

WATER PERMIT NO. 2018-1

Name of Applicant: Monarch Ridge Development Inc.

Address: PO Box 680, Black Hawk SD 57718 Phone: 605 484-0156

Amount of Water Claimed: 1.11 cfs Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: water distribution system County: Meade

Type of Waste Disposal System:

Location: 7 miles north of Rapid City

PRIORITY Date Received: 4-25-22

Application/License Fee: \$ 700

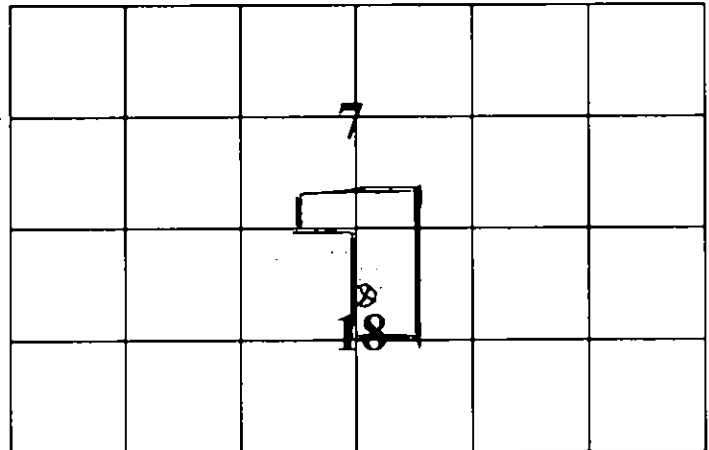
Corrected Application Received: 5-2-22

Period of Annual Use: Jan 1 – Dec 31

Remarks:

Diversion Point: SW 1/4 NE 1/4 Sec 18-T3N-R7E

Subdivision location: SE 1/4 SW 1/4, SW 1/4 SE
1/4 Sec 7 and W 1/2 NE 1/4 Sec 18; all in T3N-
R7E



Depth of Well: 2600 feet deep

Well Driller:

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 5-2-22

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 2018-1**

Date of first receipt of application April 25, 2022.

Date of return to applicant for corrections, amendments or changes April 25, 2022.

Date of receipt of corrected application May 2, 2022.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2018-1 to Monarch Ridge Development Inc., c/o Raymond J Dvorak, PO Box 680, Black Hawk SD 57718 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. 2018-1 appropriates up to 118.55 acre-feet of water annually at a maximum pump rate of 1.11 cubic feet of water per second from one well to be completed into the Madison Aquifer (approximately 2,600 feet deep) located in the W 1/2 NE 1/4 Section 18-T3N-R7E. The water is for a water distribution system to be located SE 1/4 SW 1/4, SW 1/4 SE 1/4 Section 7 and the W 1/2 NE 1/4 Section 18; all in T3N-R7E. This site is located approximately 3 miles east of Piedmont 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 from which applicant may claim right is April 25, 2022.
5. The date of approval of Permit No. 2018-1 is July 5, 2022.
6. One-fifth of the construction is to be completed on or before January 5, 2025.
7. All construction is to be completed on or before July 5, 2027.
8. Water is to be put to beneficial use on or before July 5, 2031.
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. 2018-1 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. 2018-1 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.

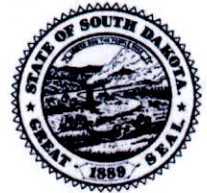
(continued)

3. The well authorized by Permit No. 2018-1 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
4. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Madison aquifer.
5. Water Permit No. 2018-1 appropriates up to 118.55 acre-feet of water annually.

WATER MANAGEMENT BOARD

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

JUL 26 2022
date



APR 25 2022

WATER RIGHTS
PROGRAM

PAID

APR 25 2022

Ck# 2461

Rec't#

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>2018-1</u> (office use only) Hydrologic Unit <u>10120111</u>
	Basin <u>Upper Cheyenne</u>
	Newspaper <u>Faith Independent</u>
	<u>Rapid City Journal</u>

Application For Permit To Appropriate Water Within The State Of 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.)

- Name to Appear on Water Permit MONARCH RIDGE DEVELOPMENT, INC.
Mailing Address PO Box 680 Black Hawk SD 57718
(Address) (City) (State) (Zip Code)
Phone _____ Mobile 605-484-0156 Email rdvorak55@gmail.com
118.55
- Amount of water claimed 1.34 *CFS or 500 **GPM and 114 ***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)
- Source of water supply Madison Aquifer (new well)
- Location of point of diversion SE1/4 of the SW1/4 of & SW1/4 of the SE1/4 of Sec. 7 and
W1/2 of the NE1/4 of Sec. 18, T3N, R7E, BHM County Meade
(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? well location: W 1/2 NE 1/4 Sec 18-T3N-R7E
(example - NW1/4 section 12-T104N-R53W)
- County or counties where water will be used Meade
- Annual period during which water is to be used ALL YEAR
- 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)

A new well is being proposed for a subdivision near Elk Creek road in Meade County. The well will be part of a private water system that includes water storage and will service 45 residential lots.

I, RAYMOND J DVORAK OWNER/PRESIDENT, the applicant, certify under
Name of Person Title (if applicable)

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

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 1 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)
- b) If existing wells, how many _____ Provide copy of log(s), if available. Drilled by _____

For either Existing or Proposed Wells:

- c) Well Depth (required) ~2400-2600 Depth to Top of Water Bearing Material _____ Depth to Water from Surface _____
- d) Distance to nearest domestic well on applicant's property _____ Property owned by others 1550 ft

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) residential septic tanks and drain fields
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System

3. Dugout Information

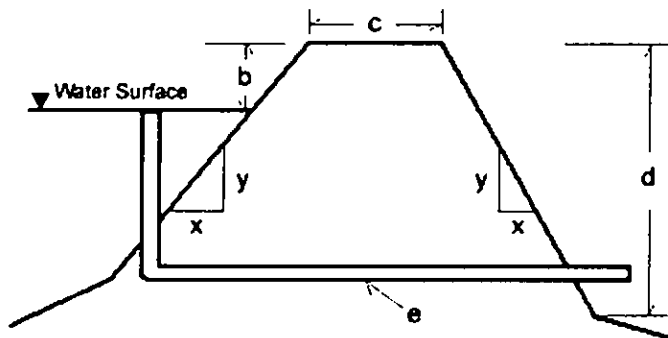
- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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

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

- b) Freeboard _____
- c) Crest Width _____
Crest Length _____
- d) Height _____
- e) Primary Outlet Capacity _____
If pipe, diameter _____
- f) Secondary Spillway Capacity _____
Spillway Width _____
- g) X & Y Slope (e.g. 3 to 1 is a typical slope)
Upstream _____
Downstream _____
- h) Surface Area of Impoundment _____
- i) Storage _____ Acre Feet
- j) Drainage Area Above Dam _____ Acres





Annual water usage			
	Peak Hour	Peak Day	Average Day
Residential	4 gpm/du	18 gpm/du	0.4 gpm/du
45 lots			
Usage Rate	180 gpm	81 gpm	18 gpm

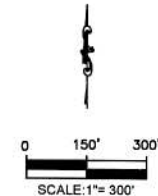
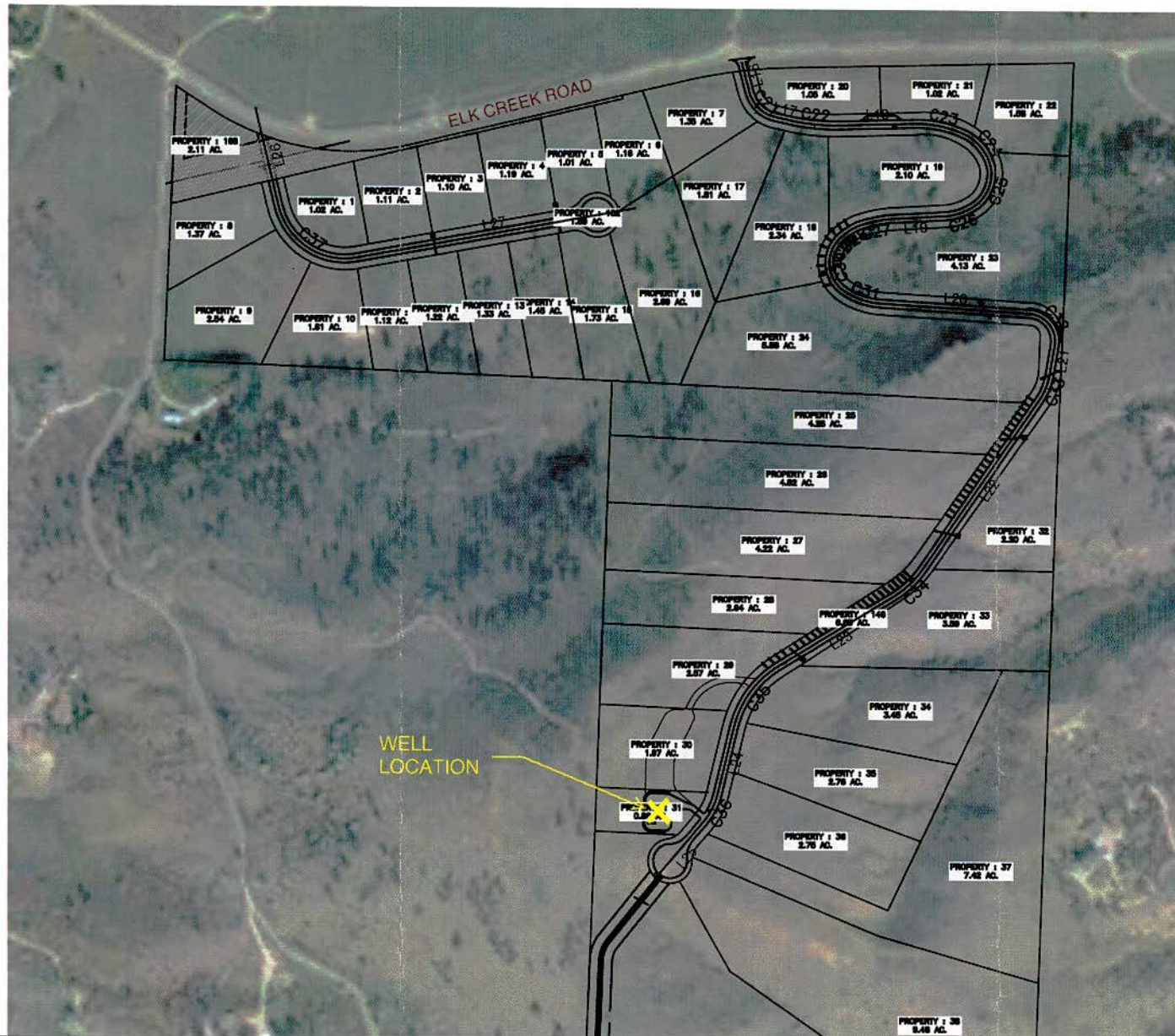
* 105,840.00 gallons/day

* based on a 4 hours of Peak Hour and 12 hours of Peak day and 4 hours average use

38,631,600.00 gallons per year

5,163,962.04 cubic feet per year

118.55 acre feet per year



MONARCH RIDGE ESTATES
 LOCATED IN THE SE 1/4 OF THE SW 1/4 OF & THE SW 1/4 OF THE SE 1/4 OF
 SECTION 7 AND W 1/2 OF THE NE 1/4 OF SECTION 18, T3N, R7E, BHM,
 MEADE COUNTY, SOUTH DAKOTA

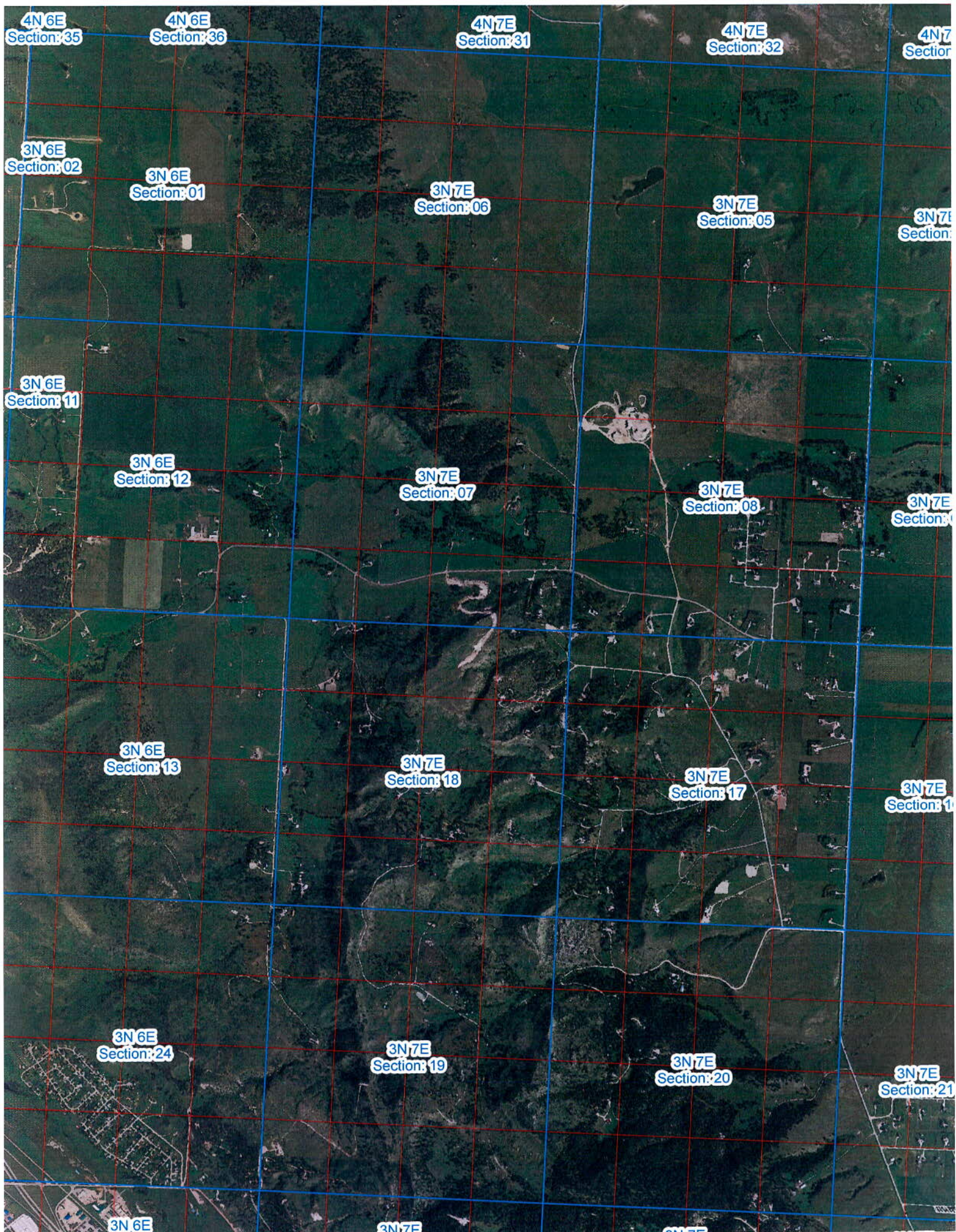
Designed By ILG	Drawn By JKM
Design Date 9/2021	Print Date 3/21/2022
Surveyed By RL, NR, CE	Survey Date 5/2021
Version: PRELIM GRADING	

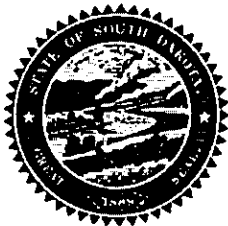
Prepared For:
 RAG HORN, LLC
 ATTN: RAY DVORAK
 PO BOX 680
 BLACK HAWK, SD
 57718

Internal Job No:
 2627.02

Sheet Title:
**ALIGNMENTS
 PLAN**

C5





OFFICE OF THE SECRETARY OF STATE
STEVEN J. BARNETT, SECRETARY OF STATE
JASON LUTZ, DEPUTY SECRETARY OF STATE

Filing Information

Name: **Monarch Ridge Development, Inc.**

General Information

SOS Business ID DB203873
Filing Type: Business Corporation - Domestic
05/31/2021
• **Status:** Good Standing
Duration Term: Perpetual

Registered Agent Address

Raymond J Dvorak
1512 NORTH CEDAR CREST CT
RAPID CITY, SD 57702

Principal Address

1512 N. CEDAR CREST COURT
RAPID CITY, SD 57702

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

Date Filed	Filing Description	Image #
03/02/2022	2022 Annual Report	B0211-7922
05/31/2021	Initial Filing	B0183-1106

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date April 25, 2022

RECEIVED OF Roberta/Raymond Dvorak Monarch Ridge Development Inc. 1120 Settlers Creek Pl., Rapid City SD 57701

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

Fee for Application for Permit No. <u>2018-2</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>2018-2</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

Em



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

April 25, 2022

Monarch Ridge Development Inc.
Raymond J Dvorak
PO Box 680
Black Hawk SD 57718

Dear Mr. Dvorak:

Thank you for submitting the *Application for a Permit to Appropriate Water* for Monarch Ridge Development. There are a couple of items that need to be clarified on the application.

- The amount of water claimed lists 1.34 cubic feet of water per second (cfs), 500 gallons per minute (gpm), and 114 acre-feet (AF).

1.34 cfs equals 600 gpm 1.11 cfs equals 500 gpm

The attached sheet submitted with the application indicates 118.55 AF

Which amounts are you requesting?

If you have any questions, please contact Ron Duvall or me.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
605 773-3352
karen.schlaak@state.sd.us

Water Rights Program - File Documentation

NAME: Ray Dvorak

ADDRESS: Black Hawk SD

DATE: 5-2-22

RE: Pending application for Monarch Ridge Development Inc.

COMMENTS:

Ray called and stated they would like the application to request 500 gpm which equals 1.11 cfs. Regarding the acre-feet amount, he is requesting the amount figured by Renner Associates LLC on the attached sheet which shows 118.55 acre-feet per year.



Karen Schlaak
Water Rights Program

**Water Rights Program
File Documentation**

NAME OF PERSON OR FILE: Raymond Dvorak for Monarch Ridge Development Inc

DATE: May 5, 2022 TELEPHONE: 605-484-0156

RE: Desired aquifer for Application No. 2018-1

COMMENTS:

I called Mr. Dvorak to discuss a slight discrepancy between proposed well depth, 2,400 to 2,600 feet deep, and desired aquifer, Madison, on his application. Mr. Dvorak confirmed he desires to use the Madison aquifer and that the proposed well depths were provided to him by Taylor Drilling. I informed Mr. Dvorak his application would be processed for the Madison aquifer.



Adam Mathiowetz

Natural Resources Engineer

DANR-Water Rights Program



**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. 2018-1, Monarch Ridge Development 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. 2018-1, Monarch Ridge Development, Inc., c/o Raymond Dvorak, PO Box 680, Black Hawk SD 57718.

The Chief Engineer is recommending APPROVAL of Application No. 2018-1 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. 2018-1 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. 2018-1 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 well authorized by Permit No. 2018-1 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
4. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Madison aquifer.
5. Water Permit No. 2018-1 appropriates up to 118.55 acre-feet of water annually.

See report on application for additional information.

Eric Gronlund, Chief Engineer
June 13, 2022

**Report to the Chief Engineer on
Water Permit Application No. 2018-1**

Monarch Ridge Development, Inc.
3 June 2022

Water Permit Application No. 2018-1 seeks to appropriate up to 118.55 acre-feet of water annually (ac-ft/yr) at a maximum instantaneous diversion rate of 1.11 cubic feet of water per second (cfs) from one well to be completed into the Madison aquifer (approximately 2,600 feet deep) located in the W $\frac{1}{2}$ NE $\frac{1}{4}$ Section 18-T3N-R7E, Black Hills Meridian for a water distribution system to be located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 7 and the W $\frac{1}{2}$ NE $\frac{1}{4}$ Section 18; all in T3N-R7E. This site is located approximately 3 miles east of Piedmont, South Dakota.

Aquifer: Madison (MDSN)

Hydrogeologic Characteristics

The Madison Group in South Dakota is a Lower Mississippian and Upper Devonian group of formations that in the Black Hills consists 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 Deadwood aquifer underlying it in some locations [5]. It is also connected to the Minnelusa aquifer above it in some areas of the aquifer [5]. There are other bedrock aquifers that receive natural discharge from the Madison aquifer further away from the Black Hills where confining layers between the Madison aquifer and those aquifers are absent. The hydraulic head of the Madison aquifer is higher than land surface in many places around the Black Hills, causing some wells completed into the aquifer to flow without a pump [6]. Numerous springs and seeps in the Black Hills flow with water that has been determined to come from the Madison aquifer [7].

The applicant did not submit a well completion report with the application, but sufficient information is available to determine the availability of water and possibility of unlawful impairment of existing water rights/permits. There is a well completion report for Water Right No. 1642-1 with a well completed on August 21, 1995 in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of the same section in which this applicant proposes to complete their well which is located approximately 0.7 miles southeast of the proposed well for this application. The driller for the well for Water Right No. 1642-1 indicated encountering the top of the Madison formation 1,925 feet below grade and drilled to a total depth of 2,085 feet, with no change in formation. The driller grouted to a depth of 1,997 feet and is likely to have left an open hole below that depth, as he did not indicate presence of a screen below 1,997 feet below grade. The static water level at the time that well

was completed was 0 feet from ground level, indicating the hydraulic head in the aquifer rose 1,925 feet above the top of the Madison Formation. Based on the elevations at the location of the well for Water Right No. 1642-1 and the location of the proposed well for this application, it is likely that the Madison aquifer is present within the depth proposed by the applicant.

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 Madison aquifer is older and stratigraphically lower than the Greenhorn Formation and the applicant is a water distribution system as defined in SDCL 46-1-6(17). 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 [8]. There are several reports available estimating recharge to the Madison aquifer.

Woodward-Clyde Consultants [9] 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 report is approximately 400,000 ac-ft/yr, assuming almost all of the precipitation that falls on the outcrop infiltrates into the aquifer [9]. Woodward-Clyde Consultants produced a lower-bound recharge estimate of 140,000 ac-ft/yr based on the Rahn and Gries [7] report [9]. However, the Rahn and Gries report estimated recharge for all Paleozoic limestone in the Black Hills, which includes the Madison Group, the Minnelusa Formation, and the Minnekahta Formation [7]. Rahn and Gries [7, p. 15] 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 report did not acknowledge the fact that the Rahn and Gries [7] report estimated minimum recharge for a larger group of formations than the Woodward-Clyde Consultants report covers, and therefore is likely to overestimate recharge to the Madison aquifer [9].

Carter, Driscoll, and Hamade [8] 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 [8]. Carter, Driscoll, and Hamade [8] estimate 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 [8] report uses more years of data, more recent data, and better assumptions than the Woodward-Clyde Consultants [9] and Rahn and Gries [7] reports. Therefore, the best estimate of recharge to the Madison aquifer is based on the Carter, Driscoll, and Hamade [8] 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 by withdrawals by domestic and appropriative wells [10]. 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 159 water rights/permits currently authorized to withdraw from the Madison aquifer and 10 future use water rights/permits reserving water from the Madison aquifer. Table 1 shows the future use permits reserving water from the Madison aquifer [11].

Of the 159 active water rights/permits, 94 are primarily for some type of water distribution system (rural water system, municipal, etc), 31 primarily for irrigation, 14 for commercial use,

11 for industrial use, 4 for domestic use, 2 for geothermal use, 2 for institutional use, and one for recreation [11]. Estimated withdrawals for irrigation use are shown in Table 2. 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 2 acre-feet per acre although actual usage is likely 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. In the case of 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.

Table 1: Future Use Permits from the Madison aquifer [11]

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					

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, that well withdraws approximately 964 ac-ft/yr from the Madison aquifer.

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 acre-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 acre-ft per acre for the land permitted by Water Right No. 1231-1. Kilts estimated that Water Right No. 1650-1 withdraws 55.9 ac-ft/yr [12].

Report on Water Permit App. No. 2018-1

There are 36 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 20,892 ac-ft/yr.

Table 2: Permits with irrigation listed as one beneficial use, or are connected to an irrigation permit [11] [13]

Permit No.	Name/Business	Diversion rate (cfs)	Acres Licensed/ Permitted	Average Report (ac ft/yr)	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	1.110	100.00	0.0	4	200.0	0.0	200.0
1096-1	Bar Bar V Livestock LLC	1.880	216.00	65.3	29	*	*	963.5
1670-1		3.610	253.00	47.5	24	*	*	*
1635-1	Black Hills National Cemetery	0.820	54.50	94.8	26	94.8	356.4	451.2
1452-1	Black Hills State College	3.330	25.44	20.3	33	20.3	1,447.5	1,467.8
1096A-1	Butte Meade Sanitary Dist	1.330	0.00	N/A	0	*	*	*
2458-2	City of Rapid City	0.800	107.00	104.4	21	104.4	0.0	104.4
2002-1	City of Spearfish	1.330	40.00	0.0	1	80.0	0.0	80.0
2313-2	Coca-Cola Bottling	0.330	3.00	7.3	27	7.3	143.4	150.7
1899-1	Davis Ranches Inc	1.430	100.00	0.0	13	0.0	0.0	0.0
2673-2	Diocese of Rapid City	0.120	7.00	8.0	9	14.0	0.0	14.0
1009-1	Donald F/Ann J Brady	0.780	53.73	30.4	40	30.4	0.0	30.4
1185-1		0.380	22.52	110.3	40	110.3	***	110.3
2286-2	Donald Konechne	0.100	38.50	10.2	28	10.2	0.0	10.2
1707A-1	Elkhorn Ridge @ Frawley Ranches LLC	3.705	100.00	0.0	4	200.0	1,610.5	1,810.5
1707E-1		0.000	0.00	9.1	15	**	**	
1931-1		0.170	3.30	3.2	9	6.6	73.9	80.5
1650-1	Foothill Land & Cattle LLC	0.890	0.00	N/A	0	*	*	55.9
1945-1	Frawley Ranches LLC	1.110	265.00	50.7	8	530.0	0.0	530.0
1858-1	Glencoe Camp Resort II LLC	0.860	34.00	0.0	16	0.0	373.8	373.8
2593-2	Hart Ranch Development	0.490	72.50	19.9	15	19.9	213.0	232.9
1911-2	Hart Ranch Development Co	0.880	124.00	120.1	28	120.1	382.5	502.6
1725-2	Janice R Crowser	1.070	75.10	1.0	23	1.0	0.0	1.0
2012-1	Jesse Horstmann	0.500	43.50	N/A	0	87.0	0.0	87.0
1923-1	Jim Montieth	0.110	3.00	1.0	10	6.0	47.8	53.8
858-2	John & Heidi McBride	9.360	655.75	6.7	38	6.7	0.0	6.7
1885-1	John T & Veronica Widdoss	0.110	22.00	16.8	5	44.0	35.7	79.7
1223-1	Montana Dakota Land LLC	0.670	263.00	195.4	40	195.4	0.0	195.4
1960-1	One Diamond Inc	1.280	150.00	148.9	6	300.0	556.4	856.4
1363-1	Spearfish Canyon Entry CI	0.900	80.10	63.3	35	63.3	0.0	63.3
2106-2	Stuart Rice	0.080	2.80	0.8	30	0.8	34.8	35.6
1842-1	Tom C Davis	0.440	330.00	0.0	17	0.0	0.0	0.0
2741-2	Tubbs Land & Cattle LLC	3.340	567.00	149.5	3	1,134.0	0.0	1,134.0
419-2	Wind Cave National Park	0.150	6.00	N/A	0	12.0	65.2	77.2
Total		43.465	3817.74			3398.7	5340.8	9758.9

* Discussed in text. ** gives additional time to develop 1707A-1. *** Reports all use types in irrigation report

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, four other applications are deferred, held in abeyance, or pending review by the Water Management Board. 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. Pending Water Permit Application No. 2013-1 for Santa Maria Land and Cattle Company seeks to appropriate 2.22 cfs to irrigate 460 acres, for a maximum possible withdrawal of 920 ac-ft/yr. Pending Water Permit Application No. 2016-1 for Ellsworth Development Authority seeks to appropriate 1,600 ac-ft/yr at a maximum diversion rate of 2.67 cfs for a water distribution system.

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. 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 65,061 ac-ft/yr. This application may withdraw up to 118.55 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	9,759
Volume limit	36	20,892
Diversion Rate limit	89	16,897
<i>Subtotal (authorized to withdraw)</i>	<i>159</i>	<i>47,548</i>
Future use (Table 1)	10	14,109
Deferred/held/pending	4	5,009
Grand total	173	66,666

Local Hydrologic Budgets

Two studies were conducted that performed local hydrologic budgets on the Madison and Minnelusa aquifers in the area of this application. Carter, et al. [10] divided the whole Black Hills into nine subareas which were delineated to minimize flow across subarea boundaries. Long and Putnam [5] studied the area around Rapid City. The hydrologic budget areas for those two studies are shown in Figure 1 [10] [5].

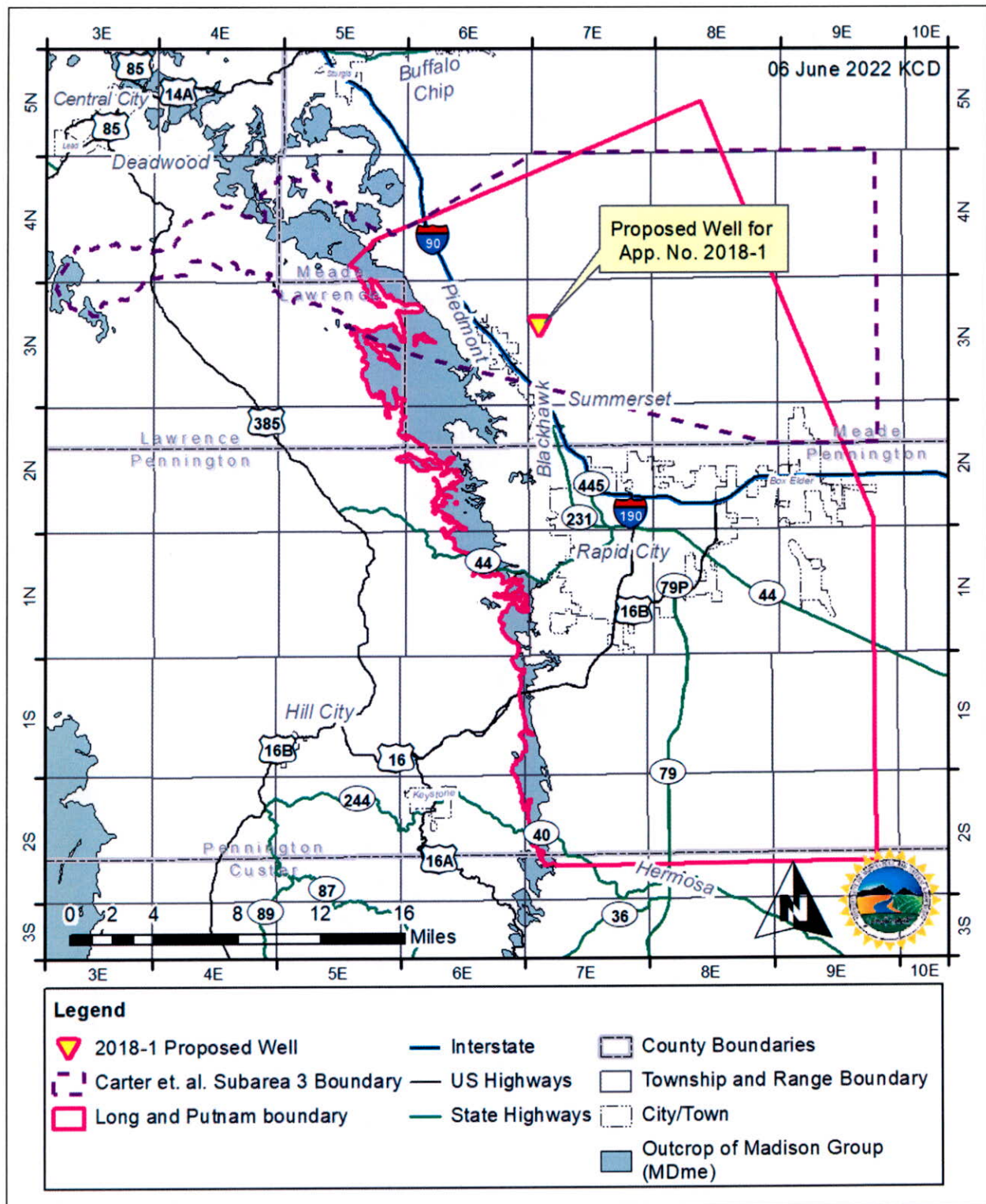


Figure 1: Local hydrologic budget boundaries [10] [5] [4]

Carter, et al. [10]

Carter, et al. [10] divided the area around the Black Hills into nine subareas and 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 3 of their report. The boundaries of the Carter et al. [10] subareas were designed to minimize flow across subarea boundaries. Carter et al. [10] estimated the total recharge to the Madison and Minnelusa aquifers in Subarea 3 was 17.6 cfs. Assuming 55% of the recharge goes to the Madison aquifer, the estimated recharge in Subarea 3 is 9.68 cfs, or approximately 7,013 ac-ft/yr [8] [10]. Carter, et al. [10] 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. Following the same methods as the Statewide Discharge section, withdrawals from Carter et al. [10] Subarea 3 are shown in Table 4. The total estimated appropriation including water reserved for future use is approximately 3,295 ac-ft/yr [11] [13]. This application seeks to withdraw up to 118.55 ac-ft/yr, if approved. Therefore, based on the local hydrologic budget in combination with other information available, there is reasonable probability unappropriated water is available for this application.

Table 4: Madison withdrawals estimated within Carter et al. [10] Subarea 3 [11] [13] rounded to the nearest 1 acre-foot.

Type	Count	Est. Rate (ac-ft/yr)
Irrigation	0	0
Volume limit	4	1,342
Diversion rate limit	7	442
<i>Subtotal (authorized to withdraw)</i>	11	1,784
Future use	2	1,511
Pending/deferred/held	0	0
Grand total	13	3,295

Long and Putnam [5]

Long and Putnam [5] analyzed groundwater flow of the Madison and Minnelusa aquifers in the area near Rapid City, including the area for this application. One product of that analysis was a hydrologic budget for water years 1988 through 1997. Long and Putnam estimated that in their study area, streamflow recharge was 38.8 cfs, precipitation recharge as 16.1 cfs, and groundwater inflow from the Deadwood aquifer was 6.3 cfs, for a total of 61.2 cfs flowing into the Madison and Minnelusa aquifers. Assuming 55% of that value goes to the Madison aquifer, recharge to the Madison aquifer in the area of the Long and Putnam study is 33.7 cfs, equivalent to approximately 24,400 ac-ft/yr. There are 59 water rights/permits currently authorized to withdraw, 4 future use permits reserving water, and one pending application within the Long and Putnam study area. Using the same methods as the Statewide Discharge section, the estimated appropriation from the Madison aquifer in the area of the Long and Putnam study is 29,964 ac-ft/yr (Table 5). Based on Water Rights Staff experience, the water rights/permits that are limited only by diversion rate are likely to actually withdraw less than 60% of their maximum possible limit. Additionally, the hydraulic head in the aquifer may have changed after the Long and Putnam study was completed, meaning groundwater may be flowing into the study area boundaries as a source of recharge. This application seeks to appropriate up to 118.55 ac-ft/yr.

Therefore, based on the local hydrologic budget, in addition to other information, there is reasonable probability unappropriated water is available for this application. Table 5: Madison withdrawals estimated within Long and Putnam study area rounded to the nearest 1 acre-foot.

Type	Count	Est. Rate (ac-ft/yr)
Irrigation	8	1,250
Volume Limit	14	11,695
Diversion rate limit	37	6,466
<i>Subtotal (authorized to withdraw)</i>	59	19,411
Future Use	4	8,953
Pending/Deferred/held	1	1,600
Grand total	64	29,964

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 [14]. The nearest observation well to this application is MD-94A, located approximately 3.0 miles west of this application [14]. Observation Well MD-94A experienced casing problems from 2000 to 2014. The next-nearest observation well to the proposed well for this application is Observation Well PE-95C, located 6.3 miles southeast of this application. Figure 2 shows water levels measured from the top of the casing in Observation Wells PE-95C and MD-94A [14]. In general, water levels rise during periods of higher-than-average rainfall and decline during periods of lower-than-average rainfall. 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.

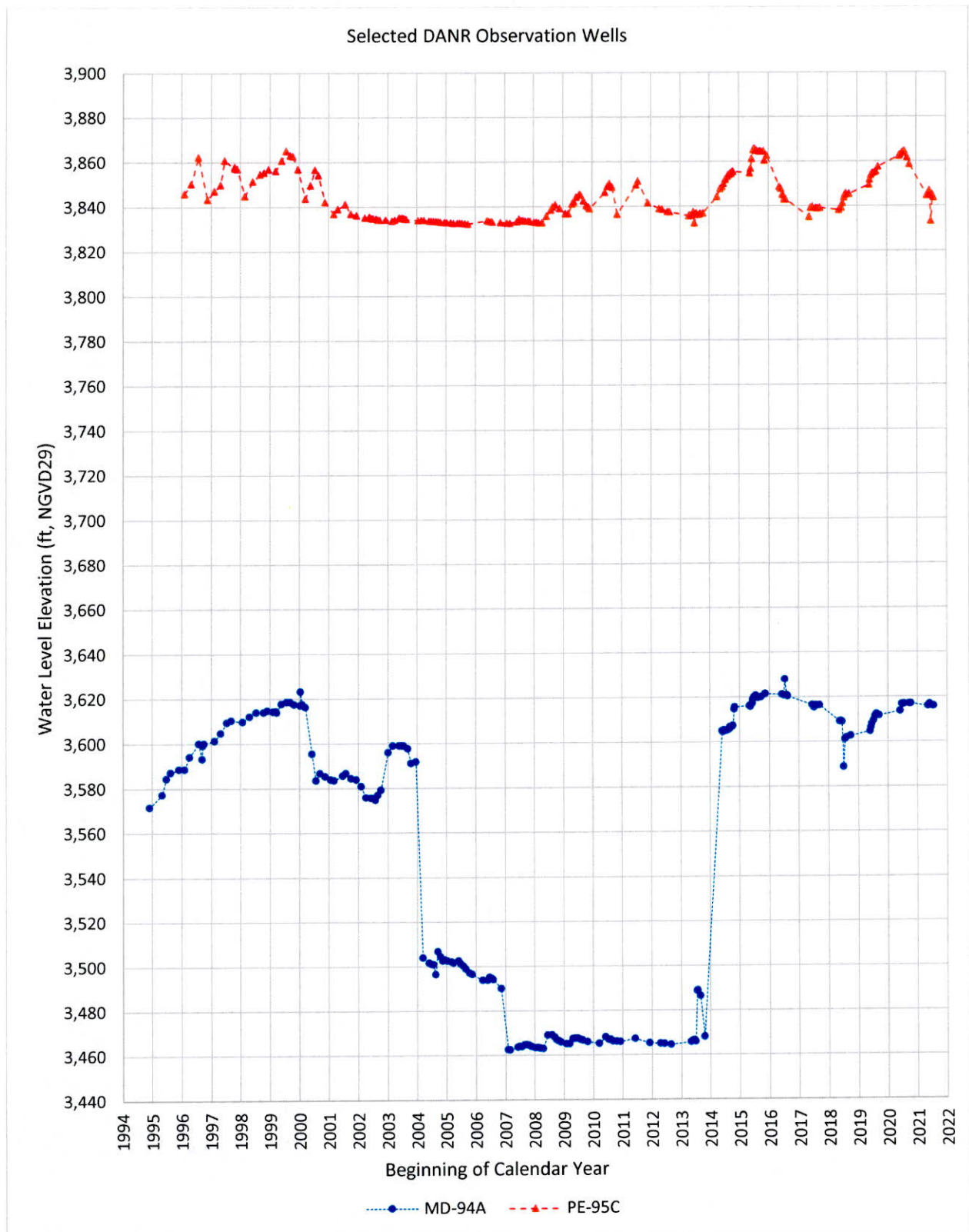


Figure 2: Water level elevations in Observation Wells MD-94A and PE-95C [14]

Possibility of Unlawful Impairment of Existing Water Rights/Permits

The nearest water right/permit to this application that is completed into the Madison aquifer is Water Right No. 1642-1, as described in the Hydrogeologic Characteristics section, located approximately 0.7 miles southeast of the proposed well for this application. The nearest domestic wells likely to be completed into the Madison aquifer that are on file with the Water Rights Program are located approximately 2 miles southwest of this application. 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 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

In the hearing for Water Permit Application No. 2313-2 for Coca-Cola Bottling Company, the Water Management Board determined that to put the waters of the state to maximum beneficial use, hydraulic head would not be protected as a means of water delivery [15]. Some drawdown from this application is likely to occur and nearby well owners may need to lower their pumps or install pumps to access the water in the aquifer. Exact aquifer behavior cannot be known without an aquifer performance test. The applicant must control their withdrawals so that nearby water rights/permits and adequate domestic wells are able to withdraw necessary water. There is no record of well interference complaints from the Madison aquifer in Meade County [16]. Observation wells completed into this aquifer near larger appropriative wells show limited drawdown when the large appropriative wells are in use [14]. Given the lack of well interference complaints in this aquifer in Meade County, limited drawdown shown in observation wells completed near larger appropriations, and the abundance of hydraulic head in the aquifer in the area of this application, there is reasonable probability this application can be developed without unlawful impairment of existing water rights.

Springs

The nearest large springs to this application are Elk Creek Springs, located approximately 5 miles northwest of the proposed well for this application [17]. 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" [18]. 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 springs.

Conclusions

1. Water Permit Application No. 2018-1 seeks to appropriate up to 118.55 ac-ft/yr at a maximum instantaneous diversion rate of 1.11 cfs from one well to be completed into the Madison aquifer located in the W $\frac{1}{2}$ NE $\frac{1}{4}$ Section 18-T3N-R7E, Black Hills Meridian for a water distribution system to be located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 7 and the W $\frac{1}{2}$ NE $\frac{1}{4}$ Section 18; all in T3N-R7E.
2. Based on the hydrologic budgets 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/permits and domestic uses.
4. There is reasonable probability this application can be developed without noticeably impacting flow from springs in the Black Hills.
5. This application is subject to a 20-year term limit.



Kimberly C. Drennon, E.I.

Natural Resources Engineer II – 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, Alexandria, Virginia, 1984. Professional Paper 1273-G.
- [4] J. M. Carter, D. G. Driscoll, J. E. Williamson and V. A. Lindquist, "Atlas of water resources in the Black Hills area, South Dakota," United States Geological Survey, 2002. Hydrologic Atlas 747.
- [5] A. J. Long and L. D. Putnam, "Flow-system analysis of the Madison and Minnelusa aquifers in the Rapid City area, South Dakota - Conceptual model," United States Geological Survey, Rapid City, South Dakota, 2002. Water-Resources Investigations Report 02-4185.
- [6] SD DANR Water Rights Program, "Well-completion report database," SD DANR Water Rights Program, Joe Foss Bldg., Pierre, 2022.

- [7] P. H. Rahn and J. P. Gries, "Large springs in the Black Hills, South Dakota and Wyoming," SD DENR Geological Survey Program, Vermillion, South Dakota, 1973. Report of Investigations 107.
- [8] 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, Rapid City, South Dakota, 2001. Water-Resources Investigations Report 00-4278.
- [9] Woodward-Clyde Consultants, "Well-field hydrology technical report for the ETSI coal slurry pipeline project," United States Department of Interior Bureau of Land Management, 1981.
- [10] J. M. Carter, D. G. Driscoll, G. R. Hamade and G. J. Jarrell, "Hydrologic budgets for the Madison and Minnelusa aquifers, Black Hills of South Dakota and Wyoming, Water Years 1987-96," United States Geological Survey, Rapid City, South Dakota, 2001. Water-Resources Investigations Report 01-4119.
- [11] SD DANR Water Rights Program, "Water right permit file database," SD DANR Water Rights Program, Pierre, South Dakota, 2022.
- [12] W. K. Kilts, "Report to the Chief Engineer on Water Permit Application No. 1987-1," DANR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2019.
- [13] SD Water Rights, "Irrigation reports," SD DANR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2021.
- [14] SD DANR Water Rights Program, "Observation wells," Pierre, South Dakota, 2022.
- [15] South Dakota Water Management Board. *On the Matter of Water Permit Application No. 2313-2 for Coca Cola Bottling Company*, 1995.
- [16] SD DANR Water Rights Program, "County Files," SD DANR Water Rights Program, Joe Foss Bldg., Pierre, South Dakota, 2022.
- [17] 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, Rapid City, South Dakota, 2001. Water-Resources Investigations Report 01-4129.
- [18] South Dakota Water Management Board. *Finding of Facts, Conclusions of Law, and Final Decision on the Matter of Water Permit Application No. 2585-2*, 1997.

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, June 14, 2022 9:46 AM
To: rdovorak55@gmail.com
Subject: Water Permit Application No. 2018-1
Attachments: 3583.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.

Karen Schlaak

DANR - Water Rights Program
(605) 773-3352
Website: <https://danr.sd.gov>



RECEIVED

JUN 30 2022

Form 8

OFFICE OF
WATER

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Meade) SS

I, Kris Stocklin - Johnson

certify that the attached printed Notice was taken
from the The Faith Independent

printed and published in Faith

County of Meade and

state of South Dakota. The notice was published
in the newspaper on the following date:

06/22/2022

Cost of Printing \$38.10

Kris Stocklin Johnson
(Signature)

Editor

(Title)

06/30/2022

(Date Signed)

County - Meade School District 46-1

mit to appropriate up to 118.55 acre-feet of water annually at a maximum pump rate of 1.11 cubic feet of water per second from one well to be completed into the Madison Aquifer (approximately 2,600 feet deep) located in the W 1/2 NE 1/4 Section 18-T3N-R7E. The water is for a water distribution system to be located SE 1/4 SW 1/4, SW 1/4 SE 1/4 Section 7 and the W 1/2 NE 1/4 Section 18, all in T3N-R7E. This site is located approximately 3 miles east of Piedmont SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2018-1 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://dwr.sd.gov/public> or contact Ron Duval for this information, or other information, at the Water Rights Program address provided below.

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://dwr.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 July 5, 2022.

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://dwr.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 July 5, 2022.

If the applicant does not contest the recommendation of the Chief Engineer and no person 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.

NOTICE OF
APPLICATION
NO. 2018-1 to
Appropriate Water

Notice is given that Monarch Ridge Development Inc. c/o Raymond Dvorka, PO Box 680, Black Hawk SD 57718 has filed an application for a water per-

Published June 25, 2022 at the total approximate cost of \$38.10.

*** Proof of Publication ***

STATE OF SOUTH DAKOTA)

County of Pennington)

SS:

S.D. DANR - GROUND WATER

523 E CAPITOL AVE

PIERRE SD 57501

ORDER NUMBER 47766

RECEIVED

JUN 23 2022

OFFICE OF
WATER

The undersigned, being duly sworn, upon his/her oath says: That he/she is now and was at all time hereinafter mentioned, a clerk of the RAPID CITY JOURNAL, a corporation of Rapid City, South Dakota, a legal and daily newspaper printed and published in Rapid City, in said County of Pennington, and has full and personal knowledge of all the facts herein stated as follows: that said newspaper is and at all of the times herein mentioned has been a legal and daily newspaper with a bonafide paid circulation of at least Two Hundred copies daily, and has been printed and published for at least one year prior to the first date of the published notice.

This affidavit is a true and corrected copy of notice which appeared

in said newspaper once each WEEK for one

successive WEEK the first publication there of being on the

18th day of June, 20 22

[Signature]

Section: Legal

Category: 0072 Public Notices

PUBLISHED ON: 06/18/2022

TOTAL AD COST: 70.26

FILED ON: 6/20/2022

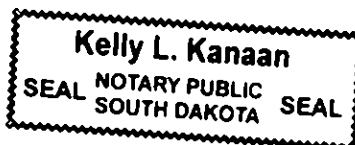
Subscribed and sworn to before me this

20th day of June, 20 22

[Signature] Notary Public

My commission expires

Jan 17, 20 25



Jun 18 L47766

NOTICE OF APPLICATION

NO. 2018-1 to Appropriate Water
Notice is given that Monarch Ridge Development Inc. c/o Raymond Dvorak, PO Box 680, Black Hawk SD 57718 has filed an application for a water permit to appropriate up to 118.55 acre-feet of water annually at a maximum pump rate of 1.11 cubic feet of water per second from one well to be completed into the Madison Aquifer, (approximately 2,600 feet deep) located in the W 1/2 NE 1/4 Section 18-T3N-R7E. The water is for a water distribution system to be located SE 1/4 SW 1/4, SW 1/4 SE 1/4 Section 7 and the W 1/2 NE 1/4 Section 18, all in T3N-R7E. This site is located approximately 3 miles east of Piedmont SD.
Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2018-1 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation, with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.
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 July 5, 2022.
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 July 5, 2022.
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 \$70.26)

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, June 14, 2022 9:39 AM
To: RCY Legals (legals@rapidcityjournal.com)
Subject: 2018-1 Monarch Ridge Development Inc
Attachments: 2018-1public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on June 22, 2022.

Monarch Ridge Development Inc, c/o Raymond J Dvorak, PO Box 680, Black Hawk SD 57718 (605 484-0156) 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.

Karen Schlaak

DANR - Water Rights Program
(605) 773-3352
Website: <https://danr.sd.gov>



Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, June 14, 2022 9:39 AM
To: 'faithind@faithsd.com'
Subject: 2018-1 Monarch Ridge Development Inc
Attachments: 2018-1public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on June 22, 2022.

Monarch Ridge Development Inc, c/o Raymond J Dvorak, PO Box 680, Black Hawk SD 57718 (605 484-0156) 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.

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

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

June 14, 2022

Monarch Ridge Development Inc.
c/o Raymond Dvorak
PO Box 680
Black Hawk SD 57718

Dear Mr. Dvorak:

Water Permit Application No. 2018-1 for water distribution system use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Faith Independent printed at Faith (Ph # 605 967-2161) and the Rapid City Journal printed at Rapid City (Ph # 605 394-8336). You will need to contact the newspapers 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 newspapers to authorize publication of your Notice and to arrange for payment. Early contact with the papers can eliminate delays. Upon receiving authorization from you, the publishers have been instructed to publish your notice. The newspapers have 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,

Karen Schlaak

Karen Schlaak
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.

NOTICE OF APPLICATION NO. 2018-1 to Appropriate Water

Notice is given that Monarch Ridge Development Inc, c/o Raymond Dvorak, PO Box 680, Black Hawk SD 57718 has filed an application for a water permit to appropriate up to 118.55 acre-feet of water annually at a maximum pump rate of 1.11 cubic feet of water per second from one well to be completed into the Madison Aquifer (approximately 2,600 feet deep) located in the W 1/2 NE 1/4 Section 18-T3N-R7E. The water is for a water distribution system to be located SE 1/4 SW 1/4, SW 1/4 SE 1/4 Section 7 and the W 1/2 NE 1/4 Section 18; all in T3N-R7E. This site is located approximately 3 miles east of Piedmont SD.

Pursuant to SDCI. 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2018-1 with qualifications because 1) unappropriated water is available, 2) existing domestic water uses and water rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest as it pertains to matters within the regulatory authority of the Water Management Board. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

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 SDCI. 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 SDCI. 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 July 5, 2022.

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 July 5, 2022.

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_



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

JUL 26 2022

Monarch Ridge Development Inc
c/o Raymond J Dvorak
PO Box 680
Black Hawk SD 57718

Dear Mr. Dvorak:

Enclosed is Water Permit No. 2018-1 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