

WATER PERMIT NO. 7154-3

Name of Applicant: **Robert Ullom**

Address: **613 E Pipestone, Flandreau SD 57028**

Phone: **605 997-2043**

Amount of Water Claimed: **0.93** ~~1.56~~ Total Acres: **104**

Source of Water Supply: **groundwater (1 well)**

Water to be used for: **irrigation** County: **Moody**

Type of Waste Disposal System: **NA**

Location: **1 mile east of Flandreau**

PRIORITY

Date Received: **8-5-09**

Application/License Fee: **\$950**

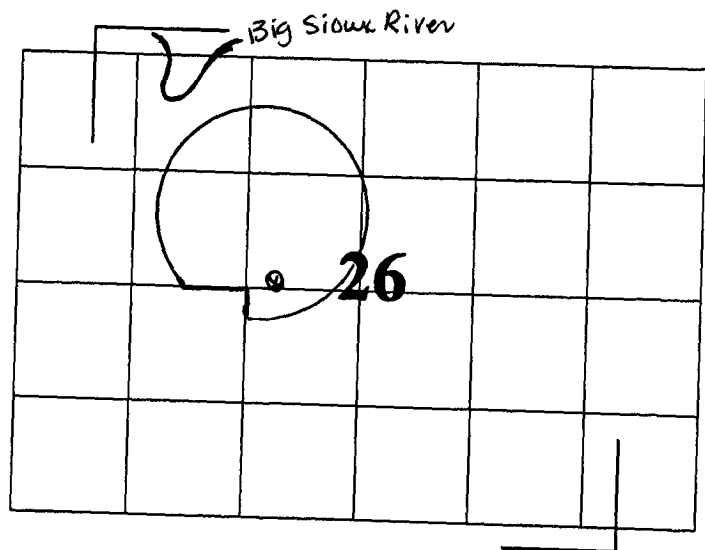
Corrected Application Received:

Period of Annual Use: **July 1 - September 31**

Remarks: **Water Right No. 1290-3 authorizes irrigation of same acreage from the Big Sioux River**

Diversion Point: **SE ¼ NW ¼ Sec 26-T107N-R48W**

Land to be Irrigated: **NW ¼, NE ¼ SW ¼ Sec 26-T107N-R48W**



Depth of Well: **48 feet deep**

Well Driller: **Lacey Well Drilling Inc.**

Remarks:

Type of Map: **aerial**

Prepared by: **Aaron S Jarvis, Moody Co NRCS**

Reviewed and the Number Assigned on: **8-10-09**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

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

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>7154-3</u> (office use only)	Hydrologic Unit <u>10170202</u>
	Basin <u>Sioux River</u>	
	Newspaper <u>MOODY COUNTY ENTERPRISE</u>	
	<u>PO Box 71 Flandreau SD 57028 605-997-3725</u>	

RECEIVED
AUG - 5 2009
WATER RIGHTS PROGRAM

Application For Permit To Appropriate Water For Irrigation

Type of Application: New Vested Right ☒ Amendment/Correction to Permit No. 1290-3
 (Use predates Mar 2, 1955)

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

- Name of Applicant ROBERT ULLOM Phone 605-997-2043
 (check one) ☒ Owner ☐ Tenant/lessee
 Mailing Address 613 EAST PIPESTONE, FLANDREAU State S.D 57028
 (Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 1.56*CFS or 700 **GPM ***AF Total Acreage 104
 (*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply WELL
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) 1 WELL IN NW 1/4 26 107-48 (SE 1/4 NW 1/4) County MOODY
- County or counties where water will be used MOODY
- Annual period during which water is to be used May 1 - Sept. 30
- List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
 (Attach sheet if more space is needed)

Land Description	Acres	Land Description	Acres
NW NW <u>SEE</u>	12	NE 1/4 SW 1/4	5
SW NW <u>MAP</u>	29		
NE NW	20	All in Sec. 26 T107N	
SE NW	43	R 48W	

8. Give a description of the project. (Attach sheet if more space is needed) MOVE DIVERSION POINT FROM BIG SIOUX RIVER WATER TO A WELL.

STATE OF SOUTH DAKOTA) SS
 County of Moody

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

I, Robert Ullom, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature Robert Ullom

Subscribed and sworn to before me this 31st day of July 2009

Robert E. Locko

Notary Public signature

SOUTH DAKOTA
WATER PERMIT NO. 7154-3

Date of first receipt of application August 5, 2009.

Date of return to applicant for corrections, amendments or changes August 5, 2009.

Date of receipt of corrected application August 7, 2009.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7154-3 to Robert Ullom, 613 E Pipestone, Flandreau SD 57028 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. 7154-3 appropriates 1.56 cubic feet of water per second from one well to be completed into the Big Sioux:Moody Aquifer (approximately 48 feet deep) located in SE ¼ NW ¼ Section 26 to irrigate 104 acres located in the NW ¼, NE ¼ SW ¼ Section 26; all in T107N-R48W. Water Right No. 1290-3 authorizes irrigation of the same acreage from the Big Sioux River.
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 – September 30.
3. The date from which applicant may claim right is August 5, 2009.
4. The date of approval of Permit No. 7154-3 is November 23, 2009.
5. One-fifth of the construction is to be completed on or before May 23, 2012.
6. All construction is to be completed on or before November 23, 2014.
7. Water is to be put to beneficial use on or before November 23, 2018.
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 well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7154-3 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. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 7154-3 authorizes a maximum diversion rate of 1.56 cfs for the irrigation of 104 acres with an annual volume not to exceed 2 acre feet of water per acre per year.

(continued)

Water Permit No. 7154-3

Robert Ullom

Page 2

4. The combined diversion under Water Right No. 1290-3 and Permit No. 7154-3 shall not exceed 1.56 cfs with an annual volume not to exceed 2 acre feet of water per acre per year.
5. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: Garland Erbele

Garland Erbele, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

APR 27 2010

date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 20" Depth 48'
- b) Casing Type STEEL/PVC Diameter 12" Thickness 40-38
- c) Screen Type SS/PVC Diameter 12" Thickness 10'-12'
- d) Gravel Pack 1/4 x 1/8 muscadine Length of Gravel Pack 35-48
- e) Depth to Top of Water Bearing Material 17'
- f) Depth to Water (ground surface to water level) 17'
- g) Distance to nearest existing domestic well:
On applicants property 700' On property owned by others 2600'

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 _____

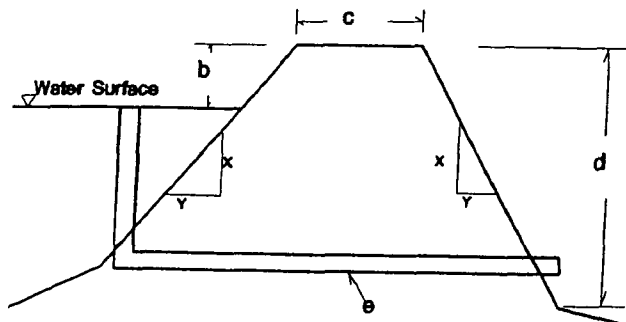
3. Dugout Information

- 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

IRRIGATION MAP

Date: 8/7/2009

Customer(s): ROBERT G ULLOM

Field Office: FLANDREAU SERVICE CENTER

Agency: NRCS

Assisted By: Curran, Joel R

Legal Description: Section 26, 107N-48W



Legend



! Well location

□ Irrigation pivot

410 0 410 820 1,230 1,640 Feet

IRRIGATION MAP

Customer(s): ROBERT G ULLOM

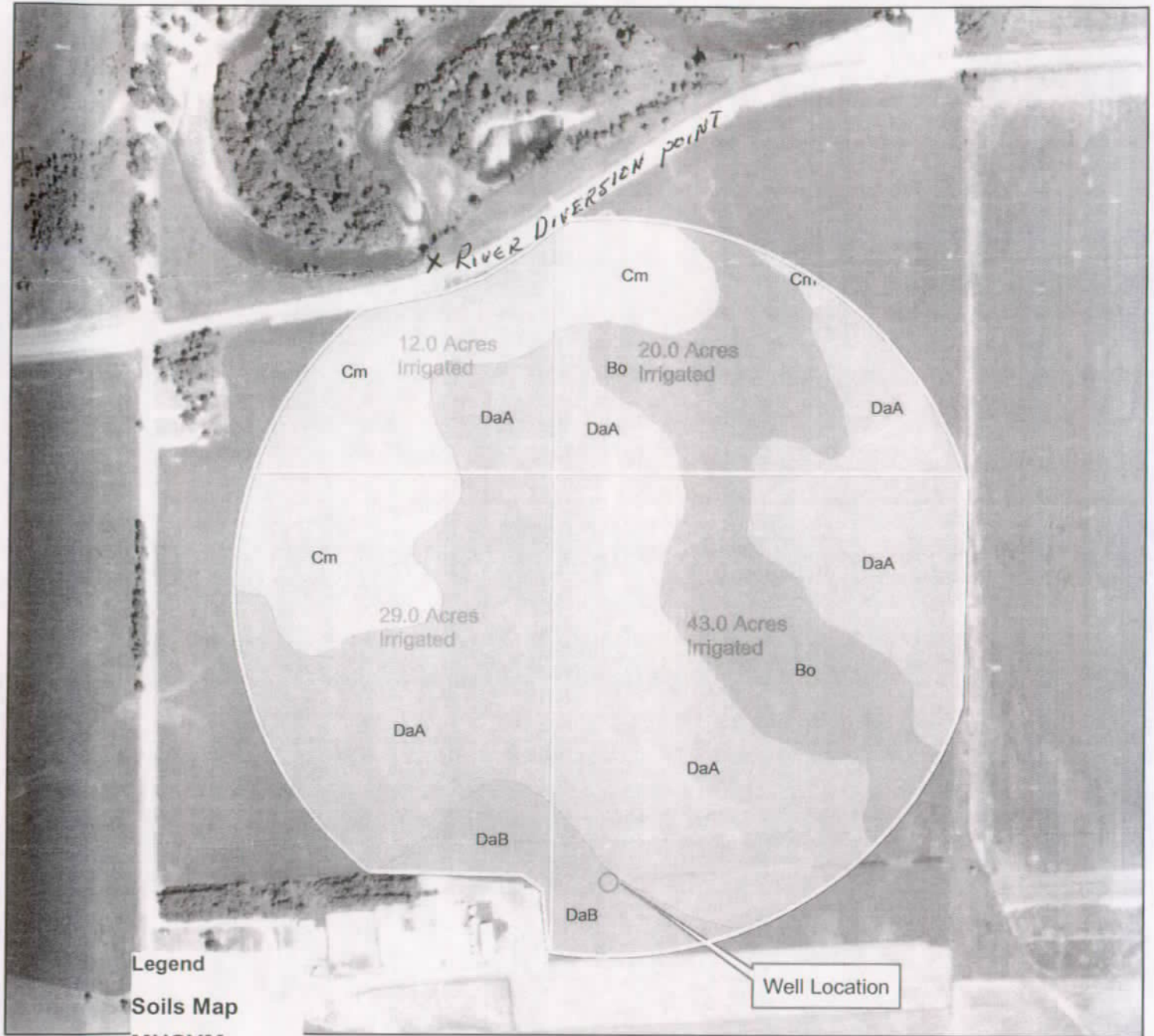
Field Office: FLANDREAU SERVICE CENTER

Agency: USDA NRCS

Assisted By: JARVIS, AARON S

Approximate Acres: 104

Legal Description: NW 1/4 26-106-48



Legend

Soils Map

MUSYM

Bo

Cm

DaA

DaB

Well Location

Irrigated Acres



RECEIVED

AUG - 5 2009

WATER RIGHTS
PROGRAM

260 0 260 520 780 1,040 Feet



Schlaak, Karen

From: Curran, Joel - Flandreau, SD [joel.curran@sd.usda.gov]
Sent: Friday, August 07, 2009 3:18 PM
To: Schlaak, Karen
Subject: Ullom map

Karen,

Here is a scanned copy with my signature on it. If you have any questions, please let me know.

Joel Curran
District Conservationist
(Work) 997-2949 ext. 3
(Cell) 530-5415

08/10/2009

IRRIGATION MAP

Date: 8/7/2009

Customer(s): ROBERT G ULLOM

Field Office: FLANDREAU SERVICE CENTER

Agency: NRCS

Assisted By: Curran, Joel R

Legal Description: Section 26, 107N-48W

Joel Curran - DC
NRCS



Legend



● Well location

□ res_inv_poly



In Water Since 1946

Wells — Pumps
Dewatering Work
Test Drilling

LACEY WELL DRILLING, INC.
47582 - 240th St.
Dell Rapids, South Dakota 57022
Telephone (605) 428-5979

Down-Hole Camera
Water Specialists
Irrigation Supplies

To Bob Ullom
FARDEAU

7-15-09

RECEIVED

AUG - 5 2009

WATER RIGHTS
PROGRAM

Bob.

Test hole AT FARM
0-3 topsoil
3-47' SAND to GRAVEL
SW 17'

Good site

Jim
Lacey SD #111

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

#33 Date 8/5, 20 09

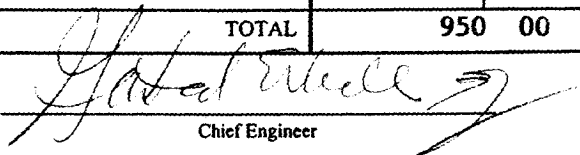
RECEIVED OF Robert G Ullom 15606 DS Gilbert RD Chandler AZ 85225

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

Fee for Application for Permit No. <u>7154-3</u> to Appropriate Water, to construct and to put water to beneficial use	750	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>7154-3</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	950 00

No. 04151

By


Chief Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

August 5, 2009

Robert Ullom
613 E Pipestone
Flandreau SD 57028

Dear Mr. Ullom:

Thank you for submitting the *Application for a Permit to Appropriate Water* for irrigation. In order to complete the application the following is required.

- Enclosed is the aerial photo map submitted with the application. The map must be signed by one of the following: Registered Land Surveyor, Registered Professional Engineer or by any other government employee who normally prepares maps as a part of his assigned duties. The map indicates Aaron Jarvis assisted preparing the map. Please have him or someone identified above, sign the map.
- Also, after reviewing the map, it appears a few acres will be irrigated in the SE ¼ SW ¼ Section 26. Do you agree and if so, how many acres?

If you have any questions, please contact me.

Sincerely,

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

enclosure



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7154-3, Robert Ullom**

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. 7154-3, Robert Ullom, 613 E Pipestone, Flandreau SD 57028.

The Chief Engineer is recommending APPROVAL of Application No. 7154-3 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 rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7154-3 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. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 7154-3 authorizes a maximum diversion rate of 1.56 cfs for the irrigation of 104 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. The combined diversion under Water Right No. 1290-3 and Permit No. 7154-3 shall not exceed 1.56 cfs with an annual volume not to exceed 2 acre feet of water per acre per year.
5. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Garland Erbele, Chief Engineer
October 27, 2009

PERMIT APPLICATION NO. 7154-3
ROBERT ULLOM
SEPTEMBER 21, 2009

Water Permit Application No. 7154-3 proposed to appropriate 1.56 cubic feet of water per second from one well to be completed into the Moody management unit of the Big Sioux aquifer. The well is expected to be approximately 48 feet deep and is to be located in the SE¼ NW¼ Section 26, T107N-R48W. The water is to be used to irrigate 104 acres located in the NW¼, NE¼ SW¼ Section 26, T107N-R48W. This application proposes to irrigate acreage that is currently irrigated from the Big Sioux River under the authority of Water Right No. 1290-3.

AQUIFIER: BIG SIOUX: MOODY

AQUIFER CHARACTERISTICS:

The Moody management unit of the Big Sioux aquifer is a surficial, glacial outwash restricted to the Big Sioux River Valley and its tributaries. The management unit extends from near the Moody/Brookings County line at the north to Dell Rapids where the outwash is bounded by a Sioux Quartzite high, see figure 1. The outwash, consisting of unconsolidated, fine-to-medium, poorly sorted sand to a well sorted sand and medium gravel deposited by glacial meltwater, ranges from 4 to 54 feet thick (Hansen, 1988). The hydraulic conductivity of the Big Sioux aquifer varies spatially within the aquifer and ranges from 200 to 450 ft/d, and the specific yield of the aquifer is estimated to be between 0.15 and 0.20 (Hansen, 1988).

Hedges and others, (1982) estimate that the management unit underlies 35,500 acres of Moody and Minnehaha Counties and contains approximately 133,130 acre-feet of recoverable water in storage. Hansen, (1988), estimated the areal extent of the management unit at 55 square miles in Moody County (35,200 acres). The aquifer is mainly under unconfined (water table) conditions and is hydraulically connected to the Big Sioux River. The depth to water in the aquifer is generally 3-10 feet below grade. Groundwater flow is generally to the south and toward the Big Sioux River.

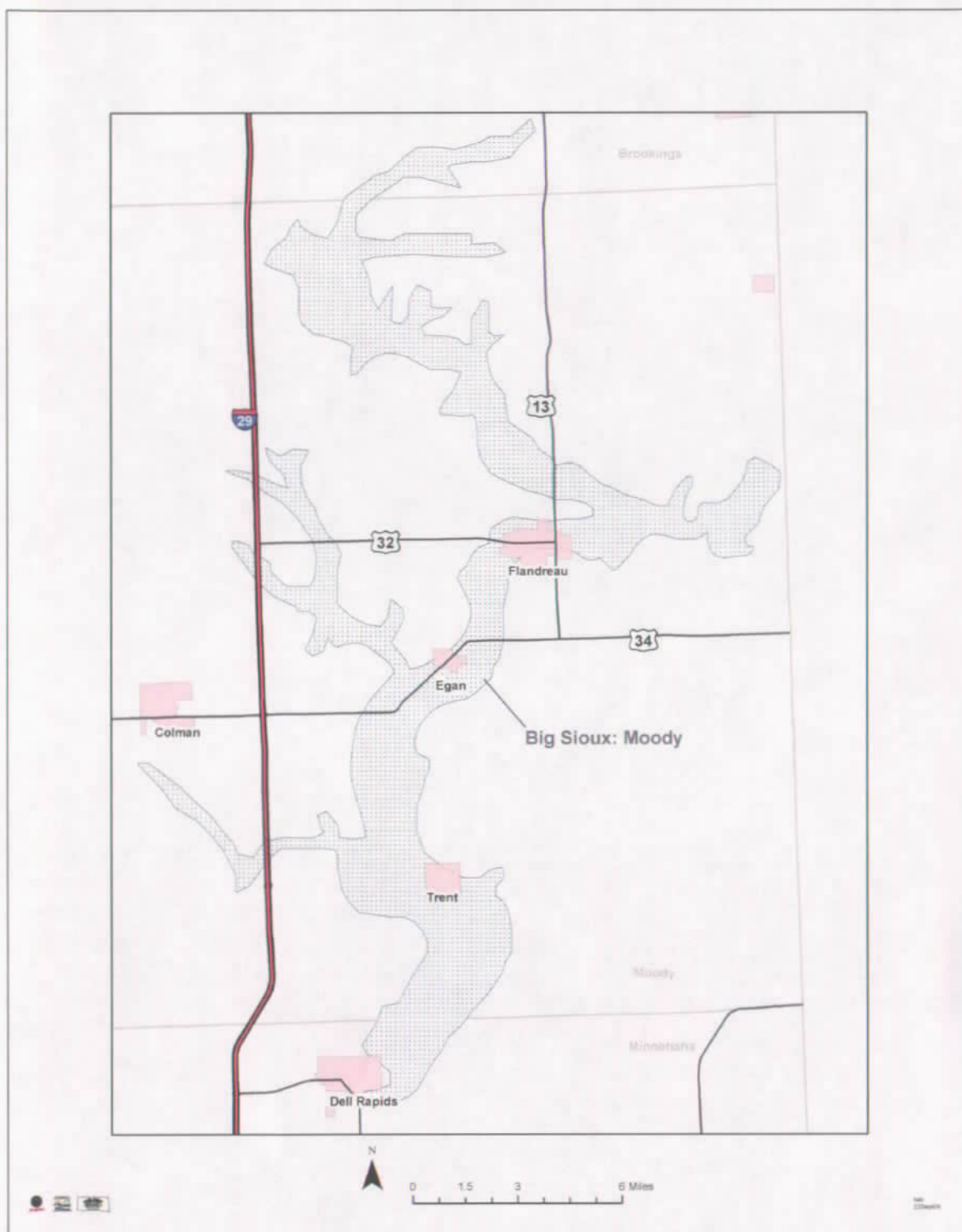


Figure 1. Approximate extent of the BS:M aquifer (modified form Hedges and others, 1982)

DISCUSSION:

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

WATER AVAILABILITY:**Recharge versus Withdrawals:**

The probability of unappropriated water available from the Big Sioux: Moody 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."

Recharge:

Recharge to the Moody management unit occurs primarily through infiltration of precipitation, and streamflow losses from the Big Sioux River and its tributaries. A minor amount of recharge is attributed to uncontrolled flowing wells completed into the Howard aquifer that discharge unto the surface of the Big Sioux aquifer (Hansen, 1986). Hedges and others (1985) estimate the average annual recharge to the BS:M to be 4.9 inches per year (in/yr). The annual recharge rate to the Moody management unit was estimated by Hansen (1988) to range from 3.6-9.36 in/yr with an average of 6.5 in/yr, by assuming an aquifer specific yield of 0.20. If average annual recharge is estimated assuming a specific yield of 0.15, the recharge rate ranges from 2.7-7.02 in/yr with an average of 4.86 in/yr (Hansen, 1988). The total average annual recharge to the BS:M aquifer ranges from approximately 14,496 ac-ft/yr to 19,229 ac-ft/yr, depending on the value assumed for the specific yield.

Withdrawals:

Discharge from the Big Sioux: Moody aquifer in descending order is to: (a) evapotranspiration, (b) discharge to the Big Sioux River, and (c) well withdrawals. A computer model was developed to simulate groundwater flow in the aquifer under various scenarios (Hansen, 1988). The model demonstrates that only a small percent of the water withdrawn from the management unit is from wells (e.g. 1.7% of the total water budget in 1983) (Hansen, 1988). The model shows increased well withdrawals from the BS:M will generally be offset by decreased evapotranspiration, and decreased discharge to the Big Sioux River.

The DENR-Water Rights Program has record of a number of wells completed into the Moody management unit (Water Rights, 2009c). Although several wells are for domestic use, the majority of well withdrawals from this management unit are for uses that require appropriations. There are 37 water rights/permits appropriating water from the BS:M aquifer, they are shown in table 1.

PERMIT NO	NAME	STATUS	USE	CFS	ACRES	AC-FT/YR _a
5083-3	L G EVERIST INC	LC	COM	0.05	NA	<22
6026-3	PLEASANT VALLEY COLONY	LC	COM	0.27	NA	<118
6317-3	DAKOTA LAYERS LLP	LC	COM	0.39	NA	<170
6625-3	RON RANDALL	LC	COM	0.03	NA	<13
6549-3	JAMES AILSBY	PE	COM	0.17	NA	<74
6632-3	PRAIRIE GOLD DAIRY LLC	PE	COM	1.78	NA	<773
1155-3	WAYNE HEADRICK	LC	IRR	1.11	132.50	397.5
1340-3	INOR INC	LC	IRR	1.36	95.00	285
1350-3	RAYMOND D JENSEN	LC	IRR	1.78	158.00	474
1709-3	MITCHEL L RYDBERG	LC	IRR	1.67	132.00	396
1909-3	JAMES J LACEY	LC	IRR	2.00	151.70	455.1
1984-3	GERALD ELSINGER	LC	IRR	1.34	144.80	434.4
2026-3	CLAYTON SCHIPPER	LC	IRR	1.33	132.00	396
213-3	TED OR BEV LACEY	LC	IRR	4.65	252.00	756
2153-3	LAWRENCE PIERSOL	LC	IRR	1.22	85.30	255.9
2952-3	WAYNE HEADRICK	LC	IRR	1.11	130.00	390
2955-3A	JAMES RAMSDELL	LC	IRR	2.00	140.00	420
2956-3	CRAIG SEVERTSON	LC	IRR	1.23	90.00	270
3254-3	DENNIS WHIPKEY	LC	IRR	1.10	79.00	237
3293-3	MICHAEL L SCHMIDT	LC	IRR	1.69	136.00	408
3749-3	LARRY J JORGENSEN	LC	IRR	0.42	30.00	90
5086-3	SCOTT J DUNCAN	LC	IRR	1.11	85.00	170
603-3	WESTERN TRUST COMPANY	LC	IRR	2.77	198.50	595.5
6291-3	FLANDREAU PARK GOLF CLUB	LC	IRR	0.86	26.00	52
6495-3	WILLIAM SUTTON	LC	IRR	1.56	132.00	264
7033-3	FLANDREAU PUBLIC SCHOOLS	LC	IRR	0.09	6.50	
4329-3	TERRY/DENISE ANDERSON	PE	IRR	5.54	538.00	1614
5530-3	TERRY L ANDERSON	PE	IRR	5.84	477.00	954
6826-3	JOSEPH NEMMERS	PE	IRR	2.00	160.00	320
7005-3	RANDALL ENTERPRISE LLC	PE	IRR	1.11	118.00	236
1182-3	CITY OF FLANDREAU	LC	MUN	3.42	NA	<1,485
1800-3	TOWN OF TRENT	LC	MUN	0.25	NA	<109
2054-3	BIG SIOUX COMMUNITY WATER	LC	RWS	1.16	NA	1,491 _b
5720B-3	BIG SIOUX COMMUNITY WATER	LC	RWS	0.67	NA	
5962-3	BIG SIOUX COMMUNITY WATER	LC	RWS	0.44	NA	
5963-3	BIG SIOUX COMMUNITY WATER	LC	RWS	0.95	NA	
6223-3	BIG SIOUX COMMUNITY WATER	PE	RWS	0.74	NA	
LC= Water License, PE= Water Permit, COM= Commercial, IRR= Irrigation, MUN= Municipal, RWS= Rural Water System						
_a Unless otherwise specified in the Water Right or Permit, annual appropriation was estimated to be 60% of full time pumping at permitted diversion rate						
_b Total appropriation from BSCW appropriations established at 1491 ac-ft/yr by Water Permit No. 6223-3						

Table 1. Big Sioux: Moody aquifer Water Rights and Permits

In addition to the appropriations shown above, there are four existing future use permits reserving water from the BS:M they are shown in Table 2.

FUTURE USE NO.	NAME	RESERVATION
1800-3	TOWN OF TRENT	.25 cfs *
3977-3	CITY OF FLANDREAU	830 ac-ft/yr
3984-3	BIG SIOUX COMMUNITY WATER	889 ac-ft/yr
3984A-3	BIG SIOUX COMMUNITY WATER	
TOTAL		1,827.6*
*Future Use No. 1800-3 has not been quantified on an ac-ft/yr basis. Volume is assumed to be 60% of full time usage		

Table 2. Future Use Reservations from the Northern Skunk Creek management unit

The total amount of water that is appropriated (including future use reservations) from the Moody management unit of the Big Sioux aquifer currently is fairly large (approximately 15,957 ac-ft/yr).

Average annual use:

Water Distribution System Use:

The largest single use type from the Moody management unit is for water distribution. Big Sioux Community Water provides rural water and water for municipalities. The City of Flandreau connected to Big Sioux Community Water and as of 2000 receives 100% of its water from the rural water system. The Town of Trent connected to Big Sioux Community Water and as of 2006 receives 100% of its water from the rural water system. (Friedeman). Total water use by Big Sioux Community Water System is shown in Table 3 (Water Rights, 2004-2009).

YEAR	BIG SIOUX COMMUNITY WATER REPORTED PUMPAGE (AC-FT/YR)
2003	1387
2004	1368
2005	1419
2006	1456
2007	1538
2008	1491
AVE	1443

Table 3. Big Sioux Community Water System use from the BS:M aquifer (Water Rights, 2004-2009)

Irrigation:

The second largest water use type from the Big Sioux: Moody aquifer is for irrigation use. Table 4 shows irrigation development from the management unit from 1979 through 2008 (Water Rights, 1980-2009).

YEAR	NO. OF PERMITS	APPROPRIATION (AC-FT/YR)	PUMPAGE REPORTED (AC-FT/YR)
1979	35	16206	517
1980	35	16206	1243
1981	36	16526	1478
1982	26	10318.97	733.54
1983	27	10962.18	1127.99
1984	26	10707.97	582
1985	28	11713.18	1113.5
1986	29	11602.18	260
1987	30	11814.18	743.5
1988	31	12694.18	1931
1989	31	12694.18	1434.95
1990	25	9833.11	812.5
1991	25	9721.71	1163.1
1992	24	9219.9	193.5
1993	25	9469.9	7
1994	26	9980.4	693.93
1995	24	9350.4	402.27
1996	22	10088.4	1006.37
1997	20	9248.4	575
1998	19	8998.4	1299.52
1999	19	8998.4	499.44
2000	19	8998.4	851.75
2001	19	8998.4	1050.62
2002	20	9050.4	1339.73
2003	20	9050.4	1203.97
2004	21	9370.4	379.62
2005	21	9370.4	556.6
2006	21	9370.4	960.18
2007	23	9694.4	860.22
2008	24	9930.4	745.66
MAX	36	16526	1931
MIN	19	8998.4	7
AVE	25	10672.92	858.85

Table 4. Irrigation use reported from the BS:M

The average annual water use for irrigation appropriations from the management unit from 1979-2008 was 858.85 ac-ft/yr (see table 3). This average probably understates irrigation use since it reflects permits being developed. The majority (19 of 24) of the irrigation appropriations were fully developed by 1996, so a more appropriate value for average annual irrigation use from the BS:M averaging use from 1996-2008 which is 871.43 ac-ft/yr.

Five of the current irrigation water permits were not developed in 1996 and represent a total appropriation of 885 ac-ft/yr to irrigate 442.5 acres. Full development of these permits will likely result in pumpage of no more than 400 ac-ft/yr. Therefore the average annual use for irrigation of the BS:M expected at the current appropriation is less than 1,271 ac-ft/yr.

The expected average annual use from the BS:M at the current level of appropriation is estimated to be:

$$\begin{aligned} &1,170 \text{ ac-ft/yr (COM appropriations)} \\ &1,443 \text{ ac-ft/yr (Big Sioux Community Water average pumping)} \\ &\quad 871 \text{ ac-ft/yr (IRR (1996-2008 average))} \\ &\quad 400 \text{ ac-ft/yr (IRR (Post 1996 development))} \\ &\underline{+1,827.6 \text{ ac-ft/yr (Future Use Reservation)}_{1,2}} \\ &5,711.6 \text{ ac-ft/yr} \end{aligned}$$

A simple water budget shows that the probable maximum development of the current appropriation (5,711.6 ac-ft/yr) is less than the estimated average annual recharge to the Big Sioux Moody aquifer (approximately 14,496 ac-ft/yr to 19,229 ac-ft/yr) by approximately 8,784 ac-ft/yr to 13,517 ac-ft/yr

Observation Wells:

The DENR-Water Rights Program monitors 23 observation wells completed into the Moody management unit of the Big Sioux aquifer. The water levels measured in the observation wells range from as high as 0.6 feet below the casing top (MY-81A, 09/22/1986), to as low as 43.3 feet below the top of the casing (MA-90A, 03/02/1992). In general, the water levels of the observation wells range from about 3-15 feet below the top of the casing. The total amplitude of water level fluctuation in the observation wells is generally 8-10 feet (Water Rights, 2009a). The greatest amplitude of water level fluctuation (16.9 feet) measured in an observation well, occurs in observation well MY-82F. The observation well is located within approximately 0.6 miles of nine Big Sioux Community Water wells.

Observation well MY-78B is located approximately one mile northeast of the well site proposed by this application, and MY-63 C is located approximately one and three-fourths miles north-northeast of this proposed well site. The hydrographs for the wells are shown below in figures 2 & 3 respectively

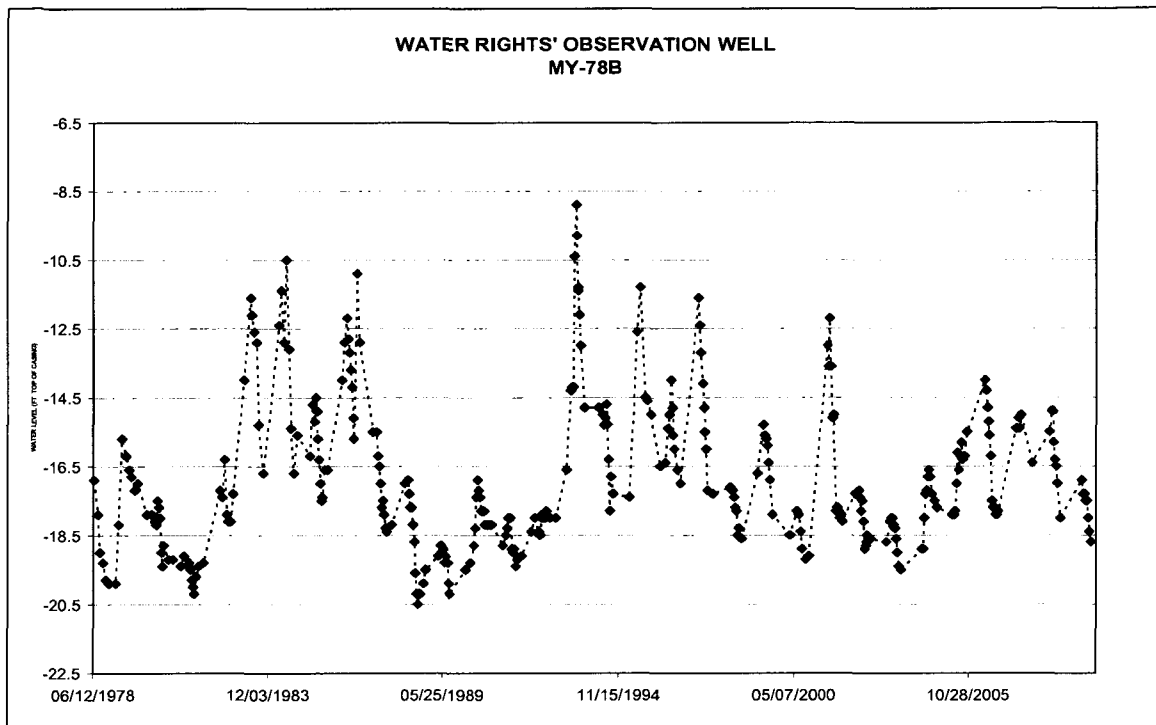


Figure 2. Hydrograph of DENR-Water Rights Program observation well completed into the Big Sioux: Moody located approximately one mile northeast of this proposed well site.

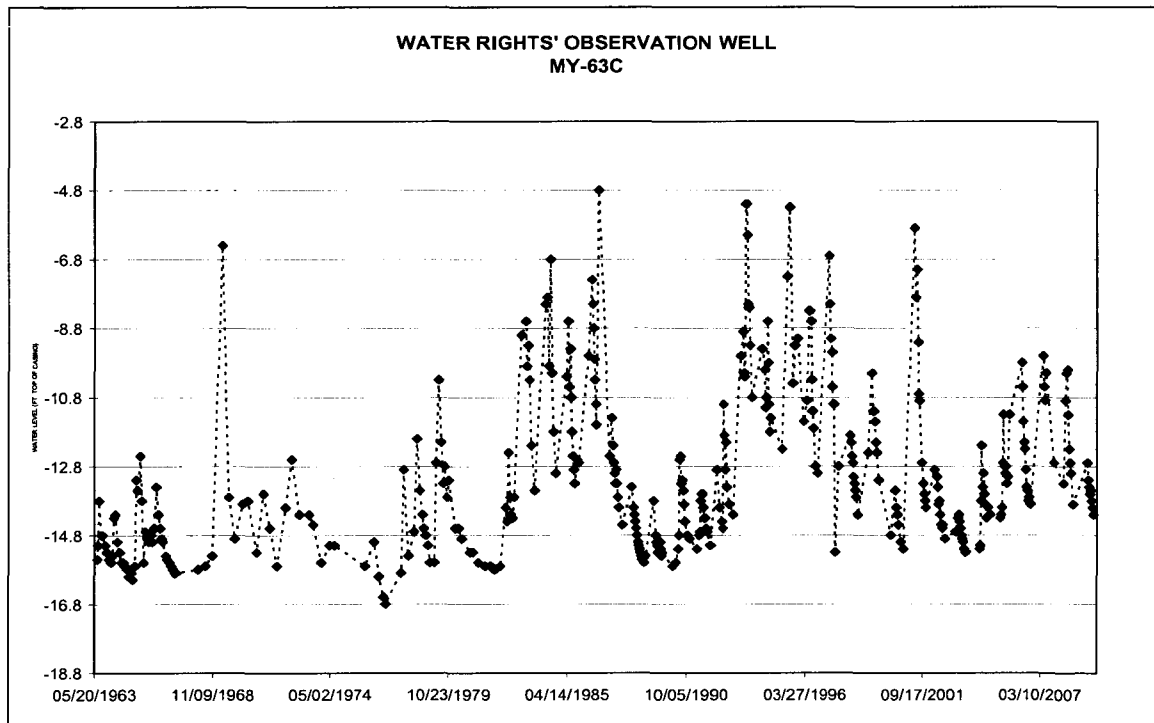


Figure 3. Hydrograph of DENR-Water Rights Program observation well completed into the Big Sioux: Moody located approximately one and three-fourths miles north-northeast of this proposed well site.

The hydrographs are representative for the management unit, demonstrating that the aquifer responds well to recharge with the highest annual water level generally occurring in the late spring/early summer. The lowest annual water level in the aquifer generally occurs in the late summer/early fall. The decline of the water levels during the summer months is due to increased withdrawals relative to recharge. Water levels rise in the aquifer from late fall through early summer when recharge exceeds withdrawals. The hydrographs also show the response in the water levels to above-normal and below-normal precipitation periods.

At the current level of development from the aquifer, it is not possible to distinguish between natural water level fluctuations and the effects of pumping from the hydrographs. The hydrographs demonstrate that in general, the amount of water in storage in the aquifer has remained fairly stable at the current level of development.

It is worth noting however, that Hedges and others (1985) point out that "...the rate of "average annual recharge" is subject to change with time if non-depletion of the aquifer is the only criteria."

REVIEW OF EXISTING WATER RIGHTS:

There have been a total of 53 appropriations approved from the Moody management Unit. Currently, there are 37 water rights and water permits appropriating water from the BS:M (see table 1). In addition, Water Permit Application No. 3432-3 was made by the Town of Egan in 1976, and Water Permit Application No. 4991-3 was made by the Town of Egan in 1984. There is no indication that either of the "Trent" applications were public noticed and there has been no action taken on either application.

Development from the aquifer has been fairly orderly with little controversy. In 1977, Applications No. 3640-3 and 3984-3 were deferred by the Water Rights Commission, pending staff investigation. The applications were subsequently approved in 1978 unopposed. In 2005, Water Permit Application No. 6632-3 was opposed based on a concern that "the Big Sioux River may be going dry". Following a contested case hearing, the Water Management Board made a finding (FOF #8) that "there is insufficient evidence in the record to deny the permit based upon a generalized concern about the Big Sioux River." Extraordinary permit qualifications to current BS:M appropriations are shown in table 5.

WATER PERMIT/RIGHT	EXTRAORDINARY QUALIFICATION
No. 3293-3	Minimum spacing of 660 feet from high capacity wells required
No. 3749-3	Minimum spacing of 660 feet from Big Sioux River required
No. 5668-3	Minimum spacing of 660 feet from high capacity wells and from Big Sioux River required
No. 6291-3	Subject to shut off orders to protect Big Sioux River Flows

Table 5. Water Permits/Rights from BS:M with extraordinary permit qualifications

The six groundwater appropriations that are within approximately two and one-half miles of the well site proposed by Water Permit Application No. 7154-3 are shown in figure 4. Drawdown will result from pumping this well at the proposed diversion rate (1.56 cfs), however, the drawdown will not extend far from the pumped well (probably not measurable beyond ½ mile). Well interference caused by pumping this well is not expected to significantly impact existing users.

Wells completed into the Big Sioux: Moody that are located very close to the Big Sioux River may actually capture some of the river flows when pumped. Some of the appropriations from the Big Sioux River diverting water in this area are required to maintain/ bypass established minimum flows in the river to protect prior downstream water rights. The well site proposed by this application is located approximately ½ mile from the Big Sioux River which should be sufficient distance that the river flows will not be affected by the well. However, as stated earlier, increased withdrawals from the Moody management unit of the Big Sioux aquifer (composite of all pumping) will generally be offset by decreased evapotranspiration and decreased groundwater discharge to the Big Sioux River. The capture of Big Sioux River water may actually be noticeable during low flow periods. Nevertheless, aquifer modeling shows that even under drought scenarios, well withdrawals did not significantly impact the amount of discharge from the aquifer to the Big Sioux River.

DUAL SOURCES FOR IRRIGATING:

This application proposes to irrigate acreage that is currently covered under Water Right No. 1290-3 which authorizes diversions from the Big Sioux River. The proposal for dual sources is not a unique situation. There are a number of permits, or pairs of permits that authorize irrigation of the same acreage from either the Big Sioux River or from the Big Sioux: Moody aquifer, they include:

- Water Right Nos. 1155-3 & 956-3

- Water Right No. 1350-3

- Water Right No. 2952-3 which incorporates Water Permit No. 1945-3

- Water Right Nos. 3749-3 & 1302-3

- Water Permit Nos. 4329-3 & 5530-3

SDCL 46-5-6 establishes limits to the rate of diversion for irrigation at one cubic foot of water per second for each seventy acres, and volume of water diverted may not exceed two acre-feet per acre per year. The combination of the withdrawals from the Big Sioux River and the Big Sioux aquifer cannot exceed the limits established by statute.

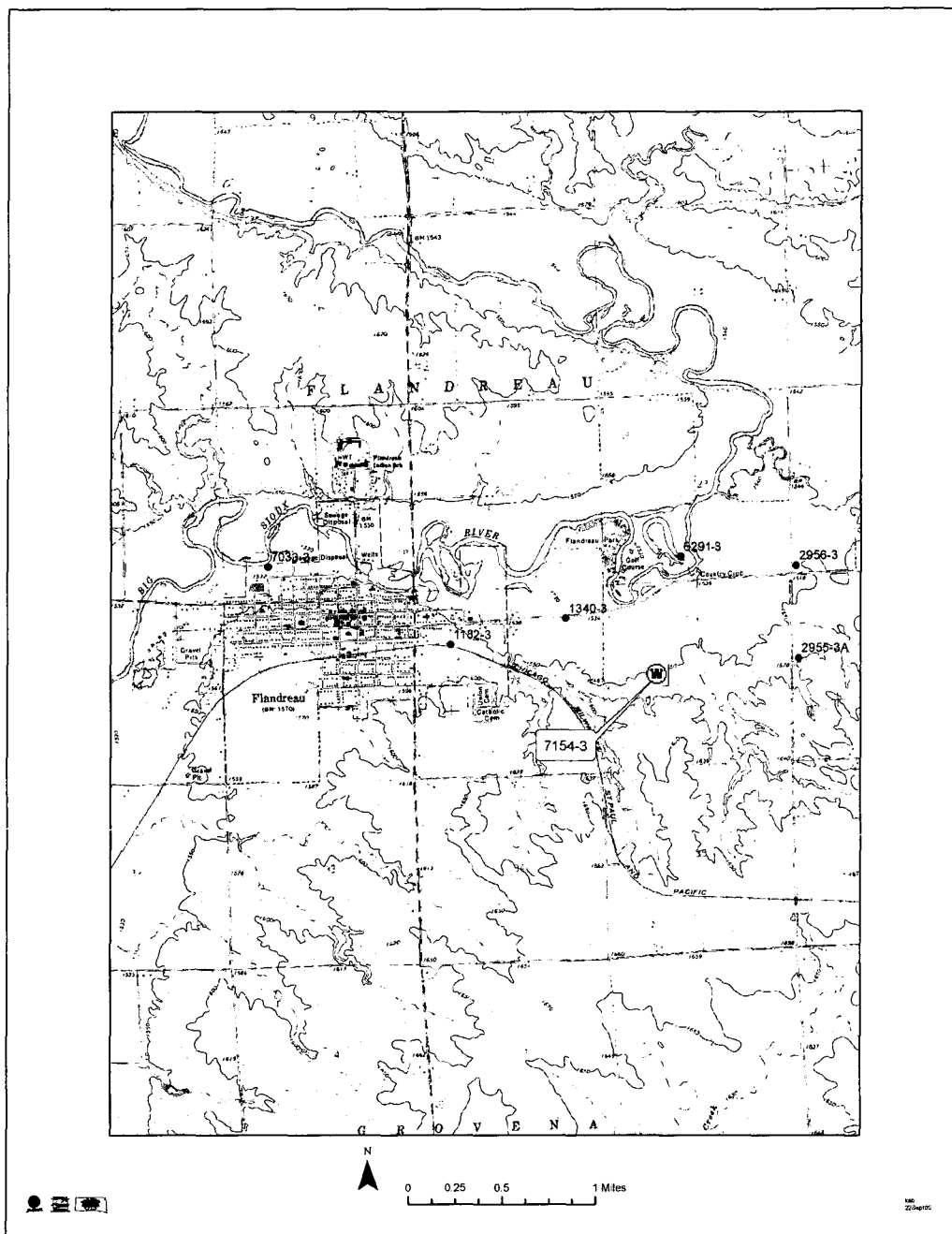
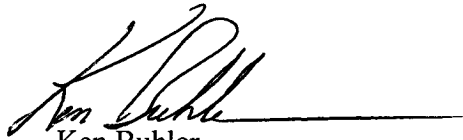


Figure 4. Water Rights and Permits appropriating water from the BS:M within approximately two and one-half miles of the well site proposed by Water Permit Application No.7154-3

CONCLUSIONS:

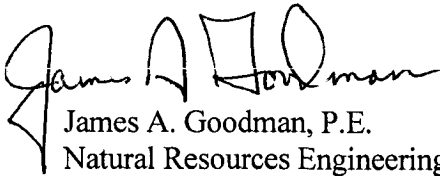
1. The Moody management unit of the Big Sioux aquifer is a viable aquifer in this area.
2. There is a reasonable probability that unappropriated water is available for this proposed appropriation.
3. It is not likely that existing water rights would be adversely impacted by this proposed diversion.
4. This application proposes to use groundwater to irrigate the same acreage that is currently irrigated with diversions from the Big Sioux River.
5. The future use portion of Water Right No. 1800-3 should be reviewed and quantified.
6. Action should be taken with Water Permit Application Nos. 3432-3 and 4991-3 for the Town of Eagan.
7. SDCL 46-5-6 limits the rate and volume that can be applied to the acreage proposed for irrigation by this application.



Ken Buhler

Natural Resources Engineering Specialist

approved by



James A. Goodman, P.E.

Natural Resources Engineering Director

REFERENCES:

- Friedeman, Barbara. "trent and flandreau." E-mail to Ken Buhler. 21 Sept. 2009.
- Hansen, D.S., 1986, Water Resources of Lake and Moody Counties, South Dakota: USGS Water Resources Report 84-4209, 51 p
- Hansen, D.S., 1988, Appraisal of the Water Resources of the Big Sioux Aquifer, Moody County, South Dakota: USGS Water Resources Investigations Report 87-4057, 38 p
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., and Schoon, R.A., 1982, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Tasks 1-4: prepared for U.S. Army Corps of Engineers, contract DACW 45-80-C-0185
- Hedges, L.S., Allen, J. and Holly, D.E., 1985, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River South Dakota and Iowa, Task 7: Groundwater Recharge: prepared for U.S. Army Corps of Engineers, contract DACW 45-80-C-0185
- Water Rights, 1980-2009, Irrigation Questionnaire Summaries, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2004-2009, Non-irrigation Water User Reporting, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2009a, Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2009b, Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2009c, Water Well Completion Report Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

RECEIVED

NOV 16 2009

Form 8

WATER RIGHTS
PROGRAM

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Moody) SS

I, Angela Nibbelink

certify that the attached printed Notice was
taken

from the Moody County
Enterprise

printed and published in Flandreau

County of Moody and

state of South Dakota. The notice was
published

in the newspaper on the following two dates:

November 4, 2009

November 11, 2009

Cost of Printing \$43.52

Angela Nibbelink
(Signature)

office mgr/bookkeeper
(Title)

November 11, 2009
(Date Signed)

NOTICE OF APPLICATION NO.
7154-3 to Appropriate Water

Notice is given that Robert Ullom, 613 E. Pipestone, Flandreau SD 57028 has filed an application for a water permit to appropriate 1.56 cubic feet of water per second from one well to be completed into the Big Sioux: Moody Aquifer (approximately 48 feet deep) located in SE 1/4 NW 1/4 Section 26 to irrigate 104 acres located in the NW 1/4 NE 1/4 SW 1/4 Section 26; all in T107N-R48W. Water Right No. 1290-3 authorizes irrigation of the same acreage from the Big Sioux River.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7154-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E. Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 23, 2009.

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

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

Published twice at the total approximate cost of \$40.

(Nov. 4 & 11, 2009)



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

October 27, 2009

Moody County Enterprise
PO Box 71
Flandreau SD 57028

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7154-3 to Appropriate Water to be published twice. Please publish the first notice on November 4, 2009 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Robert Ullom, 613 E Pipestone, Flandreau SD 57028 (Ph # 605-997-2043).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

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

No. 7154-3

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

Date _____

We are in receipt of your letter of October 27, 2009 enclosing Notice to Appropriate Water by Application No. 7154-3 which was first published in our issue of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name

Newspaper



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

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

October 27, 2009

Robert Ullom
613 E Pipestone
Flandreau SD 57028

Dear Mr. Ullom:

Water Permit Application No. 7154-3 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 Publisher of the Moody County Enterprise printed at Flandreau SD (Ph # 605-997-3725). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and reports on the applications are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

Instruction to Newspaper - Publish first Notice on November 4, 2009 with the second publication 7 days later. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7154-3 to Appropriate Water

Notice is given that Robert Ullom, 613 E Pipestone, Flandreau SD 57028 has filed an application for a water permit to appropriate 1.56 cubic feet of water per second from one well to be completed into the Big Sioux:Moody Aquifer (approximately 48 feet deep) located in SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 26 to irrigate 104 acres located in the NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 26; all in T107N-R48W. Water Right No. 1290-3 authorizes irrigation of the same acreage from the Big Sioux River.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7154-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 23, 2009.

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

Published twice at the total approximate cost of_____.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

APR 27 2010

Robert Ullom
613 E Pipestone
Flandreau SD 57028

Dear Mr. Ullom:

Enclosed is Water Permit No. 7154-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

NOTE: Is it your intent to abandon Water Right No. 1290-3 which authorizes irrigation of the same lands from the Big Sioux River? If so, we will schedule Water Right No. 1290-3 for cancellation. Please contact Genny McMath, with our office (605 773-3352) regarding your intentions for the permit utilizing the Big Sioux River.

RECEIVED

JUL - 6 2010

WATER RIGHTS
PROGRAM**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**Date July 1, 2010TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181FROM: Robert M. Allom

(name)

613 E. Pipestone Ave.

(address)

Blondreau, SD 57028

(city, state, zip)

605-997-2043
(phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

Water Permit No. 7154-3 states that the water use system is to be constructed byNovember 23, 2010, and water is to be put to beneficial use by Nov 23, 2018.

(date)

(date)

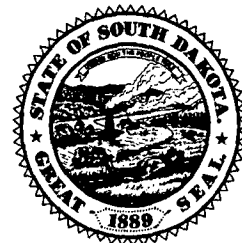
The water use system was completed on June 30, 2010.

(date)

Applying the water to beneficial use was completed on June 30, 2010.

(date)

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

Robert M. Allom
(signature)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

July 6, 2010

1290-3

7154-3

Robert Ullom
613 E Pipestone Ave
Flandreau SD 57028

Dear Mr. Ullom:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with your irrigation system as authorized under Water Permit No. 7154-3.

The system is now ready for inspection. Inspections are done on a county-by-county basis as staff time permits. You have done everything you need to do and the intervening time between the completion of your project and the staff inspection has no bearing on your water permit. Someone from our office will contact you prior to the inspection to set up a time that is convenient for you.

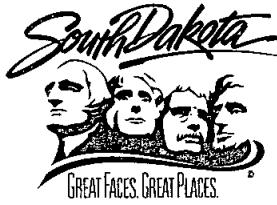
Thank you for the note concerning Water Right No. 1290-3 which authorizes diversion of water from the Sioux River. The water right will be scheduled for cancellation consideration at the October, 2010 Water Management Board meeting. You will be noticed of the exact time and date of the hearing once it is scheduled.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink that reads "Genny McMath". The signature is written in a cursive, flowing style.

Genny McMath
Environmental Scientist
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



No. 7154-3

August 22 2014

Robert Ullom
613 E Pipestone
Flandreau SD 57028

Dear Mr. Ullom:

The irrigation season is in full swing. This has led to the Department of Environment and Natural Resources (DENR) fielding inquiries regarding end gun overspray on to roads. DENR recently distributed the attached press release to the media.

DENR received an inquiry alleging the irrigation system located primarily in the NW ¼ Section 26, T107N, R48W east of Flandreau having irrigation water from the end gun hitting the roadway. The water permit for this system is held in your name under Water Permit No. 7154-3.

It is common for center pivots to have stops which can be engaged to shut off the operation of the end gun when the pivot nears a road. Please take steps to insure end gun stops are functioning properly so there is not direct overspray on to the road.

A water right holder is not allowed to operate an irrigation system in violation of state water law, which includes unauthorized end gun overspray upon land not authorized by the water right. Continued overspray can result in DENR taking enforcement action.

If you don't believe your irrigation system is causing the overspray, or if you have any questions, please contact me at (605) 773-3352 or by email at eric.gronlund@state.sd.us.

Thank you for your cooperation,

Eric Gronlund
Water Rights Program, DENR
605 773-3352

enclosure

PIERRE, S.D. – The Department of Environment and Natural Resources (DENR) reminds irrigators to check their center pivots to ensure they are operating properly and are adjusted to spray only upon land authorized for irrigation by their water permit.

“It is important that irrigators do everything they can to avoid overspraying onto nearby roads or neighboring properties,” said DENR Secretary Steve Pirner. “Irrigation overspray can damage roadways, lead to unsafe driving conditions and impact neighbors.”

A water right holder is not allowed to waste water or operate an irrigation system in violation of state water law, which includes spraying water on land not covered by the water permit. Irrigation systems and especially end guns must be constantly monitored to make sure they are not applying water where it is not allowed. Irrigators who fail to prevent overspray can be subject to fines or required to appear before the Water Management Board for possible suspension of their right to irrigate.

South Dakota has nearly 5,300 active irrigation permits authorizing irrigation of up to 879,000 acres.

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7154-3

I have this day, 26 October 2015, made a thorough examination of the water use system constructed by Robert Ullom, 613 E Pipestone, Flandreau, SD 57028 of Permit No. 7154-3, bearing the priority of 5 August 2009 authorizing the diversion of 1.56 cu. ft. per second of the waters of Big Sioux: Moody aquifer for irrigation purposes, in Moody County.

Inspection contact & relationship
to permit holder, if applicable:

Robert Ullom, owner
Mr. Ullom was not present at inspection but authorized access

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Lacey Well Drilling, Inc.
- 2) No. of Wells one
- 3) Depth(s) 47 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 12 inches
- 2) Length 37 feet
- 3) Type steel

Screen:

- 1) Type Stainless Steel
- 2) Length 10 feet
- 3) Static water level 15 feet (17 June, 2015)

Pump:

- 1) Make Western Land Roller
- 2) Model 3 stage 10CH
- 3) Size 40 horsepower
- 4) Capacity 700 GPM

Motor:

- 1) Make General Electric
- 2) Model No. 5K6237XM501B
- 3) Serial No. 14MJ811294

4) Horsepower rating 40 hp

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

1) Type Aluminum 2) Size 8 inches 3) Length 20 feet

Comments: **From well to underground pipe**

1) Type PIP 2) Size 8 inches 3) Length 1000 feet

Comments: **From well to center pivot**

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Valley
- 2) Overall length 1000 feet
- 3) Number of towers 6
- 4) End gun Yes
- 5) Capacity 700 GPM

Chemigation Equipment:

- 1) Does chemigate No

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Yes

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: 10 feet south and 1525 feet east of the west quarter corner of Sec. 26, T107N-R48W (Lat/Lon.: 44.04393/-96.56155).
2. The works are capable of diverting and conveying to the place of use 1.56 cu. ft. per second of water which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:
NW¼ NW¼ Sec. 26, T107N-R48W: 12.1 acres
NE¼ NW¼ Sec. 26, T107N-R48W: 19.1 acres
SW¼ NW¼ Sec. 26, T107N-R48W: 25.2 acres
SE¼ NW¼ Sec. 26, T107N-R48W: 38.7 acres
NE¼ SW¼ Sec. 26, T107N-R48W: 2.9 acres
NW¼ SW¼ Sec. 26, T107N-R48W: 0.8 acres

comprising a total of 98.8 acres of land and the license should be issued for 1.56 cfs.

3. All structures, wells and lands on map Yes

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

Acreage originally covered under Water Right No. 1290-3, which authorized diversions from the Big Sioux River. The water right was cancelled on 6 October 2010


Ken Buhler
DENR, Water Rights Program

Date report completed: **3 January 2016**

NW Corner
Sec. 26, T107N-R48W

7154-3

Legend

-  7154-3 Well
-  7154-3_Irrigated_acres
-  Quarter-Quarters Alternate Source

NW NW
12.1 acres

NE NW
19.1 acres

SW NW
25.2 acres

SE NW
38.7 acres

0.8 acres

NE SW
2.9 acres

10'

1525'



660 330 0 660 Feet



kb
14 Nov. 2015

Ken Kish

Base Map: NAIIP\South_Dakota_2014_1m

Bureau of Land Management and U.S. Forest Service

SOUTH DAKOTA WATER WELL COMPLETION REPORT

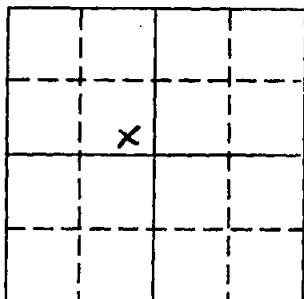
11-02

Location SE 1/4 NW 1/4 Sec 21 Twp 107N Rg 48W

County

Moody

North



Please mark well location with an "X"

Well completion Date

6-17-10

1 Mile

Distance from nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.)

? 1/4 mile ft. from House - septic (Identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Bucket - Probe Casing

CASING DATA:

- ☒ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
50 LB/FT	12 IN	+1 FT	38 FT	20 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
	10	Lb/gal	0 Ft	15 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure Termiered In

SCREEN:

- ☐ Perforated pipe ☒ Manufactured

Diameter 12 Inches Length 10 Feet

Material Stainless Steel

Slot Size 100 Set From 37 Feet to 47 Feet

Other information

WAS A PACKER OR SEAL USED?

- ☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

- ☒ Yes, How? Chlorine Pellets

- ☐ No, Why Not?

Lab sample sent to for water quality analysis

No

Well Owner:

Bob Lillom

Business Name:

Address1:

1613 E Pipestone Ave.

Address2:

City, State, Zip:

Fl Andreeau, SD 57028

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Topsoil	0	9
CLAY	9	12
Brown Sand	12	18
Mixed Coarse Gravel	18	47

STATIC WATER LEVEL

15'

FEET

If flowing: closed in pressure

PSI

GPM flow

through

Inch pipe

Controlled by

- ☐ Valve

- ☐ Reducers

- ☐ Other

Reduced flow rate

GPM

Can well be completely shut in?

WELL TEST DATA:

- ☒ Pumped Describe:

- ☐ Bailed

- ☐ Other

Pumping Level Below Land Surface

34'0"

Ft. After

2

Hrs. pumped

800

GPM

Ft. After

Hrs. pumped

GPM

If pump installed, pump rate:

GPM

REMARKS

Good Well

This well was drilled under license #

111

And this report is true and accurate.

Drilling firm:

Lacey Well Drilling

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

July 30, 2010

Please return **WHITE COPY** to: DENR Water Rights, 523 E. Capitol Ave., Pierre SD 57501

21-5-8

Licensing of Acreage Outside of Permitted Area

NAME: Robert Ullom

ADDRESS: 613 E Pipestone, Flandreau, SD 57028

DATE: 29 March 2016 COUNTY: Moody TELEPHONE: 605.997.2043 c: 605.864.8774

AUTHORITY

Pursuant to SDCL 46-5-30.5, acreage developed for irrigation outside of the area described on the permit may be licensed provided the following conditions are met:

NO INCREASE IN PERMITTED ACREAGE OR WATER APPROPRIATED:

The acreage developed for irrigation is 98.8 acres as compared to 104 acres authorized by the permit.

UNPERMITTED ACREAGE:

- **Contiguous to Permitted Acreage**

The 0.8 acres developed for irrigation outside the area described on the permit, located in the NW¼ SW¼ Sec. 26, T107N-48W, is contiguous to the acreage permitted for irrigation by Water Permit No. 7154-3.

- **Owned by Same Property Owner**

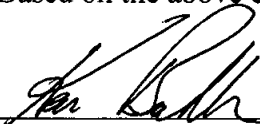
The 0.8 acres developed for irrigation outside the area described on the permit is owned by the same property owner (Robert Ullom).

- **Developed Prior to Expiration of Construction Period**

The irrigation system constructed was constructed prior to the 2010 irrigation season and the expiration of the construction period for this permit was November 23, 2014.

RECOMMENDED ACTION

Based on the above criteria, it is recommended that the 0.8 acre area be included in the water license.



Ken Buhler
Water Rights Program

The Chief Engineer makes a finding pursuant to SDCL 46-5-30.5 that:

This acreage change does not impair existing water rights and the overall project, as developed, is consistent with the original application. Licensing of the unpermitted acreage may occur without application or publication pursuant to SDCL 46-2A-4.



Jeanne Goodman Chief Engineer
Water Rights Program

Approval of Location Change and/or Additional Diversion Point(s)

NAME: Robert Ullom

ADDRESS: 613 E Pipestone, Flandreau, SD 57028

DATE: 29 March 2016 COUNTY: Moody TELEPHONE: 605.997.2043 c: 605.864.8774

AUTHORITY:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed or additional diversion points may be licensed provided the following conditions are met and the potential for interference with other existing diversions is not increased:

- **Developed water source same as permitted source and no additional water appropriated**

Diversions for Water Permit No. 7154-3 are made from a well located 10 feet south and 1525 feet east of the west quarter corner of Sec.26, T107N-R48W (NE¼SW¼ Sec.26, T107N-R48W), based on a GPS reading of the well and measurements made using ArcGIS with 2012 FSA imagery. Water Permit No. 7154-3 authorized diversions from a well in the SE¼NW¼ Sec.26, T107N-R48W. Within the accuracy of GPS and Arc GIS, the well identified in the licensing inspection appears to be located approximately 10 feet away from the location giving in the public notice. No additional diversion rate capacity was developed.

- **If irrigation, no new land is irrigated**

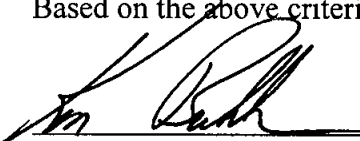
Water Permit No. 7154-3 authorized the irrigation of 104 acres. The system as developed irrigates 98.8 acres.

- **Review of Existing Diversions**

Approval of the change of location as proposed will not impair existing users.

RECOMMENDED ACTION

Based on the above criteria, it is recommended that the diversion point(s) be licensed as developed.



Ken Buhler,
Water Rights Program

The Chief Engineer makes a finding pursuant SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that:

This change in location and/or additional diversion point(s) does not increase the potential for adverse effects to existing diversions.



Jeanne Goodman, Chief Engineer
Water Rights Program



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

7154-3

MAY 02 2016

Robert Ullom
615 E Pipestone
Flandreau SD 57028

Dear Mr. Ullom:

Enclosed is Water License No. 7154-3. This is the final water right document completing your process of obtaining a Water Right. Also, included with your license is a map prepared by the staff engineer who conducted the investigation.

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

Sincerely,

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

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 7154-3

(1) Robert Ullom, 613 E Pipestone, Flandreau SD 57028 made Application No. 7154-3, August 5, 2009 for a water permit to divert 1.56 cubic feet of water per second (cfs) from one well – Big Sioux:Moody Aquifer, Moody County, South Dakota for irrigation purposes. Permit No. 7154-3, with a priority date of August 5, 2009 was approved November 23, 2009 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before November 23, 2014 and for the application to beneficial use of water on or before November 23, 2014.

The permit holder submitted a *Notice of Completion of Works and Application of Water to Beneficial Use* on July 6, 2010. The *Notice* stated the diversion system was completed on June 30, 2010 and the water placed to beneficial use on June 30, 2010.

An investigation conducted for licensing purposes found the diversion point and a portion of the acreage developed for irrigation under Water Permit No. 7154-3 were not in the locations authorized by the permit. Pursuant to SDCL 46-5-13.1 and 46-5-30.5, the Chief Engineer makes a finding that existing water rights will not be impaired and the overall project, as developed, is consistent with the original application.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Water Right No. 7154-3 is issued a license, bearing a priority date of August 5, 2009 to appropriate 1.56 cubic feet of water per second from one well – Big Sioux:Moody Aquifer to irrigate 98.8 acres.

The diversion point is located: 10 feet south and 1,525 feet east of the west quarter corner of Section 26-T107N-R48W (NE 1/4 SW 1/4). The acres authorized for irrigation are as follows:

Section 26-T107N-R48W	NW 1/4 NW 1/4	12.1 ac	NE 1/4 SW 1/4	2.9 ac
	NE 1/4 NW 1/4	19.1 ac	NW 1/4 SW 1/4	0.8 ac
	SW 1/4 NW 1/4	25.2 ac		
	SE 1/4 NW 1/4	38.7 ac	Total	98.8 ac

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 7154-3 including the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7154-3 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. *The well was drilled by Lacey Well Drilling in June, 2010. A copy of the log is on file with the Water Rights Program.*
3. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 7154-3 authorizes a maximum diversion rate of 1.56 cfs for the irrigation of 98.8 acres with an annual volume not to exceed 2 acre feet of water per acre per year. *The acreage was reduced based on what was actually developed.*

(continued)

4. The combined diversion under Water Right No. 1290-3 and Permit No. 7154-3 shall not exceed 1.56 cfs with an annual volume not to exceed 2 acre feet of water per acre per year. ***Water Right No. 1290-3 from the Big Sioux River was cancelled June 6, 2010.***
5. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.



Jeanne Goodman, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

MAY 02 2016

date



7154-3



DENR
SOUTH DAKOTA

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

October 27, 2020

7154-3

Robert Ullom
23052 482nd St
Flandreau SD 57028

Dear Mr. Ullom:

Enclosed is a "Notice" dated October 23, 2020 concerning the 2020 irrigation questionnaire.

The notice was originally mailed to 613 E Pipestone, Flandreau SD. The post office notified us that your address has changed, and I will update our records accordingly.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Genny McMath". The signature is fluid and cursive, with the first name "Genny" being more prominent.

Genny McMath
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosures



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

May 2, 2025

7154-3

David Parsley
701 E Pipestone Ave
Flandreau SD 57028

Dear Mr. Parsley:

Each year, the State of South Dakota sends out Water Management Irrigation Questionnaires to collect information based on annual water use from our state's waters.

This year we received word from one of the irrigators, Robert Ullom, that the property he had previously owned and reported on has been sold to you. For your convenience I have enclosed a partially completed "Transfer of Ownership" form for you to complete and return in the pre-paid envelope.

Please return the form with a check for \$50.00 made payable to "SD Water Rights Program" to cover the transfer fee. If you would prefer to pay by card you may call our Fiscal Office at 605.773.5559. This form will still need to be returned even if you are submitting payment over the phone.

Should you decide you wish to discontinue the irrigation on this piece of land, we would ask that you let us know.

If you have any questions or concerns, please give me a call. My direct number is 605.910.5187

Sincerely,

Amanda Dewell
Permitting Administrator
Water Rights Program
605 773-3352
Amanda.Dewell@state.sd.us

enclosures

7154-3

RECEIVED

MAY 16 2025

OFFICE OF
WATER

PAID

MAY 15 2025

Ck# 1047

Rec't#

NOTICE OF TRANSFER OF OWNERSHIP

For assistance call (605) 773-3352

Mail to: SD DANR, Water Rights Program
523 E Capitol Ave
Pierre, SD 57501-3182

Water Right/Permit No. 7154-3

Date: 5-8-2025

I/We request that Water Right/Permit No. 7154-3 formerly owned by:
Robert Ullom - Flandreau SD

be transferred to:

New Owner Name:

Address:

City, State, Zip

David Parsley

701 E Ripstone Ave

Flandreau, SD 57028

mobile: 605-777-5705

email: david.parsley4@gmail.com

Title to the following described land(s)/property has been transferred as described above:

Section 26-T107N-R48W
NW 1/4 NW 1/4 - 12.1 ac
NE 1/4 NW 1/4 - 19.1 ac
SW 1/4 NW 1/4 - 25.2 ac
SE 1/4 NW 1/4 - 38.7 ac
NE 1/4 SW 1/4 - 2.9 ac
NW 1/4 SW 1/4 - 0.8 ac

TOTAL: ~~98.8~~ acres

*VERIFIED OVER THE
PHONE

98.8

*EMAILED SHANNON 5.16.25

☐ I understand that the validity of Water Right/Permit No. 7154-3 has not been determined by this transfer action. If I have any questions on validity, I understand that only the Water Management Board has the authority to determine if a water right/permit is valid (see note below).

You are requested to file this "Notice of Transfer" in the appropriate file with the Water Rights Program, as evidence of the change of ownership.

A fee of Fifty Dollars (\$50.00) is included to cover the filing fee as required by SDCL 46-2-13.

I, David Parsley, the new owner, certify that the above information is true and correct.

(signed by new owner)

NOTE: Water permits may be cancelled for nonconstruction after the five-year construction period has expired. Once a water permit is developed, an inspection is conducted to issue a water right license for the project as developed. A water permit/right may be cancelled for one or more of the following reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three-year period without legal excuse.
3. For a third violation of a condition of a water permit/right.

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date May 16th, 2025

RECEIVED OF David Parsley 701 E Pipestone Ave Flandreau SD 57028

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	\$ _____
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 #7154-3	\$50.00
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
	\$50.00

By


Chief Engineer