

WATER PERMIT NO. 2519-2

Name of Applicant: City of Rapid City

Address: 3006th St, Rapid City SD 57701

Phone: 605 394-4162

Amount of Water Claimed: 1.78 cfs (776 AF)

Total Acres: NA

Source of Water Supply: groundwater

Water to be used for: municipal

County: Pennington

Type of Waste Disposal System:

Location:

PRIORITY

Date Received: 2-18-04

Application/License Fee: \$400

Corrected Application Received:

Period of Annual Use: Jan 1 – Dec 31

Remarks: Increase diversion rate and volume of water authorized by Permit No. 2475-2. Water is reserved by Future Use Permit No. 2086-2

Diversion Point: NW ¼ SW ¼ Sec 22-T1N-R7E

Land to be Irrigated:

Depth of Well: 1600 feet deep

Well Driller: :

Remarks:

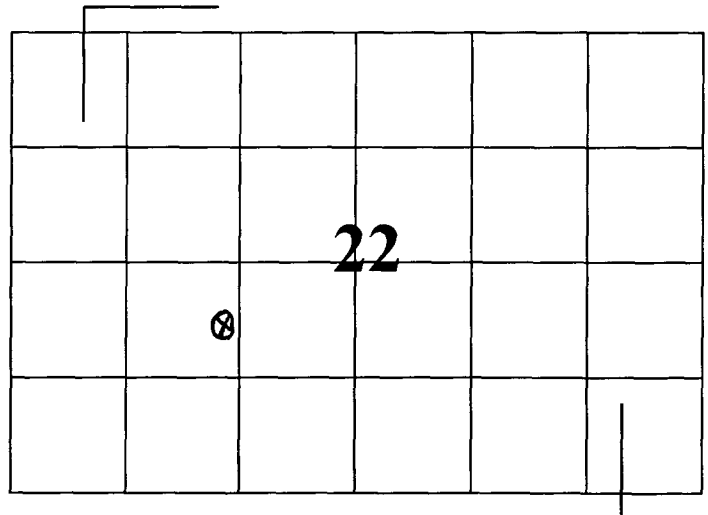
Type of Map: topo

Prepared by: Stacey Titus, PE

Reviewed and the Number Assigned on: 2-24-04

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. <u>2519-2</u> (office use only) Hydrologic Unit <u>10120110</u>
	Basin <u>Upper Cheyenne</u>
	Newspaper <u>Rapid City Journal, Rapid City</u>

RECEIVED
FEB 18 2004
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. 2086-2
☐ Amendment/Correction to Permit No. _____

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

Increase diversion rate and volume of water authorized by Water Permit No. 2475-2 from 2.67 cfs to 4.45 cfs.

- Name of Applicant City of Rapid City Phone 394-4162
(check one) ☐ Owner ☐ Tenant/lessee
Mailing Address 300 Sixth St. Rapid City State SD 57701
(Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 1.786 *CFS or 776.00 **GPM ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***) Acre Feet - storage capacity of dam/dugout or annual use if applicable
- Source of water supply Groundwater
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Pennington
NW 1/4 SW 1/4 Section 22, T1N, R7E
- County or counties where water will be used Pennington
- Annual period during which water is to be used January 1 through December 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)
The City plans to increase the diversion rate from the authorized 2.67 cfs to 4.45 cfs (2000 gpm) and the volume of water accordingly. The map showing the location of the well is on file as well as the well completion report.

STATE OF SOUTH DAKOTA)
County of Pennington) SS

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

I, John Wagner, Water Supt., 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 John Wagner

Subscribed and sworn to before me this 4th day of February 20 04

Gina Miller
Notary Public signature

My Commission Expires
June 12, 2004

SOUTH DAKOTA
WATER PERMIT NO. 2519-2

Date of first receipt of application February 18, 2004.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2519-2 to the City of Rapid City, 300 6th St, Rapid City SD 57701 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. 2519-2 authorizes the City to construct and place to beneficial use 1.78 cubic feet of water per second (cfs) (776-acre-feet annually) reserved by Future Use Permit No. 2086-2 by increasing the diversion rate and annual volume diverted from the well authorized by Water Permit No. 2475-2. Water Permit No. 2475-2 appropriates 2.67 cfs (1,160 acre-feet annually) from one well (Madison Aquifer) 1,600 feet deep located in the NW ¼ SW ¼ Section 22-T1N-R7E. This permit increases the water appropriation from 2.67 cfs to a total of 4.45 cfs.
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. 2519-2 is May 17, 2004.
5. The date from which applicant may claim right is May 18, 1989 (established by No. 2086-2).
6. One-fifth of the construction is to be completed on or before November 17, 2006.
7. All construction is to be completed on or before May 17, 2009.
8. Water is to be put to beneficial use on or before May 17, 2013.
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. 2519-2 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. 2519-2 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. Permit No. 2519-2 authorizes a total annual diversion of 776 acre feet of water annually for municipal use.
4. The city of Rapid City shall report to the Chief Engineer annually the amount of water withdrawn each year from the Madison Formation for municipal use.

WATER MANAGEMENT BOARD

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

JUN 30 2004

date



RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date February 18, 20 04

RECEIVED OF City of Rapid City, 300 Sixth St., Rapid City SD 57701

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

Fee for Application for Permit No. <u>2519-2</u> to Appropriate Water, to construct and to put water to beneficial use	350	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>2519-2</u>	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	400.00

No.

00108

By

Mark S. Eick
Chief Engineer
gm

WATER PERMIT APPLICATION NO. 2519-2
CITY OF RAPID CITY
MARCH 22, 2004

Water Permit No. 2519-2 proposes to construct and place to beneficial use 1.78 cubic feet of water per second (773 acre-feet annually) appropriated and reserved by Future Use Permit No. 2086-2, by increasing the diversion rate and annual volume diverted from the well authorized by Water Permit No. 2475-2. Water Permit No. 2475-2 appropriates 2.67 cfs (1,160 acre-feet annually) from one well (Madison aquifer) 1600 feet deep located in the NW¼ SW¼ Sec.22, T1N-R7E, in Pennington County. This application proposes to increase the water appropriation from 2.67 cfs to total of 4.45 cfs. This water will be used for municipal use by the City.

AQUIFER: Madison aquifer (MDSN)

Aquifer Characteristics:

The Madison (Pahasapa) Limestone is a massive limestone and dolomite that underlies much of the Western United States. In this area the Madison Limestone is estimated to be 300-400 feet thick (Cattermole, 1969). The top portion of the Madison Limestone contains randomly distributed zones of secondary porosity and permeability formed by weathering of exposed surfaces, groundwater solution and fracturing, and is considered the Madison aquifer. The Madison is generally considered an excellent aquifer both in terms of quality and quantity, especially near the outcrop (recharge area). The aquifer underlies approximately 30,000 square miles of western South Dakota and contains at least 640 million acre-feet of recoverable water in storage in the State (Allen and others, 1984).

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). Average annual recharge from 1931-1998 is estimated to be approximately 137,000 ac-ft/yr (Carter and others, 2001a).

This application proposes to increase the diversion rate and the annual volume of water authorized to be diverted annually from Rapid City Well #12. The well site is located approximately three miles east of the Madison outcrop (recharge area). The top of the Madison Limestone is reported to be 992 feet below grade on the SD Water Well Completion Report submitted for the well. The static water level of the well was reported to be 115 feet below grade at the time of completion (June 2003).

Observation Well Data:

The Water Rights Program monitors 26 observation wells completed into the Madison aquifer in the Black Hills area. Rapid City Well No.12 is located within approximately three and one-half miles of four Water Rights' Observation wells that are completed into the Madison aquifer, (PE-65A, PE-86A, PE-96A and PE-89A). Hydrographs for the wells show the aquifer's response to climatic conditions and clearly demonstrate the system is recharged, (see figures 1-4). The hydrograph for PE-65A also shows over 40 feet of water

level fluctuation (drawdown) in response to pumping from Rapid City Well No. 5, which is located approximately 1700 feet from the observation well. The pump rate for Rapid City Well No. 5 is reported to be 1,600 gpm (John Wagner, City of Rapid City, oral commun. 2002).

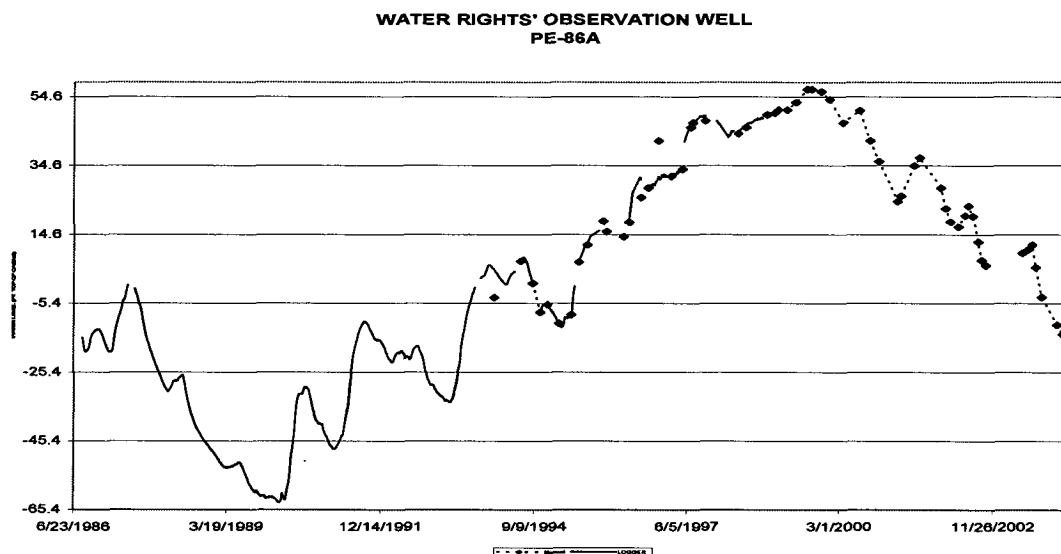


Figure 1. Hydrograph of Water Rights' Observation Well PE-86A, located approximately three miles south of Rapid City Well No. 12.

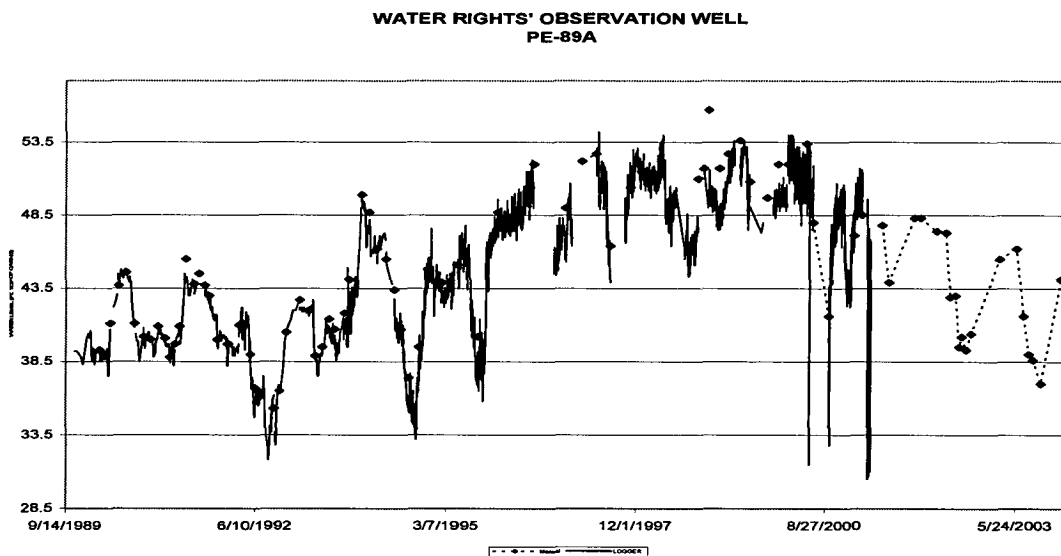


Figure 2. Hydrograph of Water Rights' Observation Well PE-89A, located approximately two and one-half miles northwest of Rapid City Well No. 12.

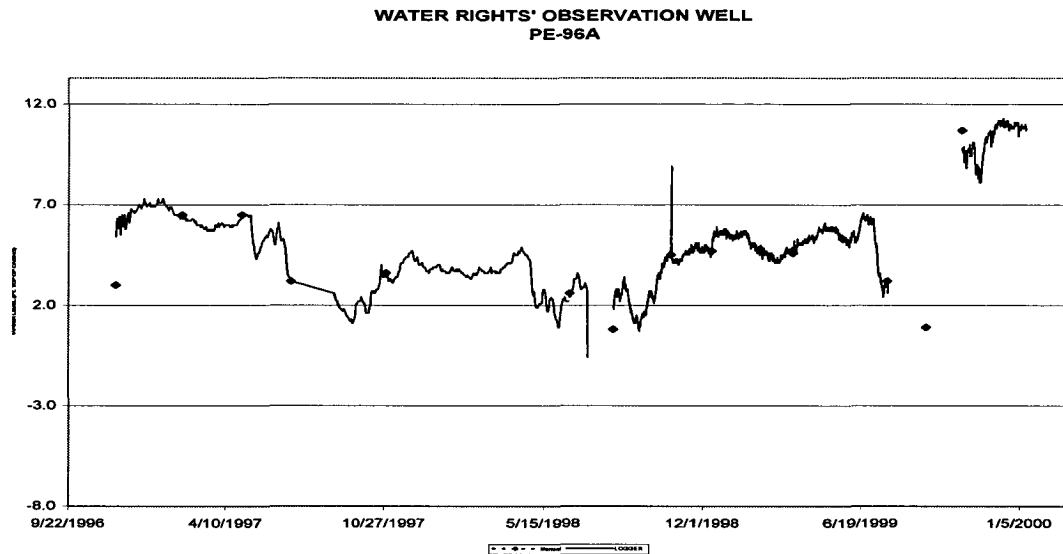


Figure 3. Hydrograph of Water Rights' Observation Well PE-96A, located approximately two and one-half miles northwest of Rapid City Well No. 12.

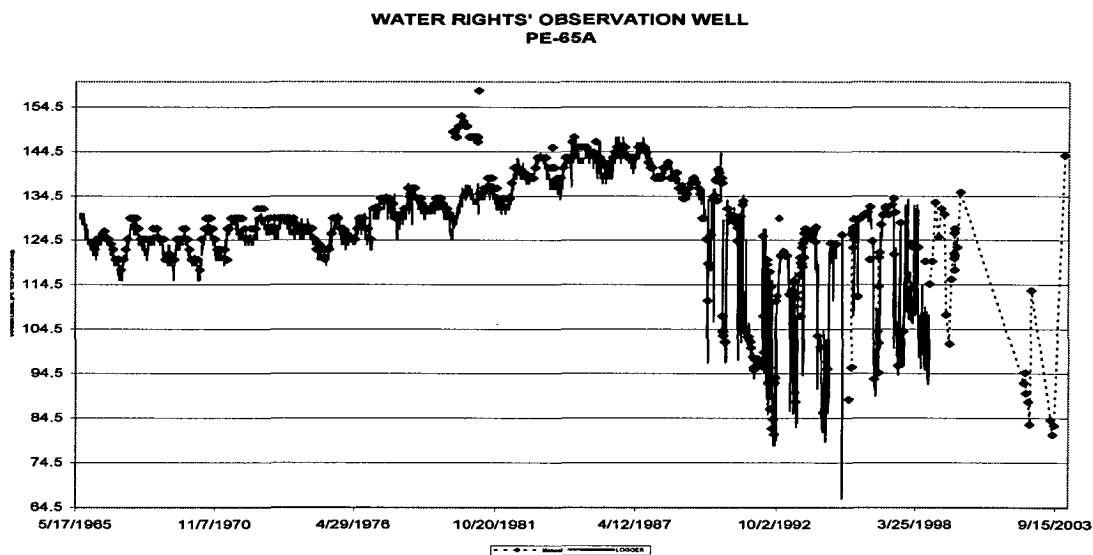


Figure 4. Hydrograph of Water Rights' Observation Well PE-65A, located approximately three miles north of Rapid City Well No. 12.

Records from the observation wells indicated the potentiometric surface of the Madison aquifer fluctuates 30-40 feet per year near the recharge area in response to seasonal and climatic variations. Long-term water level declines are not apparent from any of the hydrographs. Observation well data suggest that at the existing level of development, natural influences dominate the water levels 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. There are a total of 127 permits/rights which appropriate water from the Madison aquifer in South Dakota. The majority of the water rights/permits from the aquifer are from Butte(17), Lawrence(25), Meade(27), Pennington(35) and Fall River(11) Counties. The Madison supplies water for irrigation, geothermal, industrial, and commercial use. However, by far the major use of the aquifer is for common 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 50,000 acre-feet per year. The actual amount of water used from the Madison is considerably less than this estimate. Withdrawals from wells completed into the Madison aquifer were estimated to be 10,990.2 acre-feet annually from 1987-1996 (Carter and others, 2001b). 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.

This application, if approved, does not appropriate any additional water from the Madison aquifer. This is an application to place to beneficial use 773 acre-feet of water per year that has been reserved by Future Use Permit No. 2086-2 from the Madison aquifer. The future use permit originally appropriated 9,991 ac-ft/yr. Six Water Permits/Rights have been approved to put water to beneficial use from this reservation, they include:

Permit No	Appropriation	Water Remaining in 2086-2
2125-2	800 ac-ft	9,191 ac-ft
2155-2	1,160 ac-ft	8,031 ac-ft
2156-2	482 ac-ft	7,549 ac-ft
2273-2	756 ac-ft	6,793 ac-ft
2275-2	491 ac-ft	6,302 ac-ft
2475-2	1,160 ac-ft	5,142 ac-ft

If this application is approved there will be a total of 4369 ac-ft/yr remaining in Future Use Permit No. 2086-2.

Affects on Existing Rights:

There are 58 Water Rights/Permits appropriating groundwater from within approximately three and one-half miles of this well site (Water Rights, 2004c). These groundwater appropriations are from any of the eight aquifers in the area. Wells supplied from aquifers other than the Madison are not expected to be affected by withdrawals from this well because the Madison is isolated from shallower aquifers by the lower Minnelusa formation and isolated from deeper aquifers by the Englewood and Whitewood Formations.

There are 16 Water Rights/Permits appropriating groundwater from the Madison aquifer within approximately three and one-half miles of this well, they include:

NUMBER	NAME	STATUS	USE	CFS
1726-2	COLONIAL PINE HILLS	LC	SHD	0.38
1838-2	CANYON SHADOWS WATER CO	PE	SHD	0.03
1925-2	PONDEROSA PARK DEV ASSOC	LC	SHD	0.03
1965-2	HIGHLAND HILLS WATER ASS.	LC	SHD	0.06
2053-2	SPRING CANYON WATER CO	LC	SHD	0.05
2090-2	CHAPEL LANE WATER CO	PE	SHD	1.17
2106-2	STUART & PAMELA RICE	LC	IRR	0.09
2108-2	COLONIAL PINE HILLS	LC	SHD	0.04
2156-2	CITY OF RAPID CITY	LC	MUN	1.11
2273-2	CITY OF RAPID CITY	LC	MUN	12.42
2287-2	RIMROCK RIDGE WATER ASSO.	PE	SHD	0.05
2458-2	RED ROCK DEVELOPMENT	PE	IRR	1.38
2461-2	COLONIAL PINE HILLS	PE	SHD	0.33
2473-2	CREGUT, INC.	LC	COM	0.04
2475-2	CITY OF RAPID CITY	PE	MUN	2.67
433-2	CITY OF RAPID CITY	LC	MUN	0.84

With the exception of Rapid City Well No. 11, (covered under Water Right No. 2156-2), which is located approximately 0.8 miles northwest of Rapid City Well No. 12, the nearest Water Permit/Right appropriating water from the Madison aquifer is Water Permit No. 2458-2, Red Rock Development. The Red Rock's well is located approximately 1.4 miles from the well proposed by this application.

At this time it is not practical to attempt to quantify the specific affect pumping this well will have on area wells since aquifer characteristics have not been determined for this area, and the variability of the hydraulic characteristics has been well documented (Greene, 1993). In addition, Greene concluded that the transmissivity of the Madison is not equal in all directions (anisotropic), therefore the drawdown cone will extend farther in one direction than another.

Although the impact of this appropriation cannot be quantified precisely, it is still possible to address whether this appropriation can be made without adversely affecting water rights, including domestic wells. In the first place, the distance from other Madison wells should be sufficient to minimize interference. Secondly, Water Management Board rules 74:02:04 and 74:02:05, which were promulgated pursuant to SDCL 46-6-6.1, provide protection to prior appropriators only to the degree necessary to maintain an adequate depth of water 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. In fact, in past action, the Water Management Board it has concluded that if 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.

A major concern for some, relates to if, or how increased development from the Madison aquifer may affect springs believed to originate from the Madison aquifer that occur in several locations in Rapid City. In theory, a lowering of the potentiometric surface of the Madison aquifer in the vicinity of a spring could reduce the spring's discharge. Discharge from springs is a major water source for the City of Rapid City and provides base flow for Rapid Creek and downstream uses. Rapid City well No. 12 is located far enough from the springs to minimize any well interference, and drawdown from this appropriation should not be measurable at the springs.

Although there are a limited number of domestic wells completed into the Madison aquifer in this area (Water Rights, 2004a) the potential affect of this appropriation to domestic wells must be considered. It is likely that even if a domestic well completed into the Madison aquifer in this area experienced interference, it would still be capable of delivering sufficient water with a pump inlet placed near the top of the aquifer. Therefore adverse impact to domestic wells is not probable.

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.

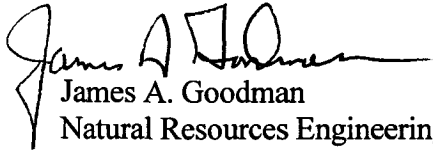
Conclusions:

1. The Madison aquifer is a viable aquifer in this area.
2. This application proposes to put to beneficial use water that has been appropriated by Future Use Permit No. 2086-2.
3. Approval of this permit will reduce the amount of water reserved by Future Use Permit No. 2086-2 by 773 ac-ft/yr, leaving 4,369 ac-ft/yr reserved.
4. This diversion will not adversely impair existing water rights.
5. Information is not available to justify issuing this permit without a term limitation of 20 years.



Ken Buhler
Natural Resources Engineering Specialist

Approved by



James A. Goodman
Natural Resources Engineering Director

References:

- Allen, J.C., Iles, D.L., Petres, A.K., Analysis of Groundwater and Streamflow Data Western Dakotas Region of South Dakota, Task 3 and 4: Groundwater Resource Inventory, U.S. Army Corps of Engineers Contract DAWC 45-82-C-0151, SD DENR-Geological Survey, Vermillion, SD
- Carter, J.M., Redden, J.A., 1999, Altitude of the Top of the Madison Limestone in the Black Hills Area, South Dakota, Hydrologic Investigations Atlas HA-744-D, U.S., Department of the Interior, U.S. Geological Survey, Rapid City, SD
- Carter, J.M., Driscoll, D.G., Hamade, G.R., 2001a, Estimated Recharge to the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota and Wyoming, Water Years 191-98, Water-Resources Investigations Report 00-4278, U.S. Department of the Interior, U.S. Geological Survey, Rapid City, SD
- 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
- Cattermole, J.M., 1969, Geologic Map of the Rapid City West Quadrangle, Pennington County, South Dakota, Geologic Quadrangle Maps of the United States, Map GQ-828, U.S. Geological Survey, Washington, D.C.
- Greene, E.A., 1993, Hydraulic Properties of the Madison Aquifer System in the Western Rapid City Area, South Dakota, Water-Resources Investigations Report 93-4008, U.S. Department of the Interior, U.S. Geological Survey, Rapid City, SD
- Strobel, M.L., Galloway, J.M., Hamade, G.R., and Jarrell, G.J., 2000, Potentiometric Surface of the Madison Aquifer in the Black Hills Area, South Dakota, Hydrologic Investigations Atlas HA-745-D, U.S. Department of the Interior, U.S. Geological Survey, Rapid City, SD

Water Rights Program, 2004a, "Domestic Well Log Files", South Dakota DENR-Water Rights Program, Joe Foss Building, Pierre, SD

Water Rights Program, 2004b, "Unpublished Observation Well Records", South Dakota DENR-Water Rights Program, Joe Foss Building, Pierre, SD

Water Rights Program, 2004c, "Water Permit/Right Files", South Dakota DENR-Water Rights Program, Joe Foss Building, Pierre, SD

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



**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. 2519-2, City of Rapid City**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 2519-2, City of Rapid City, c/o John Wagner, 300 6th Street, Rapid City SD 57701.

The Chief Engineer is recommending APPROVAL of Application No. 2519-2 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. 2519-2 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. 2519-2 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. Permit No. 2519-2 authorizes a total annual diversion of 776 acre feet of water annually for municipal use.
4. The city of Rapid City shall report to the Chief Engineer annually the amount of water withdrawn each year from the Madison Formation for municipal use.

See report on application for additional information.

Garland Erbele, Chief Engineer

April 19, 2004

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS

County of Pennington)

I, Patricia K. Van Patten

certify that the attached printed Notice was
taken

from the Rapid City Journal

printed and published in Rapid City

County of Pennington and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

April 28, 2004

May 5, 2004

Cost of Printing One hundred twenty-four
dollars and twenty cents (\$124.20)

Patricia K. Van Patten
(Signature)

Legal Advertising Representative
(Title)

4/5/04
(Date Signed)

April 28, May 5 L1637570

NOTICE OF APPLICATION NO. 2519-2 AND 2520-2

TO APPROPRIATE WATER

Notice is given that the City of Rapid City, 300 6th Street, Rapid City, SD 57701, has filed the following applications for a water permit.

Application No. 2519-2 proposes to construct and place to beneficial use 1.78 cubic feet of water per second (cfs) (776 acre-feet annually) reserved by Future Use Permit No. 2086-2 by increasing the diversion rate and annual volume diverted from the well authorized by Water Permit No. 2475-2. Water Permit No. 2475-2 appropriates 2.67 cfs (1,160 acre-feet annually) from one well (Madison Aquifer) 1,600 feet deep located in the NW¼SW¼ Section 22-T1N-R7E. This application proposes to increase the water appropriation from 2.67 cfs to a total of 4.45 cfs. This water is for municipal use.

Application No. 2520-2 proposes to construct and place to beneficial 0.67 cfs (291 acre-feet annually) reserved by Future Use Permit No. 2086-2 by increasing the diversion rate and annual volume diverted from the well authorized by Water Right No. 2156-2. Water Right No. 2156-2 appropriates 1.11 cfs (482 acre-feet annually) from one well (Madison Aquifer) 1,130 feet deep located in the SW¼SE¼ Section 16-T1N-R7E. This application proposes to increase the water appropriation from 1.11 cfs to a total of 1.78 cfs. This water is for municipal use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 2519-2 and 2520-2 for a 20 year term pursuant to SDCL 46-1-14 and 46-2A-20 because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider the applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if contesting the Chief Engineer's recommendations. 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 May 17, 2004.

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

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

RECEIVED

MAY 10 2004

WATER RIGHTS
PROGRAM

Instruction to Newspaper - Publish first Notice on April 28, 2004 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 2519-2 and 2520-2 to Appropriate Water

Notice is given that the City of Rapid City, 300 6th St, Rapid City SD 57701 has filed the following applications for a water permit.

Application No. 2519-2 proposes to construct and place to beneficial use 1.78 cubic feet of water per second (cfs) (776-acre-feet annually) reserved by Future Use Permit No. 2086-2 by increasing the diversion rate and annual volume diverted from the well authorized by Water Permit No. 2475-2. Water Permit No. 2475-2 appropriates 2.67 cfs (1,160 acre-feet annually) from one well (Madison Aquifer) 1,600 feet deep located in the NW ¼ SW ¼ Section 22-T1N-R7E. This application proposes to increase the water appropriation from 2.67 cfs to a total of 4.45 cfs. This water is for municipal use.

Application No. 2520-2 proposes to construct and place to beneficial 0.67 cfs (291 acre-feet annually) reserved by Future Use Permit No. 2086-2 by increasing the diversion rate and annual volume diverted from the well authorized by Water Right No. 2156-2. Water Right No. 2156-2 appropriates 1.11 cfs (482 acre-feet annually) from one well (Madison Aquifer) 1,130 feet deep located in the SW ¼ SE ¼ Section 16-T1N-R7E. This application proposes to increase the water appropriation from 1.11 cfs to a total of 1.78 cfs. This water is for municipal use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 2519-2 and 2520-2 for a 20 year term pursuant to SDCL 46-1-14 and 46-2A-20 because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the applications, as recommended, unless a petition is filed opposing the applications or the applicant files a petition contesting the Chief Engineer's recommendations. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider the applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting these applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. 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 May 17, 2004.

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

www.state.sd.us/denr

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

April 20, 2004

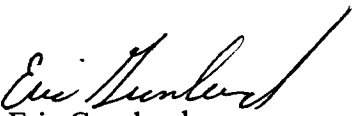
City of Rapid City
% John Wagner, Water Supt
300 Sixth St
Rapid City SD 57701

Dear Mr. Wagner:

Water Permit Application Nos. 2519-2 & 2520-2 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 the Rapid Cit Journal printed at Rapid City, SD (Ph # 605-394-8300). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notices, the recommendations of the Chief Engineer and the reports on the applications are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Hearing 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 with the last publication to occur twenty days before the board meeting. 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 applications.

Sincerely,


Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

April 20, 2004

Rapid City Journal
PO Box 450
Rapid City SD 57709-0450

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application No. 2519-2 & 2520-2 to Appropriate Water to be published twice. Please publish the first notice on April 28, 2004 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 Rapid City, %John Wagner, Water Supt., 300 6th St., Rapid City SD (Ph # 605-394-4162).

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-----

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

No. 2519-2 & 2520-2

Date _____

We are in receipt of your letter of April 19, 2004 enclosing Notice of Hearing to Appropriate Water by Application Nos. 2519-2 & 2520-2 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper



JUN 30 2004

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

City of Rapid City
% John Wagner Water Supt
300 6th St
Rapid City SD 57701

Dear Mr. Wagner:

Enclosed is Water Permit No. 2519-2 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

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

Sincerely,

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

enclosures

RECEIVED

JUN 19 2009

WATER RIGHTS
PROGRAM**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**Date June 17, 2009

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

FROM: City of Rapid City
(name)

300 6th Street
(address)

Rapid City, SD 57701
(address)

605-394-4162
(phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

Water Permit No. 2475-2* and 2519-2* states that the water use system is to be constructed by March 13, 2007 and May 17, 2009 , and water is to be put to beneficial use by March 13, 2011
(date) (date)
and May 17, 2013 .

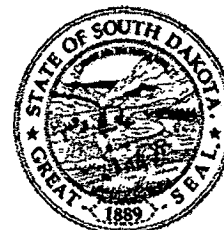
The water use system was completed on June 4, 2009 .
(date)

Applying the water to beneficial use was completed on June 4, 2009 .
(date)

You may schedule an investigation so that the water license may be issued.

John Wagner
John Wagner, Water Dept. Supt.

*Both permits pertain to Rapid City Well 12.





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

June 19, 2009

2475-2
2519-2

John Wagner, Water Supt
City of Rapid City
300 6th St
Rapid City SD 57701

Dear Mr. Wagner:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know City Well #12 as authorized by Water Permit Nos. 2475-2 and 2519-2 has been completed and water put to beneficial use.

Inspections are done on a county-by-county basis as staff time permits. You have done everything you need to do and the intervening time between the completion of the project and the staff inspection has no bearing on the water permits.

Someone from our office will contact you prior to the inspection to set up a time that is convenient for you. If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink that reads "Genny McMath".

Genny McMath
Environmental Scientist
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

Permit No. 2475-2 & 2519-2
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, **11/30/2009**, made a thorough examination of the water use system constructed by **City of Rapid City, 300 6th Street, Rapid City SD 57701** holder of Permit Nos. **2475-2 and 2519-2**, bearing the priority date of **May 18, 1989 (established by Future Use Permit No. 2086-2)**. No. 2475-2 authorizes a total diversion of **2.67 cfs (1,160 acre feet annually)** and No. 2519-2 authorized an increase of **1.78 cfs (776 acre feet annually)** from the same well (**Madison Aquifer**) for **municipal purposes**, in **Pennington County**.

Inspection contact and relationship to
permit holder, if applicable:

**John Wagner, Water Superintendent,
City of Rapid City**

A. Works used to divert the water:

A Fairbanks Morse submersible pump - 1850 gallons per minute capacity (4.12 cfs).

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

Rapid City municipal distribution system.

The system is in the following condition **good**. The point of diversion (well) is located specifically at **Lat/Lon - N44.030128 W-103.267410 which is the approximately 1,225 feet east and 2260 feet north of the SW 1/4 corner of Section 22, T1N, R7E.** The works are capable of diverting **4.12 cfs** which is to be used for **municipal purposes**.

Water has been put to beneficial use to the maximum extent and the license should be issued for **4.12 cfs (1936 acre feet annually)**.

All structures, wells and lands on map **Y**

Exceptions to compliance are: **none**.

Comments: The applicable portions of Water Permit No. 2475-2 will be incorporated into No. 2519-2. The volume of water not developed will revert back to Future Use Permit No. 2086-2.

Aaron R. Tieman

Aaron Tieman
Natural Resources Project Engineer
DENR, Water Rights Program

Date report completed: **April 20, 2010**

FIELD INVESTIGATION REPORT FOR PERMIT NO. 2475-2 & 2519-2

DATE OF INVESTIGATION:	November 30, 2009
NAME & ADDRESS OF PERMIT HOLDER	City of Rapid City 300 6th Street Rapid City, SD 57701
NAME & ADDRESS OF INVESTIGATION CONTACT/ RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE	John Wagner (Water Superintendent)
DIVERSION POINT LEGAL LOCATION	NW¼ SW¼ Section 22, T1N-R7E
WATER SUPPLY SOURCE	Ground water, Madison Aquifer

Other permit(s) associated with the project:

WELL INFORMATION:

- 1) Well Drilling Firm: **Water System Drilling Inc**
- 2) No. of Wells **One**
- 3) Depth(s) **1350 feet**
- 4) Well log is available **yes**
- 5) Comment:

Casing:

- | | | |
|--------------------------------------|---|--|
| 1) Diameter: <u>18</u> inches | Diameter <u>13³/₈</u> inches | Diameter: <u>10³/₄</u> inches |
| 2) Length: <u>32</u> feet | Length: <u>932</u> feet | Length: <u>120</u> feet |
| 3) Type: <u>Steel</u> | Type: <u>Steel</u> | Type: <u>Steel</u> |

Screen:

- 1) Type: **Open Hole**
- 2) Length: **N/A** feet
- 3) Static water level: **115** feet

Pump:

- 1) Make: **Fairbanks Morse**
- 2) Model: **7100AW**
- 3) Capacity: **1850** GPM

Motor:

- 1) Make: **U.S. Electrical Motors**
- 2) Model No.: **CG35**
- 3) Horsepower rating: **500** hp

DISTRIBUTION LINES OR CANALS:

- 1) Type: **Municipal distribution system**

PERMIT QUALIFICATIONS:

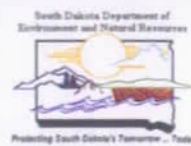
- 1) Special qualifications to permit being abided by **Yes**
- 2) All structures, wells and lands on map **Yes**

COMMENTS: The water for this permit came out of future use, the balance of the water not licensed from this permit should be returned to future use.



Aaron R. Tieman

Aaron Tieman
Natural Resources Project Engineer
DENR Water Rights Program





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

APR 28 2010

2475-2
2519-2

John Wagner, Water Supt
City of Rapid City
300 6th St
Rapid City SD 57701

Dear Mr. Wagner:

Enclosed is Water License No. 2519-2. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

For your information SDCL 46-6-27 requires that if the owner of an existing well, such as the well authorized by Water Right No. 2519-2, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

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

Sincerely,

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

enclosures

Note: The applicable portions of Water Permit No. 2475-2 have been incorporated into Water License No. 2519-2.

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 2519-2

(1) The City of Rapid City, 300 6th St, Rapid City SD 57701 made Application No. 2519-2, February 18, 2004 for a water permit to construct and place to beneficial use 1.78 cubic feet of water per second (776 acre feet annually) reserved by Future Use Permit No. 2086-2 by increasing the diversion rate and annual volume diverted from a well authorized by Water Permit No. 2475-2. Water Permit No. 2475-2 appropriates 2.67 cfs (1,160 feet annually) from ground water, one well into the Madison Aquifer in Pennington County, South Dakota for municipal purposes.

Permit No. 2519-2, with a priority date of May 18, 1989 (established by Future Use No. 2086-2) was approved May 17, 2004 and issued to the city for diversion of water with construction of the described water supply system to be completed on or before May 17, 2009 and for the application to beneficial use of said water on or before May 17, 2013. The Permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" on June 19, 2009. The "*Notice*" stated the water use system for Permit Nos. 2475-2 and 2519-2 was completed and water placed to beneficial use on June 4, 2009.

Both Water Permit No. 2475-2 and Water Permit No. 2519-2 pertain to City Well #12. The applicable portions of Water Permit No. 2475-2 are incorporated into Water License No. 2519-2.

(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 4.12 cubic feet of water per second for beneficial use with an annual volume of 1,936 acre feet annually. The location of the diversion point is approximately 1,225 feet east and 2,260 feet north of the SW corner of Section 22, T1N, R7E (NW ¼ SW ¼).

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

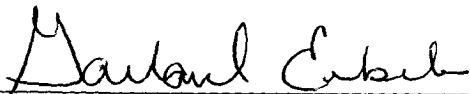
(4) Pursuant to South Dakota Water Law 46-5-30.1 the City of Rapid City, 300 6th St, Rapid City SD 57701 the holder and/or owner of Incorporated Water Right No. 2519-2 is issued a license to appropriate water, the right to use 4.12 cubic feet of water per second (1,936 acre feet annually) from ground water – one well, Madison Aquifer with a priority date of May 18, 1989 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 Incorporated Water Right No. 2519-2 and subject to the following qualifications:

- In accordance with SDCL 46-1-14 and 46-2A-20, Nos. 2475-2 and 2519-2 were 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. No. 2519-2 may also be cancelled for non-construction, 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.
- 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.

Water License No. 2519-2

- No. 2519-2 authorizes a total annual diversion of 1,936 acre feet of water annually for municipal use. ***Due to license incorporation, the acre foot limitation is a combination of Water Permit No. 2475-2 (1,160 acre feet) and Water Permit No. 2519-2 (776 acre feet).***
- The city of Rapid City shall report to the Chief Engineer annually the amount of water withdrawn each year from the Madison Formation for municipal use.



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

APR 28 2010

date

