TX 75267-7349	\$76.02

Michael G Williams
5901 N Ditch Rd
Sioux Falls, SD 57104

DETACH THIS STUB AND RETURN WITH PAYMENT

PAYMENT DUE UPON RECEIPT

AFFIDAVIT OF PUBLICATION-

Customer Number: 078200

Invoice Number: 1400472

Argus Leader
AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

COUNTY OF MINNEHAHA } ss

Linda Schulte being duly sworn, says: That The Argus Leader is, and during all the times hereinafter mentioned was, a daily legal newspaper as defined by SDCL 17-2-21, as amended published at Sioux Falls, Minnehaha County, South Dakota; that affiant is and during all of said times, was an employee of the publisher of such newspaper and has personal knowledge of the facts stated in this affidavit; that the notice, order or advertisement, a printed copy of which is hereto attached, was published in said newspaper upon

Friday the 23 day of November 2012 ,
 _____ the _____ day of _____ 2012 ,
 _____ ,the _____ day of _____ 2012
 _____ ,the _____ day of _____ 2012 ,
 _____ ,the _____ day of _____ 2012 ,
 _____ ,the _____ day of _____ 2012 ,
 _____ ,the _____ day of _____ 2012 ,

and that \$76.02 was charged for publishing the same

Linda Schulte
Subscribed and sworn to before me 11/23/2012

Judy A. Lorenzen
Notary Public, South Dakota

My Commission expires December 22, 2015

29

NOTICE OF APPLICATION

NOS. 7430-3 and 7431-3 to
 Appropriate Water
 Notice is given that Michael G
 Williams, 5901 N Ditch Rd,
 Sioux Falls SD 57104 has filed
 the following applications for a
 water permit.

Application No. 7430-3 pro-
 poses to appropriate 1.11 cu-
 bic feet of water per second
 (cfs) from one well to be com-
 pleted into the Big Sioux/Sioux
 Falls Aquifer (35 feet deep) lo-
 cated in NE 1/4 NE 1/4 Section
 8 for irrigation of 86 acres lo-
 cated in the W 1/2 NE 1/4 Sec-
 tion 8 and E 1/2 NE 1/4 Sec-
 tion 9; all in T102N-R49W.

Application No. 7431-3 pro-
 poses to appropriate 1.11 cfs
 from one well to be completed
 into the Big Sioux/Sioux Falls
 Aquifer (35 feet deep) located
 in the SE 1/4 NW 1/4 Section
 16 for irrigation of 90 acres lo-
 cated in the NW 1/4 Section
 16; all in T102N-R49W.

Pursuant to SDCL 46-2A-2,
 the Chief Engineer recom-
 mends APPROVAL of Applica-
 tion Nos. 7430-3 and 7431-3 as
 a temporary use permit pur-
 suant to SDCL 46-5-39 be-
 cause 1) water is available to
 be appropriated as a tempora-
 ry use permit until the city of
 Sioux Falls develops water re-
 served from its future use per-
 mit. 2) the proposed diversion
 can be developed as a tempo-
 rary use permit without unlaw-
 ful impairment of existing
 rights. 3) it is a beneficial use
 of water, and 4) it is in the pub-
 lic interest. In accordance with
 SDCL 46-2A-23, the Chief En-
 gineer will act on these applica-
 tions, as recommended, un-
 less a petition is filed opposing
 the applications or the appli-
 cant files a petition contesting
 the Chief Engineer's recom-
 mendations. If a petition op-
 posing the applications or con-
 testing the recommendations is
 filed, then a hearing will be
 scheduled and the Water Man-
 agement Board will consider
 these applications. Notice of
 the hearing will be given to the
 applicant and any person filing
 a petition.

Any person interested in op-
 posing or supporting these ap-
 plications or recommendations
 must file a written petition with
 BOTH the applicant and Chief
 Engineer. The applicant must
 file a petition if contesting the
 Chief Engineer's recommenda-
 tions. The Chief Engineer's ad-
 dress is "Water Rights Pro-
 gram, 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 ap-
 plicant must be filed by De-
 cember 3, 2012.

The petition may be informal,
 but must include a statement
 describing the petitioner's in-
 terest in the applications, the
 petitioner's reasons for oppos-
 ing or supporting the applica-
 tions, and the signature and
 mailing address of the petiti-
 oner or the petitioner's legal
 counsel, if legal counsel is ob-
 tained. Contact Eric Gronlund
 at the above Water Rights Pro-
 gram address to request cop-
 ies of information pertaining to
 these applications. Steven M.
 Pirner, Secretary, Department
 of Environment and Natural
 Resources.

Published once at the total ap-
 proximate cost of \$76.02.
 1400472 Nov. 23, 2012

o/c



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

November 14, 2012

Argus Leader
PO Box 5034
Sioux Falls SD 57117

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 7430-3 and 7431-3 to Appropriate Water. Please publish the notice once on November 23, 2012. 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 Michael G Williams, 5901 N Ditch Rd., Sioux Falls SD 57104 (Ph # 605-360-1353).

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,

A handwritten signature in cursive script, appearing to read "Eric Gronlund".

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

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

November 14, 0212

Michael G Williams
5901 N Ditch Rd
Sioux Falls SD 57104

Dear Mr. Williams:

Water Permit Application Nos. 7430-3 and 7431-3 for irrigation use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Argus Leader printed at Sioux Falls SD (Ph # 605-331-2200). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and reports on the applications are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

Instruction to Newspaper - Publish the Notice on November 23, 2012. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NOS. 7430-3 and 7431-3 to Appropriate Water

Notice is given that Michael G Williams, 5901 N Ditch Rd, Sioux Falls SD 57104 has filed the following applications for a water permit.

Application No. 7430-3 proposes to appropriate 1.11 cubic feet of water per second (cfs) from one well to be completed into the Big Sioux:Sioux Falls Aquifer (35 feet deep) located in NE 1/4 NE 1/4 Section 8 for irrigation of 86 acres located in the W 1/2 NE 1/4 Section 8 and E 1/2 NE 1/4 Section 9; all in T102N-R49W.

Application No. 7431-3 proposes to appropriate 1.11 cfs from one well to be completed into the Big Sioux:Sioux Falls Aquifer (35 feet deep) located in the SE 1/4 NW 1/4 Section 16 for irrigation of 90 acres located in the NW 1/4 Section 16; all in T102N-R49W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 7430-3 and 7431-3 as a temporary use permit pursuant to SDCL 46-5-39 because 1) water is available to be appropriated as a temporary use permit until the city of Sioux Falls develops water reserved from its future use permit. 2) the proposed diversion can be developed as a temporary use permit without unlawful impairment of existing rights. 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on these applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider these applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by December 3, 2012.

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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DEC 13 2012

Michael G Williams
5901 N Ditch Rd
Sioux Falls SD 57104

Dear Mr. Williams:

Enclosed are Temporary Use Water Permit Nos. 7430-3 & 7431-3 authorizing construction of your water diversion systems and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

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

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

Sincerely,

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

enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location SE 1/4 NW 1/4 Sec 116 Twp 102-N Rg 49-W

County Minnehaha

North

Please mark well location with an "X"

W

E

Well-Completion Date

7-17-13

1 Mile

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 1000 ft from other 2nd well (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Bucket false casing

CASING DATA:

- ☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>20 LB/FT</u>	<u>14 IN</u>	<u>4 FT</u>	<u>FT</u>	<u>20 IN</u>
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Brick</u>	<u>12</u>	_____ lb./gal	<u>0</u> ft	<u>4</u> ft
_____	_____	_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure _____

SCREEN: ☐ Perforated pipe ☒ Manufactured

Diameter 14 IN Length 12 FEET

Material 14" PVC class 160

Slot Size 080 Set From 39 Feet to 51 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? _____

Laboratory sent to for water quality analysis

Chlorine Pack

Inc.

Well Owner: Mike Williams

Business Name: _____

Address: 5901 Ditch Rd.

Simon Falls Spoke 57104

WELL LOG:

DEPTH

FORMATION

FROM

TO

<u>7:11</u>	<u>0</u>	<u>7</u>
<u>Gravel</u>	<u>7</u>	<u>11</u>
<u>Mud</u>	<u>11</u>	<u>13</u>
<u>Gravel</u>	<u>13</u>	<u>25</u>
<u>Mud lens</u>	<u>25</u>	<u>26</u>
<u>Fine Sand</u>	<u>26</u>	<u>29</u>
<u>Gravel</u>	<u>29</u>	<u>34</u>
<u>Coarse Gravel</u>	<u>34</u>	<u>51</u>

STATIC WATER LEVEL 4'

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

35' ft. After 1 Hrs. pumped 400 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____

GPM

REMARKS

RECEIVED

NOV 18 2013

WATER RIGHTS
PROGRAM

This well was drilled under license # 111

And this report is true and accurate.

Drilling firm Lacey Well Drilling Inc.

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: 11-11-13

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7431-3

I have this day, July 6, 2021, made a thorough examination of the water use system constructed by Michael G. Williams, 5901 Ditch Rd., Sioux Falls, SD 57104 of Permit No. 7431-3, bearing the priority of September 10, 2012 authorizing the diversion of 1.11 cu. ft. per second of the waters of the Big Sioux: Sioux Falls Aquifer for irrigation purposes, in Minnehaha County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Lacey Well Drilling, Inc.
- 2) No. of Wells 1
- 3) Depth(s) 51 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 14 inches
- 2) Length 39 feet
- 3) Type Plastic

Screen:

- 1) Type PVC
- 2) Length 12 feet
- 3) Static water level 4 feet

Pump:

- 1) Make NA
- 2) Model Submersible
- 3) Size NA
- 4) Capacity 450 GPM

Motor:

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

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

Comments: Well at the pivot

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Valley
- 2) Overall length 950 feet
- 3) Number of towers 5
- 4) End gun Y
- 5) Capacity 450 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: **From the NW corner of Sec 16 T102N-R49W, 1640 ft S & 960 ft E, Lat 43.64072 Long -96.72481 (SE ¼ NW ¼ Sec 16).**
2. The works are capable of diverting and conveying to the place of use 1.00 cu. ft. per second of water which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:

Sec 16-T102N-R49W

NW1/4 NW 1/4 - 7ac

SW 1/4 NW 1/4 - 15 ac

SE 1/4 NW 1/4 - 37 ac

NE 1/4 NW 1/4 - 18 ac

comprising a total of 77 acres of land and the license should be issued for 1.00 cfs.

3. All structures, wells and lands on map Y

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

Address and phone number on inspection materials are current.

Irrigation acreage was determined via the use of FSA maps and ArcMAPS software.



Darrell W DeBoer

Water Rights Inspector

DANR, Water Rights Program

Date report completed: July 14, 2021



0 0.1 0.2 0.4 0.6 0.8
Miles



Darrell DeBoer
Water Right Inspector
DANR-Water Rights Program



DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

7431-3

JUL 21 2021

Michael G Williams
5901 N Ditch Rd
Sioux Falls SD 57104

Dear Mr. Williams:

Enclosed is Reissued Temporary Use Water Permit No. 7431-3. The temporary use water permit was reissued to reflect the system as developed. The reissued permit is based on a field investigation done by a staff engineer with our program. A copy of his map is included showing the location of the diversion point and acres developed for irrigation.

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.

The Reissued Temporary Use Water Permit is subject to the qualifications listed in the permit. If you have any questions, please contact our office.

Sincerely,

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

enclosures

**REISSUED SOUTH DAKOTA
TEMPORARY USE WATER PERMIT NO. 7431-3
AS DEVELOPED**

On December 3, 2017, the Chief Engineer, on behalf of the Water Management Board, issued Temporary Use Water Permit No. 7431-3 to Michael G Williams 5901 N Ditch Rd Sioux Falls SD 57104 authorizing construction of the water use system and placement of water to beneficial use.

1. On July 6, 2021, an investigation was conducted of the water use system described in Temporary Use Water Permit No. 7431-3. The investigation found the system was developed as follows: One well, 51 feet deep into the Big Sioux: Sioux Falls Aquifer located in the SE ¼ NW ¼ approximately 1,640' S and 960' E of the NW corner of Section 16, T102N, R49W, Latitude 43.64072, Longitude -96.72481.

The temporary use permit holder is authorized to divert the developed diversion rate of 1.00 cubic feet of water per second (450 gpm) from the well described above to irrigate the following acreage:

T102N, R49W Section 16	NW ¼ NW ¼	7 acres
	SW ¼ NW ¼	15 acres
	SE ¼ NW ¼	37 acres
	NE ¼ NW ¼	18 acres
	Total	77 acres

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 September 10, 2012.
4. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

- The city of Sioux Falls has priority right to this water under future use withdrawal permits. This permit is issued as a temporary use permit pursuant to SDCL 46-5-39 and is subject to Sioux Falls prior rights if or when the city develops the reserve water supply. The permit may be subject to cancellation when the city puts to beneficial use water reserved by their future use permit. The Chief Engineer must provide the permit holder a six month notice prior to cancellation of this temporary use permit.
- If development and pumping of the Sioux Falls Management Unit of the Big Sioux Aquifer water appropriated by the temporary use permit results in adverse impairment of adequate domestic wells or adequate wells having prior rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use over appropriative rights does so without regard to 1) whether lowered ground water levels are due to drought, 2) the location of the domestic wells in the aquifer, or 3) the thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04.

continued

Reissued Temporary Use Water Permit No. 7431-3

Page 2

- The well authorized by Temporary Use Permit No. 7431-3 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. *The well was drilled in July 2013 by Lacey Well Drilling Inc. A copy of the well completion report is on file with the Water Rights Program.*
- This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

Eric Gronlund

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

JUL 21 2021

date

