

WATER PERMIT NO. 7645-3

Name of Applicant: City of North Sioux City

Address: 504 River Dr, N Sioux City SD 57049

Phone: 605 232-4276

Amount of Water Claimed: 1.33 cfs (966 AF)

Total Acres: NA

Source of Water Supply: groundwater (one existing well)

Water to be used for: municipal

County: Union

Type of Waste Disposal System:

Location:

PRIORITY

Date Received: 1-14-13

Application/License Fee: \$1650

Corrected Application Received: 1-17-13

Period of Annual Use: Jan 1- Dec 31

Remarks: Increasing diversion rate and acre-feet authorized by Water Right No. 6872-3

Diversion Point: NW 1/4 SW 1/4 Sec 14-T89N-
R48W

Land to be Irrigated:

Depth of Well: 249 feet

Well Driller: Layne-Western

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 1-17-13

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

	⊗		14		

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JAN 14 2013

WATER RIGHTS
PROGRAM

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	(office use only)	
	No. <u>7645-3</u>	Hydrologic Unit <u>10170101</u>
	Basin <u>Missouri River</u>	<u>605-356-2632</u>
	Newspaper <u>Leadless-Courier Box 310 Elk Point 57025</u>	<u>605-665-7811</u>
<u>Press & Dakotan 319 Walnut Yankton 57078</u>		

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. 6872-3

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

Increase the pumping rate to 1,000 gpm

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

(name and complete address if different than above name)

Mailing Address 504 River Dr., North Sioux City SD 57049

(Address) (City) (State) (Zip Code)

Home Phone 605.232.4276 Cell 712.251.7985 Email Don.Fuxa@northsiouxcity-sd.gov2. Amount of water claimed 1.33 *CFS or 1,000 **GPM 483 ***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 Formation4. Location of point of diversion NW 1/4 of SW 1/4, Sec 14, T. 89N, R. 48W County Union

(example - 3 wells in SW1/4 NE1/4 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 - NW1/4 section 12-T104N-R53W)

5. County or counties where water will be used Union6. Annual period during which water is to be used 365 days per year Jan 1 - Dec 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)

The Project consists of the replacement of the existing well pump with a pump of larger capacity which is estimated to increase the pumping capacity to 1,000 gpm.

Total annual volume
1,127 AF

I, Don Fuxa, Mayor of North Sioux City, 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. 7645-3**

Date of first receipt of application January 14, 2013.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7645-3 to City of North Sioux City, 504 River Dr, 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. 7645-3 appropriates water and increases the diversion rate authorized by Water Right No. 6872-3. Water Right No. 6872-3 appropriates 0.89 cubic feet of water per second (cfs) for an annual volume of 644 acre feet of water from one Dakota Formation well (249 feet deep) located in the NW 1/4 SW 1/4 Section 14-T89N-R48W. This permit increases the water appropriation from the existing well by an additional 1.33 cfs (483 acre feet of water) for a total diversion rate of 2.22 cfs (1000 gallons per minute). The total annual volume appropriated by Water Right No. 6872-3 and this permit will be 1,127 acre-feet.
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. 7645-3 is April 8, 2013.
5. The date from which applicant may claim right is January 14, 2013.
6. One-fifth of the construction is to be completed on or before October 8, 2015.
7. All construction is to be completed on or before April 8, 2018.
8. Water is to be put to beneficial use on or before April 8, 2022.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

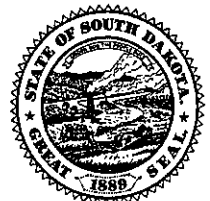
1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Right No. 6872-3 and Permit No. 7645-3 authorizes a total annual diversion of 1,127 acre feet of water annually from the Dakota Aquifer.
3. The City of 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*
Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

MAY 20 2013

date



Supplemental Information

(type or print)

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

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

b) If existing wells, how many 1 Provide copy of log(s), if available. Drilled by Layne-Western

c) Well Depth 249 Depth to Top of Water Bearing Material 104 Depth to Water from Surface 22' 2"

d) Distance to nearest existing domestic well:

On applicant's property 590.5 ft. On property owned by others N/A

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) _____

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

a) Surface Dimensions _____ Depth _____

b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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

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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

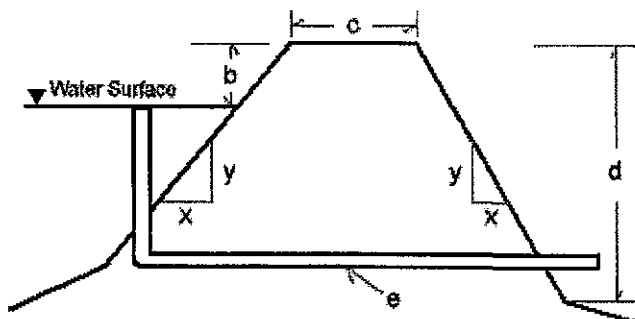
Upstream _____

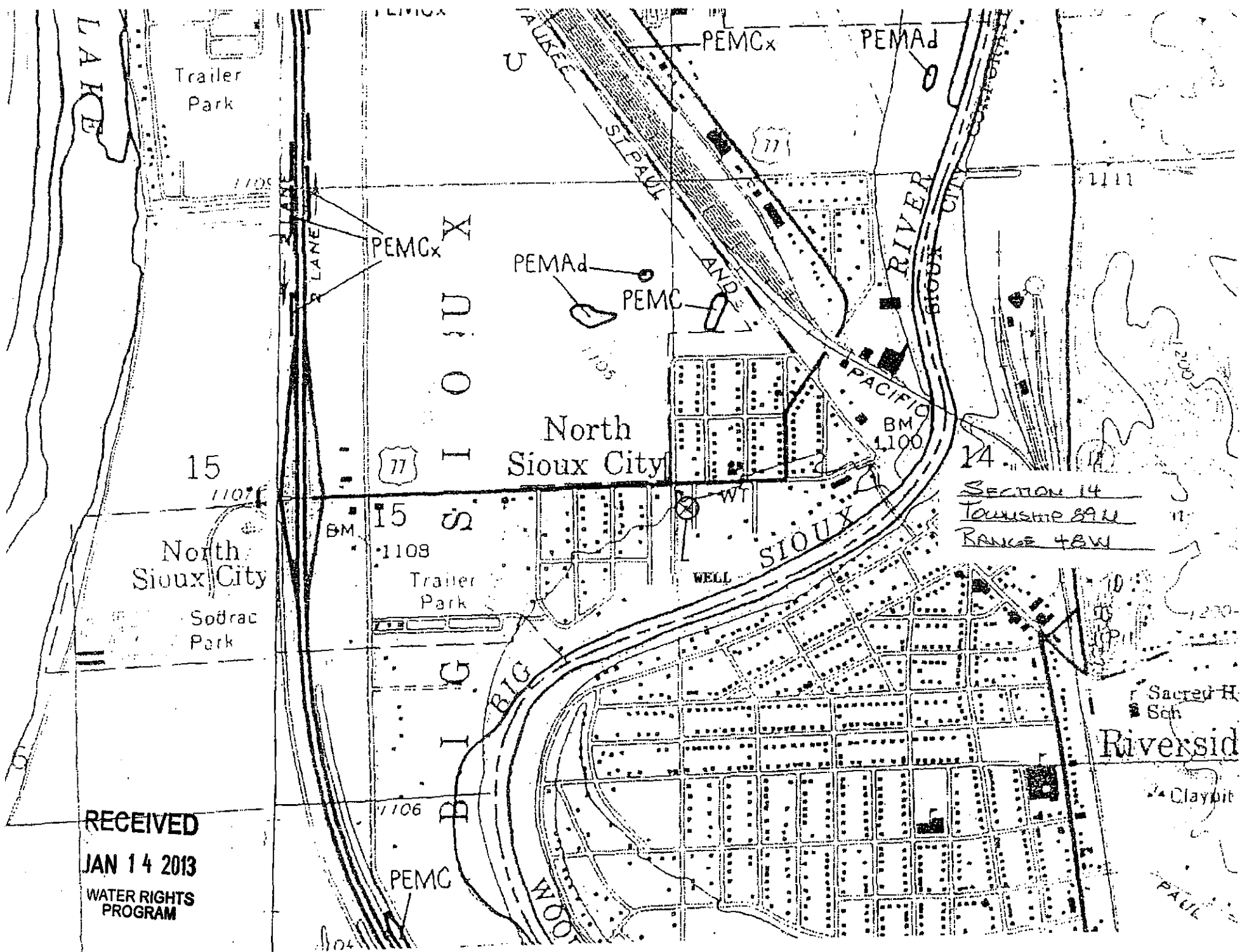
Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres





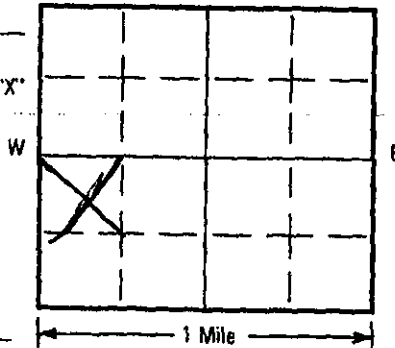
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SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 14 Twp 89N Rg 48W
 County UNION

Please mark well location with an "X"



Well Completion Date

12/01/2006

LOCATION:

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

PROPOSED USE:

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

METHOD OF DRILLING:

REVERSE ROTARY

CASING DATA: ☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
62.58 LB/FT	16 IN	8 FT	189 FT	24 IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type NEAT CEMENT No. of Sacks 276 Grout Weight 22.7 lb./gal From 10 ft To 170 ft
 _____ lb./gal _____ ft _____ ft

Describe grouting procedure GROUT INSTALLED BY TREMMIE METHODSCREEN: ☐ Perforated pipe ☒ ManufacturedDiameter 16 IN Length 60 FEETMaterial STAINLESS STEELSlot Size .030 Set From 189 Feet to 249 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: CHLORINATED

_____, NO, Why Not?

STIOUXLAND DISTRICT HEALTH
DEPARTMENT

Laboratory sent to for water quality analysis

Well Owner: THE CITY OF NORTH SIOUX CITY

Business Name: _____

Address: PO BOX 338NORTH SIOUX CITY SD 57049-0338

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
CLAY	0	38
CLAY WITH SAND	38	104
SANDSTONE	104	183
MEDIUM TO FINE SANDSTONE	183	249

STATIC WATER LEVEL 22' 2" Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☒ Pumped Describe: THE WELL WAS DEVELOPED WITH A DOUBLE DISC SURGE BLOCK, THEN BAILED, THEN PUMPED FOR 48 HOURS
☒ Bailed
☒ Other

Pumping Level Below Land Surface

81' 1" ft. After 24 Hrs. pumped 1,000 GPM45 ft. After 24 Hrs. pumped 403 GPMIf pump installed, pump rate 400 GPM

REMARKS

A BENTONITE SEAL WAS PLACED FROM 170' TO 174'

This well was drilled under license # 513

And this report is true and accurate.

Drilling firm LAYNE-WESTERNSignature of License Representative: [Signature]Signature of Well Owner or Equitable Property Holder: [Signature]Date: 2-26-07

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7-9-07

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 1/17, 20 13

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

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

Fee for Application for Permit No. <u>7645-3</u> to Appropriate Water, to construct and to put water to beneficial use	1450	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>7645-3</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	1650 00

No. 05972

By

Paul D. Erbe
Chief Engineer

Schlaak, Karen

From: Gronlund, Eric
Sent: Thursday, January 17, 2013 10:22 AM
To: 'Buell Winter Mousel and Associates'
Cc: Schlaak, Karen
Subject: RE: North Sioux City Water Rights application

This email will serve as documentation. You do not need to resubmit the application.

From: Buell Winter Mousel and Associates [<mailto:bwma.pc@evertek.net>]
Sent: Thursday, January 17, 2013 10:11 AM
To: Gronlund, Eric
Cc: Schlaak, Karen
Subject: RE: North Sioux City Water Rights application

Eric:
Thank you for your e-mails. They have helped me to understand the process better. After discussion with North Sioux City they are comfortable with the 70% of total annual volume or 1,127 ac-ft. Thank you for your assistance. Do I need to resubmit anything?
Greg

From: Gronlund, Eric [<mailto:Eric.Gronlund@state.sd.us>]
Sent: Thursday, January 17, 2013 8:22 AM
To: 'Buell Winter Mousel and Associates'
Cc: Schlaak, Karen
Subject: RE: North Sioux City Water Rights application

The total annual volume will be 1,610 ac-ft. The volume increase on this application is 966 ac-ft over the 644 ac-ft currently appropriated by WR No. 6872-3. The fee under this approach would be \$1,450 plus the \$200 licensing for a total of \$1,650 (which is what was submitted).

However, there are very few water uses that are used continuously, therefore I brought up the issue of what the actual peak volume would be. If that number is 1080 ac-ft then the volume on this request should be 436 ac-ft (1080 total minus 644 existing) and the associate fee for 436 acre feet totals \$1,050. If that is the case, we can receipt the submitted check in and refund the overpayment.

I realize that we've had past emails on this but the application did not address the acre foot amount so I need to be sure it is properly documented.

Eric

From: Buell Winter Mousel and Associates [<mailto:bwma.pc@evertek.net>]
Sent: Wednesday, January 16, 2013 10:42 AM
To: Gronlund, Eric
Subject: FW: North Sioux City Water Rights application

Eric:

Below are the e-mails that we previously exchanged regarding the NSC Water Rights Application. I offer this information as I thought the fee was based on the 1,610 ac-ft. allocation. I also checked the calculation of the fee and wonder if my understanding was correct.

After your recent e-mail suggesting 60% of the 24/7 pumping rate, I visited with the NSC Public Works Director and we feel an allocation of 70% of the 24/7 volume would be the minimum allocation. If my calculation of the fee is now correct, I believe the fee would be appropriate for 67% of the 24/7 – 1,000 gpm rate. If the fee is appropriate for the 67% allocation, NSC would proceed with the allocation of 1,080 ac-ft. allocation. Please let me know if my calculations are correct.

Greg

From: Buell Winter Mousel and Associates [<mailto:bwma.pc@evertek.net>]

Sent: Friday, December 28, 2012 11:10 AM

To: 'Gronlund, Eric'

Subject: RE: North Sioux City Water Rights application

Eric:

Thank you for your assistance.

Best Wishes for the New Year!

Greg

From: Gronlund, Eric [<mailto:Eric.Gronlund@state.sd.us>]

Sent: Friday, December 28, 2012 10:39 AM

To: 'Buell Winter Mousel and Associates'

Subject: RE: North Sioux City Water Rights application

Application filing fee of \$1,450 plus the \$200 licensing for a total of \$1,650.

From: Buell Winter Mousel and Associates [<mailto:bwma.pc@evertek.net>]

Sent: Friday, December 28, 2012 10:17 AM

To: Gronlund, Eric

Subject: RE: North Sioux City Water Rights application

Eric:

I am sure glad that I asked.

The question is regards to WR-6872-3 and the request would be to increase the annual volume to 1,610 ac-ft. with an increase in pumping rate from 400 gpm to 1,000 gpm. What is the fee amount?

Greg

From: Gronlund, Eric [<mailto:Eric.Gronlund@state.sd.us>]

Sent: Friday, December 28, 2012 8:23 AM

To: 'Buell Winter Mousel and Associates'

Cc: Schlaak, Karen

Subject: RE: North Sioux City Water Rights application

Greg – never a short answer!

The fee is based on the incremental increase in diversion rate – in this case 600 gpm. However, if there is an increase in the diversion rate authority without an increase in the authorized annual volume, then the fee is \$500 plus the \$200 licensing fee for a total of \$700. I presume your reference is to either Water Right No. 6285-3 or 6872-3 which each appropriate 0.89 cfs (400 gpm).

WR 6285-3 appropriates 0.89 cfs with an annual volume of 386 ac-ft. If the city's intent is to increase the diversion rate authority to 2.22 cfs (1000 gpm) without an increase in the 386 ac-ft annually then the fee is \$700. If the intent is to increase to annual volume then the fee is based on whatever the increase volume is intended.

WR 6872-3 appropriates 0.89 cfs but the annual volume is not defined so we technically have to assume it as a direct conversion to ac-ft of 644 ac-ft. If the intent is to increase the pump rate but not exceed the 644 ac-ft annually, the \$700 fee applies.

Feel free to contact me to discuss this further if needed.

Eric Gronlund
Water Rights Program, DENR
605 773-3352
eric.gronlund@state.sd.us

From: Buell Winter Mousel and Associates [<mailto:bwma.pc@evertek.net>]
Sent: Thursday, December 27, 2012 5:01 PM
To: Gronlund, Eric
Subject: FW: North Sioux City Water Rights application

From: Buell Winter Mousel and Associates [<mailto:bwma.pc@evertek.net>]
Sent: Thursday, December 27, 2012 4:49 PM
To: 'Eric Gronlund'
Subject: North Sioux City Water Rights application

Eric:
North Sioux City intends to increase the pumping rate of one of their wells from the existing 400 gpm to 1,000 gpm. The well was test pumped at 1,000 gpm when constructed, but the capacity was not needed until now.
Is the fee for filing a water right permit based on the increased water right of 600 gpm or on the 1,000 gpm final pumping rate?
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*



**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. 7645-3, City of 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. 7645-3, City of 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. 7645-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Right No. 6872-3 and Permit No. 7645-3 authorizes a total annual diversion of 1,127 acre feet of water annually from the Dakota Aquifer.
3. The City of 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.

Garland Erbele, Chief Engineer
March 18, 2013

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 7645-3
CITY OF NORTH SIOUX CITY
MARCH 15, 2013

Water Permit Application No. 7645-3 proposes to appropriate 483 acre-feet annually (ac-ft/yr) at a maximum diversion rate of 1.33 cubic feet of water per second (cfs) from an existing well authorized by Water Right No. 6872-3. Water Right No. 6872-3 authorizes the withdrawal of 644 ac-ft/yr at a maximum diversion rate of 0.89 cfs from the Dakota aquifer. If approved this application and Water Right No. 6872-3 would authorize the withdrawal of 1,127 ac-ft/yr at a maximum diversion rate of 2.22 cfs from one well. The well is 249 feet deep and is located in the NW ¼ SW ¼ Section 14, T89N-R48W in Union County.

AQUIFER: Dakota aquifer (DKOT)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Dakota aquifer consists of the permeable beds of sand and sandstone contained in the Cretaceous aged Dakota Formation (Buhler, 2012). The Dakota Formation underlies approximately 66,500 square miles of the 77,047 square miles that constitute the state of South Dakota (Schoon, 1971). The total amount of recoverable water in storage in the Dakota-Newcastle Formation in western South Dakota is approximately 308,442,000 acre-feet (Allen et. al, 1985). Hedges and others (1982) estimated that the Dakota Formation in eastern South Dakota contained an estimated 381,104,000 acre-feet of recoverable water.

The lithology of the Dakota Formation is quite variable both laterally and vertically. It consists of interbedded sand, sandstone, and shale. It has been postulated that the explanation for this is that the Dakota was deposited in a fluvial environment. The porosity of the Dakota varies with the lithology, but is assumed to average 15 percent and the specific yield of the aquifer is assumed to be 0.075 (Hedges et. al, 1982).

The South Dakota Water Well Completion Report on file for the existing well authorized under Water Right No. 6872-3 indicates that the well is capable of producing 1,000 gallons per minute with a static water level of 22 feet 2 inches below ground surface. The well completion report identified clay from ground surface to a depth of 38 feet, clay with sand from 38 to 104 feet below grade (Missouri: El Point aquifer), sandstone from 104 to 183 below ground surface, and medium to fine sandstone at a depth of 183 to 249 feet. The well had a static water level of 22' 2" below grade in December of 2006.

SDCL 46-2A-9

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

WATER AVAILABILITY:

This application proposes to appropriate up to 483 ac-ft/yr 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 the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of the 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”

This application qualifies for both exceptions 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 or stratigraphically lower than the greenhorn formation.

Observation Well Data:

Administrative Rule of South Dakota Section 74:02:05:07 requires that “the Water Management Board shall rely upon the record of observation well measurements to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge of the aquifer.”

The DENR-Water Rights Program monitors 43 observation wells completed into the Dakota aquifer (Water Rights, 2013a). The nearest observation wells are UN-98A and UN-77E, approximately 2.8 miles and 26.8 miles northwest of the well site, respectively. 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. The observation well hydrographs show that, in general, recharge has exceeded discharge in this area. Figures 1 and 2 show the hydrographs for observation wells UN-98A and UN-77E, respectively.

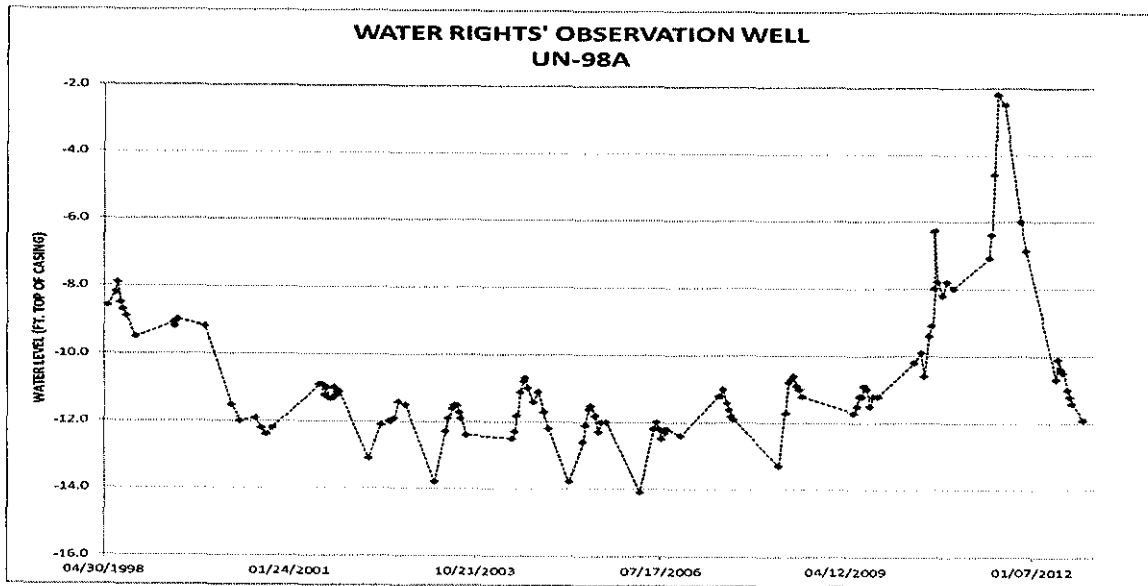


Figure 1- Hydrograph for observation well UN-98A (Water Rights, 2013a)

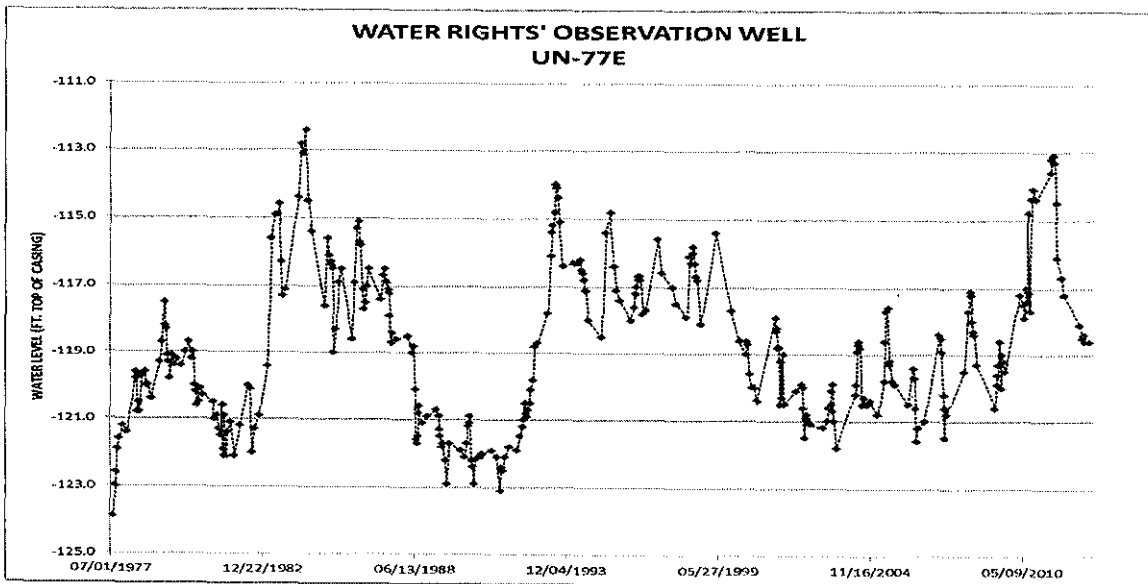


Figure 2- Hydrograph for observation well UN-77E (Water Rights, 2013a)

EXISTING WATER RIGHTS:

There are a number of domestic wells and wells for appropriative rights on file with the SD DENR-Water Rights Program in this area that appear to be completed into the Dakota aquifer (Water Rights, 2013b and 2013c). The nearest domestic well that is likely completed into the Dakota aquifer is approximately 0.6 miles southwest of the proposed well site. The nearest well authorized by a water right/permit is approximately 0.3 miles north and is held by the applicant. The nearest well authorized by a water right/permit not held by the applicant is Water Right No. 6110-3 for the Dakota Dunes Community Improvement District, approximately 1.2 miles south of well site. There may be some overlap in the drawdown cones, but with the applicant having a well approximately 0.3 miles from the well site proposed by this application it is not likely that

any drawdown from pumping would be significant in the well authorized by Water Right No. 6110-3.

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. In order to balance interests between appropriative use and delivery of water by artesian pressure 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 existing well proposed by this application, some existing well owners may need to lower their pumps to accommodate for deeper water levels. However when considering the statute (SDCL 46-6-6.1) and rule (ARSD 74:02:04:20(7)), well interference from the 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. Water Permit Application No. 7645-3 proposes to appropriate up to 438 ac-ft/yr at a maximum diversion rate of 1.33 cfs for the municipal uses from an existing well completed into the Dakota aquifer.
2. The existing well is authorized by Water Right No. 6872-3.
3. This application, if approved, and Water Right No. 6872-3 will have a total appropriation of 1,127 ac-ft/yr at a maximum diversion rate of 2.22 cfs from one well.
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.
5. There is a reasonable probability that the diversion rate requested by this application can be made without adversely impacting existing water rights/permits 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.: Groundwater Resource Inventory Final Report. Prepared for U.S. Army Corps of Engineers, contract DACW 45-82-C-0151.
- Buhler, K.A. 2012. Report on Water Permit Application No. 7387-3, Tom Nuhsbaumer. SD DENR-Water Rights Program. Joe Foss Bldg., Pierre, SD.
- Hedges, L.S., S.L. Burch, D.L. Iles, R.A. Barari, and R.A. Schoon. 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.
- Rothrock, E.P. and T.W. Robin Jr. 1938. Artesian Conditions in Western Central South Dakota: S.D. Geological Survey Report of Investigations No. 26. 93p.
- Schoon, R.A. 1971. Geology and Hydrology of the Dakota Formation in South Dakota: S.D. Geological Survey Report of Investigations 104. SD DENR-Geological Survey. 61 p.
- Water Rights. 2013a. Observation Well Files. SD DENR-Water Rights Program. Joe Foss Bldg., Pierre, SD.
- Water Rights. 2013b. Water Right/Permit Files. SD DENR-Water Rights Program. Joe Foss Bldg., Pierre, SD.
- Water Rights. 2013c. Well Completion Reports. SD DENR-Water Rights Program. Joe Foss Bldg., Pierre, SD.

AFFIDAVIT OF PUBLICATION

RECEIVED

State of South Dakota)

:ss

APR - 1 2013

County of Union)

WATER RIGHTS
an employee of the

Kelly Kruithoff,

The Leader-Courier

is a legal weekly newspaper of a general circulation, printed and published in Elk Point, 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. 7645-3

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 Elk Point, the said place of publication; that the first publication of said notice in said newspaper was

on Thursday, the 28 day of March, 2013

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

\$ 30.50, 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.

Kelly Kruithoff

Subscribed and sworn to before me

this 28 day of March, 2013

My commission expires 6-21-17

SUSAN ODSON
NOTARY PUBLIC
SOUTH DAKOTA

[Signature]

Notary Public

NOTICE OF APPLICATION NO. 7645-3

TO APPROPRIATE WATER

Notice is given that the City of North Sioux City, 504 River Dr, North Sioux City SD 57049 has filed an application for a permit to appropriate water and increase the diversion rate authorized by Water Right No. 6872-3. Water Right No. 6872-3 appropriates 0.89 cubic feet of water per second (cfs) for an annual volume of 644 acre feet of water from one Dakota Formation well (249 feet deep) located in the NW 1/4 SW 1/4, Section 14-T89N-R48W. This application proposes to increase the water appropriation from the existing well by an additional 1.33 cfs (483 acre feet of water) for a total diversion rate of 2.22 cfs (1000 gallons per minute). The total annual volume appropriated by Water Right No. 6872-3 and Application No. 7645-3 will be 1,127 acre-feet. The water is for municipal use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7645-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by April 8, 2013.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application.

Steven M. Pirner, Secretary,
Department of Environment and Natural Resources.

Published March 28, 2013

Published once at the total approximate cost of \$30.50

13-10-82

RECEIVED

APR - 1 2013

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

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

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

KELLY HERTZ BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT HE IS THE MANAGING EDITOR OF, YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID
COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
Notice of Application No 7645-3

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 28th DAY OF March 2013
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$29.79 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: 3/28/2013

FILED ON: 3/28/2013

SUBSCRIBED AND SWORN TO BEFORE ME THIS 28th DAY OF March 2013

Benjamin Schell
NOTARY PUBLIC, SOUTH DAKOTA

MY COMMISSION EXPIRES

8/19/2015

the above Water Rights Program
address to request copies of infor-
mation pertaining to this applica-
tion. Steven M. Firmer, Secretary,
Department of Environment and
Natural Resources.
Published once at the total ap-
proximate cost of \$29.79.

5-28
NOTICE OF APPLICATION
NO. 7645-3 to Appropriate Water

Notice is given that the City of
North Sioux City, 504 River Dr,
North Sioux City SD 57049 has
filed an application for a permit to
appropriate water and increase the
diversion rate authorized by Wa-
ter Right No. 6872-3. Water
Right No. 6872-3 appropriates
0.89 cubic feet of water per sec-
ond (cfs) for an annual volume of
644 acre feet of water from one
Dakota Formation well (249 feet
deep) located in the NW 1/4 SW
1/4 Section 14-T89N-R48W.
This application proposes to in-
crease the water appropriation
from the existing well by an addi-
tional 1.33 cfs (483 acre feet of
water) for a total diversion rate of
2.22 cfs (1000 gallons per min-
ute). The total annual volume ap-
propriated by Water Right No.
6872-3 and Application No.
7645-3 will be 1,127 acre-feet.
The water is for municipal use.

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Chief Engineer recommends AP-
PROVAL of Application No.
7645-3 because 1) unappropriated
water is available, 2) existing
rights will not be unlawfully im-
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cant and Chief Engineer. The ap-
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Program; Foss Building, 523 E
Capitol, Pierre SD 57501 (605
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be filed by April 8, 2013.

The petition may be informal, but
must include a statement describ-
ing the petitioner's interest in the
application, the petitioner's rea-
sons for opposing or supporting
the application, and the signature
and mailing address of the peti-
tioner or the petitioner's legal
counsel, if legal counsel is ob-
tained. Contact Eric Gronlund at



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

March 19, 2013

Leader-Courier
PO Box 310
Elk Point SD 57025

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7645-3 to Appropriate Water. Please publish the notice once on March 28, 2013. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is City of North Sioux City, 504 River Dr, 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

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

denr.sd.gov

March 19, 2013

Press & Dakotan
319 Walnut
Yankton SD 57078

ATTENTION: Legal Public Notice

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Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

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

March 19, 2013

Don Fuxa, Mayor
City of North Sioux City
504 River Dr
North Sioux City SD 57049

Dear Mayor Fuxa:

Water Permit Application No. 7645-3 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 Leader-Courier printed at Elk Point SD (Ph # 605-356-2632) 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

enclosures

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

Instruction to Newspaper - Publish the Notice on March 28, 2013. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7645-3 to Appropriate Water

Notice is given that the City of North Sioux City, 504 River Dr, North Sioux City SD 57049 has filed an application for a permit to appropriate water and increase the diversion rate authorized by Water Right No. 6872-3. Water Right No. 6872-3 appropriates 0.89 cubic feet of water per second (cfs) for an annual volume of 644 acre feet of water from one Dakota Formation well (249 feet deep) located in the NW 1/4 SW 1/4 Section 14-T89N-R48W. This application proposes to increase the water appropriation from the existing well by an additional 1.33 cfs (483 acre feet of water) for a total diversion rate of 2.22 cfs (1000 gallons per minute). The total annual volume appropriated by Water Right No. 6872-3 and Application No. 7645-3 will be 1,127 acre-feet. The water is for municipal use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7645-3 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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Published once at the total approximate cost of _____.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

MAY 20 2013

City of North Sioux City
Don Fuxa – Mayor
504 River Dr
North Sioux City SD 57049

Dear Mr. Fuxa:

Enclosed is Water Permit No. 7645-3 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. 7645-3

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 License No. 6872-3, bearing the priority of January 11, 1980 authorizing the diversion of 0.56 cu. ft. per second; bearing the priority of September 3, 1993 authorizing the diversion of 0.11 cu. ft. per second ; bearing the priority of June 22, 2007 authorizing the diversion of 0.22 cu. ft. per second; and of Permit No. 7645-3, bearing the priority of January 14, 2013 authorizing the diversion of 1.33 cu. ft. per second of the waters of groundwater, Dakota Formation, this gives a combined authorize diversion of 2.22 cu. ft. per second for municipal use purposes, in Union County.

Inspection contact & relationship Rusty Montagne, Public Works Superintendent

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Layne-Western
- 2) No. of Wells 1
- 3) Depth(s) 249 feet
- 4) Well log is available Y If no, explain in comments
Comments: none

Casing:

- 1) Diameter 16 inches
- 2) Length 189 feet
- 3) Type steel

Screen:

- 1) Type stainless steel
- 2) Length 60 feet
- 3) Static water level 22 feet

Pump:

- 1) Make Fairbanks
- 2) Model Vertical Turbine
- 3) Capacity 1000 GPM

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

- 1) Type municipal distribution system

C. Works used to apply water to beneficial use:

- 1) Municipal System

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
If no, describe: none
- 2) Non-Irrigation Reports 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:

1. The system is in good condition with the point(s) of diversion located as follows: from the NW corner of Sec 14, T89N, R48W, 145 ft E and 2,965 ft N, latitude of 42.52375 and longitude of -96.48681, NW 1/4 SW 1/4.
2. The works are capable of diverting and conveying to the place of use 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 2.22 cfs.
3. All structures, wells and lands on map Y
If no, describe: none

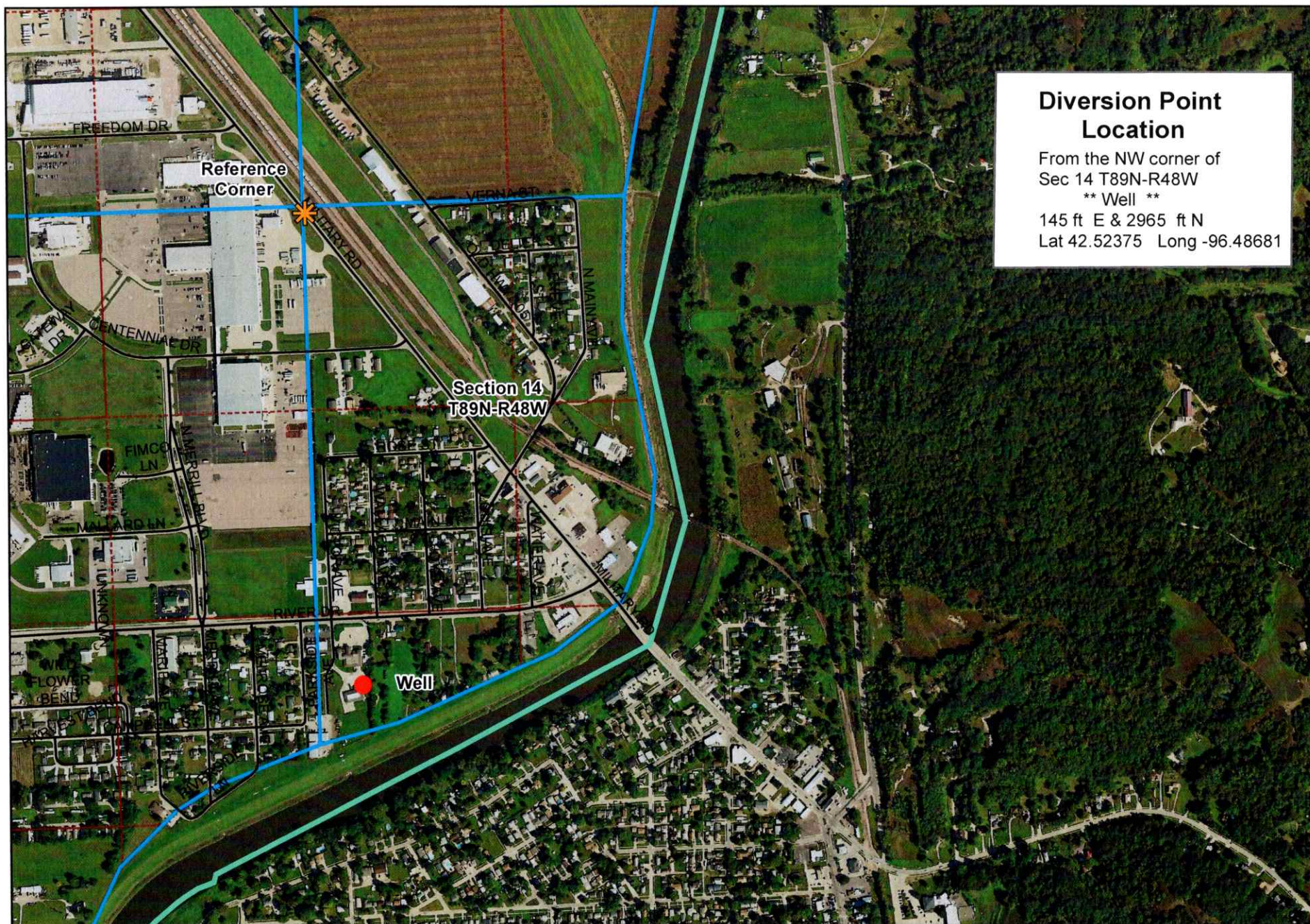
F. Comments or other permit(s) associated with the project:

none.



Mark D Rath
Water Right Inspector
DANR, Water Rights Program

Date report completed: May 15, 2025



0 0.125 0.25 0.5 0.75 1 Miles



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUN 06 2025

City of North Sioux City
c/o Don Fuxa
North Sioux City, SD 57049

No. 7645-3

Dear Mr. Fuxa:

Enclosed is Water License No. 7645-3. 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 our office.

Sincerely,

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

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 7645-3

(1) Water Right No. 6872-3, held by the City of North Sioux City, 504 River Dr, North Sioux City, SD 57049, authorizes the appropriation of up to 644 acre-feet of water annually at a maximum pump rate of 0.89 cubic feet of water per second from groundwater, one well (Dakota Formation Aquifer), for municipal purposes. The applicable portions of Water Right No. 6872-3 are incorporated into this license and previously established priority dates will be retained.

On January 14, 2013, the City of North Sioux City, made Application No. 7645-3, for a water permit to increase the diversion rate by an additional 1.33 cubic feet of water per second from the existing well authorized by Water Right No. 6872-3, appropriating an additional 483 acre-feet of water annually. Permit No. 7645-3, with a priority date of January 14, 2013, was approved April 8, 2013, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before April 8, 2018, and for the application to beneficial use of water on or before April 8, 2022.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 1,127 acre-feet of water annually at a maximum pump rate of 2.22 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 145 feet E and 2,965 feet N from the NW corner of Section 14, T89N, R48W (NW ¼ SW ¼)
(Latitude 42.52375 and Longitude -96.48681)

(3) The water is to be used during the following described annual period: January 1 – December 31.

(4) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use.

(5) 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. 7645-3 is issued a license to appropriate water, the right to use up to 1,127 acre-feet of water annually at a maximum pump rate of 2.22 cubic feet of water per second from groundwater, one well (Dakota Formation Aquifer), the priority dates are outlined in the chart below, from the location specified in (2) of this license for municipal purposes.

January 11, 1980	0.56 cfs	Established by No. 4465-3
September 3, 1993	0.11 cfs	Established by No. 5787-3
June 22, 2007	0.22 cfs	Established by No. 6872-3
January 14, 2013	1.33 cfs	Established by No. 7645-3

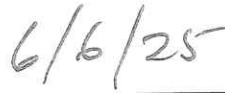
continued

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 7645-3 and subject to the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Right No. 6872-3 and Permit No. 7645-3 authorizes a total annual diversion of 1,127 acre-feet of water annually from the Dakota Aquifer. *(The applicable portions of Water right No. 6872-3 have been incorporated into this license. All diversion authority is now held by Water Right No. 7645-3.)*
3. The City of North Sioux City shall report to the Chief Engineer annually the amount of water withdrawn from the Dakota Aquifer.



Mark Mayer, PE
Director of Office of Water



date

