

WATER PERMIT NO. 8118-3

Name of Applicant: City of North Sioux City

Address: 504 River Dr, North Sioux City SD 57049 Phone: 605 232-4276

Amount of Water Claimed: 905 AF Total Acres: NA

Source of Water Supply: groundwater (2 wells)

Water to be used for: municipal County: Union

Type of Waste Disposal System:

Location: northeast corner of McCook Lake

PRIORITY Date Received: 2-19-15 Application/License Fee: \$ 1550

Corrected Application Received: Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: SE 1/4 SE 1/4 Sec 4-T89N-R48W

Land to be Irrigated: NA

Depth of Well: 262 & 294 feet deep

Well Driller: Layne Christenson Company

Remarks:

Type of Map: topo

Prepared by:

Reviewed and the Number Assigned on: 2-19-15

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

			4		
				⊗	

SD EForm - 1585LD V4

FORM 2: Application for uses other than irrigation

(type or print)

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8/18-3</u>	(office use only) Hydrologic Unit <u>10170101</u>
	Basin <u>Missouri River</u>	<u>605-232-3539</u>
	Newspaper <u>Dakota Journal News, Box 1340 57049</u>	<u>605-665-7811</u>
	<u>Press & Dakotan, 319 Walnut, Yankton 57078</u>	

RECEIVED

FEB 19 2015

WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

☒ Municipal	☐ Suburban Housing	☐ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☐ Fish & Wildlife	☐ Geothermal Heat
☐ Domestic (over 18 gpm)	☐ Industrial	☐ Other _____	

Type of Application:

(check one)

☒ New	☐ Vested Right (Use predates Mar 2, 1955)	☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____		
☐ Amendment/Correction to Permit No. _____		

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

1. Name to Appear on Water Permit City of North Sioux City(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent

(name and complete address if different than above name)

Mailing Address 504 River Drive North Sioux City SD 57049

(Address)

(City)

(State)

(Zip Code)

Home Phone 605-232-4276 Cell _____ Email kory.menken@northsiouxcity-sd.gov2. Amount of water claimed 1.34 *CFS or 600 **GPM 905 ***AF

(*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Dakota Formation (2 wells)4. Location of point of diversion SE 1/4 of Sec. 4, T89N, R48W (SE 1/4 SE 1/4) County Union

(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)

If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☐ No

If "Yes," where will water be used? _____

(example - NW 1/4 section 12-T104N-R53W)

5. County or counties where water will be used Union6. Annual period during which water is to be used January 1 through December 31

7. Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

See Attachment to the Application for Permit to Appropriate Water within the State of South Dakota.

I, Don Fuxa, Don Fuxa, Mayor, 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. 8118-3**

Date of first receipt of application February 19, 2015.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8118-3 to City of North Sioux City, 504 River Drive, North Sioux City SD 57049 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. 8118-3 appropriates 1.34 cubic feet of water per second [cfs] (905 acre-feet annually) from two wells completed into the Dakota Formation Aquifer (262 and 294 feet deep) located in the SE 1/4 SE 1/4 Section 4-T89N-R48W. Water Right No. 6285-3 appropriates 0.89 cfs at a volume of 386 acre-feet annually from one well located in the same area as described above. Water Right No. 6285-3 and this permit will allow alternate pumping of the three wells at a peak diversion rate of 2.22 cfs for a combined total of 1,291 acre-feet of water annually.
2. The water appropriated shall be used for the purpose of municipal use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 8118-3 is May 3, 2015.
5. The date from which applicant may claim right is February 19, 2015.
6. One-fifth of the construction is to be completed on or before November 3, 2017.
7. All construction is to be completed on or before May 3, 2020.
8. Water is to be put to beneficial use on or before May 3, 2024.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

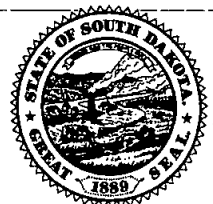
1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The new well authorized by Permit No. 8118-3 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. Water Right No. 6285-3 and Water Permit No. 8118-3, combined, authorize a total annual diversion of 1,291 acre feet of water.
4. North Sioux City shall report to the Chief Engineer annually the amount of water withdrawn from the Dakota aquifer.

WATER MANAGEMENT BOARD

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

MAY 27 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 Heinie Electric
(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 262 ft. Depth to Top of Water Bearing Material 162 ft. Depth to Water from Surface 23.5 ft.

d) Distance to nearest existing domestic well:

On applicant's property 540 ft. On property owned by others 750 ft.

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 North Sioux City Sanitary System

3. Dugout Information

a) Surface Dimensions N/A 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)

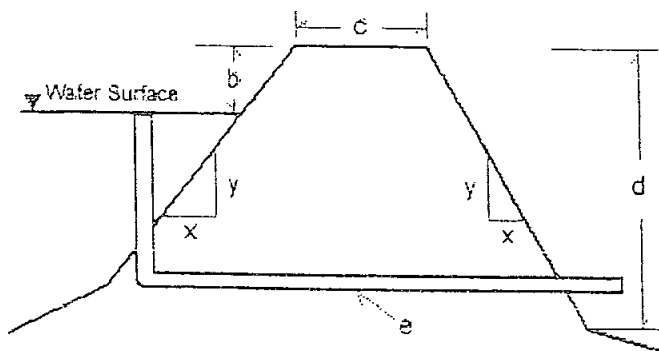
Upstream

Downstream

h) Surface Area of Impoundment

i) Storage Acre Feet

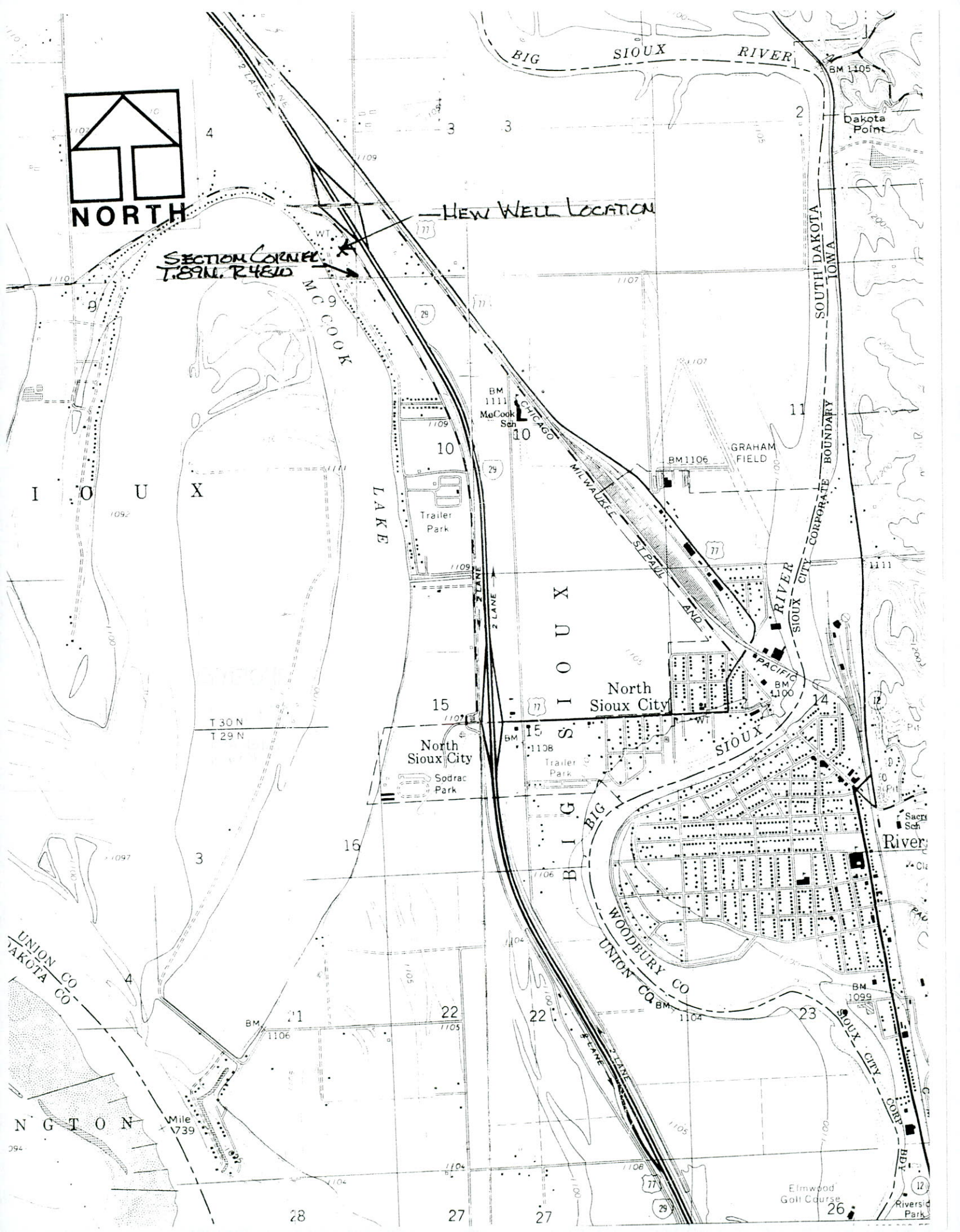
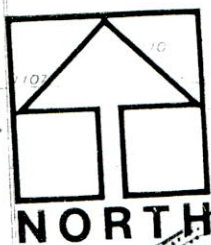
j) Drainage Area Above Dam Acres



Attachment to the Application For Permit To Appropriate Water Within the State of South Dakota:

This Application is part of an expansion of the water supply capacity in North Sioux City. The well supply will consist of three wells which were constructed in 2001, 2008, and 2014. The estimated future pumping rate is 1,000 gpm, which will be achieved by alternate pumping of the wells constructed in 2001 and 2008 for a combined capacity of 1,000 gpm; which will alternate with the well-constructed in 2014 which has a capacity of 1,000 gpm.

The estimated future annual water consumption is 1,291 ac-ft. per year. As the site has an existing water right of 386 ac-ft. per year, this application is for additional water rights of 905 ac-ft. per year.



SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec 4 Twp 89N Rg 48W

County _____

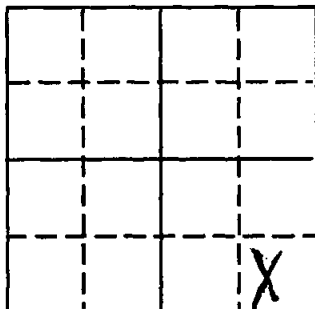
Union _____

North

Please mark well location with an "X"

W

E



1 Mile

Well Completion Date

7/11/2008

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

? _____ ft. from _____ (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

CASING DATA: ☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
49.6 LB/FT	12.00 IN	5.0 FT	252.0 FT	24.00 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Neat Cement	460	16.4 Lb/gal	10.0 Ft	215.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
Pressure Grouted

SCREEN: ☐ Perforated pipe ☒ Manufactured

Diameter 12.00 Inches Length 35.0 Feet

Material Stainless Steel

Slot Size .03 Set From 252.0 Feet to 287.0 Feet

Other information _____

WAS A PACKER OR SEAL USED? ☐ Yes ☒ No

If so, what material? _____

Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? Sodium Hypochlorite☐ No, Why Not? _____

Lab sample sent to for water quality analysis

Well Owner: The City of North Sioux City

Business Name: _____

Address: P.O. Box 338City, State, Zip: North Sioux City SD 57049

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Clay	0	61
Medium Sand, Gravel	61	84
Sand, Gravel with Cobbles	84	134
Sand, Gravel with Cobbles	134	171
Clay	171	184
Sandstone	184	196
Clay	196	223
Sandstone	223	287
Shale	287	294

STATIC WATER LEVEL 24.4 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☒ Pumped Describe: The well was developed with a double disc surge block for 8 hours, then tested pump for 24 hours.
☒ Bailed
☐ Other

Pumping Level Below Land Surface

68.0 Ft. After 24.0 Hrs. pumped 422.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

This well was drilled under license # 513

And this report is true and accurate.

Drilling firm: Layne Western Company, Inc.

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: 2-4-2015

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AUG 25 2008

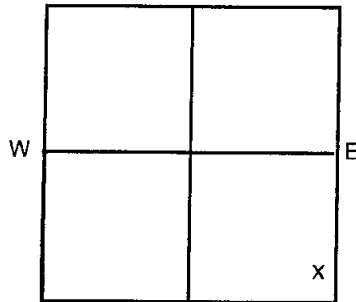
WATER RIGHTS PROGRAM

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE 1/4 SE 1/4 Sec 4 Twp 89N Rg 48WCounty Union

North

Please mark well
location with an "X"

Well Completion Date

10/1/2014

← 1 Mile →

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

PROPOSED USE:

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

METHOD OF DRILLING:

Reverse Circulation

CASING DATA:

☒ Steel ☐ Plastic ☐ Other
 If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
62.64 LB/FT	16.00 IN	0.0 FT	162.0 FT	24.00 IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Neat Cement	44	15.2 Lb/gal	155 Ft	0 Ft
_____	_____	_____ Lb/gal	_____ Ft	_____ Ft

Describe grouting procedure

Tremie

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 16.00 Inches Length 80.00 Feet
 Material Stainless Steel
 Slot Size 0.020" Set From 245.0 Feet to 162.0 Feet
 Other information _____

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material? _____

Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? Chlorine
☐ No, Why Not? _____
Lab to which water
quality sample sent for analysis _____Well Owner: City of North Sioux City, SD

Business Name: _____

Address: 504 River DriveCity, State, Zip: North Sioux City ☒ SD ☒ 57049

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top Soil Dark Brown, Silty	0	3
Clay, Brown, Silty, Sand Seems	3	26
Silt, Grayish Brown Clay, Soft	26	49
Sand Dark Gray, Fine, Silty	49	54
Gravel to 1/2" Sandy, Abundant coal	54	72
Gravel to 2.5", Sandy, Abundant coal	72	162
Sandstone, Fine, Light tan, cement	162	245
Clayston, gray, silty, sticky	245	262

STATIC WATER LEVEL 23.5 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: Completed 6-HR constant rate test using temp. test pumping equipment.
☐ Bailed

☐ Other _____

Pumping Level Below Land Surface

50.9 Ft. After 6 Hrs. pumped 1000 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

2014 Streefer Drive Well

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JAN 20 2015

WATER RIGHTS
PROGRAMThis well was drilled under license # 513 and this report is true and accurate.Drilling firm: Layne Christensen Company

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: _____

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 2/19, 20 15

RECEIVED OF City of North Sioux City 504 River Dr North Sioux City SD 57049

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

Fee for Application for Permit No. <u>8118-3</u> to Appropriate Water, to construct and to put water to beneficial use	1350	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>8118-3</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	1,550 00

No. 07284

By James Goodman
Chief Engineer



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

January 23, 2015

Randy Fredrickson, Public Works Director
City of North Sioux City
504 River Dr.
North Sioux City SD 57049

Dear Mr. Fredrickson:

The Water Rights Program recently received a Well Completion Report from Layne Christensen Company for a well they drilled for the city on October 1, 2014 (copy enclosed).

A Temporary Permit to use Public Waters was issued June 11, 2014 for the test pumping and development of the new well for the "Streeter Drive Well Project". As stated on the temporary permit, a SD Water Permit must be obtained before water from this well can be used. The temporary permit expired on December 1, 2014.

Enclosed are application form and instruction sheet to apply for a water permit. The completed form with the application fee and map can be returned to: Water Rights Program, 523 E. Capitol, Pierre, SD 57501.

If you have any questions, please contact me.

Sincerely,

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

c: Gregory C Meyer, PE
Buell, Winter, Mousel & Associates PC

enclosures

Schlaak, Karen

From: Gronlund, Eric
Sent: Wednesday, February 04, 2015 11:27 AM
To: Schlaak, Karen
Cc: Buhler, Ken
Subject: FW: North Sioux City

Mr. Meyer and I had further discussion regarding permitting since besides permitting the new 2014 well, the city has a 2008 well that wasn't permitted. The city has three Dakota wells in Section 4, T89N, R48W. One was drilling in 2001 (6285-3), one drilled in 2008 and the latest in 2014. These three wells are in completed in the Dakota. Mr. Meyer conveyed that the wells authorized by No. 5782-3 and completed into the M:EP aquifer are no longer in use.

No. 6285-3 appropriates 0.89 cfs (400 gpm) with an annual limit of 386 acre feet

The well completed in 2008 has a diversion capability of 550 gpm.

The new 2014 well will have a variable pump initially set at 500 gpm with the plan once the treatment plant is upgraded of being 1000 gpm.

The use of the wells will alternate with a maximum diversion capability of 1000 gpm. Either the 2014 will be in use or the 2001 & 2008 wells will be pumped. There is some concern with the 2001 & 2008 wells being capable of being pumped in tandem due to their close proximity to one another --- 300 feet.

The application will be for a peak additional diversion rate of 600 gpm.

The annual volume will be based on 80% of 1000 gpm. They will provide justification for greater than 60% which will basically be because of the alternating basis of the three wells.

1000 gpm = 1613 ac-ft and at 80% that is 1290 ac-ft. The annual volume requested will be 1,290 ac-ft minus 386 ac-ft existing authority. So the request will be for 904 ac-ft.

From: Gronlund, Eric
Sent: Tuesday, February 03, 2015 4:31 PM
To: Schlaak, Karen
Subject: North Sioux City

Talked with Greg Meyer, engineering consultant, for North Sioux City. The well has a capacity of 1000 gpm but they initially will install a variable speed pump in the well to limit the diversion 500 gpm until the water treatment plant is replaced. The upgrade of the treatment plant is within the time given to place water to beneficial use under a new permit. Therefore, I advised Mr. Meyer that the city should apply for a peak diversion rate of 1,000 gpm. He will calculate the annual volume based on a 60% pump rate.

RECEIVED**FEB 19 2015****WATER RIGHTS
PROGRAM**

PMB 2020

DENR-Water Rights

523 E. Capitol Ave.

Pierre, SD 57501-3182

February 4, 2015

Ms. Schlaak:

Re: North Sioux City Streeter Drive Well 2014

Application for Water Rights

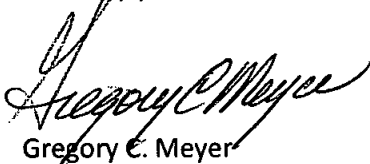
Enclosed for your consideration are the following:

- 1.) Check for the application fee in the amount of \$1,550.
- 2.) Completed Application for Permit to Appropriate Water Within the State of South Dakota, including the Supplemental Information Form.
- 3.) Map of the well location with reference to Section Corner.
- 4.) South Dakota Water Well Completion Reports for wells constructed in 2008 and 2014, with Signatures, by the Well Driller, and Mayor of North Sioux City.

The estimated annual water consumption is based on 80% usage because the wells will alternate. The combined capacity of the wells is 2,000 gpm with a firm capacity of 1,000 gpm. The estimated annual water consumption is based on 80% usage of the 1,000 gpm capacity.

If you have any questions on the enclosed, please feel free to contact this office.

Sincerely yours,


Gregory C. Meyer

Cc: City of North Sioux City

Water Rights Program - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: Application No. 8118-3, City of North Sioux City

ADDRESS: COUNTY: Union County

DATE: February 24, 2015 TELEPHONE: Greg Meyer cell 712 251-6696

RE: Phone call engineering consultant for city of North Sioux City

I contacted Greg Meyer regarding the application since we previously discussed the application and it is my belief he drafted the application for the city.

The application states the amount of water claimed is 1,000 gpm. My previous discussion was that the combined diversion of Water Right No. 6285-3 and this application was to be 1,000 gpm. Since Right No. 6285-3 authorized 400 gpm (0.89 cfs) that would mean the application is actually requesting 600 gpm additional diversion rate authority. Mr. Meyer concurred and asked that the application be amended accordingly.

I also stated that the map does not show the location of the well drilled in 2008. Mr. Meyer said it is approximately 300 feet west of the well authorized by Water Right No. 6285-3. When he gets back into the office he will provide a map showing the location of the well.

NAME: Eric Brundage

Gronlund, Eric

From: Buell Winter Mousel and Associates <bwma.pc@evertek.net>
Sent: Tuesday, February 24, 2015 6:54 PM
To: Gronlund, Eric
Cc: Kory Menken; Tim Hogan
Subject: North Sioux City Streeter Drive Well
Attachments: Google Well Map.jpg

Eric:

As we discussed today, I have attached a Google Earth view of the wells in discussion for the added Water Rights.
Greg

*Buell Winter Mousel and Associates P.C.
705 Douglas St Suite 636
Sioux City, IA 51101
Phone 712-258-4202
Fax 712-258-3304*



Northshore Dr

29

29

105

Leisner Ln

Extg 2008 Well

Extg Well with 400 gpm Permit

New Well

Streeter Dr

© 2015 Google



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. 8118-3, North Sioux City**

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. 8118-3, North Sioux City, c/o Mayor Don Fuxa, 504 River Drive, North Sioux City SD 57049.

The Chief Engineer is recommending APPROVAL of Application No. 8118-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The new well authorized by Permit No. 8118-3 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. Water Right No. 6285-3 and Water Permit No. 8118-3, combined, authorize a total annual diversion of 1,291 acre feet of water.
4. North Sioux City shall report to the Chief Engineer annually the amount of water withdrawn from the Dakota aquifer.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
April 14, 2015

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 8118-3
CITY OF NORTH SIOUX CITY
C/O DON FUXA MAYOR
APRIL 13, 2015

Water Permit Application No. 8118-3 proposes to appropriate water at a maximum diversion rate of 1.34 cubic feet per second (cfs) (905 acre-feet (ac-ft) annually) from two wells completed into the Dakota aquifer (262 and 294 feet deep) located in the SE ¼ SE ¼ Section 4; T89N-R48W in Union County. The water is to be used for municipal purposes. Water Right No. 6285-3 appropriates 0.89 cfs at a rate of 386 ac-ft annually from one well located in the SE ¼ SE ¼ Section 4 T89N-R48W. Water Right No. 6285-3 and this application, if approved, will allow alternate pumping of the three wells at a peak diversion rate of 2.22 cfs for a combined total of 1,291 ac-ft annually.

AQUIFER: Dakota (DKOT)

Aquifer Characteristics:

The Dakota aquifer consists of the permeable beds of sand and sandstone contained within the Cretaceous aged Dakota Formation (Buhler, 2012). The Dakota Formation consists of several layers of interbedded sands, sandstone, and shale with discontinuous beds of lignite (Schoon, 1971). The Dakota Formation underlies approximately 66,500 square miles of the 77,047 square miles of the State of South Dakota (Schoon, 1971). In eastern South Dakota, the recoverable water in storage is estimated to be 381,104,000 ac-ft (Hedges et. al, 1982). Allen and others (1985) estimated the amount of recoverable water in storage in western South Dakota to be approximately 308,442,000 ac-ft.

The lithology of the Dakota Formation varies both vertically and laterally. The porosity of the Dakota Formation varies with the lithology, but Hedges and others (1982) assumed the porosity averages 15 percent and the specific yield of the aquifer is approximately 0.075. In the area of this application, the Dakota Formation directly underlies the glacial outwash that forms the Missouri: Elk Point aquifer (SDGS, 2015; Water Rights, 2015c). It is likely the Dakota aquifer has some hydraulic connection to the Missouri: Elk Point aquifer. The Missouri River greatly affects the water level of the Missouri: Elk Point aquifer in this area (Buhler, 2014). Therefore, it is likely the Missouri River has some effect on the water level of the Dakota aquifer in the area of this application.

The water well completion reports submitted with this application report the top of the Dakota Formation is approximately 162 to 184 feet below grade. The static water level was 24.4 feet below ground surface in July, 2008 and 23.5 in October, 2014. The depth to the Dakota Formation and the static water levels are consistent with data from the SD DENR-Geological Survey (2015) regarding the depth to the Dakota Formation and the DENR-Water Rights Program (2015a) regarding the water level of the aquifer.

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 this 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 effects on existing rights from the aquifer that are pertinent to this application.

WATER AVAILABILITY:

This application proposes to appropriate 905 ac-ft annually from the Dakota aquifer. The probability of unappropriated water being 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. An application may be approved, however, for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems.”

The application meets both criteria laid out in SDCL 46-6-3.1 that allow for withdrawals of groundwater in excess of the average estimated annual recharge. This application is for a water distribution system, the City of North Sioux City, and the Dakota aquifer is older than and stratigraphically lower than the Greenhorn Formation.

Observation Well Data:

The DENR-Water Rights Program monitors 43 observation wells completed into the Dakota aquifer (Water Rights, 2015a). The nearest observation wells are UN-98A and UN-77E, approximately 1.8 miles west and 24.7 miles northwest of the well sites, respectively. All of the other observation wells are 43 miles away or further. Figures 1 and 2 show the hydrographs for observation wells UN-98A and UN-77E, respectively. The hydrographs show that in the area of this application the Dakota aquifer has had a steady water level over the period of record. The water level has risen (recharge exceeding withdrawals) during wet periods and slowly declined during drier periods. The observation well hydrographs show that, in general, recharge has exceeded discharge in the area of the application.

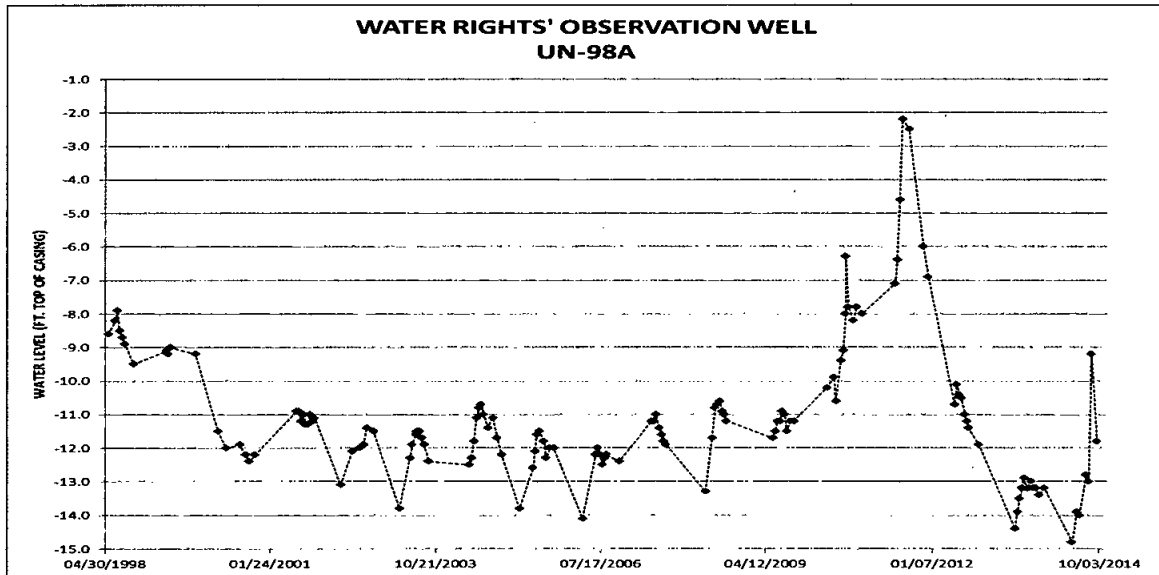


Figure 1- Hydrograph for observation well UN-98A (Water Rights, 2015a)

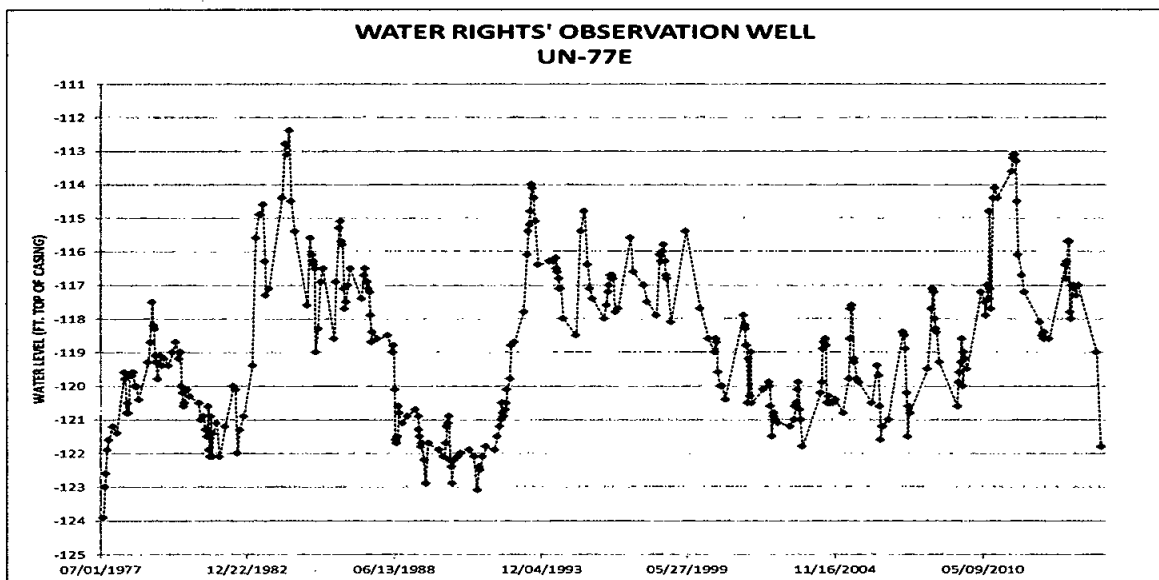


Figure 2- Hydrograph for observation well UN-77E (Water Rights, 2015a)

EXISTING WATER RIGHTS:

There are a number of domestic and appropriative right wells on file with the SD DENR-Water Rights Program within approximately two miles of the well sites (Water Rights, 2015b and 2015c). The nearest well authorized by an appropriative right is the well authorized by Water Right No. 6285-3 for the City of North Sioux City, which is approximately 130 feet from one well and 540 feet from the other well this application proposes to use. The well authorized by Water Right No. 6285-3 and the well approximately 130 feet away will be used on an alternating basis. There are no other wells authorized by appropriative rights within one mile of the well sites, but there are six ranging from approximately 1.1 miles to two miles away (see Figure 3) (Water Rights, 2014b).



Figure 3- Map of Dakota Aquifer Water Rights/Permits and Observation Wells in the Area of Application No. 8118-3 (Water Rights, 2015a and 2015b).

Permit No.	Name	Status	Use	CFS
1069-3	CITY OF NORTH SIOUX CITY	LC	MUN	0.55
5793-3	CITY OF NORTH SIOUX CITY	LC	MUN	1.22
5981-3	DEER RUN HOME OWNERS ASSN	LC	SHD	1.22
5997-3	CLAY RURAL WATER SYSTEM INC	PE	SHD	1.11
5997A-3	CLAY RURAL WATER SYSTEM INC	PE	SHD	1.11
5997B-3	CLAY RURAL WATER SYSTEM INC	PE	RWS	0
6060-3	CITY OF NORTH SIOUX CITY	LC	MUN	2.22
6285-3	CITY OF NORTH SIOUX CITY	LC	MUN	0.89
6872-3	CITY OF NORTH SIOUX CITY	LC	MUN	0.89
7645-3	CITY OF NORTH SIOUX CITY	PE	MUN	1.33

LC= Water Rights, PE= Water Permit, MUN= Municipal, SHD= Suburban Housing Development, RWS= Rural Water System

Table 1- List of Water Rights/Permits shown in Figure 3 (Water Rights, 2015b)

The Dakota aquifer is under confined conditions in the area of this application and drawdown resulting from pumping may extend a few miles from the production well. However, at the distance between the wells this application proposes to use, and other wells, excluding the well authorized by Water Right No. 6285-3 for the City of North Sioux City, well interference is not expected to be adverse. Between the wells proposed for use by this application and the well authorized by Water Right No. 6285-3 there may be some interference. However, the City of North Sioux City stated with this application that they intend to alternate pumping between the three wells. Furthermore, the interference would be self-limiting. That is to say, if the applicant

pumped one of the wells proposed for use by this application to hard, it would limit the production of one of their other wells and possibly lower overall production.

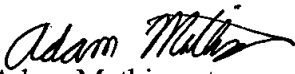
SDCL 46-6-6.1 does not protect artesian head pressure as a means of delivery and the Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. To balance interests between high capacity well use and domestic use, the Water Management Board defined an “adversely impacted domestic well” in ARSD 74:02:04:20(7) as:

“a well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient water for the well owner’s needs”

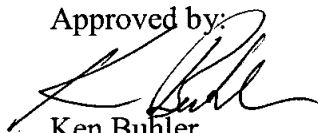
Depending on the specific characteristics of the Dakota aquifer at the well site proposed by this application, some existing well owners may need to lower their pumps to accommodate deeper water levels. The Water Management Board has considered this issue in the matter of Water Permit Application No. 2313-2, Coca-Cola Bottling Company of the Black Hills (Water Rights, 1995). The Board adopted findings of fact and conclusions of law that basically state, if lowering a pump when there is artesian head pressure available below the current pump setting is considered an adverse impact, it could be in conflict with SDCL 46-1-4, which requires South Dakota’s water resources to be put to beneficial use to the fullest extent possible. Therefore when considering the statutes (SDCL 46-6-6.1 and SDCL 46-1-4), rule (ARSD 74:02:04:20(7)), and the Water Management Boards’ prior rulings, well interference from this proposed appropriation is not likely to cause a significant impact. Therefore, there is a reasonable probability that any interference will not be adverse.

CONCLUSIONS:

1. This application proposes to appropriate water from the Dakota aquifer for municipal use at a diversion rate of 1.34 cfs with an annual rate of 905 ac-ft/yr from two wells.
2. Water Permit No. 6285-3 authorizes the diversion of water from the Dakota aquifer at a rate of 0.89 cfs at a rate of 386 ac-ft/yr from one well.
3. The combined diversion rate of Application No. 8118-3, if approved, and Water Right No. 6285-3 will be 2.22 cfs at an annual volume of 1,291 ac-ft from three wells.
4. SDCL 46-6-3.1 allows for withdrawals from an aquifer to exceed recharge if the appropriation is for a water distribution system and if the aquifer is older than or stratigraphically lower than the Greenhorn Formation. This application meets both criteria. Therefore, there is no need to consider the recharge versus withdrawal issue.
5. There is a reasonable probability that the diversion rate requested by this application can be made without adversely impacting existing appropriative and domestic users.


Adam Mathiowetz
SD DENR-Water Rights Program

Approved by:


Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Allen, J.C., D.L. Iles, and A.K. Petres. 1985. Analysis of Groundwater and Streamflow Data Western Dakotas Region of South Dakota, Tasks 3A.B.C. and 4A.B.:
- Buhler, K.A. 2014 Report on Water Permit Application No. 8029-3 Dakota Dunes Community Improvement District. SD DENR-Water Rights Program. Joe Foss Bldg., Pierre, SD.
- Buhler, K.A. 2012. Report on Water Permit Application No. 7387-3 Tom Nuhsbaumer. SD DENR-Water Rights Program. Joe Foss Bldg., Pierre, South Dakota.
- Hedges, L.S., S.L. Burch, D.L. Iles, R.A. Barari, and R.A. Schoon. 1982. Evaluation of Groundwater Resources in 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.
- SDGS. 2015. Lithologic Logs Database Search. < <http://sddenr.net/lithdb/> >. Accessed: April 1, 2015. SD DENR-Geological Survey, Vermillion, South Dakota.
- Schoon, R.A. 1971. Geology and Hydrology of the Dakota Formation in South Dakota. Report of Investigations No. 104. SD DENR-Geological Survey. Vermillion, South Dakota.
- Water Rights. 2015a. Observation Well Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- 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. 1995. Water Right No. 2313-2 Coca-Cola Bottling Company of the Black Hills file. SD DENR-Water Rights Program. Joe Foss Bldg., Pierre, South Dakota.

AFFIDAVIT OF PUBLICATION

State of South Dakota)

:ss

County of Union)

Bruce Odson,

the publisher of the Dakota Dunes / North Sioux City Times,
deposes and says that

The Dakota Dunes / North Sioux City Times

is a legal weekly newspaper of a general circulation, printed and published in North Sioux City, County of Union, State of South Dakota, and has been such legal newspaper during the time hereinafter mentioned, and that affiant is and was during all the time hereinafter mentioned in charge of the advertising department thereof, and has personal knowledge of all the facts stated in this affidavit: and that the notice and advertisement headed:

Notice of Application No. 8118-3

To Appropriate Water

a printed copy of which is hereunto attached and made a part hereof, was printed and published in the said newspaper at least once in

each week for 1 successive weeks; that said newspaper at the time of the first publication of said notice hereinafter stated, had, and still has, a bona fide circulation of over two hundred paid copies weekly, and had been published in the said County of Union for more than one year immediately prior to the date of the said publication of said notice, and that said newspaper during said times, was, and is, printed in part in an office maintained at said city of North Sioux City, the said place of publication; that the first publication of said notice in said newspaper was

on Thursday, the 23 day of April, 2015

and that the succeeding publications were

on Thursday, the _____ day of _____, _____

on Thursday, the _____ day of _____, _____

on Thursday, the _____ day of _____, _____

that the fees for the printing and publishing of said notice and advertisement in said newspaper as aforesaid were

\$ 27.05, that the full amount of the fee charged insures to the benefit of the publisher of the said newspaper, that no agreement or understanding for the division thereof has been made with any other person and that no part thereof has been agreed to be paid to any other person whomsoever.



Subscribed and sworn to before me

this 23 day of April, 2015

My commission expires 6-21-17

SUSAN ODSON
NOTARY PUBLIC
SOUTH DAKOTA



Notary Public

RECEIVED

APR 27 2015

WATER RIGHTS
PROGRAM

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 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 May 3, 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.

Publish April 23, 2015

Published once at the total approximate cost of \$27.05

T-17-D-91

NOTICE OF APPLICATION NO. 8118-3 TO APPROPRIATE WATER

Notice is given that the City of North Sioux City, c/o Don Fuxa, Mayor, 504 River Drive, North Sioux City SD 57049 has filed an application for a water permit to appropriate 1.34 cubic feet of water per second [cfs] (905 acre-feet annually) from two wells completed into the Dakota Formation Aquifer (262 and 294 feet deep) located in the SE 1/4 SE 1/4 Section 4-T89N-R48W for municipal use. Water Right No. 6285-3 appropriates 0.89 cfs at a volume of 386 acre-feet annually from one well located in the same area as described above. Water Right No. 6285-3 and this application, if approved, will allow alternate pumping of the three wells at a peak diversion rate of 2.22 cfs for a combined total of 1,291 acre-feet of water annually.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8118-3 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,

RECEIVED
APR 27 2015
WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

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

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

KELLY HERTZ BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT HE IS THE MANAGING EDITOR OF, YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID
COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
Notice on Application No. 8118-3

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 23rd DAY OF April 2015
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$30.12 ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS
BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF
HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 4/23/2015

FILED ON: 4/24/2015

SUBSCRIBED AND SWORN TO BEFORE ME THIS 24th DAY OF April 2015

NOTARY PUBLIC, SOUTH DAKOTA

MY COMMISSION EXPIRES 8/19/2015

4+23
NOTICE OF APPLICATION NO.
8118-3 to Appropriate Water

Notice is given that the City of North Sioux City, c/o Don Fuxa, Mayor, 504 River Drive, North Sioux City SD 57049 has filed an application for a water permit to appropriate 1.34 cubic feet of water per second [cfs] (905 acre-feet annually) from two wells completed into the Dakota Formation Aquifer (262 and 294 feet deep) located in the SE 1/4 SE 1/4 Section 4-T89N-R48W for municipal use. Water Right No. 6285-3 appropriates 0.89 cfs at a volume of 386 acre-feet annually from one well located in the same area as described above. Water Right No. 6285-3 and this application, if approved, will allow alternate pumping of the three wells at a peak diversion rate of 2.22 cfs for a combined total of 1,291 acre-feet of water annually.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8118-3 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.

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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 \$30.12.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

April 14, 2014

Dakota Dunes N Sioux City Times
PO Box 1340
N Sioux City SD 57049

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 8118-3 to Appropriate Water. Please publish the notice once on April 23, 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 City of North Sioux City, c/o Don Fuxa, Mayor, 504 River Drive, North Sioux City SD 57049 (Ph # 605-232-4276).

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

April 14, 2014

Press & Dakotan
319 Walnut
Yankton SD 57078

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 8118-3 to Appropriate Water. Please publish the notice once on April 23, 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 City of North Sioux City, c/o Don Fuxa, Mayor, 504 River Drive, North Sioux City SD 57049 (Ph # 605-232-4276).

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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.**

April 14, 2015

City of North Sioux City
Don Fuxa - Mayor
504 River Drive
North Sioux City SD 57049

Dear Mr. Fuxa:

Water Permit Application No. 8118-3 for municipal use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Dakota Dunes N Sioux City Times printed at N Sioux City SD (Ph # 605-232-3539) and the Press & Dakotan printed at Yankton SD (Ph # 605-665-7811). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the 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

cc: Greg Meyer, Buell, Winter Mousel & Associates, 705 Douglas #636, Sioux City IA 51101

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 April 23, 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. 8118-3 to Appropriate Water

Notice is given that the City of North Sioux City, c/o Don Fuxa, Mayor, 504 River Drive, North Sioux City SD 57049 has filed an application for a water permit to appropriate 1.34 cubic feet of water per second [cfs] (905 acre-feet annually) from two wells completed into the Dakota Formation Aquifer (262 and 294 feet deep) located in the SE 1/4 SE 1/4 Section 4-T89N-R48W for municipal use. Water Right No. 6285-3 appropriates 0.89 cfs at a volume of 386 acre-feet annually from one well located in the same area as described above. Water Right No. 6285-3 and this application, if approved, will allow alternate pumping of the three wells at a peak diversion rate of 2.22 cfs for a combined total of 1,291 acre-feet of water annually.

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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

MAY 27 2015

City of N Sioux City
Don Fuxa
504 River Dr
N Sioux City SD 57049

Dear Mr. Fuxa:

Enclosed is Water Permit No. 8118-3 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

**Report of Examination of Works and/or Application of Water to
Beneficial Use For Permit No. 8118-3 & Water Right No. 6285-3**

I have this day, March 26, 2025, made a thorough examination of the water use system constructed by City of North Sioux City of 504 River Drive, North Sioux City SD 57049 holder of Permit No. 8118-3, bearing the priority of February 19, 2015 authorizing the diversion of 1.34 cu. ft. per second of the waters of groundwater, Dakota Formation for municipal use purposes, in Union County.

Inspection contact & relationship Rusty Montagne, Public Works Superintendent

A. Works used to divert the water:

Well Information: (North & Middle Well 8118-3) (South Well 6285-3)

1) Well Drilling Firm: N & M Wells - Layne Christiansen Company/Layne Western Co, S Well - Dakota Drilling & Backhoe Inc.

2) No. of Wells 3

3) Depth(s) N & M - 262/294, S - 300 feet

4) Well log is available Y If no, explain in comments

Comments: none

Casing:

1) Diameter see Well Completion Reports inches

2) Length " " feet

3) Type " "

Screen:

1) Type see Well Completion Reports

2) Length " " feet

3) Static water level " " feet

Pump:

1) Make Fairbanks

2) Model submersible

3) Capacity 1000 combined GPM

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

1) Type municipal distribution system

Comments: none

C. Works used to apply water to beneficial use:

Municipal System

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
If no, describe: none
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Y
List any extended period of nonuse: none
- 3) Exceptions to compliance are: none

E. Condition and Location:

The system is in good condition with the point(s) of diversion located as follows: from the SE corner of Sec 4 T89N-R48W North Well: 770 ft N & 405 ft W Lat 42.54874 & Long -96.50908 (SE ¼ SE ¼) Middle Well: 610 ft N & 520 ft W Lat 42.54385 & Long -96.50968 (SE ¼ SE ¼) South Well: 305 ft N & 80 ft W Lat 42.54749 & Long -96.50783 (SE ¼ SE ¼)

The works are capable of diverting and conveying to the place of use 1291 ac-ft & 2.22 cu. ft. per second of water which is to be used for municipal use. Water has been put to beneficial use to the maximum extent and the license should be issued for 1291 ac-ft & 2.22 cfs.

All structures, wells and lands on map Y

If no, describe: none

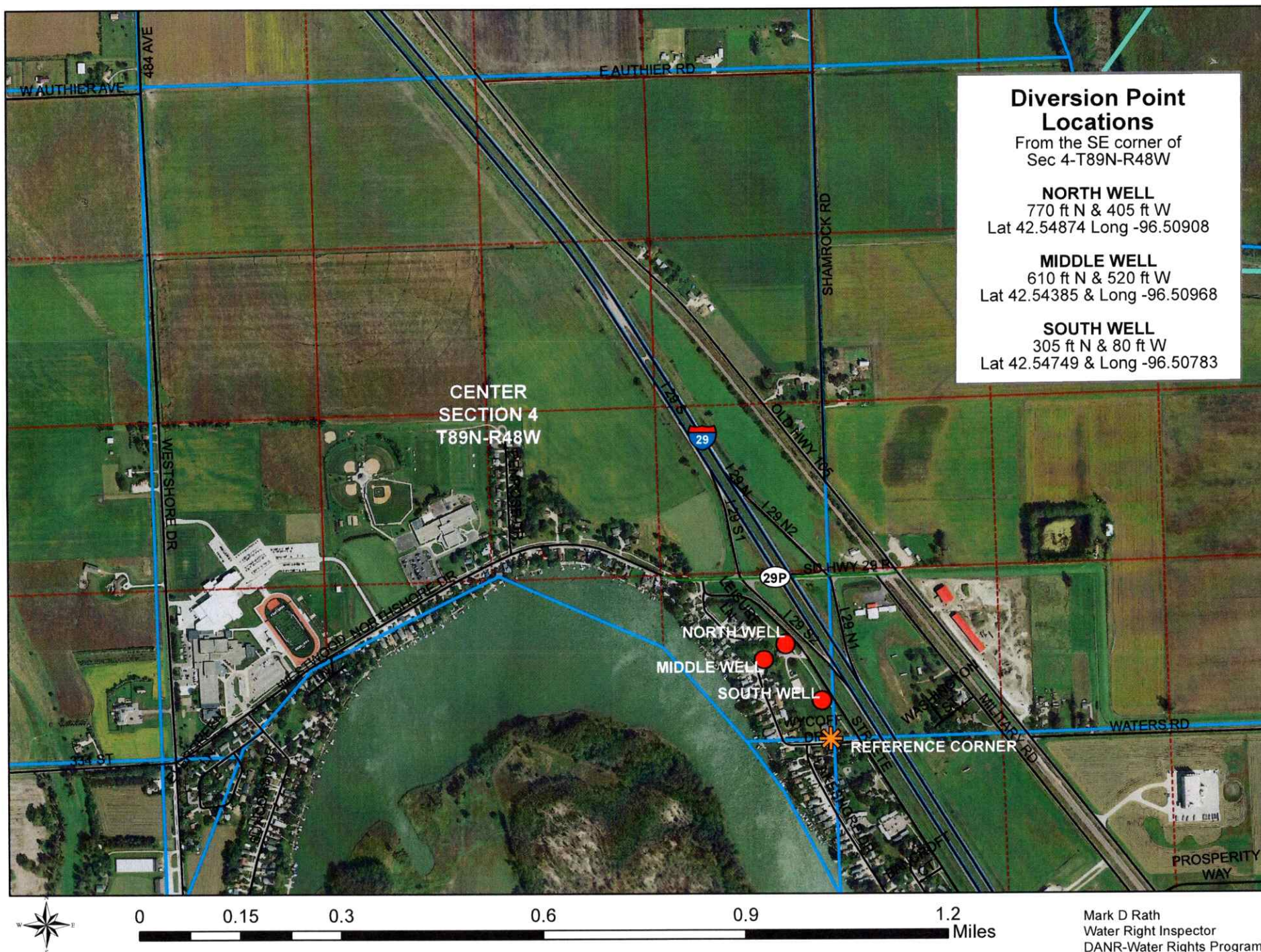
F. Comments or other permit(s) associated with the project:

none.



Mark D Rath
Water Right Inspector
DANR, Water Rights Program

Date report completed: May 15, 2025





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

SEP 18 2025

6285-3
8118-3

City of North Sioux City
c/o Rusty Montagne, Pub Works Sup
504 River Dr
N Sioux City SD 57049

Dear Mr. Montagne:

Enclosed is Water License No. 8118-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

So long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact Amanda Dewell, Water Rights Permitting Administrator (605) 773-3352.

Sincerely,

Mark Mayer, PE
Director of the Office of Water
(605) 773-3352

NOTES: The applicable portions of Water Right No. 6285-3 have been incorporated into Water Right No. 8118-3.

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8118-3

(1) Water Right No. 6285-3, held by the City of North Sioux City, 504 River Dr, N Sioux City SD 57049, bearing a priority date of November 2, 2001, authorizes the appropriation of up to 386 acre-feet of water annually, with a maximum diversion rate of 0.89 cubic feet of water per second, from groundwater, one well (Dakota Aquifer), Union County, South Dakota, for municipal use.

The applicable portions of Water Right No. 6285-3 have been incorporated into this license.

The City of North Sioux City made Application No. 8118-3, February 19, 2015, for a water permit to appropriate up to 905 additional acre-feet of water annually, increasing the maximum diversion rate by an additional 1.34 cubic feet of water per second, to what was already authorized under Water Right No. 6285-3, from groundwater, two additional wells (Dakota Aquifer), Union County, South Dakota. Permit No. 8118-3, with a priority date of February 19, 2015, was approved May 3, 2015, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before May 3, 2020, and for the application to beneficial use of water on or before May 3, 2024.

(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 appropriate water for beneficial use. The locations of the diversion points are:

- North Well: 770 ft N & 405 ft W of the SE corner Section 4, T89N, R48W (SE ¼ SE ¼)
(Latitude 42.54874 & Longitude -96.50908)
- Middle Well: 610 ft N & 520 ft W of the SE corner Section 4, T89N, R48W (SE ¼ SE ¼)
(Latitude 42.54385 & Longitude -96.50968)
- South Well: 305 ft N & 80 ft W of the SE corner Section 4, T89N, R48W (SE ¼ SE ¼)
(Latitude 42.54749 & Longitude -96.50783)

(3) The combined amount of appropriation may not exceed 1,291 acre-feet of water annually with a maximum diversion rate of 2.22 cubic feet of water per second. The water is to be used for municipal purposes during the following described annual period: January 1 – December 31.

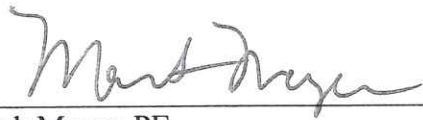
(4) Pursuant to South Dakota Water Law 46-5-30.1 the City of North Sioux City, the holder and/or owner of Water Right No. 8118-3 is issued a license to appropriate water, the right to use water from groundwater, three wells (Dakota Aquifer), with priority dates of November 2, 2001 (386 ac-ft/0.89 cfs) & February 19, 2015 (905 ac-ft/1.33 cfs), from the locations specified in (2) of this license for municipal purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8118-3 and subject to the following qualifications:

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

continued

2. The new wells authorized by Permit No. 8118-3 shall be constructed by a licensed well driller and construction of the wells and installation of the pumps 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 wells were drilled in 2008 and 2014 by Layne Western Co., Inc., and Layne Christensen Co., respectively. Copies of the Well Completion Reports are on file with the Water Rights Program.)*
3. Water Right No. 6285-3 and Water Permit No. 8118-3, combined, authorize a total annual diversion of 1,291 acre-feet of water. *(The applicable portions of Water Right No. 6285-3 have been incorporated into Water Right No. 8118-3.)*
4. Norther Sioux City shall report to the Chief Engineer annually, the amount of water withdrawn from the Dakota Aquifer.



Mark Mayer, PE
Director of the Office of Water
Department of Agriculture and Natural Resources

9/18/25

date

