

WATER PERMIT NO. 7363-3

Name of Applicant: City of Sioux Falls

Address: 2100 N Minnesota Ave, Sioux Falls SD

Phone: 605 373-6904

Amount of Water Claimed: 5.35 cfs

Total Acres: NA

Source of Water Supply: groundwater

Water to be used for: municipal

County: Minnehaha

Type of Waste Disposal System:

Location:

PRIORITY

Date Received: 5-25-12

Application/License Fee: \$

Corrected Application Received:

Period of Annual Use: Jan 1 – Dec 31

Remarks: transfer 2.23 cfs and 1,615 AF from 5710-3 to Well #29 (WR 299-3)

Diversion Point: NE ¼ SW ¼ Sec 32-T102N-

R49W

Land to be Irrigated: NA

Depth of Well: 47 feet

Well Driller:

Remarks:

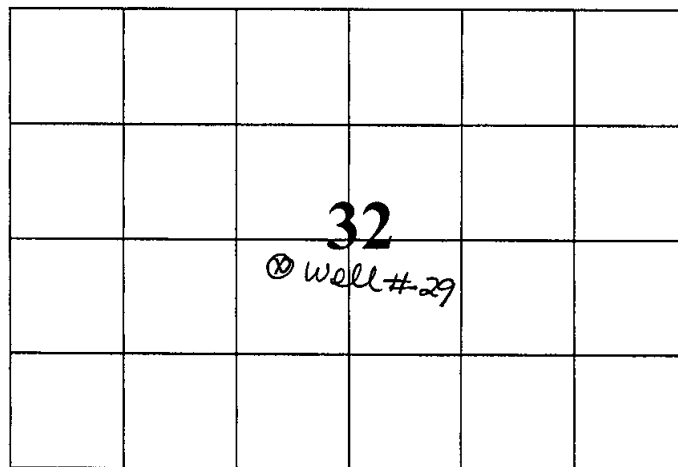
Type of Map: aerial

Prepared by: Chris Anderson

Reviewed and the Number Assigned on: 5-30-12

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>7363-3</u> (office use only) Hydrologic Unit <u>10170203</u>
	Basin <u>Sioux River</u>
	Newspaper <u>Argus Leader</u>

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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. 299-3 & 5710-3

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

Transfer diversion authority of 1.45 cfs and 719 AF from WR 5710-3 to WR 299-3.

1. Name of Applicant City of Sioux Falls Water Purification Phone 605-373-6940
(check one) ☐ Owner ☐ Tenant/lessee
Mailing Address 2100 North Minnesota Avenue Sioux Falls SD 57104
(Address) (City) (State) (Zip Code)
2. Amount of water claimed 4.57 *CFS or 2,051 **GPM 2,978 ***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 Big Sioux Aquifer Sioux Falls Unit
4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County _____
T102N R49W; 330' West Ctr Sec, 32: 130' So. Ctr Sec 32
5. County or counties where water will be used Minnehaha & Lincoln
6. Annual period during which water is to be used Annually, 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)

Three gravel pack wells (60, 61, and 62) with water right 5710-3 were abandoned in November of 2011. This will make available 1,950 gpm or 4.34 cfs and 719 AF of diversion authority to be put to beneficial use by the City of Sioux Falls. It is the intent of the City to increase the diversion authority to well No. 29 covered by permit 299-3 to 4.57 cfs and 2,978 AF to maximize the pumping potential of the well.

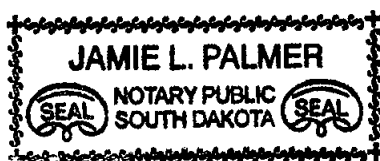
STATE OF SOUTH DAKOTA)
County of Minnehaha) SS

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

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

Applicant's signature Greg Anderson

Subscribed and sworn to before me this 8 day of June 20 12



Jamie L. Palmer
Notary Public signature
Jamie L. Palmer, Notary Public
My Commission Expires May 15, 2013

SOUTH DAKOTA
WATER PERMIT NO. 7363-3

Date of first receipt of application June 12, 2012.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7363-3 to the City of Sioux Falls Water Purifications, 2100 N Minnesota Ave, Sioux Falls SD 57104 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 7363-3 authorizes the transfer of existing diversion authority and volume authority from Water Right No. 5710-3 to the well authorized by Water Right No. 299-3. The water source is the Sioux Falls Management Unit of the Big Sioux Aquifer. Water Right No. 5710-3 appropriates 3,220 acre-feet of water annually at a maximum rate of 8.47 cubic feet of water per second (cfs) from six wells located in SE 1/4 SE 1/4 Section 29, NE 1/4 NE 1/4 Section 32; all in T102N-R49W and SE 1/4 NE 1/4, NW 1/4 SE 1/4 Section 6-T101N-R49W. The city is requesting to transfer 1.45 cfs and 719 acre-feet of the diversion authority held under Water Right No. 5710-3 to Well 29 (47 feet deep) located in the NE 1/4 SW 1/4 Section 32-T102N-R49W authorized by Water Right No. 299-3 which currently appropriates 2,259 acre feet of water at a diversion rate of 3.12 cfs. This permit authorizes a total of 2,978 acre-feet of water annually at a maximum diversion rate of 4.57 cfs to Well 29 authorized by No. 299-3. No additional water is being appropriated by this permit. The transferred diversion rate and volume authority will be deducted from Water Right No. 5710-3 and priority dates for diversion rate and volume will be retained based on the water right where the diversion rate or volume originated.
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. 7363-3 is September 17, 2012.
5. The date from which applicant may claim right is January 4, 1989 (established by Water Right No. 5710-3) for 1.45 cfs diversion rate and 719 AF volume authority.
6. One-fifth of the construction is to be completed on or before March 17, 2015.
7. All construction is to be completed on or before September 17, 2017.
8. Water is to be put to beneficial use on or before September 17, 2021.
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. If development and pumping of the well authorized by Water Right No. 299-3 results in impairment of adequate domestic wells or adequate wells having prior water rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use over appropriative rights does so without regard to whether lowered ground water levels are due to drought, the location of the domestic wells in the aquifer, or thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04.

(continued)

2. Water Permit No. 7363-3 and Water Right No. 299-3, combined, authorizes a total annual diversion of 2,978 acre feet of water at a rate of 4.57 cubic feet of water per second.
3. The City of Sioux Falls shall report to the Chief Engineer annually the amount of water withdrawn from the Sioux Falls Management Unit of the Big Sioux Aquifer.

WATER MANAGEMENT BOARD

By: *Jeanne Goodman*

Jeanne Goodman, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

APR 12 2013

date





Well 29

330' West and 130' South of the Center of Section 32, T 102 N, R 49 W of the 5th P.M.,
Minnehaha County, South Dakota



RECEIVED

0 200 400
Feet

MAY 25 2012

Map Date: May 18, 2012
Image Date: April 28, 2008
WATER RIGHT PROGRAM

Map prepared by
Chris Anderson, GIS Technician, City of Sioux Falls

Christopher J. Anderson

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Rehabilitation of the City of Sioux Falls, South Dakota Ranney Collector Well 29 was successfully completed in December 1992. The collector was equipped with four (4), 8-inch diameter stainless steel laterals each 111 to 112 feet long for a total of 447 lineal feet. Average open area of 50%, compared to the 18% open area of the previously existing laterals, results in a mechanical capacity of 3321 gpm at the design entrance velocity of 1 fpm. New lateral port assemblies and valves were also installed and the laterals were properly developed.

Results of performance testing conducted in April 1993 indicated that the efficiency and capacity of Collector 29 has been substantially improved by the installation of the new laterals.

- Lateral flow and temperature analysis revealed that flow is evenly distributed between the new laterals ranging from 20 to 29.5% each. Inflow temperature ranged from 42° to 48.5°F whereas river temperature ranged from 47° to 52°F.
- Apparent specific capacity, based on 24-hour recovery and drawdown levels, was computed at 233 gpm/ft. Specific capacity determined by City Water Department personnel in the year preceding this maintenance work (see Figure 3) averaged about 120 gpm/ft. Therefore the improvement in

capacity of Collector 29 is conservatively estimated at over 90%.

- Differential drawdown between Collector 29 and the three nearby observation wells OW29-1, OW29-2 and OW29-3 ranged from 0.36 to 1.26 feet/1000 gpm. This indicates the collector is operating efficiently to obtain the majority of water available.
- As shown previously in Figure 2 at a pumping level of about 1398 feet MSL Collector 29 was only able to produce 1000 to 1500 gpm prior to the new lateral screen installation. In contrast, during the April pumping test the well maintained a pumping level about 1398 feet MSL with about double the pumping rate of 2400 gpm.

Long-term sustained yield of Collector 29 is estimated at 2400 gpm assuming equilibrium conditions would be established within thirty (30) days. On a short term basis Collector 29 is capable of producing 3000 to 3500 gpm under test conditions.

It is recommended that the excellent record keeping program on the Sioux Falls Wells be continued. It is further recommended that at Collectors 32 and 33 this program be expanded to include differential water level monitoring on a monthly basis at the nearby observation wells. Since baseline data was obtained during the post-maintenance performance test, this would be an excellent tool

for future evaluation of collector performance and one which, unlike specific capacity, does not require a determination of static water level.

It is anticipated that differentials will initially increase and then level off as normal seasoning of the new laterals takes place. A long-term plot of differential water levels will be the clearest indication of the rate at which normal plugging of the laterals due to iron bacteria and mineral precipitation will occur. Future maintenance requirements can then be determined accordingly. With installation of new laterals in Collectors 32 and 33 the useful life of these wells, with proper operation and maintenance, has been extended another thirty (30+) years.

Respectfully submitted,

THE RANNEY DIVISION
HYDRO GROUP, INC.

GBS/KE/blw

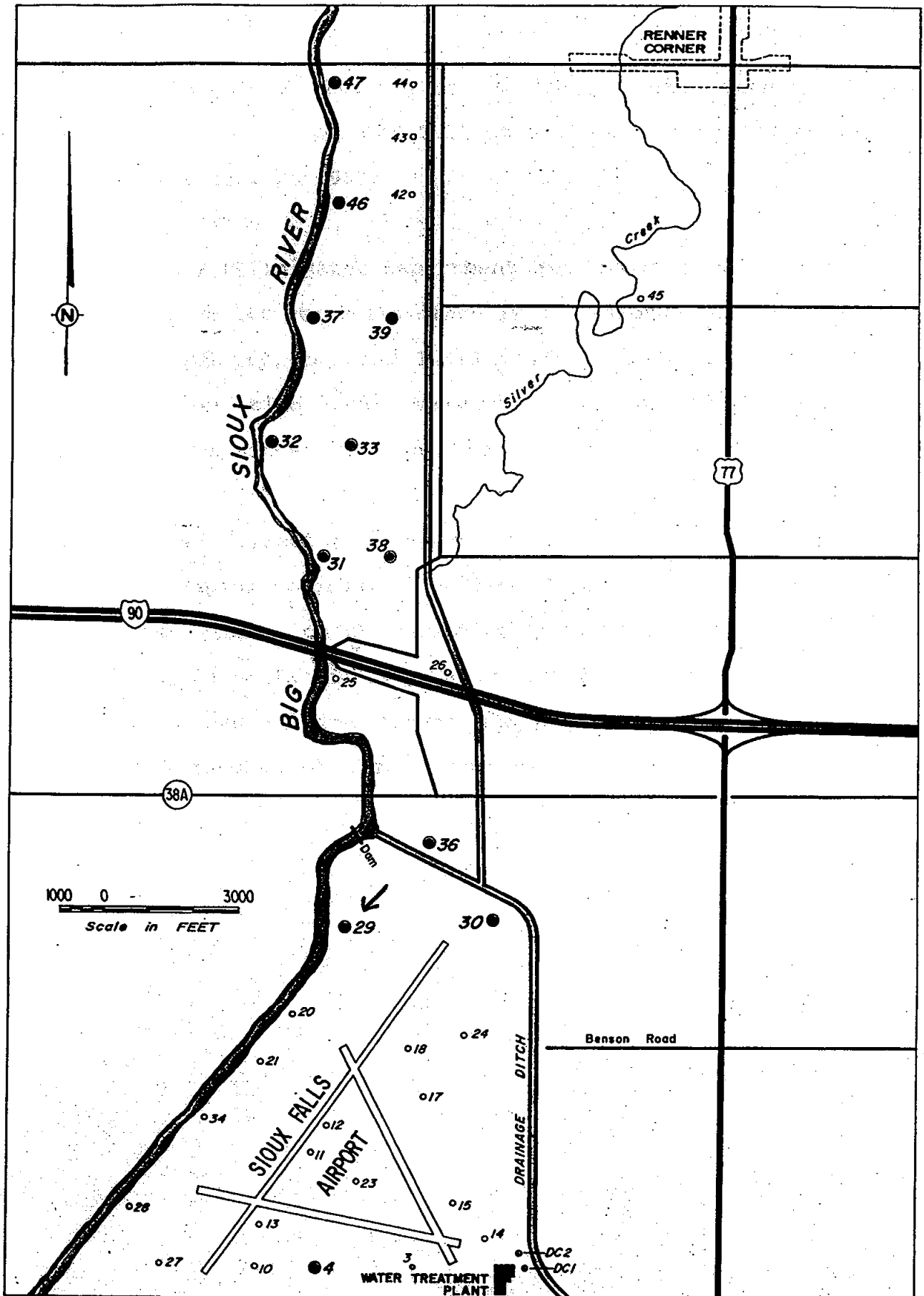
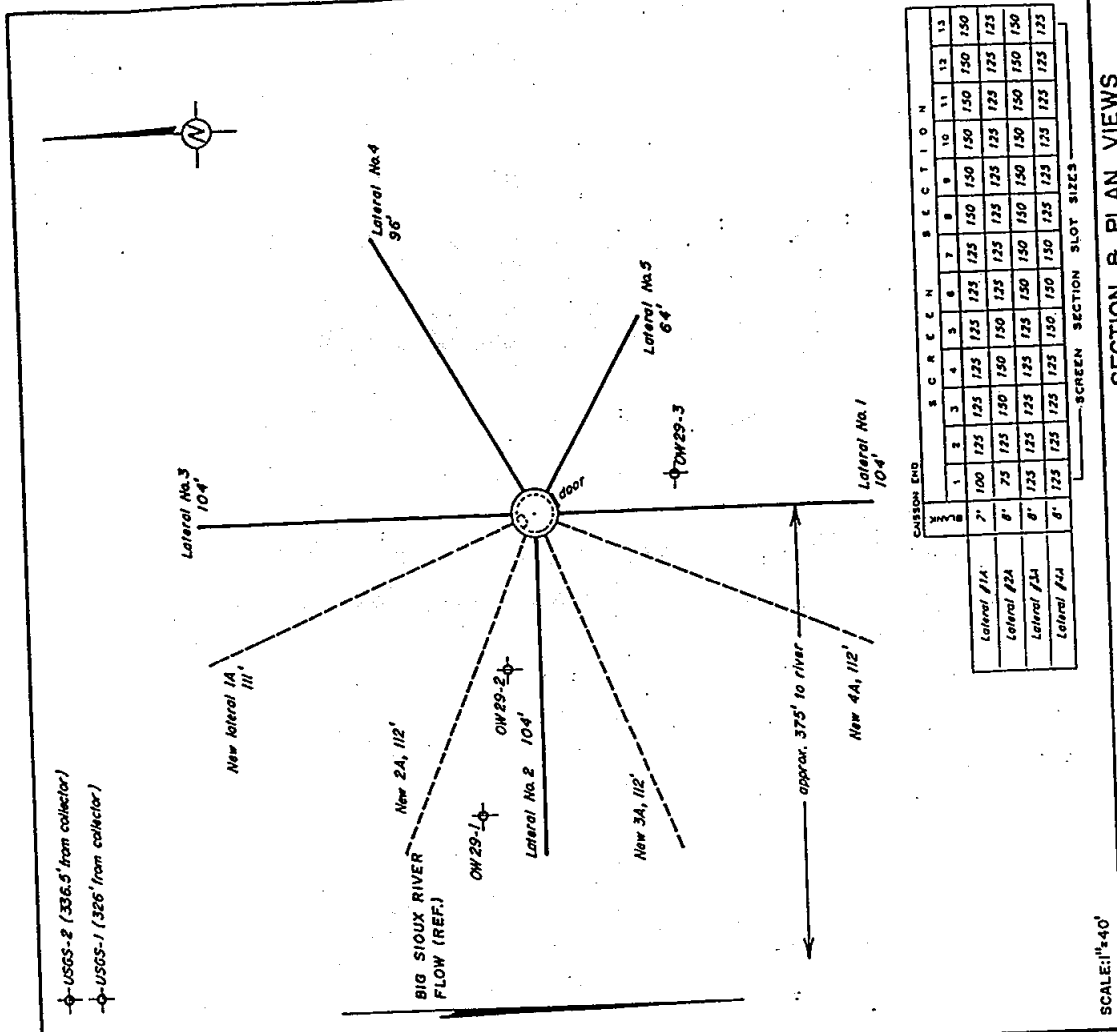


Fig. 1 - LOCATION MAP.

SIoux FALLS, SOUTH DAKOTA



SECTION & PLAN VIEWS
RANNEY WELL NO. 29
Sioux Falls, South Dakota

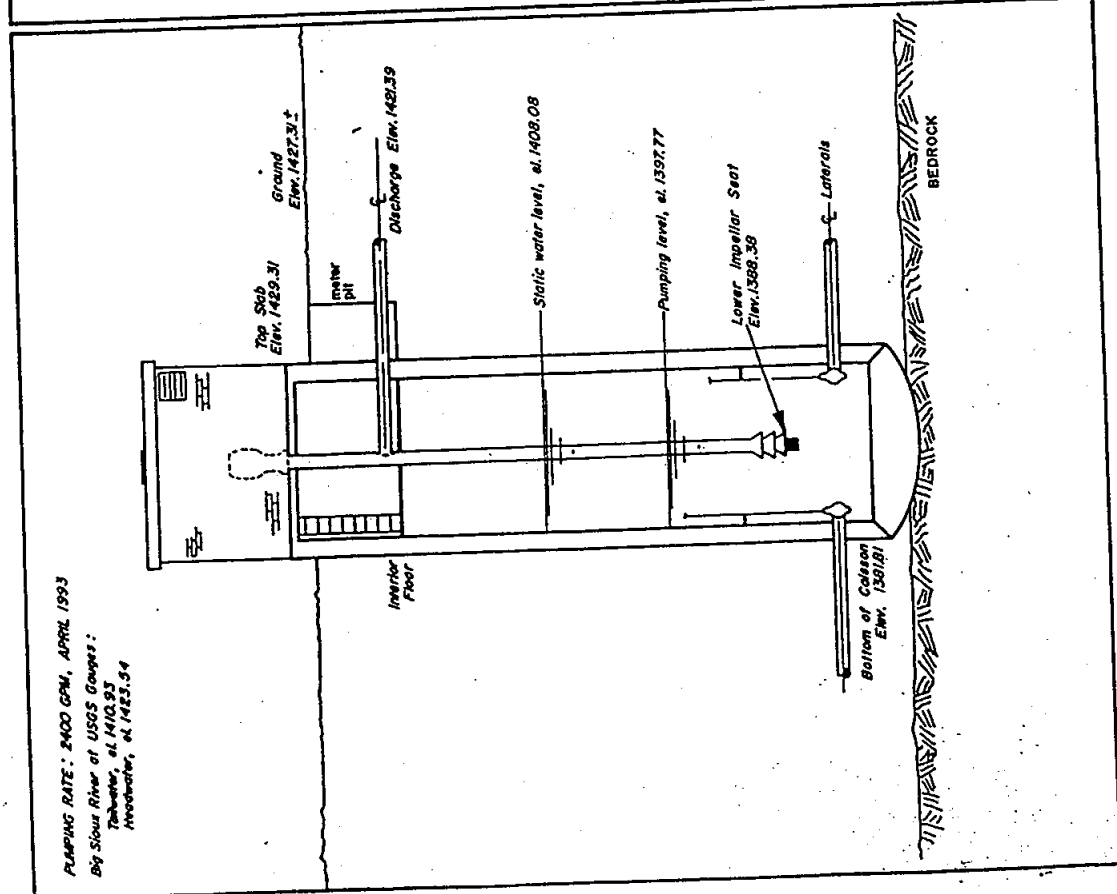
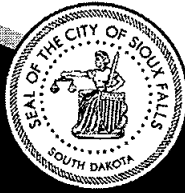


FIGURE 4

City of Sioux Falls



CITY OF SIOUX FALLS
PUBLIC WORKS

Providing a Better Quality of Life for You!

Administration

224 West Ninth Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8600 F: 367-8114

Engineering/Real Estate

224 West Ninth Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8601 F: 367-4310

Environmental

1203 North Western Avenue
Sioux Falls, SD 57104-1201
T: 605-367-8276 F: 367-4886

Fleet Management

1000 East Chambers Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8240 F: 367-8239

GIS

132 North Dakota Avenue
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8651 F: 367-8113

Household Hazardous Waste Facility/Sustainability

1015 East Chambers Street
Sioux Falls, SD 57104-7200
T: 605-367-8695 F: 367-4993

Landfill

224 West Ninth Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8162 F: 367-8167

Light

2000 North Minnesota Avenue
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-373-6979 F: 373-6974

Street

1000 East Chambers Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8255 F: 367-8200

Utility Billing

1201 North Western Avenue
P.O. Box 7401
Sioux Falls, SD 57117-7401
T: 605-367-8131 F: 367-7341

Utility Maintenance

668 West Algonquin Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8810 F: 367-7883

Water Purification

2100 North Minnesota Avenue
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-373-6940 F: 373-6941

Water Reclamation

4500 North Sycamore Avenue
Sioux Falls, SD 57104-9612
T: 605-367-8188 F: 367-8484

June 7, 2012

Mr. Eric Gronlund

SD Department of Environment and Natural Resources

Water Rights Program

Joe Foss Building

523 Capitol

Pierre, SD 57501

Dear Mr. Gronlund,

Enclosed is the application to amend the appropriation of water for the City of Sioux Falls under Water License No. 299-3 for Well No. 29. Well No. 29 was constructed in 1956 and rehabilitated in 1992. Water License No. 299-3, issued in 1956, appropriated 3.12 cfs with an annual volume limit of 2,259 acre feet of water.

The City completed work in 1992 that increased the capacity of Well No. 29. The City is requesting to transfer existing diversion authority of 1.45 cfs and volume authority of 719 AF from permit No. 5710-3 to permit 299-3 for Horizontal Collector Well No. 29. The City requests this transfer to maximize the pumping potential from this horizontal collector well. The existing diversion authority under permit No. 299-3 of 3.12 cfs and 2,259 AF of volume capacity added to the transfer of 1.45 cfs and 719 AF from permit 5710-3 will provide a total of 4.57 cfs and 2,978 AF to permit 299-3 for Well No. 29.

The City abandoned three gravel pack wells (60, 61, and 62) covered under permit 5710-3 with a total combined abandoned diversion authority of 4.34 cfs. The abandoned diversion authority from permit 5710-3 will provide the requested diversion authority to permit 299-3. Transferring 719 AF from 5710-3 to 299-3 will provide the volume capacity for Well No. 29. Granting the partial diversion authority from permit 5710-3 will leave a total of 2.90 cfs of abandoned diversion authority remaining on permit 5710-3.

It is the intent of the City to request a transfer of the remaining abandoned diversion authority from permit 5710-3 to other existing City wells to maximize their pumping potential and to account for and keep the abandoned diversion authority from permit 5710-3.

If you have any questions, please contact me at 605-373-6940. Thank you for your attention to this matter

Sincerely,

A handwritten signature in black ink, appearing to read "Greg Anderson".

Greg Anderson
Water Superintendent
City of Sioux Falls
605-373-6940

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JUN 12 2012

WATER RIGHTS
PROGRAM

File Nos. 7361-3, 7362-3, 7363-3, 5710-3, 1347-3, 299-3, 395-3, 396-3

Water Rights Program - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: Water Permits for city of Sioux Falls

ADDRESS: 2100 No Minnesota Avenue, Sioux Falls SD COUNTY: Minnehaha County

DATE: October 31, 2012 TELEPHONE:

RE: documentation of transfer of water rights

Water Permit Application Nos. 7361-3, 7362-3 and 7363-3 were approved to transfer either diversion rate authority from Water Right No 5710-3 or volume authority from Water Right No. 5710-3 or Water Right No. 1347-3 to the existing wells under Water Right Nos. 299-3, 395-3 and 396-3. This file documentation is intended to track the new quantity of water remaining in the various water rights.

The decrease in Water Right Nos. 5710-3 and 1347-3 is as follows:

Water Right ⇨	5710-3 (cfs)	5710-3 (ac-ft)		1347-3 (cfs)	1347-3 (ac-ft)
Amount prior to applications	8.47 cfs	3,220 ac-ft		5.913 cfs	4,282 ac-ft
7361-3	1.45 cfs	0		0	719 ac-ft
7362-3	1.45 cfs	0		0	719 ac-ft
7363-3	1.45 cfs	719 ac-ft		0	0
Amount Remaining after transfer	4.12 cfs	2,501 ac-ft		5.913 cfs	2,844 ac-ft

(continued)

Increases to diversion authority from wells authorized by Water Right Nos. 299-3, 395-3 and 396-3

Water Right ⇒	299-3(cfs) & 7363-3	299-3 (ac-ft)	395-3 (cfs) & 7362-3	395-3 (ac-ft)	396-3 (cfs) & 7361-3	396-3(ac-ft)
Amount prior to applications	3.12 cfs	2259 ac-ft	3.12 cfs	2259 ac-ft	3.12 cfs	2259 ac-ft
7361-3					1.45 cfs	719 ac-ft
7362-3			1.45 cfs	719 ac-ft		
7363-3	1.45 cfs	719 ac-ft				
Amount Authorized from wells	4.57 cfs	2,978 ac-ft	4.57 cfs	2,978 ac-ft	4.57 cfs	2,978 ac-ft

NAME: Eric Stenlund



**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. 7363-3, City of Sioux Falls**

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. 7363-3, City of Sioux Falls, c/o Greg Anderson, 2100 North Minnesota Avenue, Sioux Falls SD 57104.

The Chief Engineer is recommending APPROVAL of Application No. 7363-3 because 1) the proposed diversion can be developed without unlawful impairment of existing rights, 2) the proposed use is a beneficial use and 3) it is in the public interest with the following qualifications:

1. If development and pumping of the well authorized by Water Right No. 299-3 results in impairment of adequate domestic wells or adequate wells having prior water rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use over appropriative rights does so without regard to whether lowered ground water levels are due to drought, the location of the domestic wells in the aquifer, or thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04.
2. Water Permit No. 7363-3 and Water Right No. 299-3, combined, authorizes a total annual diversion of 2,978 acre feet of water at a rate of 4.57 cubic feet of water per second.
3. The City of Sioux Falls shall report to the Chief Engineer annually the amount of water withdrawn from the Sioux Falls Management Unit of the Big Sioux Aquifer.

See report on application for additional information.

Garland Erbele, Chief Engineer
August 27, 2012

NOTE: Approval of this application will result in Water Right No. 5710-3 being reduced by 1.45 cfs diversion rate authority and 719 acre feet in annual volume of water appropriated.

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NOS.
7361-3, 7362-3, AND 7363-3
CITY OF SIOUX FALLS
August 27, 2012

Water Right No. 5710-3 appropriates 3,220 acre-feet (ac-ft) of water annually at a maximum diversion rate of 8.47 cubic feet per second (cfs) from three wells located in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 29, one well located in NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 32; all in T102N-R49W, and one well located in each the SE $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 6-T101N-R49W. Water Right No. 1347-3 appropriates 4,282 ac-ft annually at a maximum diversion rate of 5.913 cfs from one well located in NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 8-T101N-R49W. Water Right No. 395-3 currently appropriates 2,259 ac-ft annually at a maximum diversion rate of 3.12 cfs from a well located in SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 20-T102N-R49W. Water Right No. 396-3 currently appropriates 2,259 ac-ft annually at a maximum diversion rate of 3.12 cfs from a well located in NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 20-T102N-R49W. Water Right No. 299-3 currently appropriates 2,259 ac-ft annually at a maximum diversion rate of 3.12 cfs from a well located in NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 32-T102N-R49W. Water Rights Nos. 5710-3, 1347-3, 395-3, 396-3, and 299-3 appropriate water from the Sioux Falls management unit of the Big Sioux aquifer (BS:SF).

Water Permit Application No. 7361-3 proposes to transfer the authorization to divert 1.45 cfs from wells authorized by Water Right No. 5710-3 to a well authorized by Water Right No. 395-3 and to transfer authorization to divert 719 ac-ft annually from a well authorized by Water Right No. 1347-3 to a well authorized by Water Right No. 395-3. This application does not propose to increase the total appropriation from the BS:SF aquifer. This application, if approved, will authorize a total appropriation of 2,978 ac-ft of water annually at a maximum diversion rate of 4.57 cfs from a well authorized by Water Right No. 395-3.

Water Permit Application No. 7362-3 proposes to transfer the authorization to divert 1.45 cfs from wells authorized by Water Right No. 5710-3 to a well authorized by Water Right No. 396-3 and to transfer the authorization to divert 719 ac-ft annually from a well authorized by Water Right No. 1347-3 to a well authorized by Water Right No. 396-3. This application does not propose to increase the total appropriation from the BS:SF aquifer. This application, if approved, will authorize a total appropriation of 2,978 ac-ft of water annually at a maximum diversion rate of 4.57 cfs from a well authorized by Water Right No. 396-3.

Water Permit Application No. 7363-3 proposes to transfer the authorization to divert 1.45 cfs and 719 ac-ft annually from wells authorized by Water Right No. 5710-3 to a well authorized by Water Right No. 299-3. This application does not propose to increase the total appropriation from the BS:SF aquifer. This application, if approved, will authorize a total appropriation of 2,978 ac-ft of water annually at a maximum diversion rate of 4.57 cfs from a well authorized by Water Right No. 299-3.

Figures 1, 2, and 3 are simplified flowcharts describing the proposed transfer of diversion rate and water appropriation and the total proposed diversion rate and annual water appropriation.



Figure 1 - Water Permit Application 7361-3



Figure 2 - Water Permit Application 7362-3



Figure 3 - Water Permit Application 7363-3

AQUIFER: SIOUX FALLS MANAGEMENT UNIT OF THE BIG SIOUX AQUIFER (BS:SF)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Sioux Falls management unit of the Big Sioux aquifer is an alluvium mantled, glacial outwash deposit, which consists of silt, fine to coarse sand, and gravel (Buhler, 2011). The management unit underlies approximately 22,900 acres in Minnehaha County and contains an estimated 103,050 ac-ft of recoverable water in Minnehaha County (Hedges et. al, 1982). Most of the aquifer is under the flood plain of the Big Sioux River (Lindgren and Niehus, 1992). The aquifer is bounded to the north (near Dell Rapids) and on the south (Sioux Falls) by the relatively impermeable Sioux Quartzite (Buhler, 2011). The aquifer tends to be under unconfined conditions, and the water in the aquifer tends to move south and towards the Big Sioux River (Lindgren and Niehus, 1992).

WATER AVAILABILITY:

These applications do not propose to appropriate more water from the Sioux Falls management unit of the Big Sioux aquifer. Only, the transfer of diversion rate and annual pumping volume between existing water rights to more accurately reflect the water withdrawal system currently used by the city of Sioux Falls.

1991 Declaratory Ruling:

On November 14, 1991, through a declaratory ruling, the Water Management Board (Board) established a limitation on the annual withdrawals due to pumping by Water Permit/Right holders from the Sioux Falls management unit of the Big Sioux aquifer to 32,200 ac-ft per year (Water Rights, 1992). When this limit is approached, water use will be restricted on a priority basis until withdrawals do not exceed 32,200 ac-ft/yr. Since, these applications do not propose to increase the amount of water appropriated, and, therefore, do not increase potential withdrawals from the aquifer; these applications will not cause withdrawals from the management unit to exceed 32,200 ac-ft/yr.

EXISTING WATER RIGHTS:

Most of the water rights/permits appropriating water from the BS:SF belongs to the city of Sioux Falls. There is only one water right within 2000 feet of any of the water rights proposed to have increased diversion rate and annual withdrawal, Water Right No. 1270-3. The well supplying Water Right No. 396-3 is 1916 feet northwest and the well supplying Water Right No. 395-3 is within 500 feet of the wells supplying Water Right No. 1270-3. Water Right No. 1270-3 is licensed to irrigate 116 acres at a maximum diversion rate of 1.660 cfs. The land covered by Water Right No. 1270-3 is in the Conservation Reserve Program (CRP) through 2020. The estimated drawdown at the wells authorized by Water Right No. 1270-3 is not expected to exceed 20 feet ("Theis Equation Calculator").

Cumulative effect:

To ensure protection of domestic users and prior appropriators from any cumulative withdrawal impacts, since 1991, most of the appropriations from the Sioux Falls management unit of the Big Sioux aquifer have included the following qualification:

"If development and pumping of the Sioux Falls Management Unit of the Big Sioux Aquifer water reserved by Future Use Permit No. 5523-3 results in adverse impairment of adequate domestic wells or adequate wells having prior rights, giving preference to domestic use over appropriative rights does so without regard to 1) whether lowered ground water levels are due to drought, 2) the location of the domestic wells in the aquifer, or 3) the thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04".

CONCLUSIONS:

1. Water Right Application No. 7361-3 proposes to transfer the authority to divert water at a rate of 1.45 cfs from wells authorized by Water Right No. 5710-3 to a well authorized by Water Right No. 395-3, and transfer the authority to divert 719 ac-ft annually from Water Right No. 1347-3 to Water Right No. 395-3.
2. Water Right Application No. 7362-3 proposes to transfer the authority to divert water at a rate of 1.45 cfs from wells authorized by Water Right No. 5710-3 to a well authorized by Water Right No. 396-3, and transfer the authority to divert 719 ac-ft annually from Water Right No. 1347-3 to Water Right No. 396-3.
3. Water Right Application No. 7363-3 proposes to transfer the authority to divert water at a rate of 1.45 cfs from wells authorized by Water Right No. 5710-3 to a well authorized by Water Right No. 299-3, and transfer the authority to divert 719 ac-ft annually from Water Right No. 5710-3 to Water Right No. 299-3.
4. If this application is approved, Water Right Nos. 395-3, 396-3, and 299-3 will each authorize the appropriation of 2,978 ac-ft of water annually at a maximum diversion rate of 4.57 cfs.
5. These water right applications do not propose to increase the total appropriation of water from the Sioux Falls management unit of the Big Sioux aquifer.
6. The estimated drawdown at Water Right No. 1270-3 is acceptable and should not be an issue.
7. There is a reasonable probability that there will be no adverse impact to existing wells.
8. These applications will not cause withdrawals to exceed the 32,200 ac-ft/yr withdrawal limit for the Sioux Falls management unit of the Big Sioux aquifer, as set by the Water Management Board November 14, 1991 Declaratory Ruling.
9. If approved this permit should contain the same qualifications as Future Use Permit No. 448-3 and Water Rights issued since the Water Management Board's declaratory ruling hearing regarding impairment. The qualification reads:

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

Adam Mathiowetz

Adam Mathiowetz
SD DENR-Water Rights Program

REFERENCES:

- Buhler, K. 2011. Report on Water Permit Application No. 7247-3 Sioux Falls Regional Airport. SD DENR-Water Rights Program, Joe Foss Building, 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.
- “Theis Equation Calculator”. 2012.< <http://www.icalcul8.com/theis.php>>. Accessed: 8 Aug 2012.
- Koch, N.C. 1982. A Digital-Computer Model of the Big Sioux Aquifer in Minnehaha County, South Dakota. Water –Resources Investigations Report 82-4064. U.S. Geological Survey. Huron, SD.
- Lindgren, R.J. and C.A. Niehus. 1992. Water Resource of Minnehaha County, South Dakota. Water-Resources Investigations Report 91-4101. U.S. Geological Survey. Huron, SD.
- Water Rights. 1992. “November 14,1991 Water Management Board Minutes”. S.D. DENR-Water Rights Program. Joe Foss Bldg., Pierre, SD.
- Water Rights. 2012. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.

Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF LINCOLN

ANDY WILCOX

being first duly sworn on his oath says; that the Sioux Valley News is a legal weekly newspaper of general circulation as required by South Dakota Code of Nineteen Hundred Thirty-Nine, and any acts amendatory thereto, printed and published by the Sioux Valley News, Inc., in Canton, in said county and State, and has been such legal newspaper during the time hereinafter mentioned; that he is and during all of said time was publisher of said newspaper and has personal knowledge of the facts stated in this affidavit; that the advertisement headed:

**City of Sioux Falls
DENR Notice**

a printed copy of which is hereto attached, was printed and published in said newspaper for ONE successive week(s) upon the following dates, to-wit:

September 6, 2012

that the full amount of the fees charged for publishing the same to-wit: the sum of \$63.90 inures solely to the benefit of the publishers of said newspaper; that no agreement or understanding for any division of this sum has been made with any other person; and that no part of said sum has been agreed to be paid to any person whomsoever.

Ascribed and sworn to before me this 6th day of
September, 2012.

Notary Public, South Dakota

(Seal)



**My Commission Expires
12/9/2014**

RECEIVED

OCT - 1 2012

**WATER RIGHTS
PROGRAM**

**NOTICE OF WATER PERMIT
APPLICATION NOS. 7361-3, 7362-3, AND 7363-3 FOR THE CITY OF
SIOUX FALLS**

Notice is given that the City of Sioux Falls Water Purification, c/o Greg Anderson, 2100 N. Minnesota Ave., Sioux Falls, SD 57104 has filed the following applications for a water permit.

Application No. 7361-3 proposes to transfer existing diversion authority from Water Rights No. 5710-3 and volume authority from Water Right No. 1347-3 to the well authorized by Water Right No. 395-3. The water source is the Sioux Falls Management Unit of the Big Sioux Aquifer. Water Right No. 5710-3 appropriated 3,220 acre-feet of water annually at a maximum rate of 8.47 cubic feet of water per second (CFS) from six wells located in SE 1/4 SE 1/4 Section 29, NE 1/4 NE 1/4 Section 32; all in T102N-R49W and SE 1/4 NE 1/4 NW 1/4 SE 1/4 Section 6-T101N-R49W. Water Right No. 1347-3 currently appropriated 4,282 acre feet annually at a diversion rate of 5.913 cfs from a well located in SW 1/4 SW 1/4 Section 4, T101N, R49W. The city is requesting to transfer 1.45 cfs of the diversion authority held under Water Rights No. 5710-3 to Well 31 (51 feet deep) located in the SE 1/4 SW 1/4 Section. 20-T102N-R49W authorized by Water Rights No. 395-3 which currently appropriated 2,259 acre feet of water at a diversion rate of 3.12 cfs. In addition, the application seeks to transfer 719 acre feet of authority on a volume basis from Water Rights No. 1347-3 to Water Rights No. 395-3. This application, if approved, will authorize a total appropriation of 2,978 acre-feet of water annually at a maximum diversion rate of 4.57 cfs to Well 31 authorized by Water Rights No. 395-3. No additional water is being appropriated by this application. The transferred diversion rate and volume authority will be deducted from Water Rights Nos. 1347-3 and 5710-3, and priority dates for diversion rate and volume will be retained based on the water right where the diversion rate or volume originated.

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volume authority from Water Right No. 1347-3 to the well authorized by Water Right No. 396-3. The water source is the Sioux Falls Management Unit of the Big Sioux Aquifer. Water Rights Nos. 1347-3 and 5710-3 are described above in Application No. 7361-3. The city is requesting to transfer 1.45 cfs of the diversion authority held under Water Right No. 5710-3 to Well 32 (51 feet deep) located in the NW 1/4 SW 1/4 Section. 20-T102N-R49W authorized by Water Right 396-3 which currently appropriated 2,259 acre feet of water at a diversion rate of 3.12 cfs. In addition, the application seeks to transfer 719 acre feet of authority on a volume basis from Water Right No. 1347-3 to Water Right No. 396-3. This application, if approved, will authorize a total appropriation of 2,978 acre-feet of water annually at a maximum diversion rate of 4.57 cfs to Well 32 authorized by Water Right No. 396-3. No additional water is being appropriated by this application. The transfer diversion rate and volume will be deducted from Water Right Nos. 1347-3 and 5710-3 and priority dates for diversion rate and volume will be retained based on the water right where the diversion rate of volume originated.

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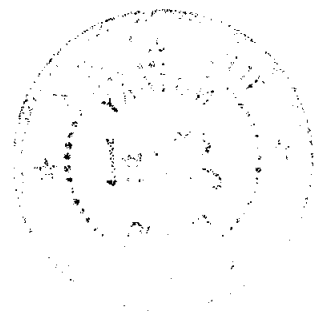
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The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the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

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

Published in the Sioux Valley News
on September 6, 2012 at the total
approximate cost of \$63.90.



Approved: [Signature]
Attorney

RECEIVED

SEP 10 2012

WATER RIGHTS
PROGRAM

CUSTOMER NUMBER:	078340	Argus Leader P.O. Box 677349, Dallas, TX 75267-7349
INVOICE NUMBER:	1392692	
RUN DATES	9/6, 2012	
		AMOUNT DUE: \$114.86

Department of Environment and Natural Resources
Water Rights Program
523 E Capitol Ave., Joe Foss Building
Pierre, SD 57501

DETACH THIS STUB AND RETURN WITH PAYMENT

PAYMENT DUE UPON RECEIPT

WATER PERMIT APPLICATION

AFFIDAVIT OF PUBLICATION-

Customer Number: 078340
Invoice Number: 1392692

Attn: Lila Magedanz

Argus Leader

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

COUNTY OF MINNEHAHA } ss

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

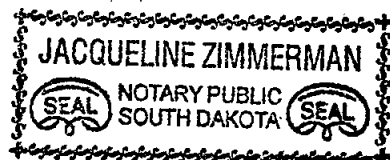
Thursday, the 6 day of September 2012,
_____, the _____ day of _____ 2012,
_____, the _____ day of _____ 2012,
_____, the _____ day of _____ 2012,
_____, the _____ day of _____ 2012,
_____, the _____ day of _____ 2012,
_____, the _____ day of _____ 2012,

and that \$114.86 was charged for publishing the same

Linda Schulte
Subscribed and sworn to before me 9/6/2012

J. Zimmerman
Notary Public, South Dakota

My Commission expires December 22, 2015



City Business

NOTICE OF WATER PERMIT
APPLICATION NOS. 7361-3,
7362-3 and 7363-3

for the City of Sioux Falls
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Published once at the total approximate cost of \$114.86.

1392692 Sept. 6, 2012

*paid by
City of Sioux
Falls*



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

August 28, 2012

Sioux Valley News
PO Box 255
Canton SD 57013

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 7361-3, 7362-3 and 7363-3 to Appropriate Water. Please publish the notice once on September 6, 2012. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is City of Sioux Falls, c/o Greg Anderson, 2100 N. Minnesota Ave., Sioux Falls SD 57104 (Ph # 605-373-6940).

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

August 28, 2012

Argus Leader
PO Box 5034
Sioux Falls SD 57117

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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.

August 28, 2012

City of Sioux Falls
Greg Anderson
2100 N Minnesota Ave
Sioux Falls SD 57104

Dear Mr. Anderson:

Water Permit Application Nos. 7361-3, 7362-3 and 7363-3 for municipal use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Argus Leader printed at Sioux Falls SD (Ph # 605-331-2200) and the Sioux Valley News printed at Canton SD (Ph# 605-296-3181). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and reports on the applications are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

Instruction to Newspaper - Publish the Notice on September 6, 2012. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

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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

APR 12 2013

City of Sioux Falls Water Purifications
2100 N Minnesota Ave
Sioux Falls SD 57104

Dear Sir:

Enclosed are Water Permit Nos. 7361-3, 7362-3 and 7363-3 authorizing construction of your water diversion systems and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

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

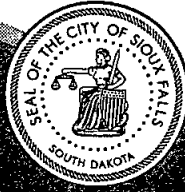
An informational sheet ? *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

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

enclosures

City of Sioux Falls



CITY OF SIOUX FALLS
PUBLIC WORKS

Providing a Better Quality of Life for You!

Administration/GIS

224 West Ninth Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8600 F: 367-4605

Engineering/Real Estate

224 West Ninth Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8601 F: 367-4310

Environmental

1203 North Western Avenue
Sioux Falls, SD 57104-1201
T: 605-367-8276 F: 367-4886

Fleet Management

1000 East Chambers Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8240 F: 367-8239

Household Hazardous Waste Facility

1015 East Chambers Street
Sioux Falls, SD 57104-7200
T: 605-367-8695 F: 367-4993

Landfill

224 West Ninth Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8162 F: 367-8167

Light

2000 North Minnesota Avenue
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-7006 F: 367-8306

Street

1000 East Chambers Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-8255 F: 367-7010

Utility Billing

1201 North Western Avenue
P.O. Box 7401
Sioux Falls, SD 57117-7401
T: 605-367-8131 F: 367-7341

Utility Maintenance

668 West Algonquin Street
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-7020 F: 367-7883

Water Purification

2100 North Minnesota Avenue
P.O. Box 7402
Sioux Falls, SD 57117-7402
T: 605-367-7025 F: 367-8475

Water Reclamation

4500 North Sycamore Avenue
Sioux Falls, SD 57104-9612
T: 605-367-8188 F: 367-8484

August 23, 2016

Eric Gronlund
Water Rights Program, DENR
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

Subject: Well Standby Status

Dear Mr. Gronlund,

The City of Sioux Falls has existing water rights to the Sioux Falls unit of the Big Sioux Aquifer. Water samples from a number of wells in the Big Sioux Aquifer were sampled, analyzed, and were found to have contaminants listed as Perfluoroalkyl substances or PFAS's. This man-made chemical has been used to keep food from sticking to cookware, to make sofas and carpets resistant to stains, to make clothes and mattresses more waterproof, and may also be used in some food packaging, as well as in some firefighting materials such as firefighting foam. Some products that use or used PFAS's include dental floss, non-stick cookware, microwave popcorn bags, pizza boxes, fast food wrappers, outdoor gear with durable water resistant coatings, shampoo, nail polish, facial moisturizers, and eye make-up. Drinking water is only one of many potential sources where a consumer may be exposed to PFAS's.

As a result of the sampling a total of 19 wells have been found to have PFAS contamination. These wells are located in an area south of 60th Street North, east of the Big Sioux River, west of the diversion channel. All wells impacted are within the boundaries of the Sioux Falls Regional Airport.

The Water Division is formally requesting support and approval from the Water Rights Chief Engineer to place the 19 contaminated wells in stand-by until further notice. At this time the Sioux Falls water plant does not have a treatment technology to remove the PFAS contamination from the source. The Water Division also does not have the means or methods required to remove the PFAS contamination from the Big Sioux Aquifer water. The Water Division is actively looking for options to respond to this challenge. At this time nothing has been identified.

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WATER RIGHTS
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The Sioux Falls Water Division is asking to place the following wells and water rights in stand-by.

Well Number	Water Right	Well Number	Water Right
3	256-3	20	269-3
4	257-3	21	270-3
10	259-3	23	272-3
11	260-3	24	273-3
12	261-3	27	276-3
13	262-3	28	298-3
14	263-3	29	299-3 – 7363-3
15	264-3	64	5710-3
17	266-3	65	5710-3
18	267-3		

If you have any questions or comments please contact me at 605-373-6940

Sincerely,



Greg Anderson
Water Superintendent
Sioux Falls Water Division

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AUG 26 2016

WATER RIGHTS
PROGRAM



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

August 29, 2016

Greg Anderson, Water Superintendent
Sioux Falls Water Division
PO Box 7402
Sioux Falls SD 57117-7402

Dear Mr. Anderson:

The Department of Environment and Natural Resources (DENR) is in receipt of your letter dated August 23, 2016. The letter explains that 19 existing wells are to be placed on standby status due to contamination. The city intends for the wells to be held on standby until treatment technology becomes available to treat or remove the contaminant from the source.

Administrative Rule of South Dakota 74:02:01:37.02 found below provides for exceptions to the nonuse of water. This includes water supply maintained for standby purposes provided the water diversion works are maintained in working condition for immediate use upon demand.

74:02:01:37.02. Exceptions to nonuse of water. A water supply maintained for either fire protection or standby purposes, or both, is not nonuse of a water permit, right, or vested right if the water diversion works are maintained in working condition for immediate use upon demand. Works to divert appropriated water must include wells equipped with functional motors, pumps, and appurtenances to convey water or functional motors, pumps, and appurtenances to convey water from a surface source, as applicable. Wells that are capped, sealed, or plugged are not standby or fire protection works.

Your letter will be included in the administrative record for each water right associated with these wells.

Sincerely,

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

File Nos. 7361-3, 7362-3, 7363-3, 5710-3, 1347-3, 299-3, 395-3, 396-3**Water Rights Program - DENR
Conversation File Documentation**

NAME OF PERSON OR FILE: Water Permits for city of Sioux Falls

ADDRESS: 2100 No Minnesota Avenue, Sioux Falls SD COUNTY: Minnehaha County

DATE: October 31, 2012 TELEPHONE:

RE: documentation of transfer of water rights

Water Permit Application Nos. 7361-3, 7362-3 and 7363-3 were approved to transfer either diversion rate authority from Water Right No 5710-3 or volume authority from Water Right No. 5710-3 or Water Right No. 1347-3 to the existing wells under Water Right Nos. 299-3, 395-3 and 396-3. This file documentation is intended to track the new quantity of water remaining in the various water rights.

The decrease in Water Right Nos. 5710-3 and 1347-3 is as follows:

Water Right ⇒	5710-3 (cfs)	5710-3 (ac-ft)		1347-3 (cfs)	1347-3 (ac-ft)
Amount prior to applications	8.47 cfs	3,220 ac-ft		5.913 cfs	4,282 ac-ft
7361-3	1.45 cfs	0		0	719 ac-ft
7362-3	1.45 cfs	0		0	719 ac-ft
7363-3	1.45 cfs	719 ac-ft		0	0
Amount Remaining after transfer	4.12 cfs	2,501 ac-ft		5.913 cfs	2,844 ac-ft

(continued)

Increases to diversion authority from wells authorized by Water Right Nos. 299-3, 395-3 and 396-3

Water Right ⇒	299-3(cfs) & 7363-3	299-3 (ac-ft)	395-3 (cfs) & 7362-3	395-3 (ac-ft)	396-3 (cfs) & 7361-3	396-3(ac-ft)
Amount prior to applications	3.12 cfs	2259 ac-ft	3.12 cfs	2259 ac-ft	3.12 cfs	2259 ac-ft
7361-3			1.45 cfs	719 ac-ft		
7362-3					1.45 cfs	719 ac-ft
7363-3	1.45 cfs	719 ac-ft				
Amount Authorized from wells	4.57 cfs	2,978 ac-ft	4.57 cfs	2,978 ac-ft	4.57 cfs	2,978 ac-ft

NAME: Eric Thompson

**Permit No. 7363-3, 299-3, & 5710-3
Big Sioux River - Water District**

Contact Person & Address: **Greg Anderson, 2100 N Minnesota Ave, Sioux Falls SD 57104**

Report of Examination of Works

On, **September 21, 2017**, I made a thorough examination of the water use system constructed by **the City of Sioux Falls** holder of Permit No. **7363-3**, bearing the priority of **September 17, 1956** authorizing the diversion of **3.12** cu. ft. per second and annual volume of **2259** acre-feet (from No. 299-3), and the priority of **September 4, 1992** authorizing the diversion of **1.45** cu. ft. per second and annual volume of **719** acre-feet (from No. 5710-3) of the waters of **groundwater (Big Sioux Aquifer - Sioux Falls Management Unit)** for **municipal use** purposes, in **Minnehaha** County.

The system is in the following condition **good**. The point of diversion is located from the **SW corner of Sec 32 T102N-R49W 2320 feet east and 2560 feet north** with a latitude of **43.59428** and a longitude of **96.74228** as determined using **GPS**. The works are capable of diverting and conveying to the place of use **4.57** cu. ft. per second of water and annual volume of **2,978** acre-feet which is to be used for **municipal use**. Water has been put to beneficial use and the license should be issued for **4.57** cfs.

Review of Permit Qualifications and Regulations:

- 1) Special qualifications to permit being abided by **yes**
- 2) All structures, wells and lands on map **yes**
- 3) Exceptions to compliance are: **none**

Report On the Specifics of the System

Diversion Point Information:

Well Information:

- 1) **Ranney coffer well**
- 2) No. of Wells **1**
- 3) Depth(s) **454.5** feet
- 4) Well schematic is available **yes**

Casing:

- 1) Diameter **NA** inches
- 2) Length **45.5** feet
- 3) Type **Concrete**

Screen: collection lateral No 1A

- 1) Type **Stainless Steel**
- 2) Length **111** feet
- 3) Static water level **19.23** feet

Screen: collection lateral No 2A

- 1) Type **Stainless Steel**
- 2) Length **112** feet
- 3) Static water level **19.23** feet

Screen: collection lateral No 3A

- 1) Type **Stainless Steel**
- 2) Length **112** feet
- 3) Static water level **19.23** feet

Screen: collection lateral No 4A

- 1) Type **Stainless Steel**
- 2) Length **112** feet
- 3) Static water level **19.23** feet

Pump:

- 1) Make **Pamona**
- 2) Model **U5585 Turbine**
- 3) Size **NA**
- 4) Capacity **2051** GPM

Motor:

- 1) Make **US Electrical**
- 2) Model No. **TP444**
- 3) Horsepower rating **100** hp

DISTRIBUTION LINES OR CANALS:

1) Type municipal distribution system

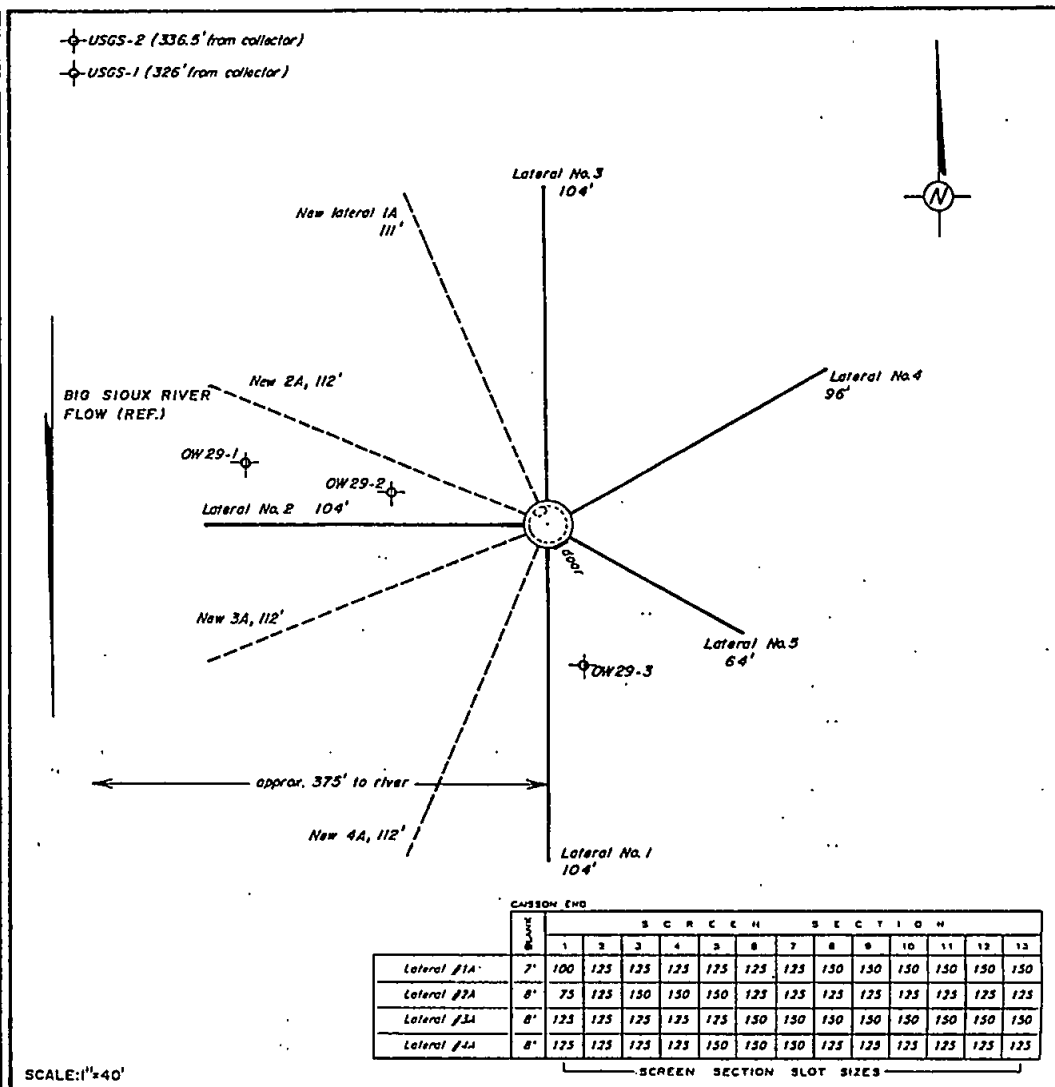
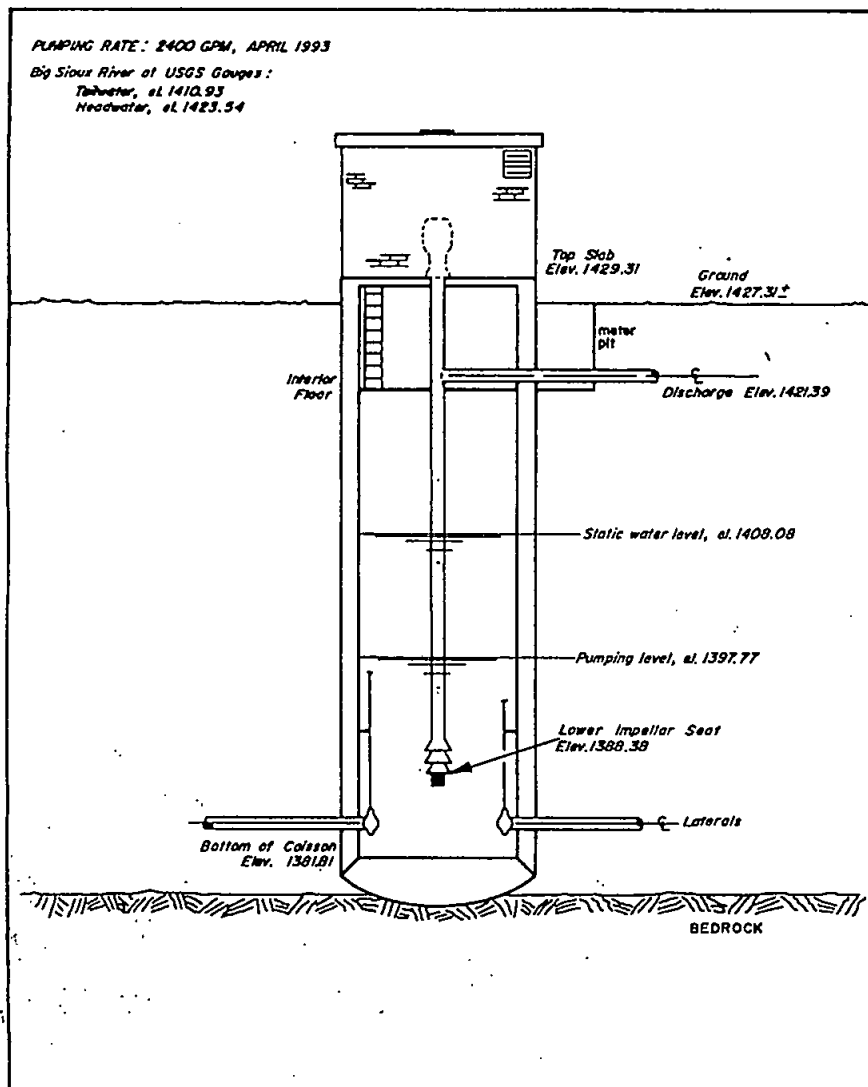
Comments: none



Mark D. Rath
Natural Resources Engineer III
DENR, Water Rights Program

September 26, 2017

FIGURE 4



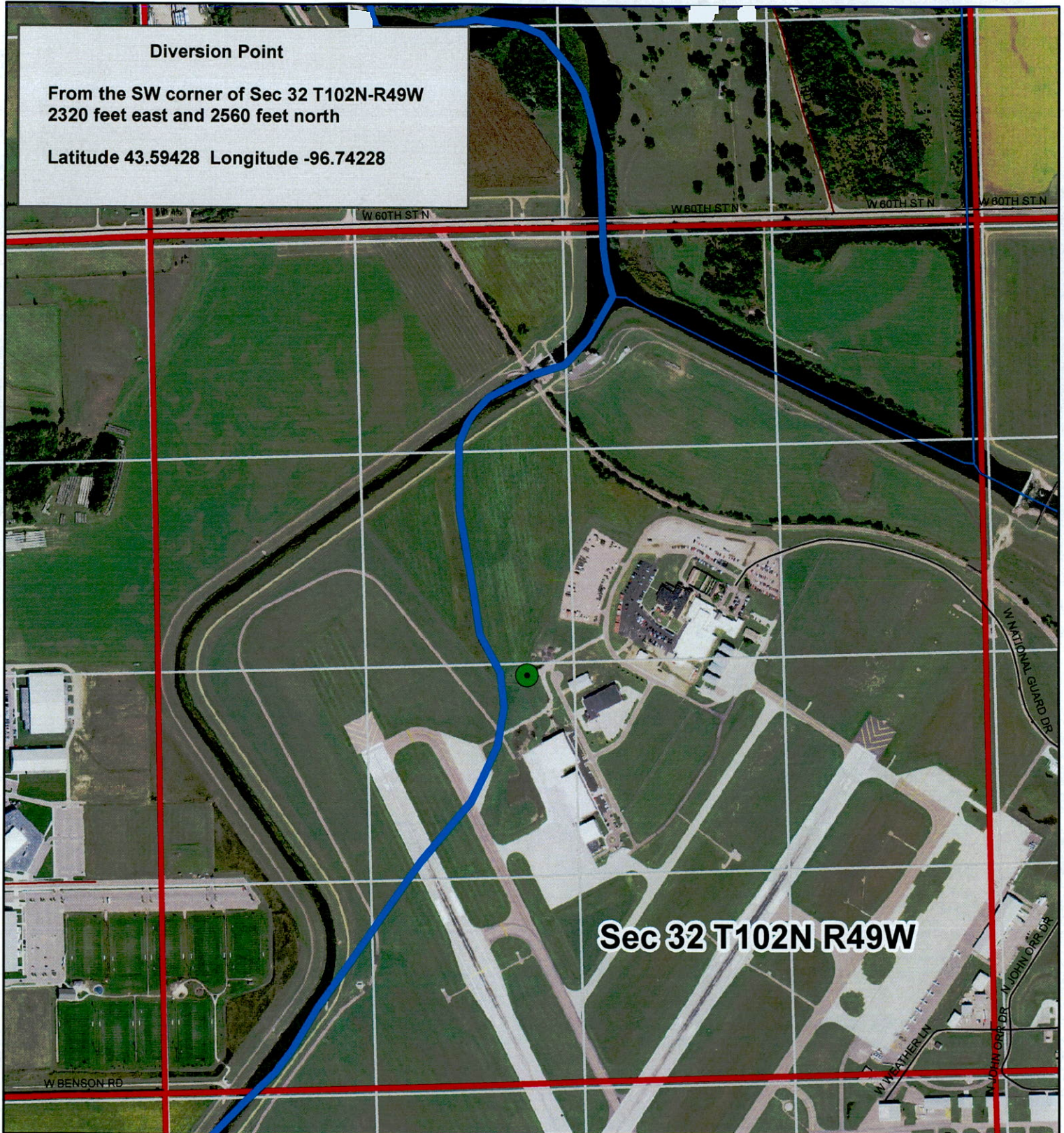
SECTION & PLAN VIEWS
RANNEY WELL NO. 29
Sioux Falls, South Dakota

No 7363-3
SF Well No 29

Diversion Point

From the SW corner of Sec 32 T102N-R49W
2320 feet east and 2560 feet north

Latitude 43.59428 Longitude -96.74228



Sec 32 T102N R49W



0 290 580 1,160 1,740 2,320 2,900 Feet

Mark D. Rath
Mark D. Rath
Natural Resources Engineer
SD DENR -Water Rights Program

September 26, 2017

7363-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

SEP 06 2018

Greg Anderson
City of Sioux Falls
2100 N Minnesota Ave
Sioux Falls SD 57104

RE: Water Right Nos. 299-3, 395-3, 396-3, 1347-3, 5710-3, 7361-3, 7362-3 & 7363-3

Dear Mr. Anderson:

Enclosed are Water License Nos. 7361-3, 7362-3, 7363-3 and Reissued Water License No. 1347-3. They are the final water right documents completing the process of obtaining Water Rights. Included with the licenses for Nos. 7361-3, 7362-3 and 7363-3 are maps prepared by the staff engineer who conducted the field investigation.

Upon licensing, the applicable portions of Water Right Nos. 299-3, 395-3 and 396-3 were incorporated into Nos. 7361-3, 7362-3 and 7363-3 in their entirety. Portions of Nos. 1347-3 and 5710-3 were also incorporated into the licenses.

With respect to Water Right No. 5710-3, three of the wells are no longer in use and have been plugged. Our intent is to schedule that portion of the water right for cancellation consideration. Once the Board takes action, the water license will be reissued to reflect the remaining wells and associated diversion authority.

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

Sincerely,

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

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7363-3

(1) The City of Sioux Falls, 2100 N Minnesota Ave, Sioux Falls SD 57104 made Application No. 7363-3, June 12, 2012 for a water permit to transfer existing diversion authority from Water Right No. 5710-3 to the well authorized by Water Right No. 299-3 from the Sioux Falls Management Unit of the Big Sioux Aquifer, Minnehaha County, South Dakota for municipal purposes. Permit No. 7363-3 was approved September 17, 2012 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before September 17, 2017 and for the application to beneficial use of water on or before September 17, 2021.

Water Rights associated with this water system:

- Water Right No. 299-3 – with priority date of September 17, 1956, authorizes 2,259 acre-feet volume authority at a diversion rate of 3.12 cubic feet of water per second (cfs) from one well;
- Water Right No. 5710-3 – with priority date of January 4, 1989, transfers a diversion rate of 1.45 cfs and 719 acre-feet volume authority.

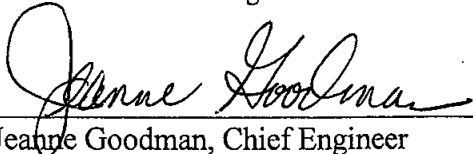
The applicable portions of Nos. 299-3 and portions of Water Right 5710-3 are incorporated into Water License No. 7363-3 (No. 5710-3 will be reissued to reflect remaining diversion authority).

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Water Right No. 7363-3 is issued a license, bearing priority dates of September 17, 1956 (3.12 cfs & 2,259 AF) and January 4, 1989 (1.45 cfs & 719 AF) to appropriate a total of 4.57 cubic feet of water per second with an annual volume of 2,978 acre-feet from one well – Sioux Falls Management Unit of the Big Sioux Aquifer for municipal use purposes.

The diversion point is located: Well No. 29 – 2,320 feet east and 2,560 feet north of the SW corner of Section 32, T102N-R49W (NE ¼ SW ¼).

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Incorporated Water Permit No. 7363-3 including the following qualifications:

- If development and pumping of the well authorized by Water Right No. 299-3 results in impairment of adequate domestic wells or adequate wells having prior water rights, reduction of withdrawals or mitigation may be necessary. SDCL 46-1-5(1), in giving preference to domestic use over appropriative rights does so without regard to whether lowered ground water levels are due to drought, the location of the domestic wells in the aquifer, or thickness of the water bearing sands and gravel; subject to compliance with minimum requirements for adequate wells as defined by Board Well Construction Standards, Chapter 74:02:04.
- Water Permit No. 7363-3 and Water Right No. 299-3, combined, authorizes a total annual diversion of 2,978 acre feet of water at a rate of 4.57 cubic feet of water per second.
- The City of Sioux Falls shall report to the Chief Engineer annually the amount of water withdrawn from the Sioux Falls Management Unit of the Big Sioux Aquifer.



Jeanne Goodman, Chief Engineer
Water Rights Program

Department of Environment and Natural Resources

SEP 06 2018

date

