

WATER PERMIT NO. 1579-1

Phone: 642-8271

Name of Applicant: City of Spearfish

Post Office Address: 722 Main Street, Spearfish SD 57783

Amount of Water Claimed: 2500 AF Total Acres: NA

Source of Water Supply: groundwater

Water to be used for: municipal County: Lawrence

About _____ miles _____ of _____

PRIORITY _____ Date Received: 5-20-93 Fee: \$250 \$450 Remarks: _____

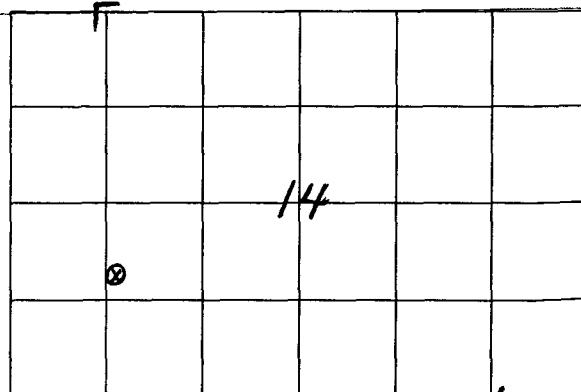
Corrected Application Received: _____ Period of Annual Use: Jan 1 - Dec 31

WATER QUALITY APPROVAL RECEIVED: NA APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES _____ NO _____ REMARKS: _____

Diversion Point: NW 1/4 SW 1/4 Sec 14-T6N-R2E

Land to be Irrigated: _____



Well Log: Driller: _____ Licensed YES _____ NO _____

Depth of Well: approx. 660 feet REMARKS: _____

Type of Map: topo PREPARED BY: Theodore J. Vore Reviewed and the Number

Assigned on: 5-24-93 By: Karen Schlaak

**SOUTH DAKOTA
WATER PERMIT NO. 1579-1**

Date of first receipt of application May 20, 1993.

Date of receipt of amended application October 4, 1993.

The Water Management Board approved Water Permit Application No. 1579-1 on December 1, 1993 for the City of Spearfish, 722 Main Street, 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. 1579-1 appropriates 5.0 cubic feet of water per second (2500 acre-feet annually) from one well (Madison Formation) 660 feet deep located in the NW 1/4 SW 1/4 Section 14-T6N-R2E.
2. The water appropriated shall be used for the purpose of supplying the City of Spearfish and may not exceed the amount of water needed for beneficial use for municipal purposes.
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 October 4, 1993.
5. One-fifth of the construction is to be completed on or before June 1, 1996.
6. All construction is to be completed on or before December 1, 1998.
7. Water is to be put to beneficial use on or before December 1, 2002.
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. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 1579-1 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. 1579-1 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.
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. 1579-1 shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) from the producing formation to the surface pursuant to Section 74:02:04:28.

(continued)

4. The City of Spearfish shall report to the Chief Engineer annually the amount of water withdrawn each year from the Madison Formation.

WATER MANAGEMENT BOARD

By: 
John Hatch, Chief Engineer
Water Rights Division
Department of Environment and Natural Resources

FEB 1 1994
date



No. 1579-1 Hydrologic Unit 10120203
 Map No. _____ Basin Belle Fourche
 Newspaper Queen City Mail, Box 7, Spearfish

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

Use of water: Industrial ☐ Commercial ☐ Municipal ☒ Other Common Distribution System ☐
 Rural Water System ☐ Suburban Housing ☐ Geothermal Heat ☐ Institutional ☐ Recreational ☐
 Domestic ☐ (above 18gpm) Other ☐

Type of Application: Check one or more of the following

New ☒ Vested Right ☐ Future Use ☐ Change Use ☐

☐ Amend Permit No. _____ with old priority date retained

Change diversion point(s) ☐ Add diversion point(s) ☐ Other: ☐ _____

☐ Application to: Change diversion point(s) ☐ Add diversion point(s) ☐ on Permit No. _____

☐ Construction to use water reserved by Future Use Permit No. _____

1. Name of Applicant City of Spearfish Phone No. 642-8271

Post Office Address 722 Main Street Spearfish State SD 57783
(Street, RR or Box) (City) Zip Code

2. Amount of water claimed (c.f.s.) 5.0 ~~3.0~~ AF annually

3. Source of water supply Madison Aquifer

4. Location of point of diversion Proposed Well Location

SW 1/4, NW 1/4, SW 1/4 Section 14, T.6N., R.2E. BHM

_____ County Lawrence

5. Counties where water will be used Lawrence - Municipal Supply for City

6. Annual period during which water is to be used Year around Jan 1 - Dec 31

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

The City of Spearfish is faced with treating the municipal surface supply or drilling another well. The treatment cost and inconsistency of the surface supply has prompted the City Council to select a new well.

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map (see instruction)

STATE OF SOUTH DAKOTA)
 County of _____)

I, Fred W. Romkema, Mayor, City of Spearfish 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.

Signed [Signature]

Subscribed and sworn to before me this 18th day of May 1993

[Signature]
 Notary Public

RECEIPT

413778

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, _____ May 24, 19 93

RECEIVED OF City of Spearfish, 722 Main, Spearfish SD 57783

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

Fee for Application for Permit No. <u>1579-1</u> to Appropriate Water, to construct and to put water to beneficial use _____	450 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. _____	
Fee for Filing Transfer Form _____	
Fee for Filing Extension Request _____	
Fee for _____	

(Any Other Work Provided by Law)	
Total	450 00

By John Hatch
Chief Engineer JOHN HATCH ks

RECEIPT

413930

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, October 25, 19 93

RECEIVED OF City of Spearfish, 722 Main, Spearfish, SD 57783

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

Fee for Application for Permit No. <u>1579-1</u> to Appropriate Water, to construct and to put water to beneficial use _____	250	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. _____		
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	250 00

By John Hatch
Chief Engineer

PHONE (605) 642-7775



VENDOR NO. 1710

Address _____

Sign and submit this form, with your invoices, to: City Finance Office; 722 Main Street; Spearfish, South Dakota 57783.

[illegible]

If this purchase order is over \$500, it must be approved by the Mayor or the appropriate City Council member.

VERIFICATION

I declare and affirm under the penalties of perjury that this claim has been examined by me, and to the best of my knowledge and belief, is in all things true and correct.

Verification must be signed here. 

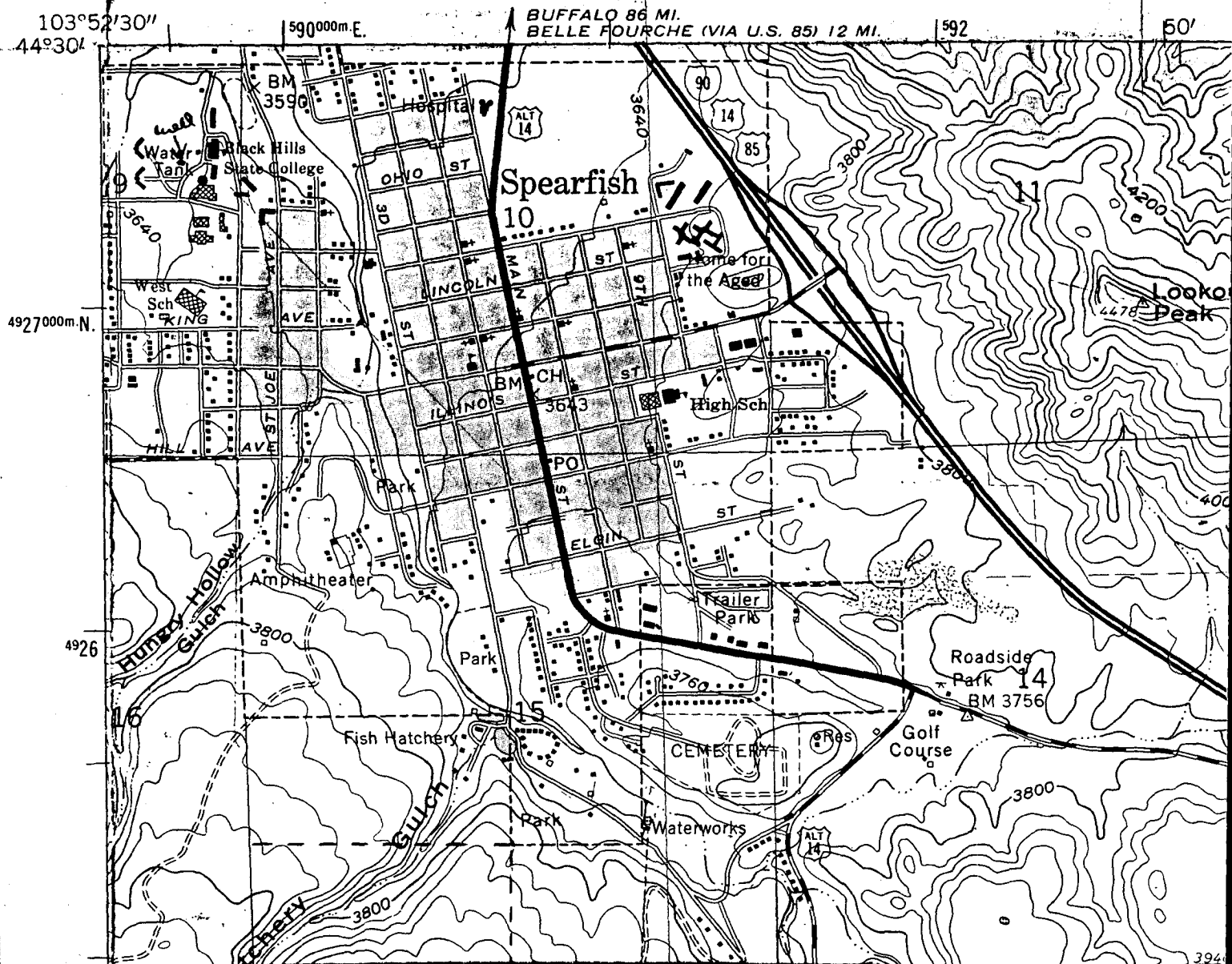
Finance Officer _____ Date _____

City Council meets the first and third Monday evenings of each month. Proper claims may be filed with the City Finance Office for processing at any time. Only claims processed by the Finance Office on or before Wednesday prior to each Council meeting will be presented for Council approval.

VENDOR CLAIM FORM

5273 III SW
(CHICKEN CREEK)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



CERTIFICATE OF ENGINEER/SURVEYOR

I, Theodore J. Vore, Registered Engineer and
Land Surveyor, hereby certify that I have located
the proposed water well site on this copy of
a Geological Survey quadrangle map.

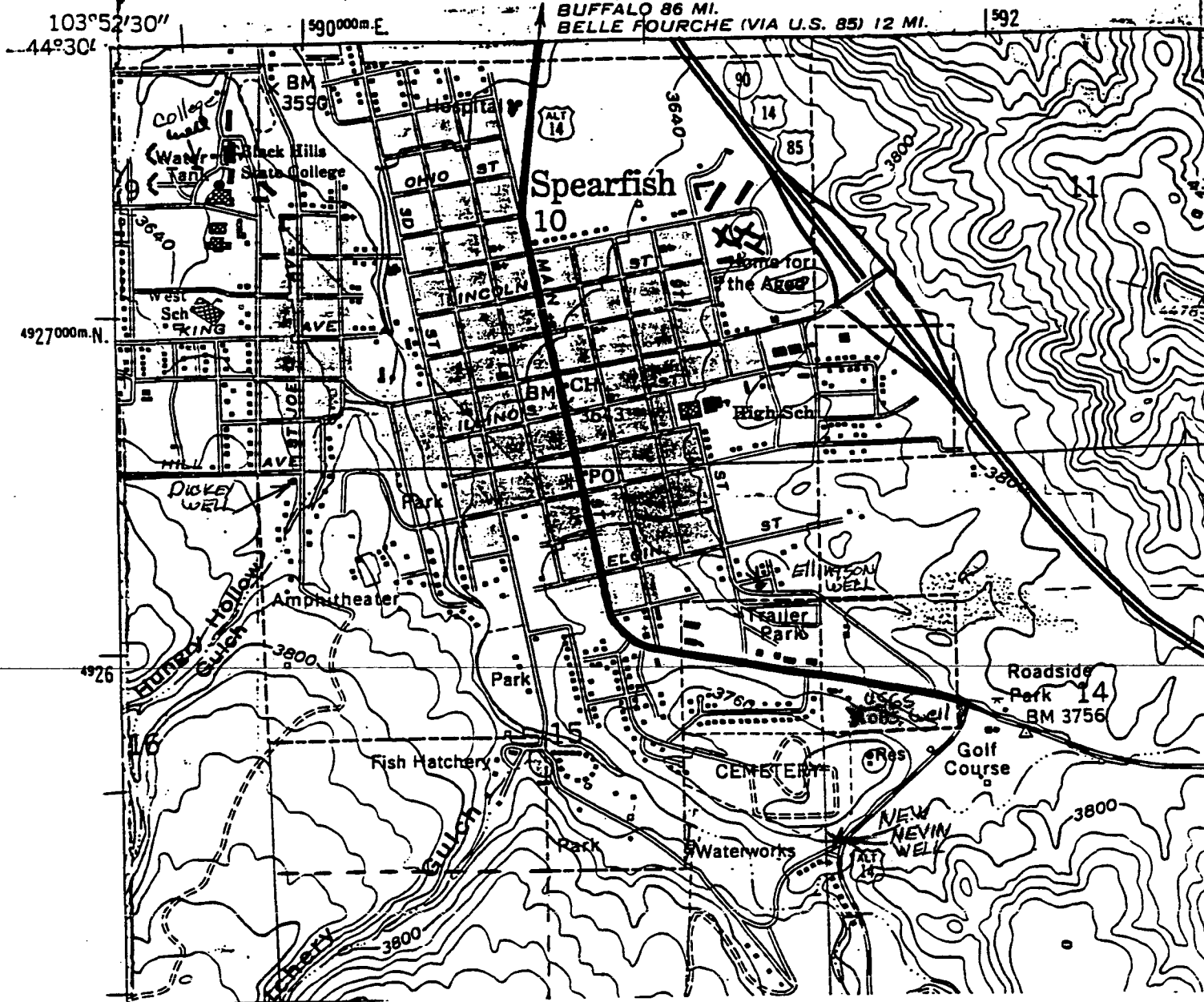
Theodore J. Vore
Theodore J. Vore PE/LS No. 4328

1579-1



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

5273 III SW
HICKEN CREEK

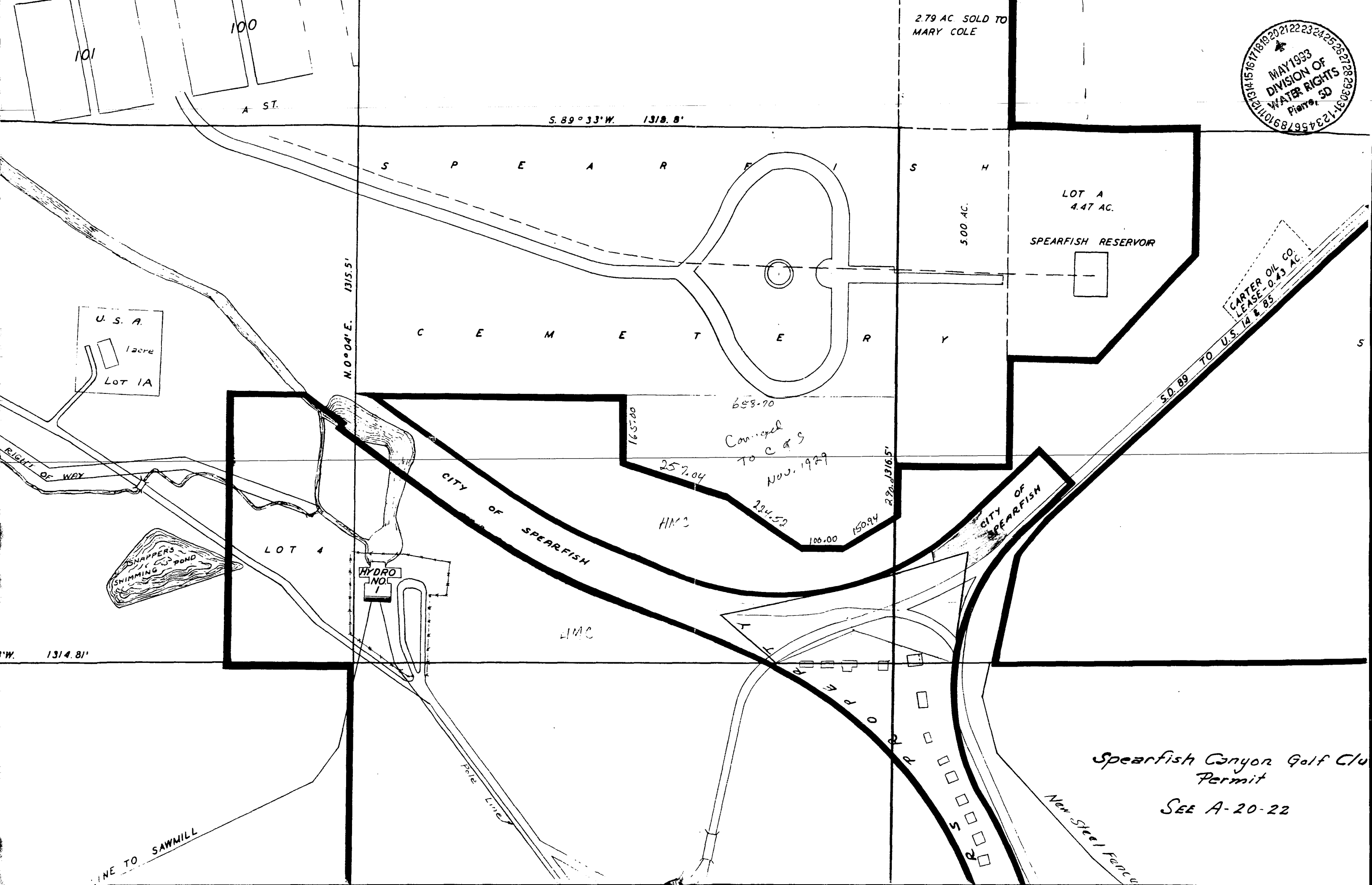


CERTIFICATE OF ENGINEER/SURVEYOR

I, Theodore J. Vore, Registered Engineer and Land Surveyor, hereby certify that I have located the proposed water well site on this copy of a Geological Survey quadrangle map.

Theodore J. Vore
Theodore J. Vore PE/LS No. 4328





MAY 1933
DIVISION OF
WATER RIGHTS
Pierre, SD

CARTER OIL CO.
LEASE - 0.43 AC.
S.D. 89 TO U.S. 14 & 85

Spearfish Canyon Golf Club
Permit
SEE A-20-22

2.79 AC SOLD TO
MARY COLE

LOT A
4.47 AC.

SPEARFISH RESERVOIR

500 AC.

S P E A R F I S H
C E M E T E R Y

CITY OF SPEARFISH

CITY OF SPEARFISH

LOT 4

HYDRO
NO. 1

Conveyed
to C & S
Nov. 1989

HMC

HMC

Pole Line

LINE TO SAWMILL

New Steel Fence

U. S. A.
1 acre
Lot 1A

RIGHT OF WAY

A ST.

S. 89° 33' W. 1318.8'

N. 0° 04' E. 1315.5'

1314.81'

101

100

SOUTH DAKOTA WATER WELL COMPLETION REPORT

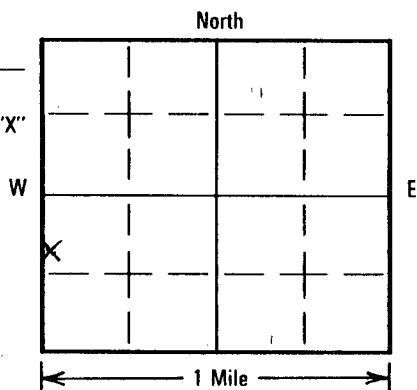
07-92

Location 40 1/4 SW 1/4 Sec 14 Twp 6N Rg 2E

County

Lawrence

Please mark well location with an "X"

Well Completion Date August 31 1993

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? > 100 ft. from _____ (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Air Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>76</u> LB/FT	<u>20</u> IN	<u>0</u> FT	<u>32</u> FT	<u>30</u> IN
<u>54</u> LB/FT	<u>13 3/8</u> IN	<u>0</u> FT	<u>603</u> FT	<u>17 1/2</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Cement</u>	<u>80</u>	<u>14</u> lb./gal	<u>0</u> ft.	<u>32</u> ft.
<u>Cement</u>	<u>430</u>	<u>16</u> lb./gal	<u>0</u> ft.	<u>603</u> ft.

Describe grouting procedure pressure grouted through casing

SCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter _____ IN Length _____ FEET

Material _____

Slot Size _____ Set From _____ Feet to _____ Feet

Other information _____

WAS A PACKER OR SEAL USED? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

DISINFECTION:

Was well disinfected upon completion? ☒ YES, How: chlorine solution
_____ NO, Why Not? _____Laboratory sent to for pump has not been set water quality analysis _____Well Owner: City of SpearfishBusiness Name: Att: Ted VoreAddress: 722 Main Street Spearfish, SD 57783

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Fill</u>	<u>0</u>	<u>2</u>
<u>limestone</u>	<u>2</u>	<u>40</u>
<u>red shale</u>	<u>40</u>	<u>135</u>
<u>SS white to yellow</u>	<u>135</u>	<u>250</u>
<u>red to brown dolomite</u>	<u>250</u>	<u>260</u>
<u>SS red</u>	<u>260</u>	<u>307</u>
<u>dolomite buff to lavender</u>	<u>307</u>	<u>350</u>
<u>SS white to pink</u>	<u>350</u>	<u>360</u>
<u>dolomite pink</u>	<u>360</u>	<u>390</u>
<u>SS pink to white</u>	<u>390</u>	<u>440</u>
<u>white dolomite</u>	<u>440</u>	<u>550</u>
<u>SS pink to white</u>	<u>550</u>	<u>595</u>
<u>dolomite</u>	<u>595</u>	<u>842</u>
<u>white to tan to yellow</u>		

STATIC WATER LEVEL 107 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☒ Pumped Describe: _____
☐ Bailed _____
☐ Other _____

Pumping Level Below Land Surface

115 ft. After 1 Hrs. pumped 1000 GPM129 ft. After 1 Hrs. pumped 1746 GPM

If pump installed, pump rate _____ GPM

REMARKS

This well was drilled under license # 331

And this report is true and accurate.

Drilling firm TAYLOR DRILLING COMPANY

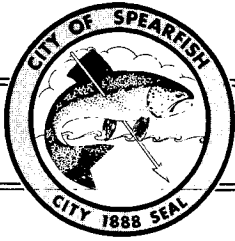
Signature of License Representative:

Ralph Taylor

Signature of Well Owner or Equitable Property Holder:

Date:

6/24/94



CITY OF SPEARFISH

722 MAIN STREET, SPEARFISH, SOUTH DAKOTA 57783

May 14, 1993



Eric Gronlund, Water Rights
DENR
Joe Foss Building
523 E. Capitol
Pierre, SD 57501-3181

Dear Eric:

As per our telephone conversation of this date, I anticipate the City Council on May 17, 1993 to authorize Taylor Drilling to drill a water test well.

We anticipate drilling at the location indicated on the enclosed maps and at a depth of about 660 ft. The USGS, Earl Greene, has assisted the City of Spearfish in determining the most logical location for another Madison Well with the least probable interference with other wells.

Thank you for your assistance, and please advise the earliest the driller may begin.

Sincerely,

A handwritten signature in cursive script, reading "Theodore J. Vore".

Theodore J. Vore
Public Works Administrator
CITY OF SPEARFISH

TJV/bsk





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

May 21, 1993

Theodore J. Vore
City of Spearfish
722 Main Street
Spearfish, SD 57783

Dear Mr. Vore:

As requested, pursuant to South Dakota Well Construction Standard 74:02:04:21, The City of Spearfish is authorized to construct a test well into the Madison Aquifer in the SW 1/4 NW 1/4 SW 1/4 Section 14, T6N-R2E, prior to approval of a water permit. The test well must be constructed in accordance with the South Dakota Well Construction Standards. Any test holes that are abandoned must be plugged pursuant to the South Dakota Well Construction Standards.

Sincerely,

JAMES A. GOODMAN, P.E.
Natural Resources Engineer
for JOHN HATCH, Chief Engineer
Water Rights Division
(605) 773-3352

Water Rights Division - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: City of Spearfish -- Water Permit Appl. No. 1579-1

ADDRESS: 722 Main St., Spearfish, SD COUNTY: Lawrence

DATE: 8/12/93 TELEPHONE:

RE: Phone Call from Ted Vore, City Engineer

COMMENTS:

Mr. Vore called to say he had received a copy of the report, recommendation and notice of hearing on the City of Spearfish's WP application No. 1579-1. Mr. Vore said they were nearing completion on the test well at that it appears the well will produce significantly greater than the 3.0 cfs that they had applied for. Mr. Vore was having the driller complete the well and then test pump the well to determine the sustainable pumping rate from the well. Mr. Vore will then amend the city's application to include the correct amount on the application. For now, the city is not going to authorize publication of the notice of hearing.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: Eva Thorslund



CITY OF SPEARFISH

722 MAIN STREET, SPEARFISH, SOUTH DAKOTA 57783



August 12, 1993

Eric Gronlund
DENR
Joe Foss Building
523 E. Capitol
Pierre, SD 57501-3181

Re: Application to Appropriate Water No. 1579-1

Dear Eric:

As per our telephone conversation of this date and your advice, I have put a hold on the above referenced publication.

At 645 feet, on August 11, 1993 about 4:30 p.m., Taylor Drilling encountered between 1500 and 2000 gpm from the above referenced (Nevin Well). USGS Officials from Rapid City measured the flow on August 12, 1993 with a pygmy meter to be 2136 gpm.

Dr. Gries, SDSM&T, and Earl Greene, USGS, advise that the greatest potential of the Madison Aquifer comes from the top 200 feet. Present plans are to drill to 800 feet and then perform a pump test.

We will advise you of the test pump results and the desired amount of water requested in application as soon as possible.

Thank you for your cooperation.

Sincerely,

A handwritten signature in cursive script, reading "Theodore J. Vore".

Theodore J. Vore
Public Works Administrator
CITY OF SPEARFISH

TJV/bsk





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

September 24, 1993

Theodore J. Vore, Public Works Administrator
City of Spearfish
722 Main Street
Spearfish, SD 57783

Re: Water Permit Application No. 1579-1

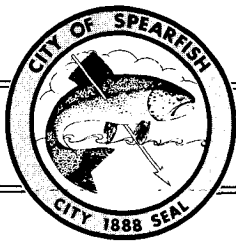
Dear Mr. Vore:

I am writing as a reminder that Water Permit Application No. 1579-1 for the City of Spearfish is on hold. This application was originally to appropriate 3.0 cubic feet of water per second (cfs) from a Madison well. However, while drilling the well it appeared the well would produce a much greater amount than the 3.0 cfs. You requested that the application be put on hold so that a pump test could be performed. The results of the pump test would provide a basis for amending the application to the amount the well is capable of producing.

This letter is only intended as a friendly reminder that the application is currently on hold. When you have complete pump test results and want to amend the application, please let me know and we will proceed with the application.

Sincerely,

Eric Gronlund
Water Rights Division
605 773-3352



CITY OF SPEARFISH

722 MAIN STREET, SPEARFISH, SOUTH DAKOTA 57783

September 28, 1993



Eric Gronlund, Water Rights
DENR
Joe Foss Building
523 E. Capitol
Pierre, SD 57501-3181

Re: Water Well Permit Application No. 1579-1 (Nevin Well)

Dear Eric:

Enclosed please find an updated map showing the locations of the above referenced Nevin Well, as well as the location of other Madison Wells within the City.

The Nevin Well pump test was conducted by the USGS. A staged drawdown was performed while the USGS observation well (green) and the Ellingson, Dickey and College Wells (yellow) were monitored. A maximum of 1800 gpm was all the test pump could handle and no effect was noted on the monitored well. Draw down in the Nevin Well reached 124 feet below the surface and totally recovered in less than one minute after pump shut-down.

We are convinced the Nevin Well could be pumped in excess of 3000 gpm, however, at this time the City of Spearfish wishes to amend our application to request 5 cfm, 2500 AF annually. It would not be cost effective at this time, for the City to install equipment capable of a larger discharge.

Thank you for your cooperation in allowing us to perform the pump test prior to application finalization.

Sincerely,

A handwritten signature in dark ink, appearing to read "Theodore J. Vore".

Theodore J. Vore
Public Works Administrator
CITY OF SPEARFISH

TJV/bsk
Enclosure





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

October 12, 1993

Theodore Vore
Public Works Administrator
City of Spearfish
722 Main Street
Spearfish, SD 57783

Dear Mr. Vore:

I am writing to advise you that I have amended the City of Spearfish's Water Permit Application for the Nevin Well to be for 5.0 cubic feet of water per second not to exceed an annual volume of 2,500 acre feet of water annually.

The application filing fee for 2,500 acre feet of water is \$700. The city previously submitted \$450 with their originally application for 1,300 acre feet of water. An additional \$250 (\$700 minus \$450) will be required before that application is considered complete.

If you have any questions, please feel free to contact me.

Sincerely,

Eric Gronlund
Eric Gronlund
Water Rights Division
605 773-3352

WATER PERMIT APPLICATION NO. 1579-1
CITY OF SPEARFISH
JULY 2, 1993

Water Permit Application No. 1579-1 proposes to appropriate 5.0 cubic feet of water per second from one well (Madison Formation), 660 feet deep located in the NW 1/4 SW 1/4 Sec.14, T6N-R2E. The water is to be used for municipal use by the City of Spearfish.

AQUIFER: MADISON LIMESTONE

The Madison Aquifer is a massive, carbonate (limestone and dolomite) aquifer which underlies most of western South Dakota. It is estimated that the aquifer contains at least 640 million acre-feet of recoverable water in storage in the State (Allen, 1984). The importance of the Madison as an aquifer is largely due to randomly distributed zones of secondary porosity and permeability formed by weathering of exposed surfaces, groundwater solution and fracturing. These zones also play an important role in determining the hydraulic behavior of the Madison aquifer system and the response of the system to stress. The aquifer is under confined (artesian) conditions at this location. A well at this site is not expected to flow.

Recharge to the Madison aquifer occurs through streamflow losses and direct infiltration of precipitation at the outcrop area. Recharge for the entire Madison Aquifer in South Dakota has been estimated to range from 140,000 to 400,000 acre-feet per year (Woodward Clyde, 1981).

The Division of Water Rights monitors 12 observation wells completed into the Madison aquifer. Observation well LA-88C is located approximately 1200 feet north of this well site. Records from the observation wells indicate the potentiometric surface of the aquifer fluctuates 30-40 feet per year near the recharge area, in response to seasonal and climatic variations. A downward trend of the water levels in recent years is probably indicative of low annual precipitation from 1986 through 1992. Observation well data suggest that at the existing level of development, natural influences dominate the water level of the aquifer and the effects of pumping as yet are not obvious.

The high cost of Madison wells, except very near the outcrop, and the availability of groundwater from shallower aquifers, has limited domestic development and generally restricted usage from the Madison to those uses which require water rights. The majority of the water use from the aquifer is from Butte, Lawrence, Meade, Pennington and Fall River Counties. The Madison supplies water for irrigation, geothermal, industrial, and commercial use. However, by far the major use of the aquifer is for water distribution systems (suburban housing development and municipal use). The cities of Spearfish, Belle Fourche, Sturgis, Rapid City, Box Elder, and Edgemont all depend on water from the Madison Aquifer.

If the worst case assumptions are made that (1) permits/rights with an annual withdrawal limitation (ac-ft/yr) will use the maximum allowable; and (2) permits/rights that are limited by a diversion rate only, will use 60% of the maximum allowable (considered reasonable for water distribution systems); the total water use from the Madison would be less than 35,000 acre-feet per year. The actual amount of water used from the Madison is considerably less than this estimate. Comparison of the estimated annual recharge to the Madison with the water use estimated from the aquifer, indicates unappropriated water is available from the Madison aquifer.

AFFECTS ON EXISTING RIGHTS:

The major obstacle to potential development of the Madison Aquifer is consideration of the affects pumping may have on existing water rights. The drawdown caused by pumping an individual well could have an affect nearby wells (well interference), and the cumulative affect of numerous withdrawals from an area, may have an affect on area water rights.

WELL INTERFERENCE:

Since the Madison is under artesian conditions except very near the outcrop, withdrawals from a well can cause a decline in the potentiometric surface over fairly widespread areas. The water levels of wells in the immediate vicinity may be influenced by withdrawals from this well, however, any effects should minimal.

CUMULATIVE AFFECT OF WITHDRAWALS:

The cumulative affect of numerous withdrawals from a concentrated area, may lower the water levels over a fairly large area. A significant lowering of the potentiometric surface of the Madison Aquifer could theoretically affect not only the Madison, but also other aquifers, spring flows and surface water flows. In recent years, a number of wells have been completed into the Madison aquifer in the Spearfish area. The relationship between the Madison Aquifer and the overlying Minnelusa Aquifer is not fully understood. A hydrologic connection may exist between these two aquifers. Measurements taken in the Division of Water Rights Observation Wells indicate the water level of the Madison is generally higher than the water level of the Minnelusa, thus suggesting the potential of the Madison contributing recharge to the Minnelusa. If a hydraulic connection exists, lower water levels in the Madison Aquifer would also result in lower water levels in the Minnelusa Aquifer. While significant effects to the Minnelusa water level do not appear to have resulted from present development, this connection cannot be ignored when considering long-term development.

As stated previously, a major percentage of the recharge to the Madison occurs from streamflow losses. Streamflow losses to the aquifer are directly influenced by the gradient between the surface water and the groundwater. An increase in the gradient caused by a decline in water levels in the Madison aquifer may

increase the streamflow losses.

If the cumulative affect of development from the Madison Aquifer requires the lowering of pumps in existing wells (either domestic wells or those wells with existing permits), or reduces flows of area streams, unlawful impairment of existing rights questions may need to be answered. SDCL 46-6-6.1 authorizes the Water Management Board to protect domestic water use by controlling large capacity wells without the necessity of requiring maintenance of artesian head pressure in a domestic use well. The statute also provides for the lowering of a water lift mechanism to a depth near the bottom of the groundwater supply or, in artesian aquifers to a substantial depth below the geological formation confining the ground water. Based on this statute, although water levels may be affected, the affect may not be unlawful impairment.

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."

Evidence is not available to justify issuing this permit without a term limitation of 20 years.

CONCLUSIONS:

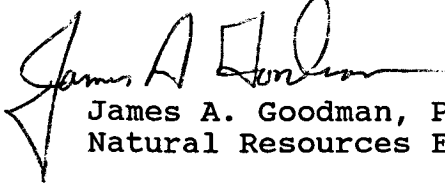
1. There is a reasonable probability that unappropriated water is available from the Madison Formation.
2. The Madison Aquifer is under artesian conditions in this area and fluctuations in the water table will occur as a result of pumping. A well at this site is not expected to flow.
3. Interference with existing diversions (wells) is unlikely to be adverse.
4. Although the long term cumulative affects of the development of the Madison Aquifer are not known, the contribution this appropriation will have on the cumulative affect is expected to be negligible.

5. Evidence is not available to justify issuing this permit without a 20 year term limitation.



Ken Buhler
Natural Resources Engineer

Approved by:



James A. Goodman, P.E.
Natural Resources Engineer

References:

Allen, J.C., D.Iles, A.Peters, 1984, Analysis of Ground Water and Streamflow Data Western Dakotas Region of SD, Task 3 and 4, Ground Water Resources Inventory, for US Army Corps of Engineers, SD DWR, Division of Geologic Survey, Vermillion, SD 57069

Division of Water Rights, 1993, "Water Permit Files", SD DENR-Division of Water Rights, Joe Foss Building, Pierre, SD 57501

Division of Water Rights, 1993, "Observation Well Files", SD DENR-Division of Water Rights, Joe Foss Building, Pierre, SD 57501

Division of Water Rights, 1993, "Domestic Well Log Files", SD DENR-Division of Water Rights, Joe Foss Building, Pierre, SD 57501

Kyllonen, D.P., K.Peter, 1987, Geohydrology and Water Quality of the Inyan Kara, Minnelusa, and Madison Aquifers of the Northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming, USGS Water-Resources Investigations Report 86-4158, Rapid City, SD 57701

Woodward Clyde, 1981, Well Field Hydrology Technical Report, for ETSI Coal Slurry Pipeline Project, U.S. Dept. of Interior, Bureau of Land Management

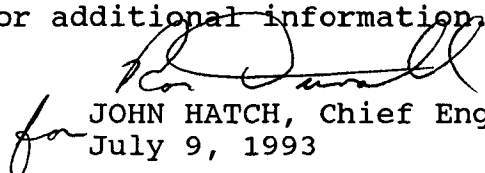
RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1579-1, City of Spearfish

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Environment and Natural Resources concerning Water Permit Application No. 1579-1, City of Spearfish, c/o Mayor Fred Romkema, 722 Main Street, Spearfish, SD 57783.

The Chief Engineer is recommending APPROVAL of Application No. 1579-1 for a 20-year term pursuant to SDCL 46-1-14 and 46-2A-20 because 1) although evidence is not available to justify issuing this permit without a 20-year term limitation, 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) in the public interest with the following qualifications:

1. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 1579-1 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. 1579-1 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.~~
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. 1579-1 shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) from the producing formation to the surface pursuant to Section 74:02:04:30.
4. The City of Spearfish shall report to the Chief Engineer annually the amount of water withdrawn each year from the Madison Formation.

See report on application for additional information.


JOHN HATCH, Chief Engineer
July 9, 1993



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

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

October 15, 1993

Theodore Vore, City Engineer
City of Spearfish
722 Main Street
Spearfish, SD 57783

Dear Mr. Vore:

Water Permit Application No. 1579-1 for municipal use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of Black Hills Pioneer printed at Lead, SD (Ph # 642-2761). 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 of Hearing~~ and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. The newspaper has 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
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.

cc: Mayor Fred Romkema, City of Spearfish, 722 Main St., Spearfish, SD 57783



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

October 15, 1993

Black Hills Pioneer
Box 7
Spearfish, SD 57783

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application No. 1579-1 to be published twice. Please publish the first notice on October 27, 1993, with the second publication 7 days later.

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, 722 Main Street, Spearfish, SD 57783 (Ph # 642-8271).

A copy of BOTH publications must be SENT to the WATER RIGHTS DIVISION. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. ~~Publication errors can invalidate the public notice and cause the applicant costly delays.~~

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. No action may be taken on the permit application until proof of publication has been received.

Sincerely,

Eric Gronlund
Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

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

FIRST TRANSMITTAL NOTICE

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

No. _____

Date _____

We are in receipt of your letter of _____ enclosing Notice of Hearing to Appropriate Water by Application No. _____ which was first published in our issue of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name

Newspaper

Instruction to Newspaper - Publish first Notice on October 27, 1993, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 1579-1 to Appropriate Water

Notice is given that the City of Spearfish, 722 Main Street, Spearfish, SD 57783 has filed an application for a water permit to appropriate 5.0 cubic feet of water per second (2500 acre-feet annually) from one well (Madison Formation) 660 feet deep located in the NW 1/4 SW 1/4 Section 14-T6N-R2E. The water is for municipal use by the City of Spearfish.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1579-1 for a 20-year term pursuant to SDCL 46-1-14 and 46-2A-20 because 1) although evidence is not available to justify issuing this permit without a 20-year term limitation, there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 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 Division, 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 November 22, 1993. 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., December 1, 1993, Floyd Matthew Training Center, Joe Foss Building, 523 East Capitol, 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 December 1, 1993, 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 November 22, 1993.

~~Any hearing will be an adversary 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 November 22, 1993, at the above Water Rights Division 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.~~

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. Robert E. Roberts, Secretary, Department of Environment and Natural Resources.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Lawrence) ss

I, Laurie Hardin

certify that the attached printed Notice was
taken from the Dept of Env.

printed and published in Black Hills Pic

County of Lawrence and State of

South Dakota. The notice was published in
the newspaper on the following two dates:

10-27-93

11-3-93

Cost of Printing: \$ 57.89

Laurie Hardin
(Signature)

Accounts Receivable
(Title)

11-3-93
(Date Signed)

NOTICE OF HEARING on Application No. 1579-1 to Appropriate Water

NOTICE IS GIVEN that the City of Spearfish, 722 Main Street, Spearfish, SD 57783 has filed an application for a water permit to appropriate 5.0 cubic feet of water per second (2500 acre-feet annually) from one well (Madison Formation) 660 feet deep located in the NW 1/4 SW 1/4 Section 14-T6N-R2E. The water is for municipal use by the City of Spearfish.

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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 Division, 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 November 22, 1993. 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.

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The December 1, 1993, 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 November 22, 1993.

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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. Robert E. Roberts, Secretary, Department of Environment and Natural Resources.

#145
Oct. 27, Nov. 3





1579-1

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

January 13, 1994

Theodore J. Vore
City of Spearfish
722 Main
Spearfish, SD 57783

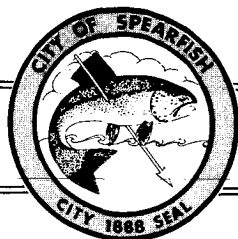
Dear Mr. Vore:

Pursuant to a qualification on Water Permit/Right No. 1579-1, I am requesting that the City of Spearfish report the total amount of water diverted from the Madison Formation during 1993. Please respond by January 31, 1994.

If you have any questions concerning this or other water rights questions, please contact Barry McLaury, Natural Resources Analyst, (605) 773-3352.

Sincerely,

RON DUVALL, Natural Resources Engineer
for JOHN HATCH, Chief Engineer
Water Rights Division



CITY OF SPEARFISH

722 MAIN STREET, SPEARFISH, SOUTH DAKOTA 57783



January 21, 1994

Ron Duvall
Joe Foss Building
523 East Capitol
Pierre, SD 57501

Re: Madison Well Withdrawal Totals

Dear Ron:

Enclosed please find our water withdrawal totals from our wells (all Madison), as well as Spearfish Creek. Please note that the Spearfish Creek supply was abandoned as potable water at the end of June 1993.

If you have further questions or desire further information, please call.

Sincerely,

A handwritten signature in cursive script that reads "Theodore J. Vore".

Theodore J. Vore
Public Works Administrator
CITY OF SPEARFISH

TJV/jab
encl:



MONTHLY WATER PRODUCTION

MONTH	91	92	93	94	AVERAGE MONTHLY	AVERAGE DAILY
CANYON SUPPLY						
JAN	38852000	35092120	35092120		45689770	1473864
FEB	30204000	34465476	34465476		39975579	1289535
MAR	31931000	17728830	17728830		39676380	1279883
APRIL	7830000	24021390	24021390		27419548	884502
MAY	0	26919620	26919620		21686837	699575
JUNE	19950000	18929900	10970800		32535833	1049543
JULY	41235000	17284950			40215163	1297263
AUG	40839000	33421060			41837897	1349610
SEPT	32085000	34387140			39985795	1289864
OCT	34318000	35509880			38124490	1229822
NOV	31332250	33838830			38150315	1230655
DEC	38351990	38851990			39870207	1286136
	346,928,240	350,451,186	149,198,236	0	445,167,814	1196688



ELLINGSON WELL						
JAN	12046200	1676490	3277300		1666391	53755
FEB	4114400	1419490	1227700		1755116	62683
MAR	4338400	16881220	9067700		5484442	176917
APRIL	22963000	12028000	28549400		14672513	489084
MAY	31339900	17653700	30068200		21179989	683225
JUNE	19760600	24683800	28105300		15635000	521167
JULY	20809100	29609700	13255000		18686406	602787
AUG	25858400	28042200	25299300		15588973	502870
SEPT	12673100	21255200	9753000		7255731	241858
OCT	3613100	14606700	20031300		7352647	237182
NOV	4729600	2028600	18661300		5511963	183732
DEC	0	693700	17615000		4687364	151205
	162,245,800	170,578,800	204,910,500	0	9956378	325539

MONTHLY WATER PRODUCTION

MONTH	91	92	93	94	AVERAGE MONTHLY	AVERAGE DAILY
DICKEY WELL						
JAN	7188380	10545830	11049500		4941423	159401
FEB	8978630	10063500	12786500		5375587	191985
MAR	8007840	7701150	10295000		4798123	154778
APRIL	1766960	14966350	2043500		5776327	192544
MAY	641720	16797100	7423600		9006406	290529
JUNE	13016480	16699400	10970800		16065543	535518
JULY	27065800	21425900	13151300		21536952	694740
AUG	29179500	21778800	1143600		19198655	619311
SEPT	20317880	13530400	1869100		13878014	462600
OCT	16691700	9725700	3101300		8450249	272589
NOV	10374970	9188900	13269800		5602117	186737
DEC	11387880	9303640	16866300		7116193	229555
	154,617,740	161,726,670	103,970,300	0	10145466	332524

VIGNA WELL

JAN	0	345500			805413	25981
FEB	0	430400			780067	27860
MAR	0	0			716898	23126
APRIL	0	0			902230	30074
MAY	0	0	30068200		3448868	111254
JUNE	278400	1305000			1640538	54685
JULY	1362800	0			2419851	78060
AUG	0	0			3033169	97844
SEPT	223000	0			1865982	62199
OCT	0	0			633950	20450
NOV	0	0	2888300		986805	32893
DEC	0				705393	22755
	1,864,200	2,080,900	32,956,500	0	1494930	48932

MONTHLY WATER PRODUCTION

MONTH	91	92	93	94	AVERAGE MONTHLY	AVERAGE DAILY
KYTE WELL						
JAN			0		599575	19341
FEB			409400		606908	19578
MAR			236400		286633	9246
APRIL			0		0	0
MAY			0		0	0
JUNE			0		418342	13495
JULY			0		607175	19586
AUG			0		0	0
SEPT			0		703508	22694
OCT			0		0	0
NOV			0		616317	19881
DEC			0		390200	12587
	0	0	645,800	0	352,388	11,367

COLLEGE WELL

JAN	0				0	0
FEB	0		403000		36636	1199
MAR	698800		1269700		164042	5292
APRIL	1105300		2037900		261933	8731
MAY	364800	161400	880000		117183	3780
JUNE	1000200		2655000		1445317	48177
JULY	10777400		20060700		6458425	208336
AUG	5876500	2825500	50244600		10012867	322996
SEPT	0		43628100		5255175	175173
OCT	0		14105000		1282273	37917
NOV	0		0		0	0
DEC	0		0		0	0
	19,823,000	2,986,900	135,284,000	0	2,086,154	67,633



FEB 1 1994

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

Theodore Vore, Public Works Administrator
City of Spearfish
722 Main Street
Spearfish, SD 57783

Dear Mr. Vore:

Enclosed is Water Permit No. 1579-1 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Also enclosed is Form 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the system and/or have put the water to beneficial use. An inspection can then be scheduled so that the Water License may be issued, thus completing your acquisition of a Water Right.

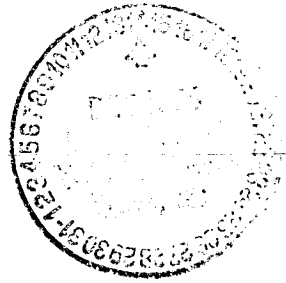
Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

enclosures

PLEASE NOTE: Certain changes can be made in your permit within the five year construction period, usually without affecting the priority date provided an application to amend your permit is made within the five year period - i.e. changes in location or number of diversion points (wells) or location of land to be irrigated. Well locations for wells into the same aquifer can be moved up to 660 feet without application.

Applications to amend a permit after the five year construction period will be assigned a new priority date. Applications to change water sources, to add lands or increase original diversion rates, if approved will usually receive the date of the new application as a priority date regardless of the five year construction period.

**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**Date December 12, 1994

TO: Water Rights Division, DENR
523 E. Capitol
Pierre, SD 57501-3181

FROM: City of Spearfish 722 Main Street
(name) (address)
Spearfish SD 57783 605-642-8271
(city) (state) (zip) (phone)

I have completed the construction of the water diversion system and I have put the water to beneficial use to the maximum extent it is going to be used. I have not exceeded the amounts specified in Water Permit No. 1579-1.

Water Permit No. 1579-1 states that the diversion system is to be constructed by December 1, 1998, and that the water is put to beneficial use by December 1, 2002.
(date) (date)

The diversion system was completed on December 2, 1994.
(date)

Applying the water to beneficial use was completed on December 6, 1994.
(date)

You may schedule an inspection so that the Water License may be issued.

Heard J. VOTE
(signature)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

July 17, 1995

1579-1

Elizabeth Benning, Finance Officer
City of Spearfish
722 Main Street
Spearfish, SD 57783

Dear Ms. Benning:

The inspection of your water use system and the inspection of the extent of application of water to beneficial use, as developed under Water Permit No. 1579-1, has been completed. Your final water right document, the Water License, can now be issued.

Statutes require that we charge a \$50.00 fee for the inspection and issuance of the Water License. Upon receipt of the \$50.00 fee from you, we will begin processing your Water License.

Please remit fee to:
Department of Environment & Natural Resources
Water Rights Program
523 E. Capitol
Pierre, SD 57501-3181

South Dakota Water Law 46-5-30.1 requires that a permit holder may not divert water until the \$50.00 license fee has been paid. Please contact us if you have any questions.

Sincerely,

Cheryl F. Frost
Secretary
Water Rights Program
(605) 773-3352

NOTE: On check or money order, please specify your permit number. This will insure proper handling of the fee.

RECEIPT

414586

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, _____ August 14, 19 95

RECEIVED OF City of Spearfish, P22 Main, 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 _____		
Fee for Application for Permit No. _____ to Appropriate Water, for Future Use _____		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>1579-1</u>	50	00
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	50 00

By John Hatch
Chief Engineer

Permit No. 1579-1
Belle Fourche - 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 this day, **6/21/1995**, made a thorough examination of the water use system owned by the **City of Spearfish** of **722 Main Street, Spearfish, SD 57783**, holder of **Permit No. 1579-1**, bearing the priority of **October 4, 1993**, authorizing the diversion of **5.0 cu. ft. per second** of the groundwater for **municipal purposes**, in **Lawrence County**.

I have to report on the conditions of the same as follows:

A. Works used to divert the water:

A Gould Pump, 2000 gallons per minute capacity.
A US Motors motor, 200 horse power.

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

800 feet of 12 inch PVC pipe.

C. Works used to apply water to beneficial use:

Water is used for municipal purposes within the City of Spearfish.

~~The system is in the following condition: Good.~~ The point of diversion is located about 118 feet east, 1175 feet north from the southwest corner of Section 14, T6N-R2E (NW1/4 SW1/4). The works are capable of diverting and conveying to the place of use 4.45 cu. ft. per second of water which is used for municipal purposes

The license should be issued for **4.45 cfs**

Applicable permit qualifications have been complied with: **Yes X** **No**

Exceptions to compliance are: **None**

Date Report Completed: **7/14/1995**



M. Rassool Ahadi
Natural Resources Engineer
DENR, Water Rights Program

REPORT ON INSPECTION OF PERMIT NO. 1579-1

DATE OF INSPECTION: 6/21/1995

NAME & ADDRESS OF PERMIT HOLDER: City of Spearfish, 722 Main Street, Spearfish, SD 57783

DIVERSION POINT LEGAL LOCATION: NW1/4 SW1/4, Section 14, T 6N-R2E

WELL INFORMATION:

- 1) Well Drilling Firm: Taylor
- 2) No. of Wells 1
- 3) Depth(s) 842 feet
- 4) Well log is available Y
- 5) Comment:

Casing:

- 1) Diameter 12 3/8 inches
- 2) Length 660 feet
- 3) Type Stainless Steel

Screen:

- 1) Type None
- 2) Length feet
- 3) Static water level 106 feet

Pump:

- 1) Make Gould
- 2) Model
- 3) Size 12 inches
- 4) Capacity 2000 GPM

Motor:

- 1) Make US Motors
- 2) Model No. RX09-X25069GT
- 3) Horsepower rating 200 hp

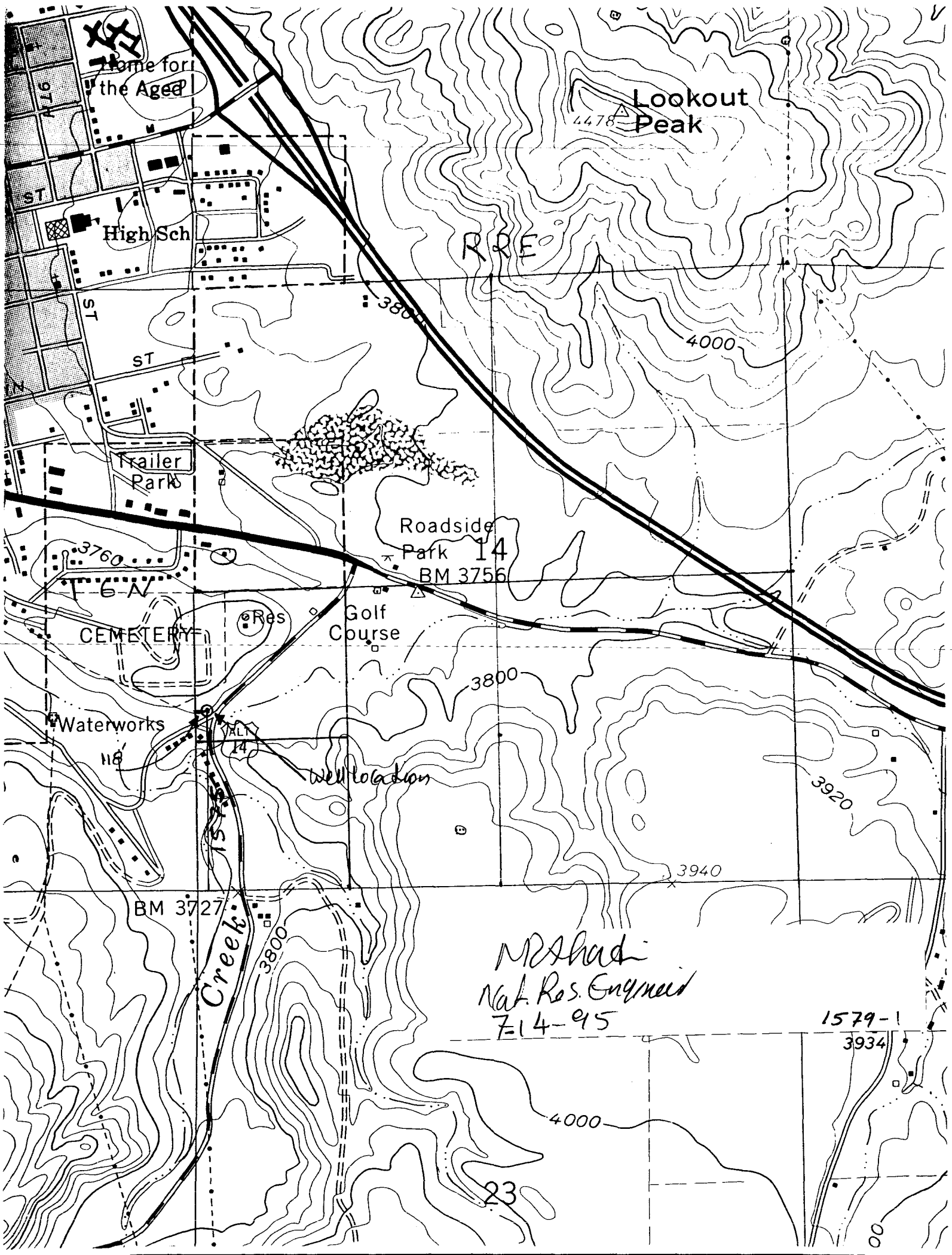
DISTRIBUTION LINES OR CANALS:

- 1) Type PVC
- 2) Size 12 inches
- 3) Length 800 feet

**** Water is pumped into two storage tanks, 980,000 gallon and 550,000 gallon capacity.**

PERMIT QUALIFICATIONS AND REGULATIONS:

- 1) Soil and water permit lands agree with lands being irrigated and lands listed on permit NA
- 2) Special qualifications to permit being abided by Y
- 3) All structures, wells and lands on map Y
- 4) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period NA



Home for the Aged

Lookout Peak
4478

High Sch

RRE

4000

Trailer Park

Roadside Park 14
BM 3756

Golf Course

CEMETERY

Res

Waterworks

well location

BM 3727

Creek

MR Shad
Nat. Res. Engineer
7-14-95

1579-1
3934

4000

23

00

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 1579-1

(1) The City of Spearfish of 722 Main Street, Spearfish, SD 57783 made Application No. 1579-1, May 20, 1993 for a water permit to appropriate 5.00 cubic feet of water per second (2500 acre feet annually) from groundwater (one Madison Formation well), Lawrence County, South Dakota for municipal purposes. Permit No. 1579-1, with a priority date of October 4, 1993 was approved December 1, 1993 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before December 1, 1998 and for the application to beneficial use of said water on or before December 1, 2002.

On December 14, 1994, the City of Spearfish submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*". The "*Notice*" stated the diversion system was completed on December 2, 1994 and the application of water to beneficial use was completed on December 6, 1994.

(2) It is certified that the applicant 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 4.45 cubic feet of water per second (2500 acre feet annually) for beneficial use.

The location of the diversion point is 118 feet E and 1175 feet N of the SW corner, Section 14, T6N, R2E (NW 1/4 SW 1/4).

(3) The applicant 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 of 722 Main Street, Spearfish, SD 57783 the holder and/or owner of Water Permit No. 1579-1 is issued a license to appropriate water, the right to use 4.45 cubic feet of water per second (2500 acre feet annually) from groundwater (one well) with a priority date of October 4, 1993 from the location specified in (2) of this license. The water is appropriated for the purpose of municipal use. This license is subject to any limitations or qualifications listed in Water Permit No. 1579-1 and subject to South Dakota State Law.



JOHN HATCH, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

SEP 6 1995

date



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

SEP 6 1995

1579-1

Elizabeth Benning, Finance Officer
City of Spearfish
722 Main Street
Spearfish, SD 57783

Dear Ms. Benning:

Enclosed is Water License No. 1579-1. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 414586 in the amount of \$50.00 which you paid for the inspection and issuance of the Water License.

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. 1579-1, 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.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Program
(605) 773-3352

gm
enclosures