

WATER PERMIT NO. 2549-2

Name of Applicant: City of Custer

Address: 622 Crook St, Custer SD 57730

Phone: 605 673-4824

Amount of Water Claimed: 1.0 cfs

Total Acres: NA

Source of Water Supply: groundwater

Water to be used for: municipal

County: Custer

Type of Waste Disposal System:

Location:

PRIORITY

Date Received: 1-24-05

Application/License Fee: \$375

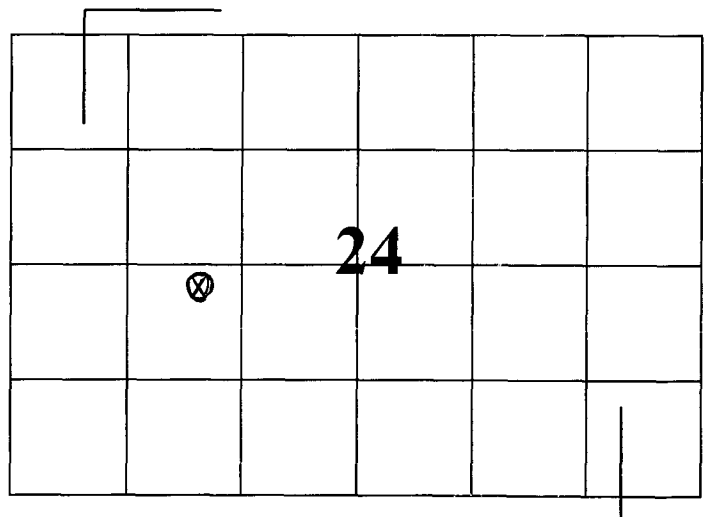
Corrected Application Received:

Period of Annual Use: January 1 – December 31

Remarks: Same well as originally permitted under cancelled Water Permit No. 1963-2

Diversion Point: NW ¼ SW ¼ Sec 24-T3S-R4E

Land to be Irrigated:



Depth of Well: 500 feet deep

Well Driller: : Raby Drilling

Remarks:

Type of Map: plat

Prepared by: E Dallas Wasserburger, PE

Reviewed and the Number Assigned on: 1-25-05

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

Mail to:
Water Rights Program
Joe Foss Building
523 E. Capitol
Pierre, SD 57501-3181
(605) 773-3352

No. 2549-2 (office use only)
Hydrologic Unit 10120109
Basin Upper Cheyenne
Newspaper Custer Co. Chronicle, Custer

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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. _____

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

- Name of Applicant City of Custer City Phone (605) 673-4824
 (check one) ☒ Owner ☐ Tenant/lessee
 Mailing Address 622 Crook Street Custer State SD 57730
 (Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 1.0 *CFS or 450 **GPM ***AF
 (*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply Precambrian Formation - schists, quartzite, and pegmatite
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Custer
 Well is located S82°44'E a distance of 1072' from the West 1/4 Corner of Section 24, T3S, R4E, BHM,
 Custer County, SD. (NW1/4 SW1/4)
- County or counties where water will be used Custer County
- Annual period during which water is to be used All year Jan 1-Dec 31
- 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)

Well No. 11 was originally permitted under Water Right Permit No. 1963-2. This permit was cancelled in 2002 because of non-use. The city is applying for a new Water Right Permit to complete this well and place it into service for the beneficial use of the City of Custer City. This project also consists of the construction of the City's fourth Iron removal plant and replacing 4-inch mains with 6- and 8- inch mains.

STATE OF SOUTH DAKOTA)

County of Custer)

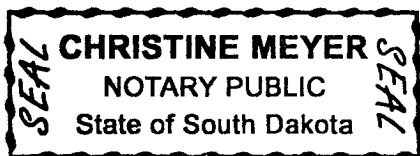
SS

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

I, Harold Stickney, Mayor, Custer, 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 Harold D. Stickney

Subscribed and sworn to before me this 21st day of January 2005



Christine Meyer
Notary-Public signature

**SOUTH DAKOTA
WATER PERMIT NO. 2549-2**

Date of first receipt of application January 24, 2005.

The Water Management Board approved Water Permit No. 2549-2 on May 4, 2005 for the City of Custer, 622 Crook Street, Custer SD 57730 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. 2549-2 appropriates 1.0 cubic feet of water per second from one existing well completed into the Precambrian Rock aquifer (430 feet deep) located in the NW 1/4 SW 1/4 Section 24-T3S-R4E.
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 from which applicant may claim right is January 24, 2005.
5. One-fifth of the construction is to be completed on or before November 4, 2007.
6. All construction is to be completed on or before May 4, 2010.
7. Water is to be put to beneficial use on or before May 4, 2014.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

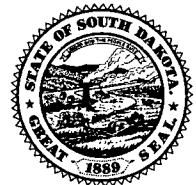
QUALIFICATIONS

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The city of Custer shall report to the Chief Engineer annually the amount of water withdrawn from the Precambrian Rock.

WATER MANAGEMENT BOARD

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

JUL 11 2005
date



(type or print in ink)

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1. Well Information - Proposed Construction

- a) Drill Hole Diameter 11-5/8" Depth 500'
- b) Casing Type Steel (0 to 200') Diameter 12-3/4" OD Thickness .375"
- c) Screen Type N/A Diameter _____ Thickness _____
- d) Gravel Pack N/A Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material 200"
- f) Depth to Water (ground surface to water level) Approximately 30'
- g) Distance to nearest existing domestic well:
On applicants property Approximately 1500' On property owned by others Approximately 900'

2. Wastewater Disposal System Information

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

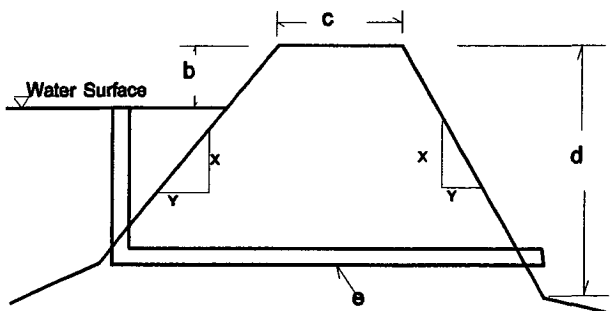
3. Dugout Information

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

4. Water Storage Dams

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

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



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

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WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date January 25, 20 05

RECEIVED OF City of Custer, 622 Crook Street, Custer SD 57730

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	325	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. _____	50	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	375.00

No.

000000

By

Darlene Allen

Chief Engineer

gm

MAP TO ACCOMPANY WATER RIGHT APPLICATION

PROPOSED WELL IS LOCATED IN THE CUSTER ATHLETIC FIELD, FORMERLY CUSTER CITY PARK, IN THE SOUTHWEST 1/4 OF SECTION 24, T3S, R4E, B.H.M. CUSTER COUNTY, SOUTH DAKOTA.

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WATER RIGHTS
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PROPOSED WELL LOCATION

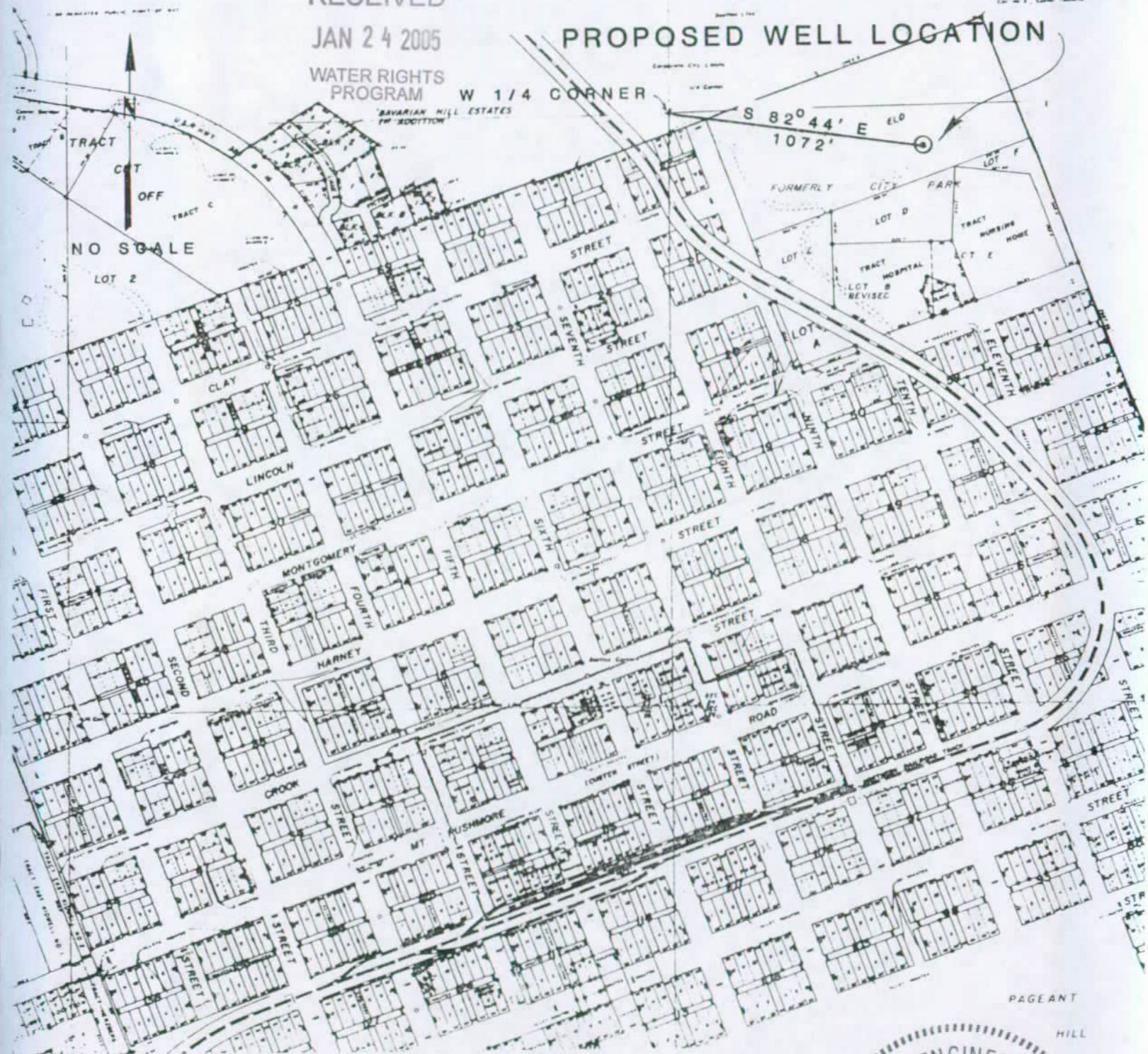
W 1/4 CORNER

BAVARIAN HILL ESTATES
1/4 ADDITION

S 82° 44' E
1072'

NO SCALE

LOT 2

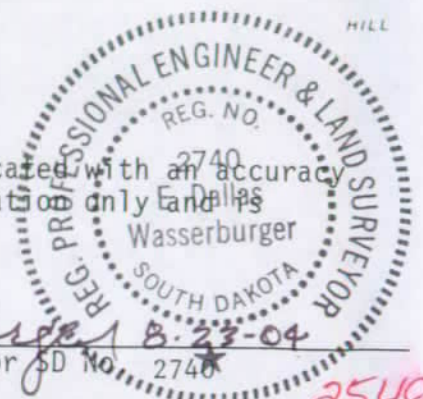


PAGE ANT

HILL

The location of the proposed well, as shown on this map, was located with an accuracy sufficient to meet the requirements of this water permit application only and is intended for no other use.

Edward Wasserburger
Registered Land Surveyor SD No. 2740



2549-2

JOHN PAUL GRIES

Consulting Geologist

238 ST. CHARLES STREET
RAPID CITY, SOUTH DAKOTA

Custer Municipal Well No.

Drilled 1986 by Raby Drilling Co., Edgemont, SD

NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T. 3 S., R. 4 E.

Samples examined by J. P. Gries March 1986

- 0 - 5 surface and weathered mica schist
- 10 schist, mica, weathered; some surface gravel
- 15 schist, mica, dark gray
- 20 schist, dark gray with muscovite and biotite mica, fresh;
much caved surface rock
- 25 schist, as above, consisting of quartz, feldspar, two micas
- 35 schist, same but slightly iron-stained
- 40 schist, same with traces of pegmatite
- 45 schist, dark gray, with some iron staining along fractures
- 60 schist, two micas, dark gray, fresh
- 65 schist, same with probable thin quartz veins
- 75 schist, same, slightly iron stained
- 85 schist, same, no staining
- 95 schist, medium gray, weathered
- 100 schist and traces of pegmatite, both weathered
- 15 schist, with both muscovite and biotite, fresh, dark gray
- 20 schist, medium gray, slightly iron stained
- 25 schist, fresh
- 30 schist, same, with some new pegmatite
- 35 pegmatite, probably the mica zone
- 40 schist, dark gray
- 45 schist, same; trace of pegmatite
- 50 schist, dark gray, with aggregates of biotite mica
- 60 no sample
- 65 schist, dark gray, with two micas
- 70 pegmatite, white, consisting of quartz, muscovite, feldspar
- 75 same and back into schist
- 80 schist, dark gray
- 85 schist and pegmatite
- 90 schist, dark gray
- 95 pegmatite, white, as above
- 200 no sample
- 05 pegmatite white, with quartz, feldspar, two micas, tourmaline
- 10 pegmatite, same, slightly ironstained
- 15 pegmatite, same slightly stained
- 25 schist, dark gray, with two micas, garnets, pyrite
- 30 schist, same but less pyrite
- 35 schist, same, and back into white pegmatite
- 40 pegmatite, white
- 55 schist, dark gray, with garnets and some pyrite
- 60 schist, same, slightly iron stained
- 65 schist, same, with trace pegmatite

265 - 275 pegmatite, white
 80 pegmatite, mostly feldspar
 85 back into schist
 90 pegmatite, mostly feldspar
 95 schist, medium to dark gray, garnets
 300 schist, same and some new feldspar
 05 pegmatite, white, mostly quartz, muscovite, and feldspar
 10 schist, dark gray, garnets; trace feldspar
 20 schist, very dark gray, garnets
 25 schist, similar but few garnets
 30 schist, dark gray, slightly garnetiferous
 35 pegmatite, slightly iron-stained, white
 40 pegmatite, same, and back into schist, slightly iron stained
 45 schist, dark gray, slightly iron stained
 50 schist, and back into white pegmatite
 55 pegmatite, white, mostly feldspar
 75 pegmatite, same
 80 pegmatite with high percentage muscovite
 90 pegmatite, mostly feldspar
 95 pegmatite, white
 400 pegmatite, white, trace of schist
 05 schist, dark gray; trace of pegmatite
 10 pegmatite, white
 15 schist, light gray, slightly iron stained.
 20 pegmatite, white, mostly feldspar
 25 pegmatite and light gray schist (may be caved)
 30 pegmatite, mostly feldspar, slightly iron stained
 40 pegmatite, mostly feldspar
 45 pegmatite, mostly spar, slightly iron-stained
 50 pegmatite, white
 55 pegmatite, slightly iron stained
 60 pegmatite, white, low mica
 65 pegmatite, white, trace schist
 70 schist, light gray, micaceous; trace pegmatite
 75 schist, dark gray, no garnets
 500 schist, dark gray, two micas, garnets
 05 schist, with quartz, biotite, muscovite, garnets, feldspar
 10 schist, same but with fewer garnets
 25 schist, dominantly muscovite and quartz
 35 schist, with muscovite and biotite and garnets
 45 schist, high percentage of muscovite
 70 schist, two micas
 75 schist, same, iron stained
 80 pegmatite, white
 85 schist, with two micas
 600 pegmatite, white
 10 back into two mica schist
 40 pegmatite, white, coarse
 50 mixed pegmatite and mica schist
 720 schist, two mica, very fine grained
 870 schist, same TOTAL DEPTH

DRILLERS REPORT FOR MONITOR WELL #3
WEST OF TEST WELL FOR CITY OF CUSTER:

SET UP AND DRILLED 8" HOLE 0 TO 10FT. SET IN 10FT. PVC. SEWER PIPE FURNISHED BY THE CUSTER WATER DEPT. DRILLED UNDER SURFACE CASEING TO 480FT. WITH 4 OM-7 BUTTON BITS. HOLE 0 TO 300FT. MODERATE DRILLING. 300FT. TO 440FT. EXTREMELY HARD AND SLOW. 440FT. TO 475FT. MODERATE. 475FT. TO 480FT. SOFT SAND. HOLE WAS SCHEDULED TO GO TO 500FT. BUT DRILLING STOPPED AT 480FT. DUE TO SAND ZONE THAT IS FLOWING INTO HOLE. THIS HOLE HAS A STRONG FLOW OF WATER APROX. 300 GPM. FROM 250FT. TO 300FT. THE IRON LEVEL IN THE WATER IS LOWER THAN THE TEST WELL, AND THE HOLE IS HARDER THAN THE FIRST TEST HOLE, WITH NO SAND COMMING IN WITH THE WATER. I RECOMMEND THIS HOLE TO BE COMPLETED INTO A WELL INSTEAD OF THE FIRST TEST HOLE DRILLED, BECAUSE OF THESE CHANGES. MONITORING OF FIRST TEST AND SECOND MONITOR HOLES WAS DONE ON A DAILY BASIS WHILE DRILLING WITH AIR, AND DRAW DOWN IN HOLES ARE LOGGED IN THIS REPORT.

WHILE AIR DRILLING BELOW 250FT. IN THIS HOLE 300 GPM. WAS MEASURED AT THE SURFACE. APROX. 1,500,000 GAL. WATER WAS PULLED FROM THIS WELL WHILE DRILLING WITH NO SUBSTANTIAL DRAW DOWN IN OTHER HOLES.

2,430,000 gal

THIS IS PROBABLY THE TEST HOLE THAT WAS LATER
COMPLETED ^{INTO} PRODUCTION
WELL FOR 1963-2
KB 3/22/05

WATER PERMIT APPLICATION NO. 2549-2
CITY OF CUSTER
MARCH 22, 2005

Water Permit Application No. 2549-2 proposes to appropriate 1.0 cubic feet of water per second (cfs), from one existing well completed into the Precambrian Crystalline Rock aquifer (480 feet deep) located in the NW¼ SW¼ Sec. 24, T3S-R4E, Custer County. The water is for municipal use.

AQUIFER: Precambrian aged Crystalline Rock (CRSL)

Geology and Aquifer Characteristics:

The crystalline rock in this area consists of metamorphosed greywacke (mica schist and impure quartzite), (Strobel and others, 1999). The crystalline rock aquifer is exposed at the surface throughout this area, except where it is covered by alluvium along French Creek and its tributaries (Strobel and others, 1999). The aquifer is under unconfined conditions and the static water levels of wells in this area are probably at about the same elevation as French Creek. Groundwater is derived primarily through joints, fractures and foliation within the rock. The distribution, orientation and interconnection of these zones of secondary porosity and permeability are unpredictable, and the aquifer characteristics are site specific and highly variable. Recharge to the crystalline rock occurs through infiltration of precipitation and steamflow losses.

The Water Rights Program monitors an observation well completed into the Crystalline aquifer 364 feet from this existing well (Water Rights, 2005b). Water levels in the observation well fluctuate nearly 50 feet in response to varying climatic conditions, rising during wet years and gradually declining water levels during dry years, see figure 1.

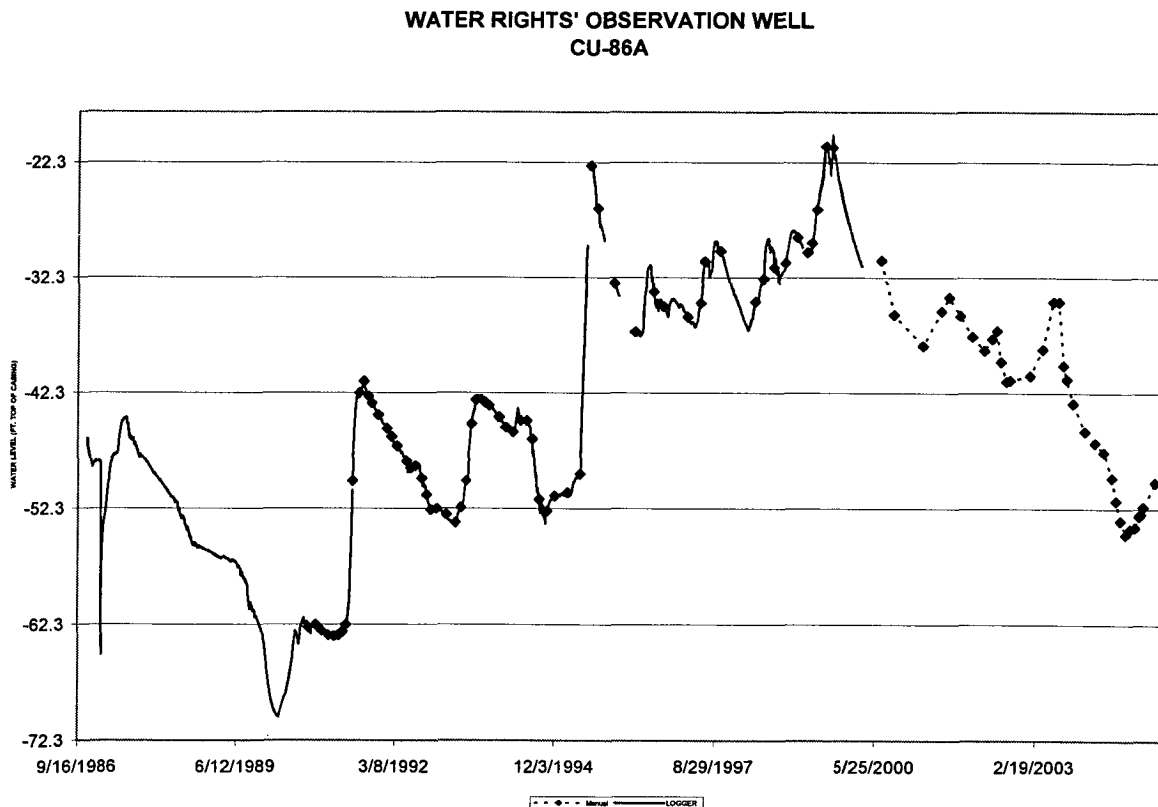


Figure1. Hydrograph of Crystalline aquifer observation well located 364 feet from 2549-2.

There is a history of controversy over water rights in the Custer Area. Approval of the original permit that authorized diversions from this well (Water Permit No. 1963-2) was a contentious issue that resulted in qualifications on the permit requiring: (a) installation of monitoring wells; (b) restrictions regarding the production well construction; (c) performing an aquifer test; (d) conducting a public meeting relaying aquifer test results; (e) analyzing the water; (f) adhering to the “standard” well interference clause; and (g) completing an inventory of all domestic wells within a one-half mile radius of the production well.

An aquifer test was conducted on the well that is to be used to supply this appropriation from February 6, 1987 through February 12, 1987. The pumping test answered a number of questions about the aquifer in this area. Analysis of the pumping test data suggests the aquifer has fairly high permeability and probably has low porosity. The test identified an aquifer with a relatively high transmissivity (around 20,000 to 50,000 gpd/ft) and a relatively low storativity (around 10^{-4} to 10^{-6}). The specific capacity of the well was identified to be 3.36 gpm/ft at a rate of 400 gallons per minute. The drawdown in the production well was 120 feet and less than 20 feet in the three observation wells located 162 feet, 312 feet and 364 feet, respectively, from the production well. The test showed an instantaneous response to pumping, regardless of the well depth and the distance of the monitoring wells from the production well. It was projected that drawdown from this well, assuming a pump rate of 300 gpm, pumping eight hours per day for 180 days, would extend approximately 1200 feet from the well.

The water sample analysis for the production well and area domestic wells identified nitrate and total coliform issues in the area and the well was capped. Water Right No. 1963-2 was cancelled in 2002 for forfeiture.

Review of Existing Water Rights:

There are a number of domestic wells completed into the crystalline rock in this area and there are three Water Rights/Permits, not belonging to the City of Custer, appropriating water from the aquifer within approximately one mile of this site. The appropriations include:

PERMIT NO	NAME	STATUS	USE	CFS	ACRES
2024-2	CUSTER SCHOOL DIST 16-1	LC	IRR	0.02	1.50
2071-2	HILLS MATERIALS COMPANY	LC	IND	0.10	
2524-2	LPS INC	PE	COM	0.10	

Table 1. Groundwater appropriations within approximately one mile of 2549-2

In addition, the Water Management Board denied an application (No. 2299-2) made by Custer School Dist 16-1 that would have increased the diversion rate authorized by Water Right No. 2024-2. The permit was denied based on public interest concerns within the city limits of Custer. The Water Management Board had previously denied Water Permit Application No. 2204-2, Flintstone Bedrock City, Inc., and subsequent to considering Application No. 2299-2 denied Water Permit Application No. 2396-2, Flintstone Bedrock City, Inc. These applications were denied because the Board determined that it would not be in the public interest to approve irrigation permits within the City that would not be subject to future City water restrictions.

The nearest groundwater appropriation, No. 2024-2, Custer School District 16-1, is located 312 feet from the well to be used by 2549-2, (it was actually constructed as a monitoring well for the

pumping test). Water levels in the well used to supply Water Right No. 2024-2 will be affected by this proposed appropriation. There was approximately 19 feet of drawdown measured at the Custer School District well after 62 hours of pumping the City's well at a rate of 400 gpm, during the aquifer test.

In this geohydrologic setting, it is not clear exactly what constitutes an "adverse impact" on an existing well. Although a specific definition of an adverse impact does not exist, ARSD 74:02:04:20(6) defines an adequate well as a well constructed to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer. An adversely impacted domestic well has been defined by 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 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. Since the porosity of the Crystalline aquifer is low, (0.03-0.10, (Driscoll and others, 2002)), 20 feet of saturated thickness may not be sufficient for a well to be a reliable water supply. In other words, in this hydrogeologic setting, wells (domestic or appropriative right wells) that are "adequate" by definition may not be reliable water supplies. Under these circumstances it can be argued that, any measurable interference (drawdown), from a competing well is actually an adverse impact. However, with natural water level fluctuations in this aquifer measured in excess of 50' at the Water Rights' Observation well; drawdown of a few feet could be considered insignificant for most low yield wells, and therefore not "adverse impacts".

The well that supplies Water Right No. 2024-2 is an adequate well, 140 feet deep, purportedly capable of producing in excess of 100 gpm. The static water level in the well has probably ranged from around three feet below grade in 1999 to around 52 feet below grade in 1990. The Custer School District well appears to be a reliable water supply for the appropriation (0.02 cfs (9 gpm)). It is unlikely that interference from Water Permit Application No. 2549-2 would affect the reliability of the well used to supply water to Water Right No. 2024-2. However, if the dependability of the well used to supply Water Right No. 2549-2 is diminished by the City of Custer's pumping, and the school district's pump is near the bottom of the hole, the interference may be considered an adverse impact. In other words since the school district well is adequate, and the well yield exceeds the diversion rate authorized by Water Right No. 2024-2, the City of Custer, in theory could be required to limit pumping from their well to protect the Water Right No. 2024-2. This is without regard to the fact the City of Custer well is 340 feet deeper than the Custer School District well. Although an adverse impact is less likely if the two wells are the same depth, the Custer School District is probably not obligated to deepen their well to accommodate interference (drawdown) from the deeper City of Custer well that may affect the district well's ability to supply the amount appropriated by the Water Right.

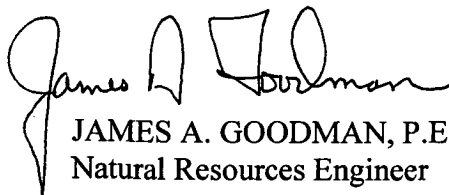
Conclusions:

1. The Precambrian aged Crystalline Rock is a viable aquifer in this area.
2. The aquifer is unconfined and interference is not expected to be a concern.
3. This is an application to divert water from an existing well. The completion report on file for the well indicates it was constructed in accordance with the SD Well Construction Standards.



KEN BUHLER
Natural Resource Engineer

approved by:



JAMES A. GOODMAN, P.E.
Natural Resources Engineer

REFERENCES:

- Driscoll, D.G., Carter J.M., Williamson, J.E., and Putnam, L.D., 2002, Hydrology of the Black Hills Area, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 02-4094, 1503 p.
- Strobel, M.L., Jarrell, G.J., Sawyer, J.F., Schleicher, J.R., Fahrenbach, M.D., 1999, Distribution of Hydrogeologic Units in the Black Hills Area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-743, 3 sheets, scale 1:100,000
- Water Rights, 2005a, Domestic Well Logs, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2005b, Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2005c, Water Permit/Right Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2549-2, City of Custer**

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. 2549-2, City of Custer, c/o Mayor Harold Stickney, 622 Crook Street, Custer SD 57730.

The Chief Engineer is recommending APPROVAL of Application No. 2549-2 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 qualification:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The city of Custer shall report to the Chief Engineer annually the amount of water withdrawn from the Precambrian Rock.

See report on application for additional information.

Garland Erbele, Chief Engineer
April 1, 2005

NOTE: The Custer School District well authorized by Water Right No. 2024-2 is located approximately 312 feet from the well proposed to be used under the application. The school well, which is considered an adequate well, will have senior priority. The city may be required to limit pumping from their well to protect the school's well in the event of an adverse impact.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
 County of Custer)

I, Norma Royache

certify that the attached printed Notice was taken

from the Custer County Chronicle

printed and published in Custer

County of Custer and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

April 6, 2005

April 13, 2005

Cost of Printing 55.80

Norma Royache
 (Signature)

Bookkeeper
 (Title)

April 13, 2005
 (Date Signed)

RECEIVED

APR 18 2005

**WATER RIGHTS
 PROGRAM**

NOTICE OF HEARING
ON APPLICATION NO. 2549-2 TO
APPROPRIATE WATER

Notice is given that City of Custer, 622 Crook St, Custer SD 57730 has filed an application for a water permit to appropriate 1.0 cubic feet of water per second from one existing well completed into the Pre-Cambrian Rock aquifer (430 feet deep) located in the NW 1/4 SW 1/4 Section 24-T3S-R4E. The water is for municipal use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2549-2 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.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to 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 22, 2005. 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.

The Water Management Board will consider this application at 10:00 A.M., May 4, 2005 in the Matthew Training Center, Foss Building, 523 E Capitol Ave., Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. The May 4, 2005 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by April 22nd, 2005.

Any hearing may be an adversarial proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by April 22, 2005, at the above Water Rights Program address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

Since this application does not involve a monetary controversy in excess of \$2,500.00 or termination of a property right in accordance with SDCL 1-26-18.3, the Chief Engineer has determined this contested case may not be referred to the Office of Hearing Examiners. If any party disagrees with this determination, the Chief Engineer shall be notified by April 22, 2005.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

#116, 4/6/13



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

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

April 1, 2005

City of Custer
%Harold Stickney, Mayor
622 Crook Street
Custer SD 57730

Dear Mayor Stickney:

Water Permit Application No. 2549-2 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 Publisher of the Custer Co. Chronicle printed at Custer, SD (Ph # 605-673-2217). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and a 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 to authorize publication of your Notice and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization, the publisher has been instructed to publish your notice once each week for two consecutive weeks. 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 first Notice on April 6, 2005 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 2549-2 to Appropriate Water

Notice is given that City of Custer, 622 Crook St, Custer SD 57730 has filed an application for a water permit to appropriate 1.0 cubic feet of water per second from one existing well completed into the Pre-Cambrian Rock aquifer (430 feet deep) located in the NW ¼ SW ¼ Section 24-T3S-R4E. The water is for municipal use.

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DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

April 1, 2005

Custer Co. Chronicle
PO Box 551
Custer SD 57730-0551

ATTENTION: Legal Public Notice

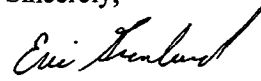
Enclosed is a Notice on Application No. 2549-2 to Appropriate Water to be published twice. Please publish the first notice on April 6, 2005 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is City of Custer, % Harold Stickney, Mayor, 622 Crook Street, Custer SD (Ph # 605-673-4824).

Please send the Water Rights Program the first publication immediately. The publication is checked for accuracy so any corrections can be made in the second publication. You may use the form below or fax a copy of the first publication. Any fax should be sent to the attention of Karen Schlaak at (605) 773-4068. Publication errors can invalidate the public notice.

After the second publication, **please send us an affidavit or use the enclosed Proof of Publication form.** 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

-----CUT HERE-----

No. 2549-2

TO: Eric Gronlund
Water Rights Program
Joe Foss Building
Pierre SD 57501-3181

Date _____

We are in receipt of your letter of April 1, 2005 enclosing Notice to Appropriate Water by Application No. 2549-2 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

JUL 11 2005

City of Custer
% Harold Stickney Mayor
622 Crook Street
Custer SD 57730

Dear Mayor Stickney:

Enclosed is Water Permit No. 2549-2 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,

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

enclosures

07-92

WATER RIGHTS
PROGRAM

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 2549-2

I have this day, Feb 4, 2016 made a thorough examination of the water use system constructed by City of Custer, 622 Crook Street, Custer SD of Permit No. 2549-2, bearing the priority of 1/24/2005 authorizing the diversion of 1.0 cu. ft. per second of the water from one well for municipal purposes, in Custer County.

Inspection contact & relationship to permit holder, if applicable: **Bob Morrison**
Public Works Director

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Raby Drilling (1986)
- 2) No. of Wells 1
- 3) Depth(s) 870 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 0-175 ft. 12 3/4 " Raby (1986)
0-358 ft. 9 5/8 " Taylor Drilling (2005) Taylor set the 9 5/8" and grouted it in the existing well
- 2) Length 358 feet
- 3) Type Steel

Screen:

- 1) Type Torch cut slots 188-358'
- 2) Length 170 feet
- 3) Static water level 35 feet

Pump:

- 1) Make Grundfos
- 2) Model 300S400-10 set @ 300 ft.
- 3) Size 6"
- 4) Capacity 340 GPM (per public works director)
- 5) Horsepower rating 40 hp

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

- 1) Type PVC main
- 2) Size 6 inches
- 3) Length - feet

C. Works used to apply water to beneficial use:

The 6" main completed in November 2006 connects what is referred to as "well #11" to the city water treatment facility located in the 900 block of Crook Street. The well is currently in standby status. The City will isolate city well #14 located just east of the water treatment facility if/when well # 11 is put in service.

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
- 2) Exceptions to compliance are: none

E. Condition and Location:

1. The system is in good condition with the point of diversion located as follows:
NW ¼ SW ¼ S 24, T3S, R4E (2,548 ft. north and 1,008 ft. east of the SW corner),
N 43.774203° W 103.594072°
2. The works are capable of diverting and conveying to the place of use .76 cu. ft. per second (340 gpm) of water which is to be used for **municipal use** and the license should be issued for .76 cfs.
3. All structures, wells and lands on map – **No, only well associated with permit 2549-2.**

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

When the well was first developed the water was high in bacteria and nitrates. Since then, the City has annexed some of the outlying areas to the east and put the residences annexed on the city sewer system. Bacteria and nitrate levels have dropped considerably. Iron content as well as other water quality issues for this well require modifications to the treatment plant prior to any use other than standby basis. In addition to permit #2549-2, the City of Custer has 10 additional licenses for municipal water and 1 future use permit (#1407-2) scheduled for review in July 2019.



Steven Quissell
Water Rights Inspector
DENR, Water Rights Program

Date report completed: 2/29/2016



Custer City well no. 11 located southeast of athletic field

**Water Rights Program - DENR
Conversation File Documentation**

NAME OF PERSON OR FILE: City of Custer # 2549-2
Bob Morrison, Public Works Director
bob@cityofcuster.com

ADDRESS: 622 Crook Street, Custer, SD 57730

COUNTY: Custer County

DATE: January 26, 2016 **TELEPHONE:** (605) 673-4824 office

RE: Licensing of Water Permit No. 2549-2
Priority 1/24/2005
Construction to be completed 5/4/2010
Beneficial Use by 5/4/2014

COMMENTS: I visited with Bob Morrison on January 26, 2016 and again on February 4, 2016 at the City of Custer offices concerning the well permitted under 2549-2. This is the same well which was permitted under 1963-2 and subsequently cancelled in 2002 for failure to put to beneficial use. The well is located on the east end of the school's athletic field. The city re-cased the well in November 2005, and installed a pump and electric service. A 6" main was completed in November 2006 to connect the well to the water treatment plant located in the 900 block of Crook Street making the well operational. They would isolate a city well adjacent to the water treatment plant if the (2549-2) athletic field well were to be used. The well is currently in a standby status. When the well was first developed the water was high in bacteria and nitrates. Since then, the City has annexed some of the outlying areas to the east and put the residences annexed on the city sewer system. Bacteria and nitrate levels have dropped considerably. Iron content as well as other water quality issues for this well require modifications to the treatment plant prior to any use other than standby basis.

NAME: Steven Quissell, Water Rights Inspector

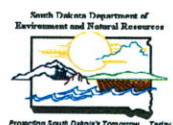


Water Right #2549-2
City of Custer
2/4/2016



Steven Quissell

Steven Quissell
Water Rights Inspector
DENR Water Rights Program





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

MAR 22 2016

2549-2

Laurie Woodward, Finance Officer
City of Custer
622 Crook St
Custer SD 57730-1608

Dear Ms. Woodward:

Enclosed is Water License No. 2549-2. 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 the owner of an existing well, such as the well authorized by Water Right No. 2549-2, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

As long as you use the water beneficially, as stated in the Water License, 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. 2549-2

(1) The City of Custer, 622 Crook Street, Custer SD 57730 made Application No. 2549-2, January 24, 2005 for a water permit to divert 1.00 cubic feet of water per second from ground water, one well (Precambrian Rock), Custer County, South Dakota for municipal purposes. Permit No. 2549-2, with a priority date of January 24, 2005 was approved May 4, 2005 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before May 4, 2010 and for the application to beneficial use of said water on or before May 4, 2014.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 0.76 cubic feet of water per second for beneficial use.

The location of the diversion point is 2,548 feet north and 1,008 feet east of the SW corner of Section 24, T3S, R4E, locally known as Well #11 (NW ¼ SW ¼).

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

(4) Pursuant to South Dakota Water Law 46-5-30.1 the City of Custer, 622 Crook Street, Custer SD 57730 the holder and/or owner of Water Right No. 2549-2 is issued a license to appropriate water, the right to use 0.76 cubic feet of water per second from ground water, one well (Precambrian Rock) with a priority date of January 24, 2005 from the location specified in (2) of this license for municipal purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 2549-2 and subject to the following qualifications:

- 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.
- This City of Custer shall report to the Chief Engineer annually the amount of water withdrawn from the Precambrian Rock.

Jeanne Goodman

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

MAR 22 2016

date

