

WATER PERMIT NO. 2532-2

Name of Applicant: Hermosa Water User Association

Address: PO Box 41, Hermosa SD 57744 Phone: 605 255-4504

Amount of Water Claimed: 0.56 cfs Total Acres: NA

Source of Water Supply: groundwater (one existing well)

Water to be used for: rural water system use County: Custer

Type of Waste Disposal System:

Location: 6 miles southwest of Hermosa

PRIORITY Date Received: 7-23-04 Application/License Fee: \$275

Corrected Application Received: Period of Annual Use: January 1 – December 31

Remarks: Increases the diversion rate authorized by Water Permit No. 2489-2 from 250 gpm to 500 gpm

Diversion Point: on the quarter-quarter line
between the SW ¼ NW ¼ and NW ¼ SW ¼ Sec
23-T3S-R7E

Land to be Irrigated: NA

Depth of Well: 2414 feet deep

Well Driller: : Taylor Drilling Co.

Remarks:

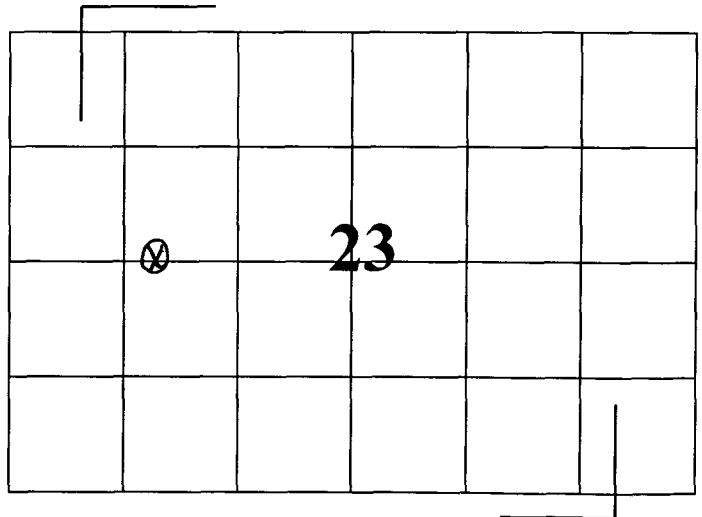
Type of Map: aerial

Prepared by: Cindy Walker, FSA

Reviewed and the Number Assigned on: 7-26-04

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



FORM 2: Application for uses other than irrigation
 (type or print)

RECEIVED
JUL 23 2004
**WATER RIGHTS
PROGRAM**

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>2532-2</u> (office use only) Hydrologic Unit <u>10120109</u>
	Basin <u>Upper Cheyenne</u>
	Newspaper <u>Custer Co. Chronicle, Custer</u>

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: ☐ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
 (check one) ☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☒ Amendment/Correction to Permit No. 2489-2

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.) To increase from 250 gpm to 500 gpm from a well in the Madison formation.

- Name of Applicant Hermosa Water User Association Phone 605-255-4504
 (check one) Owner Tenant/lessee
 Mailing Address P.O. Box 41 Hermosa State SD 57744
 (add'l) (Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 0.56 *CFS or 500 **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 Madison formation
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) Same as original
Permit # 2489-2 on quarter-quarter line between SW1/4 NW1/4 and NW1/4 SW1/4 Sec 23-T3S-R7E County Custer
- County or counties where water will be used Custer, Pennington
- Annual period during which water is to be used 12 months Jan 1-Dec 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

STATE OF SOUTH DAKOTA)

 County of Custer SS

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

I, Jim Baker, 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 Hermosa Water User Assn.

 Subscribed and sworn to before me this 13th day of July 20 04

Notary Public signature

4-2090

My Commission Expires 8-7-08

**SOUTH DAKOTA
WATER PERMIT NO. 2532-2**

Date of first receipt of application July 23, 2004.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2532-2 to Hermosa Water User Association, PO Box 41, Hermosa SD 57744 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. 2532-2 appropriates an additional 0.56 cubic feet of water per second (cfs) by increasing the diversion rate authorized by Water Permit No. 2489-2. Water Permit No. 2489-2 appropriates 0.56 cfs from one well completed into the Madison aquifer (approximately 2414 feet deep) located on the quarter-quarter line between the SW $\frac{1}{4}$ NW $\frac{1}{4}$ and the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 23-T3S-R7E. This permit authorizes an increase to the diversion rate from the existing well from 0.56 cfs to 1.12 cfs (500 gallons per minute).
2. The water appropriated shall be used for the purpose of rural water system 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. 2532-2 is September 7, 2004.
5. The date from which applicant may claim right is July 23, 2004.
6. One-fifth of the construction is to be completed on or before March 7, 2007.
7. All construction is to be completed on or before September 7, 2009.
8. Water is to be put to beneficial use on or before September 7, 2013.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

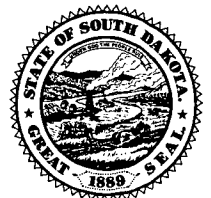
QUALIFICATIONS

1. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 2532-2 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. 2532-2 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. The Hermosa Water User Association shall report to the Chief Engineer annually the amount of water withdrawn from the Madison Formation.

WATER MANAGEMENT BOARD

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

NOV 19 2004
date



RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date JULY 26, 20 04

RECEIVED OF Bermosa Water Users Association, PO Box 41, Bermosa SD 57744

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	275	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 _____		
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	275.00

No.

001113

By

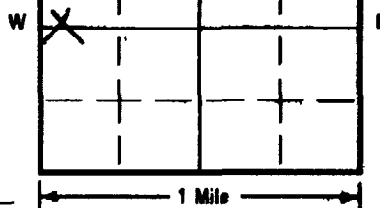
Darland Eilcke
Chief Engineer
grr

SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location SW 1/4 NW 1/4 Sec 23 Twp 35 Rg 7E
 County Custer
 North

Please mark well location with an "X"



Well Completion Date

7-2-04

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.) 2600 ft from Septic Tank (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Air Rotary - Mud RotaryCASING DATA: ☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>54.5 LB/FT</u>	<u>13 3/8 IN</u>	<u>0 FT</u>	<u>28 FT</u>	<u>17 1/2 IN</u>
<u>36 LB/FT</u>	<u>9 5/8 IN</u>	<u>+ 1 FT</u>	<u>1093 FT</u>	<u>12 1/4 IN</u>
<u>23 LB/FT</u>	<u>7 IN</u>	<u>1050 FT</u>	<u>2248 FT</u>	<u>8 3/4 IN</u>

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Portland</u>	<u>400</u>	<u>14.5 lb./gal</u>	<u>0</u>	<u>1093</u>
<u>Portland</u>	<u>480</u>	<u>14.5 lb./gal</u>	<u>1050</u>	<u>2248</u>

Describe grouting procedure Pressure grouted through casing. 13 3/8 casing was grouted also

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☐ NO. Why Not? Sanitation

Laboratory sent to for water quality analysis

Mid-Cont.Well Owner: Hermosa Water User Assoc.

Business Name: _____

Address: HCR 83, Box 8Hermosa, SD 57744

WELL LOG:

DEPTH

FORMATION	FROM	TO
<u>Fall River / Lakota</u>	<u>0</u>	<u>308</u>
<u>Morrison</u>	<u>308</u>	<u>625</u>
<u>Unkpapa</u>	<u>625</u>	<u>736</u>
<u>Sundance</u>	<u>736</u>	<u>1055</u>
<u>Spearfish</u>	<u>1055</u>	<u>1455</u>
<u>Minnekahta</u>	<u>1455</u>	<u>1495</u>
<u>Opal</u>	<u>1495</u>	<u>1620</u>
<u>Minnelusa</u>	<u>1620</u>	<u>2220</u>
<u>Madison</u>	<u>2220</u>	<u>2414</u>

STATIC WATER LEVEL 164 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by: ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flow rate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☐ PumpedDescribe: Air Developed☐ Bailed☒ Other

Pumping Level Below Land Surface

300 ft. After 1 Hrs. pumped 300 GPM660 ft. After 16 Hrs. pumped 600 or - GPM

If pump installed, pump rate _____ GPM

Seal Log + Perf. 9 5/8 casing
4 shots @ 518-20. cement Return to
Surface, Bond Log + Perf. 7" casing
with 4 shots @ 1878-80. cement
Return to 1050 FT.

This well was drilled under license # 331

And this report is true and accurate.

Drilling firm Taylor Drilling Co.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder.

Date: _____

WATER PERMIT APPLICATION NO. 2532-2
HERMOSA WATER USERS ASSOCIATION
AUGUST 4, 2004

Water Permit Application No. 2532-2 proposes to appropriate an additional 0.56 cubic feet of water per second (cfs) by increasing the diversion rate authorized by Water Permit No. 2489-2. Water Permit No. 2489-2 appropriates 0.56 cfs from one existing well completed into the Madison aquifer (2,414 feet deep) located on the quarter-quarter line between the SW¼ NW¼ and the SW¼ SW¼ Sec. 23, T3S-R7E, Custer County. This appropriation, if approved, would increase the diversion rate authorized from the well from 0.56 cfs to 1.12 cfs (500 gallons per minute). The water is for rural water system use.

AQUIFER: Madison aquifer (MDSN)

Aquifer Characteristics:

The Madison Limestone, locally known as the Pahasapa Limestone, is a fine to medium crystalline, cavernous limestone and dolomite approximately 300 feet thick in this area (Carter and Redden, 1999a) (Carter and Redden, 1999b). The Madison underlies approximately 736,640 acres of Custer County and contains an estimated 9,208,000 acre-feet of recoverable water in storage in the county (Allen and others, 1985). The Madison extends into the counties adjacent to Custer County, and in fact underlies much of the Western United States. The top portion of the Madison Limestone is karstic, therefore it 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 Madison outcrop is located about four miles west of this well site (Strobel and others, 1999), and the top of the Madison limestone is reported to be 2,220 feet below grade at this well site. The average porosity of the Madison is estimated to be 11% and the effective porosity from which recoverable water can be obtained by wells is assumed to be 5% (Rahn, 1979). The Madison is recharged through infiltration of precipitation falling directly on the outcrop area, possibly upward leakage from the Deadwood aquifer, and from streamflow losses. The estimated average annual recharge for the Madison aquifer in South Dakota ranges from 140,000 to 400,000 acre-feet annually (Woodward Clyde, 1981). Average annual recharge from 1931-1998 is estimated to be approximately 137,000 ac-ft/yr (Carter and others, 2001).

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 130 permits/rights which appropriate water from the Madison aquifer in South Dakota (Water Rights, 2004c). In addition, there are two Future Use Permits (1833-2 Weston Heights Home Owners, and 2086-2 The City of Rapid City), that reserve water from the Madison aquifer. The majority of the water rights/permits from the aquifer are 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 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.

Observation Well Data:

The Water Rights Program monitors 26 observation wells completed into the Madison aquifer in the Black Hills area (Water Rights, 2004b). Records from the observation wells indicate 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 nearest Water Rights' Madison aquifer observation well (CU-93A) is located about five miles southwest of this well site. The hydrograph for the observation well is shown below in figure 1.

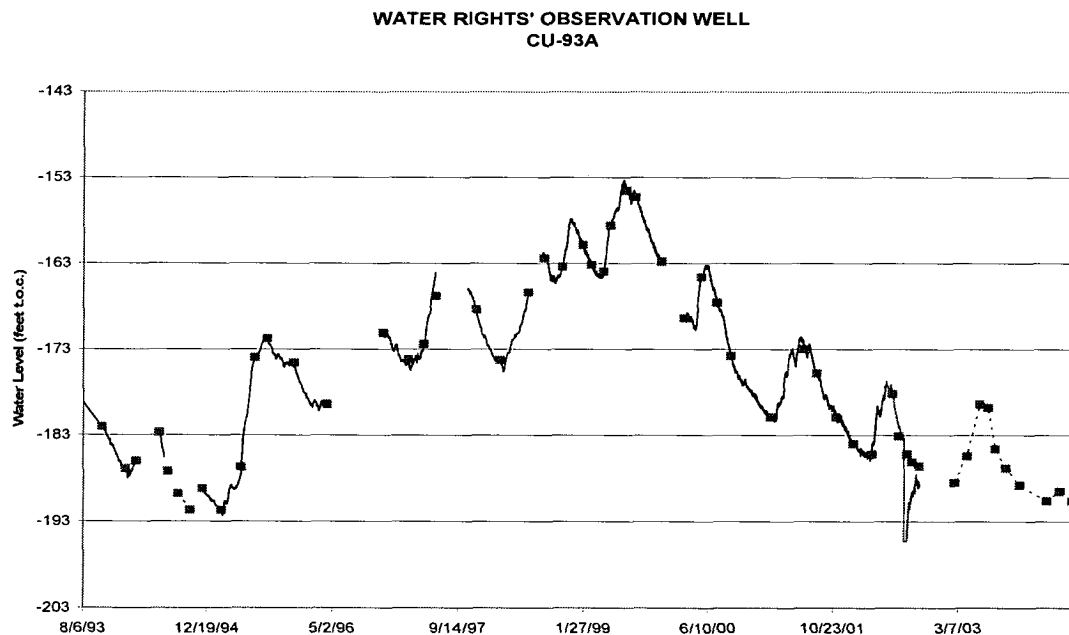


Figure 1. Hydrograph of Water Rights' observation well located approximately five miles southwest of the well site proposed by this application.

Water Rights Observation well PE-86A is located approximately seven miles northwest of this well. The hydrograph for the well is shown below in figure 2.

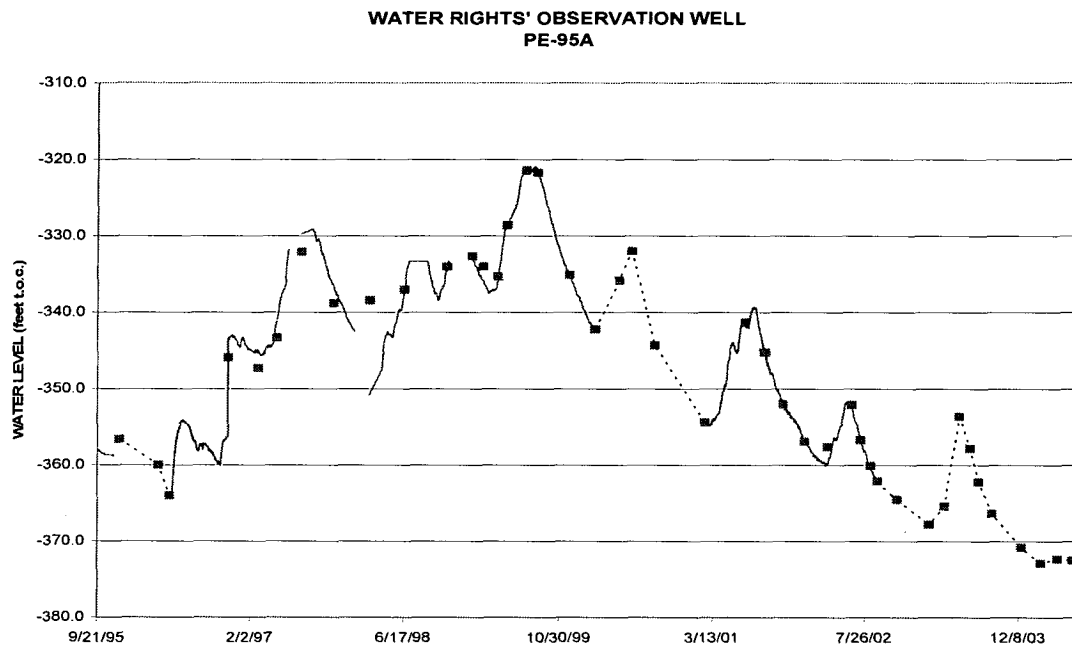


Figure 2. Hydrograph of Water Rights' observation well located approximately seven miles northwest of the well site proposed by this application.

Affects on Existing Rights:

There are three Water Rights/Permits appropriating groundwater within approximately two and one-half miles of this proposed well (Water Rights, 2004c), they include:

PERMIT NO	NAME	AQUIFER	USE	CFS	ACRES
2074-2	PRAIRIE GARDENS, INC	INKR	IRR	0.01	0.50
2247-2	JAMES BORGLUM	MNLS	IRR	0.09	8.00
2448-2	HEARTLAND CNTRY RANCHETTE	INKR	SHD	0.17	

Table 1. Groundwater Appropriations within two and one-half miles of 2532-2

Wells, including domestic wells, completed into aquifers shallower than the Madison aquifer (i.e. Inyan Kara aquifer, and Minnelusa aquifer) are not expected to be affected by this proposed appropriation since the lower Minnelusa aquifer is a confining bed that isolates the Madison hydraulically from shallower aquifers. The nearest appropriation from the Madison aquifer is Water Permit 2377-2, Rushmore Ranch Estates, with wells approximately six and one-half miles northeast of this well. Well interference at this distance is expected to be insignificant.

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.

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."

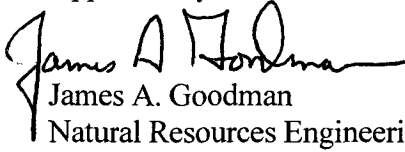
Evidence is not available to justify issuing this permit without a term limitation of 20 years.

Conclusions:

1. The Madison aquifer is a viable aquifer in this area.
2. This diversion will not adversely impair existing water rights.
3. 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., and Petres, A.K., 1985, Analysis of Groundwater and Streamflow Data Western Dakotas Region of South Dakota, Tasks 3A.B.C. and 4A.B.: Groundwater Resource Inventory: South Dakota Department of Water and Natural Resources,
- Carter, J.M., Driscoll, D.G., Hamade, G.R., 2001, 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, 66 p.
- Carter, J.M., Redden, J.A., 1999a, Altitude of the Top of the Madison Limestone in the Black Hills Area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-744-D, 2 sheets, scale 1:100,000
- Carter, J.M., Redden, J.A., 1999b, Altitude of the Top of the Deadwood Formation in the Black Hills Area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-744-E, 2 sheets, scale 1:100,000
- Carter, J.M., Driscoll, D.G., Hamade, G.R., 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
- Greene, E.A., 1993, Hydraulic Properties of the Madison Aquifer System in the Western Rapid City Area, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 93-4008, 56 p.
- Rahn, P.H., 1979, Ground Water Resources of Western South Dakota: U.S. Army Corps of Engineers, SDSM&T Project #2533

Strobel, M.L., Jarrell, G.J., Sawyer, J.F., Schleicher, J.R., and Fahrenbach, M.D., 1999, Distribution of Hydrogeologic Units in the Black Hills Area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-743, 3 sheets, scale 1:100,000

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**

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. 2532-2, Hermosa Water User Association**

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. 2532-2, Hermosa Water User Association, c/o Jim Baker, PO Box 41, Hermosa SD 57744.

The Chief Engineer is recommendation APPROVAL of Application No. 2532-2 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) it is in the public interest with the following qualifications:

1. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 2532-2 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. 2532-2 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. The Hermosa Water User Association shall report to the Chief Engineer annually the amount of water withdrawn from the Madison Formation.

See report on application for additional information.

Garland Erbele
August 11, 2004

Affidavit of Publication

State of South Dakota)

)ss.

County of Custer)

Charles W. Najacht of said county, being duly sworn, on oath says that he is publisher of the Custer County Chronicle, a weekly newspaper printed and published in Custer City, said County of Custer and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive weeks next prior to the publication of the notice herein, mentioned, and was and is printed wholly or in part in an office maintained at said place of publication: that the

Hermosa Water Users Assoc.
Notice of Application

a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once each week for 2 successive week(s), on which said newspaper was regularly published, to wit:

Aug 18, 2004; Aug 25, 2004;

_____, _____; _____, _____;

_____, _____; _____, _____;

_____, _____; _____, _____;

_____, _____; _____, _____;

the full amount of the fees for the publication of the annexed notice is \$ _____.

Charles W. Najacht

Subscribed and sworn to me before this 25

of August, 2004;

Norma Najacht

NOTARY PUBLIC

MY COMMISSION EXPIRES: May 5, 2006

NOTICE OF APPLICATION NO. 2532-2

TO APPROPRIATE WATER

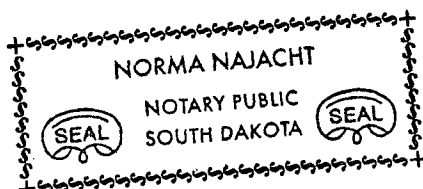
Notice is given that Hermosa Water User Association, c/o Jim Baker, PO Box 41, Hermosa SD 57744 has filed an application for a water permit to appropriate an additional 0.56 cubic feet of water per second (cfs) by increasing the diversion rate authorized by Water Permit No. 2489-2. Water Permit No. 2489-2 appropriates 0.56 cfs from one well completed into the Madison aquifer (approximately 2414 feet deep) located on the quarter-quarter line between the SW 1/4 NW 1/4 and the NW 1/4 SW 1/4 Section 23-T3S-R7E. This application proposes to increase the diversion rate from the existing well from 0.56 cfs to 1.12 cfs (500 gallons per minute). The water is for rural water system use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2532-2 for a 20 year term pursuant to SDCL 46-1-14 and 46-2A-20 because 1) evidence is not available to justify issuing this permit without a 20 year term limitation, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 7, 2004.

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

#268, 8/18, 8/25



RECEIVED

SEP - 3 2004

WATER RIGHTS
PROGRAM

Instruction to Newspaper - Publish first Notice on August 18, 2004 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 2532-2 to Appropriate Water

Notice is given that Hermosa Water User Association, c/o Jim Baker, PO Box 41, Hermosa SD 57744 has filed an application for a water permit to appropriate an additional 0.56 cubic feet of water per second (cfs) by increasing the diversion rate authorized by Water Permit No. 2489-2. Water Permit No. 2489-2 appropriates 0.56 cfs from one well completed into the Madison aquifer (approximately 2414 feet deep) located on the quarter-quarter line between the SW $\frac{1}{4}$ NW $\frac{1}{4}$ and the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 23-T3S-R7E. This application proposes to increase the diversion rate from the existing well from 0.56 cfs to 1.12 cfs (500 gallons per minute). The water is for rural water system use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2532-2 for a 20 year term pursuant to SDCL 46-1-14 and 46-2A-20 because 1) evidence is not available to justify issuing this permit without a 20 year term limitation, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 7, 2004.

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

August 12, 2004

Custer Co Chronicle
PO Box 551
Custer SD 57730-0551

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 2532-2 to Appropriate Water to be published twice. Please publish the first notice on August 18, 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 Hermosa Water User Association, % Jim Baker, PO Box 41, Hermosa SD (Ph # 605-255-4504).

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

After the second publication, please send us an affidavit or use the enclosed Proof of Publication form. The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

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

No. 2532-2

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

Date _____

We are in receipt of your letter of August 12, 2004 enclosing Notice to Appropriate Water by Application No. 2532-2 which was first published in our issue of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name

Newspaper



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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.

August 12, 2004

Hermosa Water User Association
% Jim Baker
PO Box 41
Hermosa SD 57744

Dear Mr. Baker:

Water Permit Application No. 2532-2 for rural water system use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Publisher of the Custer Co. Chronicle printed at Custer, SD (Ph # 605-673-2217). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization, the publisher has been instructed to publish your notice once each week for two consecutive weeks. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,


Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

NOV 19 2004

Hermosa Water Users Association
%Jim Baker
PO Box 41
Hermosa SD 57744

Dear Mr. Baker:

Enclosed is Water Permit No. 2532-2 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

**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**

Date 5-9-05

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

RECEIVED
MAY 12 2005
WATER RIGHTS
PROGRAM

FROM: Hermosa Water User Assoc.
(name)

P.O. Box 41
(address)

Hermosa SD 57744
(city, state, zip)

605-255-4504
(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. 2489-2
2532-2 states that the water use system is to be constructed by

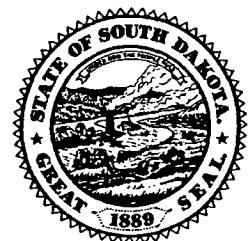
Sept. 7, 2009, and water is to be put to beneficial use by Sept 7, 2013.
(date) (date)

The water use system was completed on February 15, 2005.
(date)

Applying the water to beneficial use was completed on February 15, 2005.
(date)

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

Alan Mielke
(signature)



Permit No. 2489-2 and 2532-2
Upper Cheyenne - 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, 06/29/05, made a thorough examination of the water use system constructed by Hermosa Water Users Association of P.O. Box 41, Hermosa, SD, 57744 holder of Permit No. 2489-2 and 2532-2, bearing the priority of 09/16/02 and 07/23/04 authorizing the diversion of 1.11 cu. ft. per second of the waters of Madison Formation for Rural Water System purposes, in Custer County.

Inspection contact & relationship **Allen Milke**
to permit holder, if applicable:

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Taylor Drilling
- 2) No. of Wells 1
- 3) Depth(s) 2414 feet
- 4) Well log is available Y
- 5) Comment:

Casing:

- 1) Diameter 13 3/8" to 28 ft, 9 5/8" to 1093 ft, 7 inches to 2248 ft.
- 2) Length 2248 feet
- 3) Type Steel

Screen:

- 1) Type
- 2) Length _____ feet
- 3) Static water level 164 feet

Pump:

- 1) Make Grunfuss
- 2) Model
- 3) Size
- 4) Capacity 500 GPM

Motor:

- 1) Make Hitachi
- 2) Model No. Mfg. # 689363
- 3) Horsepower rating 25 hp

B. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period NA
- 3) Exceptions to compliance are: NONE

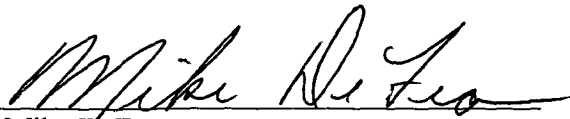
The system is in Excellent condition with the point(s) of diversion located as follows: 2600 ft South and 400 ft East of the NW1/4 corner of Sec. 23-T3S-R7E (N 43.77465, W -103.257517) . The works are capable of diverting and conveying to the place of use 1.11 cu. ft. per second of water which is to be used for Rural Water System.

Water has been put to beneficial use to the maximum extent as follows:

The license should be issued for 1.11 cfs.

All structures, wells and lands on map Y

Comments or other permit(s) associated with the project: Water Permit No. 2489-2 authorizes a diversion of 0.56 cfs from the Madison Formation. The applicant has applied for an additional 0.56 cfs for the same well under Water Permit No. 2532-2. The combined diversion of 1.11 cfs will equal the maximum pump capacity in place. Water Permit Nos. 2489-2 (priority date of 09/16/02) and 2532-2 (priority date 07-23-04) should both be licensed under Water Permit No. 2532-2 with their original priority dates.

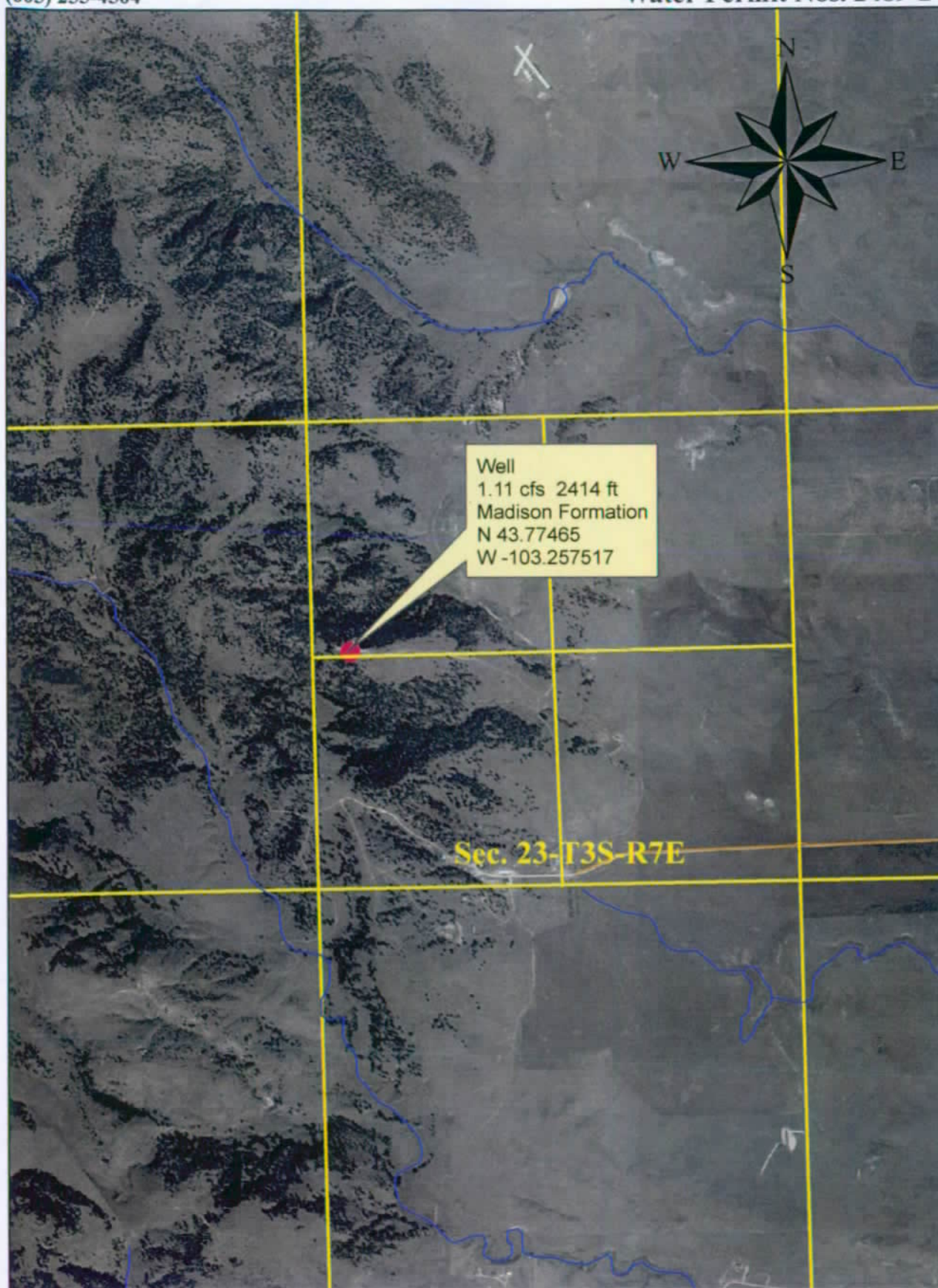


Mike DeFea
Natural Resources Engineer
DENR, Water Rights Program

Date report completed: October 1, 2005

Hermosa Water Users Assn.
P.O. Box 41
Hermosa, SD 57744
(605) 255-4504

Water Permit Nos. 2489-2 & 2532-2



Mike DeFea
Natural Resources
DENR Water Rights Program
08/01/05



0 500 1,000 2,000 3,000 4,000
Feet

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 2532-2**

(1) Hermosa Water Users Association, PO Box 41, Hermosa SD 57744-0041 made Application No. 2489-2, September 16, 2002 for a water permit to divert 0.56 cubic feet of water per second (cfs) from ground water (one well - Madison Formation), Custer County, South Dakota for rural water system purposes. Water Permit No. 2489-2 with a priority date of September 16, 2002 was approved on December 16, 2002.

The Association made Application No. 2532-2, July 23, 2004 for a water permit to divert an additional 0.56 cfs from the same well authorized by Water Permit No. 2489-2. Permit No. 2532-2, with a priority date of July 23, 2004 was approved September 7, 2004 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before September 7, 2009 and for the application to beneficial use of water on or before September 7, 2013.

On May 12, 2005, the Association submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" for Permit Nos. 2489-2 and 2532-2. The "*Notice*" stated the water use system was completed and water placed to beneficial use on February 15, 2005.

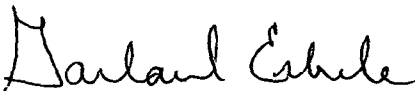
The applicable portions of Water Permit No. 2489-2 have been incorporated into this Water License No. 2532-2.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the Hermosa Water Users Association the holder and/or owner of Incorporated Water Right No. 2532-2 is issued a license, bearing priority dates of September 16, 2002 (0.56 cfs) and July 23, 2004 (0.56 cfs) to appropriate 1.11 cubic feet of water per second from ground water (one well - Madison formation) to be used for rural water system purposes.

The diversion point is located: 2,600 feet south and 400 feet east of the NW corner of Section 23, T3S, R7E (SW ¼ NW ¼).

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Incorporated Water Permit No. 2532-2 including the following qualifications:

- In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 2532-2 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. 2532-2 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.
- The Hermosa Water User Association shall report to the Chief Engineer annually the amount of water withdrawn from the Madison Formation.



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

AUG 08 2005

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

AUG 08 2005

2532-2
2489-2

Alan Mielke
Hermosa Water Users Association
PO Box 41
Hermosa SD 57744-0041

Dear Sirs:

Enclosed is Water License No. 2532-2. This is the final water right document completing your process of obtaining a Water Right. Also enclosed is a copy of the 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. 2532-2, 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. 2489-2 were incorporated into Water License No. 2532-2.