

WATER PERMIT NO. 1901-1

Name of Applicant: City of Spearfish

Address: 625 5th St, Spearfish SD Phone: 605 717-3921

Amount of Water Claimed: 2.67 cfs (1,160 acre-feet) Total Acres: NA

Source of Water Supply: groundwater (1 well)

Water to be used for: municipal County: Lawrence

Type of Waste Disposal System:

Location:

PRIORITY Date Received: 10-09-2008

Application/License Fee: \$475

Corrected Application Received: 11-25-2008

Period of Annual Use: January 1 – December 31

Remarks: Withdraw from Future Use Permit No. 1872-1

Diversion Point: SW ¼ NE ¼ Sec 13-T6N-R2E

Land to be Irrigated: NA

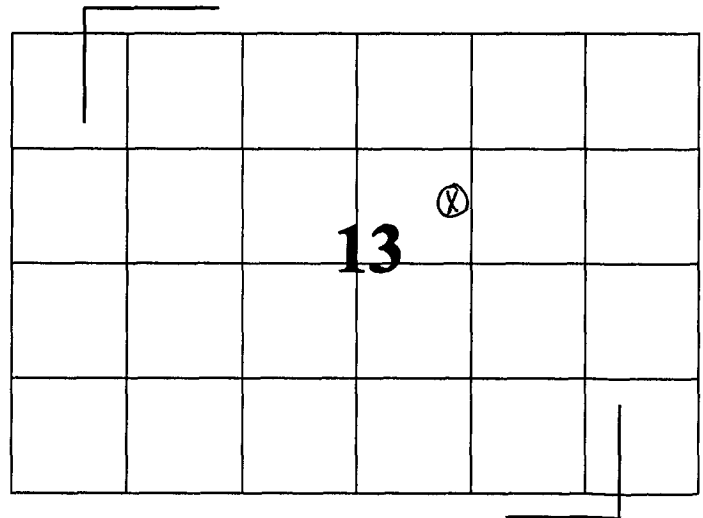
Depth of Well: 830 feet deep

Well Driller:

Remarks:

Type of Map: topo

Prepared by: Kyle D Mathis, PE



Reviewed and the Number Assigned on: 12-1-08

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. 1901-1 (office use only) Hydrologic Unit 10120203
Basin Belle Fourche River
Newspaper Black Hills Pioneer P.O. Box 7
1605-1642-2761 C Spearfish 57783

RECEIVED
OCT - 9 2008
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. 1872-1
☐ 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 Spearfish Phone (605) 717-3921
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 625 5th Street Spearfish State SD 57783
(Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 2.67 *CFS or 1200 **GPM 1,160 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply Madison Aquifer
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Lawrence
1 well in SW1/4 NE1/4 of Section 13 T6N R2E
- County or counties where water will be used Lawrence
- Annual period during which water is to be used 1 Jan-31Dec
- 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)

Madison well for municipal purposes for assisting the demand for water to the East sector of the City of Spearfish. The Engineering is being done by CETEC Engineering Services, Inc. of Rapid City, Greg Wierenga, PE, being the Project Manager. (341-7800)

STATE OF SOUTH DAKOTA) SS
County of Lawrence

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, Jerry Krambeck, 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 Jerry A. Krambeck

Subscribed and sworn to before me this 8 day of OCTOBER 20 08

Jamie Hafner
Notary Public

JAMIE HAFNER
NOTARY PUBLIC - SOUTH DAKOTA
MY COMM. EXPIRES DECEMBER 28, 2013

SOUTH DAKOTA
WATER PERMIT NO. 1901-1

Date of first receipt of application October 9, 2008.

Date of return to applicant for corrections, amendments or changes October 15, 2008.

Date of receipt of corrected application November 25, 2008.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 1901-1 to the City of Spearfish, c/o Jerry Krambeck, Mayor, 625 5th St, Spearfish SD 57783 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. 1901-1 authorizes placing to beneficial use 1,160 acre-feet annually at a maximum diversion rate of 2.67 cubic feet of water per second from one well to be completed into the Madison Aquifer (approximately 830 feet deep) located in SW 1/4 NE 1/4 Section 13-T6N-R2E. This water was appropriated and reserved by Future Use Permit No. 1872-1.
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. 1901-1 is February 16, 2009.
5. The date from which applicant may claim right is November 13, 2006 (established by Future Use Permit No. 1872-1).
6. One-fifth of the construction is to be completed on or before August 16, 2011.
7. All construction is to be completed on or before February 16, 2014.
8. Water is to be put to beneficial use on or before February 16, 2018.
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. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 1901-1 is issued for a 20-year term. Pursuant to SDCL 46-2A-21, the 20-year term may be deleted at any time during the 20-year period or following its expiration. If the 20-year term is not deleted at the end of the term, the permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 1901-1 may also be cancelled for nonconstruction, forfeiture, abandonment, or three permit violations pursuant to SDCL 46-1-12, 46-5-37, 46-5-37.1 and ARSD 74:02:01:37.
2. 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.

(continued)

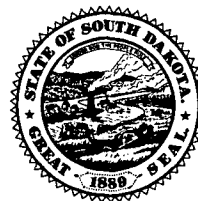
3. The well authorized by Permit No. 1901-1 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
4. The city of Spearfish shall report to the Chief Engineer annually the amount of water withdrawn from the Madison Aquifer.

WATER MANAGEMENT BOARD

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

APR 16 2009

date



(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 17 1/2" Depth 830'
- b) Casing Type Steel Diameter 13 3/8" Thickness
- c) Screen Type Diameter Thickness
- d) Gravel Pack Length of Gravel Pack
- e) Depth to Top of Water Bearing Material
- f) Depth to Water (ground surface to water level)
- g) Distance to nearest existing domestic well:
On applicants property On property owned by others .75 miles

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

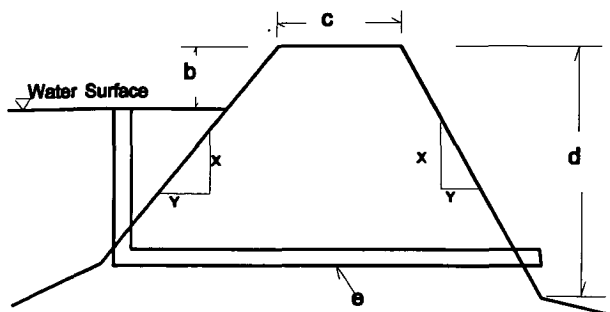
3. Dugout Information

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

4. Water Storage Dams

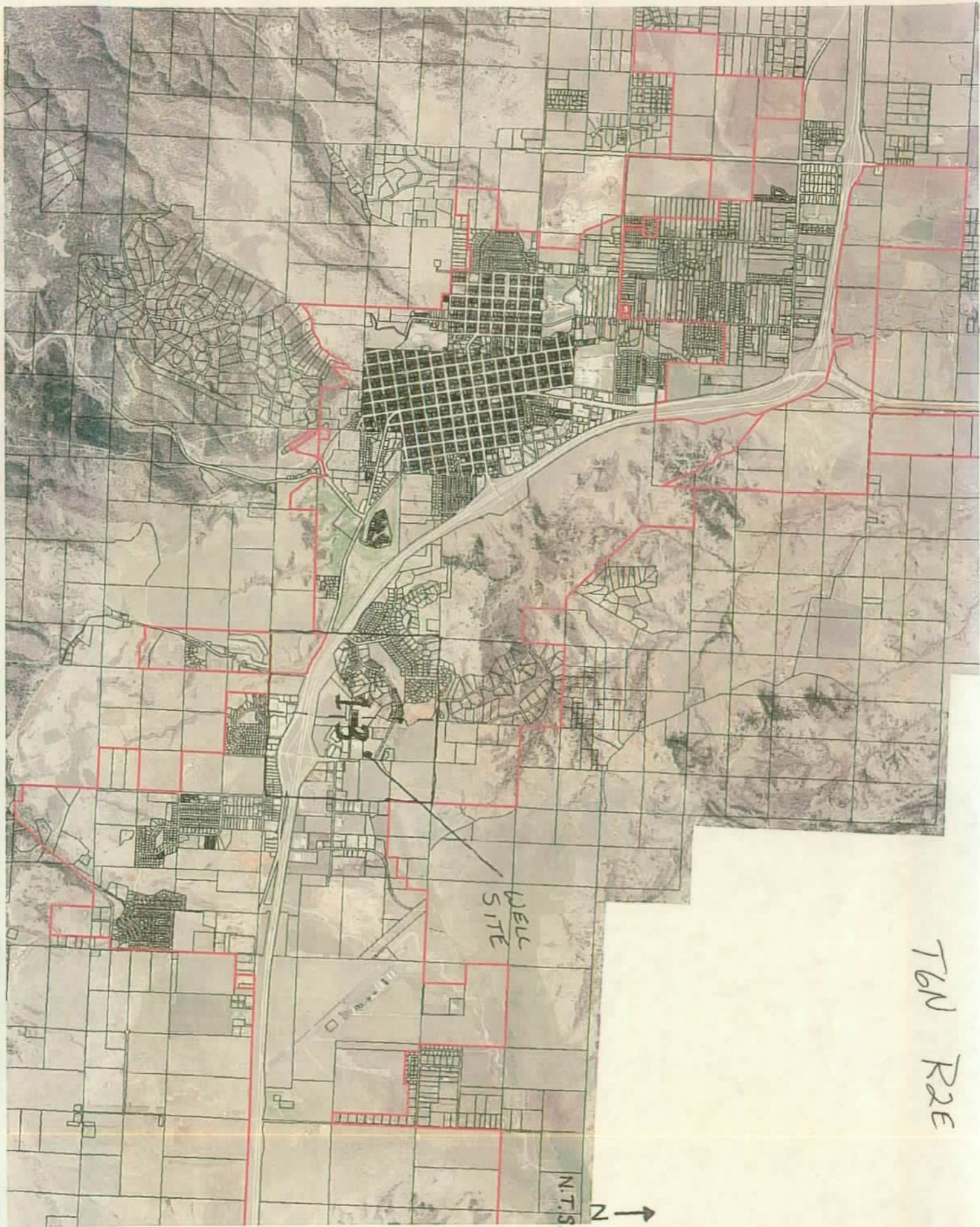
If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

- 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

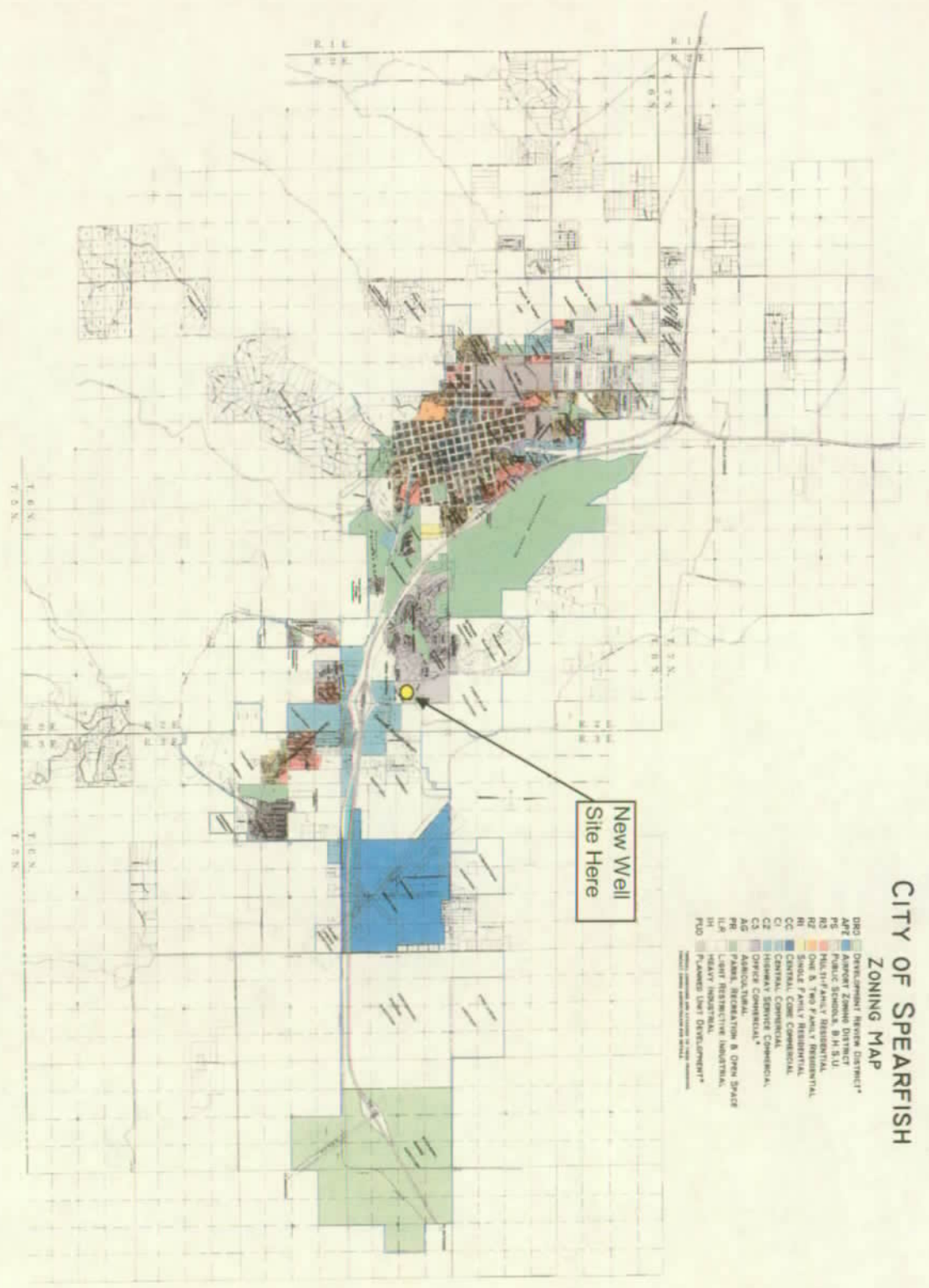
T6N R2E



CITY OF SPEARFISH ZONING MAP

- Legend:**
- DDO Development District
 - APR Airport Zone District
 - PS Public Schools, B.H.S.U.
 - R1 Multi-Family Residential
 - R2 One & Two Family Residential
 - R3 Single Family Residential
 - CC Central Core Commercial
 - C1 General Commercial
 - C2 Highway Service Commercial
 - C3 Office Commercial
 - AG Agricultural
 - PR Park, Recreation & Open Space
 - ILR Light Industrial
 - SI Heavy Industrial
 - PD Planned Development

New Well
Site Here



REGISTERED PROFESSIONAL ENGINEER
S.C. REG. NO. 8454
KYLE D. MATHIS
06/19/2014
SOUTH CAROLINA

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 10/9, 20 08

RECEIVED OF City of Spearfish 625 N 5th St Spearfish SD 57783

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	575	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	625 00

No.

03772

By

Richard E. White

Chief Engineer



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

October 30, 2008

Tom Callaway
City of Spearfish
625 5th St
Spearfish SD 57783

Dear Mr. Callaway:

Thank you for submitting the *Application for a Permit to Appropriate Water* for municipal use by the City of Spearfish.

As stated in email correspondence with Eric Gronlund from this office, in addition to designating a diversion rate (1200 gallons per minute) the city also needs to state the annual volume to be withdrawn. In order to determine this amount we commonly apply the 60% rule when making this calculation. For the city's request, this would equate to 1,160 acre-feet of water annually.

Please let us know if the city concurs with the 1,160 acre-feet amount and the application will be amended accordingly. If you have any questions, please contact Eric or me.

Sincerely,

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

Gronlund, Eric

From: Tom Callaway [Tom.Callaway@cityofspearfish.com]
Sent: Tuesday, November 25, 2008 3:21 PM
To: Gronlund, Eric
Cc: Schlaak, Karen; Cheryl Johnson
Subject: RE: Spearfish Well Application

I apologize Eric. I sent a response which was returned due to an internal email problem we were having. Although our old email addresses still work, please note the change in the address below.

In answer to your question, yes we are comfortable with that number. If you need a signature I can give you a written response and send it out asap.

Tom Callaway
Environmental Services Manager
City of Spearfish
625 5th Street
Spearfish, South Dakota 57783
Phone : 605-642-1333
Fax : 605-642-1337
Tom.Callaway@CityofSpearfish.com

From: Eric.Gronlund@state.sd.us [mailto:Eric.Gronlund@state.sd.us]
Sent: Tuesday, November 25, 2008 12:25 PM
To: Tom Callaway
Cc: Cheryl Johnson
Subject: RE: Spearfish Well Application

Tom - not sure if you've got my previous emails or the letter Karen Schlaak sent to you on October 30th.

I am looking for confirmation that the city of Spearfish concurs with the annual volume limitation of 1,160 acre feet of water for the water permit application pending from a proposed city well to be located in the SW 1/4 NE 1/4 Section 13, T6N, R2E. The application as submitted only defined the maximum diversion rate as being 1200 gpm. The application can not be process until the annual volume is defined.

Eric Gronlund
Water Rights Program, DENR
605 773-3352

-----Original Message-----

From: Gronlund, Eric
Sent: Monday, October 27, 2008 11:28 AM
To: 'Tom Callaway'
Subject: RE: Spearfish Well Application

Tom - I am just following up to ensure the city agrees to quantifying the annual volume to 1,160 acre feet of water.

-----Original Message-----

From: Gronlund, Eric
Sent: Wednesday, October 15, 2008 1:44 PM
To: 'Tom Callaway'
Subject: RE: Spearfish Well Application

11/25/2008

Tom

When Cheryl and you were in the office, I explained that in addition to designating a diversion rate (1200 gpm) the city also needs to state the annual volume to be withdrawn. I explained that commonly the 60% rule is applied in making this calculation. For the city's request this would equate to 1,160 acre feet of water annually. I believe you concurred with amending the application to reflect 1,160 acre feet of water annually. Just emailing to make sure this is the city's desire.

Let me know if you concur and I will amend the application accordingly.

Thanks - Eric

11/25/2008



**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. 1901-1, City of Spearfish**

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. 1901-1, City of Spearfish, c/o Mayor Jerry Krambeck, 625 5th Street, Spearfish SD 57783

The Chief Engineer is recommending APPROVAL of Application No. 1901-1 for a 20 year term 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. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 1901-1 is issued for a 20-year term. Pursuant to SDCL 46-2A-21, the 20-year term may be deleted at any time during the 20-year period or following its expiration. If the 20-year term is not deleted at the end of the term, the permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 1901-1 may also be cancelled for nonconstruction, forfeiture, abandonment, or three permit violations pursuant to SDCL 46-1-12, 46-5-37, 46-5-37.1 and ARSD 74:02:01:37.
2. 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.
3. The well authorized by Permit No. 1901-1 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
4. The city of Spearfish shall report to the Chief Engineer annually the amount of water withdrawn from the Madison Aquifer.

See report on application for additional information.

Garland Erbele, Chief Engineer
January 22, 2009

WATER PERMIT APPLICATION NO. 1901-1
CITY OF SPEARFISH
DECEMBER 29, 2008

Water Permit Application No. 1901-1 proposes to construct and place to beneficial use 1,160 acre-feet of water annually that has been appropriated and reserved by Future Use Permit No. 1872-1. If approved, this permit will authorize a diversion rate of up 2.67 cubic feet of water per second from a well to be completed into the Madison aquifer. The well is to be located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 13, T6N-R2E, and is expected to be approximately 830 feet deep. The water will be used for municipal use by the City of Spearfish.

AQUIFER: Madison aquifer (MDSN)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Madison aquifer is a major regional aquifer that underlies parts of Montana, North Dakota, South Dakota, Wyoming and Canada (figure 1). The aquifer contains an estimated 644,827,200 acre-feet of recoverable water in storage in South Dakota alone (Allen and others, 1985).

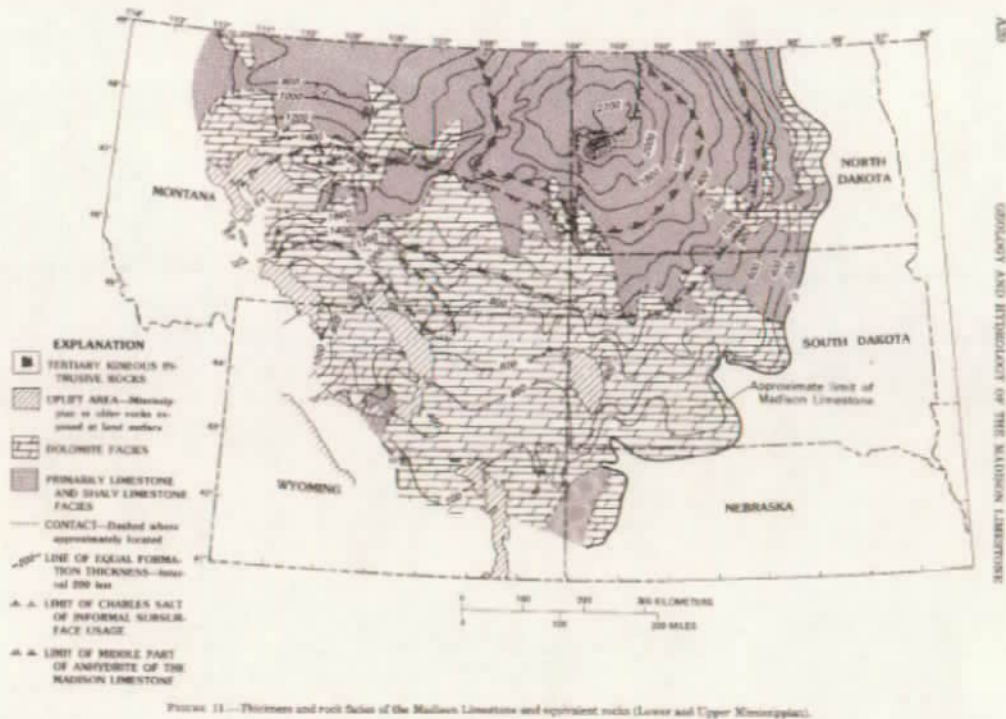


Figure 1. Areal extent of the Madison aquifer. Modified from Peterson (1984)

The Madison aquifer is contained within the Madison Limestone which in general is composed of carbonate rocks. Since the Madison Limestone is a massive limestone and dolomite, its primary permeability and porosity is low. The average porosity of the Madison is estimated to be 11% and the effective porosity from which recoverable water can be obtained by wells is assumed to be 5% (Rahn, 1979). Extensive secondary porosity and permeability occur within the Madison from fractures and solution openings. A number of high yield wells have been developed in the Madison aquifer where these enhanced porosity and permeability features are favorable. The upper portion of the Madison Limestone in particular is karstic with caves, solution collapse and enlarged conduits. The Madison is generally considered an excellent aquifer in terms of its potential to supply good quality water to relatively productive wells, especially near the outcrop (recharge area). The site proposed by this application is about two miles from the Madison outcrop in Spearfish Canyon (Strobel and others, 2000). The lower portion of the Madison is typically tighter and together with the underlying Englewood Formation form a lower confining zone (Strobel and others, 1999). The Minnelusa Formation unconformably overlies the Madison aquifer and acts as an upper confining layer.

The general hydrogeology of the Madison aquifer in the Spearfish area has been characterized (Greene and others, 1999). The aquifer's transmissivity and storativity were determined through various aquifer-testing techniques. The transmissivity estimated for the Madison ranged from 2,900 ft²/d to 41,700 ft²/d. The range in transmissivity was attributed to the heterogeneity of the aquifer and the scale of the formation stressed by the particular aquifer test (Greene and others, 1999). The heterogeneity of the Madison has been documented and it has been shown that the aquifer characteristics of the Madison can vary considerably within a short distance (Greene, 1993). The Madison's storativity was estimated to range from 3×10^{-4} to 1×10^{-3} .

The top of the Madison is expected to be between 750 and 800 feet below ground surface at the well site proposed by this application (Carter and Redden, 1999a). Estimates of the thickness of the Madison in this area range from approximately 500 feet thick (Allen and others, 1985) to approximately 400 feet thick (Carter and Redden, 1999a) (Carter and Redden, 1999b).

The Madison is under confined conditions at this proposed well site. The static water level of a well at the proposed site is expected to be around 325 feet below grade (Strobel and others, 2000). In general, groundwater flow in this area is toward the northeast (Putnam and Long, 2007).

SDCL 46-2A-9

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

WATER AVAILABILITY:

This application proposes to place to beneficial use water that has been reserved by a future use permit. The availability of unappropriated water from the Madison aquifer for this proposed appropriation was addressed in the approval of Future use Permit No. 1872-1 (Water Rights, 2006) and is therefore not an issue.

IMPACT ON EXISING WATER USERS (APPROPRIATIVE AND DOMESTIC):

There are completion reports on file with the Water Rights Program for 14 domestic wells that appear to be completed into the Madison aquifer within approximately two and one-half miles of this proposed well site (Water Rights, 2009c).

There are 14 Water Rights/Permits appropriating groundwater within approximately two and one-half miles of this proposed well site (Water Rights, 2009d). They are shown in table one and figure two.

PERMIT NO	NAME	AQUIFER	USE	CFS	IRR ACRES
1003-1	CITY OF SPEARFISH	MDSN	MUN	1.50	
1080-1	SUNRISE HOME OWNERS	MNLS	SHD	0.15	
1187-1A	HILLS MATERIALS COMPANY	MDSN	IND	0.04	
1229-1A	CITY OF SPEARFISH	MDSN	MUN	1.45	
1363-1	SPEARFISH CANYON CNTRY CL	MDSN	IRR	0.90	80.10
1508-1	CHRIS' CAMPGROUND	MNLS	COM	0.06	
1579-1	CITY OF SPEARFISH	MDSN	MUN	4.45	
1583-1	WILL/MARY ELLEN LANTIS	MDSN	COM	0.04	
1839-1	FARRAR COMPANIES INC	ALQ	GEO	0.03	
579-1	CITY OF SPEARFISH	MDSN	MUN	1.20	
728-1	SPEARFISH CANYON CNTRY CL	MNLS	IRR	0.66	56.70
795-1	THOMAS/DORIS KEMP	MNLS	SHD	0.03	
944-1	LAWRENCE COUNTY COMM	MNLS	COM	0.02	
967-1	US BUREAU SPORT/FISHERIES	ALQ	FWP	1.11	
MDSN= Madison, MNLS= Minnelusa, ALQ= Alluvium MUN= Municipal, SHD= Suburban Housing Development, IND= Industrial, IRR= Irrigation, COM= Commercial, GEO= Geothermal, FWP= Fish and Wildlife Propagation					

Table 1. Water Rights/Permits appropriating groundwater within approximately two and one-half miles of the well site proposed by Water Permit Application No. 1901-1.

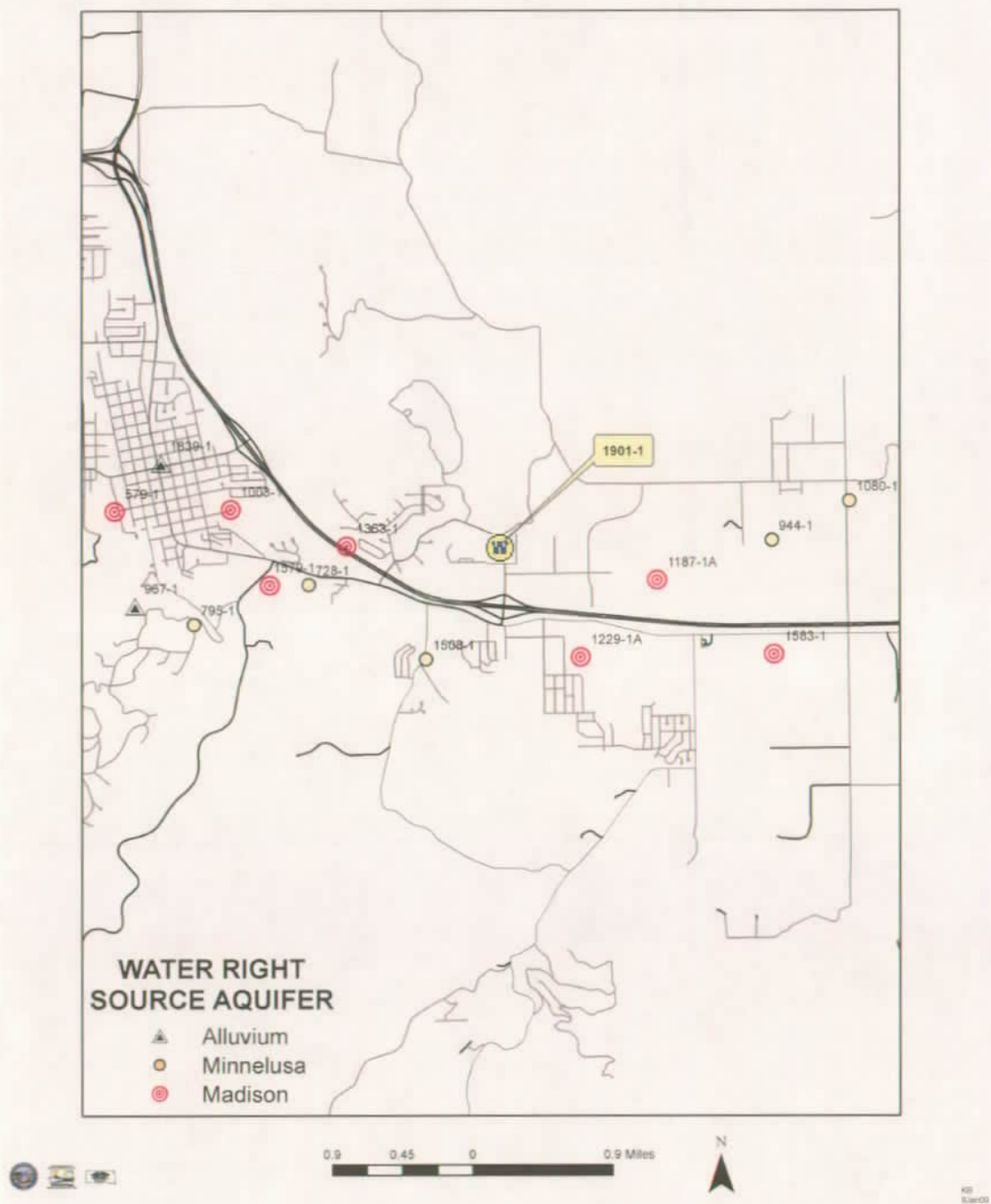


Figure 2. Location of the well site proposed by 1901-1 in relation to existing groundwater appropriations.

Wells supplied from aquifers other than the Madison are not expected to be impacted by withdrawals from a well completed into the Madison aquifer because of confining layers at the top and bottom of the Madison.

The closest domestic well on file with the Water Rights Program that is supplied by the Madison aquifer (Jerry Riggs well), is located approximately one mile south of this proposed well site (Water Rights, 2009c).

The nearest existing well completed into the Madison aquifer supplies Water Right No. 1187-1A, Hills Material Company, and is located approximately three-fourths of a mile east of this proposed well site (see figure 2).

Since the Madison is under artesian conditions in this area, drawdown from pumping a well may extend over a fairly large area. At this time, it is not practical to attempt to quantify the specific affect this proposed well may have on area wells. However, the possibility of adverse impacts can still considered.

Wells supplying existing Water Rights/Permits and domestic uses are protected from adverse impacts per Water Management Board rules 74:02:04 and 74:02:05, which were promulgated pursuant to SDCL 46-6-6.1. These rules provide for the regulation of large capacity wells to the degree necessary to maintain an adequate depth of water for a prior appropriator in wells that have the ability to produce water **independent of artesian pressure**. Simply put, the pump placement in a prior appropriator's well is not necessarily protected.

If the water levels in the Madison aquifer were to decline, owners of existing wells bear the responsibility of lowering the pump inlet in the well to the top of the aquifer, if necessary. Increased lift would decrease the pump discharge; or require a larger pump or a different type of a pump to maintain the same output.

An increase in operating expenses that may result from interference between wells is not necessarily an adverse impact. The Water Management Board considered this situation in the matter of Water Permit Application 2313-2, Coca-Cola Bottling Company of the Black Hills (Water Rights, 1995). The Board adopted findings of fact and conclusions of law that basically state that if the increased cost or decreased production is considered an adverse impact, it could be in conflict with SDCL 46-1-4, which requires South Dakota's water resources to be put to beneficial use to the fullest extent of which they are capable.

The Riggs well has approximately 240 feet of artesian head pressure and the Hills Material well has approximately 460 feet of artesian head pressure.

Water Rights' Observation Wells:

Observation well data can be beneficial in evaluating proposed diversions and potential impacts to existing water rights.

The Water Rights Program monitors 26 observation wells completed into the Madison aquifer in the Black Hills area (Water Rights, 2009a). The nearest two observation wells: LA-88C and LA-95A are located approximately 1.65 and 4.25 miles respectively, from this proposed well site. Hydrographs for these observation wells are shown in figures 3 and 4.

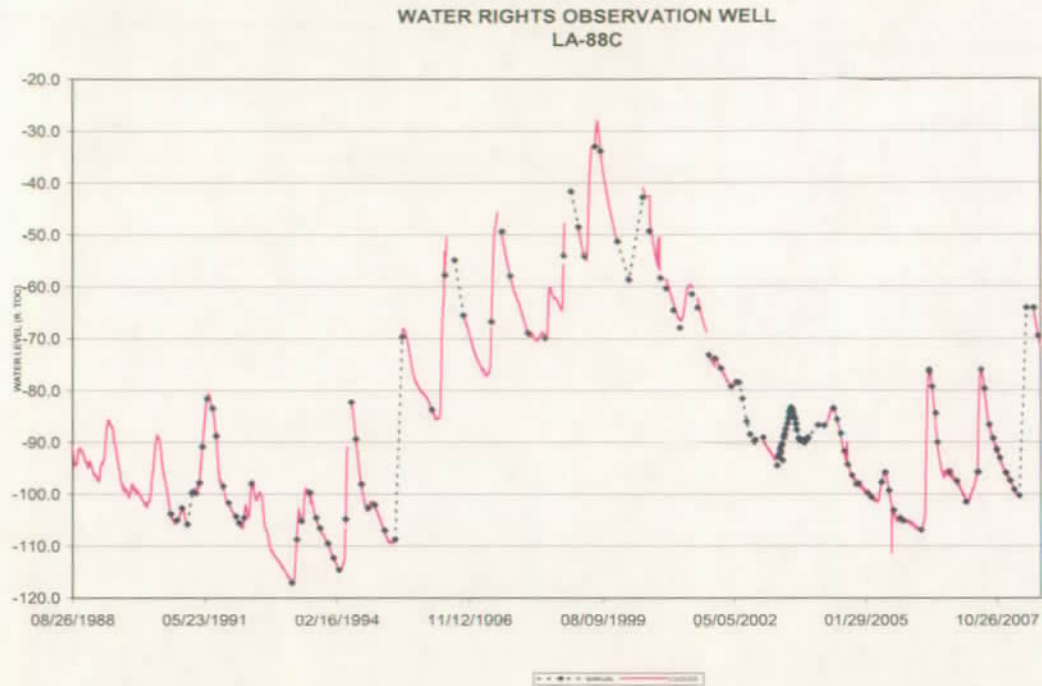


Figure 2. Hydrograph of Water Rights Observation Well LA-88C, located about 1.65 miles west of the well site proposed by Application No. 1901-1.

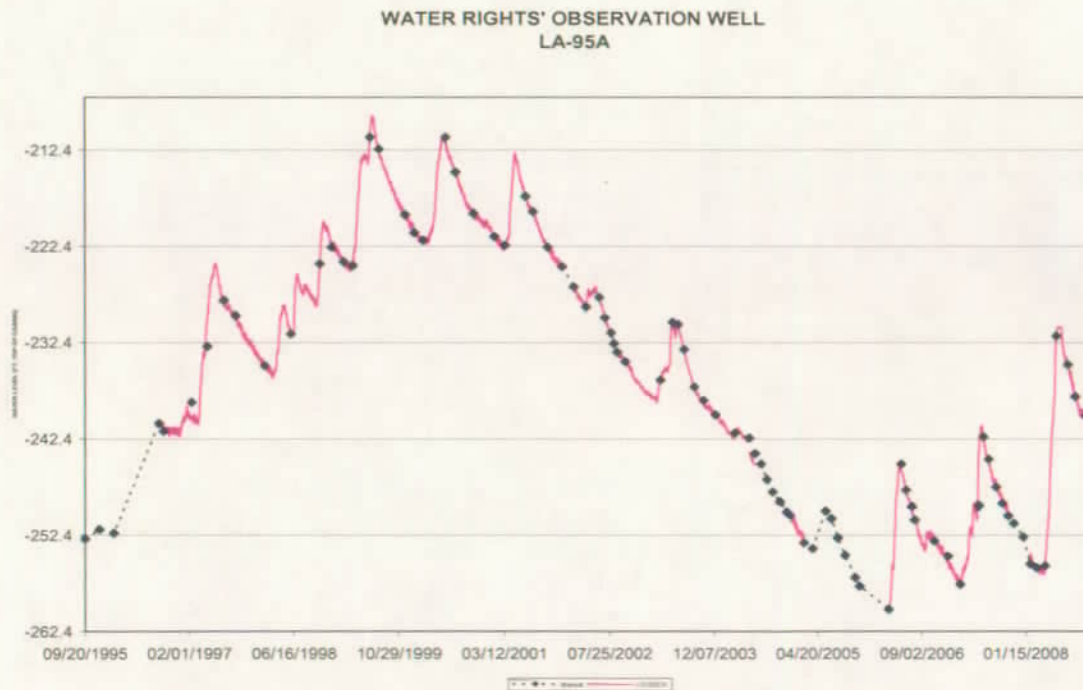


Figure 3. Hydrograph of Water Rights Observation Well LA-95A, located about 4.25 miles east of the well site proposed by Application No. 1901-1.

The hydrographs show the potentiometric surface measured at these sites rose during the late 1990's in response to wet climatic conditions and was highest in July 1999. The water levels decreased since about 1999 to a low in April 2006 in response to less recharge. Both of the hydrographs document increasing water levels since 2006.

A single plot of data from both wells (figure 4) provides a simple means of comparing the aquifer's response to stresses.

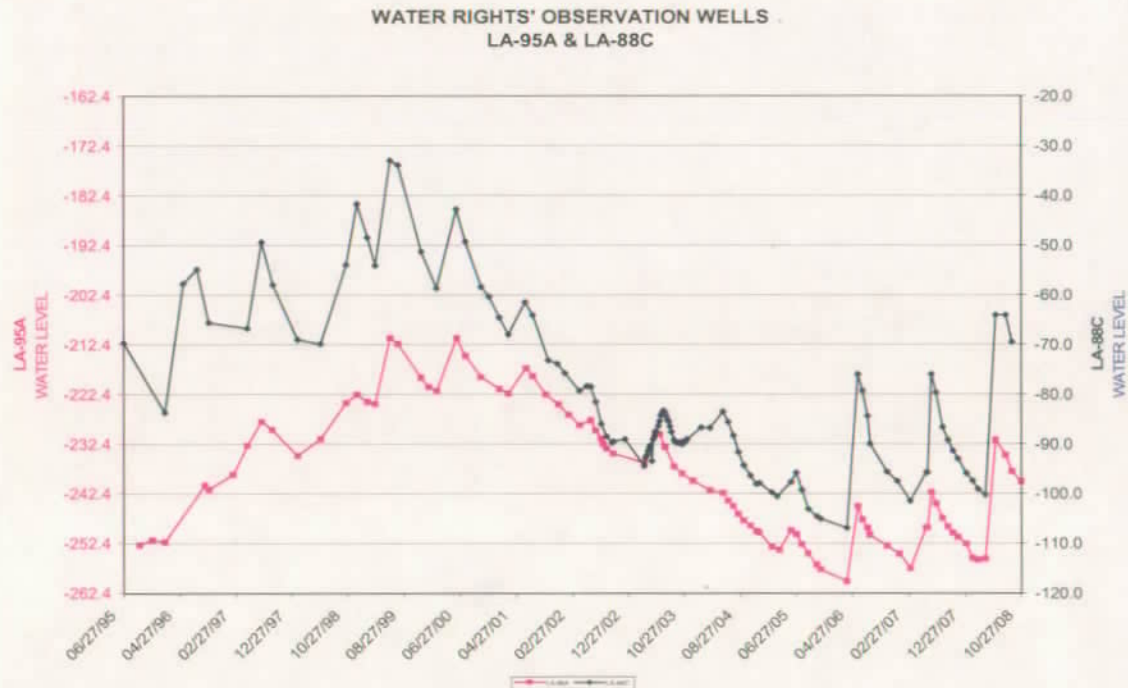


Figure 4. Hydrograph of Water Rights Observation Wells LA-95A and LA-88C

It appears from figure 4 that during drier periods (roughly the right half of the graph), the wells have very similarly responses to climatic conditions; but during wetter conditions (roughly the left half of the graph); the water levels measured at LA-88C fluctuate more than the water levels in LA-95A. This may be the result of increased recharge due to streamflow loss from Spearfish Creek during the wetter periods, which would influence LA-88C much more than LA-95A.

In general, the water level responses in the two observation wells to climatic conditions are similar in spite of the fact LA-88C is located just 1,350 feet from the City of Spearfish's "Nevin Well" and 1,400 feet from the City's "Ellingson Well" and LA-95A is not close to any high capacity Madison aquifer wells. In addition, the observation well does not show a response to the cumulative withdrawals (approximately 2,000 ac-ft/yr) made by the City of Spearfish. All of the City's wells are located within one and one-half miles of LA-88C.

Observation well LA-88C is much closer to the high capacity city wells than the well site proposed by this application is to existing Madison Wells. Data from LA-88C documents that well interference has not been significant in this area. Given the distance this proposed well site is from existing Madison aquifer wells, interference is not expected to be adverse.

BENEFICIAL USE:

The Water Management Board has determined in the past that a rural water system use of water is a beneficial use.

PUBLIC INTEREST:

There are a number of artesian springs located in northern Lawrence County. Rahn and Gries (1973) estimated spring discharge for this general area to be 81.11 cfs. Carter et al. (2001) estimated the total artesian springflow to the Redwater River, upstream of its confluence with the Belle Fourche River, to be about 94 cfs. These springs have a relatively steady discharge and consistently provide large contributions to the area streamflow (Putnam and Long, 2007). These springs are classified as Type 2 springs by Rahn and Gries (1973), meaning "The springs do not dry up and serve as points of permanent discharge from the carbonate aquifer" (Rahn and Gries, 1973). The geochemical and isotopic characteristics of these spring discharges suggest they originate primarily from the Madison and Minnelusa aquifers (Klemp, 1995). A decline of the potentiometric surface in the vicinity of the springs could decrease spring discharge.

When considering Future Use Permit No. 2560-2 for Fall River Water User District, the Water Management Board accepted that SD Water Law does not protect artesian head pressure as a means of diversion and determined that well interference resulting in decreased discharge from these "artesian" springs could probably not be considered an adverse impact. The Board did however recognize the "public interest" issues of decreased base flows in area streams that could result from decreased spring discharge as the result of well interference. Approval of Future Use Permit No. 2560-2 included the following qualification:

"At such time as definite plans are made to construct works and put the water reserved by this permit to beneficial use, specific application for all or any part of the reserved water must be submitted and approved prior to construction of facilities pursuant to SDCL 46-5-38.1 with particular attention given to the flows of Beaver Spring, Cascade Springs and Hot Springs." (Water Rights, 2008).

Subsequently, when considering the deferral of Water Permit Application No. 2585-2, Southern Black Hills Water System, the Water Management Board adopted a conclusion of law (No. 11) which states in part "The only protection South Dakota law provides when considering an application for an underground water permit for flow from an artesian spring is under the public interest criteria." (Water Rights, 2007a).

Approval of Water Permit No. 2633-2, Southern Black Hills Water Systems, includes a qualification (still in draft form), that will provide specific protection to Beaver Creek Spring.

Water Permit Application No. 1901-1 proposes to construct works and place to beneficial use water that has been appropriated and reserved by Future Use Permit No. 1872-1. The future use permit was approved with the qualification:

“At such time as definite plans are made to construct works and put the water reserved by this permit to beneficial use, specific application for all or any part of the reserved water must be submitted and approved prior to construction of facilities pursuant to SDCL 46-5-38.1 with particular attention given to flows of Higgins Gulch Spring and Old Spearfish Hatchery Spring” (Water Rights, 2007b)

The well site proposed by this application is located about five miles from Higgins Gulch Spring and six and one-quarter miles from Old Spearfish Hatchery Spring and is over four miles from the nearest spring identified by Klemp (1995). Data from the Water Rights Observation Well Network (see earlier discussion) indicates that the distances involved should be sufficient to ensure they will not be impacted from this proposed pumping.

TERM LIMITATION:

SDCL 46-2A-20 requires that "... no water permit for construction of works to withdraw water from the Madison formation in Butte, Fall River, Custer, Lawrence, Meade and Pennington counties may be issued for a term of more than twenty years, unless the water management board determines, based upon the evidence presented at the hearing that:

- (1) Sufficient information is available to determine whether any significant adverse hydrologic effects on the supply of water in the Madison formation would result if the proposed withdrawal were approved; and
- (2) The information, whether provided by the applicant or by other means, show that there is a reasonable probability that issuance of the proposed permit would not have a significant adverse effect on nearby Madison formation wells and springs."

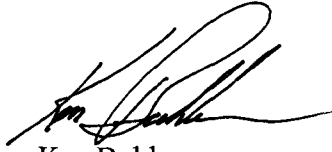
Pursuant to SDCL 46-2A-21, "at the end of the twenty-year limitation, the board may cancel a permit or amend the permit with a new term limitation of up to twenty years, if the board is unable to make a finding after notice and hearing that sufficient information is available to delete the term."

Evidence is not available to justify issuing these permits without a term limitation of 20 years.

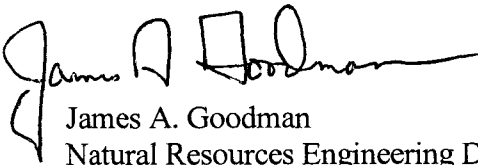
CONCLUSIONS:

1. The Madison aquifer is a major regional aquifer and a viable source of water for this proposed appropriation. The water for this permit was appropriated and reserved by Future Use Permit No. 1872-1 which has a November 13, 2006 priority date.
2. This application proposes to construct works and place to beneficial use 1,160 acre-feet annually at a maximum diversion rate of 2.67 cfs. The maximum amount of water that would be placed to beneficial use is equivalent to a continuous diversion of about 1.60 cfs.
3. There is a reasonable probability the diversion authorized by this permit could be made without adversely impacting existing water rights including domestic users.
4. Municipal use is a beneficial use of water.
5. This appropriation is unlikely to affect the discharge of area springs.

6. Information is not available to justify issuing these permits without a term limitation of 20 years.
7. Following notice and a public hearing, the Water Management Board can cancel this permit or amend it with a new term limitation after twenty years.



Ken Buhler
Natural Resources Engineering Specialist
Approved by



James A. Goodman
Natural Resources Engineering Director

REFERENCES:

- Allen, J.C., Iles, D.L., and Petres, A.K., 1985, Analysis of Groundwater and Streamflow Data Western Dakotas Region of South Dakota, Tasks 3A.B.C. and 4A.B.: Groundwater Resource Inventory: South Dakota Department of Water and Natural Resources
- Carter, J.M., Redden, J.A., 1999a, Altitude of the Top of the Madison Limestone in the Black Hills Area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-744-D, 2 sheets, scale 1:100,000
- Carter, J.M., Redden, J.A., 1999b, Altitude of the Top of the Deadwood Formation in the Black Hills Area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-744-E, 2 sheets, scale 1:100,000
- Carter, J.M., Driscoll, D.G., Hamade, G.R., and Jarrell, G.J., 2001b, Hydrologic Budgets for the Madison and Minnelusa Aquifers, Black Hills of South Dakota and Wyoming, Water Years 1987-1996: Water-Resources Investigations Report 01-4119, U.S. Department of the Interior, U.S. Geological Survey, Rapid City, SD
- Greene, E.A., 1993, Hydraulic Properties of the Madison Aquifer System in the Western Rapid City Area, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 93-4008, 56 p.
- Greene, E.A., Shapiro, A.M., and Carter, J.M., 1999, Hydrogeologic Characterization of the Minnelusa and Madison Aquifers near Spearfish, South Dakota: U.S. Geological Survey Water-resources Investigations Report 98-4156, 64 p.

- Klemp, J.A., 1995, source Aquifers for large Springs in Northwestern Lawrence County, South Dakota: Rapid City, South Dakota School of Mines and Technology, unpublished M.S. thesis, 175 p.
- Peterson, J.A., 1984, Stratigraphy and Sedimentary Facies of the Madison Limestone and Associated Rocks in Parts of Montana, Nebraska, North Dakota, South Dakota, and Wyoming: U.S. Geological Survey Professional Paper 1273-A, 34 p.
- Putnam, L.D., and Long, A.J., 2007, Characterization of Ground-Water Flow and Water Quality for the Madison and Minnelusa Aquifers in Northern Lawrence county, South Dakota: U.S. Geological Survey Scientific Investigations Report 2007-5001, 61 p.
- Rahn, P.H., and Gries, J.P., 1973, Large Springs in the Black Hills, South Dakota and Wyoming: SD Geological Survey Report of Investigations No. 107, 46 p.
- Rahn, P.H., 1979, Ground Water Resources of Western South Dakota: U.S. Army Corps of Engineers, SDSM&T Project #2533
- Strobel, M.L., Jarrell, G.J., Sawyer, J.F., Schleicher, J.R., and 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
- Strobel, M.L., Galloway, J.M., Hamade, G.R., Jarrell, G.J., 2000, Potentiometric Surface of the Madison Aquifer in the Black Hills Area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-745-D, 2 sheets, scale 1:100,000
- Water Rights Program, 1995, Findings of Fact, Conclusions of Law and Final Decision in the Matter of Water Permit Application No. 2313-2, Coca-Cola Bottling Company of The Black Hills , SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501
- Water Rights Program, 2006a, "Report for Future Use Permit Application No. 1872-1, City of Spearfish", Unpublished Report in Future Use Permit No. 1872-1, SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501
- Water Rights Program, 2006b, Water Permit No. 2560-2, SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501
- Water Rights Program, 2007, Deferred Water Permit Application No. 2585-2, DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501
- Water Rights Program, 2009a, Observation Well Files, DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501

Water Rights Program, 2009b, Water Permit/Right Files, DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501

Water Rights Program, 2009c, Well Completion Report Files, DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501

RECEIVED

FEB 12 2009

WATER RIGHTS
PROGRAM

Affidavit of Publication

STATE OF SOUTH DAKOTA:

COUNTY OF LAWRENCE:

Stewart Huntington of said County and State being first duly sworn, on his oath says: That the BLACK HILLS PIONEER is a legal daily newspaper of general circulation, printed and published in the City of Spearfish, in said County and State by Stewart Huntington, and has been such a newspaper during the times hereinafter mentioned; and that said newspaper has a bonafide circulation of at least 200 copies weekly, and has been published within said County in the English language for at least one year prior to the first publication of the notice herein mentioned, and is printed in whole or in part in an office maintained at the place of publication; and that I, Stewart Huntington, the undersigned, am the Publisher of said newspaper and have personal knowledge of all the facts stated in this affidavit; and that the advertisement headed:

Notice of Application
No. 1901-1

a printed copy of which is hereto attached, was printed and published in said newspaper for 2 successive and consecutive weeks, the first publication being made on the 30th day of Jan., 2009, and the last publication on the 6th day of Feb., 2009, that the full amount of fees charged for publishing same, to-wit: The sum of \$43.96, insures solely to the benefit of the publisher of the BLACK HILLS PIONEER, that no agreement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

[Signature]
Subscribed and sworn to before me this 10th day of Feb., 2009

[Signature]
Notary Public, Lawrence County, South Dakota
My commission expires: 10-24-2010

NOTICE OF APPLICATION NO. 1901-1 to Develop Reserved Water

Notice is given that the City of Spearfish, 625 5th St, Spearfish SD 57783 has filed an application for a water permit to construct and place to beneficial use 1,160 acre-feet annually at a maximum diversion rate of 2.67 cubic feet of water per second from one well to be completed into the Madison Aquifer (approximately 830 feet deep) located in SW 1/4 NE 1/4 Section 13-T6N-R2E. This water was appropriated and reserved by Future Use Permit No. 1872-1. The water is for municipal use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1901-1 subject to a 20-year term limitation because 1) although evidence is not available to justify issuing the permit without a 20 year term limitation, there is reasonable probability that there is unappropriated water available, 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by February 16, 2009.

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

#40
Jan. 30
Feb. 6



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

January 22, 2009

Black Hills Pioneer
PO Box 7
Spearfish SD 57783

ATTENTION: Legal Public Notice

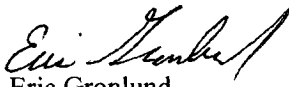
Enclosed is a Notice on Application No. 1901-1 to Appropriate Water to be published twice. Please publish the first notice on January 30, 2009 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

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 Spearfish, 625 5th St., c/o Jerry Krambeck, Spearfish SD 57783 (Ph # 605-717-3921).

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. 1901-1

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

Date _____

We are in receipt of your letter of January 22, 2009 enclosing Notice to Appropriate Water by Application No. 1901-1 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

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

January 22, 2009

City of Spearfish
c/o Jerry Krambeck
625 5th St
Spearfish SD 57783

Dear Mr. Krambeck:

Water Permit Application No. 1901-1 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 Black Hills Pioneer printed at Spearfish SD (Ph # 605-642-2761). 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 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 January 30, 2009 with the second publication 7 days later. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 1901-1 to Develop Reserved Water

Notice is given that the City of Spearfish, 625 5th St, Spearfish SD 57783 has filed an application for a water permit to construct and place to beneficial use 1,160 acre-feet annually at a maximum diversion rate of 2.67 cubic feet of water per second from one well to be completed into the Madison Aquifer (approximately 830 feet deep) located in SW ¼ NE ¼ Section 13-T6N-R2E. This water was appropriated and reserved by Future Use Permit No. 1872-1. The water is for municipal use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1901-1 subject to a 20-year term limitation because 1) although evidence is not available to justify issuing the permit without a 20 year term limitation, there is reasonable probability that there is unappropriated water available, 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by February 16, 2009.

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



United States Department of the Interior

FISH AND WILDLIFE SERVICE Mountain-Prairie Region



IN REPLY REFER TO:

BA WTR
SD WR
Mail Stop 60189

MAILING ADDRESS:
P.O. Box 25486, DFC
Denver, Colorado 80225-0486

STREET LOCATION:
134 Union Boulevard
Lakewood, Colorado 80228-1807

RECEIVED

FEB 19 2009

**WATER RIGHTS
PROGRAM**

Garland Erbele, Chief Engineer
South Dakota Department of Environment
and Natural Resources
Water Rights Program
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501

FEB 13 2009

RE: Application No. 1901-1

Via fax, hard copy to follow

Dear Mr. Erbele:

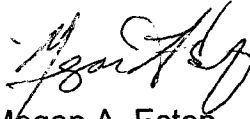
The Fish and Wildlife Service has received notice that the Chief Engineer has recommended approval of Application No. 1901-1, for the City of Spearfish to construct a well to pump groundwater at a maximum rate of 2.67 cfs, not to exceed 1,160 acre-feet annually, for municipal use. The well will be located in the SW1/4NE1/4 of Section 13, Township 6 North, Range 2 East, and will be completed in the Madison Aquifer.

The Service previously filed a letter of concern for Future Use Permit 1872-1, also submitted by the City of Spearfish, because of our concern about potential impacts to senior water rights we hold for the D. C. Booth Historic National Fish Hatchery. We oppose this issuance of this appropriation because of the large volume associated with it, and the proximity to the groundwater source that we utilize for the D.C Booth Historic National Fish Hatchery. We retain Water License 967-1 for a well with a diversion rate of 1.11 cfs for fish culture purposes. The well is located in the SW1/4 of Section 15, Township 6 North, Range 2 East.

The Service requests that your office provide us with any analysis done to determine whether this appropriation should be granted, as well as whether this well will have impacts to the Service's senior water right. The Service reserves the right to provide additional comments or information after review of the analysis and recommendation on this application.

If you have questions or require further information, please contact me at (303) 236-4491.

Sincerely,

A handwritten signature in black ink, appearing to read 'Megan A. Estep', written in a cursive style.

Megan A. Estep
Chief, Water Resources Division

cc: City of Spearfish
Jerry Krambeck, Mayor
625 5th Street
Spearfish SD 57783



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

February 19, 2009

NOTICE

TO: Jerry Krambeck, Mayor
City of Spearfish
625 5th Street
Spearfish SD 57783

Megan A. Estep, Chief
Water Resources Division
US Fish and Wildlife Service
PO Box 25486, DFC
Denver CO 80225-0486

FROM: Garland Erbele, Chief Engineer
Water Rights Program

SUBJECT: Notice of Hearing on Water Permit Application No. 1901-1, City of Spearfish

A petition in opposition to Water Permit Application No. 1901-1 has been filed by the United States Fish and Wildlife Service. The petition was filed in response to the Notice of Application published in the Black Hills Pioneer printed and published in Spearfish SD. This notice schedules a hearing on the application before the South Dakota Water Management Board.

Application No. 1901-1 proposes to construct and place to beneficial use 1,160 acre-feet annually at a maximum diversion rate of 2.67 cubic feet of water per second from one well to be completed into the Madison Aquifer (approximately 830 feet deep) located in SW 1/4 NE 1/4 Section 13-T6N-R2E. This water was appropriated and reserved by Future Use Permit No. 1872-1. The water is for municipal use.

The Water Management Board will conduct a hearing to consider Application No. 1901-1 at 1:00 PM on Thursday, March 12, 2009 in the Floyd Matthew Training Center, Joe Foss Building, 523 E. Capitol Avenue, Pierre SD. Future notice will be provided to all parties if there are changes to the hearing time. Pursuant to SDCL 46-2-9, 46-2-11, and 46-2A-23, the Board has legal authority and jurisdiction to conduct this hearing.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1901-1 subject to a 20-year term limitation because 1) although evidence is not available to justify issuing the permit without a 20 year term limitation, there is reasonable probability that there is unappropriated water available, 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. 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 the application based on the evidence presented at the public hearing.

The March 12, 2009, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any party of record opposing the application. The request for an automatic delay must be filed by March 2, 2009. In the event of a request for automatic delay, the hearing will be rescheduled for the next Board meeting to be held May 6 – 7, 2009.

This hearing may be an adversarial proceeding. Any party of record 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.

Enclosed is a copy of the report, recommendation and petition in the matter of Water Permit Application No. 1901-1. State law directs the Chief Engineer to provide Water Management Board members with a copy of all pleadings including petitions for each proceeding. This same information will be sent to the Board members in advance of the hearing. In addition, enclosed are two documents intended to acquaint parties with the hearing process entitled "Procedure for Hearings before the Water Management Board" and "Summary of South Dakota Water Laws and Rules". You are encouraged to review these documents prior to the hearing.

The 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-23; 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; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.

Questions regarding the hearing process may be directed to Eric Gronlund, Water Rights Program at (605) 773-3352. In addition, please notify the Department of Environment and Natural Resources at least 48 hours before the hearing if you have a disability for which special arrangements must be made at the hearing.

c: Diane Best, Assistant Attorney General

NOTE: Since this matter 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 need not be referred to the Office of Hearing Examiners. If any party disagrees with this determination, the Chief Engineer shall be notified by March 2, 2009.

CERTIFICATION

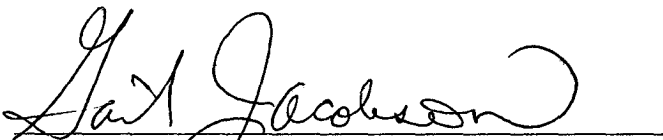
I hereby certify that on February 19, 2009, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated February 19, 2009, regarding hearing for Water Right Permit Application No. 1901-1, as addressed below:

Jerry Krambeck, Mayor
City of Spearfish
625 5th Street
Spearfish SD 57783

Megan A. Estep, Chief
Water Resources Division
US Fish and Wildlife Service
PO Box 25486, DFC
Denver CO 80225-0486

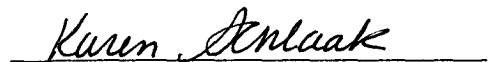
A copy of the above described Notice was sent Inter-office to:

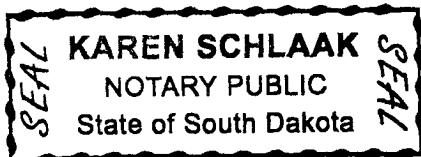
Diane Best, Assistant Attorney General, 300 N. Dakota Ave., Suite 403, Sioux Falls SD 57104

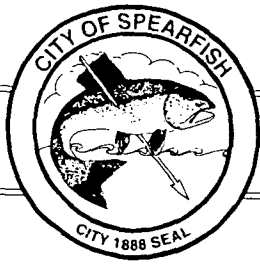

Gail Jacobson
Water Rights Program, DENR

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 19th day of February 2009.


Karen Schlaak
Notary Public
My Commission expires April 1, 2013





CITY OF SPEARFISH

625 FIFTH STREET, SPEARFISH, SOUTH DAKOTA 57783

February 23, 2009

RECEIVED

FEB 24 2009

**WATER RIGHTS
PROGRAM**

Garland Erbele
SD DENR
Water Rights Program
523 E Capitol Ave
Pierre, South Dakota 57501

Re: Hearing for Water Permit Application 1901-1, City of Spearfish

Dear Mr. Gronlund:

The City of Spearfish is requesting a continuance on the hearing for our water permit application 1901-1 in March to the May meeting. We have been in touch with the US Fish and Wildlife Service to discuss their concerns with our project.
Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Callaway".

Tom Callaway
Environmental Services Manager
City of Spearfish
642-1333





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

February 25, 2009

NOTICE

TO: Jerry Krambeck, Mayor
City of Spearfish
625 5th Street
Spearfish SD 57783

Megan A. Estep, Chief
Water Resources Division
US Fish and Wildlife Service
PO Box 25486, DFC
Denver CO 80225-0486

FROM: Garland Erbele, Chief Engineer
Water Rights Program

SUBJECT: Automatic Delay of Hearing on Water Permit Application No. 1901-1, City of Spearfish

The United States Fish and Wildlife Service submitted a petition in response to the public notice for Water Permit Application No. 1901-1 filed by the city of Spearfish. In response to the February 19th notice scheduling a hearing before the Water Management Board, the city has made a formal request for postponement of the March 12th hearing date on the application. A copy of city's request is enclosed. Therefore, the hearing on Application No. 1901-1 is automatically delayed pursuant to SDCL 46-2A-4 and 46-2A-5 and will not be held on March 12, 2009.

The hearing to consider Application Nos. 1901-1 will now be scheduled for the May 6 - 7, 2009 Water Management Board meeting tentatively to be held in Pierre. Future notice of the time and place of the hearing for Application No. 1901-1 will be provided to all parties of record.

Please contact Eric Gronlund at (605) 773-3352, if you have any questions.

enclosure

c: Diane Best, Assistant Attorney General

CERTIFICATION

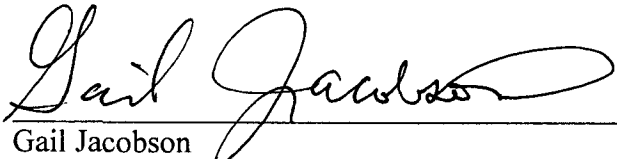
I hereby certify that on February 25, 2009, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated February 25, 2009, regarding and automatic delay of hearing for Water Right Permit Application No. 1901-1, as addressed below:

Jerry Krambeck, Mayor
City of Spearfish
625 5th Street
Spearfish SD 57783

Megan A. Estep, Chief
Water Resources Division
US Fish and Wildlife Service
PO Box 25486, DFC
Denver CO 80225-0486

A copy of the above described Notice was sent Inter-office to:

Diane Best, Assistant Attorney General, 300 N. Dakota Ave., Suite 403, Sioux Falls SD 57104



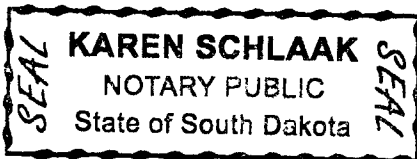
Gail Jacobson
Water Rights Program, DENR

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 25th day of February 2009.



Karen Schlaak
Notary Public
My Commission expires April 1, 2013





United States Department of the Interior

FISH AND WILDLIFE SERVICE Mountain-Prairie Region



IN REPLY REFER TO:

MAILING ADDRESS:
P.O. Box 25486, DFC
Denver, Colorado 80225-0486

STREET LOCATION:
134 Union Boulevard
Lakewood, Colorado 80228-1807

BA WTR
SD WR
Mail Stop 60189

RECEIVED

MAR 13 2009

MAR 11 2009

WATER RIGHTS
PROGRAM

Garland Erbele, Chief Engineer
South Dakota Department of Environment
and Natural Resources
Water Rights Program
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501

RE: Application No. 1901-1

Dear Mr. Erbele:

The Service filed an objection for the referenced application on February 13, 2009. After review of the report prepared by Natural Resources Engineering Specialist Ken Buhler and discussion with the Spearfish Public Works Department, the Service wishes to withdraw its' objection. We are satisfied with the findings that this appropriation should not affect our senior water right we hold for the D.C. Booth Historic National Fish Hatchery.

Thank you for your assistance in this matter. If you have questions or require further information, please contact me at (303) 236-4491.

Sincerely,

Megan A. Estep
Chief, Water Resources Division

cc: City of Spearfish
Jerry Krambeck, Mayor
625 5th Street
Spearfish SD 57783

Schlaak, Karen

From: Gronlund, Eric
Sent: Tuesday, April 14, 2009 1:26 PM
To: 'Tom Callaway'; 'Cheryl Johnson'
Subject: Water Permit No. 1901-1, City of Spearfish

As you are aware, the USFWS withdrew their objection to the city's application to appropriate water from a new Madison well. Therefore, the Water Rights Program intend to proceed with issuance of the permit as though it is uncontested. This means there will be no formal hearing on the application before the Water Management Board. I anticipate that the permit will be signed and issued by the Chief Engineer's in about 2 weeks.

Let me know if you have any questions.

Eric Gronlund
Water Rights Program, DENR
Phone: (605) 773-3352
Fax: (605) 773-4068
Email: eric.gronlund@state.sd.us
Web: www.denr.sd.gov

04/16/2009

PAYMENT REQUEST FORM

PAYEE: City of Spearfish
c/o Jerry Krambeck
625 5th St
Spearfish SD 57783

FROM: DENR Water Rights Program
523 E. Capitol Ave
Pierre, SD 57501-3181

DESCRIPTION OF SERVICE, PRODUCE OR TRANSFER

Refund on Water Permit No. 1901-1

AMOUNT: \$150.00

FUNDING SOURCE:

GENERAL: X

FEDERAL:

COMMENTS:

AUTHORIZATION:

Darlan E. Ceballos

APR 16 2009

I declare and affirm under the penalties of perjury that this claim is in all things, true and correct. I further agree to comply with the provisions of the Civil Rights Act of 1964 and regulations issued thereunder relating to nondiscrimination in federal assisted programs.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

APR 16 2009

City of Spearfish
c/o Mayor Jerry Krambeck
625 5th St
Spearfish SD 57783

Dear Mayor Krambeck:

Enclosed is Water Permit No. 1901-1 authorizing construction of the city's 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 the completed form after the city has 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.

Permit No. 1901-1 was submitted with a filing fee of \$625.00 which was more than required. Therefore, \$150.00 will be refunded to the city. The refund check should be received within the next couple of weeks.

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

11-02

Date:

Well Name	Municipal Water Supply Well City of Spearfish, South Dakota
Location	SW ¼ NE ¼ sec. 13, T. 6 N., R. 2 E., Lawrence County, South Dakota; approximately ½ mile north of I-90, Exit 14
Total Depth	1412 ft
Elevation	approximately 3920 ft
Engineering Firm	CETEC Engineering Services, Inc. 1560 Concourse Drive Rapid City, South Dakota 57703
Drilling Firm	Weston Engineering, Inc.
Drilling Date	September, October, November, and December, 2009; January and February, 2010

WELL LOG

<u>Depth (ft)</u>	<u>Description</u>	<u>Formation</u>
0 – 10	weathered red silt; some gravel and sand	Spearfish (at land surface)
10 – 20	red siltstone; some clay	
20 – 30	red siltstone; some clay	
30 – 40	red siltstone; some clay	
40 – 50	red siltstone	
50 – 60	red siltstone	
60 – 70	red siltstone and shale	
70 – 80	red siltstone and shale; some gray shale	
80 – 90	red siltstone	
90 – 100	red siltstone	
100 – 110	red siltstone; some gray shale	
110 – 120	red siltstone	
120 – 130	red siltstone	
130 – 140	red siltstone and shale	
140 – 150	red siltstone and shale	
150 – 160	red siltstone and shale	
160 – 170	red siltstone; some shale	
170 – 180	red siltstone	
180 – 190	red siltstone; some	

190 – 200	gray shale light red siltstone; white gypsum; some gray limestone	base of Spearfish
200 – 210	gray to pink limestone	top of Minnekahta (~200 ft)
210 – 220	gray to pink limestone	
220 – 230	gray to pink limestone; some red silt	
230 – 240	gray to purple limestone	
240 – 250	gray to purple limestone; reddish-purple silt	base of Minnekahta
250 – 260	red siltstone and shale	top of Opeche (~250 ft)
260 – 270	red siltstone and shale; some gypsum	
270 – 280	red siltstone and shale; some gypsum	
280 – 290	red shale and siltstone; some gypsum	
290 – 300	red siltstone and shale; minor gypsum	
300 – 310	red siltstone and shale; minor gypsum	
310 – 320	dark red shale and siltstone	
320 – 330	dark red shale and siltstone	
330 – 340	dark red shale and siltstone	
340 – 350	dark red siltstone and shale; gray clay and silt	
350 – 360	dark red siltstone and shale; gray clay and silt	base of Opeche
360 – 370	gray siltstone and clay; red silt; weathered limestone	top of Minnelusa (~360 ft)
370 – 380	gray siltstone and clay; some red silt; weathered limestone	
380 – 390	white limestone; white claystone; red siltstone; minor chert	
390 – 400	chert; white limestone; some sandstone; some red siltstone	
400-410	yellow sandstone; some red siltstone; some chert; some white limestone; some purple sandstone	

410 – 420	tan siltstone and sandstone; some clay; some soft limestone
420 – 430	yellow to tan sandstone; some light red sandstone; some siltstone
430 – 440	light red to yellow sandstone; siltstone; some limestone and dark gray dolomite
440 – 450	yellow to white to red sandstone; some white limestone; some siltstone and chert
450 – 460	yellow to white to red sandstone; red siltstone; some purple limestone
460 – 470	yellow to white sandstone; red siltstone; some purple limestone
470 – 480	light red siltstone; tan sandstone; some gray limestone; minor clay
480 – 490	light yellow to white sandstone; some purple limestone; some soft white limestone
490 – 500	purple to gray limestone; yellow to white sandstone; some soft white limestone; some red siltstone
500 – 510	yellow to white sandstone; some purple limestone; some red siltstone
510 – 520	yellow to red sandstone; some red siltstone
520 – 530	red to yellow sandstone; minor limestone; some red siltstone
530 – 540	yellow sandstone; some tan limestone; some red silt
540 – 550	gray to tan to yellow limestone; yellow sandstone and siltstone; some red siltstone
550 – 560	purple limestone; yellow sandstone and siltstone
560 – 570	red siltstone and shale; white gypsum; some yellow limestone; some gray clay

570 – 580	red siltstone and shale; white gypsum; some gray limestone; minor clay
580 – 590	gray limestone; gray dolomite; some red silt; some very dark gray calcareous clay
590 – 600	gray to tan limestone; gray dolomite; minor red siltstone; minor chert
600 – 610	yellow sandstone; gray limestone; some gray dolomite; some red siltstone
610 – 620	tan to yellow sandstone; gray limestone; some gray dolomite; some chert; minor red siltstone
620 – 630	tan to yellow sandstone; gray limestone and dolomite; some gray siltstone; some red siltstone
630 – 640	tan to yellow sandstone; minor gray limestone; minor chert
640 – 650	tan to yellow sandstone; some red silt; minor gray limestone
650 – 660	tan to yellow sandstone; minor red silt; minor gray limestone
660 – 670	tan sandstone; minor gray limestone and dolomite; minor red silt
670 – 680	tan sandstone; gray to purple dolomite; some gypsum; minor red silt
680 – 690	gray to purple dolomite; some yellow sandstone; some red silt
690 – 700	purple to gray dolomite; some gray clay
700 – 710	red silt; gray sandy limestone; some soft white calcareous clay
710 – 720	tan to gray to purple limestone; gray siltstone, some with calcareous cement; some

	red siltstone
720 – 730	gray sandy limestone; gray siltstone, some with calcareous cement
730 – 740	white to gray to purple siltstone and fine sandstone; some gray to purple limestone; some minor chert
740 – 750	light tan to purple limestone and dolomite; gray siltstone; minor gray to white to clear chert; minor gray and yellow sandstone
750 – 760	gray to purple dolomite; gray to clear chert; red silt and red clay; some minor yellow sandstone
760 – 770	gray sandstone; gray to purple to white dolomite; some red red silt; minor chert
770 – 780	gray to pink to white dolomite; gray sandstone; red silt; some gray shale; minor gypsum
780 – 790	white to gray to yellow sandstone; gray to purple dolomite; some red silt; minor chert
790 – 800	gray to white sandstone; gray to white dolomite; red silt; minor chert
800 – 810	purple to white dolomite; white to gray sandstone; some red silt; minor chert
810 – 820	purple to white dolomite; pink to white limestone; some white to gray sandstone; some red silt; minor chert
823	white to pink dolomite; some white limestone; some white to gray sandstone; some red silt; some purple siltstone; minor chert and clear quartz
830 – 840	white to pink to purple limestone; minor gray to dark gray dolomite; minor red siltstone

840 – 850	tan to white to purple dolomite; white limestone; tan clay; minor siltstone; minor gray siltstone	
851 – 860	tan to pink to white dolomite; gray to yellow limestone; gray siltstone; minor red silt; minor chert; minor gray clay	
860 – 870	tan to yellow to pink dolomite; white to yellow limestone; some red silt; some purple dolomite; minor chert and clear quartz	
870 – 880	tan to yellow to gray limestone; some red siltstone; some brown silt; minor quartz	
880 – 890	tan to yellow to gray, silty limestone; tan dolomite; purple to maroon siltstone; red silt; minor chert and quartz; minor green siltstone	
890 – 900	tan to yellow dolomite; gray, silty limestone; purple to maroon siltstone; red silt; minor green siltstone; minor quartz	
900 – 908	tan to yellow to gray limestone; some purple to maroon siltstone; some red silt and clay; minor yellow clay; minor chert and quartz	
908 – 920	tan to gray limestone; some calcite crystals; minor red silt; minor purple siltstone	base of Minnelusa; top of Madison (~ 910 ft)
920 – 930	tan to gray limestone; much red silt and clay; some calcite crystals; minor purple siltstone	
930 – 940	tan limestone; some calcite crystals; some red silt	
936 – 945	tan to gray limestone; minor red silt; some calcite crystals	
945 – 955	tan to gray limestone; minor red silt minor gray weathered limestone	
955 – 965	tan limestone; much red siltstone; some weathered limestone; minor chert	

965 – 975	very light tan dolomite; some light tan limestone with chalky appearance; some yellow, oxidized, calcareous silt
975 – 985	tan to yellow to gray dolomite; light red dolomite; some white limestone
985 – 995	tan to gray dolomite; light red dolomite; some gray limestone; much granular, sand-sized dolomite grains; chert pebble
995 – 1005	tan to pink dolomite; much silty dolomite; loosely consolidated silt
1005-1010	hard white to light tan dolomite; much loose, silty dolomite
1010 – 1020	light tan to gray dolomite; some brown, oxidized, calcareous siltstone
1020 – 1030	light tan dolomite; some pink dolomite; minor oxidation
1030 – 1040	light tan dolomite; much brown chert and silica sand
1040 – 1050	light tan dolomite; minor brown to pink dolomite
1050 – 1060	light tan dolomite; some brown to yellow dolomite; coarsely crystalline dolomite
1060 – 1070	light tan dolomite; some brown to gray dolomite; some limestone; coarsely crystalline dolomite
1070 – 1080	light tan to brown dolomite; some pink dolomite; coarsely crystalline dolomite; some gray limestone
1080 – 1090	light tan to brown to pink dolomite; some pink limestone
1090 – 1100	light tan to brown to yellow dolomite; some pink to white limestone; coarsely crystalline dolomite
1100 – 1110	white to mottled limestone; some pink to brown dolomite; coarsely crystalline calcite
1110 – 1120	light tan to light brown dolomite; coarsely crystalline dolomite

1120 – 1130	light tan to brown dolomite; some white dolomititic limestone; some calcite crystals
1130 – 1140	light tan to brown dolomite; some pink limestone
1140 – 1150	light tan to pink to brown dolomite; some coarsely crystalline
1150 – 1160	light tan to pink to brown dolomite
1160 – 1170	tan to pink dolomite; some white to gray limestone
1170 – 1180	pink to tan limestone; some calcite crystals
1180 – 1190	light gray to white limestone; finely crystalline calcite
1190 – 1200	missing
1200 – 1210	light tan dolomite; finely crystalline dolomite; minor iron staining
1210 – 1220	light tan to white limestone with some iron staining; brown to pink dolomite; minor gray limestone
1220 – 1230	light tan to yellow limestone; some pink limestone; some brown dolomite
1230 – 1240	light gray to yellow limestone; some pink limestone; some calcite crystals
1240 – 1250	light gray to brown to pink limestone; some calcite crystals
1250 – 1260	tan to pink limestone; some coarsely crystalline calcite
1260 – 1270	tan to yellow limestone; some pink to white dolomite; minor iron-stained brown dolomite
1270 – 1280	brown to tan dolomite; some pink dolomite; some dark brown, iron-stained dolomite; minor chert
1280 – 1290	brown dolomite; minor pink dolomite; minor brown to clear chert
1290 – 1300	light tan limestone; brown dolomite
1300 – 1310	light tan limestone; brown dolomite; some pink limestone; some brown, iron-stained dolomite

1310 – 1315	light tan to yellow limestone; minor brown to pink limestone; coral fragment	
1320 – 1330	light tan to brown limestone; some light red to rust-colored dolomite	
1330 – 1340	brown to white limestone; some light red limestone; minor dark gray limestone	
1340 – 1344	brown to white limestone; some light red dolomite	
1350 – 1360	white to light brown dolomitic limestone; some calcite crystals; coarsely crystalline dolomite and limestone	
1360 – 1370	light tan dolomite; some yellow to light red limestone; some calcite crystals; some rust- colored dolomite; coarsely crystalline dolomite	
1370 – 1380	light tan dolomite; light tan dolomitic limestone; finely crystalline dolomite	
1380 – 1390	light brown limestone; coarsely crystalline limestone	
1390 – 1400	light brown limestone; some dolomitic limestone; some calcite crystals; coarsely to finely crystalline limestone	Madison Limestone
1412	end of boring	

Drill cuttings examined by Arden D. Davis

Permit Nos. 1901-1
Upper Cheyenne River - Water District

Report of Examination of Works and/or Application of Water to Beneficial Use

TO: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have on this day, 9/14/2015, made a thorough examination of the water use system constructed by City of Spearfish, 625 5th Street, Spearfish, SD 57783 holder of Permit no. 1901-1, bearing the priority date of November 13, 2006. Permit No. 1901-1 is authorized to appropriate a total of 2.67 (1200 gpm) from one well (Madison Aquifer) for municipal purposes, in Lawrence County.

Inspection contact and relationship to
permit holder, if applicable:

Tom Callaway,
Public Works

A. Works used to divert the water:

Gould submersible pump 1200 gpm capacity (2.67 cfs).

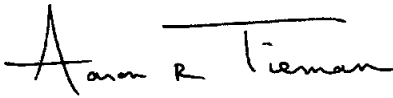
B. Works used to transport water to place of use:

Municipal distribution lines.

The system is in the following condition **good**. The point of diversion (well) for Permit No. 1602-1 is located specifically at Lat/Lon – N44.482989/W-103.814953 which is the approximately 2200 feet south and 1500 feet west of the NE corner of Section 13, T6N-R2E. The works are capable of diverting 2.67 cfs which is to be used for municipal purposes. The license should be issued for 2.67 cfs.

All structures, wells and lands on map Y
Exceptions to compliance are: none.

Comments: Withdrawal from Future Use Permit No. 1872-1



Aaron Tieman
Natural Resources Engineer II
DENR, Water Rights Program

Date report completed: September 28, 2015

FIELD INVESTIGATION REPORT FOR PERMIT NO. 1901-1

DATE OF INVESTIGATION:	September 14, 2015
NAME & ADDRESS OF PERMIT HOLDER	City of Spearfish 625 5th Street Spearfish, SD 57783
INVESTIGATION CONTACT/ RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE	Tom Callaway, Public Works
DIVERSION POINT LEGAL LOCATION	SW¼ NE¼ Section 13, T6N-R2E
WATER SUPPLY SOURCE	Groundwater, Madison Aquifer

Other permit(s) associated with the project: **Withdrawal from Future Use Permit No. 1872-1.**

WELL INFORMATION:

- 1) Well Drilling Firm: **Weston Engineering Drilling**
- 2) Number of Wells: **One**
- 3) Depth(s): **1412** feet
- 4) Well log available: **yes**

Casing:

- 1) Diameter: **13³/₈** inches **20** inches
- 2) Length: **935** feet **40** feet
- 3) Type: **Steel** **Steel**

Screen:

- 1) Type: **Open hole**
- 2) Length: **N/A** feet
- 3) Static water level: **366** feet.

Pump:

- 1) Make: **Goulds**
- 2) Model:
- 3) Capacity: **1200** gpm

Motor:

- 1) Make: **Franklin**
- 2) Model: **2396038521**
- 3) Horsepower rating: **75** hp

DISTRIBUTION LINES OR CANALS:

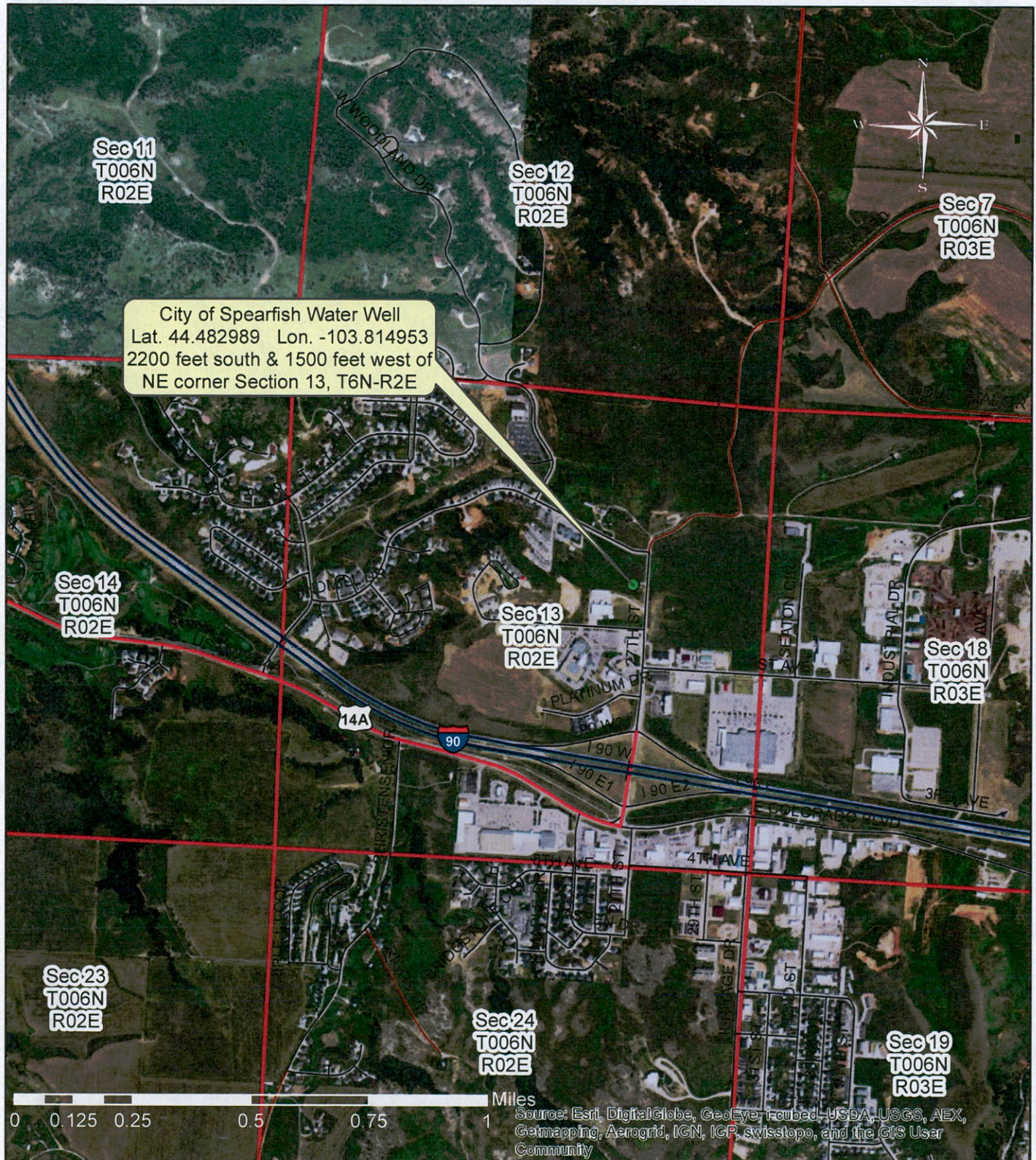
- 1) Type: **Municipal distribution lines.**

PERMIT QUALIFICATIONS:

- 1) Special qualifications to permit being abided by **Yes**
- 2) All structures, wells and lands on map **Yes**

COMMENTS:

Water Right 1901-1
City of Spearfish
September 28, 2015



Aaron R. Tieman

Aaron Tieman
Natural Resources Engineer II
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>

OCT 19 2015

1901-1

Tom Callaway, Public Works Director
City of Spearfish
625 5th St
Spearfish SD 57783

Dear Mr. Callaway:

Enclosed is Water License No. 1901-1. 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. 1901-1, 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. 1901-1

(1) The City of Spearfish, 625 5th St., Spearfish SD 57783 made Application No. 1901-1, October 9, 2008 for a water permit to place to beneficial use 1,160 acre feet of water annually at a maximum diversion rate of 2.67 cubic feet of water per second from ground water (one well – Madison Aquifer), Lawrence County, South Dakota for municipal purposes. Permit No. 1901-1, with a priority date of November 13, 2006 (established by Future Use Permit No. 1872-1) was approved February 16, 2009 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before February 16, 2014 and for the application to beneficial use of said water on or before February 16, 2018.

The water placed to beneficial use was appropriated and reserved by Future Use Permit No. 1872-1.

(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 2.67 cubic feet of water per second for beneficial use.

The location of the diversion point is approximately 2,200 feet S and 1,500 feet W of the NE corner of Section 13, T6N, R2E (SW ¼ NE ¼).

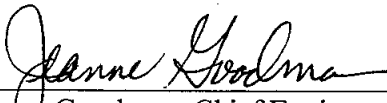
(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use.

(4) Pursuant to South Dakota Water Law 46-5-30.1 the City of Spearfish, 625 5th St., Spearfish SD 57783 the holder and/or owner of Water Right No. 1901-1 is issued a license to appropriate water, the right to use 2.67 cubic feet of water per second, with an annual volume of 1,160 acre feet of water from ground water (one well – Madison Aquifer) with a priority date of November 13, 2006 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. 1901-1 and subject to the following qualifications:

- In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 1901-1 is issued for a twenty year term. Pursuant to SDCL 46-2A-21, the twenty year term may be deleted at any time during the twenty year period or following its expiration. If the twenty year term is not deleted at the end of the term, the Permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 1901-1 may also be cancelled for nonconstruction, forfeiture, abandonment or three permit violations pursuant to SDCL 46-1-12, 46-5-37, 46-5-37.1, and Board Rule ARSD 74:02:01:37.
- 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.

- The well authorized by Permit No. 1901-1 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28. *The well was drilled in 2010 by Weston Engineering Inc. A copy of the log is on file with the Water Rights Program.*
- The city of Spearfish shall report to the Chief Engineer annually the amount of water withdrawn from the Madison Aquifer.



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

OCT 19 2015

date

