

WATER PERMIT NO. 8571-3

Name of Applicant: Maxwell Colony

Address: 42805 Maxwell Rd, Scotland SD 57059

Phone: 605 660-2231

Amount of Water Claimed: 3.11 cfs

Total Acres: 234 acres

Source of Water Supply: groundwater (2 wells)

Water to be used for: irrigation

County: Yankton

Type of Waste Disposal System:

Location: 4 miles east of Scotland

PRIORITY

Date Received: 9-23-21

Application/License Fee: \$ 500

Corrected Application Received:

Period of Annual Use: May 1 – Sept 30

Remarks:

Diversion Points: NE 1/4 SW 1/4 Sec 6-T96N-
R57W

Land to be Irrigated: S 1/2 NW 1/4, SW 1/4 NE
1/4, W 1/2 SE 1/4, SW 1/4 Sec 6-T96N-R57W

Depth of Well: 178 & 173 feet deep

Well Driller:

Remarks:

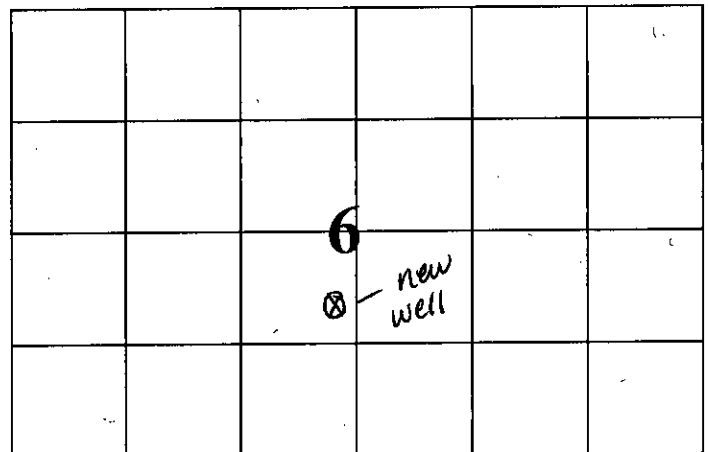
Type of Map: aerial

Prepared by: Keith DeJong

Reviewed and the Number Assigned on: 9-23-21

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



SOUTH DAKOTA WATER PERMIT NO. 8571-3

Date of first receipt of application December 23, 2021.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8571-3 to Maxwell Colony, 42805 Maxwell Rd, Scotland SD 57059 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. 8571-3 authorizes an additional well, appropriates 2.22 cubic feet of water per second (cfs), and adds irrigated acres. Water Permit No. 6758-3 appropriates 4.89 cfs from two wells for irrigation of 980 acres. An investigation of the permit found two wells completed into the Lower James Missouri:Scotland Aquifer (163 and 178 feet deep) located in the NW 1/4 SE 1/4 Section 1-T96N-R58W and the NE 1/4 SW 1/4 Section 6-T96N-R57W capable of pumping 2.40 cfs to irrigate 376 acres located in the S 1/2 NE 1/4, E 1/2 SW 1/4, SE 1/4 Section 1-T96N-R58W and the SW 1/4, NE 1/4 NW 1/4, S 1/2 NW 1/4, SW 1/4 NE 1/4, W 1/2 SE 1/4 Section 6-T96N-R57W. The pivot in Section 6 was increased in size by 121 acres after the time to place water to beneficial use expired. These 121 acres will be assigned a new priority date. This permit also adds a well to be completed into the Lower James Missouri:Scotland Aquifer (approximately 173 feet deep) located in NE 1/4 SW 1/4 Section 6-T96N-R57W with a 2.22 cfs increase in the existing permitted pump rate. This permit and Water Permit No. 6758-3 will authorize a total of 4.62 cfs from the three wells for irrigation of 376 acres. This site is located approximately 4 miles east of Scotland SD.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: May 1 – October 31.
3. The date from which applicant may claim right is December 23, 2021 (121 acres and 2.22 cfs).
4. The date of approval of Permit No. 8571-3 is February 21, 2022.
5. One-fifth of the construction is to be completed on or before August 21, 2024.
6. All construction is to be completed on or before February 21, 2027.
7. Water is to be put to beneficial use on or before February 21, 2031.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The wells approved under Water Permit No. 6758-3 and this Permit are located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

(continued)

2. The additional well authorized by Permit No. 8571-3 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.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

APR 28 2022
date



FORM 2: Application for irrigation in South Dakota
(type or print)

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8571-3</u>	(office use only) Hydrologic Unit <u>10160011</u>
	Basin <u>James River</u>	
	Newspaper <u>Press & Dakotan</u>	

RECEIVED
DEC 23 2021
WATER RIGHTS PROGRAM

Application For Permit To Appropriate Water For Irrigation

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

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

We do not want to irrigate from the 90 acre-foot storage dam. Instead we want to drill an additional well south of the existing well. (see maps)

1. Name to Appear on Irrigation Permit Maxwell Colony

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

Mailing Address 42805 Maxwell Rd Scotland SD 57059
(Address) (City) (State) (Zip Code)

Phone 605-583-2861 Mobile 605-660-2231 Email (121 Ac add'l)

2. Amount of water claimed 2.22 ^{add'l} *CFS or 1400 ^{1000 add'l} **GPM NA ***AF Total Acreage 1234
(*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Wells - one existing and one proposed

4. Location of point of diversion 2 wells in SW 1/4 sec 6 T96N R57W
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)
(NE 1/4 SW 1/4) County Yankton

5. County or counties where water will be used Yankton

6. Annual period during which water is to be used May 1 - October 31

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

NE NW 3 acres		SW NE 6 acres	
Land Description	Acres	Land Description	Acres
SE NW Sec 6-T96N-R57W	39	SW SW	24
SW NW	26	SE SW	39
NW SW	39	SW SE	23
NE SW	32	NW SE	3

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

Drilling a new well south of the existing well. The Second well be used with the existing well to irrigate these Acres listed above. The pivots are in place and will be fed water with these two wells.

I, Mark Taylor Sec. Treas., 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.

(type or print in ink)

1. Well Information - Proposed Construction

I new well

- a) Drill Hole Diameter _____ Depth *≈ 173 ft.*
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well:
On applicants property _____ On property owned by others *≈ 1/2 mile*

2. Wastewater Disposal System Information

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

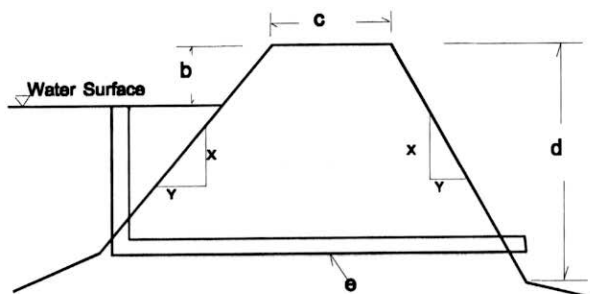
3. Dugout Information

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

4. Water Storage Dams

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

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



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

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Agriculture and Natural Resources

Date September 23, 2021

RECEIVED OF Maxwell Hutterian Brethren Inc. 42805 Maxwell Colony Scotland SD 57059

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

Fee for Application for Permit No. <u>8550-3</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. _____	\$ _____
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>500.00</u>

By Eric Bromlund
Chief Engineer
EB

*8550-3 was withdrawn by applicant.
Application fee applied towards replacement
No. 8571-3.*

WATER RIGHTS PROGRAM -- FILE DOCUMENTATION

NAME: Mark Hofer, Maxwell Colony

ADDRESS: 42805 Maxwell Road, Scotland SD 57059

DATE: December 27, 2021

Mobile: 605.660.2231

RE: Application to add well to supply pivot located in section 6-T96N-R57W

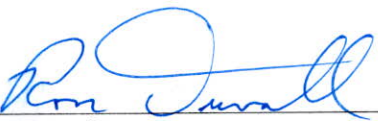
COMMENTS:

I contacted Mark Hofer concerning an application received on December 23, 2021, to drill an additional well to supply an irrigation pivot located in section 6-T96N-R57W. Along with the application, Mr. Hofer noted that Application No. 8550-3 to irrigate the same acreage from a storage dam was being withdrawn. Public notice for Application No. 8550-3 was not completed in all the required newspapers.

Concerning the new application for an additional well to supplement the existing well, I asked Mr. Hofer the following:

- I asked whether the acreage covered by the northern portion of the pivot in section 6-T96N-R57W be included on the application. Mr. Hofer's response was "yes."
- I asked whether the 1,400 gpm requested should be left in place or use 1,000 gpm to supply the pivot as requested in Application No. 8550-3. Mr. Hofer asked for 1,400 gpm to be used.
- I asked whether the proposed well would be approximately the same depth as the existing well in section 6. Mr. Hofer responded "yes."
- I asked about the distance to the nearest neighbor's domestic well in the same aquifer. Mr. Hofer believe the nearest domestic well was approximately one-half mile away.

Based on Mr. Hofer's responses, I modified the application as requested.



Ron Duvall
Water Rights Permitting Administrator
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. 8571-3, Maxwell Colony**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 8571-3, Maxwell Colony, 42805 Maxwell Rd, Scotland SD 57059.

The Chief Engineer is recommending APPROVAL of Application No. 8571-3 because 1) 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. The wells approved under Water Permit No. 6758-3 and this Permit are located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The additional well authorized by Permit No. 8571-3 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.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Eric Gronlund

Eric Gronlund, Chief Engineer
January 28, 2022

**REPORT TO THE CHIEF ENGINEER
WATER PERMIT APPLICATION NO. 8571-3
MAXWELL COLONY
JANUARY 28, 2022**

Water Permit Application No. 8571-3 proposes to appropriate 2.22 cubic feet of water per second (cfs), add an additional well, and add irrigated acres to what was authorized under Water Permit No. 6758-3. Water Permit No. 6758-3 appropriates 4.89 cfs of water from two wells for the irrigation of 980 acres. An investigation of Water Permit No. 6758-3 found two wells (163 feet and 178 feet deep) completed into the Lower James Missouri: Scotland aquifer located in the NW $\frac{1}{4}$, SE $\frac{1}{4}$ Section 1-T96N-R58W and the NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 6-T96N-R57W. These two wells were found to be capable of pumping 2.40 cfs to irrigate 376 acres located in the S $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ Section 1-T96N-R58W and the SW $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ Section 6-T96N-R57W. The pivot in Section 6 was increased in size by 121 acres after the time to place water to beneficial use period expired. If this application is approved, these 121 acres will be assigned a new priority date. This application also requests an additional well to be completed into the Lower James Missouri: Scotland aquifer (approximately 173 feet deep) located in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 6-T96N-R57W with a 2.22 cfs pump rate. This application, if approved, and Water Permit No. 6758-3 will authorize a total of 4.62 cfs from three wells for irrigation of 376 acres. The site is in Yankton County, approximately 4 miles east of Scotland, SD.

AQUIFER: Lower James Missouri: Scotland (LJM:S)

Aquifer Characteristics

The names and boundaries of aquifer units in this report were established by Hedges et al., (1982). As per Figure 1, they consist of the Lower James Missouri, the Choteau: Tyndall and the Lower James Missouri: Scotland. Assessment of the water resources in Bon Homme County was completed by Jorgensen (1971) and included the Lower James Missouri: Scotland aquifer as a portion of the Tyndall-Scotland aquifer. Assessment of the water resources were published in Yankton County by Bugliosi (1986) and in Hutchinson County by Lindgren and Hansen (1990). They both included the Lower James Missouri: Scotland aquifer as a portion of the Lower James Missouri aquifer. The area defined by Hedges et al., (1982) as the Lower James Missouri: Scotland aquifer boundary is a glacial outwash deposit composed of sand and gravel (Jorgensen, 1971; Bugliosi, 1986; Lindgren and Hansen, 1990). The Lower James Missouri: Scotland aquifer underlies approximately 72,800 acres in Bon Homme, Hutchinson, and Yankton Counties and contains approximately 1,110,650 ac-ft of recoverable water in storage (Hedges et al., 1982).

Two well completion reports were submitted for Water Permit No. 6758-3. The first one, completed on September 18, 2007, reported sand from 118 to 177 feet, a screened interval between 137.5 to 178 feet, and a static water level of 73 feet at the time of drilling. The second well, completed September 26, 2007, reported sand from 119 to 163 feet, a screened interval between 133 to 163, and a static water level of 55 feet at the time of drilling. This indicates that at the proposed site the aquifer is under confined conditions with an average depth to the top of the aquifer material at 118.5 feet, an average static water level of 64 feet and, an average of 54.5 feet of artesian head pressure.

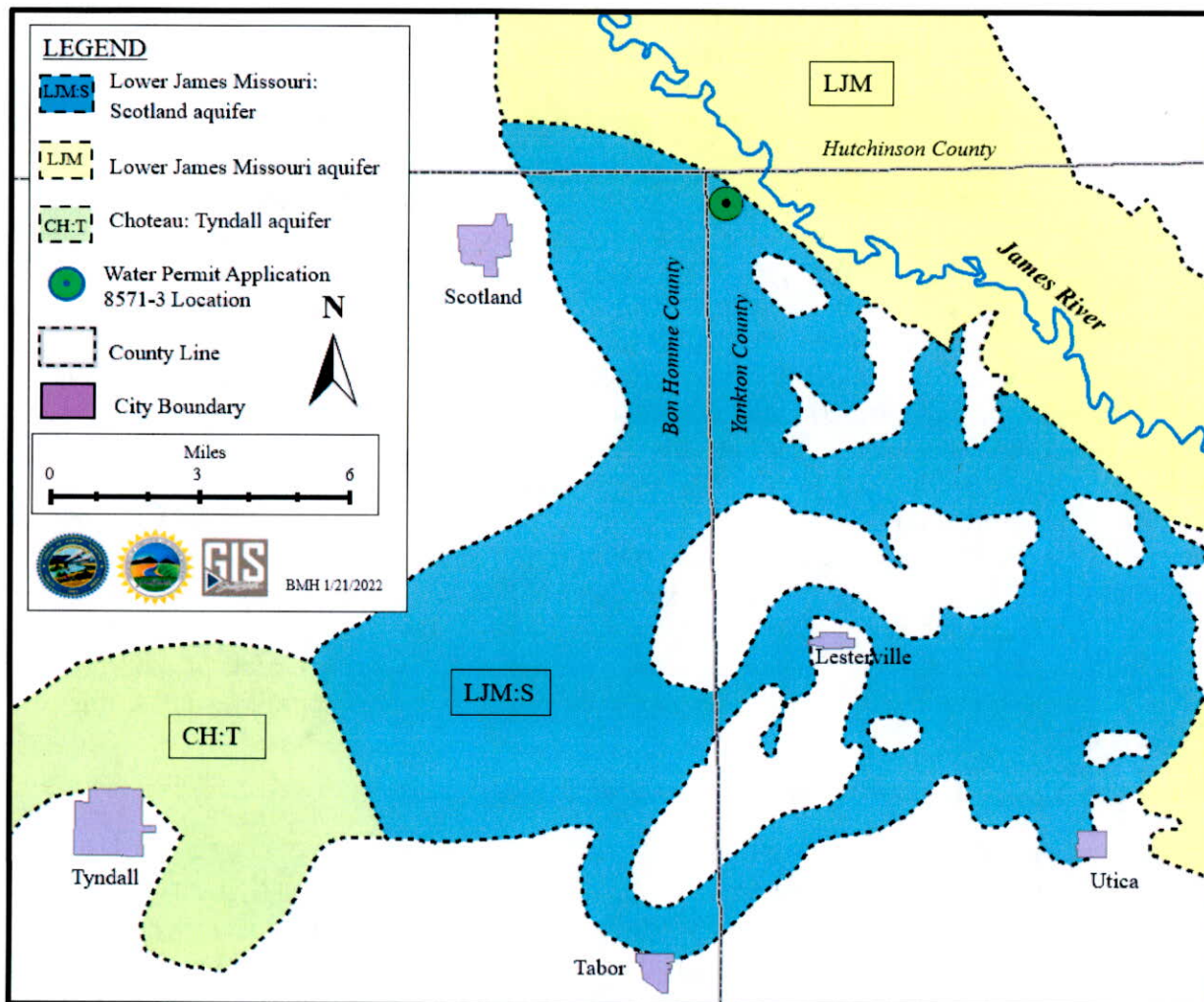


Figure 1. Water Permit Application No. 8571-3 shown within the boundary of the Lower James Missouri: Scotland aquifer (Hedges et al., 1982).

SOUTH DAKOTA CODIFIED LAW (SDCL) 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may only be issued if there is reasonable probability that unappropriated water is available for the applicant's proposed use, the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, the proposed use is a beneficial use, and the permit is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board. This report will address water availability and potential for unlawful impairment of existing domestic users and water rights within the Lower James Missouri: Scotland aquifer.

WATER AVAILABILITY

Water Permit Application No. 8571-3 proposes to appropriate water from the Lower James Missouri: Scotland aquifer. The probability of unappropriated water being available from an aquifer can be evaluated by considering SDCL 46-6-3.1 which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source

will exceed the quantity of the average estimated annual recharge of water to the groundwater source..." If the source of the water is older or lower than the Greenhorn Formation and a water distribution system as defined in SDCL 46-1-6(17) has applied for a permit, the Board need not consider the balance of recharge to and withdrawal from the aquifer. For this application, a water distribution system is not involved, and the aquifer is not older or lower than the Greenhorn Formation, therefore the balance of recharge and withdrawal must be considered.

Hydrologic Budget

Recharge:

Recharge to the Lower James Missouri: Scotland aquifer is primarily through infiltration of precipitation where the aquifer is exposed at the surface and inflow from other hydrologically connected bedrock and glacial aquifers (Jorgenson, 1971; Bugliosi, 1986). Bugliosi (1986) noted that stratigraphic evidence showed that the Lower James Missouri aquifer was in hydraulic connection with the Tyndall-Scotland aquifer. This implies that the Lower James Missouri: Scotland aquifer is in hydraulic connection with both the Lower James Missouri and the Choteau: Tyndall aquifers. Hedges et al., (1985) utilized regional flow-net analysis to calculate a recharge rate for the Lower James Missouri: Scotland of 1.5 inches per year (in/yr). When applying this to the areal extent of the Lower James Missouri: Scotland aquifer (72,800 acres), the estimated recharge to the aquifer is 9,100 acre-feet per year (ac-ft/yr). Hedges et al., (1985) also recommended a recharge rate of 0.15 to 0.6 in/yr for buried, confined aquifers. When this range is applied to the areal extent of 72,800 acres, a recharge range for the Lower James Missouri: Scotland is between 910 to 3,640 ac-ft/yr. Locally, where the confined aquifer encounters unconfined conditions, the recharge rates may be within the range calculated for non-buried surficial aquifer (Hedges et al., 1985). Because the aquifer is under confined conditions in the location of the proposed application, the more conservative values of 910 to 3,640 ac-ft/yr will be utilized as the recharge range for this aquifer.

Discharge:

Discharge from the Lower James Missouri: Scotland aquifer occurs through evapotranspiration, outflow to hydrologically connected aquifers, and well withdrawals (Jorgensen, 1971). Currently, there are 17 water rights/permits (1 domestic and 16 irrigation) appropriating water from the Lower James Missouri: Scotland aquifer (Water Rights, 2022a). For non-irrigation uses, the total estimated volume of water to be withdrawn can be determined by assuming that water rights/permits limited by an annual volume will pump the entire appropriated volume annually or that water rights/permits not limited by annual volume will pump at the maximum permitted diversion rate 60 percent of the time. The domestic use Water Right No. 7072-3, with a licensed diversion rate of 0.11 cfs, is not limited by an annual volume therefore, it is assumed to withdraw approximately 48 ac-ft/yr.

Discharge from the Lower James Missouri: Scotland aquifer also occurs through irrigation use with actual pumpage from the aquifer reported to the DANR-Water Rights Program through annual irrigation questionnaires. Currently, there are 16 irrigation water rights/permits in the Lower James Missouri: Scotland aquifer (Water Rights, 2022a). Table 1 contains both the historical (1979 – 2020) average of annual withdrawal rate and the average annual withdrawal rate from 2011 – 2020 to represent the increase in water use from the aquifer due to development (Water Rights, 1979 - 2020). With the number of irrigation water rights/permits continuing to

increase over the last decade, the historical estimated average annual withdrawal rate for irrigation appropriations may not accurately reflect the current level of development. An average annual withdrawal rate of approximately 651 ac-ft/yr, during the time period from 2011 to 2020, was determined to better reflect the level of irrigation development in the Lower James Missouri: Scotland aquifer.

Table 1. Reported historic irrigation use (1979-2020) and increased irrigation use (2011-2020) from the Lower James Missouri: Scotland aquifer (Water Rights, 1979 - 2020).

Year	No. of Water Rights/Permits	Reported Pumpage (ac-ft/yr)	Year	No. of Water Rights/Permits	Reported Pumpage (ac-ft/yr)
1979	3	118	2002	6	423
1980	3	73	2003	7	484
1981	5	119	2004	7	178
1982	5	126	2005	7	384
1983	7	119	2006	7	531
1984	6	186	2007	7	212
1985	6	241	2008	10	358
1986	7	190	2009	10	111
1987	7	194	2010	10	63
1988	7	359	2011	11	398
1989	7	297	2012	10	974
1990	7	417	2013	16	1,181
1991	7	283	2014	16	682
1992	7	120	2015	18	847
1993	8	26	2016	18	712
1994	7	196	2017	19	759
1995	7	275	2018	19	350
1996	7	240	2019	19	131
1997	7	245	2020	17	475
1998	7	250	Avg	9	344
1999	7	271	Max	19	1,181
2000	6	446	Min	3	26
2001	6	385	AVG 2011-2020	16	651

There are numerous domestic wells on file with the Water Rights Program within the Lower James Missouri: Scotland aquifer (Water Rights 2022b). Domestic users are not required to report their annual water usage and, with their low diversion rates, are not considered a significant portion of the hydrologic budget. Additionally, some domestic wells may no longer be in use after transitioning to getting water from one of the rural water systems in the area.

There is one pending applications for the Lower James Missouri: Scotland aquifer, Water Permit Application No. 8568-3 proposing to irrigate 30 acres. Utilizing an average annual application rate of 1.0 feet per permitted acre, 30 ac-ft/yr will be included in the water balance for the pending applications.

Water Balance:

The estimated average annual withdrawal rate from the Lower James Missouri: Scotland aquifer is 729 ac-ft/yr (non-irrigation: 48; irrigation: 651; pending: 30). The estimated range for annual

recharge for the Lower James Missouri: Scotland aquifer is 910 to 3,640 ac-ft/yr. The expected use of 121 ac-ft/yr (irrigating 121 acres with an application rate of 1 foot per acre) by this application does not result in an exceedance of the minimum recharge rate compared to the annual withdrawal for the Lower James Missouri: Scotland aquifer. Therefore, there is reasonable probability unappropriated water is available for this application.

Observation Well Data

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

The DNR-Water Rights Program monitors 18 observation wells completed into the Lower James Missouri: Scotland aquifer (Water Rights, 2022c). Figures 2 and 3 are hydrographs for the observation wells within 2.5 miles of the proposed diversion. The data points utilized to construct the hydrographs are measurements of the static water level in the observation wells from the top of the well casing. They are representative of the hydrographs for the other observation wells completed into the Lower James Missouri: Scotland aquifer. The hydrographs show the water level of the aquifer is stable over the period of record. They indicate that the aquifer responds well to climatic conditions with rising water levels during wet periods and declining water levels during drier periods. They also demonstrate that any drawdowns from pumping are temporary because the water levels typically recover to pre-pumping levels after the irrigation season. This recovery indicates that climatic conditions (the natural effects of recharge to and discharge from the aquifer) govern the long-term fluctuations of the water level rather than the impacts of pumping from the Lower James Missouri: Scotland aquifer. Recognizing that recharge to and natural discharge from the aquifer can be captured for pumping, there is a reasonable probability that unappropriated water available in this aquifer.

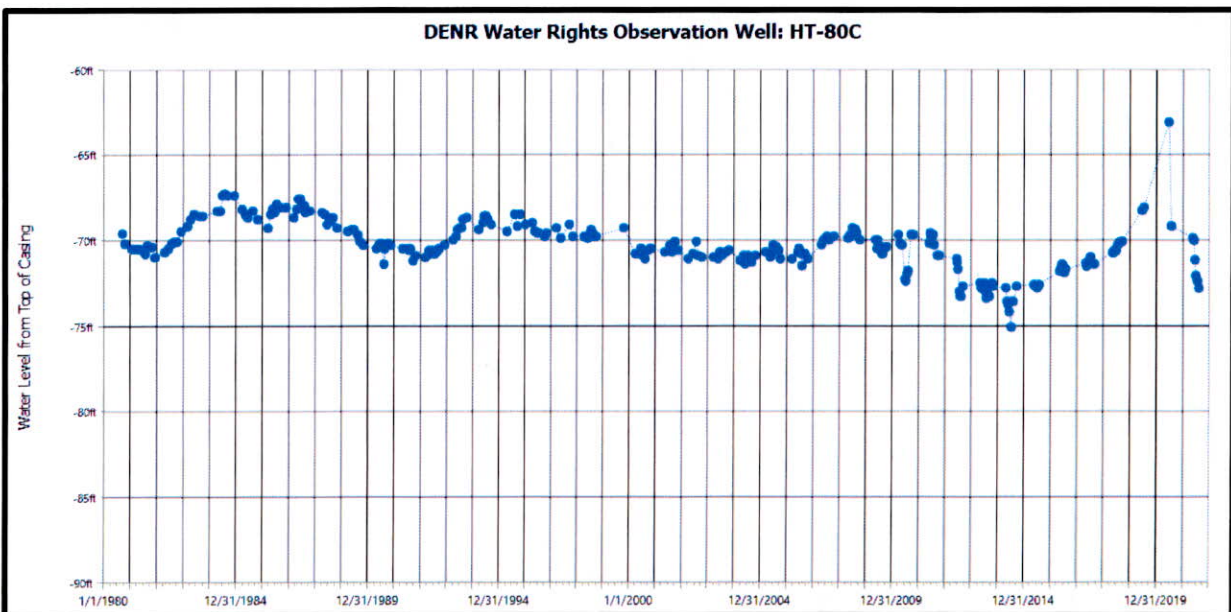


Figure 3. Hydrograph for observation well HT-80C. It is approximately 0.8 miles northwest of the proposed well location for Water Permit Application No. 8571-3 (Water Rights, 2022c).

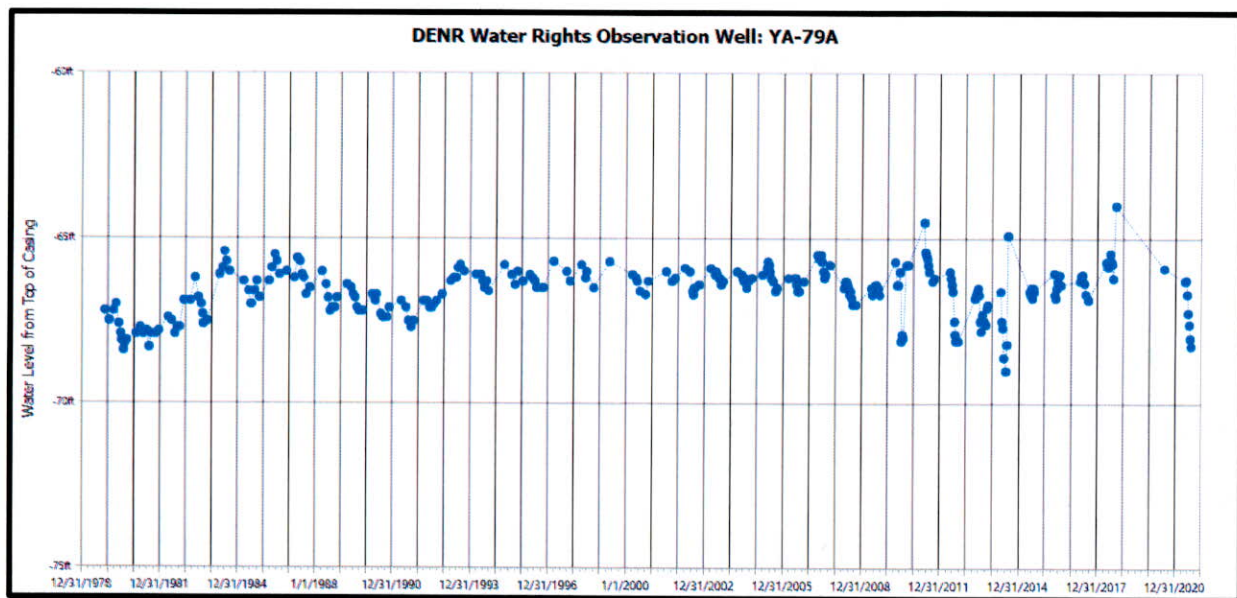


Figure 4. Hydrograph for observation well YA-79A. It is approximately 2.5 miles south of the proposed well location for Water Permit Application No. 8571-3 (Water Rights, 2022c).

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS

Currently, there are a total of 17 water rights/permits (1 domestic and 16 irrigation) appropriating water from the Lower James Missouri: Scotland aquifer (Water Rights, 2022a). The closest water rights that appropriate water from the Lower James Missouri: Scotland aquifer are Nos. 7524-3 held by Jim Kulish and 7850-3 held by Wayne Heckenlaible. These are irrigation permits located approximately 6.9 miles southeast of the proposed location.

Bugliosi (1986) noted hydrological connection likely exists between the Lower James Missouri: Scotland and the Lower James Missouri aquifers. The closest water that appropriates water from the Lower James Missouri aquifer is No. 7827-3. It is located 0.8 miles north of the proposed diversion and is a commercial permit maintained by the Maxwell Colony. Table 2 lists the water rights/permits shown in Figure 5 located within 5 miles of the proposed well location. Because this aquifer is under confined conditions, drawdown due to pumping is likely and will be greatest at the production well. The exact drawdown cannot be determined without an aquifer performance test.

The Water Management Board has recognized that to place water to beneficial use, a certain amount of drawdown may occur. Observation Well HT-80C, as per Figure 2, shows that pumping does not significantly drawdown the water level in the observation well. The hydrograph also indicates a minimum of three feet of artesian head pressure above the top of the aquifer in relation to the lowest recorded water levels. There are no complaints regarding well interference in the Lower James Missouri aquifer or the Lower James Missouri: Scotland aquifers in Bon Homme and Yankton Counties on file with the DANR-Water Rights Program (Water Rights, 2022d). Therefore, it is reasonable to conclude that drawdown from the proposed well will not unlawfully impair existing users with adequate wells.

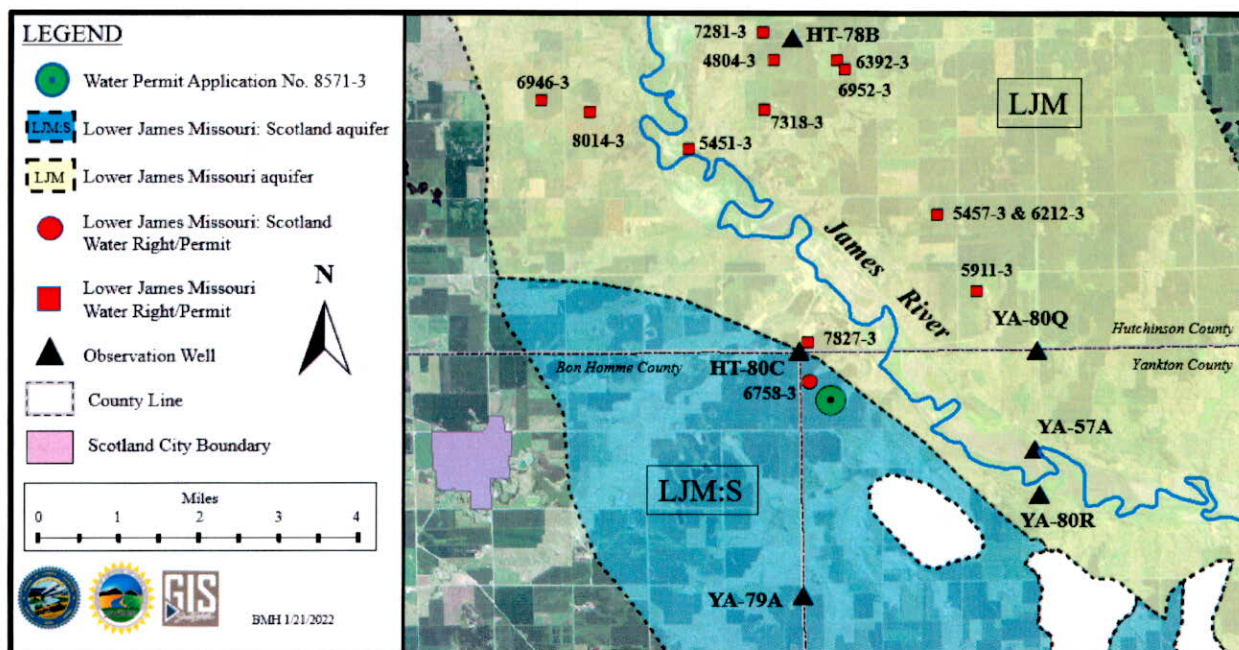


Figure 5. Existing water rights/permits in the Lower James Missouri aquifer and Lower James Missouri: Scotland within five miles Water Permit Application No. 8571-3 (Water Rights 2022a, Water Rights 2022c).

Table 2. Water rights/permits shown in Figure 5 (Water Rights, 2022a).

Permit Number	Name	Rate (cfs)	Acres	Use ^a	County ^b	Aquifer ^b	Status ^a
6758-3	MAXWELL COLONY	4.89	980	IRR	YA	LJM:S	PE
7827-3	MAXWELL COLONY	0.33	0	COM	HT	LJM	
6212-3	JOHN ULMER	0.89	20	IRR			
6952-3	BRIAN HERRBOLDT	0.00	90				
7281-3	BRIAN METTLER	1.78	134				
7318-3	RONALD GUTHMILLER	2.00	190				
8014-3	KEVIN SCHAEFFER	1.56	120				
4804-3	MARK ALLEN ULMER	1.78	131				
5451-3	MERRITT E ULMER	1.10	77.5				
5457-3	JOHN ULMER	1.88	132				
5911-3	JOHN ULMER	1.40	98				
6392-3	BRIAN HERRBOLDT	3.56	272		IRR	HT	LJM
6946-3	BRETT GUTHMILLER	1.17	133				
a - LC: Licensed Water Right; PE: Permitted Water Right; IRR: Irrigation; COM: Commercial							
b - YA: Yankton; HT: Hutchinson; LJM:S: Lower James Missouri; Scotland; LJM: Lower James Missouri							

There are several domestic wells on file with the DANR-Water Rights Program within 0.3 miles south and southwest of the proposed site that are maintained by the Maxwell Colony. The closest domestic well on record not maintained by the Maxwell Colony is approximately 0.9 miles south of the proposed well site (Water Rights, 2022b). Additionally, there may be domestic wells completed into the Lower James Missouri: Scotland aquifer that are not on file with the DANR-Water Rights Program.

To protect domestic well users, the Water Management Board defined an “adversely impacted domestic well” in ARSD 74:02:04:20(7) as:

“a well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient water for the well owner’s needs”.

The Water Management Board considered the delivery of water by artesian head pressure versus maximum beneficial use during the issuance of Water Right No. 2313-2 for Coca-Cola Bottling Company of the Black Hills. The Board adopted Findings of Facts and Conclusions of Law that noted the reservation of artesian head pressure for delivery of water is inconsistent with SDCL 46-1-4 which states, “general welfare requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable...” (Water Rights, 1995). Furthermore, the Water Management Board found if increased cost or decreased production as a result of impacts on artesian head pressure by legitimate users is considered as an unlawful impairment, it conflicts with SDCL 46-1-4 (Water Rights, 1995). Consequently, some existing well owners may need to lower their pumps due to deeper water levels depending on the specific characteristics of the Lower James Missouri: Scotland aquifer at their location; particularly since the aquifer is under confined conditions near the proposed diversion point for this application. Nearby adequate wells are not expected to be adversely impacted as defined in ARSD 74:02:04:20(7).

When considering the large amount of artesian head pressure (54.5 feet) at the proposed well location, the hydrographs of nearby observation wells not showing detrimental impact of pumping and, the lack of well interference complaints due to pumping complaints in the area of the aquifer, there is reasonable probability that the proposed diversion can be developed without unlawfully impairing existing appropriative or domestic water users with adequate wells.

CONCLUSIONS:

1. Water Permit Application No. 8571-3 proposes to appropriate water at a maximum instantaneous diversion rate of 2.22 cubic feet per second (cfs) of water from one well to be completed into the Lower James Missouri: Scotland aquifer (approximately 173 feet deep) located in the NE ¼ SW ¼ Section 6-T96N-R57W for the irrigation of 121 acres.
2. Water Permit Application No. 8571-3 will combine with Water Permit No. 6758-3 to authorize a total of 4.62 cfs from three wells for irrigation of 376 acres.
3. Based on the hydrologic budget and the observation well data for the Lower James Missouri: Scotland aquifer, there is reasonable probability unappropriated water is available for this proposed water use.
4. There is a reasonable probability the diversion proposed by this application can be made without unlawfully impairing existing appropriative or domestic users with adequate wells.



Blaise Hansen
SD DANR – Water Rights Program

Reviewed By:



Adam Mathiowetz
SD DANR-Water Rights Program

REFERENCES:

- Bugliosi, E. F., 1986. *Water Resources of Yankton County, South Dakota*. Water resources Investigations Report 84-4241. US. Geological Survey, Huron, South Dakota.
- Hedges, L.S., S.L. Burch, D.L. Iles, R.A. Barari, and R.A. Schoon, 1982. *Evaluation of Ground-water Resources in Eastern South Dakota and Upper Big Sioux River, South Dakota, and Iowa. Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report*. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Hedges, L.S., Allen, J., Holly D.E., 1985. *Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge*. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
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- Jorgensen, D. G., 1971. *Geology and Water Resources of Bon Homme County, South Dakota. Part II: Water Resources Bulletin 21*. South Dakota Geological Survey, Vermillion, SD.
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- Water Rights, 1995. *Findings of Fact, Conclusions of Law, and Final Decision in the Matter of Water Permit Application No. 2313-2, Coca-Cola Bottling Company of the Black Hills*. DANR-Water Rights Program file for Water Right No. 2313-2. Pierre, SD.

Water Rights, 2022a. *Water Right/Permit Files*. SD DANR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights, 2022b. *Well Completion Reports*. SD DANR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights, 2022c. *Observation Well Files*. SD DANR-Water Rights Program, Joe Foss Building, Pierre, SD.

Water Rights, 2022d. *Yankton County Files*. SD DANR-Water Rights Program, Joe Foss Building, Pierre, SD.

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

MAXWELL COLONY
42805 MAXWELL RD
SCOTLAND SD 57059

RECEIVED

FEB 11 2022

WATER RIGHTS
PROGRAM

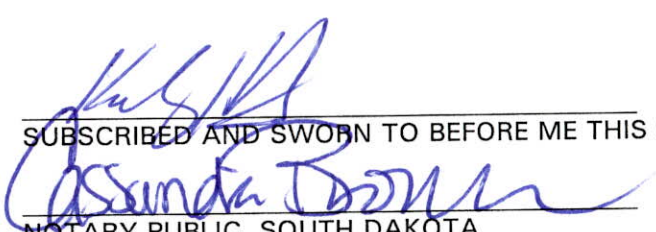
STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

KELLY HERTZ, BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT (S)HE IS THE MANAGING EDITOR OF YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID
COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
2+9 NOTICE OF APPLICATION

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 9th DAY OF February, 2022
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$47.84 ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS
BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF
HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 02/09/2022

FILED ON: 02/09/2022


SUBSCRIBED AND SWORN TO BEFORE ME THIS 9th DAY OF February, 2022

NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES 07/04/2026

NOTICE OF APPLICATION NO. 8571-3 to Appropriate Water

Notice is given that Maxwell Colony, c/o Mark Hofer, 42805 Maxwell Rd, Scotland SD 57059 has filed an application for an additional well, appropriate 2.22 cubic feet of water per second (cfs), and to add irrigated acres. Water Permit No. 6758-3 appropriates 4.89 cfs from two wells for irrigation of 980 acres. An investigation of the permit found two wells completed into the Lower James Missouri:Scotland Aquifer (163 and 178 feet deep) located in the NW 1/4 SE 1/4 Section 1-T96N-R58W and the NE 1/4 SW 1/4 Section 6-T96N-R57W capable of pumping 2.40 cfs to irrigate 376 acres located in the S 1/2 NE 1/4, E 1/2 SW 1/4, SE 1/4 Section 1-T96N-R58W and the SW 1/4, NE 1/4 NW 1/4, S 1/2 NW 1/4, SW 1/4 NE 1/4, W 1/2 SE 1/4 Section 6-T96N-R57W. The pivot in Section 6 was increased in size by 121 acres after the time to place water to beneficial use expired. If this application is approved, these 121 acres will be assigned a new priority date. This application also requests an additional well to be completed into the Lower James Missouri:Scotland Aquifer (approximately 173 feet deep) located in NE 1/4 SW 1/4 Section 6-T96N-R57W with a 2.22 cfs increase in the existing permitted pump rate. This application, if approved, and Water Permit No. 6758-3 will authorize a total of 4.62 cfs from the three wells for irrigation of 376 acres. This site is located approximately 4 miles east of Scotland SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8571-3 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 Engineers 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 February 21, 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 February 21, 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.

Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, January 31, 2022 11:27 AM
To: Sam Berres
Subject: 8571-3, Maxwell Colony
Attachments: 8571-3public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on February 9, 2022 in the Press & Dakotan.

Maxwell Colony, c/o Mark Hofer, 42805 Maxwell Rd, Scotland SD 57059 (605 660-2231) 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.

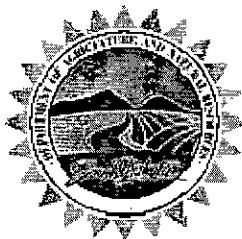
Let me know if you have questions. Please acknowledge receipt of this email.

Karen Schlaak

DANR - Water Rights Program

(605) 773-3352

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



NOTICE OF APPLICATION NO. 8571-3 to Appropriate Water

Notice is given that Maxwell Colony, c/o Mark Hofer, 42805 Maxwell Rd, Scotland SD 57059 has filed an application for an additional well, appropriate 2.22 cubic feet of water per second (cfs), and to add irrigated acres. Water Permit No. 6758-3 appropriates 4.89 cfs from two wells for irrigation of 980 acres. An investigation of the permit found two wells completed into the Lower James Missouri:Scotland Aquifer (163 and 178 feet deep) located in the NW 1/4 SE 1/4 Section 1-T96N-R58W and the NE 1/4 SW 1/4 Section 6-T96N-R57W capable of pumping 2.40 cfs to irrigate 376 acres located in the S 1/2 NE 1/4, E 1/2 SW 1/4, SE 1/4 Section 1-T96N-R58W and the SW 1/4, NE 1/4 NW 1/4, S 1/2 NW 1/4, SW 1/4 NE 1/4, W 1/2 SE 1/4 Section 6-T96N-R57W. The pivot in Section 6 was increased in size by 121 acres after the time to place water to beneficial use expired. If this application is approved, these 121 acres will be assigned a new priority date. This application also requests an additional well to be completed into the Lower James Missouri:Scotland Aquifer (approximately 173 feet deep) located in NE 1/4 SW 1/4 Section 6-T96N-R57W with a 2.22 cfs increase in the existing permitted pump rate. This application, if approved, and Water Permit No. 6758-3 will authorize a total of 4.62 cfs from the three wells for irrigation of 376 acres. This site is located approximately 4 miles east of Scotland SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8571-3 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 February 21, 2022.

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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

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

January 31, 2022

Maxwell Colony
c/o Frank Hofer
42805 Maxwell Rd
Scotland SD 57059

Dear Mr. Hofer:

Water Permit Application No. 8571-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Press & Dakotan printed at Yankton SD (Ph # 605 665-7811). 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,

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.

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 6758-3

I have this day, June 22, 2021, made a thorough examination of the water use system constructed by Maxwell Colony, 42805 Maxwell Rd., Scotland, SD 57059, holder of Permit No. 6758-3, bearing the priority of September 11, 2006 authorizing the diversion of 4.89 cu. ft. per second of the waters of groundwater (Lower James Missouri: Scotland Aquifer) for the irrigation of 980 acres located in Yankton County.

Inspection contact: Harold

A. Works used to divert the water:

Well Information

West Well (Sec. 1-T96N-R58W)

- 1) Well Drilling Firm: Thein Well Co.
- 2) No. of Wells: 1
- 3) Depth(s): 178 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 12 inches
- 2) Length: 137.5 feet
- 3) Type: Steel

Screen:

- 1) Diameter: 16 inches
- 2) Length: 40.5 feet
- 3) Type: Stainless Steel
- 4) Static water level: 73 feet

Pump:

- 1) Make: American Marsh
- 2) Model: 9LC2
- 3) Capacity: 680 GPM

Motor:

- 1) Make: Hitachi
- 2) Model No.: Unknown
- 3) Horsepower rating: 60 hp

Reservoir Information

Pump:

- 1) Make: Cornell
- 2) Model: 4NHTB-F18DBK
- 3) Capacity: 1,000 GPM

East Well (Sec. 6-T96N-R57W)

- 1) Well Drilling Firm: Thein Well Co.
- 2) No. of Wells: 1
- 3) Depth(s): 173 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 12 inches
- 2) Length: 133 feet
- 3) Type: Steel

Screen:

- 1) Diameter: 16 inches
- 2) Length: 30 feet
- 3) Type: Stainless Steel
- 4) Static water level: 55 feet

Pump:

- 4) Make: Unknown
- 5) Model: Unknown
- 6) Capacity: 400 GPM

Motor:

- 4) Make: Unknown
- 5) Model No.: Unknown
- 6) Horsepower rating: Unknown hp

Engine:

- 1) Make: John Deere
- 2) Model: Super Pumper
- 3) Horsepower rating: 300 hp

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

- | | | | |
|--------------------------------------|-----------------------|-----------------------|-----------------------------|
| 1) To the Section 1 Pivot: | Type: <u>Steel</u> | 2) Size: <u>6</u> in. | 3) Length: <u>20</u> ft. |
| 2) To the Section 6 Pivot: | Type: <u>PVC</u> | 2) Size: <u>6</u> in. | 3) Length: <u>570</u> ft. |
| 3) Section 6 Pivot to the Reservoir: | Type: <u>Flexible</u> | 2) Size: <u>6</u> in. | 3) Length: <u>4,400</u> ft. |

C. Works used to apply water to beneficial use:**Section 1 Pivot (west):**

- 1) Make: Zimmatic
- 2) Overall length: 1,320 feet
- 3) Number of towers: 9
- 4) End gun: Yes
- 5) Capacity: 680 GPM

Chemigation Equipment:

- 1) Does chemigate: No

Section 6 Pivot (east):

- 1) Make: Zimmatic
- 2) Overall length: 1,960 feet
- 3) Number of towers: 14
- 4) End gun: Yes
- 5) Capacity: 1,000 GPM

Chemigation Equipment:

- 1) Does chemigate: No

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by: No
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period: Yes
- 3) Exceptions to compliance are: See Section F

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows:

The west well is 1,380 feet west and 1,420 feet north of the southwest corner of Section 6-T96N-R57W (Latitude 43.15822, Longitude -97.64263 – NW1/4 of the SE1/4 of Sec. 1-T96N-R58W).

The east well is 2,600 feet east and 1,950 feet north of the southwest corner of Section 6-T96N-R57W (Latitude 43.15961, Longitude -97.62773 – NE1/4 of the SW1/4 of Sec. 6-T96N-R57W).

The reservoir inlet and outlet are 570 feet west and 910 feet south of the northeast corner of Section 6-T96N-R57W (Latitude 43.16619 – Longitude -97.61943 – NE1/4 of the NE1/4 of Sec. 6-T96N-R57W).

2. The works are capable of diverting and conveying to the place of use 3.74 cu. ft. per second of water when the reservoir is in use, which is to be used for irrigation purposes. Water has been put to beneficial use to the maximum extent as follows:

Section 1-T96N-R58W

<u>SW1/4NE1/4</u>	<u>2 acres</u>	<u>NW1/4SE1/4</u>	<u>37 acres</u>
<u>SE1/4NE1/4</u>	<u>2 acres</u>	<u>NE1/4SE1/4</u>	<u>35 acres</u>
<u>NE1/4SW1/4</u>	<u>1 acre</u>	<u>SW1/4SE1/4</u>	<u>33 acres</u>
<u>SE1/4SW1/4</u>	<u>1 acre</u>	<u>SE1/4SE1/4</u>	<u>31 acres</u>

Section 6-T96N-R57W

<u>NE1/4NW1/4</u>	<u>3 acres</u>	<u>NW1/4SW1/4</u>	<u>39 acres</u>
<u>SW1/4NW1/4</u>	<u>26 acres</u>	<u>NE1/4SW1/4</u>	<u>32 acres</u>
<u>SE1/4NW1/4</u>	<u>39 acres</u>	<u>SW1/4SW1/4</u>	<u>24 acres</u>
<u>SW1/4NE1/4</u>	<u>6 acres</u>	<u>SE1/4SW1/4</u>	<u>39 acres</u>
<u>NW1/4SE1/4</u>	<u>3 acres</u>	<u>SW1/4SE1/4</u>	<u>23 acres</u>

comprising a total of 376 acres of land and the license should be issued for 2.4 cfs from the wells.

3. All structures, wells and lands on map Yes

F. Comments or other permit(s) associated with the project: The irrigation systems do not irrigate all of the permitted property. They do irrigate some property not listed in the permit. However, these properties are adjacent to the properties listed in the permit and the properties are owned by Maxwell Colony.

The two wells are in different locations than noted in the permit.

The east well does not provide enough water for the current pivot. To get enough water, the Colony is pumping the water from the well at 400 gpm to a reservoir on their property during the hours that they are not operating the pivot. Then, they turn off the well and pump the water at 1,000 gpm from the reservoir to the pivot.

The Owner stated that the east pivot was extended a few years ago. From Google Earth, I estimated that the pivot was extended by approximately 640 feet in about 2018. At that time, they began pumping from the well to the reservoir and from the reservoir to the pivot at the 1,000 gpm rate so that the pivot would operate properly. I would estimate that the old pivot irrigated about 113 acres and the extended pivot added 121 acres to the total.

The Owner mentioned that they may be interested in irrigating more acres in the future.

The well pump and motor information was obtained from Their Well Company.

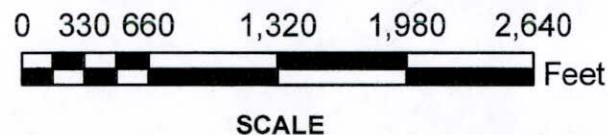
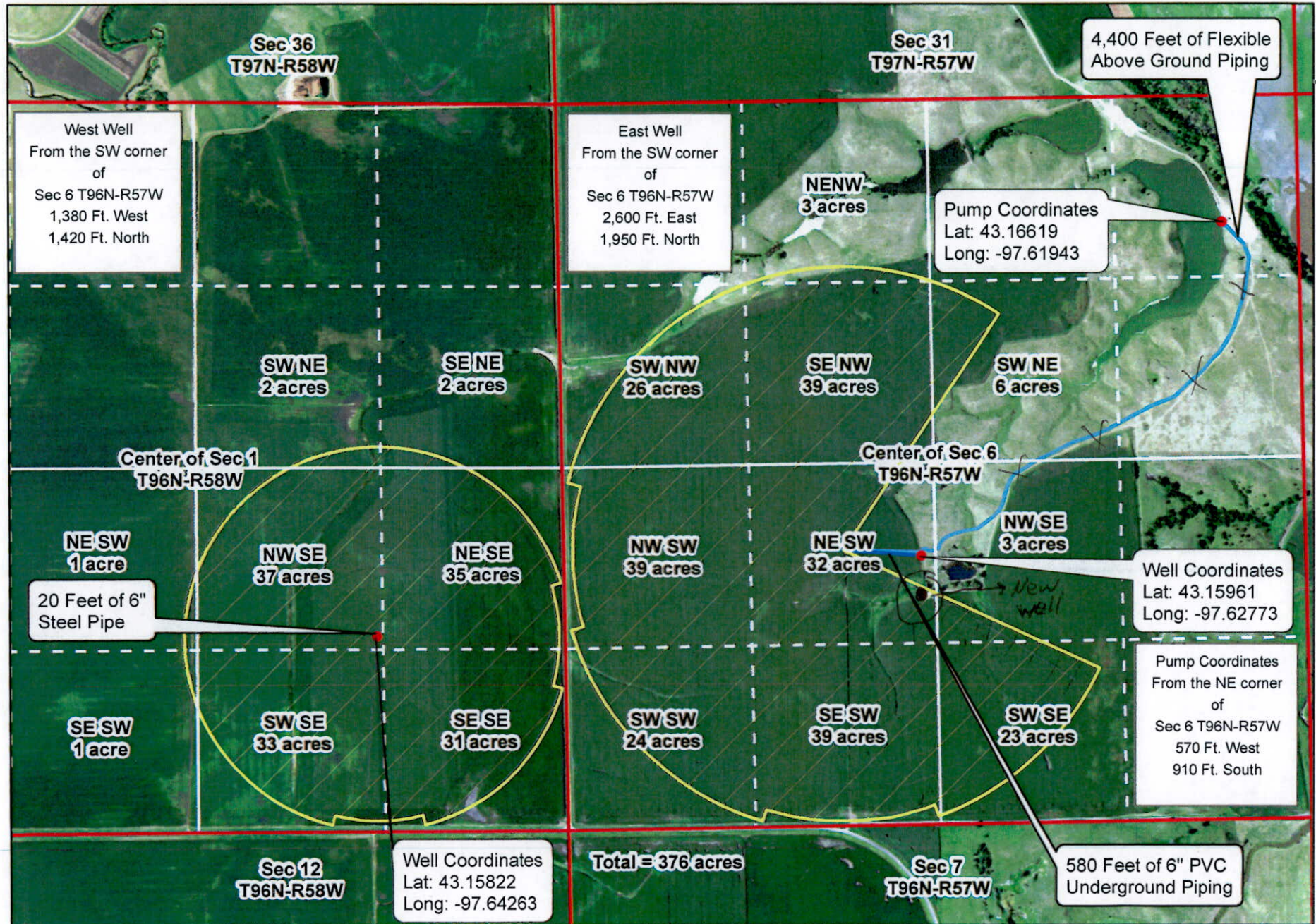
There is a chemical tank setting by the west well. The Colony did chemigate early on, but they have not used the tank in several years and do not intend to chemigate in the future. There was not any chemical pumping equipment at the well site.

Keith DeJong

Keith DeJong
Water Rights Inspector
DENR, Water Rights Program

Date report completed: September 29, 2021

Water Right No. 6758-3



Keith DeJong

Keith DeJong, PE
Staff Engineer
June 23, 2021



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

APR 28 2022

Maxwell Colony
Mark Hofer
42805 Maxwell Rd
Scotland SD 57059

Dear Mr. Hofer:

Enclosed is Water Permit No. 8571-3 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

NOTE: Please let us know when the new well in Section 6 is completed and your water license can then be processed.



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

January 20, 2023

NOTICE

TO: MAXWELL COLONY, MARK HOFER, 42805 MAXWELL RD, SCOTLAND, SD 57059

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

SUBJECT: Reporting Requirement for 2022 Irrigation Questionnaire(s)

Our records indicate your 2022 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 6758-3 & 8571-3. The request for the Questionnaire was dated October 21, 2022. The Water Management Board has directed owners of water permits who have not submitted the 2022 Irrigation Questionnaire(s) 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(s) 6758-3 & 8571-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held at **Wednesday, March 8, 2023 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(s) 6758-3 & 8571-3 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 questionnaire(s) is (are) received in this office before the **March 8, 2023** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. **If you prefer, you can complete the questionnaire online at the following link: <https://danr.sd.gov/iq> using this password: RMNKDU**

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



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

February 21, 2023

6758-3
8571-3

Mark Hofer
Maxwell Colony
42805 Maxwell Rd
Scotland SD 57059

Dear Mr. Hofer:

I am writing to acknowledge receipt of your 2022 irrigation questionnaire.

You may disregard the January 20, 2023, "Notice" concerning reporting requirements for Water Permit Nos. 6758-3 & 8571-3. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

Genny McMath
Water Rights Program
605 773-3352
Genny.mcmath@state.sd.us

Maxwell Colony 12" 139' Irrigation Well Scotland SD

<i>Formation</i>	<i>From</i>	<i>To</i>
Top soil	0	1
Clay Tan	1	31
Clay Blue	31	39
Gravel	39	54
Clay Gray Pebbly	54	69
Clay Olive	69	75
Clay Gray	75	96
Sand, coarse & fine Gravel	96	112
Sand Med	112	121
Clay blue	121	122
Sand Med	122	131
Fine Gravel	131	138
Clay Gray	138	145

Maxwell Colony Menno SD

Legend

Feature 1

6" HOG BARN WELL 512' 7/20/2022

550' TEST HOLE FOR HOG BARN WELL

300' Test hole 4/19/2022

199' 12" WELL JUNE 2022 MAXWELL COLONY

TH # 2W 200' MAXWELL COLONY 7/21/2022

139' 12" Irr Well 9/14/2022

292nd St

NW Jim River Rd

James River



4000 ft

Report of Examination of Works and/or Application of Water to Beneficial Use

For Permit No. 6758-3/8571-3

I have this day, June 22, 2021, made a thorough examination of the water use system currently owned by Maxwell Colony, 42805 Maxwell Rd Scotland SD 57059, of Permit No. 6758-3, bearing the priority of September 11, 2006, authorizing the diversion of 4.89 cu. ft. per second of the waters of ground water (Lower James Missouri: Scotland Aquifer) for irrigation of 980 acres in Yankton County.

Inspection contact: Harold

A. Works used to divert the water:

Well Information:

WEST WELL

- 1) Well Drilling Firm: Thein Well Co
- 2) No. of Wells: 1
- 3) Depth: 178 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 12 inches
- 2) Length: 137.5 feet
- 3) Type: Steel

Screen:

- 1) Diameter: 16 inches
- 2) Length: 40.5 feet
- 3) Type: Steel
- 4) Static water level: 73 feet

Pump:

- 1) Make: American Marsh
- 2) Model: 9LC2
- 3) Capacity: 680 gpm

Motor:

- 1) Make: Hitachi
- 2) Model No.: Unknown
- 3) Horsepower rating: 60 hp

MIDDLE WELL

- 1) Well Drilling Firm: Thein Well Co
- 2) No. of Wells: 1
- 3) Depth: 199 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 12 inches
- 2) Length: 179.0 feet
- 3) Type: plastic

Screen:

- 1) Diameter: 12 inches
- 2) Length: 20 feet
- 3) Type: Steel
- 4) Static water level: 63 feet

Pump:

- 1) Make: Unknown
- 2) Model: Unknown
- 3) Capacity: 210 gpm

EAST WELL

- 1) Well Drilling Firm: Thein Well Co
- 2) No. of Wells: 1
- 3) Depth: 173 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 12 inches
- 2) Length: 133 feet
- 3) Type: steel

Screen:

- 1) Diameter: 16 inches
- 2) Length: 30 feet
- 3) Type: Steel
- 4) Static water level: 55 feet

Pump:

- 1) Make: unknown
- 2) Model: unknown
- 3) Capacity: 400 gpm

Motor:

- 1) Make: Unknown
- 2) Model No.: Unknown
- 3) Horsepower rating: Unknown hp

RESEVOIR INFO

Pump:

- 1) Make: **Cornell**
- 2) Model: **4NHTB-F18DBK**
- 3) Capacity: **1,000 gpm**

Engine:

- 1) Make: **John Deere**
- 2) Model: **Super Pumper**
- 3) Horsepower Rating: **300hp**

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

- | | | | |
|----------------------------------|-----------------------|-----------|-------------------------|
| 1) To the Section 1 Pivot: | Type: <u>Steel</u> | Size: 6in | Length: <u>20 ft</u> |
| 2) To the Section 6 Pivot: | Type: <u>PVC</u> | Size: 6in | Length: <u>570 ft</u> |
| 3) Section 6 Pivot to Reservoir: | Type: <u>Flexible</u> | Size: 6in | Length: <u>4,400 ft</u> |

C. Works Used to apply water to apply to beneficial use:

Section 1 Pivot (west):

- 1) Make: Zimmatic
- 2) Overall Length: 1320 ft
- 3) Number of Towers: 9
- 4) Eng Gun: yes
- 5) Capacity 680gpm

Section 6 Pivot (east):

- Make: Zimmatic
- Overall Length: 1960 ft
- Number of Towers: 14
- End Gun: Yes
- Capacity: 1000gpm

Chemigation Equipment: Does Chemigation: No Chemigation Equipment: Does Chemigation: No

D. Compliance with Permit Requirements:

- 1) Permit Qualifications being abided by: No
- 2) Irrigation Questionnaire checked to determine if permit owner started irrigation by the end of construction period: Yes
- 3) Exceptions to compliance: See Section F

E. Condition and Location:

- 1) The system is in good condition with the point(s) of diversion located as follows:

****The west well is 1380 ft W and 1420 ft N of the SE corner of Section 1, T96N, R58W (Latitude 43.15822 Longitude -97.64263) (NW ¼ SE ¼ Sec 1, T96N, R58W)**

****The east well is 2600 ft W and 1950 ft N of the SW corner of Section 6, T96N, R57W (Latitude 43.15961 Longitude -97.62773) (NE ¼ SW ¼ Sec 6, T96N, R57W)**

****The middle well is 2000 ft E and 1990 ft of the SW corner of of Section 6, T96N, (Latitude 43.15976 Longitude -97.62993) R57W (NE ¼ SW ¼ Sec 6, T96N, R57W)**

****The Reservoir inlet and outlet are 570 ft W and 910 ft S or the NE corner of Section 6, T96N, R57W (Latitude 43.16619 Longitude -97.61943) (NE ¼ NE ¼ of Sec 6, T96N, R57W)**

- 2) The works are capable of diverting and conveying to the place of use 3.74 cfs of water when the reservoir is in use, which is to be used for irrigation purposes. Water has been put to beneficial use to the maximum extent as follows:

Section 1, T96N, R58W

<u>SW ¼ NE ¼</u>	<u>2 acres</u>	<u>NW ¼ SE ¼</u>	<u>37 acres</u>
<u>SE ¼ NE ¼</u>	<u>2 acres</u>	<u>NE ¼ SE ¼</u>	<u>35 acres</u>
<u>NE ¼ SW ¼</u>	<u>1 acre</u>	<u>SW ¼ SE ¼</u>	<u>33 acres</u>
<u>SE ¼ SW ¼</u>	<u>1 acre</u>	<u>SE ¼ SE ¼</u>	<u>31 acres</u>

Section 6, T96N, R57W

<u>NE ¼ NE ¼</u>	<u>3 acres</u>	<u>NW ¼ SW ¼</u>	<u>39 acres</u>
<u>SW ¼ NW ¼</u>	<u>26 acres</u>	<u>NE ¼ SW ¼</u>	<u>32 acres</u>
<u>SE ¼ NW ¼</u>	<u>39 acres</u>	<u>SW ¼ SW ¼</u>	<u>24 acres</u>
<u>SW ¼ NE ¼</u>	<u>6 acres</u>	<u>SE ¼ SW ¼</u>	<u>39 acres</u>
<u>NW ¼ SE ¼</u>	<u>3 acres</u>	<u>SW ¼ SE ¼</u>	<u>23 acres</u>

Comprising a total of 376 acres of land and the license should be issued for 2.87 cfs from the wells.

- 3) All structures, wells, and lands are on map: Yes

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

** The East well does not provide enough water for the current pivot. To get enough water the Colony is pumping water from the well at 400 gpm to a reservoir on their property during the hours that they are not operating the pivot. Then they turn off the well and pump the water at 1000 gpm from the reservoir to the pivot.

** The well pump and motor info was obtained from Thein Well Company.

** There is a chemical tank setting by the West well. The colony did chemigate early on, but they have not used the tank in several years and do not intend to chemigate in the future. There was not any chemical pumping equipment at the well site.

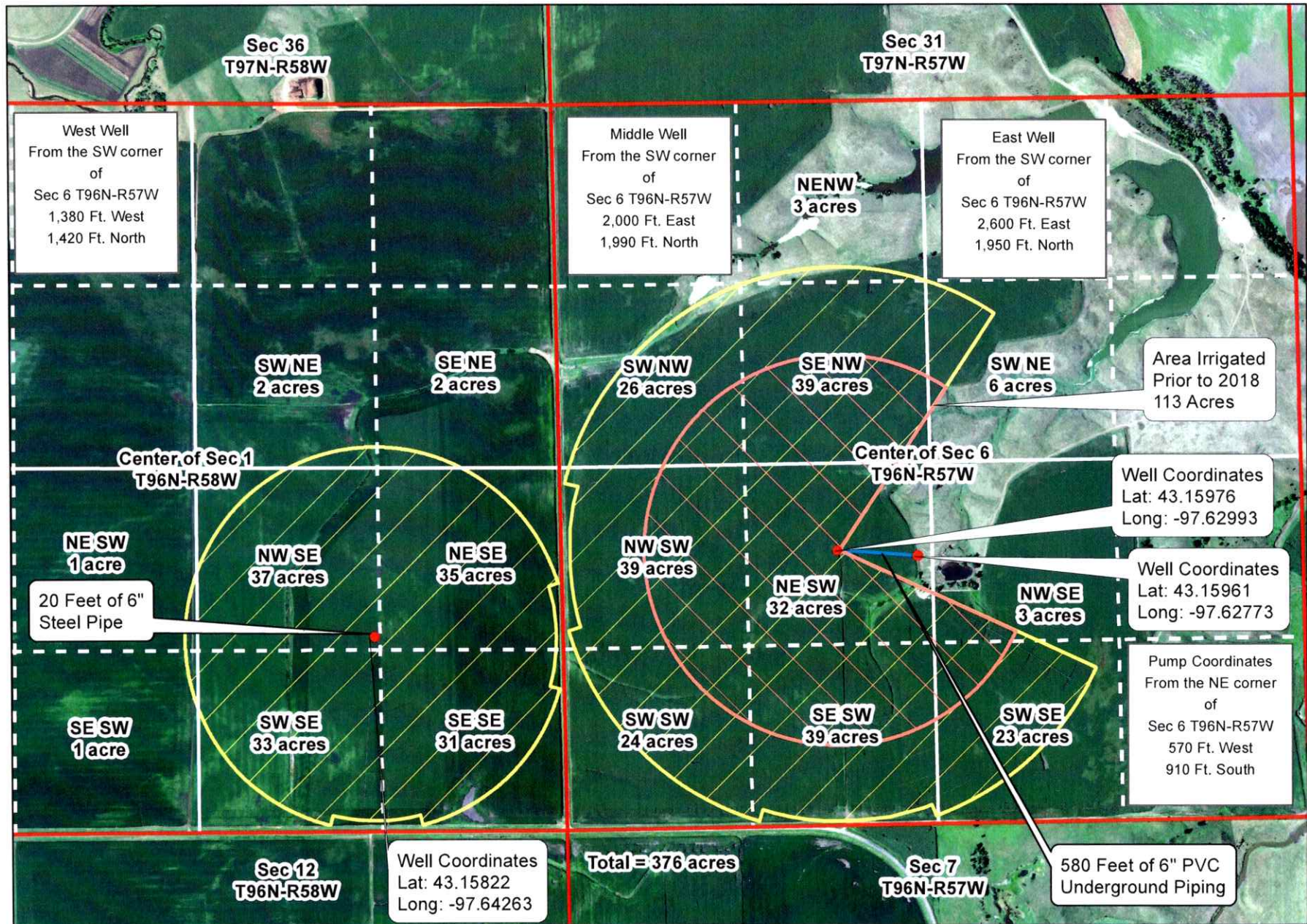
Keith DeJong

Keith DeJong, PE Ret.
Water Rights Inspector
DANR, Water Rights Program

Date report completed: September 29, 2021

Amanda Dewell confirmed the pump rate of 210 gpm for the Middle Well during a phone conversation with Mark Hofer on 8/8/2023

Water Right No. 6758-3 & 8571-3



SCALE



Keith DeJong, PE
Staff Engineer
September 29, 2021



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

AUG 09 2023

Maxwell Colony
c/o Mark Hofer
42805 Maxwell Rd
Scotland SD 57059

8571-3
6758-3

Dear Mr. Hofer:

Enclosed is Water License No. 8571-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

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

NOTE: The applicable portions of Water Permit No. 6758-3 are now incorporated into Water Right No. 8571-3

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8571-3

(1) Maxwell Colony; 42805 Maxwell Rd, Scotland SD 57059, made Application No. 8571-3, December 23, 2021, for a water permit to divert 2.22 cubic feet of water per second (cfs) from groundwater, one additional well (Lower James Missouri: Scotland Aquifer), Yankton County, South Dakota for the irrigation of an additional 121 acres. Permit No. 8571-3, with a priority date of December 23, 2021, was approved February 21, 2022, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before February 21, 2027, and for the application to beneficial use of water on or before February 21, 2031.

Water Permit No. 6758-3 appropriates 4.89 cfs from groundwater, two existing wells (Lower James Missouri: Scotland Aquifer), Yankton County, South Dakota for the irrigation of 980 acres. The applicable portions of Water Permit No. 6758-3 are now incorporated into Water Right No. 8571-3.

An investigation into Permit Nos. 6758-3 and 8571-3 found a reservoir used for storing and then diverting water at a higher rate than the East and Middle wells, due to the wells not producing as desired.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 2.87 cfs from the three wells and 3.74 cfs when pumping from the small reservoir, for beneficial use. The locations of the diversion points are:

- West Well: 1,380 ft W & 1,420 ft N of the SE corner of Section 1, T96N, R58W (NW ¼ SW ¼)
(Latitude 43.15822 Longitude -97.64263)
- East Well: 2,600 ft W & 1,950 ft N of the SW corner of Section 6, T96N, R57W (NE ¼ SW ¼)
(Latitude 43.15961 Longitude -97.62773)
- Middle Well: 2,000 ft E & 1,990 ft N of the SW corner of Section 6, T96N, R57W (NE ¼ SW ¼)
(Latitude 43.15976 Longitude -97.62993)
- Small Reservoir: 570 ft W & 910 ft S of the NE corner of Section 6, T96N, R57W (NE ¼ NE ¼)
(Latitude 43.16619 Longitude -97.61943)

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

Section 1, T96N, R58W			
SW ¼ NE ¼	2.0 acres	NE ¼ SE ¼	35.0 acres
SE ¼ NE ¼	2.0 acres	NW ¼ SE ¼	37.0 acres
NE ¼ SW ¼	1.0 acres	SW ¼ SE ¼	33.0 acres
SE ¼ SW ¼	1.0 acres	SE ¼ SE ¼	31.0 acres

continued

Section 6, T96N, R57W

NE ¼ NE ¼	3.0 acres	SW ¼ SE ¼	23.0 acres
SW ¼ NE ¼	6.0 acres	NE ¼ SW ¼	32.0 acres
SW ¼ NW ¼	26.0 acres	NW ¼ SW ¼	39.0 acres
SE ¼ NW ¼	39.0 acres	SW ¼ SW ¼	24.0 acres
NW ¼ SE ¼	3.0 acres	SE ¼ SW ¼	39.0 acres

TOTAL ACRES: 376.0

(4) Pursuant to South Dakota Water Law 46-5-30.1 Maxwell Colony, the holder and/or owner of Water Right No. 8571-3 is issued a license to appropriate water, the right to use 2.87 cfs from groundwater, three wells (Lower James Missouri: Scotland Aquifer), and 3.74 cfs when pumping from the reservoir, with priority dates of September 11, 2006 (established by Permit No. 6758-3) for 3.74 cfs and 255 acres and December 23, 2021 (established by Permit No. 8571-3) for 121 acres, from the locations specified in (2) of this license for irrigation purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 8571-3 and subject to the following qualifications:

1. The wells approved under Water Permit Nos. 6758-3 & 8571-3 are located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The additional well authorized by Permit No. 8571-3 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 grouter (bottom to top) pursuant to Section 74:02:04:28. *(The West & East wells were drilled in 2007 and the Middle well was drilled in 2022, all by Thein Well Company. Copies of the well completion reports are on file with the Water Rights Program.)*
3. This Water Right is approved subject to the irrigation water use questionnaire being submitted each year.



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

AUG 09 2023

date



Maxwell Colony Irrigation Well Scotland SD – Formation log

<i>Formation</i>	<i>From</i>	<i>To</i>
Top soil	0	1
Clay brown pebbly	1	32
Sand & gravel	32	38
Clay gray	38	51
Gravel	51	53
Clay gray sandy- very pebbly	53	71
Clay brown/olive	71	86
Clay blue	86	102
Sand & gravel	102	137
Gravel coarse	137	141
Sand & gravel	141	147
Clay	147	167
Sand	167	172
Clay	172	176
Gravel- med	176	199