

WATER PERMIT NO. 2027-1

Name of Applicant: Rae Marie Homes, LLC

Address: 120 Industrial Ave, Spearfish SD 57783

Phone: 605 641-2780

Amount of Water Claimed: 0.11 cfs

Total Acres: NA

Source of Water Supply: groundwater (one existing well)

Water to be used for: water distribution system

County: Lawrence

Type of Waste Disposal System:

Location: 3 miles southwest of Spearfish

PRIORITY

Date Received: 1-23-23

Application/License Fee: \$700

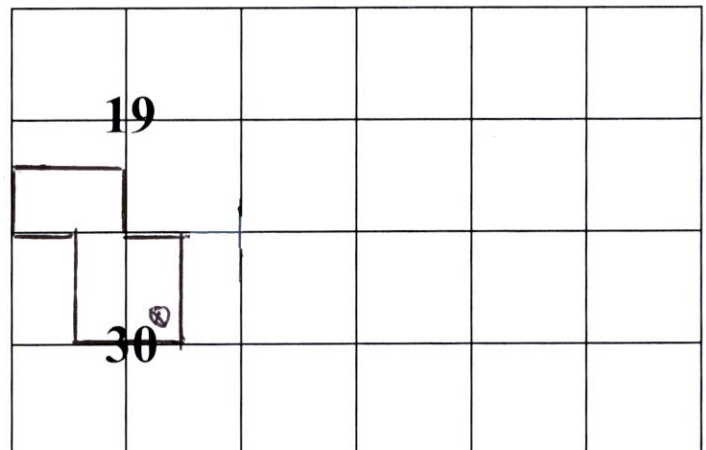
Corrected Application Received:

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: SW 1/4 SE 1/4 Sec 30-T6N-R2E

Area of use: S 1/2 SW 1/4 Sec 19 and W 1/2 NE 1/4, E 1/2 NW 1/4 Sec 30; all in T6N-R2E



Depth of Well: 1,247 feet deep

Well Driller: Tim Barritt, LLC

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 1-24-23

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

SOUTH DAKOTA
WATER PERMIT NO. 2027-1

Date of first receipt of application January 23, 2023.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2027-1 to Rae Marie Homes, LLC., c/o Kurt Campbell, 120 Industrial Avenue, Suite 4, 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. 2027-1 appropriates 45 acre-feet of water annually at a maximum pump rate of 0.11 cubic feet of water per second from one existing well completed into the Madison Aquifer (1,247 feet deep) located in the SW 1/4 NE 1/4 Section 30 for a water distribution system serving The Timbers Subdivision located in the S 1/2 SW 1/4 Section 19 and W 1/2 NE 1/4, E 1/2 NW 1/4 Section 30; all in T6N-R2E. This site is located approximately 3 miles southwest of Spearfish SD.
2. The water appropriated shall be used for the purpose of water distribution 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. 2027-1 is April 17, 2023.
5. The date from which applicant may claim right is January 23, 2023.
6. One-fifth of the construction is to be completed on or before October 17, 2025.
7. All construction is to be completed on or before April 17, 2028.
8. Water is to be put to beneficial use on or before April 17, 2032.
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. 2027-1 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. 2027-1 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 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control 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 Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Madison aquifer.

(continued)

4. Water Permit No. 2027-1 appropriates up to 45 acre-feet of water annually.
5. Prior to placement of water to beneficial use in excess of 18 gallons permit from the well authorized by Water Permit No. 2027-1, the Madison well on the property originally drilled in 2015 on the property shall be either:
 - Brought into compliance by a South Dakota licensed well driller with South Dakota Well Construction Standards, Administrative Rules of South Dakota 74:02:04 and maintained in sanitary condition; or
 - Plugged by a South Dakota licensed well driller in compliance with the South Dakota Well Construction Standard Rules, Administrative Rules of South Dakota 74:02:04.

WATER MANAGEMENT BOARD

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

MAY 11 2023

date



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

Mail to: SD DANR, Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>2027-1</u> Hydrologic Unit <u>10120203</u> Basin <u>Belle Fourche River</u> Newspaper <u>Black Hills Pioneer 642-2761</u> (office use only)
---	---

PAID
JAN 23 2023
Ck# 45264
Rec't# _____

Application for Permit to Appropriate Water in South Dakota

Check use(s) of water:

☐ Municipal	☒ Water Distribution System	☐ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☐ Fish & Wildlife	☐ Geothermal
☐ Domestic (over 18 gpm)	☐ Industrial	☐ Other _____	

Type of Application: (check one)

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

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

This well permit application is to change the use of this well from "Domestic" to a well that will be the water source for a 40 lot subdivision (The Timbers Subdivision).

1. Name to Appear on Water Permit Rae Marie Homes, LLC

Mailing Address 120 Industrial Ave, Suite 4 Spearfish SD 57783
(Address) (City) (State) (Zip Code)

Phone 605-641-6490 Mobile 605-641-2780 Email raemariehomes@gmail.com - Kurt Campbell

2. Amount of water claimed 0.11 *CFS or 50 **GPM and 45 ***AF or _____ Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use)

3. Source of water supply Madison Aquifer SW 1/4 NE 1/4 Sec 30 - T6N - R2E

4. Location of point of diversion Lot 5, Block 4 Timbers Subdivision, Lawrence County County Lawrence
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☒ Yes ☐ No

If "Yes," where will water be used? The Timbers Subd. (S 1/2 SW 1/4 Sec. 19 and W 1/2 NE 1/4 and E 1/2 NW 1/4 Sec. 30, T6N, R2E, BHM
(example - NW1/4 section 12-T104N-R53W)

5. County or counties where water will be used Lawrence

6. Annual period during which water is to be used Year round

7. 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)

Provide water to Timbers subdivision in Lawrence County. See attached water system plans

I, John Wetstein Project Engineer/Geologist, 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.

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 One Provide copy of log(s), if available. Drilled by Tim Barritt, LLC
Lic. # 205

For either existing or proposed wells:

c) Well Depth (required) 1,247' Depth to Top of Water Bearing Material 1,090' Depth to Water from Surface 1,090'

d) Distance to nearest domestic well on applicant's property NA Property owned by others Approx. 900 Feet

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)

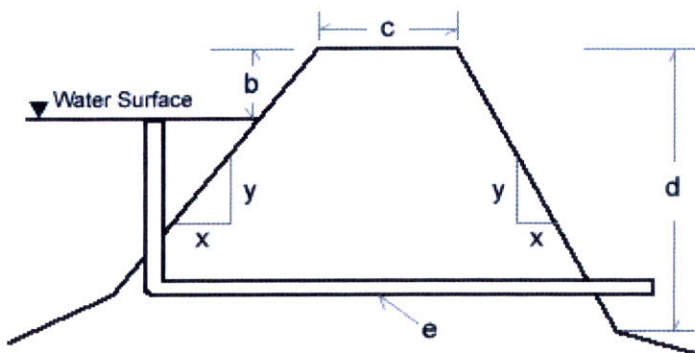
Upstream _____

Downstream _____

h) Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



The Timbers Subdivision

SE 1/4 Section 19
T 6 N, R 2 E

00071137 •
1,100' Well

00071669 •
1,200' Well

Timbers Well
00077159
1,247' Well

00064583 •
1,420' Well

SE 1/4 Section 30
T 6 N, R 2 E



1152 Feet

6N:2E
Section:

6N 1E
Section: 24

6N:2E
Section: 19

6N:2E
Section: 20

6N 1E
Section: 25

6N:2E
Section: 30

6N:2E
Section: 29

6N 1E
Section: 36

6N:2E
Section: 31

6N:2E
Section: 32



Lot 5
Block 4
pump house
well

C2

NO.	DATE	DESCRIPTION
1	10/1/2011	ISSUED FOR PERMIT
2	10/1/2011	ISSUED FOR RECORD

THE TIMBERS WATER UTILITY PLAN - ASBUILTS
HC PROPERTIES LLC
LAWRENCE COUNTY, SOUTH DAKOTA



RECORD DRAWING
THIS RECORD DRAWING IS THE PROPERTY OF AES. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF AES.

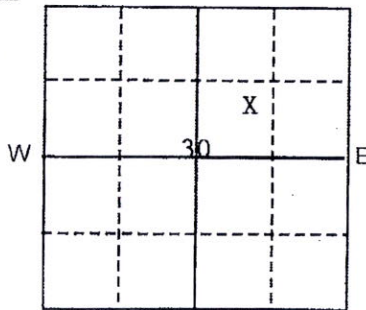
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SW ¼ NE ¼ Sec 30 Twp 6N Rg 2E

County LAWRENCE

North

Please mark well
location with an "X"

Well Completion Date

9-16-22

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?

> 150.0 ft. from SEPTIC (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

AIR PERCUSSION

CASING DATA:

☒ Steel ☐ Plastic ☐ Other
 If other describe

PIPEWEIGHT LB/FT	DIAMETER IN	FROM FT	TO FT	HOLE DIAMETER IN
23.0	7.00	0.0	20.0	14.75
15.5	5.50	1,084.1	1,247.1	6.25

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight Lb/gal	From Ft	To Ft
QUICK GROUT	50	9.3	1,107.0	550.0
PORTLAND	68	15.5	400.0	10.0

Describe grouting procedure

PRESSURE THRU CASING

TREMMIE ABOVE CAVERN W/CEMENT F/400

SCREEN:

☒ Perforated pipe ☐ Manufactured
 Diameter 5.50 Inches Length 163.0 Feet

Material STEEL 15.5 J-55

Slot Size Set From 1,084.0 Feet to 1,247.0 Feet

Other information CUSTOM .25 HOLES 4/FT

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?Lab to which water
quality sample sent for analysis

ENERGY LABORATORIES

Well Owner: KURT CAMPBELL

Business Name: HC PROPERTIES, RAE MARIE HOMES

Address: 120 INDUSTRIAL DRIVE, SUITE 4

City, State, Zip: SPEARFISH SD 57783

WELL LOG:

DEPTH

FORMATION

FROM

TO

SEE ATTACHED

STATIC WATER LEVEL 1,090.0 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:

☐ Pumped Describe: AIR DEVELOPED 12 GPM FROM 1100☐ Bailed☒ Other

Pumping Level Below Land Surface

Ft. After Hrs. pumped GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

This well was drilled under license # 205 and this report is true and accurate.

Drilling firm: TIM BARRITT, LLC

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

RECEIVED

OCT 28 2022

Date:

OFFICE OF
WATER

Tyvo Drilling, LLC

The Timbers Well
SW NE Sec 30, T6N R2E
Lawrence County, South Dakota

From	To	Description
0	20	Yellowish hard sandstone
20	110	White sandstone
110	180	Yellow sandstone, pink stringers
180	210	Pink sandstone
210	250	Sandstone, red clay stringers
250	410	Limestone, some crystalline stringers
410	440	Pinkish limestone
440	520	Grey limestone
520	550	Grey limestone, red clay stringers
550	560	Cavern, lost circulation
560	1107	No samples
1107	1150	Hard limestone/dolomite
1150	1160	Hard white sand
1160	1180	Hard reddish, purple limestone and dolomite mix
1180	1200	Hard white sandstone
1200	1210	Purple and grey limestone/chert mix
1210	1225	Sandstone, red clay stringers
1225	1245	Hard white sandstone, limestone, dolomite, chert mix

11-02

OFFICE OF
WATER

Tyvo Drilling, LLC

The Timbers Well
SW NE Sec 30, T6N R2E
Lawrence County, South Dakota

From	To	Description
0	20	Yellowish hard sandstone
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180	210	Pink sandstone
210	250	Sandstone, red clay stringers
250	410	Limestone, some crystalline stringers
410	440	Pinkish limestone
440	520	Grey limestone
520	550	Grey limestone, red clay stringers
550	560	Cavern, lost circulation
560	1107	No samples
1107	1150	Hard limestone/dolomite
1150	1160	Hard white sand
1160	1180	Hard reddish, purple limestone and dolomite mix
1180	1200	Hard white sandstone
1200	1210	Purple and grey limestone/chert mix
1210	1225	Sandstone, red clay stringers
1225	1245	Hard white sandstone, limestone, dolomite, chert mix



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Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Tyvo, LLC
Project: Not Indicated
Client Sample ID: The Timbers
Sampled By: Tim Barritt
Lab ID: G22080064-001D

Report Date: 08/16/22
Collection Date: 08/02/22 12:00
Received Date: 08/02/22 16:32
Matrix: Drinking Water

Analyses	Result	Units	Safe/Unsafe	Qualifier	Method	Analysis Date / By
BACTERIA						
Bacteria, Total Coliform	Absent	per 100ml	SAFE		A9223 B	08/02/22 17:36 / blb
Bacteria, E-Coli Coliform	Absent	per 100ml			A9223 B	08/02/22 17:36 / blb

Comments: The notation "SAFE" indicates that the water was bacteriologically SAFE when sampled.
The notation "UNSAFE" indicates that the water was bacteriologically UNSAFE when sampled.

Qualifiers:



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Prepared by Gillette, WY Branch

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Lab ID: G22080064-001
Client Sample ID: The Timbers

Report Date: 08/16/22
Collection Date: 08/02/22 12:00
Date Received: 08/02/22
Matrix: Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS, DISSOLVED							
Alkalinity, Total as CaCO ₃	224	mg/L		5		A2320 B	08/04/22 17:38 / blb
Bicarbonate as HCO ₃	274	mg/L		6		A2320 B	08/04/22 17:38 / blb
Carbonate as CO ₃	ND	mg/L		3		A2320 B	08/04/22 17:38 / blb
Chloride	ND	mg/L		1		E300.0	08/03/22 01:40 / blb
Fluoride	ND	mg/L		0.2	4	E300.0	08/03/22 01:40 / blb
Nitrogen, Nitrate+Nitrite as N	0.2	mg/L		0.1	10	E300.0	08/03/22 01:40 / blb
Sulfate	3	mg/L		1		E300.0	08/03/22 01:40 / blb
MAJOR IONS							
Calcium	52	mg/L		1		E200.7	08/11/22 14:57 / eli-b
Iron	0.06	mg/L		0.05		E200.7	08/11/22 14:57 / eli-b
Magnesium	24	mg/L		1		E200.7	08/11/22 14:57 / eli-b
Potassium	ND	mg/L		1		E200.7	08/11/22 14:57 / eli-b
Sodium	1	mg/L		1		E200.7	08/11/22 14:57 / eli-b
PHYSICAL PROPERTIES							
Solids, Total Dissolved - Calculated	217	mg/L		1		A1030 E	08/11/22 17:27 / tlf
NON-METALS							
Conductivity @ 25 C	411	umhos/cm		10		A2510 B	08/02/22 18:53 / blb
Hardness as CaCO ₃	230	mg/L				A2340 B	08/11/22 14:57 / tlf
Hardness as CaCO ₃ - Grains	13.3	grains/gal		0.1		A2340 B	08/11/22 14:57 / tlf
pH	8.0	s.u.	H	0.1		A4500-H B	08/02/22 18:53 / blb
pH Measurement Temp	21.6	°C	H			A4500-H B	08/02/22 18:53 / blb
Sodium Adsorption Ratio (SAR)	0	unitless				Calculation	08/11/22 14:57 / tlf
LANGELIER INDEX							
Langelier Index	0.7					A2330 B	08/11/22 17:27 / tlf
If a sample temperature at the time of collection is not provided, the Langelier is calculated using a default temperature of 20 degrees C.							
DATA QUALITY							
A/C Balance	0.62	%				A1030 E	08/11/22 17:27 / tlf
Anions	4.57	meq/L				A1030 E	08/11/22 17:27 / tlf
Cations	4.63	meq/L				A1030 E	08/11/22 17:27 / tlf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
H - Analysis performed past the method holding time

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date January 23, 2023

RECEIVED OF Engineering Associates PO Box 1900 Cody WY 82414

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

Fee for Application for Permit No. <u>2027-1</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>500.00</u>
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>2027-1</u>	\$ <u>200.00</u>
Fee for Filing Transfer Form _____	\$ _____
Fee for _____	\$ _____
Fee for Issuing New Well Driller's License No. _____	\$ _____
Fee for Renewal of Well Driller's License No. _____	\$ _____
Fee for Issuing Well Pump Installer's License No. _____	\$ _____
Fee for Renewal of Well Pump Installer's License No. _____	\$ _____
(Any Other Work Provided by Law)	
TOTAL	\$ <u>700.00</u>

By Eric Gronlund
Chief Engineer
vm



OFFICE OF THE SECRETARY OF STATE

MONAE L. JOHNSON, SECRETARY OF STATE
THOMAS J. DEADRICK, DEPUTY SECRETARY OF STATE

Filing Information

Name: **RAE MARIE HOMES, LLC**

General Information

SOS Business ID DL029800
Filing Type: Limited Liability Company - Domestic
10/25/2012
Status: Good Standing
Duration Term: Perpetual
Managed By: Member-Managed

Registered Agent Address

KURT CAMPBELL
120 INDUSTRIAL DRIVE SUITE 4
SPEARFISH, SD 57783

Principal Address

120 INDUSTRIAL DRIVE, SUITE 4
SPEARFISH, SD 57783-1125

The following document(s) was/were filed in this office on the date(s) indicated below:

Date Filed	Filing Description	Image #
09/26/2022	2022 Annual Report	B0234-1828
10/01/2021	2021 Annual Report	B0195-0048
01/14/2021	2020 Annual Report	B0165-9849
01/10/2020	2019 Annual Report	B0125-3600
10/28/2018	2018 Annual Report	B0078-5466
09/02/2017	2017 Annual Report	B0038-5461
08/11/2017	2016 Annual Report	B0037-5036
06/17/2016	2015 Annual Report	
03/11/2015	2014 Annual Report	
03/11/2015	2013 Annual Report	
10/25/2012	Initial Filing	DL029800



ENGINEERING ASSOCIATES
CONSULTING ENGINEERS & SURVEYORS

January 17, 2023

DANR - Water Rights
523 E Capitol Ave
Pierre, SD 57501-3182

Attn: Mr. Eric Gronlund

RE: Application for Permit to
Appropriate Water

Dear Mr. Gronlund:

Please find enclosed the application for permit to appropriate water within the State of South Dakota along with the required well location map and the requisite filing fee. The proposed well will be a water supply well for The Timbers Subdivision, owner Rae Marie Homes, LLC. Attached to this permit also find the water analysis of a sample collected at the end of a multiple day pump test. This pump test was conducted at 33 gpm with no measured drawdown in the well.

If you need additional information, please let me know.

Respectfully submitted,
Engineering Associates

John Wetstein

Enc.

cc-w/ enc.: Mr. Kurt Campbell – Rae Marie Homes, LLC



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Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Tyvo, LLC
Project: Not Indicated
Client Sample ID: The Timbers
Sampled By: Tim Barritt
Lab ID: G22080064-001D

Report Date: 08/16/22
Collection Date: 08/02/22 12:00
Received Date: 08/02/22 16:32
Matrix: Drinking Water

Analyses	Result	Units	Safe/Unsafe	Qualifier	Method	Analysis Date / By
BACTERIA						
Bacteria, Total Coliform	Absent	per 100ml	SAFE		A9223 B	08/02/22 17:36 / blb
Bacteria, E-Coli Coliform	Absent	per 100ml			A9223 B	08/02/22 17:36 / blb

Comments: The notation "SAFE" indicates that the water was bacteriologically SAFE when sampled.
The notation "UNSAFE" indicates that the water was bacteriologically UNSAFE when sampled.

Qualifiers:



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Gillette, WY 866.686.7175 • Helena, MT 877.472.0711**LABORATORY ANALYTICAL REPORT**

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Client: Tyvo, LLC
Project: Not Indicated
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Client Sample ID: The TimbersReport Date: 08/16/22
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Matrix: Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS, DISSOLVED							
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Bicarbonate as HCO ₃	274	mg/L		6		A2320 B	08/04/22 17:38 / blb
Carbonate as CO ₃	ND	mg/L		3		A2320 B	08/04/22 17:38 / blb
Chloride	ND	mg/L		1		E300.0	08/03/22 01:40 / blb
Fluoride	ND	mg/L		0.2	4	E300.0	08/03/22 01:40 / blb
Nitrogen, Nitrate+Nitrite as N	0.2	mg/L		0.1	10	E300.0	08/03/22 01:40 / blb
Sulfate	3	mg/L		1		E300.0	08/03/22 01:40 / blb
MAJOR IONS							
Calcium	52	mg/L		1		E200.7	08/11/22 14:57 / eli-b
Iron	0.06	mg/L		0.05		E200.7	08/11/22 14:57 / eli-b
Magnesium	24	mg/L		1		E200.7	08/11/22 14:57 / eli-b
Potassium	ND	mg/L		1		E200.7	08/11/22 14:57 / eli-b
Sodium	1	mg/L		1		E200.7	08/11/22 14:57 / eli-b
PHYSICAL PROPERTIES							
Solids, Total Dissolved - Calculated	217	mg/L		1		A1030 E	08/11/22 17:27 / tlf
NON-METALS							
Conductivity @ 25 C	411	umhos/cm		10		A2510 B	08/02/22 18:53 / blb
Hardness as CaCO ₃	230	mg/L				A2340 B	08/11/22 14:57 / tlf
Hardness as CaCO ₃ - Grains	13.3	grains/gal		0.1		A2340 B	08/11/22 14:57 / tlf
pH	8.0	s.u.	H	0.1		A4500-H B	08/02/22 18:53 / blb
pH Measurement Temp	21.6	°C	H			A4500-H B	08/02/22 18:53 / blb
Sodium Adsorption Ratio (SAR)	0	unitless				Calculation	08/11/22 14:57 / tlf
LANGELIER INDEX							
Langelier Index	0.7					A2330 B	08/11/22 17:27 / tlf
If a sample temperature at the time of collection is not provided, the Langelier is calculated using a default temperature of 20 degrees C.							
DATA QUALITY							
A/C Balance	0.62	%				A1030 E	08/11/22 17:27 / tlf
Anions	4.57	meq/L				A1030 E	08/11/22 17:27 / tlf
Cations	4.63	meq/L				A1030 E	08/11/22 17:27 / tlf

Report Definitions: RL - Analyte Reporting Limit
QCL - Quality Control Limit
H - Analysis performed past the method holding timeMCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



ANALYTICAL SUMMARY REPORT

October 31, 2022

Engineering Associates
PO Box 2202
Laramie, WY 82073-2202

Work Order: G22090408

Project Name: Not Indicated

Energy Laboratories Inc. Gillette WY received the following 2 samples for Engineering Associates on 9/26/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
G22090408-001	Timbers Well	09/26/22 12:45	09/26/22	Drinking Water	Metals by ICP/ICPMS, Drinking Water Acidity to pH 8.3 Alkalinity to pH 4.5 Anion - Cation Balance Bacteria, Iron Related Bacteria, Heterotrophic Plate Count Bacteria, SDWA Chloramine Cyanide, SDWA Color Conductivity Carbon, Total Organic Mercury, Drinking Water Fluoride Foaming Agents Haloacetic Acid Liquid-Liquid Ext. (VOA) 552-Haloacetic Acids-(HAAs) 515.4-Herbicides, Chlorinated SDWA 547-Herbicides, Glyphosate SDWA Hardness Anions by Ion Chromatography Langelier Index Nitrogen, Nitrite Nitrogen, Nitrate + Nitrite Nitrogen, Nitrate as N Odor pH Drinking Water Metals Digestion by EPA 200.2 Herbicide Liquid-Liquid Microextraction Digestion, Mercury by CVAA 504.1 Microextraction 504-Microextraction VOCs, EDB and DBCP SDWA 531-Pesticides, Carbamates SDWA LSE for 549.2 549-Pesticides, Diquat SDWA Gross Alpha Calculated Gross Alpha, Gross Beta, Total Radium 226 + Radium 228 Radium 226, Total Radium 228, Total Sodium Adsorption Ratio Solids, Total Dissolved Solids, Total Dissolved - Calculated Semi-Volatile Organic Compounds Extraction



ANALYTICAL SUMMARY REPORT

525-Semi-Volatile Organic
Compounds, SDWA
Endothall extraction
548-Endothall
Turbidity
524-Purgeable Organics, SDWA

G22090408-002	Trip Blank 3424	09/26/22 12:45	09/26/22	Trip Blank	524-Purgeable Organics, SDWA
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The analyses presented in this report were performed by Energy Laboratories, Inc., 400 W. Boxelder Rd., Gillette, WY 82718, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these tests results, please contact your Project Manager.

Report Approved By:



CLIENT: Engineering Associates
Project: Not Indicated
Work Order: G22090408

Report Date: 10/31/22

CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, 2393 Salt Creek Hwy., Casper, WY, EPA Number WY00002.

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E. Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as "etash" were subcontracted to Eurofins Test America, 110 S Hill St, South Bend, IN 46617, TEL (574) 233-4777. Please see attached data packet for details.



LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Engineering Associates
Project: Not Indicated
Client Sample ID: Timbers Well
Sampled By: Tim Barrett
Lab ID: G22090408-001Q

Report Date: 10/31/22
Collection Date: 09/26/22 12:45
Received Date: 09/26/22 16:02
Matrix: Drinking Water

Analyses	Result	Units	Safe/Unsafe	Qualifier	Method	Analysis Date / By
BACTERIA						
Bacteria, Total Coliform	Absent	per 100ml	SAFE		A9223 B	09/26/22 16:55 / blb
Bacteria, E-Coli Coliform	Absent	per 100ml			A9223 B	09/26/22 16:55 / blb

Comments: The notation "SAFE" indicates that the water was bacteriologically SAFE when sampled.
The notation "UNSAFE" indicates that the water was bacteriologically UNSAFE when sampled.

Qualifiers:



LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Engineering Associates
Project: Not Indicated
Lab ID: G22090408-001
Client Sample ID: Timbers Well

Report Date: 10/31/22
Collection Date: 09/26/22 12:45
Date Received: 09/26/22
Matrix: Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Color	ND	c.u.		5		A2120 B	09/28/22 12:09 / eli-b
Surfactants, MBAS	<1	mg/L		1		LaMotte DS-1	09/28/22 12:20 / eli-b
Turbidity	ND	NTU		0.5		A2130 B	09/27/22 13:52 / blb
Odor	2	T.O.N.	H			A2150 B	09/28/22 13:46 / eli-b
Odor Measurement Temp	59	°C	H			A2150 B	09/28/22 13:46 / eli-b
pH at Time of Color Analysis	8	s.u.				A2120 B	09/28/22 12:09 / eli-b
MAJOR IONS, DISSOLVED							
Alkalinity, Total as CaCO ₃	274	mg/L		5		A2320 B	09/30/22 13:41 / eli-ca
Bicarbonate as HCO ₃	334	mg/L		6		A2320 B	09/30/22 13:41 / eli-ca
Carbonate as CO ₃	ND	mg/L		3		A2320 B	09/30/22 13:41 / eli-ca
Calcium	71	mg/L		1		E200.7	10/07/22 15:31 / eli-b
Fluoride	0.1	mg/L		0.1	4	A4500-F C	10/05/22 14:08 / eli-ca
Magnesium	21	mg/L		1		E200.7	10/07/22 15:31 / eli-b
Potassium	ND	mg/L		1		E200.7	10/07/22 15:31 / eli-b
Sodium	1	mg/L		1		E200.7	10/07/22 15:31 / eli-b
NON-METALS							
Monochloramine	<0.10	mg/L	HF	0.10		A4500-Cl G	09/30/22 17:43 / etasb
Dichloramine	<0.10	mg/L	HF	0.10		A4500-Cl G	09/30/22 17:43 / etasb
Nitrogen Trichloride	<0.20	mg/L	HF	0.20		A4500-Cl G	09/30/22 17:43 / etasb
Chloramines	<0.20	mg/L	HF	0.20		A4500-Cl G	09/30/22 17:43 / etasb
INORGANIC COMPOUNDS, SDWA							
Chloride	ND	mg/L		1		E300.0	09/29/22 19:57 / eli-ca
Aluminum	ND	mg/L		0.03		E200.8	10/09/22 19:25 / eli-b
Antimony	ND	mg/L		0.001	0.006	E200.8	10/09/22 19:25 / eli-b
Nitrogen, Nitrate+Nitrite as N	0.20	mg/L		0.05	10	E353.2	09/28/22 14:51 / eli-ca
Sulfate	2	mg/L		1		E300.0	09/29/22 19:57 / eli-ca
Arsenic	0.001	mg/L		0.001	0.01	E200.8	10/09/22 19:25 / eli-b
Barium	0.21	mg/L		0.05	2	E200.7	10/07/22 15:31 / eli-b
Beryllium	ND	mg/L		0.001	0.004	E200.8	10/09/22 19:25 / eli-b
Boron	ND	mg/L		0.05		E200.7	10/07/22 15:31 / eli-b
Cadmium	ND	mg/L		0.001	0.005	E200.8	10/09/22 19:25 / eli-b
Chromium	ND	mg/L		0.005	0.1	E200.8	10/09/22 19:25 / eli-b
Copper	ND	mg/L		0.005	1.3	E200.8	10/09/22 19:25 / eli-b
Cyanide, Total	ND	mg/L		0.005	0.2	Kelada-01	09/28/22 14:05 / eli-b
Iron	ND	mg/L	L	0.04		E200.7	10/07/22 15:31 / eli-b
Lead	ND	mg/L		0.001	0.015	E200.8	10/09/22 19:25 / eli-b
Manganese	ND	mg/L		0.001		E200.8	10/09/22 19:25 / eli-b
Mercury	ND	mg/L		0.0001	0.002	E245.1	10/05/22 12:14 / eli-b
Nickel	ND	mg/L		0.01		E200.8	10/09/22 19:25 / eli-b
Selenium	ND	mg/L		0.001	0.05	E200.8	10/09/22 19:25 / eli-b
Silicon as SiO ₂	10.7	mg/L	D	0.6		E200.7	10/07/22 15:31 / eli-b

Report RL - Analyte Reporting Limit

Definitions: QCL - Quality Control Limit

D - Reporting Limit (RL) increased due to sample matrix

L - Lowest available reporting limit for the analytical method used

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

H - Analysis performed past the method holding time

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Engineering Associates
Project: Not Indicated
Lab ID: G22090408-001
Client Sample ID: Timbers Well

Report Date: 10/31/22
Collection Date: 09/26/22 12:45
Date Received: 09/26/22
Matrix: Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
INORGANIC COMPOUNDS, SDWA							
Silicon	5.0	mg/L	D	0.3		E200.7	10/07/22 15:31 / eli-b
Thallium	ND	mg/L		0.0005	0.002	E200.8	10/09/22 19:25 / eli-b
Zinc	0.49	mg/L	D	0.02		E200.7	10/07/22 15:31 / eli-b
NON-METALS							
Acidity, Total as CaCO ₃	-30	mg/L				A2310 B	10/08/22 09:01 / eli-ca
Conductivity @ 25 C	479	umhos/cm		10		A2510 B	09/27/22 17:37 / blb
Hardness as CaCO ₃	260	mg/L				A2340 B	10/07/22 15:31 / jlw
pH	7.5	s.u.	H	0.1		A4500-H B	09/27/22 17:37 / blb
pH Measurement Temp	20.4	°C	H			A4500-H B	09/27/22 17:37 / blb
Sodium Adsorption Ratio (SAR)	0	unitless				Calculation	10/07/22 15:31 / jlw
Solids, Total Dissolved TDS @ 180 C	265	mg/L	D	20		A2540 C	09/30/22 12:30 / eli-ca
Organic Carbon, Total (TOC)	0.6	mg/L		0.5		A5310 C	09/30/22 17:43 / eli-ca
Solids, Total Dissolved - Calculated	276	mg/L		1		A1030 E	10/26/22 10:37 / jlw
NUTRIENTS							
Nitrogen, Nitrate as N	0.20	mg/L		0.05		E353.2	10/03/22 10:06 / eli-ca
Nitrogen, Nitrite as N	ND	mg/L		0.01	1	A4500-NO2 B	09/28/22 11:32 / eli-ca
RADIONUCLIDES, TOTAL							
Gross Alpha	-3	pCi/L	U		15	E900.0	10/12/22 06:06 / eli-ca
Gross Alpha precision (±)	1.7	pCi/L				E900.0	10/12/22 06:06 / eli-ca
Gross Alpha MDC	1.8	pCi/L				E900.0	10/12/22 06:06 / eli-ca
Gross Alpha - Adjusted	-2.9	pCi/L	U		15	E900.0	10/14/22 12:00 / eli-ca
Gross Alpha - Adjusted precision (±)	1.7	pCi/L				E900.0	10/14/22 12:00 / eli-ca
Gross Alpha - Adjusted MDC	1.8	pCi/L				E900.0	10/14/22 12:00 / eli-ca
Uranium	0.0010	mg/L		0.0003		E200.8	10/09/22 19:25 / eli-b
Uranium, Activity	0.7	pCi/L		0.2		E200.8	10/09/22 19:25 / eli-b
Radium 226	0.1	pCi/L	U		5	E903.0	10/20/22 10:31 / eli-ca
Radium 226 precision (±)	0.3	pCi/L				E903.0	10/20/22 10:31 / eli-ca
Radium 226 MDC	0.3	pCi/L				E903.0	10/20/22 10:31 / eli-ca
Radium 228	0.8	pCi/L	U		5	RA-05	10/12/22 16:31 / eli-ca
Radium 228 precision (±)	0.9	pCi/L				RA-05	10/12/22 16:31 / eli-ca
Radium 228 MDC	0.9	pCi/L				RA-05	10/12/22 16:31 / eli-ca
Radium 226 + Radium 228	0.6	pCi/L	U		5	A7500-RA	10/25/22 12:23 / eli-ca
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	10/25/22 12:23 / eli-ca
Radium 226 + Radium 228 MDC	1.0	pCi/L				A7500-RA	10/25/22 12:23 / eli-ca
LANGELIER INDEX							
Langelier Index	0.4					A2330 B	10/26/22 10:37 / jlw
If a sample temperature at the time of collection is not provided, the Langelier is calculated using a default temperature of 20 degrees C.							
DATA QUALITY							
A/C Balance	-1.78	%				A1030 E	10/26/22 10:37 / jlw

Report	RL - Analyte Reporting Limit	MCL - Maximum Contaminant Level
Definitions:	QCL - Quality Control Limit	ND - Not detected at the Reporting Limit (RL)
	D - Reporting Limit (RL) increased due to sample matrix	H - Analysis performed past the method holding time
	U - Not detected at Minimum Detectable Concentration (MDC)	

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Engineering Associates
Project: Not Indicated
Lab ID: G22090408-001
Client Sample ID: Timbers Well

Report Date: 10/31/22
Collection Date: 09/26/22 12:45
Date Received: 09/26/22
Matrix: Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
Anions	5.55	meq/L				A1030 E	10/26/22 10:37 / jlw
Cations	5.36	meq/L				A1030 E	10/26/22 10:37 / jlw
HALOACETIC ACIDS							
Dibromoacetic acid	ND	ug/L		0.25		E552.2	10/03/22 19:35 / eli-b
Dichloroacetic acid	ND	ug/L		0.75		E552.2	10/03/22 19:35 / eli-b
Monobromoacetic acid	ND	ug/L		0.50		E552.2	10/03/22 19:35 / eli-b
Monochloroacetic acid	ND	ug/L		0.75		E552.2	10/03/22 19:35 / eli-b
Trichloroacetic acid	ND	ug/L		0.50		E552.2	10/03/22 19:35 / eli-b
Total Regulated Haloacetic Acids	ND	ug/L		0.25	60	E552.2	10/03/22 19:35 / eli-b
Bromochloroacetic acid	ND	ug/L		0.50		E552.2	10/03/22 19:35 / eli-b
Surr: 2,3-Dibromopropionic acid	96.0	%REC		70-130		E552.2	10/03/22 19:35 / eli-b
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	ug/L	H	0.50	5	E524.2	09/30/22 13:12 / eli-h
Bromobenzene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Bromochloromethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Bromodichloromethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Bromoform	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Bromomethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
n-Butylbenzene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
sec-Butylbenzene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
tert-Butylbenzene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Carbon tetrachloride	ND	ug/L	H	0.50	5	E524.2	09/30/22 13:12 / eli-h
Chlorobenzene	ND	ug/L	H	0.50	100	E524.2	09/30/22 13:12 / eli-h
Chlorodibromomethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Chloroethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Chloroform	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Chloromethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
2-Chlorotoluene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
4-Chlorotoluene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
1,2-Dibromo-3-chloropropane	ND	ug/L	H	1.0	0.2	E524.2	09/30/22 13:12 / eli-h
Dibromomethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
1,2-Dichlorobenzene	ND	ug/L	H	0.50	600	E524.2	09/30/22 13:12 / eli-h
1,3-Dichlorobenzene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
1,4-Dichlorobenzene	ND	ug/L	H	0.50	75	E524.2	09/30/22 13:12 / eli-h
Dichlorodifluoromethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
1,1-Dichloroethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
1,2-Dichloroethane	ND	ug/L	H	0.50	5	E524.2	09/30/22 13:12 / eli-h
1,2-Dibromoethane	ND	ug/L	H	0.50	0.05	E524.2	09/30/22 13:12 / eli-h
1,1-Dichloroethene	ND	ug/L	H	0.50	7	E524.2	09/30/22 13:12 / eli-h
cis-1,2-Dichloroethene	ND	ug/L	H	0.50	70	E524.2	09/30/22 13:12 / eli-h
trans-1,2-Dichloroethene	ND	ug/L	H	0.50	100	E524.2	09/30/22 13:12 / eli-h

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
H - Analysis performed past the method holding time

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Engineering Associates
Project: Not Indicated
Lab ID: G22090408-001
Client Sample ID: Timbers Well

Report Date: 10/31/22
Collection Date: 09/26/22 12:45
Date Received: 09/26/22
Matrix: Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,2-Dichloropropane	ND	ug/L	H	0.50	5	E524.2	09/30/22 13:12 / eli-h
1,3-Dichloropropane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
2,2-Dichloropropane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
1,1-Dichloropropene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
cis-1,3-Dichloropropene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
trans-1,3-Dichloropropene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Ethylbenzene	ND	ug/L	H	0.50	700	E524.2	09/30/22 13:12 / eli-h
Hexachlorobutadiene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Isopropylbenzene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
p-Isopropyltoluene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Methyl tert-butyl ether (MTBE)	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Methylene chloride	ND	ug/L	H	0.50	5	E524.2	09/30/22 13:12 / eli-h
Naphthalene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
n-Propylbenzene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Styrene	ND	ug/L	H	0.50	100	E524.2	09/30/22 13:12 / eli-h
1,1,1,2-Tetrachloroethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
1,1,2,2-Tetrachloroethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Tetrachloroethene	ND	ug/L	H	0.50	5	E524.2	09/30/22 13:12 / eli-h
Toluene	ND	ug/L	H	0.50	1000	E524.2	09/30/22 13:12 / eli-h
1,2,3-Trichlorobenzene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
1,2,4-Trichlorobenzene	ND	ug/L	H	0.50	70	E524.2	09/30/22 13:12 / eli-h
1,1,1-Trichloroethane	ND	ug/L	H	0.50	200	E524.2	09/30/22 13:12 / eli-h
1,1,2-Trichloroethane	ND	ug/L	H	0.50	5	E524.2	09/30/22 13:12 / eli-h
Trichloroethene	ND	ug/L	H	0.50	5	E524.2	09/30/22 13:12 / eli-h
Trichlorofluoromethane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
1,2,3-Trichloropropane	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Trihalomethanes, Total	ND	ug/L		0.50	80	E524.2	09/30/22 13:12 / eli-h
1,2,4-Trimethylbenzene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
1,3,5-Trimethylbenzene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Vinyl chloride	ND	ug/L	H	0.50	2	E524.2	09/30/22 13:12 / eli-h
m+p-Xylenes	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
o-Xylene	ND	ug/L	H	0.50		E524.2	09/30/22 13:12 / eli-h
Xylenes, Total	ND	ug/L		0.50	10000	E524.2	09/30/22 13:12 / eli-h
Surr: p-Bromofluorobenzene	105	%REC		70-130		E524.2	09/30/22 13:12 / eli-h
Surr: 1,2-Dichloroethane-d4	98.0	%REC		70-130		E524.2	09/30/22 13:12 / eli-h
Surr: Toluene-d8	104	%REC		70-130		E524.2	09/30/22 13:12 / eli-h

-- H = The 524.2 method indicates samples not preserved to a pH <2 may only be held for up to 24 hours before analysis.
- The sample was received in the laboratory with a pH > 2. The pH was 7.

SEMI-VOLATILE ORGANIC COMPOUNDS

Alachlor	ND	ug/L		0.10	2	E525.2	10/06/22 13:13 / eli-b
Aldrin	ND	ug/L		0.10		E525.2	10/06/22 13:13 / eli-b
Aroclor 1016	ND	ug/L		0.080		E525.2	10/06/22 13:13 / eli-b

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
H - Analysis performed past the method holding time

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Engineering Associates
Project: Not Indicated
Lab ID: G22090408-001
Client Sample ID: Timbers Well

Report Date: 10/31/22
Collection Date: 09/26/22 12:45
Date Received: 09/26/22
Matrix: Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Aroclor 1221	ND	ug/L		2.0		E525.2	10/06/22 13:13 / eli-b
Aroclor 1232	ND	ug/L		0.50		E525.2	10/06/22 13:13 / eli-b
Aroclor 1242	ND	ug/L		0.30		E525.2	10/06/22 13:13 / eli-b
Aroclor 1248	ND	ug/L		0.10		E525.2	10/06/22 13:13 / eli-b
Aroclor 1254	ND	ug/L		0.10		E525.2	10/06/22 13:13 / eli-b
Aroclor 1260	ND	ug/L		0.20		E525.2	10/06/22 13:13 / eli-b
Atrazine	ND	ug/L		0.10	3	E525.2	10/06/22 13:13 / eli-b
Benzo(a)pyrene	ND	ug/L		0.10	0.2	E525.2	10/06/22 13:13 / eli-b
bis(2-ethylhexyl)Adipate	ND	ug/L		0.50	400	E525.2	10/06/22 13:13 / eli-b
bis(2-ethylhexyl)Phthalate	ND	ug/L		0.60	6	E525.2	10/06/22 13:13 / eli-b
Butachlor	ND	ug/L		0.10		E525.2	10/06/22 13:13 / eli-b
Chlordane	ND	ug/L		1.0	2	E525.2	10/06/22 13:13 / eli-b
Dieldrin	ND	ug/L		0.10		E525.2	10/06/22 13:13 / eli-b
Endrin	ND	ug/L		0.10	2	E525.2	10/06/22 13:13 / eli-b
gamma-BHC (Lindane)	ND	ug/L		0.10	0.2	E525.2	10/06/22 13:13 / eli-b
Heptachlor	ND	ug/L		0.10	0.4	E525.2	10/06/22 13:13 / eli-b
Heptachlor epoxide	ND	ug/L		0.10	0.2	E525.2	10/06/22 13:13 / eli-b
Hexachlorobenzene	ND	ug/L		0.10	1	E525.2	10/06/22 13:13 / eli-b
Hexachlorocyclopentadiene	ND	ug/L		0.10	50	E525.2	10/06/22 13:13 / eli-b
Methoxychlor	ND	ug/L		0.10	40	E525.2	10/06/22 13:13 / eli-b
Metolachlor	ND	ug/L		0.10		E525.2	10/06/22 13:13 / eli-b
Metribuzin	ND	ug/L		0.10		E525.2	10/06/22 13:13 / eli-b
Propachlor	ND	ug/L		0.10		E525.2	10/06/22 13:13 / eli-b
Simazine	ND	ug/L		0.10	4	E525.2	10/06/22 13:13 / eli-b
Toxaphene	ND	ug/L		2.0	3	E525.2	10/06/22 13:13 / eli-b
PCBs, Total	ND	ug/L		0.50	0.5	E525.2	10/06/22 13:13 / eli-b
Surr: 1,3-Dimethyl-2-nitrobenzene	112	%REC		70-130		E525.2	10/06/22 13:13 / eli-b
Surr: Perylene-d12	117	%REC		70-130		E525.2	10/06/22 13:13 / eli-b
Surr: Pyrene-d10	107	%REC		70-130		E525.2	10/06/22 13:13 / eli-b
Surr: Triphenylphosphate	130	%REC		70-130		E525.2	10/06/22 13:13 / eli-b

- Note: The federal MCL for total PCB's is 0.5 ug/L as Decachlorobiphenyl (DCB). PCB screening at the reporting limits given for the individual Aroclors meets or exceeds federal and state requirements for "Total PCB" monitoring if Aroclors are not detected.

SEMI-VOLATILE ORGANIC COMPOUNDS

Endothall	ND	ug/L		8.0	100	E548.1	10/12/22 17:47 / eli-b
Surr: 2,4-Dichlorophenylacetic acid	131	%REC	S	70-130		E548.1	10/12/22 17:47 / eli-b

PESTICIDES, BY HPLC

Aldicarb	ND	ug/L		1.0	3	E531.1	09/29/22 19:56 / eli-ca
Aldicarb sulfone	ND	ug/L		1.0	2	E531.1	09/29/22 19:56 / eli-ca
Aldicarb sulfoxide	ND	ug/L		1.0	4	E531.1	09/29/22 19:56 / eli-ca
Carbaryl	ND	ug/L		1.0		E531.1	09/29/22 19:56 / eli-ca
3-Hydroxycarbofuran	ND	ug/L		1.0		E531.1	09/29/22 19:56 / eli-ca
Carbofuran	ND	ug/L		1.0	40	E531.1	09/29/22 19:56 / eli-ca

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
S - Spike recovery outside of advisory limits

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Engineering Associates
Project: Not Indicated
Lab ID: G22090408-001
Client Sample ID: Timbers Well

Report Date: 10/31/22
Collection Date: 09/26/22 12:45
Date Received: 09/26/22
Matrix: Drinking Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PESTICIDES, BY HPLC							
Methiocarb	ND	ug/L		1.0		E531.1	09/29/22 19:56 / eli-ca
Methomyl	ND	ug/L		1.0		E531.1	09/29/22 19:56 / eli-ca
Oxamyl	ND	ug/L		1.0	200	E531.1	09/29/22 19:56 / eli-ca
Baygon	ND	ug/L		1.0		E531.1	09/29/22 19:56 / eli-ca
Surr: BDMC	114	%REC		70-130		E531.1	09/29/22 19:56 / eli-ca
VOCS BY MICROEXTRACTION-ECD							
1,2-Dibromo-3-chloropropane	ND	ug/L		0.020	0.2	E504.1	09/30/22 20:06 / eli-b
1,2-Dibromoethane	ND	ug/L		0.010	0.05	E504.1	09/30/22 20:06 / eli-b
1,2,3-Trichloropropane	ND	ug/L		0.050		E504.1	09/30/22 20:06 / eli-b
Surr: 1,1,1,2-Tetrachloroethane	98.0	%REC		70-130		E504.1	09/30/22 20:06 / eli-b
HERBICIDES, BY HPLC							
Glyphosate	ND	ug/L		5.0	700	E547	09/30/22 12:55 / eli-ca
PESTICIDES							
Diquat	ND	ug/L		0.40	20	E549.2	09/30/22 15:51 / eli-ca
HERBICIDES							
2,4,5-TP (Silvex)	ND	ug/L		0.25	50	E515.4	10/06/22 09:35 / eli-b
2,4-D	ND	ug/L		1.0	70	E515.4	10/06/22 09:35 / eli-b
2,4-DB	ND	ug/L		1.0		E515.4	10/06/22 09:35 / eli-b
Dalapon	ND	ug/L		2.5	200	E515.4	10/06/22 09:35 / eli-b
Dicamba	ND	ug/L		1.0		E515.4	10/06/22 09:35 / eli-b
Dichlorprop	ND	ug/L		1.0		E515.4	10/06/22 09:35 / eli-b
Dinoseb	ND	ug/L		1.0	7	E515.4	10/06/22 09:35 / eli-b
Pentachlorophenol	ND	ug/L		0.10	1	E515.4	10/06/22 09:35 / eli-b
Picloram	ND	ug/L		0.50	500	E515.4	10/06/22 09:35 / eli-b
Surr: 2,4-Dichlorophenylacetic acid	102	%REC		70-130		E515.4	10/06/22 09:35 / eli-b
BACTERIA							
Bacteria, Heterotrophic Plate Count	>73.8	MPN/mL		0.2		SimPlate	09/26/22 17:00 / blb
BACTERIA							
Bacteria, Iron Related	9000	CFU/ml		1.0		IRB-BART	09/26/22 17:01 / blb

- Bacteria, Iron Related: Results are approximate. <1 - 8 CFU/ml: Non-Aggressive; 25 -2200 CFU/ml: Moderate; >9000 CFU/ml Aggressive.

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Engineering Associates
Project: Not Indicated
Lab ID: G22090408-002
Client Sample ID: Trip Blank 3424

Report Date: 10/31/22
Collection Date: 09/26/22 12:45
Date Received: 09/26/22
Matrix: Trip Blank

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	ug/L		0.50	5	E524.2	09/30/22 13:44 / eli-h
Bromobenzene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Bromochloromethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Bromodichloromethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Bromoform	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Bromomethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
n-Butylbenzene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
sec-Butylbenzene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
tert-Butylbenzene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Carbon tetrachloride	ND	ug/L		0.50	5	E524.2	09/30/22 13:44 / eli-h
Chlorobenzene	ND	ug/L		0.50	100	E524.2	09/30/22 13:44 / eli-h
Chlorodibromomethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Chloroethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Chloroform	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Chloromethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
2-Chlorotoluene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
4-Chlorotoluene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
1,2-Dibromo-3-chloropropane	ND	ug/L		1.0	0.2	E524.2	09/30/22 13:44 / eli-h
Dibromomethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
1,2-Dichlorobenzene	ND	ug/L		0.50	600	E524.2	09/30/22 13:44 / eli-h
1,3-Dichlorobenzene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
1,4-Dichlorobenzene	ND	ug/L		0.50	75	E524.2	09/30/22 13:44 / eli-h
Dichlorodifluoromethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
1,1-Dichloroethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
1,2-Dichloroethane	ND	ug/L		0.50	5	E524.2	09/30/22 13:44 / eli-h
1,2-Dibromoethane	ND	ug/L		0.50	0.05	E524.2	09/30/22 13:44 / eli-h
1,1-Dichloroethene	ND	ug/L		0.50	7	E524.2	09/30/22 13:44 / eli-h
cis-1,2-Dichloroethene	ND	ug/L		0.50	70	E524.2	09/30/22 13:44 / eli-h
trans-1,2-Dichloroethene	ND	ug/L		0.50	100	E524.2	09/30/22 13:44 / eli-h
1,2-Dichloropropane	ND	ug/L		0.50	5	E524.2	09/30/22 13:44 / eli-h
1,3-Dichloropropane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
2,2-Dichloropropane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
1,1-Dichloropropene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
cis-1,3-Dichloropropene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
trans-1,3-Dichloropropene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Ethylbenzene	ND	ug/L		0.50	700	E524.2	09/30/22 13:44 / eli-h
Hexachlorobutadiene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Isopropylbenzene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
p-Isopropyltoluene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Methyl tert-butyl ether (MTBE)	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Methylene chloride	ND	ug/L		0.50	5	E524.2	09/30/22 13:44 / eli-h
Naphthalene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
n-Propylbenzene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Engineering Associates
Project: Not Indicated
Lab ID: G22090408-002
Client Sample ID: Trip Blank 3424

Report Date: 10/31/22
Collection Date: 09/26/22 12:45
Date Received: 09/26/22
Matrix: Trip Blank

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Styrene	ND	ug/L		0.50	100	E524.2	09/30/22 13:44 / eli-h
1,1,1,2-Tetrachloroethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
1,1,2,2-Tetrachloroethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Tetrachloroethene	ND	ug/L		0.50	5	E524.2	09/30/22 13:44 / eli-h
Toluene	ND	ug/L		0.50	1000	E524.2	09/30/22 13:44 / eli-h
1,2,3-Trichlorobenzene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
1,2,4-Trichlorobenzene	ND	ug/L		0.50	70	E524.2	09/30/22 13:44 / eli-h
1,1,1-Trichloroethane	ND	ug/L		0.50	200	E524.2	09/30/22 13:44 / eli-h
1,1,2-Trichloroethane	ND	ug/L		0.50	5	E524.2	09/30/22 13:44 / eli-h
Trichloroethene	ND	ug/L		0.50	5	E524.2	09/30/22 13:44 / eli-h
Trichlorofluoromethane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
1,2,3-Trichloropropane	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Trihalomethanes, Total	ND	ug/L		0.50	80	E524.2	09/30/22 13:44 / eli-h
1,2,4-Trimethylbenzene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
1,3,5-Trimethylbenzene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Vinyl chloride	ND	ug/L		0.50	2	E524.2	09/30/22 13:44 / eli-h
m+p-Xylenes	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
o-Xylene	ND	ug/L		0.50		E524.2	09/30/22 13:44 / eli-h
Xylenes, Total	ND	ug/L		0.50	10000	E524.2	09/30/22 13:44 / eli-h
Surr: p-Bromofluorobenzene	104	%REC		70-130		E524.2	09/30/22 13:44 / eli-h
Surr: 1,2-Dichloroethane-d4	101	%REC		70-130		E524.2	09/30/22 13:44 / eli-h
Surr: Toluene-d8	103	%REC		70-130		E524.2	09/30/22 13:44 / eli-h

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

ANALYTICAL REPORT

Eurofins Eaton South Bend
110 S Hill Street
South Bend, IN 46617
Tel: (574)233-4777

Laboratory Job ID: 810-39707-1

Client Project/Site: Chloramines-G22090408

For:

Energy Laboratories
2393 Salt Creek Highway
Casper, Wyoming 82601

Attn: Allison Degnan



Authorized for release by:

10/6/2022 9:48:25 AM

Traci Chlebowska, Project Manager
(574)233-4777

Traci.Chlebowska@et.eurofinsus.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory. Page 6 of 72

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Definitions/Glossary

Client: Energy Laboratories
Project/Site: Chloramines-G22090408

Job ID: 810-39707-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Energy Laboratories
Project/Site: Chloramines-G22090408

Job ID: 810-39707-1

Job ID: 810-39707-1

Laboratory: Eurofins Eaton South Bend

Narrative

Job Narrative 810-39707-1

Receipt

The sample was received on 9/30/2022 10:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.2°C

Receipt Exceptions

The sample submitted was received outside of holding time. G22090408-001V / Timbers Well (810-39707-1).

General Chemistry

Method 4500_Cl_F_ClrAm: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: G22090408-001V / Timbers Well (810-39707-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Energy Laboratories
Project/Site: Chloramines-G22090408

Job ID: 810-39707-1

Client Sample ID: G22090408-001V / Timbers Well

Lab Sample ID: 810-39707-1

Date Collected: 09/26/22 12:45

Matrix: Drinking Water

Date Received: 09/30/22 10:00

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Monochloramine (SM 4500 Cl F Amine)	<0.10	HF	0.10	mg/L			09/30/22 17:43	1
Dichloramine (SM 4500 Cl F Amine)	<0.10	HF	0.10	mg/L			09/30/22 17:43	1
Nitrogen trichloride (SM 4500 Cl F Amine)	<0.20	HF	0.20	mg/L			09/30/22 17:43	1
Chloramines, Total (SM 4500 Cl F Amine)	<0.20	HF	0.20	mg/L			09/30/22 17:43	1

Lab Chronicle

Client: Energy Laboratories
Project/Site: Chloramines-G22090408

Job ID: 810-39707-1

Client Sample ID: G22090408-001V / Timbers Well
Date Collected: 09/26/22 12:45
Date Received: 09/30/22 10:00

Lab Sample ID: 810-39707-1
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	4500 Cl F Amine		1	33680	JA	EA SB	09/30/22 17:43

Laboratory References:
EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: Energy Laboratories
Project/Site: Chloramines-G22090408

Job ID: 810-39707-1

Laboratory: Eurofins Eaton South Bend

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	ISO/IEC 17025	5794.01	07-31-24
Alabama	State	40700	06-30-23
Alaska	State	IN00035	06-30-23
Arizona	State	AZ0432	07-26-23
Arkansas (DW)	State	EPA IN00035	06-30-23
California	State	2920	06-30-22 *
Colorado	State	IN00035	02-28-23
Connecticut	State	PH-0132	03-31-22 *
Delaware (DW)	State	IN00035	06-30-23
Florida	NELAP	E87775	06-30-23
Georgia (DW)	State	929	06-30-23
Hawaii	State	IN035	06-30-23
Idaho (DW)	State	IN00035	12-31-22
IL Dept. of Public Health (Micro)	State	17767	12-31-22
Illinois	NELAP	200001	09-30-23
Indiana	State	C-71-01	12-31-22
Indiana (Micro)	State	M-76-07	12-31-22
Iowa	State	IA Lab #098	11-01-23
Kansas	NELAP	E-10233	10-31-22
Kentucky (DW)	State	KY90056	12-31-22
Louisiana (DW)	State	LA180008	12-31-22
Maine	State	IN00035	05-01-23
Maryland	State	209	03-31-23
Massachusetts	State	M-IN035	06-30-23
MI - RadChem Recognition	State	9926	06-30-23
Michigan	State	9926	12-31-22
Minnesota	NELAP	1989807	12-31-22
Mississippi	State	IN00035	06-30-22 *
Missouri	State	880	09-30-24
Montana (DW)	State	CERT0026	01-01-23
Nebraska	State	NE-OS-05-04	06-30-23
Nevada	State	IN000352021-2	07-31-23
New Hampshire	NELAP	2124	11-05-22
New Jersey	NELAP	IN598	06-30-23
New Mexico	State	IN00035	06-30-23
New York	NELAP	11398	04-01-23
North Carolina (DW)	State	18700	07-31-23
North Dakota	State	R-035	06-30-23
Ohio	State	87775	06-30-23
Oklahoma	NELAP	D9508	08-31-23
Oregon	NELAP	4156	09-16-23
Pennsylvania	NELAP	68-00466	04-30-23
Puerto Rico	State	IN00035	04-01-23
Rhode Island	State	LAO00343	12-30-22
South Carolina	State	95005001	06-30-22 *
South Dakota (DW)	State	IN00035	12-31-22
Tennessee	State	TN02973	06-30-23
Texas	NELAP	T104704187-20-4	12-31-22
Texas	TCEQ Water Supply	TX207	06-30-23
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Eaton South Bend

Accreditation/Certification Summary

Client: Energy Laboratories
Project/Site: Chloramines-G22090408

Job ID: 810-39707-1

Laboratory: Eurofins Eaton South Bend (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Utah	NELAP	IN00035	07-31-23
Vermont	State	VT-8775	11-15-22
Virginia	NELAP	460275	03-14-23
Washington	State	C837	01-01-23
West Virginia (DW)	State	9927 C	12-31-22
Wisconsin	State	999766900	08-31-23
Wisconsin (Micro)	State	10121	12-31-22

Method Summary

Client: Energy Laboratories
Project/Site: Chloramines-G22090408

Job ID: 810-39707-1

Method	Method Description	Protocol	Laboratory
4500 Cl F Amine	Chloramines	SM	EA SB

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

Client: Energy Laboratories
Project/Site: Chloramines-G22090408

Job ID: 810-39707-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-39707-1	G22090408-001V / Timbers Well	Drinking Water	09/26/22 12:45	09/30/22 10:00

Login Sample Receipt Checklist

Client: Energy Laboratories

Job Number: 810-39707-1

Login Number: 39707

List Source: Eurofins Eaton South Bend

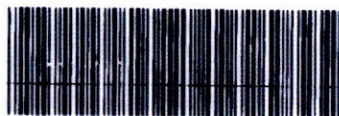
List Number: 1

Creator: Blackburn, Kelly

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	False	Client provided containers

Energy Laboratories Inc.

400 W Boxelder Rd
Gillette, WY 82718
3076867175



810-39707 Chain of Custody

CHAIN-OF-CUSTODY RECORD

Page 1 of 1
27-Sep-22

Subcontractor:

Eurofins TA-South Bend
110 South Hill St
South Bend, IN 46617
TEL: 5742334777
FAX: 5742338207
Acct #: 5742334777

Subcontractor's Client:

QC Level: STD

Test HT Expires: Mon, 9/26/2022 1509

Test Codes: CHLORAMINES-W

Earliest Due Date: 10/10/2022

Bus. Days Until Due: 9

PAST HT

Requested Tests

CHLORAMINES-W

1

Rush	Sample ID	Matrix	Collection Date	Bottle Type
☐	G22090408-001V	Drinking Water	09/26/22 12:45 P	1 - 250ML-AG-NM-UP-Se
	Sample Name: Timbers Well			

RECEIVED OUT OF HOLD TIME

Initial Temp: 0.2

ected Temp: 0.2 Wet

IR Gun # 26

Client Provided Sample Container

> 250ml AG

Comments:

Relinquishment of this Chain of Custody will indicate to proceed with analysis past hold.

Relinquished by: <u>[Signature]</u>	Date/Time: <u>9/27/22</u>	Received by: <u>[Signature]</u>	Date/Time: <u>9/30/2022</u>
Relinquished by: _____	_____	Received by: _____	_____
Shipped By: _____	Custody Seal Y N	Intact Y N	Receipt Temp: _____ °C
		Temp Blank Y N	On Ice Y N

1000 WPS

Schlaak, Karen

From: Kurt Campbell <raemariehomes@gmail.com>
Sent: Tuesday, January 24, 2023 11:30 AM
To: Schlaak, Karen
Subject: Re: [EXT] Water Permit Application

I am in agreement
Thank you
Kurt Campbell

Sent from my iPhone

On Jan 24, 2023, at 10:20 AM, Schlaak, Karen <Karen.Schlaak@state.sd.us> wrote:

We received a water permit application for Rae Marie Homes LLC signed by John Wetstein, Project Engineer. Please verify that you are in agreement with Mr. Wetstein signing your water permit application. A search of the Secretary of State's website indicates Kurt Campbell is the Registered Agent for the LLC.

Karen Schlaak

DANR - Water Rights Program

(605) 773-3352

Website: <https://danr.sd.gov>





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

October 28, 2022

HC Properties, Rae Marie Homes
c/o Kurt Campbell
120 Industrial Dr, Suite 4
Spearfish SD 57783

Dear Mr. Campbell:

I am writing in regard to a well completion report filed by Tim Barritt, LLC. The report shows a new well was completed for you on September 16, 2022. I am writing to ensure that you are aware of the water right permit requirements in South Dakota.

1. If water is to be used by a water distribution system for domestic use, such as a well serving multiple homes, a water right permit is required if the pump rate exceeds 18 gallons per minute.
2. Also, as a new well owner, you need to be aware of some of your responsibilities. Enclosed is a copy of "Well Owner Responsibilities". Please review these responsibilities to ensure you are complying with all of the requirements.

If you want more information regarding the permitting process or need application forms, please go to our web site at <https://danr.sd.gov/OfficeOfWater/default.aspx>

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
karen.schlaak@state.sd.us

enclosure



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2027-1, Rae Marie Homes Inc.**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Agriculture and Natural Resources concerning Water Permit Application No. 2027-1, Rae Marie Homes, Inc., c/o Kurt Campbell, 120 Industrial Avenue, Spearfish SD 57783.

The Chief Engineer is recommending APPROVAL of Application No. 2027-1 with a twenty-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 domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board with the following qualifications:

1. In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 2027-1 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. 2027-1 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 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control 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 Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Madison aquifer.
4. Water Permit No. 2027-1 appropriates up to 45 acre-feet of water annually.
5. Prior to placement of water to beneficial use in excess of 18 gallons permit from the well authorized by Water Permit No. 2027-1, the Madison well on the property originally drilled in 2015 on the property shall be either:
 - Brought into compliance by a South Dakota licensed well driller with South Dakota Well Construction Standards, Administrative Rules of South Dakota 74:02:04 and maintained in sanitary condition; or
 - Plugged by a South Dakota licensed well driller in compliance with the South Dakota Well Construction Standard Rules, Administrative Rules of South Dakota 74:02:04.

See report on application for additional information.

Eric Gronlund

Eric Gronlund, Chief Engineer
March 28, 2023

**Report to the Chief Engineer on
Water Permit Application No. 2027-1**

Rae Marie Homes, LLC

14 March 2023

Water Permit Application No. 2027-1 seeks to appropriate up to 45 acre-feet of water annually (ac-ft/yr) at a maximum diversion rate of 0.11 cubic feet of water per second (cfs), equivalent to 50 gallons per minute (gpm), from one well completed into the Madison aquifer located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 30 for a water distribution system serving The Timbers Subdivision located in the S $\frac{1}{2}$ SW $\frac{1}{4}$ Section 19 and W $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$ Section 30; all in T6N-R2E. This site is located approximately 3 miles southwest of Spearfish, South Dakota.

Aquifer: Madison Limestone (MDSN)

Hydrogeologic Characteristics

The Madison Group in South Dakota is a Lower Mississippian and Upper Devonian group of formations that in the Black Hills consist of the Englewood and Pahasapa Limestone formations [1]. The Pahasapa Limestone is a “white, light-gray to tan, fine- to medium-grained limestone and dolomite containing brown to gray chert” [2]. The Englewood Limestone is a “pink to lavender to light-gray, thin- to medium-bedded, fine- to medium-grained, argillaceous, dolomitic limestone” [2]. The Madison aquifer consists of the permeable and porous portions of the Madison Group that are sufficiently saturated to deliver useful quantities of water. The Madison aquifer extends over more than 210,000 square miles in Montana, Wyoming, North Dakota, South Dakota, and Nebraska [3], although it may not be suitable as a source of water in all of those areas due to extreme depth to the aquifer and low water quality far from the outcrops [4]. It crops out in the Black Hills and is buried elsewhere in South Dakota [3]. The Madison aquifer may be hydrologically connected to the underlying Deadwood aquifer. It is also hydrologically connected to the overlying Minnelusa aquifer [5]. The Minnelusa aquifer overlies the Madison unconformably [1], which means there was a period of erosion or weathering between when the Madison Group and the Minnelusa Formation were deposited. Transmissivity in the Madison aquifer mainly comes from secondary porosity features such as solution cavities, faults, and fractures [5]. Because most of the transmissivity in the Madison aquifer comes from secondary porosity features, aquifer characteristics in the Madison aquifer vary greatly from location to location [5].

The applicant submitted a well completion report for a well completed on September 16, 2022. The driller reported encountering hard limestone, dolomite, sand, and chert from 1,107 to 1,245 feet below grade. When no samples return while drilling, that means the formation has such a high transmissivity that the drill rig is pumping cuttings and fluid into the formation instead of back up the bore hole or the borehole encountered a cavern. The driller placed screen from 1,084 to 1,247 feet below grade. The static water level at the time the well was completed was 1,090 feet below grade. A professional engineer on site indicated a constant-rate pump test was conducted at 33 gpm for multiple days and no drawdown was measured in the well. The well for this application is under unconfined conditions. At the depth the water was encountered, this application is withdrawing from the Madison aquifer.

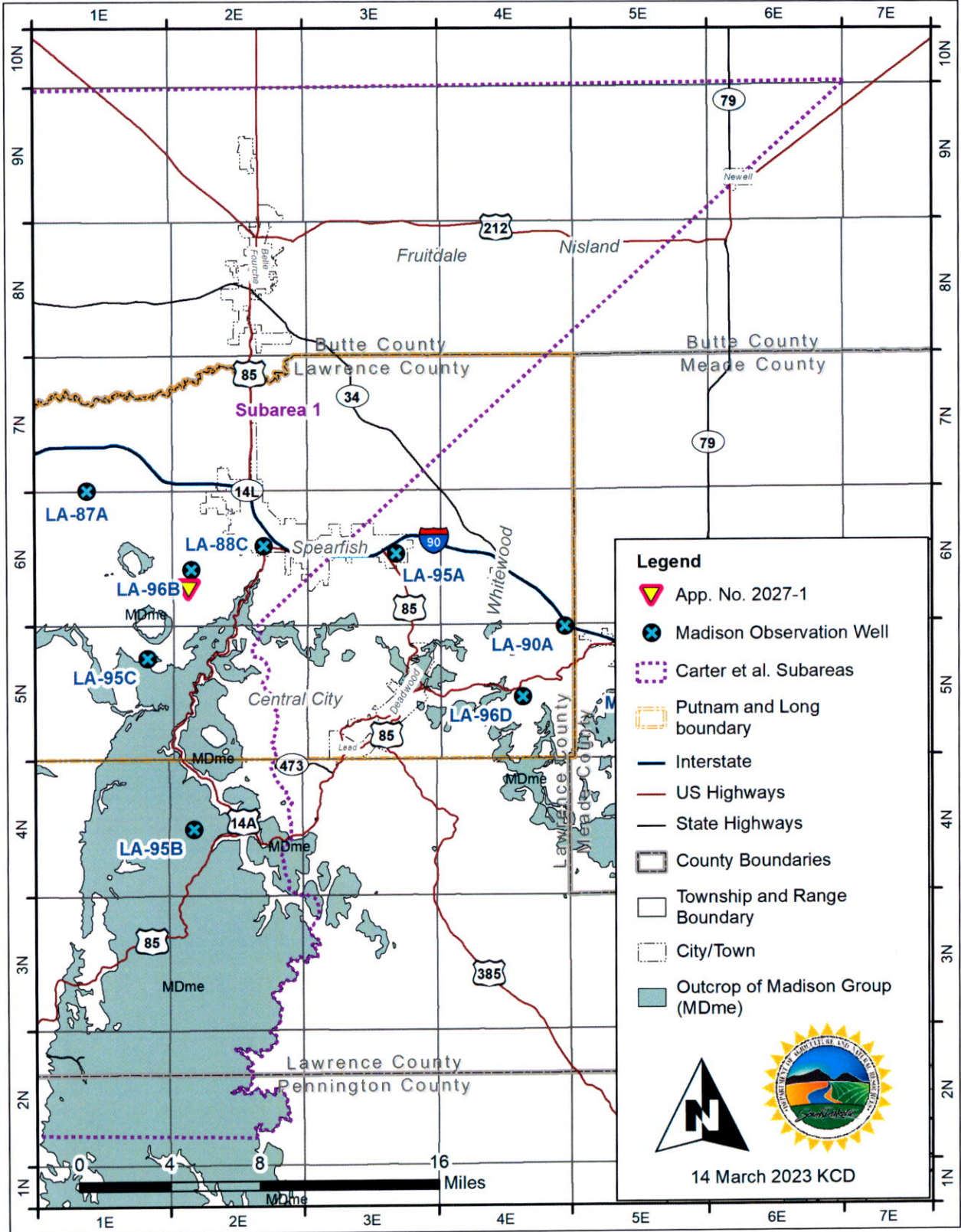


Figure 1: Area surrounding this application, observation wells [6], and study area boundaries within South Dakota [4] [7] [8]

Applicable South Dakota Codified Law (SDCL)

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued 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 domestic water uses and water rights, and that the proposed use is a beneficial use and in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board. This report will only assess the availability of water and possibility of developing this application without unlawful impairment of existing domestic water uses and water rights.

Pursuant to SDCL 46-6-3.1, 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 the water to the groundwater source. An exception allows water distribution systems to withdraw from groundwater sources older or stratigraphically lower than the Greenhorn Formation regardless of the results of a hydrologic budget. The applicant is a water distribution system as defined in SDCL 46-1-6(17). The Madison aquifer is older and stratigraphically lower than the Greenhorn Formation. Therefore, the Water Management Board's authority to approve this application is not restricted by whether or not recharge exceeds withdrawals. However, a statewide and local hydrologic budget is included in this report for the information of the Chief Engineer and the Water Management Board.

Pursuant to SDCL 46-2A-20:

Notwithstanding §§ 46-1-14 and 46-2A-7, 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 a 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, shows 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.*

This application proposes to withdraw water from the Madison aquifer in one of the counties listed above. Therefore, in addition to the other requirements, the Water Management Board must consider the effect this application may have on nearby Madison aquifer wells and springs and this application is subject to a 20-year term limit.

Availability of Water

Statewide Hydrologic Budget

Statewide Recharge

The Madison aquifer receives recharge from infiltration of precipitation and streamflow on the outcrop area and may also receive inflow from the underlying Deadwood aquifer [5] [9]. There are several reports available estimating recharge to the Madison aquifer.

Woodward-Clyde Consultants [10] estimated recharge to the outcrop of the Madison aquifer in the Black Hills as part of an environmental impact statement for the ETSI Coal Slurry Pipeline Project. The upper-bound estimate of recharge in the Woodward-Clyde Consultants [10] report is approximately 400,000 ac-ft/yr, assuming almost all of the precipitation that falls on the outcrop infiltrates into the aquifer. Woodward-Clyde Consultants [10] produced a lower-bound recharge estimate of 140,000 ac-ft/yr based on the Rahn and Gries [11] report. However, the Rahn and Gries [11] report estimated recharge for all Paleozoic limestone in the Black Hills, which includes the Madison Group, the Minnelusa Formation, and the Minnekahta Formation. Rahn and Gries [11] reported that 146.14 cfs was their minimum estimated recharge rate for the Paleozoic limestone from infiltration of precipitation, which converts to approximately 106,000 ac-ft/yr for all Paleozoic formations. The Woodward-Clyde Consultants [10] report did not acknowledge the fact that the Rahn and Gries [11] report estimated minimum recharge for a larger group of formations than the Woodward-Clyde Consultants [10] report covers, and therefore is likely to overestimate recharge to the Madison aquifer.

Carter, Driscoll, and Hamade [9] analyzed streamflow and precipitation data from water years 1931 to 1998 in the Black Hills area in South Dakota and Wyoming to determine the average annual recharge to the Madison and Minnelusa aquifers. They estimated a combined average annual recharge to both aquifers to be 344 cfs, or approximately 249,000 ac-ft/yr, not including possible flow from the Deadwood aquifer. Carter, Driscoll, and Hamade [9] estimated that approximately 55% of the recharge goes to the Madison aquifer, so the total estimated average recharge to the Madison aquifer from the outcrop in the Black Hills is 137,000 ac-ft/yr, not including possible inflow from adjacent aquifers. The Carter, Driscoll, and Hamade [9] report uses more years of data, more recent data, and better assumptions than the Woodward-Clyde Consultants [10] and Rahn and Gries [11] reports. Therefore, the best estimate of recharge to the Madison aquifer is based on the Carter, Driscoll, and Hamade [9] report.

Statewide Discharge

Discharge from the Madison aquifer in South Dakota is mainly by outflow to other aquifers when the hydraulic head in the Madison aquifer is higher than those aquifers, outflow to springs and seeps, and withdrawals by domestic and appropriative wells [7] [12]. Due to the presence of overlying aquifers and water distribution systems in many areas of the aquifer, domestic well withdrawals are a negligible portion of the hydrologic budget of the Madison aquifer. There are 165 water rights/permits currently authorized to withdraw from the Madison aquifer and 10 future use water rights/permits reserving water from the Madison aquifer [12]. Table 1 shows the future use permits reserving water from the Madison aquifer [12].

Table 1: Future Use Permits from the Madison aquifer [12]

Permit No.	Name/Business	County	Use	Priority Date	Amount Reserved (ac-ft/yr)
369-1	City of Belle Fourche	LA	MUN	12/10/1958	620
2086-2	City of Rapid City	PE	MUN	05/18/1989	4,075
439-2	City of Rapid City	PE	MUN	09/22/1956	3,367
1872-1	City of Spearfish	LA	MUN	11/13/2006	2,704
2560-2	Fall River Water Users District	FR	RWS	05/16/2005	358
2560A-2	Fall River Water Users District	FR	RWS	05/16/2005	0
2560B-2	Fall River Water Users District	FR	RWS	05/16/2005	0
2580-2	Southern Black Hills Water System	FR	RWS	03/02/2006	1,474
1833-2	Weston Heights Home Owners	MD	RWS	02/18/1983	211
1995-1	Black Hawk Water User District	MD	RWS	04/15/2020	1,300
Total					14,109
FR – Fall River, LA – Lawrence, MD – Meade, PE – Pennington					
MUN – Municipal, RWS – Rural Water System					

Of the 165 active water rights/permits, 100 are primarily for some type of water distribution system (rural water system, municipal, etc), 31 primarily for irrigation, 14 primarily for commercial use, 11 primarily for industrial use, four primarily for domestic use, two for geothermal use, two for institutional use, and one for recreation [12]. Estimated withdrawals for irrigation use are shown in Table 2 [12] [13].

When there were more than 10 years of irrigation reports available, the average reported irrigation was used to estimate irrigation withdrawals. When there were fewer than 10 years of irrigation reports available, withdrawals are assumed to equal two acre-feet per acre, although actual usage is likely to be less for non-turf irrigation. Non-irrigation withdrawals from permit holders with irrigation as a permitted use are assumed to withdraw at their maximum instantaneous diversion rate 60% of the time for non-irrigation uses. For Water Right No. 1885-1, that would have caused the total estimated withdrawal to exceed the rate they were physically capable of withdrawing, so their total estimated withdrawal is 100% of their maximum instantaneous diversion rate. Water Right/Permit Nos. 1096-1, 1096A-1, 1496-1, and 1670-1 are all authorized to withdraw from the same well and one dam. Water Right Nos. 1096-1, 1096A-1, 1670-1 authorize diversion of water for irrigation use and Water Right No. 1096A-1 and Water Permit No. 1496-1 authorize diversion of water for rural water system use. Documentation in the administrative file for Water Right No. 1670-1 indicates that the well is not valved such that it can be shut off when not in use for the beneficial uses listed on the permits. A letter dated September 9, 1998, indicates that when the water for that well is not being used for the beneficial uses described in the permits, it is used for fish and wildlife propagation. The person writing the letter indicated they would prefer the Water Management Board not order the well to be shut off when not used for irrigation or rural water system withdrawals. It is likely the well continues to flow uncontrolled; thus, at the flow rate listed in Water Right No. 1096A-1 of 1.33 cfs [12], that well withdraws approximately 964 ac-ft/yr from the Madison aquifer.

Report on Water Permit App. No. 2027-1

Table 2: Permits with irrigation listed as one beneficial use, or are connected to an irrigation permit [12] [13]

Permit No.	Name/Business	Priority	Diversion rate (cfs)	Acres Licensed/ Permitted	Average Report (ac-ft)	Number of Years of Irrigation Reports	Estimated average irrigation (ac-ft/yr)	Est. Non-irr. Use (ac-ft/yr)	Total Est. Withdrawal (ac-ft/yr)
2773-2	Arrowhead Country Club	07/27/2017	1.110	100.0	0.0	5	200.0	0.0	200.0
1635-1	Black Hills National Cemetery	04/02/1990	0.820	54.5	94.7	27	94.7	356.4	451.2
1452-1	Black Hills State College	12/19/1988	3.330	25.4	20.3	34	20.3	1,447.5	1,467.7
1670-1	Buddy L, Peggy A, Kami S Ireland	06/09/1998	3.610	253.0	45.6	25	*	*	*
1096A-1	Butte Meade Sanitary Dist	04/16/1976	1.330	0.0	N/A	0	*	*	963.5
2458-2	City Of Rapid City	03/30/2001	0.800	107.0	109.4	22	109.4	0.0	109.4
2002-1	City Of Spearfish	12/28/2020	1.330	40.0	0.0	2	80.0	0.0	80.0
2313-2	Coca-Cola Bottling	04/08/1994	0.330	3.0	7.2	28	7.2	143.4	150.6
1899-1	Davis Ranches Inc	08/25/2008	1.430	100.0	0.0	14	0.0	0.0	0.0
1650-1	Dennis L Miller	04/03/1997	0.890	0.0	N/A	0	*	*	55.9
2673-2	Diocese Of Rapid City	05/27/2011	0.120	7.0	8.1	10	14.0	0.0	14.0
1009-1	Donald F/Ann J Brady	02/01/1974	0.780	53.7	29.7	41	29.7	0.0	29.7
1185-1		01/18/1979	0.380	22.5	112.8	41	112.8	***	112.8
2286-2	Donald Konechne	04/28/1993	0.100	38.5	10.2	29	10.2	0.0	10.2
1707A-1	Elkhorn Ridge @ Frawley Ranches LLC	01/06/2000	3.705	100.0	0.0	4	0.0	1,610.5	1,610.5
1707E-1**		01/06/2000	0.000	0.0	12.6	16	12.6	0	12.6
1931-1		08/17/2012	0.170	3.3	3.1	10	6.6	73.9	80.5
1945-1	Frawley Ranches LLC	02/10/2014	1.110	265.0	53.6	9	530.0	0.0	530.0
1858-1	Glencoe Camp Resort II LLC	03/08/2006	0.860	34.0	0.0	17	0.0	373.8	373.8
2593-2	Hart Ranch Development	06/15/2006	0.490	72.5	26.9	16	26.9	213.0	239.9
1911-2	Hart Ranch Development Co	09/27/1984	0.880	124.0	120.2	29	120.2	382.5	502.7
1725-2	Janice R Crowser	08/20/1980	1.070	75.1	1.0	24	1.0	0.0	1.0
2012-1	Jesse Horstmann	01/10/2022	0.500	43.5	1.0	1	87.0	0.0	87.0
858-2	John & Heidi McBride	02/05/1965	9.360	655.8	6.5	39	6.5	0.0	6.5
1885-1	John T & Veronica Widdoss	04/09/2007	0.110	22.0	17.2	6	44.0	35.7	79.7
1960-1	One Diamond Inc	04/11/2016	1.280	150.0	142.1	7	300.0	556.4	856.4
1223-1	P & L Water and Hay LLP	03/10/1981	0.670	263.0	190.6	41	190.6	0.0	190.6
1923-1	Roger & Jean Ranschau	02/15/2011	0.110	3.0	0.9	11	0.9	47.8	48.7
2013-1	Santa Maria Land & Cattle Corp	01/18/2022	2.220	460.0	N/A	0	920.0	0.0	920.0
1363-1	Spearfish Canyon Country Club	09/15/1986	0.900	80.1	65.4	36	65.4	0.0	65.4
2106-2	Stuart Rice	06/06/1990	0.080	2.8	0.8	31	0.8	34.8	35.6
1842-1	Tom C Davis	04/05/2005	0.440	330.0	0.0	18	0.0	0.0	0.0
2741-2	Tubbs Land & Cattle LLC	08/20/2018	3.340	567.0	248.0	4	1,134.0	0.0	1,134.0
419-2	Wind Cave National Park	12/29/1955	0.150	6.0	N/A	0	12.0	65.2	77.2
Total			43.805	4,061.7	43.805	597	4,136.7	5,340.9	10,497.0
* Discussed in text. **gives additional time to develop 1707A-1. *** Reports all use types in irrigation report									

Water Right No. 1650-1 does not require the water right holder to report annual withdrawals and allocates no acreage. It provides supplemental water supply from a flowing well for Water Right No. 1231-1. Water Right No. 1231-1 permits a 110 ac-ft dam to provide water for a commercial livestock operation and irrigation of 134 acres. Water Right No. 1650-1 allows for direct irrigation from a Madison aquifer well of up to 2 ac-ft per acre for the land permitted by Water Right No. 1231-1. Kilts [14] estimated that Water Right No. 1650-1 withdraws 55.9 ac-ft/yr.

There are 42 water rights/permits that have a volume limit listed in their permit or have had their total withdrawal limited by a subsequent water right/permit held by the same person/entity.

While many of those water rights/permits are required to report their withdrawals, they may develop their permits further to withdraw up to the limit on their permit, so the volume limit listed on their permits is assumed to be their total appropriation. The total volume limit listed by such permits is 24,491 ac-ft/yr [12].

There are 89 non-irrigation water rights/permits that do not have a volume limit listed in their permit and are not discussed above. They are estimated to withdraw up to their maximum instantaneous diversion rate 60% of the time, for a total estimated withdrawal of 16,897 ac-ft/yr. Based on Water Rights Staff experience, this estimate is likely to be higher than the actual withdrawals by those water rights/permits.

In addition to the potential withdrawals by future use permits described above, three other applications are deferred, held in abeyance, or pending review. Water Permit Application No. 2585-2 for Southern Black Hills Water System seeks to appropriate 1,600 ac-ft/yr but is deferred for further study. Water Permit Application No. 2685-2 for Powertech, Inc is held in abeyance pending federal permitting and seeks to appropriate 889 ac-ft/yr. Water Permit Application No. 2850-2 seeks to appropriate up to 145 ac-ft/yr and is pending a hearing before the Water Management Board.

Summary of Statewide Hydrologic Budget

The best available estimate of recharge to the Madison aquifer in South Dakota is approximately 137,000 ac-ft/yr [9]. The estimated withdrawals as described in the Statewide Discharge section are summarized in Table 3. The total estimated withdrawal, including withdrawals reserved for future use and held, or deferred applications is approximately 68,628 ac-ft/yr. This application may withdraw up to 45 ac-ft/yr, if approved. Therefore, based on the statewide hydrologic budget, there is reasonable probability unappropriated water is available for this application.

Table 3: Summary of withdrawals from Madison aquifer rounded to the nearest 1 acre-foot.

Type	Count	Est. Rate (ac-ft/yr)
Irrigation (Table 2)	34	10,497
Volume limit	42	24,491
Diversion Rate limit	89	16,897
<i>Subtotal (authorized to withdraw)</i>	<i>165</i>	<i>51,885</i>
Future use (Table 1)	10	14,109
Deferred/held/pending	3	2,634
Grand total	178	68,628

Local Hydrologic Budgets

There are two studies which performed a local hydrologic budget in the area of this application. Local hydrologic budgets in bedrock aquifers are not management units. Information regarding local hydrologic budgets in bedrock aquifers is provided for the information of the Chief Engineer and Water Management Board. The two different studies are of similar quality and simply define different study area boundaries.

Carter et al. [7]

Carter, et al. [7] used streamflow, precipitation, spring flow, estimated ground water flow, and well withdrawal data from 1987 to 1996 for the hydrologic budgets. This application is in Subarea 1 of their report. The boundaries of the Carter et al. [7] subareas were selected to minimize flow across subarea boundaries. Carter et al. [7] estimated the total recharge to the Madison and Minnelusa aquifers in Subarea 1 was 130.7 cfs. Assuming 55% of the recharge goes to the Madison aquifer, the estimated recharge in Subarea 1 is 71.9 cfs, or approximately 52,077 ac-ft/yr [9] [7]. Carter, et al. [7] do not provide values for the recharge area of the Madison and Minnelusa formations for each subarea in their report, so it is possible the proportion of recharge area to those two aquifers is different within each subarea. There are 33 water rights/permits authorized to withdraw, and 1 future use permit reserving water, from the Madison aquifer in Subarea 1 [12]. Domestic well withdrawals are negligible on the scale of this hydrologic budget. Using the same methods as in the Statewide Discharge section, estimated withdrawals within Carter, et al. [7] Subarea 1 are 17,160 ac-ft/yr (Table 4). This application may withdraw up to 45 ac-ft/yr, if approved. It is likely that the withdrawal estimates are higher than the true average annual withdrawal and the recharge estimates (including induced recharge from outside the study area or subarea) are lower than actual recharge to the subarea of the Madison aquifer.

Table 4: Estimated withdrawals in Carter et al. [7] Subarea 1

Type	Count	Est. Use (ac-ft/yr)
Irrigation	11	4,742
Volume Limit	7	5,379
Sixty Percent	15	4,336
Subtotal (authorized to withdraw)	33	14,456
Future Use	1	2,704
Pending/Deferred/held	0	0
Grand total	34	17,160

Putnam and Long [8]

Putnam and Long [8] characterized groundwater flow in northern Lawrence County in the Madison and Minnelusa aquifers. They estimated the average annual recharge to the Madison and Minnelusa aquifers was 38.1 cfs. They estimated recharge to the Madison aquifer from precipitation infiltration, and stream flow infiltration from Spearfish and False Bottom Creeks, to total 16.5 cfs [8]. There were 6.0 cfs of infiltration from Bear Gulch and Beaver Creek that the Putnam and Long report does not specifically attribute to either the Madison or Minnelusa aquifers. Approximately 23% of the river miles from Bear Gulch and Beaver Creek are above the Madison aquifer [15] [4]. Assuming recharge occurs in proportion to the mileage of those flows, approximately 1.4 cfs of recharge to the Madison aquifer comes from Bear Gulch and Beaver Creek. Therefore, according to the Putnam and Long [8] report, recharge to the Madison aquifer in the area of that study is 17.9 cfs, equivalent to 12,968 ac-ft/yr. That estimate does not include recharge from groundwater inflows from other parts of the Madison aquifer. There are 39 water

rights/permits authorized to withdraw and two future use permits reserving water from the Madison aquifer in the area of the Putnam and Long [8] study [12]. Using the same methods as in the Statewide Discharge section, the total estimated withdrawal including reservations for future use in the Putnam and Long [8] study area is 21,054 ac-ft/yr (Table 5). This application seeks to appropriate up to 45 ac-ft/yr. This hydrologic budget does not include recharge from groundwater flow from other areas of the Madison aquifer and estimates from permits only limited by discharge rate are likely to be higher than actual withdrawals.

Table 5: Summary of estimated withdrawals in the Putnam and Long [8] study area

Type	Count	Est. Use (ac-ft/yr)
Irrigation	11	4,918
Volume Limit	10	4,748
Sixty Percent	18	8,064
Subtotal (authorized to withdraw)	39	17,730
Future Use	2	3,324
Pending/Deferred/held	0	0
Grand total	41	21,054

Observation Wells

Administrative Rule of South Dakota 74:02:05:07 requires that the Water Management Board rely upon the record of observation wells, in addition to other information, to determine that recharge exceeds withdrawals to approve an application. The Water Rights Program maintains 25 observation wells completed into the Madison aquifer [6]. The nearest observation well to this application that is completed into the Madison aquifer is LA-96B, which is located approximately 0.8 miles north of the well for this application. Observation Well LA-96B has an object lodged in its casing, preventing measurement. The next-nearest observation wells are LA-95C, located approximately 3.6 miles southwest of this application, and LA-88C, located approximately 3.8 miles east of this application. Figure 2 shows water elevations in Observation Well LA-95C and Figure 3 shows water elevations in Observation Wells LA-88C and LA-96B over the period of record. The fluctuations in these three wells represent the general behavior of the Madison aquifer. In general, water levels rise during periods of higher-than-average rainfall and decline during periods of lower-than-average rainfall [16]. This means that recharge and natural discharge are the dominant effects in the aquifer and natural discharge is available for capture. Therefore, based on observation well analysis, there is reasonable probability unappropriated water is available for this application.

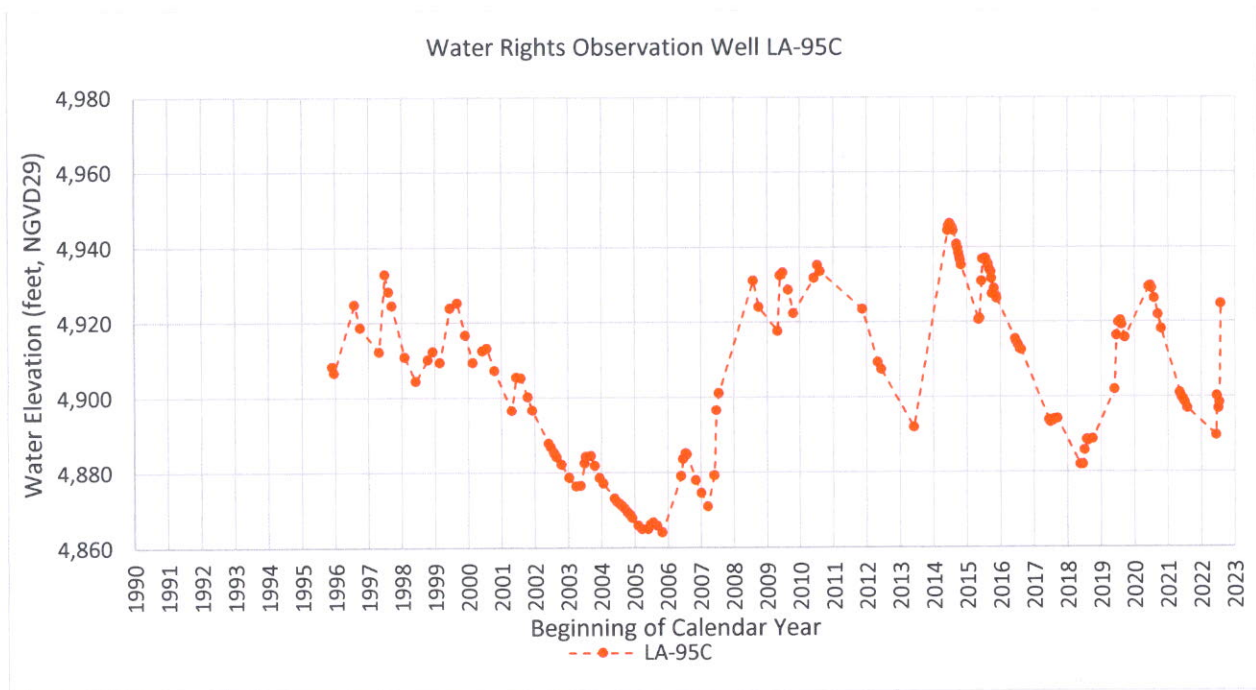


Figure 2: Observation well LA-95C water elevations [6]

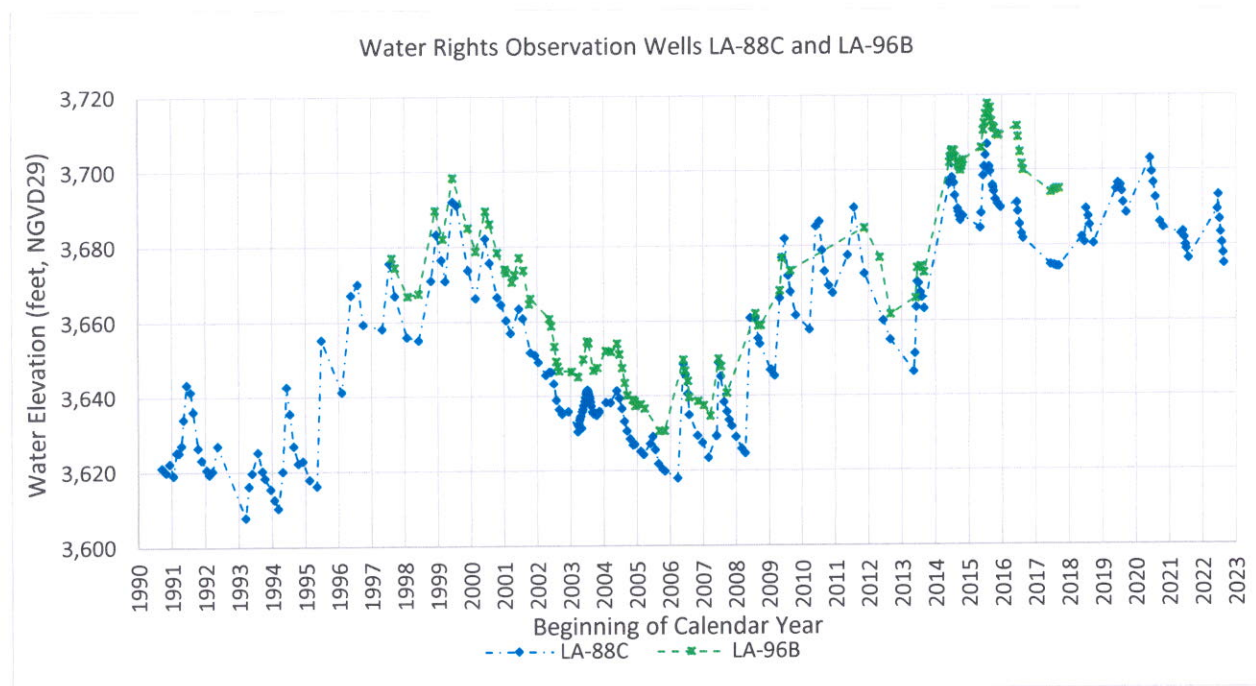


Figure 3: Observation well LA-88C and LA-96B water elevations [6]

Possibility of Unlawful Impairment of Existing Water Rights

The nearest water right or permit to this application is Water Right No. 1599-1, located approximately 3.4 miles east of this application [12]. There are two domestic wells on file with the Water Rights Program with legal descriptions that are the same as the well for this

application. One is owned by The Timbers Subdivision and was completed in 2015 which DANR's understanding is being replaced by the well for this application. The other well was drilled for Cannon River Investments and was completed in 2007 [17]. The Water Rights Program has historically interpreted an unlawful impairment of existing water rights to occur if a junior water right/permit causes a nearby adequate well with a senior water right/permit to become unable to withdraw at the rate it is entitled to or, if a domestic well is impacted, a water right/permit causes an adequate domestic well to be unable to withdraw at the rate needed to supply reasonable domestic use of water. Administrative Rule of South Dakota (ARSD) 74:02:04:20(6) defines an adequate well as:

...a well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet

Precise drawdown effects caused by a well cannot be known without an aquifer performance test that includes an observation well at the location of concern. The applicant pumped their well at 33 gallons per minute and measured no drawdown. It is likely they will find similar results at their requested diversion rate of 50 gallons per minute. Madison aquifer characteristics vary greatly from location to location. In the area of this application, the Madison aquifer is under unconfined conditions. Therefore, drawdown is not likely to occur as far from the pumped well as it would in a confined area of the aquifer. Because the Madison aquifer is unconfined near this application, the top of the aquifer is defined as the static water level at the time the well is completed. If the well does not meet the definition of an adversely impacted adequate well (ARSD 74:02:04:20(7)), the Water Management Board has not historically considered it an unlawful impairment of existing water rights. Conditions may occur where a nearby adequate well in a thinner part of the aquifer is unable to access needed water while a well in a thicker part of the aquifer is able to access water. In such cases, an unlawful impairment of existing rights may occur. Therefore, the applicant should control withdrawals so that adequate domestic wells and senior water rights are able to access needed water. There is no record of well interference complaints in Lawrence County [18]. Observation wells completed into this aquifer near larger appropriative wells show limited drawdown when the large appropriative wells are in use. Given the lack of well interference complaints in Lawrence County, and limited drawdown shown in observation wells completed near large appropriations, there is reasonable probability this application can be developed without unlawful impairment of existing water rights.

Impact to Springs

The nearest major artesian spring to this application is Higgins Gulch Spring, located approximately 10 miles north of the well for this application [19]. Upon considering the deferral of Water Permit Application No. 2585-2 for Southern Black Hills Water System, the Water Management Board adopted a conclusion of law stating in part, "... The only protection South Dakota law provides when considering an application for an underground water permit for flow from an artesian spring is under the public interest criteria" [20]. Given the distance between the

proposed well site and the nearest springs, there is reasonable probability this application can be developed without noticeably impacting flow from the spring.

Special Consideration – Compliance with Well Construction Standards

The applicant owns another well on the property from which they attempted by their own labor to remove a pump. During the attempt, the pump became lodged in the well. The applicant dug a pit around the well to cut off the casing surrounding it and get a better grip on the pipe supporting the pump. The Water Rights Program has received a complaint from a neighbor that the applicant has not capped that well. The complaint is still open because the applicant has not resolved it to the satisfaction of the Water Rights Program [21]. Pursuant to SDCL 46-6-9.2 and SDCL 46-6-9.4, pump installation activities done for compensation must be done by a licensed pump installer or by a licensed plumbing, electrical, or mechanical contractor. Pursuant to South Dakota Well Construction Standards, a well may not be completed in a pit below the natural level of the ground. Additionally, wells must be capped with a watertight seal when not in use. Abandoned wells must be plugged pursuant to South Dakota Well Construction Standards. Wells that are not plugged or sealed properly can create a direct entry point into the aquifer for pollutants, especially when the top of the casing is below the natural grade in the area and it is not sealed into a pitless unit. A qualification should be placed on this application that the applicant must hire a licensed well driller to repair or plug the other well pursuant to South Dakota Well Construction Standards.

Conclusions

1. Water Permit Application No. 2027-1 seeks to appropriate up to 45 ac-ft/yr at a maximum diversion rate of 0.11 cfs from one well completed into the Madison aquifer located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 30 for a water distribution system serving The Timbers Subdivision located in the S $\frac{1}{2}$ SW $\frac{1}{4}$ Section 19 and W $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$ Section 30; all in T6N-R2E.
2. Based on the hydrologic budget and observation well analysis, there is reasonable probability unappropriated water is available for this application.
3. There is reasonable probability this application can be developed without unlawful impairment of existing water rights.
4. If approved, this application is unlikely to noticeably impact flow from springs.
5. This application is subject to a 20-year term limit.



Kimberly C. Drennon, E.I.

Natural Resources Engineer II - SD DANR Water Rights Program

References

- [1] M. D. Fahrenbach, F. V. Steece, J. F. Sawyer, K. A. McCormick, G. L. McGillivray, L. D. Schulz and J. A. Redden, "South Dakota Stratigraphic Correlation Chart," SD DANR Geological Survey Program, Vermillion, South Dakota, 2010. Oil and Gas Investigation 3.
- [2] J. E. Martin, J. F. Sawyer, M. D. Fahrenbach, D. W. Tomhave and L. D. Schulz, "Geologic Map of South Dakota," SD DANR Geological Survey Program, Vermillion, South Dakota, 2004. General Map 10.
- [3] J. S. Downey, "Geohydrology of the Madison and associated aquifers in Parts of Montana, North Dakota, South Dakota, and Wyoming," United States Geological Survey, Reston, Virginia, 1984. Professional Paper 1273-G.
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- [8] L. D. Putnam and A. J. Long, "Characterization of Ground-Water Flow and Water Quality for the Madison and Minnelusa Aquifer in Northern Lawrence County, South Dakota," US Geological Survey, Reston, Virginia, 2007. Water-Resources Investigations Report 02-4185.
- [9] J. M. Carter, D. G. Driscoll and G. R. Hamade, "Estimated recharge to the Madison and Minnelusa aquifers in the Black Hills Area, South Dakota and Wyoming, Water Years 1931-98," United States Geological Survey, Reston, Virginia, 2001.
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- [19] C. A. Naus, D. G. Driscoll and J. M. Carter, "Geochemistry of the Madison and Minnelusa aquifers in the Black Hills area, South Dakota," United States Geological Survey, Reston, Virginia, 2001. Water-Resources Investigations Report 01-4129.
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**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

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

March 29, 2023

Rae Marie Homes, LLC.
c/o Kurt Campbell
120 Industrial Ave.
Spearfish SD 57783

Dear Mr. Campbell:

Water Permit Application No. 2027-1 for water distribution 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 Black Hills Pioneer printed at Spearfish SD (Ph # 605 642-2761). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization 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,

Rachel Rodriguez

Rachel Rodriguez
Water Rights Program
(605) 773-3352

enclosures

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

CC: John Wetstein
Engineering Associates
PO Box 2202
Laramie WY 82073

NOTICE OF APPLICATION NO. 2027-1 to Appropriate Water

Notice is given that Rae Marie Homes LLC, c/o Kurt Campbell, 120 Industrial Ave, Spearfish SD 57783 has filed an application for a water permit to appropriate 45 acre-feet of water annually at a maximum pump rate of 0.11 cubic feet of water per second from one existing well completed into the Madison Aquifer (1,247 feet deep) located in the SW 1/4 NE 1/4 Section 30 for a water distribution system serving The Timbers Subdivision located in the S 1/2 SW 1/4 Section 19 and W 1/2 NE 1/4, E 1/2 NW 1/4 Section 30; all in T6N-R2E. This site is located approximately 3 miles southwest of Spearfish SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2027-1 with a twenty-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 domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest.

Any person interested in opposing this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Chief Engineer. A petition opposing the application shall be filed on a form provided by the Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Chief Engineer. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by April 17, 2023.

The petition shall include a statement describing the unique injury upon approval of the application on the petitioner, the petitioner's reasons for opposing the application, and the name and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

Any interested person may file a comment on the application with the Chief Engineer. The comment shall be filed on a form provided by the Chief Engineer and is available online at <https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Chief Engineer at the address provided above. Filing a comment does not make the commenter a party of record or a participant in any hearing that may be held. Any comment must be filed by April 17, 2023.

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.

Published once at the total approximate cost of _

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Wednesday, March 29, 2023 9:15 AM
To: legals@bhpioneer.com
Subject: 2027-1 Rae Marie Homes LLC - Public Notice
Attachments: 2027-1 public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on April 6, 2023.

Rae Marie Homes, LLC., c/o Kurt Campbell, 120 Industrial Ave., Spearfish SD 57783, 605-641-2780 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 to the Water Rights Program, 523 E Capitol, Pierre SD 57501.

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

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us



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:

RECEIVED
APR 14 2023
OFFICE OF
WATER

Notice OF Application
No. 2027-1

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 6th day of April, 2023, and the last publication on the _____ day of _____, that the full amount of fees charged for publishing same, to-wit: The sum of \$39.31, 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 12th day of Apr., 2023

[Signature]

Notary Public, Lawrence County, South Dakota
My commission expires: 7-18-2025

**NOTICE OF
APPLICATION
NO. 2027-1 to
Appropriate Water**

Thursday, April 6, 2023

Notice is given that Rae Marie Homes LLC, c/o Kurt Campbell, 120 Industrial Ave, Spearfish SD 57783 has filed an application for a water permit to appropriate 45 acre-feet of water annually at a maximum pump rate of 0.11 cubic feet of water per second from one existing well completed into the Madison Aquifer (1,247 feet deep) located in the SW 1/4 NE 1/4 Section 30 for a water distribution system serving The Timbers Subdivision located in the S 1/2 SW 1/4 Section 19 and W 1/2 NE 1/4, E 1/2 NW 1/4 Section 30; all in T6N-R2E. This site is located approximately 3 miles southwest of Spearfish SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2027-1 with a twenty-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 domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest.

Any person interested in opposing this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as de-

fined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Chief Engineer. A petition opposing the application shall be filed on a form provided by the Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Chief Engineer. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by April 17, 2023.

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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.

Published once at the total approximate cost of

\$40.27 and can be viewed free of charge at www.sd-publicnotices.com.

**#163
Apr 6**

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Wednesday, March 29, 2023 11:02 AM
To: 'raemariehomes@gmail.com'
Subject: 2027-1 Rae Marie Homes LLC - Public Notice
Attachments: 2027-1 APPL.docx; 2027-1 public.short_final.docx; 2027-1_rec.pdf

Attached is a copy of the report, chief engineer recommendation and information regarding the public notice for your water permit application. As stated in the letter, **please contact the paper(s) as soon as possible to authorize publication and arrange for payment.** This information is being mailed to you today.

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

MAY 11 2023

Rae Marie Homes, LLC.
c/o Kurt Campbell
120 Industrial Ave., Suite 4
Spearfish SD 57783

Dear Mr. Campbell:

Enclosed is Water Permit No. 2027-1 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,

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

enclosures



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

**Affidavit of Public Notice
on DANR Website**

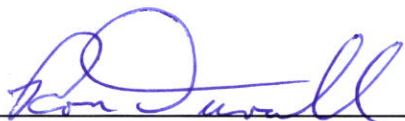
Pursuant to SDCL § 46-2A-4, public notice of the following application was posted on the DANR web site at <https://danr.sd.gov/public>. The posted public notice is the same notice as published in the pertinent newspaper(s) and a copy of the public notice is maintained in the application file. If the application is contested, the posting is moved to the DANR contested case website at <https://danr.sd.gov/public/ContestedCase.aspx> until final action is taken on the application pursuant to SDCL § 46-2A-4.

Application No.: 2027-1

Name of Applicant: Rae Marie Homes LLC, c/o Kurt Campbell

Date of Posting: 4/3/2023

Date of Removal: 5/11/2023

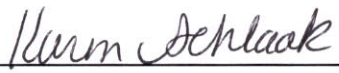


Ron Duvall, Water Rights Permitting Administrator

5/12/23

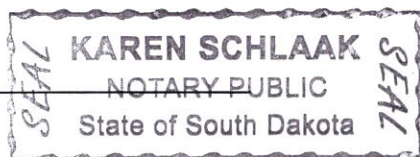
Date

Subscribed and sworn to before me, a notary public, this 12th day of May, 2023.



Notary Public - South Dakota
My commission expires: 4/1/2025

(SEAL)





DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

June 11, 2024

NOTICE OF HEARING

TO: Rae Marie Homes, LLC, c/o Kurt Campbell, 120 Industrial Ave., Suite 4, Spearfish SD 57783

FROM: Ron Duvall, Engineer III
for Eric Gronlund, Chief Engineer
Water Rights Program

SUBJECT: Violation of Permit Qualification to Report Annual Water Use

Our records indicate your 2023 annual water use has not been submitted for Permit No. 2027-1. The request to report water use for 2023 was dated January 5, 2024. Two follow-up attempts to get the required water use report have gone unanswered. The Water Management Board has directed owners of water permits who have not submitted the 2023 water use reporting be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No. 2027-1 qualification:

"The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Madison aquifer."

The hearing will be held on **Wednesday, July 10, 2024 at 9:30 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1. Suspend or cancel Permit No. 2027-1 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

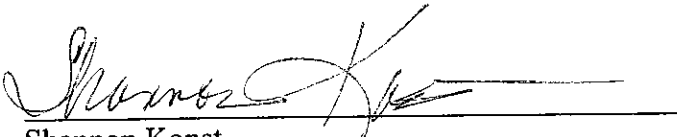
If the water use report(s) is (are) received in this office before the **July 10, 2024** hearing, you will no longer be in violation of your permit and your name will be removed from the Board agenda. You may submit your water use report by providing the information to Rachel Rodriguez at (605) 773-3352 or via email at rachel.rodriguez@state.sd.us. You may also submit the water use report via mail using the address in the NOTE at the bottom of this Notice.

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD 57501 or call (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.

CERTIFICATION

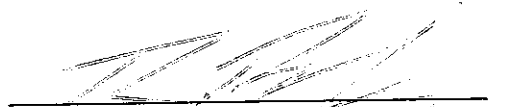
The undersigned hereby certifies under the penalty of perjury that a true and correct copy of a Notice of Hearing, dated June 11, 2024, concerning violation water use reporting qualification in the matter of Water Permit No. 2027-1 was served by U.S. certified mail, postage prepaid, upon the following on June 11, 2024.

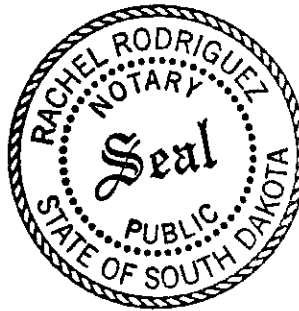
Rae Marie Homes, LLC
c/o Kurt Campbell
120 Industrial Ave., Suite 4
Spearfish SD 57783


Shannon Konst
Water Rights Program, DANR

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this _____ day of _____, 2024.


Rachel Rodriguez
Notary Public
My Commission expires May 16, 2029





2027-1

**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

July 7, 2023

2027-1

Rae Marie Homes
c/o Kurt Campbell
120 Industrial Dr. #4
Spearfish SD 57783

Dear Campbell:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with your water use system.

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

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

Sincerely,

Amanda Dewell
Water Rights Program
(605) 773-3352
email: Amanda.Dewell@state.sd.us

RCND 7/7/23



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

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

TO: Water Rights Program, DANR
523 E. Capitol Ave.
Pierre, SD 57501-3182
or via email to DANRmail@state.sd.us

Date 6/1/2023

FROM: Rae Marie Homes: Kurt Campbell

605-641-2780

(name)

(phone)

120 Industrial Dr, #4

raemariehomes@gmail.com

(address)

(email)

Spearfish, SD 57783

(city, state, zip)

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. 2027-1 states that the water use system is to be constructed by

April 17, 2028

(date)

, and water is to be put to beneficial use by

April 17, 2032

(date)

The water use system was completed on June 1, 2023

(date)

Applying the water to beneficial use was completed on June 1, 2023

(date)

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

Rodriguez, Rachel

From: Duvall, Ron
Sent: Wednesday, June 26, 2024 8:05 AM
To: Kurt Campbell
Cc: Rodriguez, Rachel
Subject: RE: [EXT] 2023 Water Use Reporting

Converted to AF 4.45

Mr. Campbell,

Thank you for reporting your water usage. This addresses the reporting issue so there will be NO hearing held on July 10 concerning your water permit.

Thanks again, glad it is cleared up!

Ron

From: Kurt Campbell <raemariehomes@gmail.com>
Sent: Tuesday, June 25, 2024 5:41 PM
To: Duvall, Ron <Ron.Duvall@state.sd.us>
Subject: Re: [EXT] 2023 Water Use Reporting

Hello Mr. Duvall, It was my request and understanding that Clearwater was and had responded to this request some time ago. Clearwater handles all of the testing and monitoring for the system and they had the information required for this request. I have obtained the usage which was 1,452,700 gallons. I want to stay in good standing with the state obviously. This has been a misunderstanding on my part as to this being handled. Would you be able to respond to this email that I have completed the information necessary so I may retain for my records? If there is something more required please advise on what I may have missed.

Thank You

Kurt Campbell
605-641-2780

On Tue, Jun 25, 2024 at 3:51 PM Duvall, Ron <Ron.Duvall@state.sd.us> wrote:

Mr. Campbell,

Attached is a copy of the Notice of Hearing mailed to you on June 11, 2024. There is still time to avoid having the Water Management Board suspend the permit for a year if you report your 2023 water usage as required by a qualification on [Water Permit No. 2027-1](#).

3. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Madison aquifer.

You can report your usage by replying to this email with your water usage amount.