

WATER PERMIT NO. 1960-1

Name of Applicant: One Diamond Inc.

Address: PO Box 943, Spearfish SD 57783 Phone: 605 641-0359

Amount of Water Claimed: 1.28 cfs Total Acres: 150 acres

Source of Water Supply: groundwater (1 well)

Water to be used for: irrigation and suburban housing development use

County: Lawrence

Type of Waste Disposal System:

Location: 4 miles north of Spearfish

PRIORITY Date Received: 4-11-16 Application/License Fee: \$ 1050.00

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

Remarks:

Diversion Point: NE 1/4 SW 1/4 Sec 11-T7N-R2E

Land to be Irrigated: SW 1/4 Sec 11 and N 1/2
NW 1/4 Sec 14; all in T7N-R2E

Depth of Well: 1720 feet

Well Driller: Taylor Drilling

Remarks:

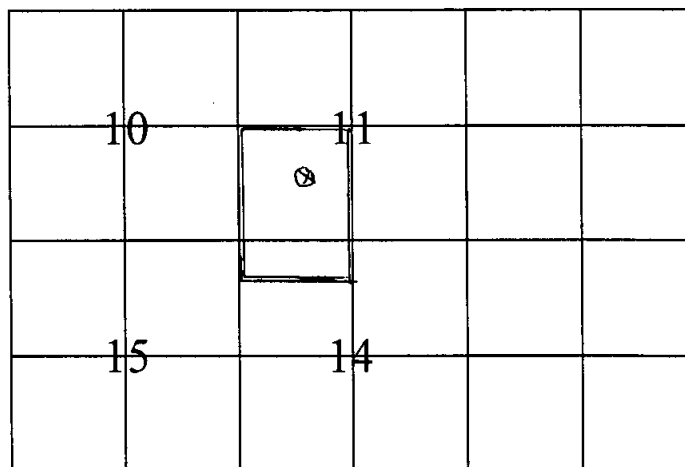
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 4-13-16

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



FORM 2: Application for irrigation in South Dakota

(type or print)

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>1960-1</u>	(office use only) Hydrologic Unit <u>10120203</u>
	Basin <u>Belle Fourche River</u>	
	Newspaper <u>Black Hills Pioneer</u>	
	<u>605-642-2761</u>	

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APR 11 2016

WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

Type of Application: ☒ New ☐ Vested Right ☐ Amendment/Correction to Permit No. _____
(Use predates Mar 2, 1955)

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

1. Name to Appear on Irrigation Permit One Diamond, Inc.

Note: The "Name to Appear on Irrigation Permit" must be the name in which the property to be irrigated is held in.

Mailing Address PO Box 943 Spearfish OK 57783
(Address) (City) (State) (Zip Code)

Phone _____ Mobile 605-641-0359 Email alan.crago@gmail.com

2. Amount of water claimed 1.28 *CFS or 575 **GPM ***AF Total Acreage 150
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Artesian well in Madison Aquifer

4. Location of point of diversion NE4SW4 Section 11 T7N R2 E
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County Lawrence

5. County or counties where water will be used Lawrence

6. Annual period during which water is to be used Apr 25 - Oct.30(irrigation) and Jan.1 - Dec. 31(subdivision)

7. List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

Land Description	Acres	Land Description	Acres
NW4SW4 11-7-2	32.5	<u>N 1/4 NW 1/4 11-7-2</u>	20
NE4SW4 11-7-2	32.5		
SW4SW4 11-7-2	32.5		
SE4SW4 11-7-2	32.5		

8. Give a description of the project. (Attach sheet if more space is needed)

Irrigation project to partially convert to residential subdivision or commercial land development uses within 10 years of this permit's issuance, on lands legally described as: LOTS 3-8 SW1/4, E1/2 SW1/4 EX LOTS 3-8 (12.578), W1/2 SW1/4, all in Section 11-7-2. LOT 1 (2.66) & LOT 2 (2.18) E1/2 E1/2 SE1/4, E1/2 E1/2 SE1/4 Except Lots 1 & 2; S1/2 NE1/4 EX LOT H2(.11AC) & H3(1.2AC) & EX. POR. IN PARCEL A(.88), TRACT 1 OF THE SE1/4 NW1/4 EX H1(.93AC) & H2(.2AC) all in Section 10-7-2. N1/2 N1/2 NW1/4 Section 14-7-2 Lawrence County

I, One Diamond Inc., by Alan Crago President, the applicant, certify under
Name of Person Title (if applicable)

penalty of perjury that I have read this application, examined the attached map, and that the matters stated are true. I further certify, if acting on behalf of an entity or individual other than myself, that I am authorized to submit this application.

SOUTH DAKOTA
WATER PERMIT NO. 1960-1

Date of first receipt of application April 11, 2016.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 1960-1 to One Diamond Inc., PO Box 943, Spearfish SD 57783 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 1960-1 appropriates 1.28 cubic feet of water per second from one well to be completed into the Madison Aquifer (1720 feet deep) located in the NE 1/4 SW 1/4 Section 11 for irrigation of 150 acres located in the SW 1/4 Section 11 and the N 1/2 NW 1/4 Section 14; all in T7N-R2E. The permit holder is also proposing to partially convert use of the well to supply a residential subdivision and commercial development located in Lots 3-8 SW 1/4, E 1/2 SW 1/4 ex Lots 3-8 (12.578), W 1/2 SW 1/4 Section 11; Lot 1 (2.66), Lot 2 (2.18) E 1/2 E 1/2 SE 1/4, E 1/2 E 1/2 SE 1/4 except Lots 1 & 2; S 1/2 NE 1/4 ex Lot H2 (0.11 ac); H3 (1.2 ac) & ex. por. in Parcel A (.88), Tract 1 of SE 1/4 NW 1/4 ex H1 (.93 ac) & H2 (.2 ac) Section 10; N 1/2 N 1/2 NW 1/4 Section 14; all in T7N-R2E.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 25 – October 30 (irrigation) and January 1 – December 31 (residential/commercial).
3. The date from which applicant may claim right is April 11, 2016.
4. The date of approval of Permit No. 1960-1 is July 5, 2016.
5. One-fifth of the construction is to be completed on or before January 5, 2019.
6. All construction is to be completed on or before July 5, 2021.
7. Water is to be put to beneficial use on or before July 5, 2025.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 1960-1 is issued for a twenty year term. Pursuant to SDCL 46-2A-21, the twenty year term may be deleted at any time during the twenty year period or following its expiration. If the twenty year term is not deleted at the end of the term, the permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 1960-1 may also be cancelled for nonconstruction, forfeiture, abandonment or three permit violations pursuant to SDCL 46-1-12, 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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year for the irrigation component of the permit and the Permit Holder shall also report to the Chief Engineer annually the amount of water withdrawn for residential and commercial use.
4. Water Permit No. 1960-1 authorizes a total annual volume of up to 29 acre feet of water from the Madison Aquifer for the residential/commercial use component of the permit in addition to the 2 acre-feet/acre for irrigation.

WATER MANAGEMENT BOARD

By: 

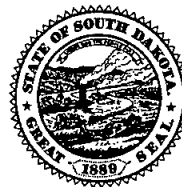
Jeanne Goodman, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

JUL 27 2016

date



Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☐ Drilling new well(s) ☒ Using existing well(s)a) If new wells, how many ____ Have test holes been drilled ☐ Yes ☐ No Drilled by ____
(if yes, please provide copies of logs)b) If existing wells, how many 1 Provide copy of log(s), if available. Drilled by Taylor -See information on File.

For either Existing or Proposed Wells:

c) Well Depth (required) 1720 Depth to Top of Water Bearing Material ____ Depth to Water from Surface ____d) Distance to nearest domestic well on applicant's property NA Property owned by others 3/4 mile**2. Wastewater Disposal System Information**

a) Type of System (i.e. septic tank, drain field) _____

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

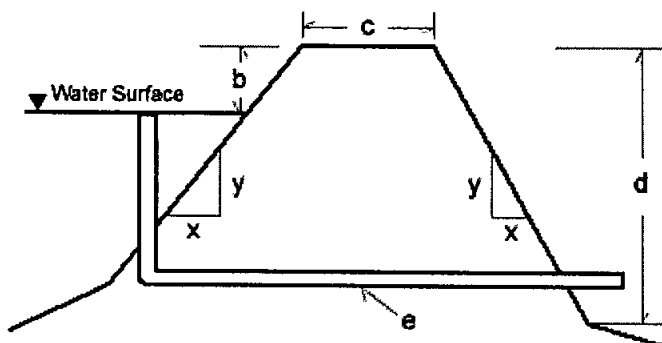
a) Surface Dimensions _____ Depth _____

b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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

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



b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

Upstream _____

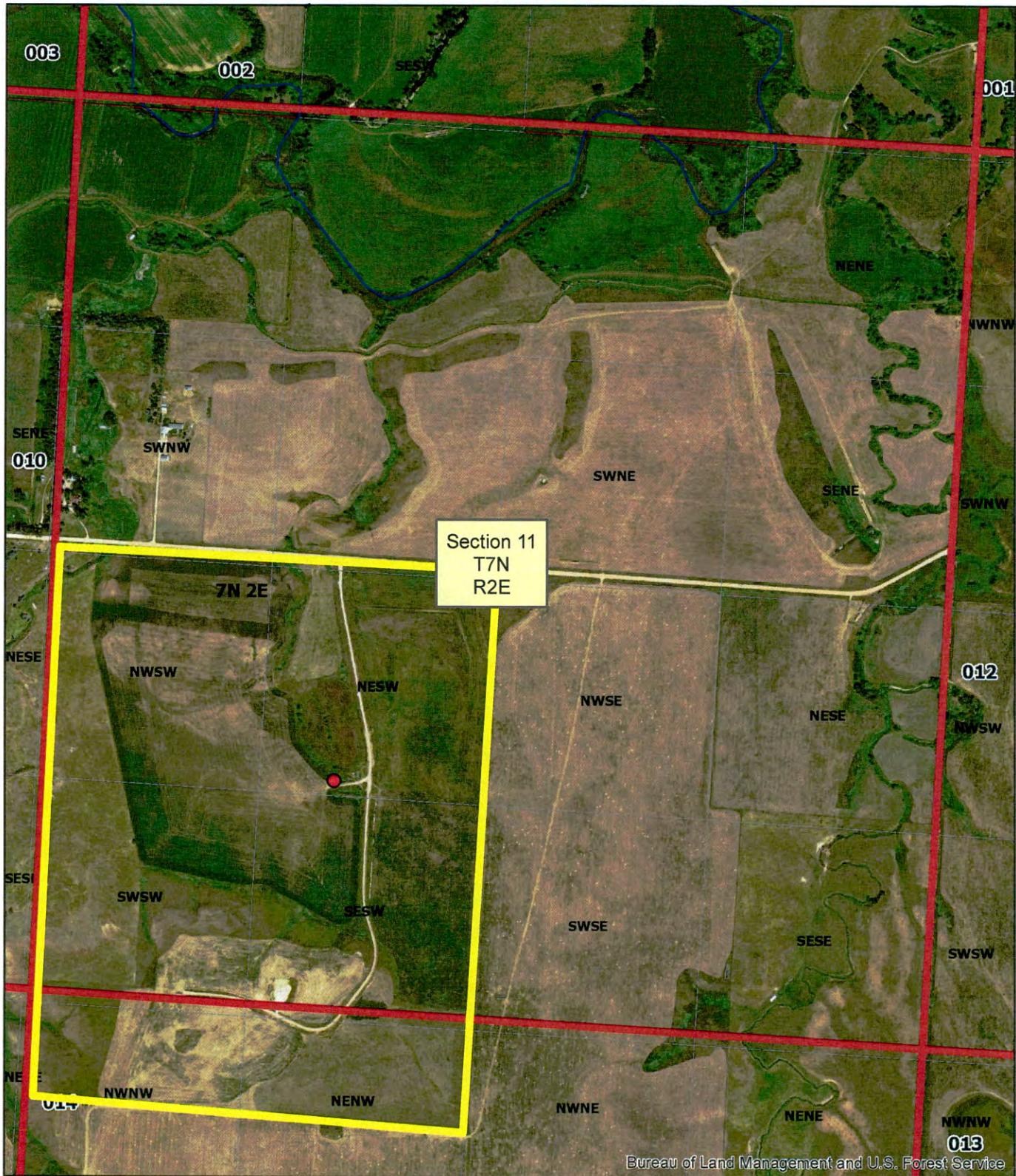
Downstream _____

h) Surface Area of Impoundment _____

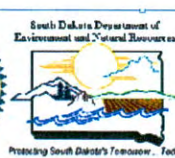
i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres

DRAFT CRAGO WATER PERMIT APPLICATION



1,000 500 0 1,000 Feet





United States
Department of
Agriculture

Lawrence County, South Dakota



Common Land Unit  Tract Boundary
Common Land Unit  PLSS
 Rangeland

Wetland Determination Identifiers

-  Restricted Use
-  Limited Restrictions
-  Exempt from Conservation Compliance Provisions



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2016 Program Year

Map Created October 13, 2015

Farm 469

14 -7N -2E

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly from the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact boundaries and determinations or contact USDA Natural Resources Conservation Service (NRCS).



United States
Department of
Agriculture

Lawrence County, South Dakota



Common Land Unit

Common Land Unit

Cropland

Rangeland

Tract Boundary

PLSS

Wetland Determination Identifiers

- Restricted Use
- ▲ Limited Restrictions
- Exempt from Conservation Compliance Provisions



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WATER RIGHTS
PROGRAM

2016 Program Year

Map Created October 13, 2015

Farm 469

11 -7N -2E

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly from the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact boundaries and determinations or contact USDA Natural Resources Conservation Service (NRCS).



United States
Department of
Agriculture

Lawrence County, South Dakota



Common Land Unit
Other Ag

Common Land Unit
Cropland
Rangeland

Tract Boundary

Wetland Determination Identifiers

- Restricted Use
- Limited Restrictions
- Exempt from Conservation Compliance Provisions



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WATER RIGHTS
PROGRAM

2016 Program Year

Map Created October 13, 2015

Farm 469

10 -7N -2E

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly from the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact boundaries and determinations or contact USDA Natural Resources Conservation Service (NRCS).



11-02

Date:

Alan Crago

Ft	Sample Description
0-18	Red Shale
18-100	Gravel and Red Shale
100-120	Gray to Green Shale
120-140	Green Shale
140-765	Red Siltstone & Gyp
765-805	Minnekahta Limestone 785' flowing 75 gpm
805-895	Red Siltstone & Shale – Opeche
895-905	Green and Brown Siltstone
905-936	Yellow Sandstone – Black Sandstone Also producing a small amount of oil
936-955	Tan Sandstone
955-965	Same
965-995	Tan Sandstone and Tan Dolomite
995-1015	White, Pink, Tan Limestone and Tan Sandstone
1015-1035	Yellow Dolomite and White Limestone
1035-1055	Yellow Dolomite and Yellow Sandstone
1055-1075	Same
1075-1095	Yellow Sandstone
1095-1115	Tan and Pink Sandstone
1115-1135	Same
1135-1155	Same
1155-1175	Tan Sandstone and Yellow Limestone
1175-1195	Tan Sandstone and Yellow Dolomite
1195-1215	Yellow Sandstone, Yellow Limestone and Red Shale
1215-1235	Yellow and Pink Limestone, Tan Sandstone and Red Shale
1235-1255	Tan Sandstone
1255-1275	Tan Sandstone and Red Shale
1275-1295	Red Shale and Tan and Brown Sandstone
1295-1315	Tan Sandstone and Green Shale
1315-1335	Tan and Pink Dolomite
1335-1355	Same
1355-1375	Tan Sandstone and White Sandstone
1375-1395	White and Pink Limestone and Red Shale
1395-1415	White and Pink Limestone
1415-1435	Red Shale and Siltstone, some White Limestone
1435-1455	Red Shale & Siltstone
1455-1480	Pink Limestone and White Chert
1480-1500	Pink Limestone – Tan Limestone, Yellow Siltstone
1500-1520	White Limestone
1520-1540	Pink and White Dolomite
1540-1560	White Dolomite
1560-1580	Same
1580-1600	Light Gray Dolomite
1600-1620	White Dolomite and Limestone
1620-1640	Same
1640-1660	White and Tan Limestone
1660-1680	Same
1680-1700	White Dolomite
1700-1720	Same

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WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 4/11, 20 16

RECEIVED OF One Diamond Inc A Crago PO Box 943 Spearfish SD 57783

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

Fee for Application for Permit No. <u>1960-1</u> to Appropriate Water, to construct and to put water to beneficial use	850	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>1960-1</u>	200	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	1050 00

No. **07816**

By Jean Goodman
Chief Engineer

Feb. 27, 2016

Dear Eric,

I've enclosed my check
but have not completed the
application.

Please wait for me to complete
application before depositing.
I'll be in touch,

Thanks,

Alan Craig

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FEB 29 2016

WATER RIGHTS
PROGRAM

Gronlund, Eric

From: Alan Crago <alan.crago@gmail.com>
Sent: Tuesday, March 08, 2016 11:26 PM
To: Gronlund, Eric
Subject: Correction: Section not Lot.

It should read Section 10 not Lot 10. Thanks,

See the plat which is the preliminary plat of 48 lots. 1-8 lots of the 48 lots were final platted. The remaining portion of Section 10 (80 acres approx.) which would allow 16 lots under the present zoning remain unplatted. Under current zoning the number of lots in this subdivision are 64.

Thanks,

--

Alan Crago
Associate Broker
Century 21 Dakota Belle Spearfish Realty, Inc.
123 East Jackson Blvd Ste 3
Spearfish, SD 57783

605.641.0359

Gronlund, Eric

From: Alan Crago <alan.crago@gmail.com>
Sent: Tuesday, March 08, 2016 4:52 PM
To: Gronlund, Eric
Cc: Alan Crago
Subject: Page 1 shows additional legally described properties
Attachments: SD081_F469.pdf; Two Gate Ranch Plat.pdf

Eric,

The outlined properties from the Blue Line west(section line)on Page one shows the properties included in the legal descriptions that are not on the map you provided. These properties are in Section 10-7-2.

See the plat which is the preliminary plat of 48 lots. 1-8 lots of the 48 lots were final platted. The remaining portion of Lot 10 (80 acres approx.) which would allow 16 lots under the present zoning remain unplatted. Under current zoning the number of lots in this subdivision are 64.

Thanks,

--

Alan Crago
Associate Broker
Century 21 Dakota Belle Spearfish Realty, Inc.
123 East Jackson Blvd. Ste 3
Spearfish, SD 57783
605.641.0359

Entity Detail	File Annual Report	Statement of Change	Forms
Name	ONE DIAMOND, INC. <u>Obtain a Certificate of Good Standing</u>		
Business ID	DB035119		
Incorporation/Qualification Date	12/19/1994		
Home State	SOUTH DAKOTA		
Status	Good Standing		
Last Annual Report	2015		
Business Type	Domestic Business		
Stock Info	25,000 @ \$1.00		

Registered Agent Documents

Registered Agent Name & Address

ALAN CRAGO
130 E ILLINOIS ST APT 5
SPEARFISH, SD 57783-2100



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1960-1, One Diamond, Inc.**

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. 1960-1, One Diamond, Inc., c/o Alan Crago, PO Box 943, Spearfish SD 57783.

The Chief Engineer is recommending Approval of Application No. 1960-1 with 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. 1960-1 is issued for a twenty year term. Pursuant to SDCL 46-2A-21, the twenty year term may be deleted at any time during the twenty year period or following its expiration. If the twenty year term is not deleted at the end of the term, the permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 1960-1 may also be cancelled for nonconstruction, forfeiture, abandonment or three permit violations pursuant to SDCL 46-1-12, 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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year for the irrigation component of the permit and the Permit Holder shall also report to the Chief Engineer annually the amount of water withdrawn for residential and commercial use.
4. Water Permit No. 1960-1 authorizes a total annual volume of up to 29 acre feet of water from the Madison Aquifer for the residential/commercial use component of the permit in addition to the 2 af/acre for irrigation.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
June 10, 2016

NOTE: An EPA publication entitled "Water Sense" dated June 2008 states the average family of four uses 400 gallons per day (gpd). Applying this daily use for currently zoned number of lots (64) results in an annual use of 29 acre feet of water.

(64 homes X 400 gpd X 365 day/year divide 325,851 gallons/acre-feet = 28.7 acre feet per year)

Another method to calculate annual water use would be calculating based on water use per capita demand for residential use which is a maximum of 130 gpd based on Civil Engineer Reference Manual for PE Exam (Lindburg, 2012). The Drinking Water Program assumes 2.5 residence per home. This results in an annual use of 24 acre feet of water per year.

(64 homes X 2.5 people/home X 130 gpd X 365 days/year divide 325,851 gallons/ac-ft = 23.3 ac-ft)

**REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 1960-1
ONE DIAMOND INC.
MAY 21, 2016**

Water Permit Application No. 1960-1 proposes to appropriate water from the Madison aquifer for irrigation, and to supply a residential subdivision and commercial development. This application proposes to divert water from an existing 1720 foot deep well completed into the Madison aquifer, located in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 11, T7N-R2E, at a maximum diversion rate of 1.28 cubic feet of water per second. Application No. 1960-1 proposes to irrigate 150 acres located in the SW $\frac{1}{4}$ Sec. 11, T7N-R2E and the N $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 14, T7N-R2E. The residential subdivision and commercial development this application proposes to use water for is located in Lots 3-8 SW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$ ex Lots 3-8 (12.578), W $\frac{1}{2}$ SW $\frac{1}{4}$ Section 11; Lot 1 (2.66), Lot 2 (2.18) E $\frac{1}{2}$ E $\frac{1}{2}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ E $\frac{1}{2}$ SE $\frac{1}{4}$ except Lots 1 & 2; S $\frac{1}{2}$ NE $\frac{1}{4}$ ex Lot H2 (0.11 ac); H3 (1.2 ac) & ex. por. in Parcel A (.88), Tract 1 of SE $\frac{1}{4}$ NW $\frac{1}{4}$ ex H1 (.93 ac) & H2 (.2 ac) Section 10; N $\frac{1}{2}$ N $\frac{1}{2}$ NW $\frac{1}{4}$ Section 14; all in T7N-R2E.

AQUIFER: MADISON AQUIFER (MDSN)

GEOLOGY AND AQUIFER CHARACTERISTICS:

Strobel and others, (1999) consider the Madison aquifer as composed of the Madison (Pahasapa) Limestone and Englewood Formation. The Madison aquifer is a regional aquifer that underlies portions of Montana, Nebraska, North Dakota, South Dakota, Wyoming and parts of Canada (Peterson, 1984). The Madison aquifer contains an estimated 644,827,200 acre-feet of recoverable water in storage in western South Dakota (Allen and others, 1985) and 51,512,300 acre-feet of recoverable water in storage in eastern South Dakota (Hedges and others, 1982). The Madison Limestone is a massive limestone and dolomite with relatively low primary permeability and porosity. Rahn (1979) estimates the average primary porosity of the aquifer is 11% and the effective porosity is 5%. The Madison aquifer is most productive in the upper part of the Madison Limestone. The upper third of the Madison is karstic with caves, solution collapse features and enlarged conduits resulting in extensive secondary permeability and creating potentially the most productive aquifer in the Black Hills (Kyllonen and Peter, 1987). Since groundwater movement in the Madison is dominated by secondary permeability features the aquifer characteristics are variable (Greene and others, 1999). The Englewood Formation, a limestone below the Madison Limestone, is included in this hydrologic unit because of the hydraulic connection between the two units and relatively minor thickness of the Englewood Formation in outcrop areas. The lower portion of the Madison Limestone and the Englewood Formation are generally considered confining zones. The Minnelusa Formation overlies the Madison Limestone and generally acts as a confining layer. However, Putnam and Long (2007) suggest that a "spatially variable" hydraulic connection between the Minnelusa aquifer and the Madison aquifer may result from faults, fractures and breccia pipes. With the possible exception of one site in Rapid City (i.e. City Quarry site), aquifer testing has not documented a hydraulic connection between the Madison and Minnelusa aquifers (Greene and others, 1999, and Greene, 1993). Nested observation wells completed into the Madison and Minnelusa aquifers generally

identify significant differences in the potentiometric surfaces, suggesting a significant hydrologic separation between the two aquifers (Water Rights, 2016a).

The existing well that this permit application proposes to use as a water source was constructed in 1996 and reportedly flowed 575 gallons per minute. The completion report for the well indicates the well had a shut-in pressure of 175 psi or the equivalent of a potentiometric surface of approximately 404 feet above ground surface. Groundwater flow in this area is to the northeast with a gradient of 20-40 feet per mile (McKaskey, 2013).

SDCL 46-2A-9

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

WATER AVAILABILITY:

The probability of unappropriated water available for appropriation can be evaluated by considering SDCL 46-6-3.1 which requires that:

“No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source. An application may be approved, however, for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems.”

Water Permit Application No. 1960-1 proposes to appropriate water from the Madison aquifer, a water source that is older than the Greenhorn Formation, and the water may be used by a water distribution system.

Water Balance:

Recharge to the Madison aquifer occurs through streamflow losses and direct infiltration of precipitation at the outcrop area. “Precipitation recharge [in the Black Hills] is consistently larger than streamflow recharge; however, the relative proportion of streamflow recharge increases as combined recharge decreases” (Carter and others, 2000). Recharge to the Madison aquifer in South Dakota has been estimated to range from 140,000 to 400,000 acre-feet per year (Woodward-Clyde, 1981). Woodward-Clyde however, essentially defined the Madison aquifer as everything between the Precambrian and the Cretaceous shales. As part of the Black Hills Hydrology Study, the average annual recharge to the Madison aquifer from 1931-1998 was estimated to be approximately 137,000 ac-ft/yr (Carter and others, 2001a).

The availability of groundwater from shallower sources, has limited domestic development from the Madison aquifer except very near the outcrop. Carter and others, (2001b) estimate “Self-supply Domestic” and “Livestock Watering” only account for approximately 2.25% of the water use from the Madison aquifer. In general, well withdrawals from the Madison are for uses which

require water rights/permits. The majority of the water rights/permits from the aquifer in South Dakota are from Butte, Lawrence, Meade, Pennington and Fall River Counties. The Madison supplies water for irrigation, geothermal, industrial, and commercial uses. By far the major use of the aquifer in South Dakota is for water distribution systems (suburban housing development and municipal use). The cities of Spearfish, Belle Fourche, Sturgis, Rapid City, Box Elder, and Edgemont all depend on water from wells completed into the Madison aquifer.

There have been a total of 224 previous applications made for appropriations from the Madison; the status of these applications are shown in Table 1 (Water Rights 2016b).

Table 1. Water permit applications from the Madison aquifer in South Dakota (Water Rights 2016b).

STATUS	NUMBER
Approved and licensed	113
Approved and not licensed	38
Future Use reservation	7
Incorporated into a license	37
Cancelled	25
Denied	1
Deferred	1
Withdrawn	2

There are currently a total of 158 appropriations and one deferred application from the Madison aquifer in South Dakota. Assuming that: (1) future use permits will be fully developed; (2) appropriations with a specified annual rate limitation will divert to their maximum limit; and (3) appropriations limited by diversion rate only, will be used at 60 percent of full time usage at their maximum diversion rate, the appropriations represent a potential maximum annual withdrawal from the Madison aquifer of approximately 55,000 ac-ft/yr. The assumptions used to estimate the potential maximum withdrawal from the aquifer are extremely conservative and represent a “worst case scenario.”

Almost all of the water use from the Madison aquifer in South Dakota is from the Black Hills area. The withdrawals from all wells completed into the Madison aquifer in the Black Hills of South Dakota and Wyoming, estimated to average 12,310 acre-feet annually from 1987-1996 (Carter and others, 2001b). The “potential maximum annual withdrawal” from the aquifer for 1996, using the assumptions given above for the appropriations in 1996 is 35,831 ac-ft/yr. Applying the 1996 “potential maximum annual withdrawal” to the estimated average annual use ratio, the average annual withdrawal corresponding with a potential maximum annual withdrawal of 55,000 ac-ft/yr would be less than 20,000 ac-ft/yr.

The quantities of both the average annual recharge and the average annual use for the Madison aquifer are both small percentages of the amount of water stored in the Madison aquifer so the aquifer can actually withstand several years of drought conditions with only minimal impact to wells or springs. Comparison of average annual recharge and average annual withdrawal estimates for the Madison aquifer indicate that unappropriated water is available from the Madison aquifer. The simple water budget comparing the estimated average annual recharge and the potential withdrawal by existing wells and current appropriations is not intended to suggest that all of the water that is in storage in the Madison or that all of the recharge to the aquifer is

available for this appropriation, merely to demonstrate that in general the Madison aquifer is an immense resource that is relatively untapped.

Localized Hydrologic Budget:

Carter and others (2001b):

Carter and others (2001b) developed hydrologic budgets for the Madison and Minnelusa aquifers combined, using nine subareas to cover the Black Hills. The subareas were identified on the basis of hypothetical flowpaths and were selected with the intent of minimizing flow across the boundaries. The well that is to be used to supply this appropriation is located in Carter and others' (2001b) subarea 1. The hydrologic budget for this subarea balanced from 1987-1996, by estimating that water enters these subareas through streamflow recharge, precipitation recharge and groundwater inflow. Water is assumed to exit these subareas through groundwater outflow, artesian springflow and well withdrawals (see Table 2).

Table 2. Hydrologic budget for the subareas that includes the area near the well site proposed by Application No. 1960-1 for Water Years 1987-1996. Modified from (Carter and others, 2001b).

Stream-flow recharge	Precipitation recharge	Minnelusa ground-water inflow	Madison ground-water inflow	Minnelusa ground-water outflow	Madison ground-water outflow	Artesian spring-flow	Well withdrawals
9.6 cfs	121.1 cfs	15.4 cfs	0	8.1 cfs	36.9 cfs	90.3 cfs	10.8 cfs

There are currently 36 water rights/permits, including one future use permit, appropriating water from the Madison aquifer from the subarea that includes this proposed well site. The amount of water that can be expected to be withdrawn through appropriative uses from the Madison was estimated by assuming: 1) water rights/permits limited by an annual volume will pump the entire volume appropriated, 2) water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time, and 3) the future use permit can be fully developed. Under current appropriations, given the assumptions listed above, the well withdrawal from the subarea containing this well is estimated to be less than 25 cfs. Other variables of a hydrologic budget for this subarea, (i.e. springflow, groundwater inflow and groundwater outflow) are all dependent on the groundwater gradient at the subarea boundaries or near the springs. The increase of well withdrawals compared with the estimates given in Table 2 has resulted in adjustments to the other interdependent variables of the hydrologic budget to achieve a new dynamic equilibrium (i.e. balanced water budget) for the area. It can be assumed that with a very subtle change in the hydraulic gradient at either the inflow zone or the outflow zone, a new dynamic equilibrium would be established in this area with virtually immeasurable impacts to the amount of water in transient storage. Therefore, there is a reasonable probability that unappropriated water is available from this subarea for this proposed use.

Putnam and Long (2007):

On an even more localized scale, Putnam and Long (2007) evaluated an area consisting of approximately 416 square miles in Lawrence County (see Figure 3).

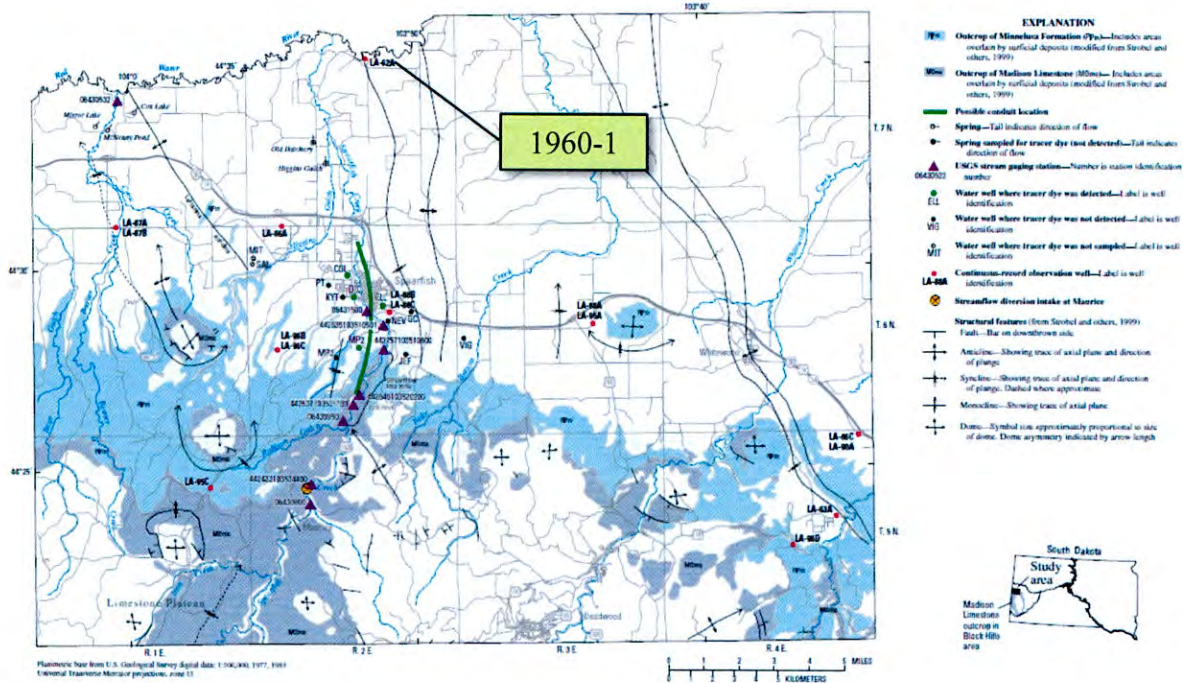


Figure 3. Location of Putnam and Long (2007) study area, (modified from (Putnam and Long, 2007)).

An average annual recharge rate to the Madison aquifer for the area was estimated to be 16.5 cfs. Sources of recharge in the area were identified as areal recharge (8.0 cfs), streamflow recharge from Spearfish Creek (6.5 cfs) and streamflow recharge from False Bottom Creek (2.0 cfs) (Putnam and Long, 2007). In addition, Putnam and Long (2007) estimated an average annual recharge rate of 2.0 cfs to the Madison and Minnelusa aquifers combined from Bear Gulch and an average annual recharge rate of 2.0 cfs to the Madison and Minnelusa aquifers combined from Beaver Creek. There have been 48 water permit applications filed for appropriations from the Madison aquifer from the Putnam/Long study area. The status of these applications is shown in Table 3.

Table 3. Water permit applications from the Madison aquifer from the Putnam/Long study area (Water Rights, 2016b).

STATUS	NUMBER
Approved and licensed	23
Approved and not licensed	15
Future Use reservation	1
Incorporated into a license	6
Cancelled	3

The amount of water that can be expected to be withdrawn through appropriative uses from the Madison aquifer from the area shown in Figure 3 using similar assumptions as above is estimated to approximately 89,775 acre-feet per year (12.11 cfs).

It is likely that the average annual recharge rate to the Madison aquifer that originates in the area shown in Figure 2 exceeds the expected average annual withdrawal that will result from the current appropriations. It is important to note that in addition to the recharge that originates in the area, water enters the Madison aquifer in this area from groundwater inflow from the west. The regional aspect of the Madison aquifer in this area is demonstrated most clearly in the fact that Putnam and Long (2007) identified the discharge from artesian springs in the area exceeds the recharge that occurs within the area.

Observation Well Data:

Administrative Rule of South Dakota Section 74:02:05:07 requires that the Water Management Board shall rely upon the record of observation well measurements in addition to other data to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge to the aquifer.

The Water Rights Program monitors 26 observation wells completed into the Madison aquifer in the Black Hills area (Water Rights, 2016a). There are seven Madison aquifer observation wells in the area shown in Figure 3. Hydrographs for the wells show the aquifer's response to climatic conditions and clearly demonstrate the system is recharged (see Figures 4-10).

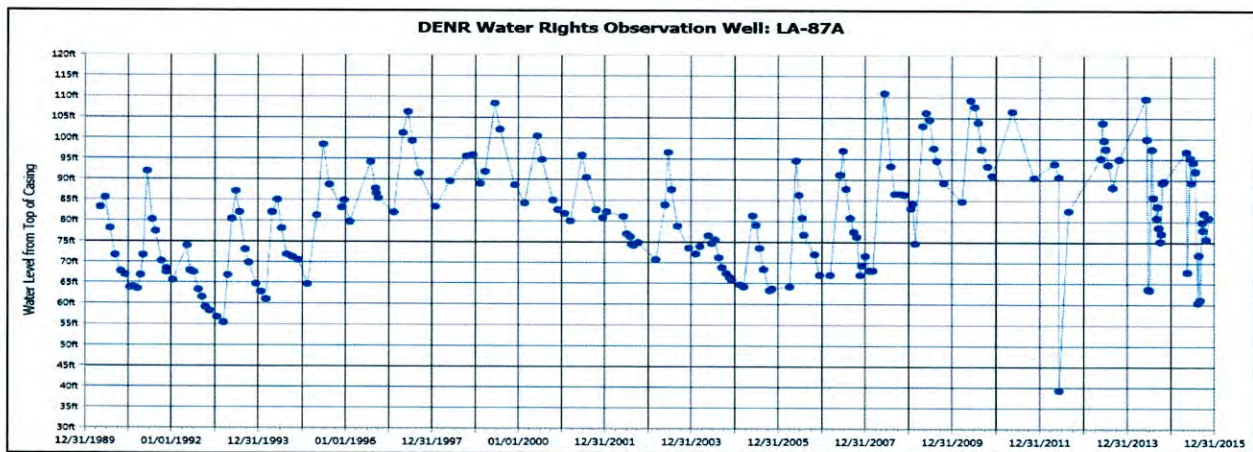


Figure 4. DENR-Water Rights' observation well completed into the Madison aquifer located approximately 9.5 miles southwest of the well site proposed by Application No. 1960-1.

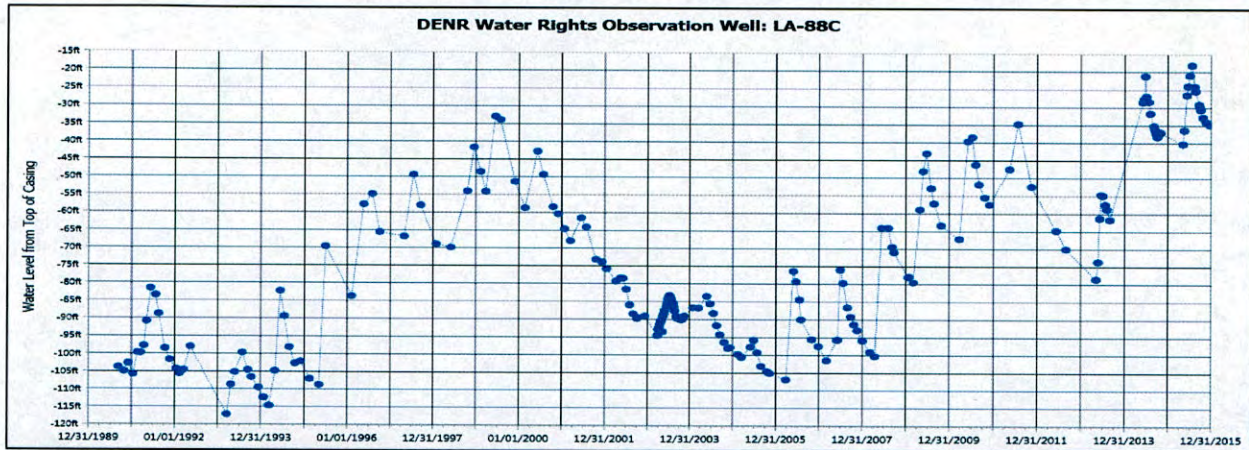


Figure 5. DENR-Water Rights' observation well completed into the Madison aquifer located approximately 6.8 miles south of the well site proposed by Application No. 1960-1.

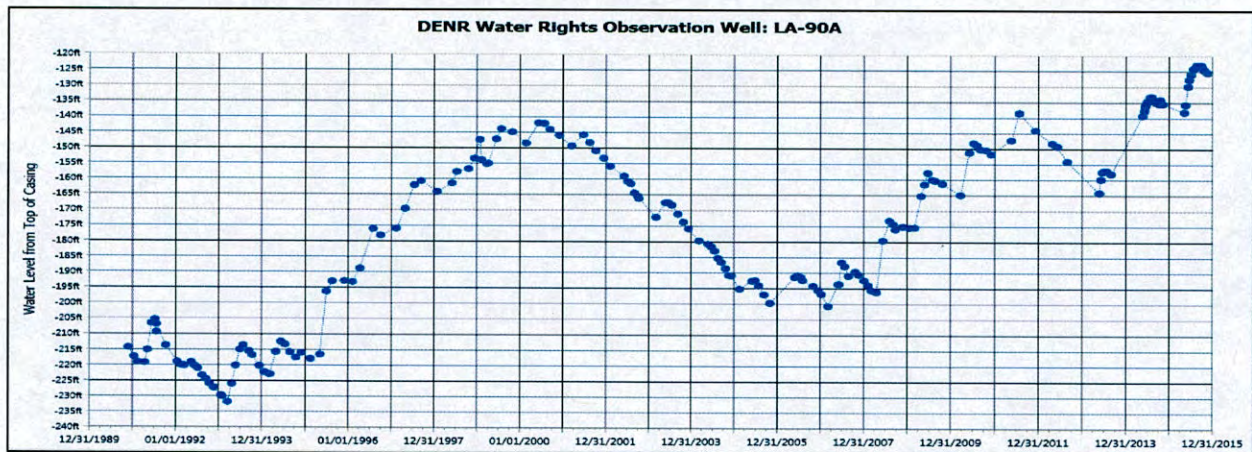


Figure 6. DENR-Water Rights' observation well completed into the Madison aquifer located approximately 16.7 miles southeast of the well site proposed by Application No. 1960-1.

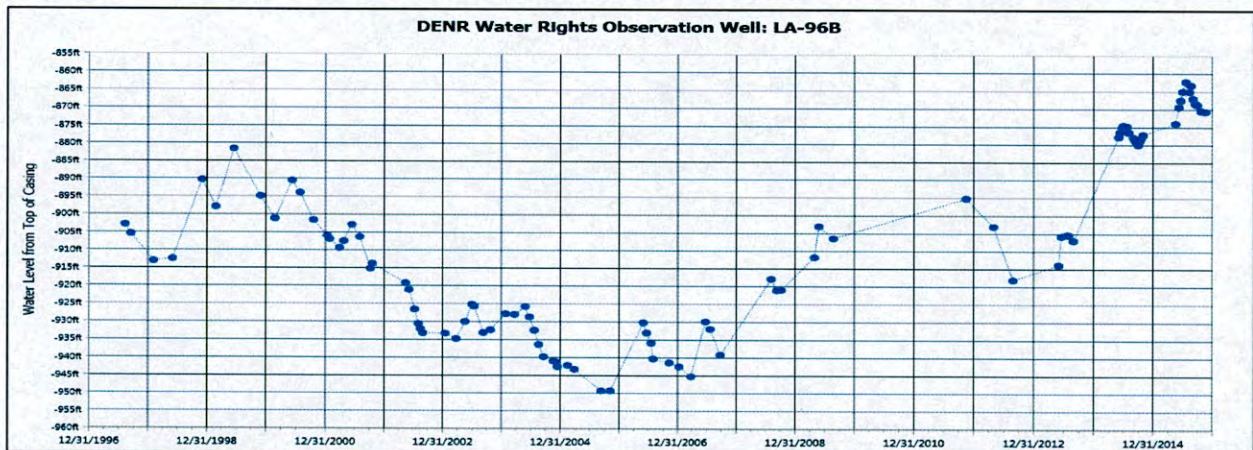


Figure 7. DENR-Water Rights' observation well completed into the Madison aquifer located approximately 8.8 miles south-southwest of the well site proposed by Application No. 1960-1.

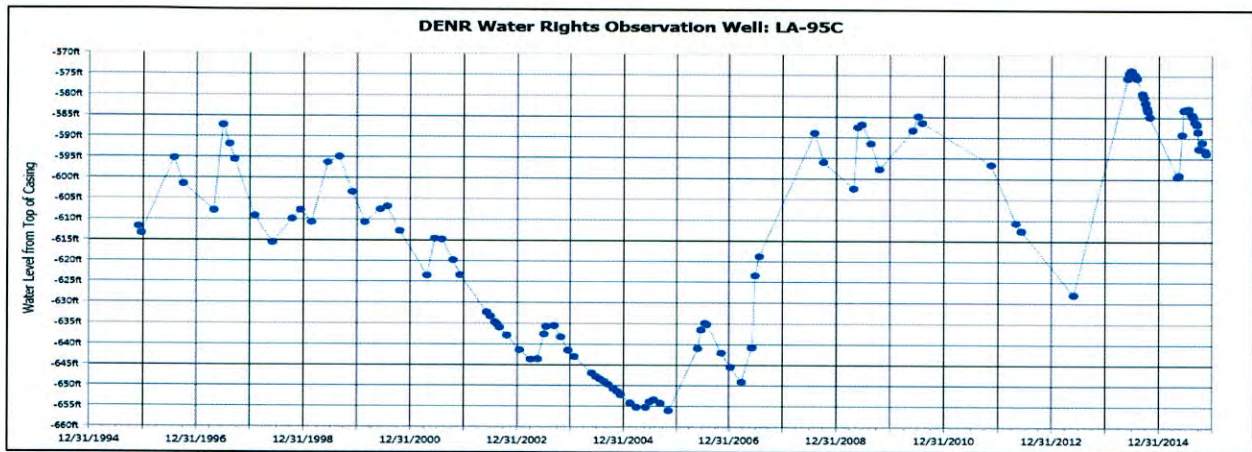


Figure 8. DENR-Water Rights' observation well completed into the Madison aquifer located approximately 13 miles south-southeast of the well site proposed by Application No. 1960-1.

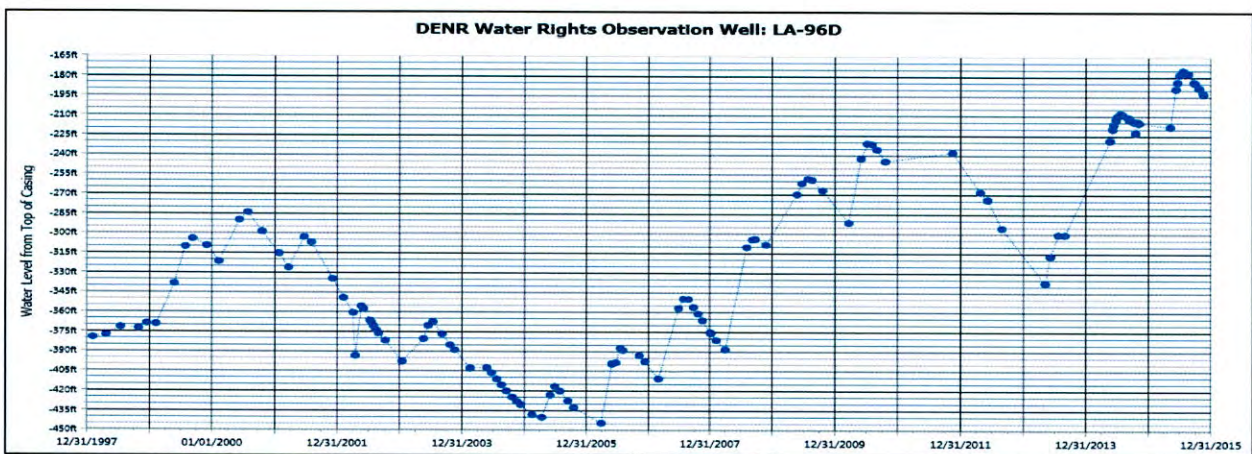


Figure 9. DENR-Water Rights' observation well completed into the Madison aquifer located approximately 17.6 miles west-southwest of the well site proposed by Application No. 1960-1.

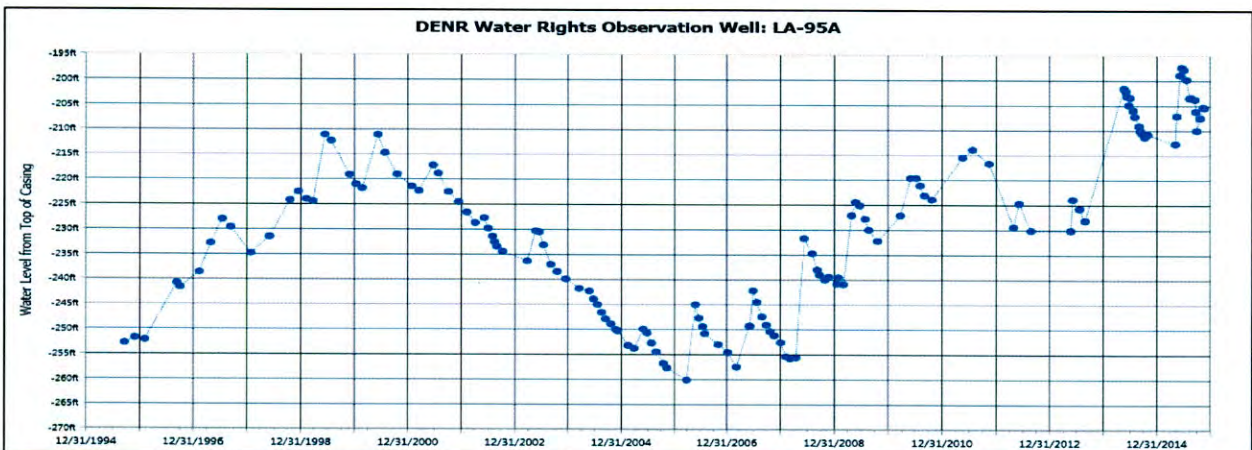


Figure 10. DENR-Water Rights' observation well completed into the Madison aquifer located approximately 9 miles southeast of the well site proposed by Application No. 1960-1.

The analysis of the DENR-Water Rights Program observation well data provides a qualitative means of assessing the aquifer and provides the best information reasonably available to evaluate the hydrologic budget for the Madison aquifer. Observation well data showing a steady, continual decline of the aquifer's water level or artesian pressure could indicate that withdrawals from the aquifer were exceeding recharge. In addition, water level fluctuations in an aquifer dominated by the influences of well withdrawals, or a change in the gradient of the potentiometric surface could indicate that well pumping is a significant component in the system relative to recharge and/or natural withdrawals.

Observation well data for the Madison aquifer documents: 1) upward trending water levels; 2) that at the current level of development, climatic conditions greatly mask any temporal effects of well withdrawals thus the combined recharge to and natural discharge from the Madison aquifer significantly exceeds long term well withdrawals; and 3) the potentiometric surface of the aquifer has been relatively unchanged over time. Therefore, the observation well data shows that unappropriated water is available from the Madison aquifer.

AFFECTS ON EXISTING RIGHTS:

Water Rights/Permits supplied by wells completed into aquifers that are stratigraphically above or below the Madison are not expected to be affected by Madison aquifer withdrawals since the lower Minnelusa Formation and the lower Madison Limestone generally serve as upper and lower confining units for the Madison aquifer.

There are 44 water rights/permits appropriating water from the Madison aquifer within approximately 10 miles of the well that is to be used for this appropriation. Only two of these appropriations are within five miles of the well to be used by Permit No. 1960-1, if approved (Water Rights, 2016b). They are shown in Figure 11 and identified in Table 4. In addition, there are a number of domestic use wells completed into the Madison aquifer in this area (Water Rights, 2016c).

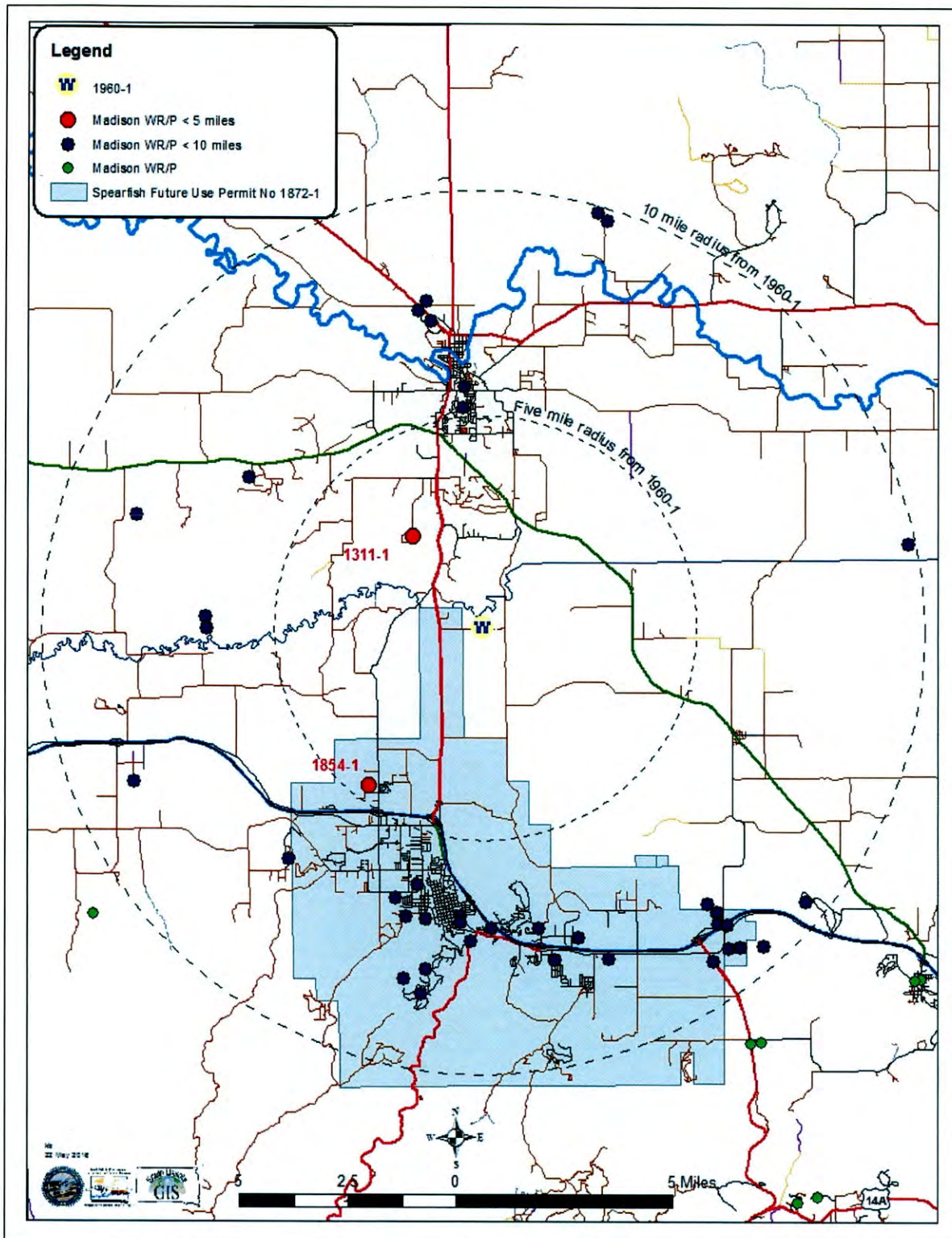


Figure 11. Location of the well site proposed by Application No. 1960-1, approximate location of diversion points for existing Madison aquifer appropriations, highlighting diversion points within 10 miles and within five miles of the well proposed as a water supply by Application No. 1960-1, and location of the future use area associated with Future Use Permit No. 1872-1.

Table 4. Water Rights located within five miles of the well that Water Permit Application No. 1960-1 proposes to use.

PERMIT NO	NAME	STATUS	USE	CFS
1311-1	CODY KLOECKL	LC	SHD	0.17
1854-1	OLD APOSTOLIC LUTHERAN CHURCH OF SPEARFISH	LC	INS	0.17
LC= Water Right, SHD= Suburban Housing Development, INS= Institutional				

It is difficult to precisely estimate the amount and extent of drawdown that will result from pumping a well completed into the Madison aquifer since the well conditions are site specific. The transmissivity of the aquifer is very heterogenous with values that range over several orders of magnitude (Putnam and Long, 2007). In addition the aquifer characteristics of the Madison can vary considerably within a short distance (Greene, 1993).

If this application is approved, the drawdown caused by pumping a well 1.28 cfs is not expected to adversely impact domestic wells or wells supplying prior appropriations due to the distances between wells. Well interference is not expected to be significant. This is especially the case when considering the Madison is under artesian conditions with several hundred feet of head pressure at the documented natural fluctuation of the potentiometric surface in this area (see Figures 4-10). Wells supplying existing Water Rights/Permits and domestic uses are protected from adverse impacts per Water Management Board rules 74:02:04 and 74:02:05, which were promulgated pursuant to SDCL 46-6-6.1. These rules provide for the regulation of large capacity wells to the degree necessary to maintain an adequate depth of water for a prior appropriator in wells that have the ability to produce water **independent of artesian pressure**. Simply put, the pump placement in a prior appropriator's well is not necessarily protected.

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

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

It should be noted however, that well drawdown measured at Water Rights' observation wells located near high capacity municipal wells in Spearfish, Sturgis and Rapid City has never been significant (i.e. drawdown of only a few feet or tens of feet) (Water Rights, 2016a).

Given the distance between the well that is to supply this appropriation and existing Madison wells, well interference is not expected to be adverse.

The well site proposed by this application is located within approximately one-half mile of the area reserved for future use by Future Use Permit No. 1872-1 for the City of Spearfish. Although the effect on existing water rights must be considered to place water reserved by the future use permit to beneficial use, following issuance of a permit, the permit will retain the priority date of the future use permit and be senior to Permit No. 1960-1 (if approved). Considering the size of the future use area reserved, approval of this application should not interfere with Spearfish's ability to develop their future use permit.

TERM LIMITATION:

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

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

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

Although the criteria for approval of a water permit established by SDCL 46-2A-9 are met, (i.e., there is a reasonable probability that unappropriated water is available for the applicant's proposed use, and this proposed diversion can be developed without unlawful impairment of existing rights) evidence is not available to justify issuing this permit without a term limitation of 20 years.

CONCLUSIONS:

1. The Madison aquifer is a major regional aquifer and a viable source of water for this proposed appropriation.
2. This application proposes to appropriate 1.28 cubic feet of water per second.
3. There is a reasonable probability that unappropriated water is available in the Madison aquifer to supply this appropriation.
4. There is a reasonable probability this appropriation can be made without adversely impacting existing water rights including domestic users.
5. Information is not available to justify issuing this permit or renew it without a term limitation of 20 years.
6. Following notice and a public hearing, the Water Management Board can cancel this permit, amend or renew it with a new term limitation after 20 years.



Ken Buhler
DENR-Water Rights Program

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- Water Rights Program, 2016b, Water Permit/Right Files, DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501
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RECEIVED

JUN 27 2016

WATER RIGHTS
PROGRAM

NOTICE OF
APPLICATION
NO. 1960-1
to Appropriate Water

Affidavit of Publication

STATE OF SOUTH DAKOTA:

COUNTY OF LAWRENCE:

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

Notice of Application
No. 1960-1

a printed copy of which is hereto attached, was printed and published in said newspaper for 1 successive and consecutive weeks, the first publication being made on the 22nd day of June, 2016, and the last publication on the _____ day of _____, _____, that the full amount of fees charged for publishing same, to-wit: The sum of \$ 31.88, insures solely to the benefit of the publisher of the BLACK HILLS PIONEER, that no agreement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

[Signature]
Subscribed and sworn to before me this 22nd day of June, 2016

[Signature]
Notary Public, Lawrence County, South Dakota
My commission expires: 10-24-2016

Notice is given that One Diamond, Inc., c/o Alan Crago, PO Box 943, Spearfish SD 57783 has filed an application for a water permit to appropriate 1.28 cubic feet of water per second from one well to be completed into the Madison Aquifer (1720 feet deep) located in the NE 1/4 SW 1/4 Section 11 for irrigation of 150 acres located in the SW 1/4 Section 11 and the N 1/2 NW 1/4 Section 14; all in T7N-R2E. The applicant is also proposing to partially convert use of the well to supply a residential subdivision and commercial development located in Lots 3-8 SW 1/4, E 1/2 SW 1/4 ex Lots 3-8 (12.578), W 1/2 SW 1/4 Section 11; Lot 1 (2.66), Lot 2 (2.18) E 1/2 E 1/2 SE 1/4, E 1/2 E 1/2 SE 1/4 except Lots 1 & 2; S 1/2 NE 1/4 ex Lot H2 (0.11 ac); H3 (1.2 ac) & ex. por. in Parcel A (.88), Tract 1 of SE 1/4 NW 1/4 ex H1 (.93 ac) & H2 (.2 ac) Section 10; N 1/2 N 1/4 NW 1/4 Section 14; all in T7N-R2E.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1960-1 with qualifications 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 the permit without a 20 year term limitation, there is reasonable probability that there is unappropriated water available, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest. The Chief Engineer's recommendation, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

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 July 5, 2016.

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.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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

Published once at the
total approximate cost of
\$32.34.

#419
Jun 22

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, June 14, 2016 9:07 AM
To: Legals (legals@bhpioneer.com)
Subject: 1960-1, One Diamond Inc.
Attachments: 1960-1publicnov2015.short1.docx; FORM8.FRM.doc

Attached is a notice to be published on June 22, 2016.

One Diamond Inc., c/o Alan Crago, PO Box 943, Spearfish SD 57783 (605 641-0359) has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP.

Let me know if you have questions. Please acknowledge receipt of this email.

Karen Schlaak
Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

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

June 13, 2016

One Diamond, Inc
Alan Crago
PO Box 943
Spearfish SD 57783

Dear Mr. Crago:

Water Permit Application No. 1960-1 for residential and commercial use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Black Hills Pioneer printed at Spearfish SD (Ph # 605-642-2761). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper(s) to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. 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.

NOTICE OF APPLICATION NO. 1960-1 to Appropriate Water

Notice is given that One Diamond, Inc, c/o Alan Crago, PO Box 943, Spearfish SD 57783 has filed an application for a water permit to appropriate 1.28 cubic feet of water per second from one well to be completed into the Madison Aquifer (1720 feet deep) located in the NE 1/4 SW 1/4 Section 11 for irrigation of 150 acres located in the SW 1/4 Section 11 and the N 1/2 NW 1/4 Section 14; all in T7N-R2E. The applicant is also proposing to partially convert use of the well to supply a residential subdivision and commercial development located in Lots 3-8 SW 1/4, E 1/2 SW 1/4 ex Lots 3-8 (12.578), W 1/2 SW 1/4 Section 11; Lot 1 (2.66), Lot 2 (2.18) E 1/2 E 1/2 SE 1/4, E 1/2 E 1/2 SE 1/4 except Lots 1 & 2; S 1/2 NE 1/4 ex Lot H2 (0.11 ac); H3 (1.2 ac) & ex. por. in Parcel A (.88), Tract 1 of SE 1/4 NW 1/4 ex H1 (.93 ac) & H2 (.2 ac) Section 10; N 1/2 N 1/2 NW 1/4 Section 14; all in T7N-R2E.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1960-1 with qualifications 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 the permit without a 20 year term limitation, there is reasonable probability that there is unappropriated water available, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

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 July 5, 2016.

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.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of _____.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

JUL 27 2016

One Diamond Inc
Alan Crago
PO Box 943
Spearfish SD 57783

Dear Mr. Crago:

Enclosed is Water Permit No. 1960-1 authorizing construction of the 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,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 1960-1

I have this day, **October 27, 2022**, made a thorough examination of the water use system constructed by **One Diamond Inc., PO Box 943 Spearfish, SD 57783** of Permit No. **1960-1**, bearing the priority of **April 11, 2016**, authorizing the diversion of **1.28** cu. ft. per second of the waters of **groundwater (Madison aquifer)** for **irrigation of 150 acres and suburban housing development use**, in **Lawrence** County.

Inspection contact & relationship to permit holder, if applicable: **Alan Crago, President**

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Taylor Drilling
- 2) No. of Wells 1
- 3) Depth(s) 1,720 feet
- 4) Well log is available Yes

If no, explain

Casing:

- 1) Diameter 12.25 inches
- 2) Length 150 feet
- 3) Diameter 8.75 inches
- 4) Length 815 feet
- 5) Diameter 6.25 inches
- 6) Length 749 feet
- 7) Type steel

Screen:

- 1) Type open hole
- 2) Static water level flowing

Pump:

- 1) Make Cornell Centrifugal Pump
- 2) Model 4RB-20-04
- 3) Size N/A
- 4) Capacity 575 GPM

Motor:

- 1) Make Baldor-Reliance Electric Motor – 20 hp
- 2) Serial Number EJPM2515T

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

- 1) Type 4-inch gated aluminum pipe and Reinke Irrigation Pivot (6 towers, low pressure system)

C. Chemigation Equipment: Does not chemigate**D. Compliance with Permit Requirements:**

- 1) Permit qualifications being abided by: Yes
If no, describe:
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period: Yes
List any extended period of nonuse: none
- 3) Exceptions to compliance are: none

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: 1,800 feet E and 1,500' N of the SW corner of Section 11-T7N-R2E (44.57971877, -103.84286603).
2. The works are capable of diverting and conveying to the place of use 1.28 cu. ft. per second of water which is to be used for irrigation and suburban housing development use. Water has been put to beneficial use to the maximum extent as follows:

Section 11-T7N-R2E

NW ¼ SW ¼ 30 acres; SW ¼ SW ¼ 13.5 acres;
NE ¼ SW ¼ 34 acres; SE ¼ SW ¼ 31.5 acres

Section 14-T7N-R2E

NW ¼ NW ¼ 8 acres;
NE ¼ NW ¼ 3 acres

comprising a total of 120 acres of land and the license should be issued for 1.28 cfs.

3. All structures, wells, and lands on map: Yes

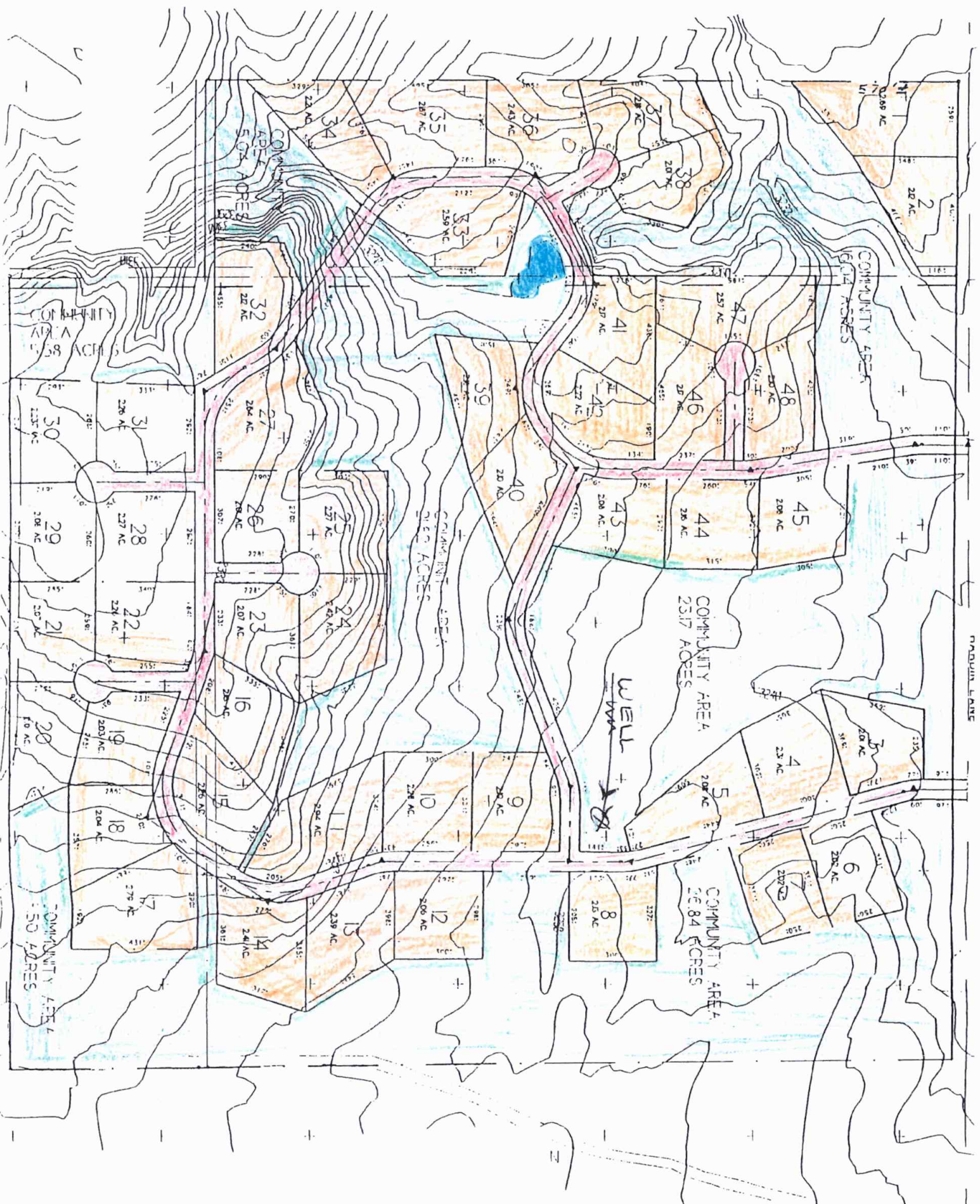
F. Comments or other permit(s) associated with the project:

The permit holder has constructed a fire hydrant and electrical box that are intended to serve plots 3 through 8 for suburban housing development use.

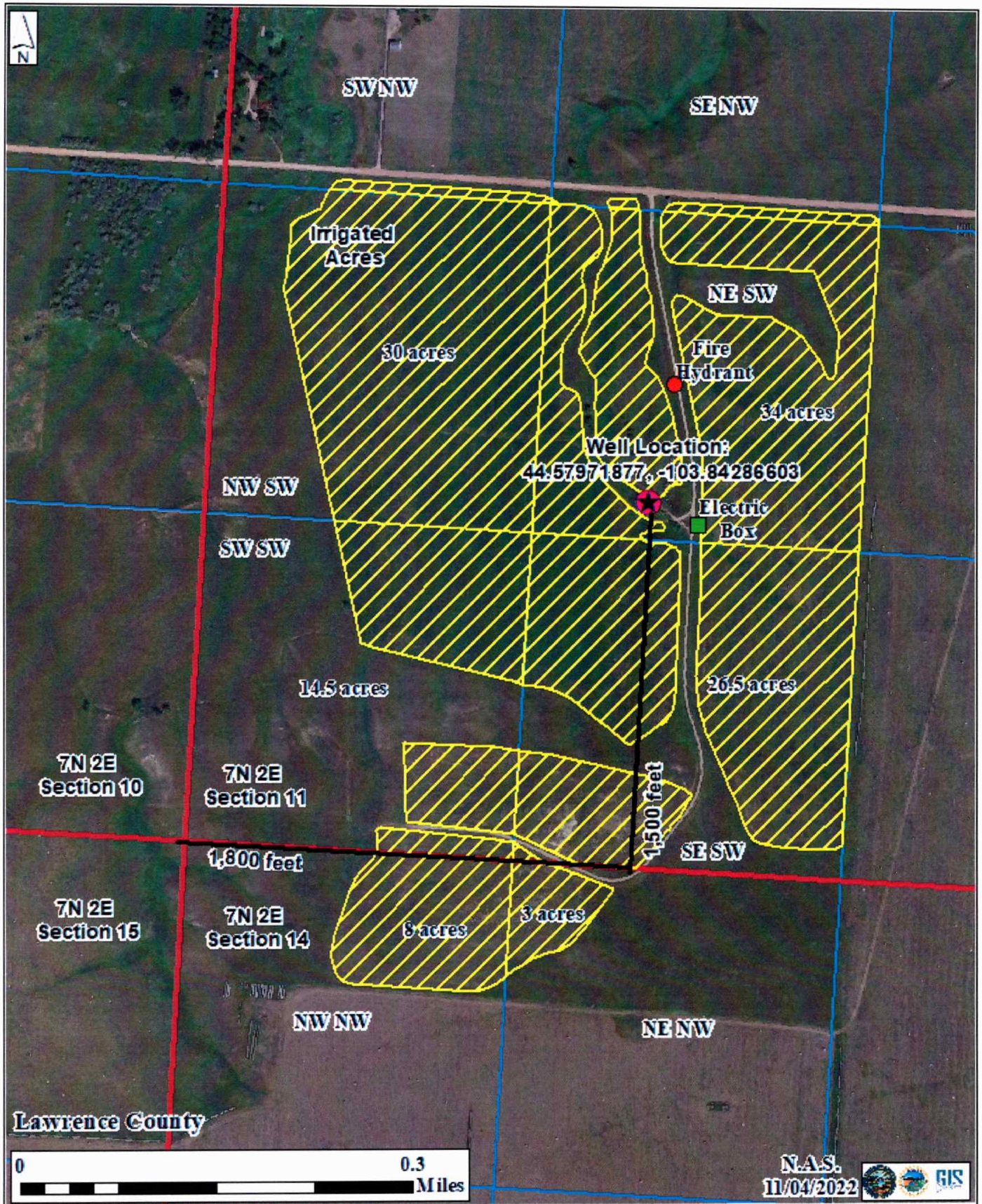
Nakaila Steen

Nakaila Steen
Natural Resources Engineer II
SD DANR - Water Rights Program

Date report completed: November 7, 2022



Water Right No. 1960-1
One Diamond Inc. – c/o Alan Crago



STATE OF SOUTH DAKOTA

WATER LICENSE NO. 1960-1

(1) One Diamond Inc., PO Box 943, Spearfish SD 57783 made Application No. 1960-1, April 11, 2016 for a water permit to divert 1.28 cubic feet of water per second from groundwater (one well) Madison Aquifer, Lawrence County, South Dakota for irrigation, residential, and commercial use purposes. Permit No. 1960-1, with a priority date of April 11, 2016 was approved July 5, 2016 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before July 5, 2021 and for the application to beneficial use of water on or before July 5, 2025.

(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 1.28 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 1,800'E and 1,500'N of the SW corner of Section 11-T7N-R2E (NE 1/4 SW 1/4)
Latitude 44.57971877 Longitude -103.84286603

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

<u>Section 11-T7N-R2E</u>		<u>Section 14-T7N-R2E</u>	
NW 1/4 SW 1/4	30 acres	NW 1/4 NW 1/4	8 acres
NE 1/4 SW 1/4	34 acres	NE 1/4 NW 1/4	3 acres
SW 1/4 SW 1/4	13.5 acres		
SE 1/4 SW 1/4	31.5 acres	Total	120 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 One Diamond Inc., PO Box 943, Spearfish SD 57783 the holder and/or owner of Water Right No. 1960-1 is issued a license to appropriate water, the right to use 1.28 cubic feet of water per second from groundwater (one well) Madison Aquifer with a priority date of April 11, 2016 from the location specified in (2) of this license for irrigation, residential and commercial use purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 1960-1 and subject to the following qualifications:

- In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 1960-1 is issued for a twenty year term. Pursuant to SDCL 46-2A-21, the twenty year term may be deleted at any time during the twenty year period or following its expiration. If the twenty year term is not deleted at the end of the term, the permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 1960-1 may also be cancelled for nonconstruction, forfeiture, abandonment or three permit violations pursuant to SDCL 46-1-12, 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.

(continued)

Water Right No. 1960-1
One Diamond, Inc.
Page 2

- This Permit is approved subject to the irrigation water use questionnaire being submitted each year for the irrigation component of the permit and the Permit Holder shall also report to the Chief Engineer annually the amount of water withdrawn for residential and commercial use.
- Water Permit No. 1960-1 authorizes a total annual volume of up to 29 acre feet of water from the Madison Aquifer for the residential/commercial use component of the permit in addition to the 2 acre-feet/acre for irrigation.

Eric Gronlund

Eric Gronlund, Chief Engineer
Water Rights Program
Department of Agriculture and Natural Resources

JAN 26 2023

date





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

JAN 26 2023

1960-1

One Diamond Inc.
c/o Alan Crago
PO Box 943
Spearfish SD 57783

Dear Mr. Crago:

Enclosed is Water License No. 1960-1. This is the final water right document completing your process of obtaining a Water Right. Also, included with your license is a map prepared by the staff engineer who conducted the investigation.

For your information SDCL 46-6-27 requires that if in the future the owner drills a replacement well and has no plan to use the old existing 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,

Eric Gronlund, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures