

WATER PERMIT NO. 8126-3

Name of Applicant: David Smit, Cathy Smit, Brian Smit, Krista Smit

Address: 45536 283rd St, Hurley SD 57036 Phone: 605 310-0640

Amount of Water Claimed: 3.78 cfs Total Acres: 220 acres

Source of Water Supply: groundwater (2 wells)

Water to be used for: irrigation County: Turner

Type of Waste Disposal System:

Location: 1/2 mile north of Davis

PRIORITY Date Received: 2-11-15 Application/License Fee: \$ 1150

Corrected Application Received: 2-24-15 Period of Annual Use: May 1 – September 30

Remarks: Requesting a diversion rate greater than the statutory limit

Diversion Point: NE 1/4 SW 1/4 and SE 1/4 NW
1/4 Section 33-T98N-R52W

Land to be Irrigated: NW 1/4, NE 1/4 SW 1/4, N
1/2 SE 1/4, W 1/2 NE 1/4 Sec 33-T98N-R52W

Depth of Well: 200 feet deep

Well Driller:

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 2-24-14

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

			33		

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FEB 24 2015

WATER RIGHTS
PROGRAM

SD EForm - 0499LD V4

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

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FEB 11 2015

WATER RIGHTS
PROGRAM

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8126-3</u> (office use only)
	Hydrologic Unit <u>10170102</u>
	Basin <u>Vermillion River</u>
	Newspaper <u>Viborg Enterprise/Hurley Leader</u> <u>Argus Leader</u>

Application For Permit To Appropriate Water For Irrigation

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

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

1. Name to Appear on Irrigation Permit David Smit, Cathy Smit, Brian Smit & Krista Smit
(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent

Mailing Address ~~45536~~ 45536 283rd St Hurley SD 57036
(Address) (City) (State) (Zip Code)

Home Phone (605) 238-5450 Cell (605) 310-0640 Email cdsmit@Knology.net

2. Amount of water claimed 3.78 *CFS or 1,700 **GPM ***AF Total Acreage 220
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acres - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply 2 200ft wells drawing from the Upper Vermillion Missouri Aquifer

4. Location of point of diversion 1 well in NE 1/4 of SW 1/4 of 98-52-33 +
(example - 3 wells in SW 1/4 NE 1/4 section T2-T104N-R53W)
1 well in the SE 1/4 of NW 1/4 of 98-52-33 County Turner

5. County or counties where water will be used Turner

6. Annual period during which water is to be used May - September 30

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

Land Description	Acres	Land Description	Acres
NE 1/4 of NW 1/4 of 33-98-52	36	NW 1/4 of SE 1/4 of 33-98-52	26
NW 1/4 of NW 1/4 of 33-98-52	10	NW 1/4 of NE 1/4 of 33-98-52	32
SE 1/4 of NW 1/4 of 33-98-52	38	SW 1/4 of NE 1/4 of 33-98-52	30
NE 1/4 of SW 1/4 of 33-98-52	36	SW 1/4 of NW 1/4 of 33-98-52	10

8. Give a description of the project. (Attach sheet if more space is needed) SW 1/4 of SE 1/4 of 33-98-52 | 2

2 new wells & 2 pivots, both making partial circles to maximize the number of acres irrigated on this very odd shaped field

Requesting diversion rate greater than statutory limit.

I, David Smit, Cathy Smit, Brian Smit & Krista Smit, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

2012-09

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

SOUTH DAKOTA
WATER PERMIT NO. 8126-3 FOR IRRIGATION

Date of first receipt of application February 11, 2015.

Date of return to applicant for corrections, amendments or changes February 17, 2015.

Date of receipt of corrected application February 24, 2015.

The Water Management Board approved Water Permit No. 8126-3 on July 8, 2015 for David Smit, Cathy Smit, Brian Smit and Krista Smit, 45536 283rd St, Hurley SD 57036 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. 8126-3 appropriates 3.78 cubic feet of water per second (cfs) from two wells to be completed into the Upper Vermillion Missouri:North Aquifer (200 feet deep) located in the NE 1/4 SW 1/4 and the SE 1/4 NW 1/4 Section 33 for irrigation of 220 acres located in the NW 1/4, NE 1/4 SW 1/4, W 1/2 SE 1/4, W 1/2 NE 1/4 Section 33; all in T98N-R52W.
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 February 11, 2015.
4. One-fifth of the construction is to be completed on or before January 8, 2018.
5. All construction is to be completed on or before July 8, 2020.
6. Water is to be put to beneficial use on or before July 8, 2024.
7. 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 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 wells authorized by Permit No. 8126-3 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. 8126-3 authorizes a maximum diversion rate of 3.78 cfs for the irrigation of 220 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: Jeanne Goodman
Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

AUG 04 2015
date



Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☒ Drilling new well(s) ☐ Using existing well(s)

a) If new wells, how many 2 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)

b) If existing wells, how many _____ Provide copy of log(s), if available. Drilled by _____

c) Well Depth approximately 200 ft Depth to Top of Water Bearing Material ? Depth to Water from Surface ?

d) Distance to nearest existing domestic well:

On applicant's property none

On property owned by others 3000 ft approximately

2. Wastewater Disposal System Information

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

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

a) Surface Dimensions _____ Depth _____

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

4. Water Storage Dams

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

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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

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

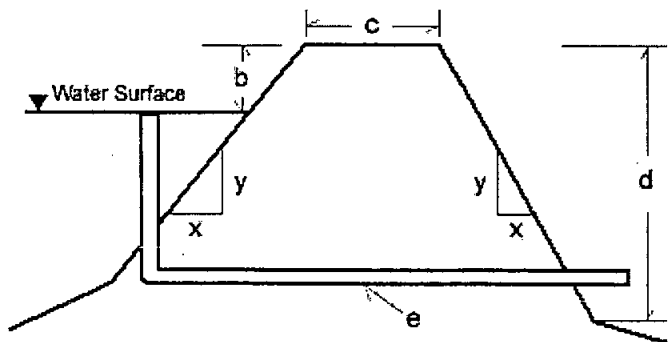
Upstream _____

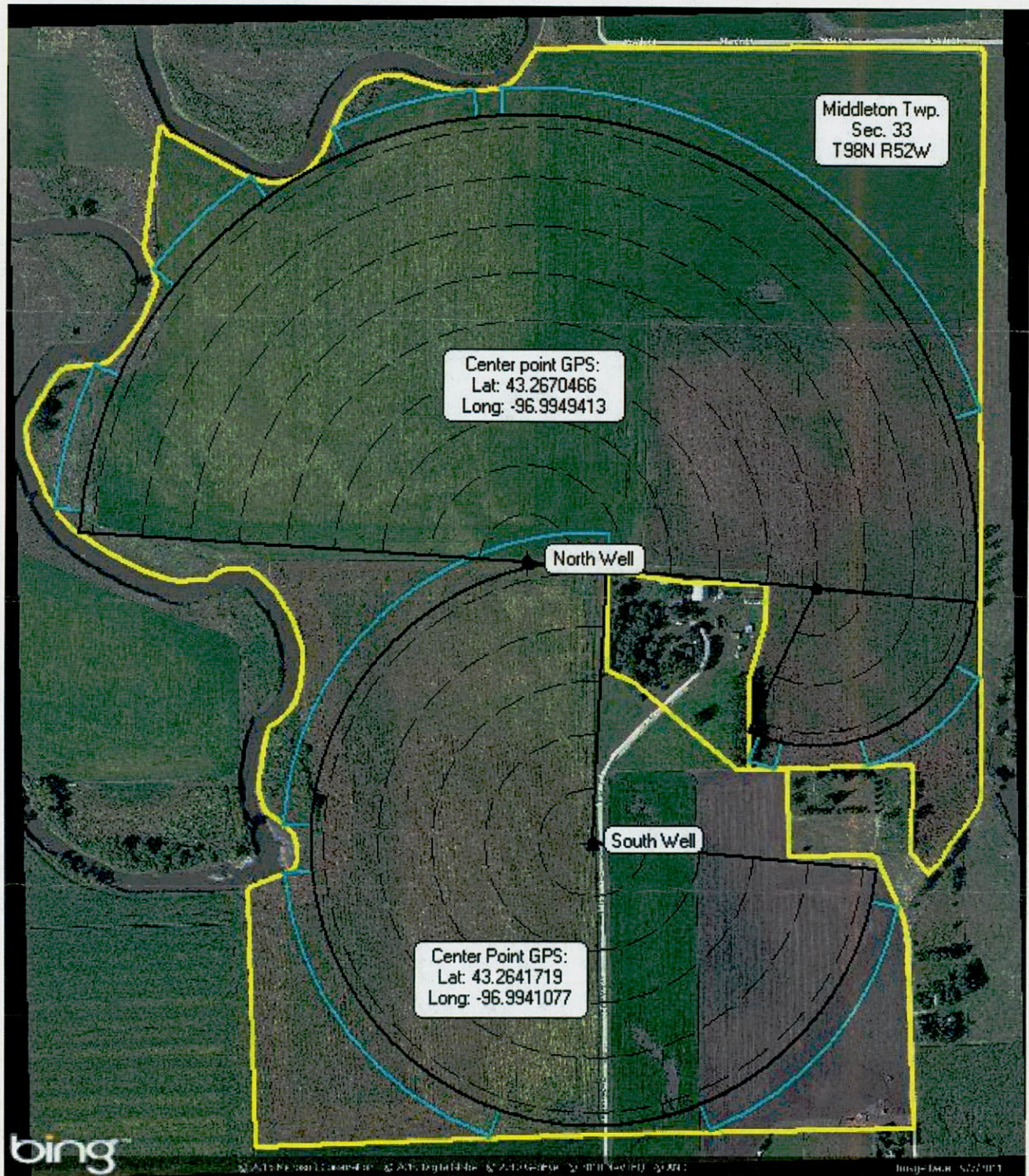
Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres





Sec 20
T098N
R52W

Sec 21
T098N
R52W

Sec 29
T098N
R52W

Sec 28
T098N
R52W

Sec 27
T098N
R52W

Sec 32
T098N
R52W

Sec 33
T098N
R52W

Sec 34
T098N
R52W

Sec 5
T097N
R52W

Sec 4
T097N
R52W

Sec 3
T097N
R52W

Sec 8
T097N
R52W

Sec 9
T097N
R52W

Sec 10
T097N
R52W

Handwritten numbers on the map:
36, 32, 10, 10, 38, 30, 36, 26, 2

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 2-11, 20 15

RECEIVED OF David or Cathy Smit, 45536 283rd St, Hurley SD 57036

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

Fee for Application for Permit No. <u>8126-3</u> to Appropriate Water, to construct and to put water to beneficial use	475	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>8126-3</u>	100	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	575.00

No. 07250

By Jeannie Goodman
Chief Engineer 115

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 2-11, 20 15

RECEIVED OF Krista or Brian Smit, 7300 Shadow Creek Ave, Sioux Falls SD 57108

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

Fee for Application for Permit No. <u>8126-3</u> to Appropriate Water, to construct and to put water to beneficial use	475	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>8126-3</u>	100	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	575.00	

No. 07259

By Joanne Goodman
Chief Engineer

K5

Gronlund, Eric

From: Gronlund, Eric
Sent: Wednesday, February 11, 2015 11:44 AM
To: 'cdsmit@knology.net'
Cc: Schlaak, Karen
Subject: Water Permit application for Dave Smit, Cathy Smit, Brian Smit and Krista Smit

DENR acknowledges receiving the water permit application for irrigation in Section 33, T98N, R53W.

1. The location of the diversion point needs clarification. From the submitted map it appears the wells will be located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ and NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 33. Is that correct?
2. The application states 220 acres will be irrigated. However under Item No. 7 of the application a breakdown of the acres by quarter-quarter section (40 acre parcel) is not given. Please provide a breakdown of the acres to be irrigated by forty acre division.

A note attached indicates Dave Smit's desire to have everything in order before the March meeting. This is not possible. First because the publication deadline for the March meeting is already past. Secondly, as I believe I spoke with either Dave or Brian, it appears this application is within in the north management unit of the Upper Vermillion Missouri aquifer. Currently there are deferred applications from this management unit. DENR currently intends to schedule those applications before the Board at their May 6 – 7, 2015 meeting. It would be our hope public notice this application along with the other deferred application for the May meeting. DENR is still reviewing the material to make a recommendation so nothing is definite. Also when a new application is filed DENR has 60 days to review for the purpose of making a recommendation and proceeding to public notice.

Eric Gronlund
Water Rights Program, DENR
605 773-3352
Eric.gronlund@state.sd.us



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

February 11, 2015

David, Cathy, Brian, Krista Smit
c/o David Smit
45536 283rd St
Hurley SD 57036

Dear Mr. Smit:

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

1. The location of the diversion point needs clarification. From the submitted map, it appears the wells will be located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ and NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 33. Is that correct?
2. The application states 220 acres will be irrigated. However under Item No. 7 of the application a breakdown of the acres by quarter-quarter section (40 acre parcel) is not given. Please provide a breakdown of the acres to be irrigated by forty acre division.

A note attached indicates Dave Smit's desire to have everything in order before the March meeting. This is not possible. First, the publication deadline for the March meeting is already past. Secondly, as I believe I spoke with either Dave or Brian, it appears this application is within in the north management unit of the Upper Vermillion Missouri aquifer. Currently, there are deferred applications from this management unit. DENR intends to schedule those applications before the Board at their May 6 – 7, 2015 meeting. It would be our hope to public notice this application along with the other deferred applications for the May meeting. DENR is still reviewing the material to make a recommendation so nothing is definite. Also, when a new application is filed DENR has 60 days to review for the purpose of making a recommendation and proceeding to public notice.

If you have any questions, please contact me.

Sincerely,

Eric Gronlund
Water Rights Program
605 773-3352
eric.gronlund@state.sd.us

Schlaak, Karen

From: Gronlund, Eric
Sent: Tuesday, February 24, 2015 7:46 AM
To: Schlaak, Karen
Subject: FW: Water Permit application and letter sent for clarification.
Attachments: Revised Water Permit.pdf

Think this is in the pending file. I did not review his resubmittal.

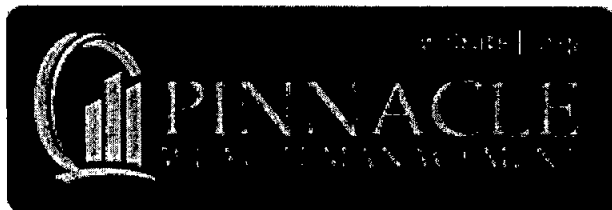
From: Smit, Brian [<mailto:brian@pinnaclewealthmanagement.com>]
Sent: Monday, February 23, 2015 8:13 PM
To: Gronlund, Eric
Subject: RE: Water Permit application and letter sent for clarification.

Eric,

Here is the revised version of the application with the missing information included. I am sorry for the inconvenience. Thanks so much.

Sincerely,

Brian Smit, CEPA
Wealth Advisor



BRIAN SMIT
WEALTH ADVISOR

Phone: 605.271.6023 Fax: 605.271.6032
Toll Free: 866.575.2500

6216 S.Pinnacle Place • Suite 101 • Sioux Falls, SD 57108



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From: Gronlund, Eric [<mailto:Eric.Gronlund@state.sd.us>]
Sent: Monday, February 23, 2015 3:23 PM

To: Smit, Brian

Subject: Water Permit application and letter sent for clarification.

Brian – attached is the letter we sent to your dad and the application that was filed. Eric



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8126-3, David, Cathy, Brian and Krista Smit**

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. 8126-3, David, Cathy, Brian and Krista Smit, 45536 283rd Street, Hurley SD 57036.

The Chief Engineer is recommending APPROVAL of Application No. 8126-3 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 wells 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 wells authorized by Permit No. 8126-3 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. 8126-3 authorizes a maximum diversion rate of 3.78 cfs for the irrigation of 220 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
May 19, 2015

REPORT TO THE CHIEF ENGINEER
ON
THE NORTH MANAGEMENT UNIT OF THE UPPER VERMILLION AQUIFER
APRIL 21, 2015

HISTORY

A number of water permit applications proposing to appropriate water from the Upper Vermillion Missouri aquifer were filed with the South Dakota Department of Environment and Natural Resources (DENR)-Water Rights Program since the fall of 2012. The Chief Engineer recommended deferral of approximately 20 applications until data was available to determine whether approval of the additional permits from the aquifer would cause average annual withdrawals from the aquifer to exceed the average annual recharge to the aquifer (i.e. determine the probability of unappropriated water available from the aquifer). Interpretation of geologic and hydrologic data produced by the DENR-Geological Survey in 2013-2014, resulted in considering three management units (North, South and West units) within the Upper Vermillion Missouri aquifer (Buhler, 2014). The Water Management Board adopted the three management unit approach to dealing with appropriations from the Upper Vermillion Missouri aquifer at its March 6, 2014, meeting. The deferred water permit applications that proposed appropriations from the south and west management units of the aquifer were approved at the March 2014 Water Management Board meeting because it was determined there was unappropriated water available.

However, three applications proposing to appropriate water from the North management unit remain in deferred status because there was insufficient data to determine that unappropriated water was available. They include Water Permit Application No. 7468-3, Cleland Hagen Trust; Water Permit Application No. 7558-3, Cleland Trust; and Water Permit Application No. 7587-3, Paul Peterson.

Water Permit Application No. 7468-3 proposes to appropriate water from the Upper Vermillion Missouri: North aquifer using one well approximately 206 feet deep, located in the approximate center of the NE $\frac{1}{4}$ of Section 26, T98N-R52W. Water is to be diverted at a maximum diversion rate of 1.78 cubic feet of water per second (cfs) for the irrigation of 152 acres located in the NE $\frac{1}{4}$ of Section 26, T98N-R52W, in Turner County.

Water Permit Application No. 7558-3 proposes to appropriate water from the Upper Vermillion Missouri: North aquifer using one well approximately 275 feet deep, located in the approximate center between the NW $\frac{1}{4}$ and the SW $\frac{1}{4}$ of Section 1, T98N-R52W. Water is to be diverted at a maximum diversion rate of 1.78 cfs for the irrigation of 120 acres located in the N $\frac{1}{2}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$ of Section 1, T98N-R52W, in Turner County. This application is proposing a diversion rate greater than the statutory limit of one cfs per 70 acres.

Water Permit Application No. 7587-3 proposes to appropriate water from the Upper Vermillion Missouri: North aquifer using one well approximately 100 feet deep, located in the approximate center of the SE $\frac{1}{4}$ of Section 10, T98N-R53W. Water is to be diverted at a maximum diversion rate of 1.78 cfs for the irrigation of 160 acres located in the SW $\frac{1}{4}$ of Section 10, T98N-R53W in Turner County.

Recently, Water Permit Application No. 8126-3, proposing an appropriation from the North management unit was filed with the DENR-Water Rights Program by David, Cathy, Brian, and Krista Smit. Water Permit Application No. 8126-3 proposes to appropriate water from the North management unit of the Upper Vermillion aquifer using two wells approximately 200 feet deep, located in the NE¼ SW¼ and the SE¼ NW¼ Section 33, T98N-R52W. Water is to be diverted at a maximum diversion rate of 3.78 cfs for the irrigation of 220 acres located in the NW¼, NE¼SW¼, W½ SE¼, W½ NE¼ of Section 33, T98N-R52W. This application is proposing a diversion rate greater than the statutory limit of one cfs per 70 acres.

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Upper Vermillion Missouri aquifer is a glacial outwash deposit that generally occupies a north-south trending bedrock channel in Turner, Lincoln and Clay Counties. A study of the Upper Vermillion Missouri aquifer conducted by the DENR-Geological Survey in 2013-2014 established new boundaries for the main body of the aquifer in Turner County (Holmes and Filipovic, 2015). Although the southern boundary of the Upper Vermillion Missouri (South management unit) has not been delineated at this time, data shows that it extends south several miles from the original border as it merges with or transitions into the Lower Vermillion Missouri aquifer. The areal extent of the main body (North and South management units) of the Upper Vermillion Missouri aquifer as defined by these new boundaries is at least 117,000 acres. A channel deposit extending to the northwest from the main body of the Upper Vermillion Missouri aquifer may be hydrologically connected to the aquifer.

The transmissivity of the Upper Vermillion Missouri aquifer was estimated using the specific capacities of irrigation wells and two rural water system wells completed into the aquifer where sufficient data was available. Transmissivity values ranged from 19,200 – 466,600 gpd/ft and the average transmissivity for the aquifer was estimated to be 145,861 gpd/ft (Buhler, 2014).

As the result of work done by the DENR- Geological Survey in 2013-2014, identifiable geologic and hydrologic data suggests two boundaries establishing three management units within the Upper Vermillion Missouri aquifer (Buhler, 2014). Geologic and hydrologic data suggests a boundary between the North management and South management units of the Upper Vermillion Missouri aquifer near the middle of T97N-R52W (Buhler, 2014).

The North management unit of the Upper Vermillion Missouri aquifer extends north of T97N-R52W and encompasses an estimated 38,110 acres (see Figure 1). The North Management unit of the Upper Vermillion Missouri aquifer (UVM:N) is typically buried and under confined conditions. However, the Parker Centerville aquifer overlies the Upper Vermillion Missouri aquifer in places, and the two aquifers are in direct hydrologic contact over approximately 2,930 acres (Holmes and Filipovic, 2015) (see Figure 2). Where the Parker Centerville aquifer directly overlies the Upper Vermillion Missouri: North aquifer, the UVM:N is under unconfined conditions.

A reliable average annual recharge estimate is not available for the Upper Vermillion Missouri: North aquifer, but the source of recharge is “most likely from precipitation rather than inflow from other buried aquifers. The leakage from the overlying Parker-Centerville aquifer to the

Vermillion-Missouri aquifer is the likely source of recharge where the two aquifers are in direct contact...” (Holmes and Filipovic, 2015). Discharge from the UVM:N is through groundwater outflow to the South management unit of the Upper Vermillion Missouri and well withdrawals.

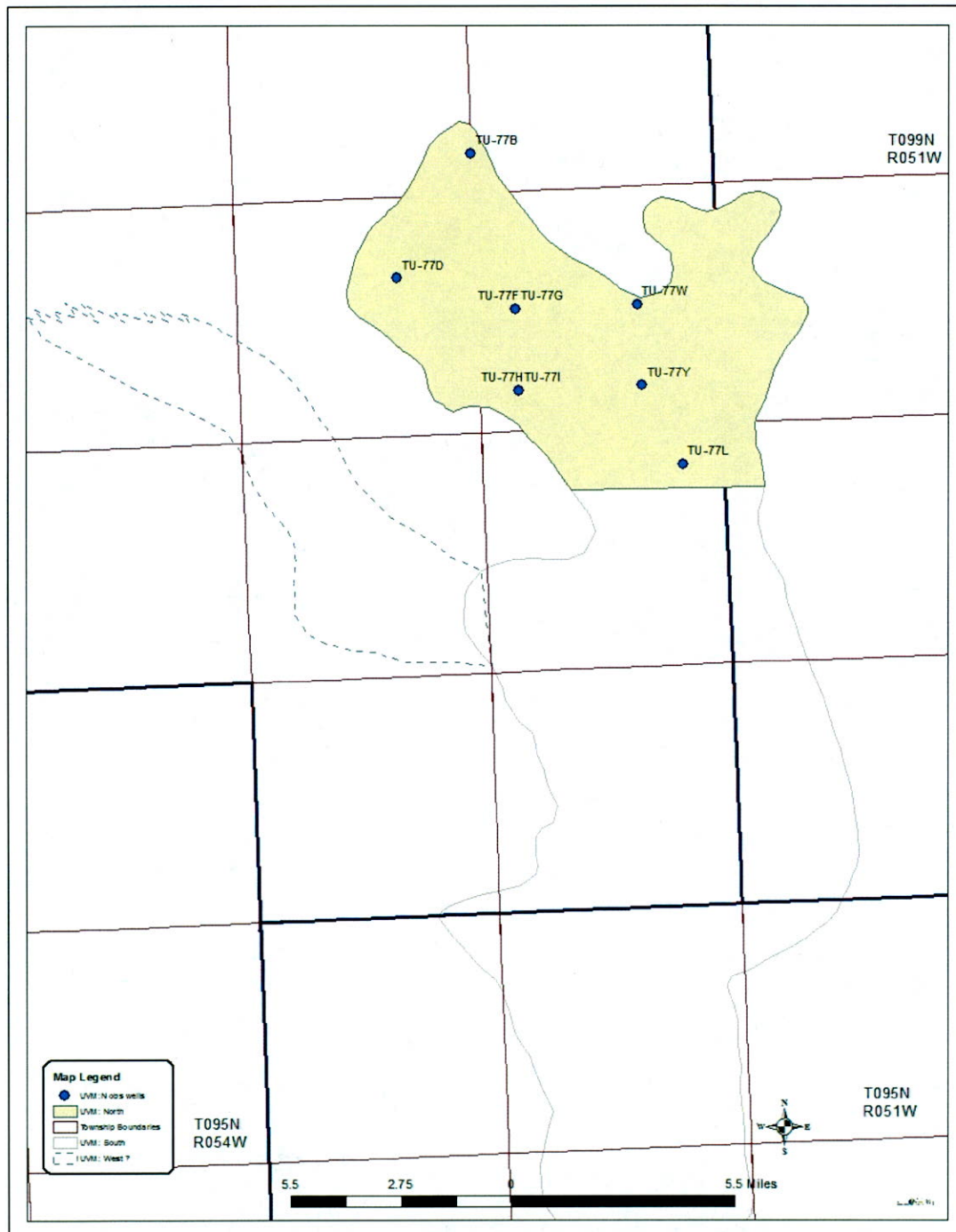


Figure 1. Map showing the location and areal extent of the North management unit of the Upper Vermillion aquifer and the location of DENR-Water Rights' observation wells completed into the aquifer.

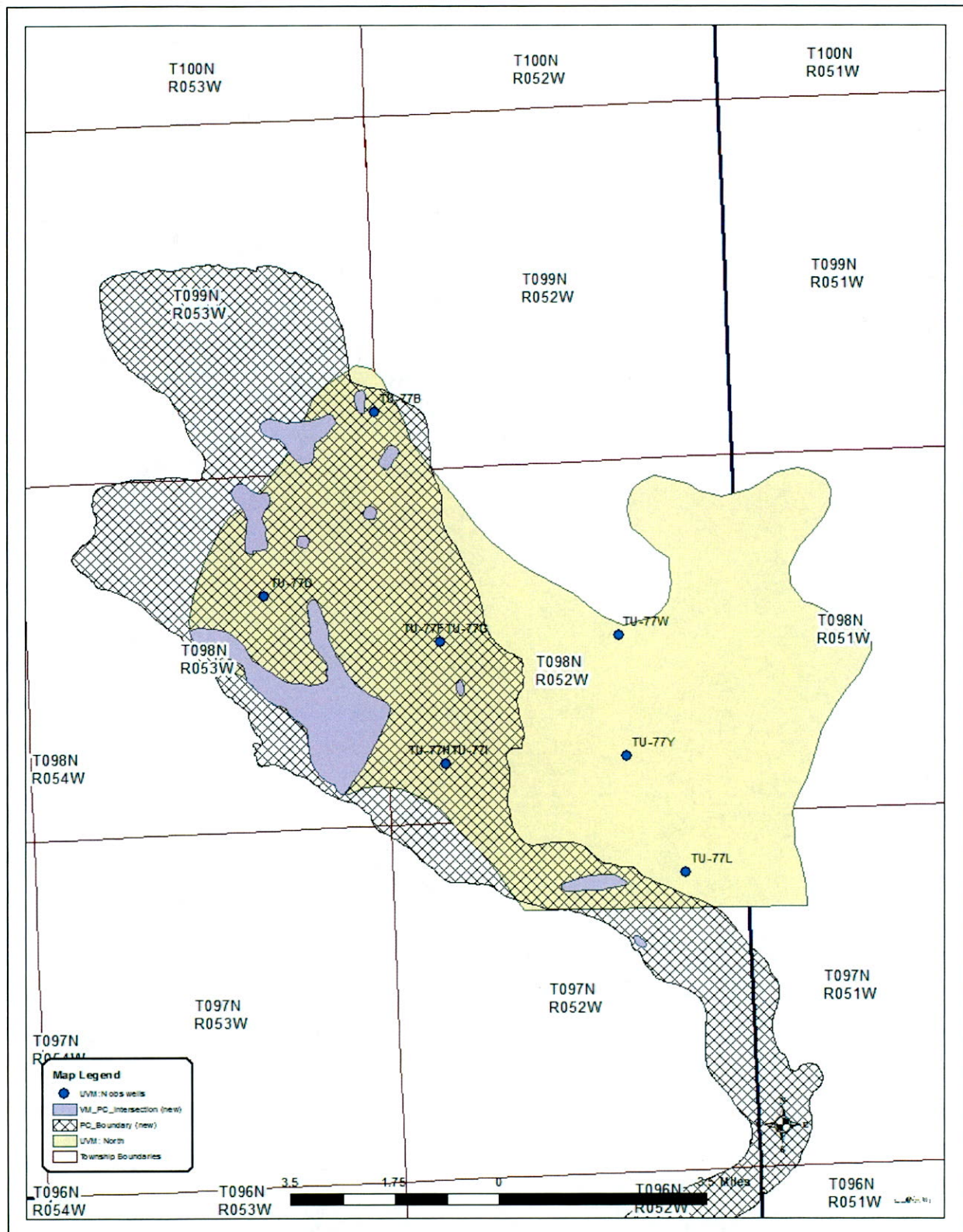


Figure 2. Upper Vermillion: North aquifer, Parker Centerville aquifer and areas where the two aquifers are in direct hydrologic connection (i.e. where the UVM:N is under unconfined conditions) (modified from Holmes and Filipovic, 2015).

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

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

WATER AVAILABILITY

The probability of unappropriated water availability from the 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.”

In applying SDCL 46-6-3.1, the Sixth Judicial Circuit Court ruled in 2005 that if the Water Management Board uses average annual recharge, then it should also use average annual withdrawals to determine if unappropriated water is available from the aquifer (*Hines v. South Dakota Dept. of Environ. and Nat'l. Resources, Hughes County 04-37* (Memorandum Decision, April 29, 2005)).

A 2012 First Judicial Circuit Court's rulings basically stated that data must be presented to show it is probable the average annual recharge exceeds the average annual discharge by at least the amount requested by the water permit application being considered (*Hanson County Dairy v. Robert Bender and Stace Nelson*) (Memorandum Decision, April 11, 2012).

Later in 2012, the First Judicial Circuit Court stated that the determination whether or not it is probable that the quantity of water withdrawn will exceed the quantity of the average estimated annual recharge is to be based on the best information reasonably available, and that nothing in South Dakota law requires a recharge study (*Longview Farms, LLP v. South Dakota Dept. of Environ. and Nat'l. Resources*), (Memorandum Decision, May 17, 2012).

The three deferred water permit applications (Nos. 7468-3, 7558-3, 7587-3) and single new permit application (No. 8126-3) propose to irrigate a total of 652 acres from the North Management Unit of the Upper Vermillion Missouri aquifer. The expected withdrawal associated with these proposed appropriations was estimated based on the *average application rate per permitted acreage* for the Upper Vermillion Missouri aquifer for 1979-2012 (Buhler, 2014) to be 326 acre-feet per year. The availability of unappropriated water from this unit was assessed in terms of SDCL 46-6-3.1 through evaluating observation well data.

Buhler (2013) demonstrated a reliable average annual recharge estimate is not available for the Upper Vermillion Missouri: North aquifer. Therefore, a hydrologic budget comparing the estimated average annual recharge to the aquifer with the estimated average annual withdrawal from the aquifer cannot be completed. There are 57 water rights/permits appropriating water from the UVM:N aquifer. Historic well withdrawals reported from the UVM:N aquifer are shown in Figure 3.

The best information available to evaluate recharge as it compares to withdrawal for the Upper Vermillion Missouri: North aquifer is through the analysis of observation well data. Furthermore, Administrative Rule of South Dakota Section 74:02:05:07 requires the Water Management Board to rely upon the record of observation well measurements and other data to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge to the aquifer.

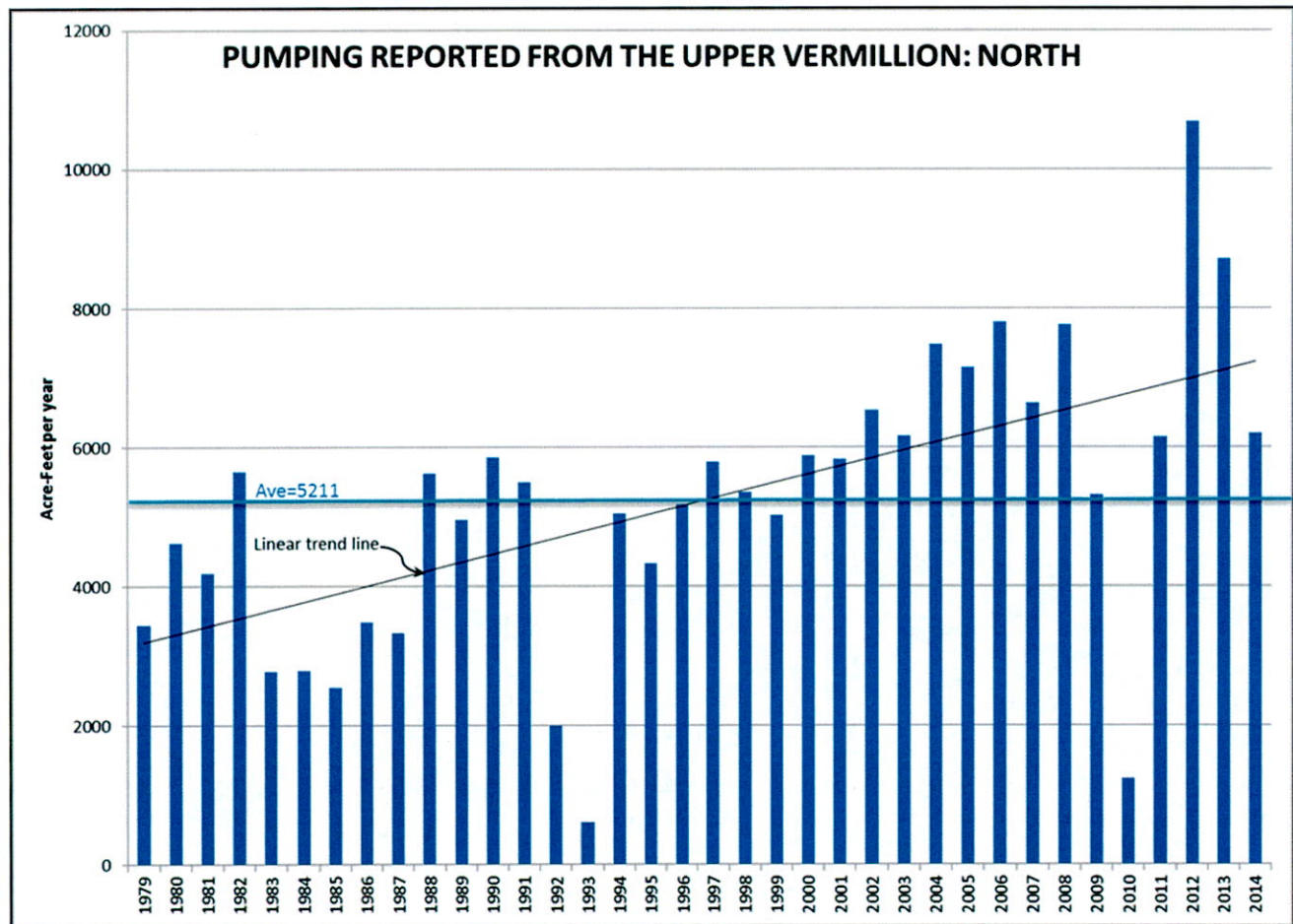


Figure 3. Historic well withdrawals reported by appropriative right holders from the Upper Vermillion Missouri: North aquifer (Water Rights, 1980-2015)

Observation Well Data:

The DENR-Water Rights Program monitors nine observation wells completed into the North Management unit of the Upper Vermillion Missouri aquifer. Hydrographs for these observation wells are shown in Figures 4-12 (Water Rights, 2015a).

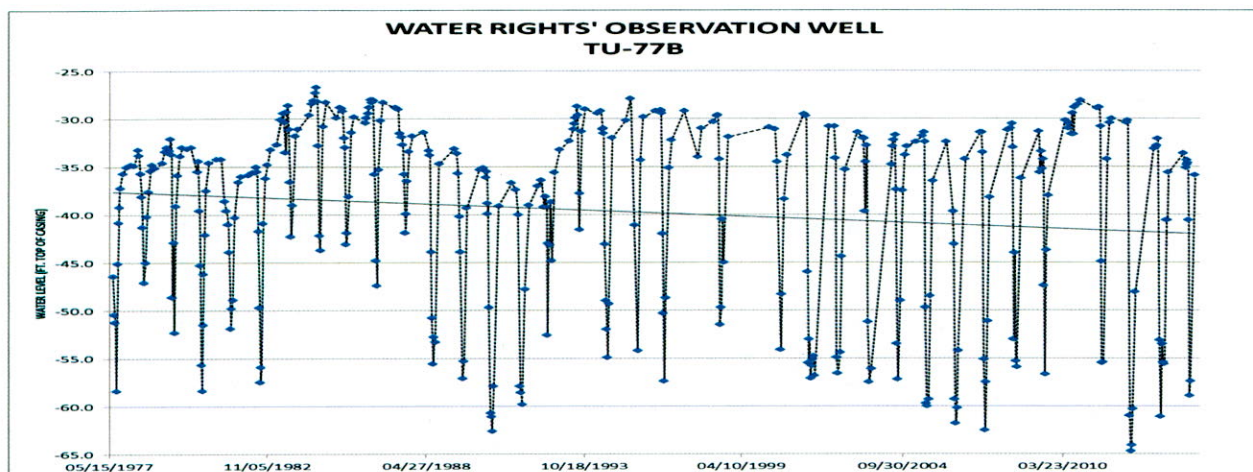


Figure 4. Hydrograph including linear trend line for observation well completed into the UVM:N aquifer (see Figure 1 for location).

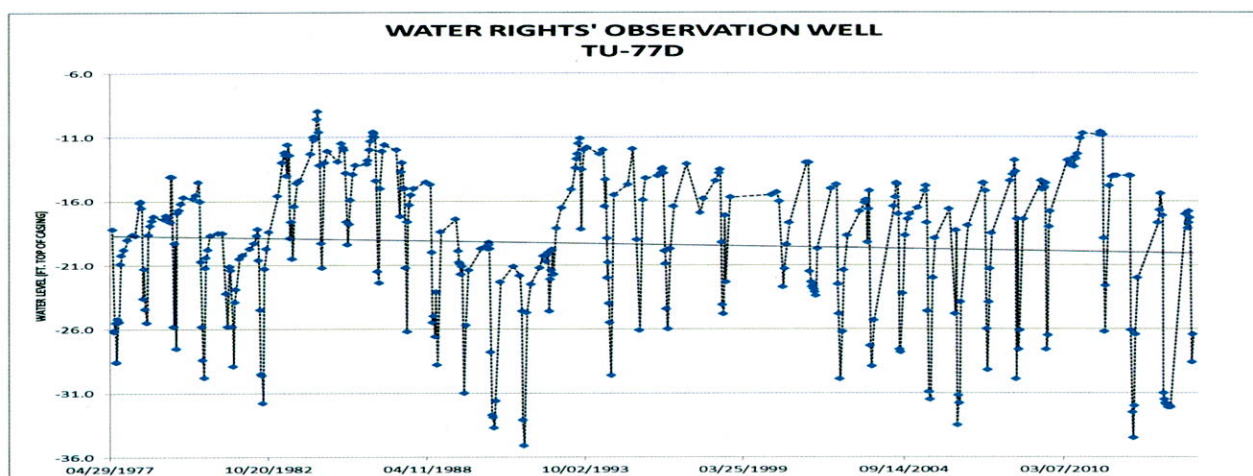


Figure 5. Hydrograph including linear trend line for observation well completed into the UVM:N aquifer (see Figure 1 for location).

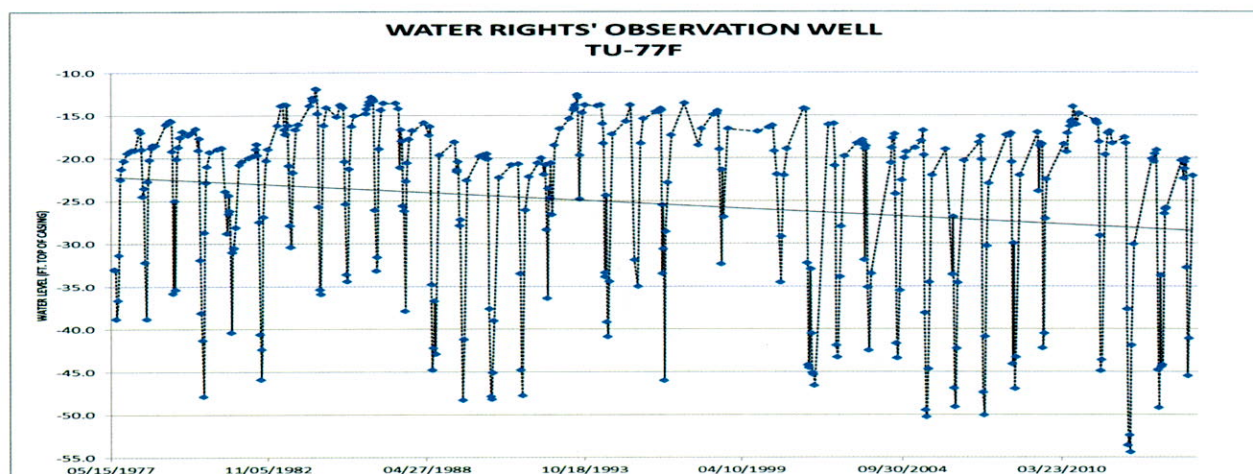


Figure 6. Hydrograph including linear trend line for observation well completed into the UVM:N aquifer (see Figure 1 for location).

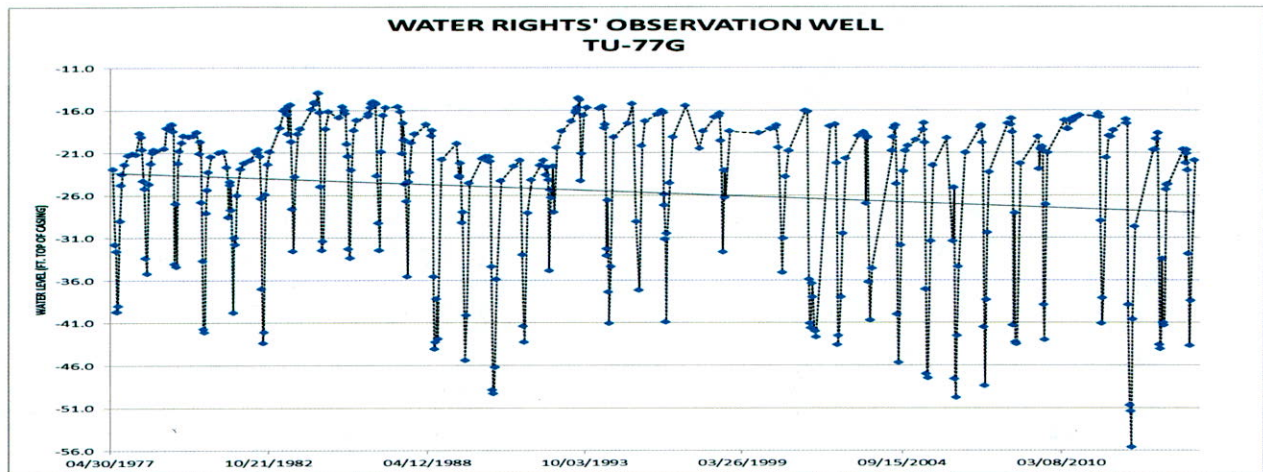


Figure 7. Hydrograph including linear trend line for observation well completed into the UVM:N aquifer (see Figure 1 for location).

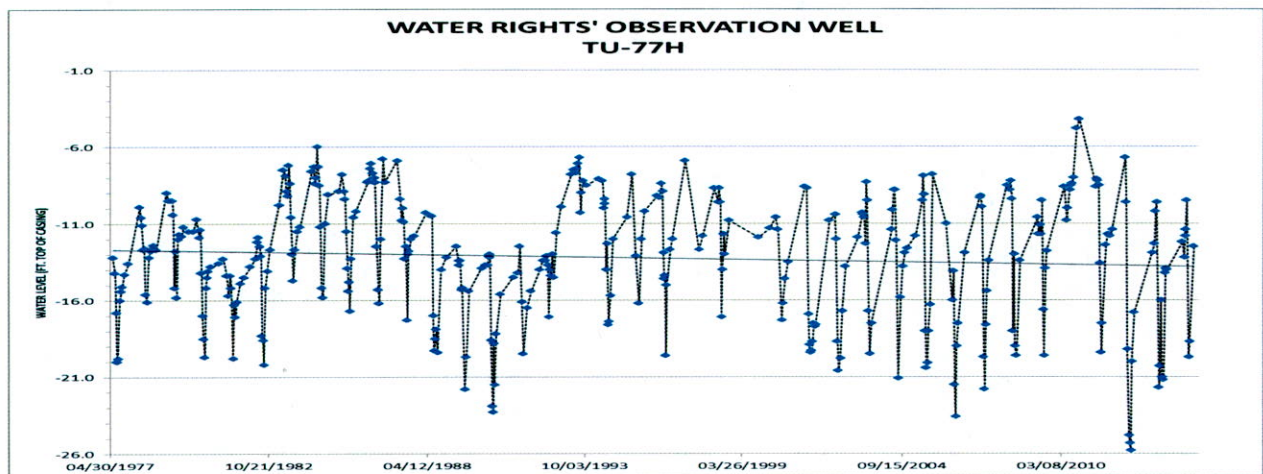


Figure 8. Hydrograph including linear trend line for observation well completed into the UVM:N aquifer (see Figure 1 for location).

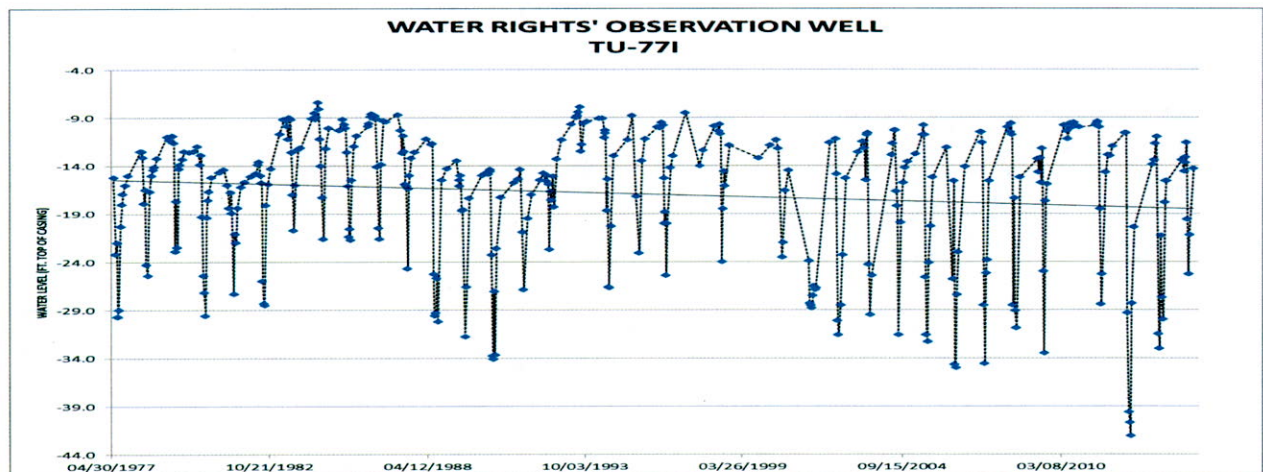


Figure 9. Hydrograph including linear trend line for observation well completed into the UVM:N aquifer (see Figure 1 for location).

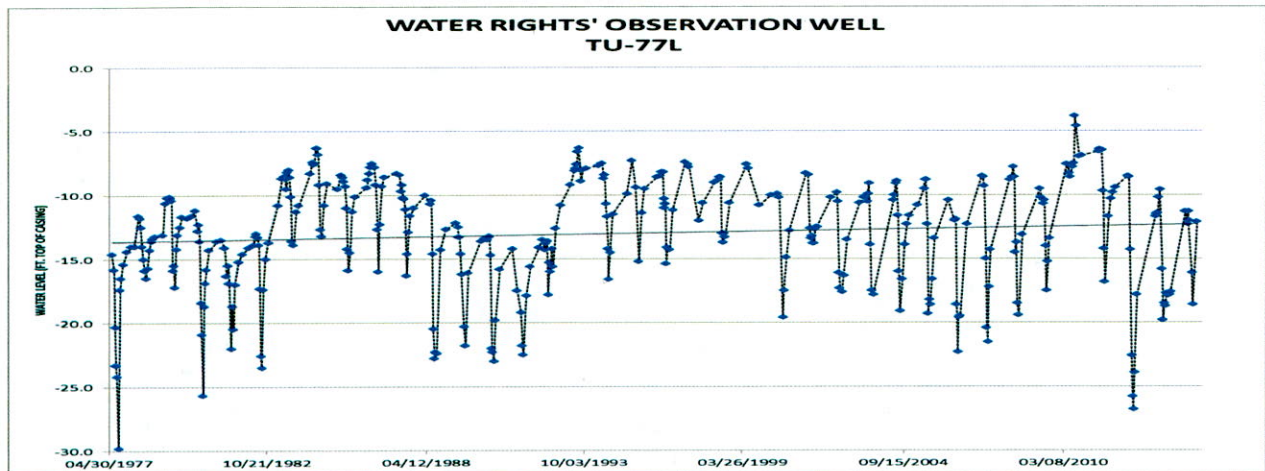


Figure 10. Hydrograph including linear trend line for observation well completed into the UVM:N aquifer (see Figure 1 for location).

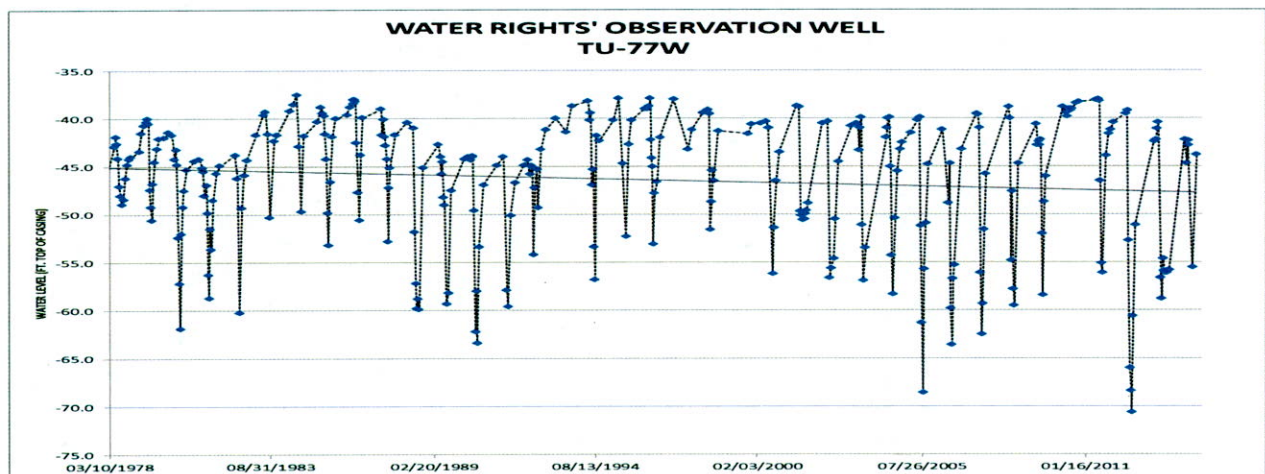


Figure 11. Hydrograph including linear trend line for observation well completed into the UVM:N aquifer (see Figure 1 for location).

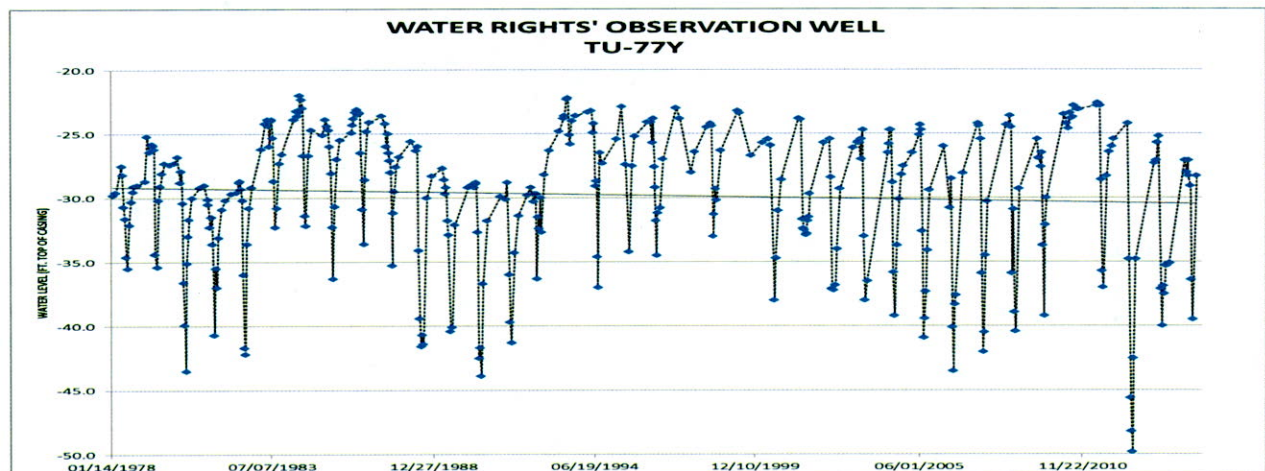


Figure 12. Hydrograph including linear trend line for observation well completed into the UVM:N aquifer (see Figure 1 for location).

Observation well data shows the potentiometric surface of the UVM:N aquifer is typically less than 70 feet below grade. The hydrographs document that seasonal variations of the potentiometric surface are significant, yet the potentiometric surface readily recovers. With the exception of Observation Well TU-77L (Figure 10), the hydrographs all document downward trending water levels over the period of record.

The Upper Vermillion: North is predominately under confined conditions and therefore, by nature, the potentiometric surface is very responsive to pumping (i.e. a small change of water stored in the aquifer results in a fairly large change in the head pressure). This can be illustrated using the Theis Solution, which is a graphical method typically used to analyze an aquifer test to determine aquifer transmissivity and storativity. The Theis Solution is based on a number of simplifying assumptions that are rarely all met, but still can be useful. By assuming a transmissivity and storativity, a graph with the shape of the cone of depression near a pumping well can be developed for a given pumping rate over a time period.

Assuming the transmissivity of the Upper Vermillion Missouri aquifer is 145,861 gpd/ft (see above) and the aquifer has a storativity of 0.0004 (considered reasonable for a confined aquifer), with a pumping rate of 1.78 cfs for a 90 day pumping period, the theoretical drawdown cone that would result is shown in Figure 13. Drawdown 500 feet from the production well is estimated to be 7.51 feet and at a distance of one mile from the pumping well, drawdown is predicted to be 4.55 feet. Ten miles from the production well, drawdown is estimated to be 1.69 feet (“Theis Equation Calculator”).

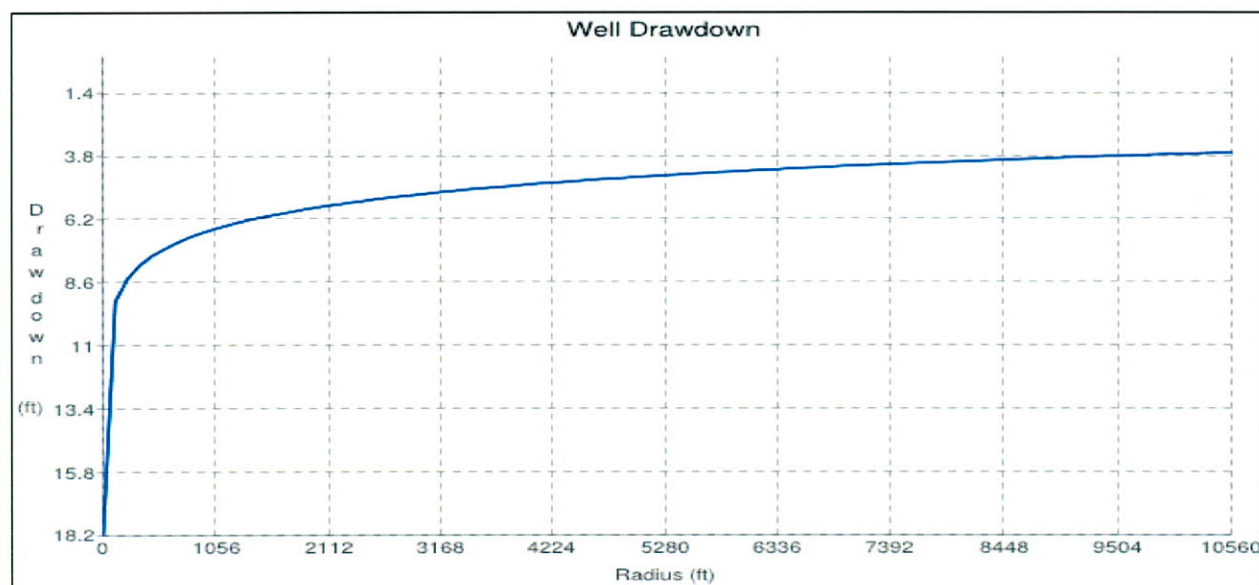


Figure 13. Drawdown predicated by the Theis solution assuming $T=145,861$, $S=0.0004$, $Q=1.78$ cfs, $t=90$ days (modified from (“Theis Equation Calculator”)).

Drawdown will be greater than predicted by the Theis Solution if the drawdown cone intersects an aquifer boundary and if the cones of depression of two or more wells overlap (see Figure 14).

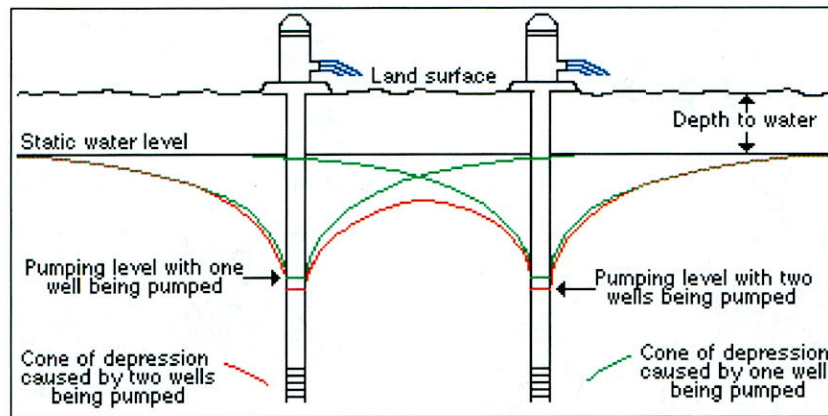


Figure 14. Illustration of mutual interference between wells and the resulting cones of depression (Kansas Geological Survey, 1998)

The location of the DENR-Water Rights observation wells with respect to diversion points for water rights/permits appropriating water from the UVM:N, is shown in Figure 15. Considering the proximity of high capacity wells to the observation wells, water level measurements taken from the observation wells likely are influenced by pumping. The amplitude of seasonal fluctuations of the potentiometric surface appears to be greatest in observation wells nearest the greater density of high capacity wells.

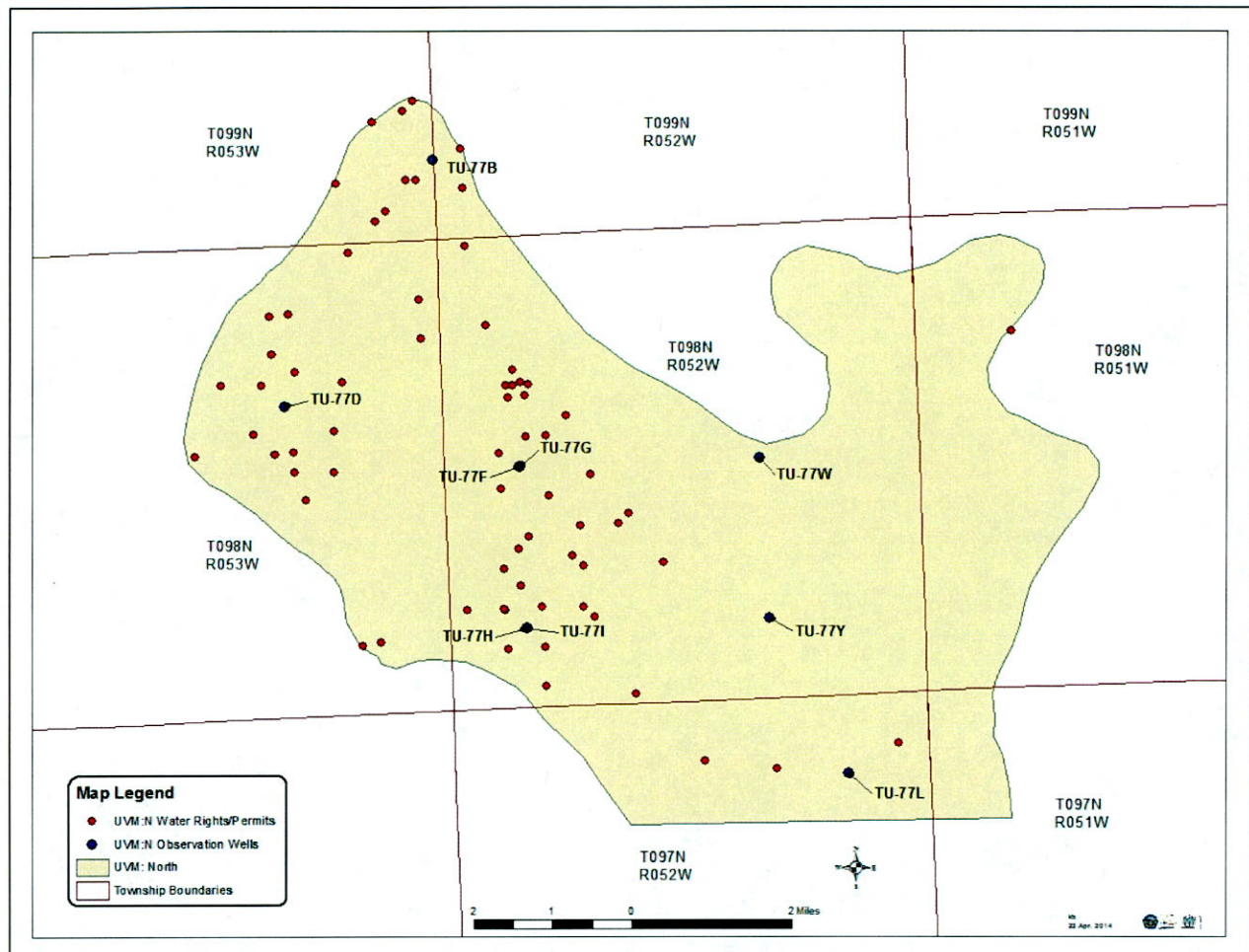


Figure 15. Map showing the UVM:N aquifer, location of DENR-Water Rights' Observation Wells, and location of diversion points for water rights/permits appropriating water from the aquifer (Water Rights, 2015b).

Linear trend lines for the maximum and minimum annual water levels were compared to linear trend lines for the entire data set, and there appears to be a relationship between the trend line for minimum annual water levels and the trend line for the entire data set. An example of this apparent relationship is shown in Figure 16.

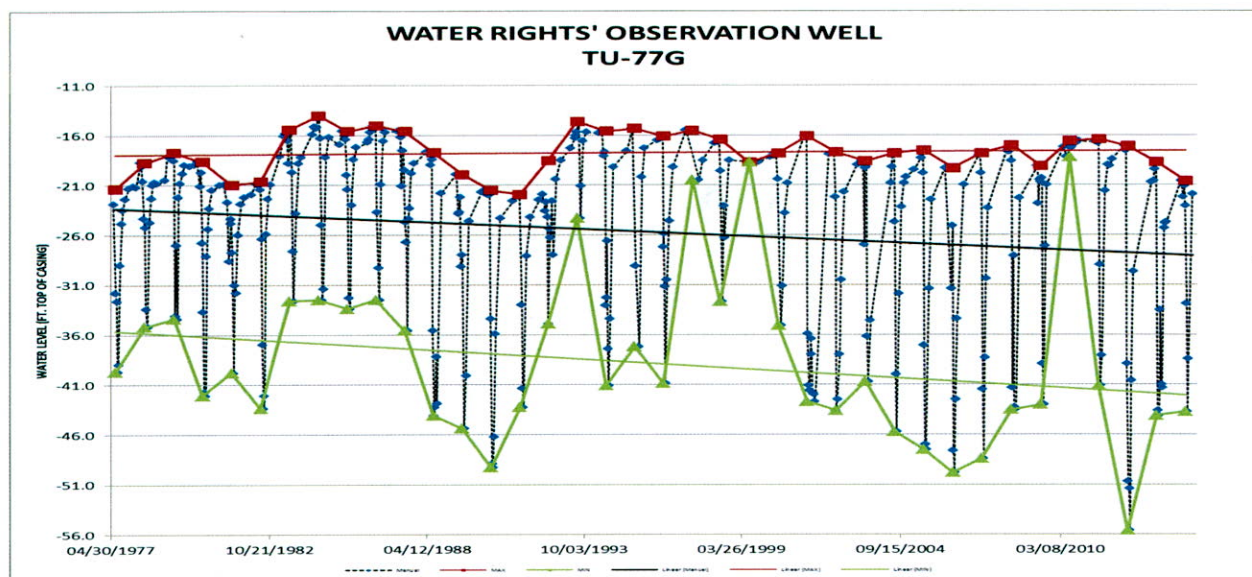


Figure 16. Hydrograph of an observation well completed into the North management unit of the Upper Vermillion Missouri aquifer with trend line, minimum annual water level trend line, and maximum annual overall water level trend line (Water Rights, 2015a).

The hydrograph shown in Figure 16 is representative of seven of the nine DENR-Water Rights' observation wells monitoring the UVM:N aquifer. These seven hydrographs show downward trending minimum annual readings, downward trending trend lines for the entire dataset, and upward trending maximum annual readings. The two observation wells with hydrographs dissimilar to the other seven hydrographs are TU-77L and TU-77F. Trend lines for the hydrograph for TU-77L trend upward for the minimum annual readings, the maximum annual readings and for the entire dataset (see Figure 17).

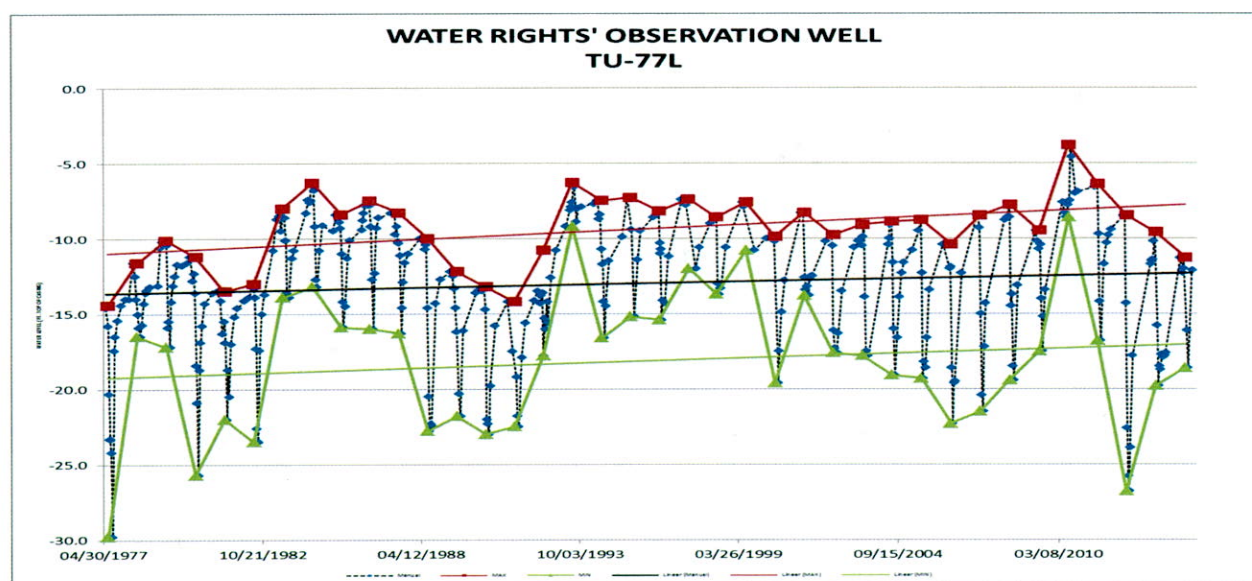


Figure 17. Hydrograph for observation well TU-77L with trend line, minimum annual water level trend line, and maximum annual overall water level trend line (Water Rights, 2015a).

Trend lines for the hydrograph for TU-77F trend downward for the minimum annual readings, the maximum annual readings and for the entire dataset (see Figure 18).

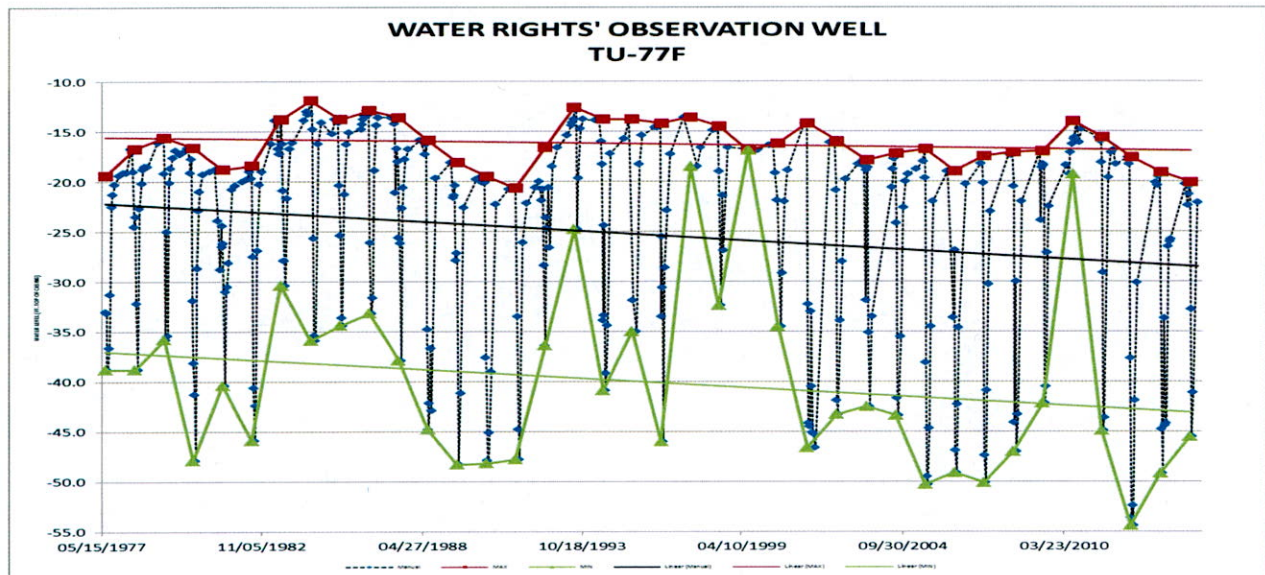


Figure 18. Hydrograph for observation well TU-77F with trend line, minimum annual water level trend line, and maximum annual overall water level trend line (Water Rights, 2015a).

Observation well TU-77L likely responds uniquely due to the fact that the development in the vicinity of the observation well has been essentially stable since 1977. All three trend lines for observation well TU-77F trend downward, likely due to drawdown from South Lincoln Rural Water System wells (Water Right Nos. 6435-3 and 6767-3), located within one mile of the observation well. Rural water system use results in year round pumping. Pumping reported by South Lincoln Rural Water System is shown in Figure 19.

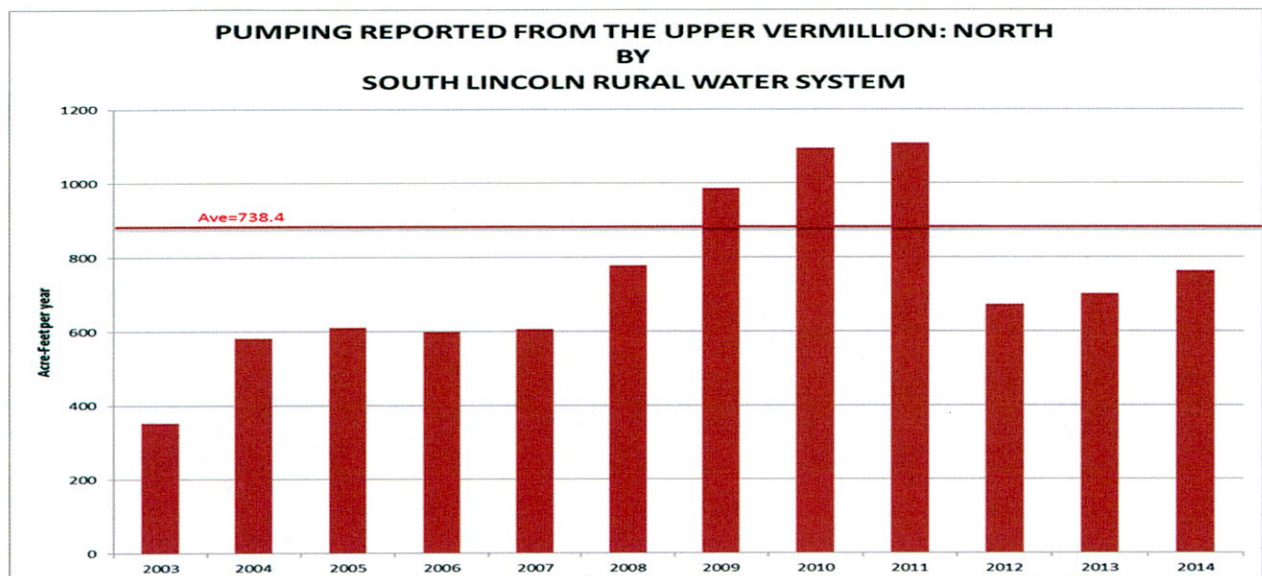


Figure 19. Pumping reported from the Upper Vermillion: North aquifer by South Lincoln Rural Water System (Water Rights, 2004-2015)

The DENR-Water Rights program observation wells are typically measured eight to twelve times per year. However, the timing of these readings is not evenly distributed throughout the year. The monthly distribution of the 3,308 readings taken from the nine UVM:N observation wells between 1978 and 2014 is shown in Figure 20.

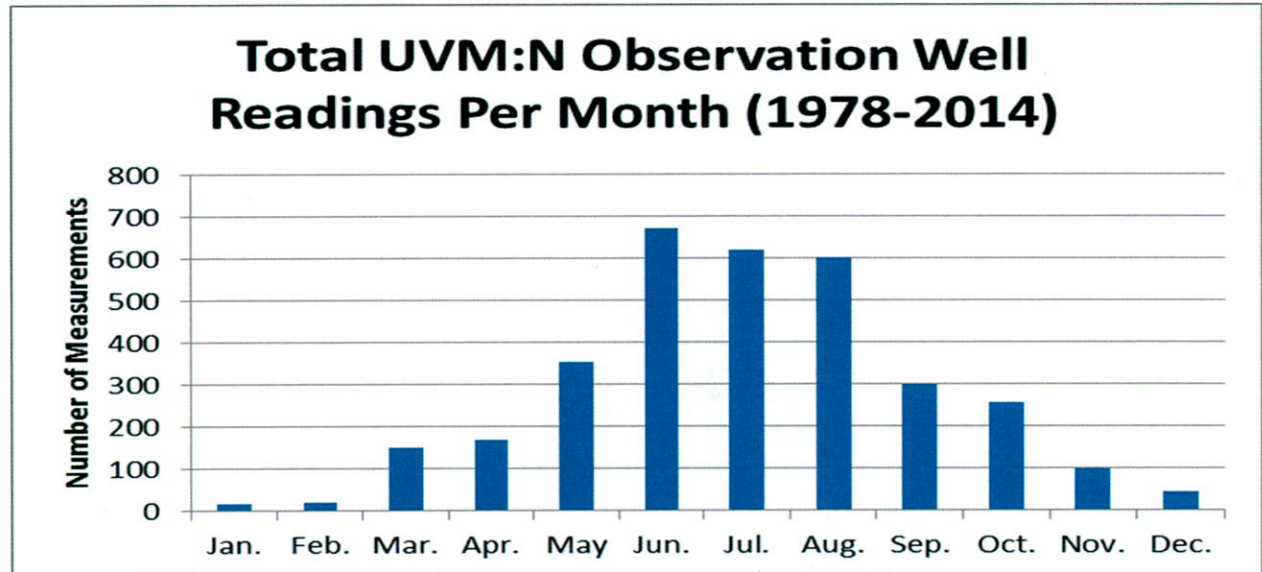


Figure 20. Monthly distribution of water level readings taken from DENR-Observation Wells completed into the Upper Vermillion Missouri: North aquifer for 1978-2014 (Water Rights, 2015a).

As shown in Figure 21, fifty- seven percent of the water level readings taken from the UVM:N aquifer were taken during the twenty- five percent of the year when irrigation is at a maximum (June, July, August). Since the preponderance of readings is taken when drawdown is greatest,

the observation well data is likely biased toward minimum annual water level readings. Since a well withdrawal from the aquifer by appropriate users has increased (see Figure 3), drawdown has increased.

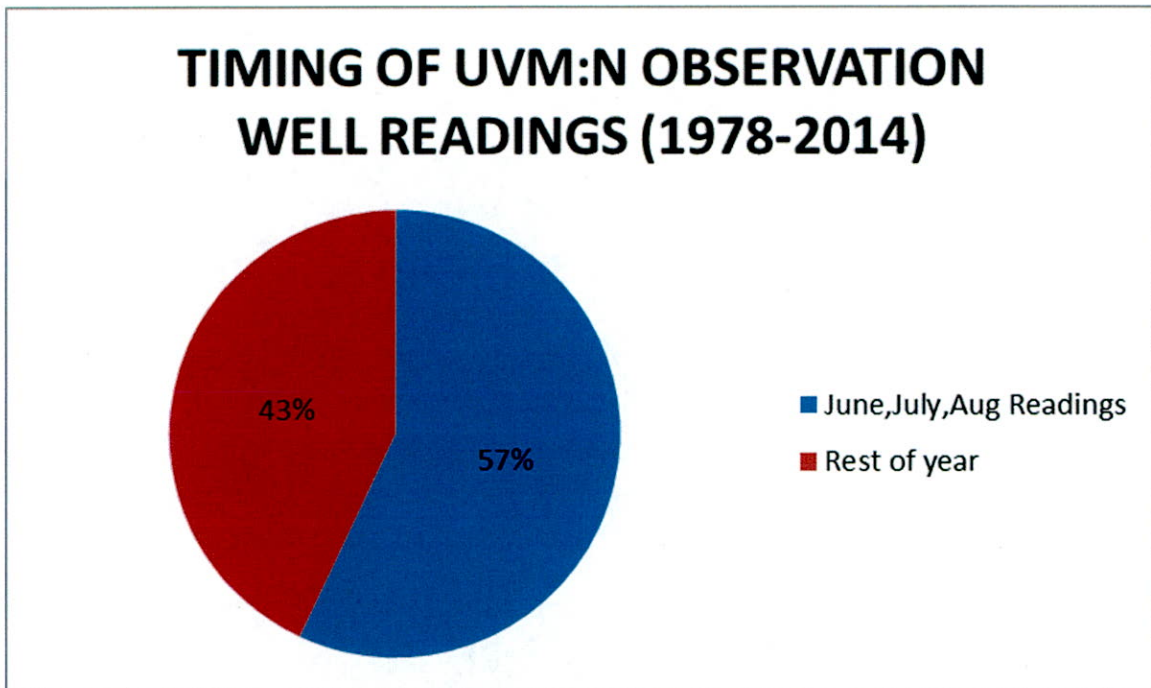


Figure 21. Distribution of water level readings taken from DENR-Observation Wells completed into the Upper Vermillion Missouri: North aquifer for 1978-2014 (Water Rights, 2015a).

To account for any bias in the hydrograph trend lines that may be introduced by well interference (i.e. drawdown), hydrographs were developed using the earliest reading taken in May each year. Since the period of November through April would not include irrigation pumping and only limited recharge, early May readings can be considered representative of nearly static conditions for the aquifer. Hydrographs with linear trend lines for early May observation well measurements are shown in Figures 22-30 data.



Figure 22. TU-77B May water level measurements with trend line

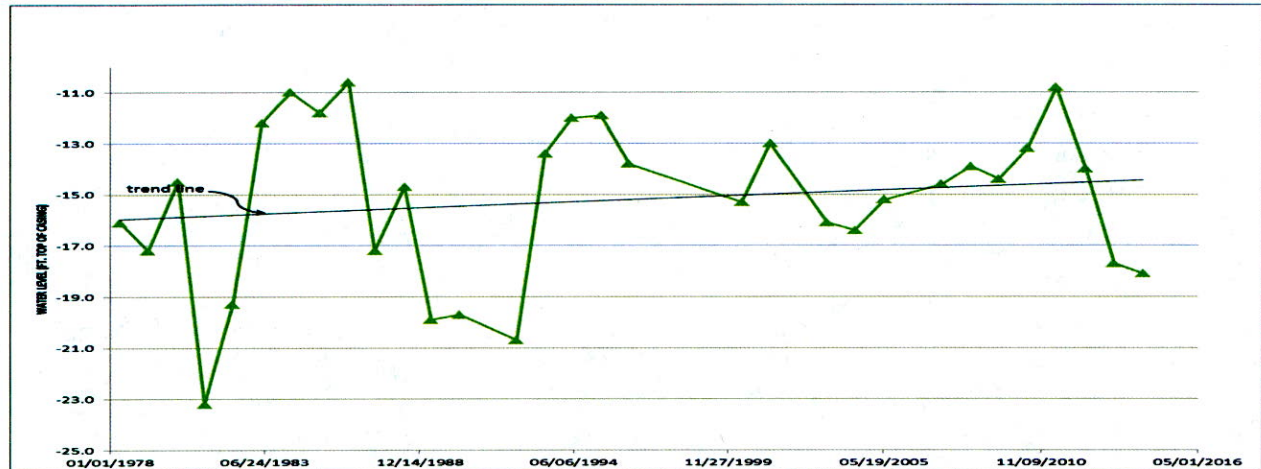


Figure 23. TU-77D May water level measurements with trend line

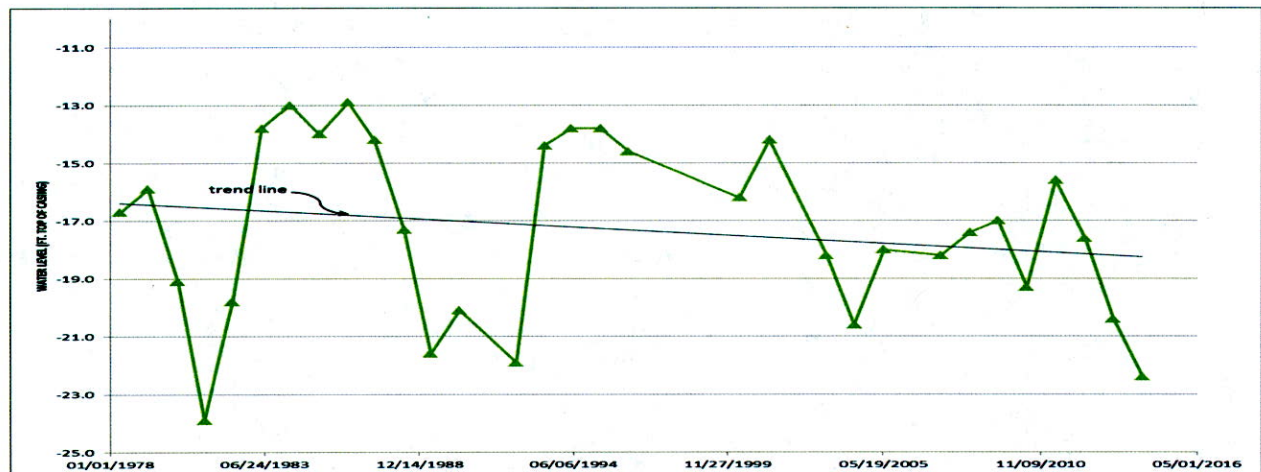


Figure 24. TU-77F May water level measurements with trend line

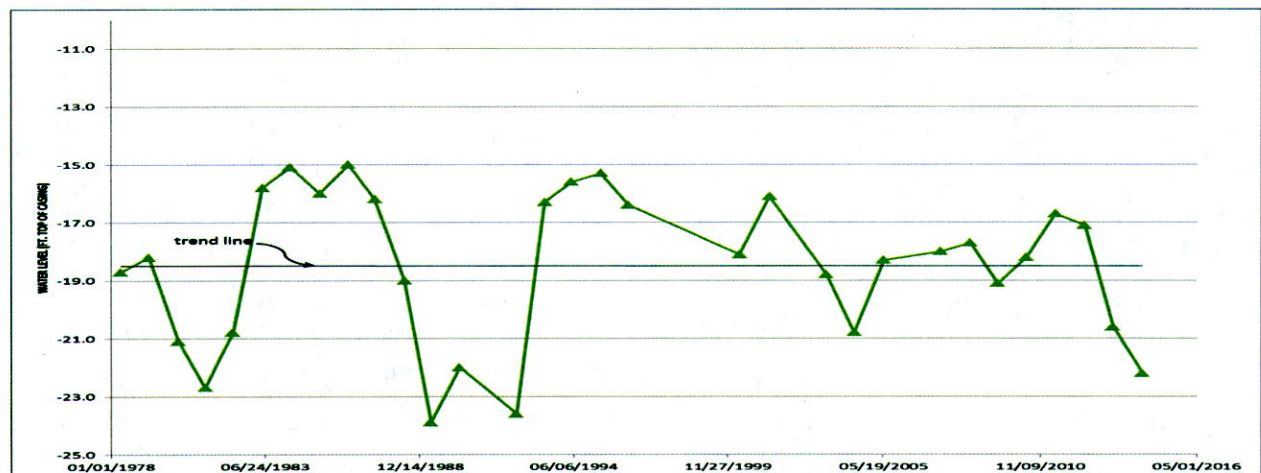


Figure 25. TU-77G May water level measurements with trend line

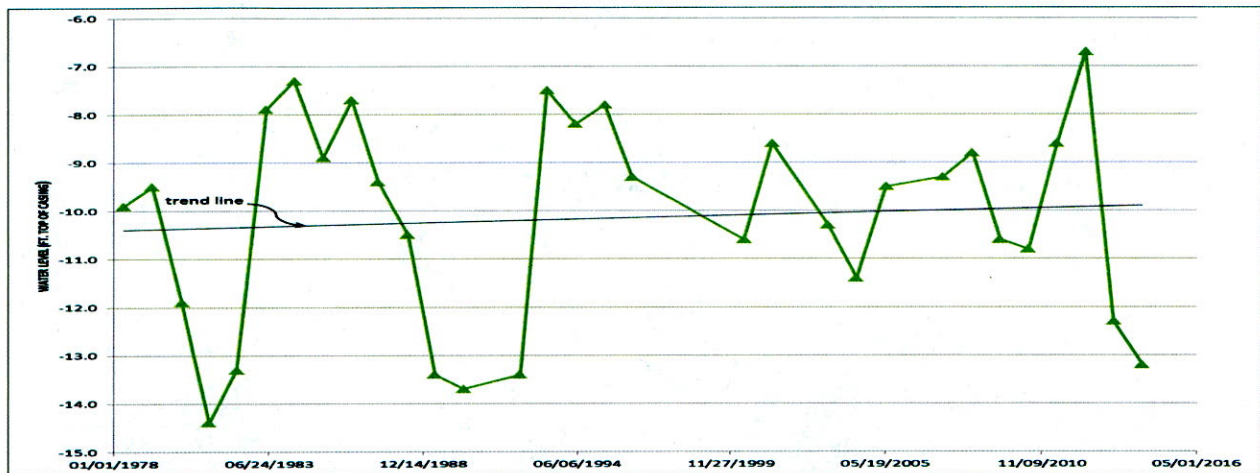


Figure 26. TU-77H May water level measurements with trend line



Figure 27. TU-77I May water level measurements with trend line

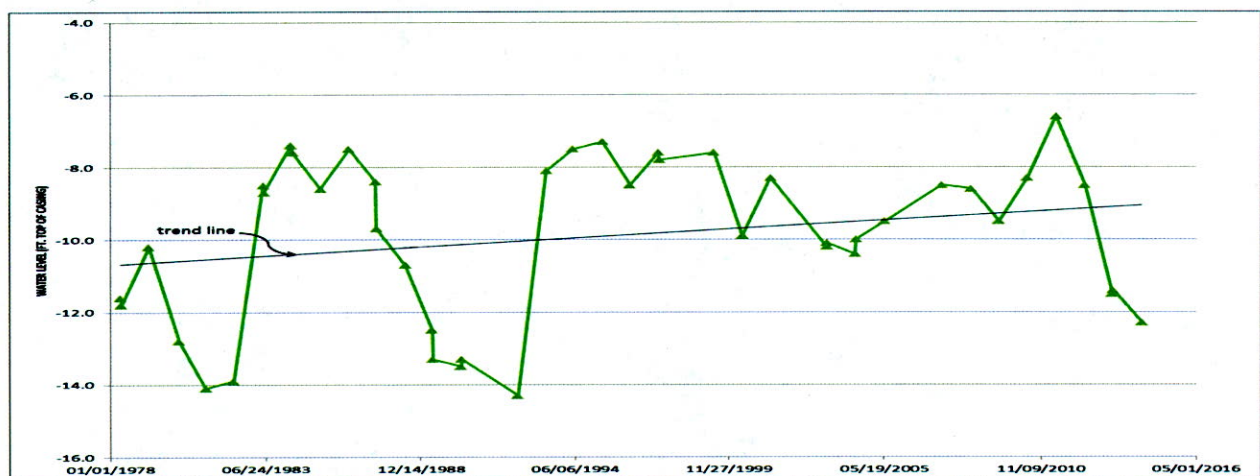


Figure 28. TU-77L May water level measurements with trend line

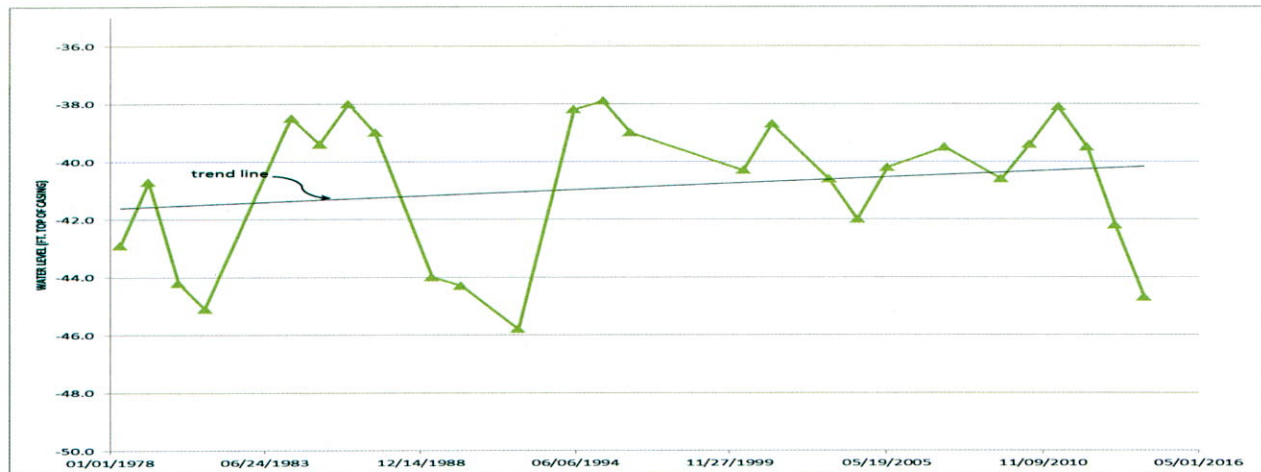


Figure 29. TU-77W May water level measurements with trend line



Figure 30. TU-77Y May water level measurements with trend line

The hydrographs plotted for “static conditions” for the Upper Vermillion: North aquifer (Figures 22-30), with the exception of the hydrograph for observation well TU-77F, document stable or upward trending water levels throughout the period of record. As noted above, the aquifer in the vicinity of observation well TU-77F, has likely not equilibrated to increased development by South Lincoln Rural Water System.

Above average irrigation withdrawals typically correspond with below average precipitation and vice versa. It is difficult to differentiate whether water level fluctuations are a response to climatic conditions or withdrawals. However, considering the increased development from the aquifer over the period of record (see Figure 3), and the stable to rising potentiometric surface documented by the May hydrographs, (see Figures 22-30), it is clear that increased development has not been as significant to the system as recharge to and natural discharge from the UVM:N. Since natural discharge from the aquifer can be captured for well withdrawals and greater pumping may induce greater recharge, hydrographs for static conditions for the UVM:N aquifer document that unappropriated water is available from the aquifer.

As stated earlier, leakage from the overlying Parker Centerville aquifer (PAC) to the Upper Vermillion Missouri: North aquifer (UVM:N), where the two aquifers are hydrologically connected, is the likely source of recharge to the UVM:N aquifer. Since “static condition” water levels in the UVM:N have remained stable or increased with an increase of pumping, recharge from the PAC has apparently increased. The DENR-Water Rights Program monitors 10 observation wells completed into the PAC where it overlies the UVM:N aquifer. Trend lines for all of the hydrographs for these PAC observation wells are trending upward, although leakage to the UVM: N has theoretically increased. Therefore, additional leakage (recharge) can be induced, and additional water is available for appropriation.

The profile of the potentiometric surface of the Upper Vermillion Missouri aquifer was determined based on observation well data for several time periods. Figure 31 shows the comparison of the plots of these profiles over time. The North management unit is represented to the left of the “Management Unit boundary area” on the graph.

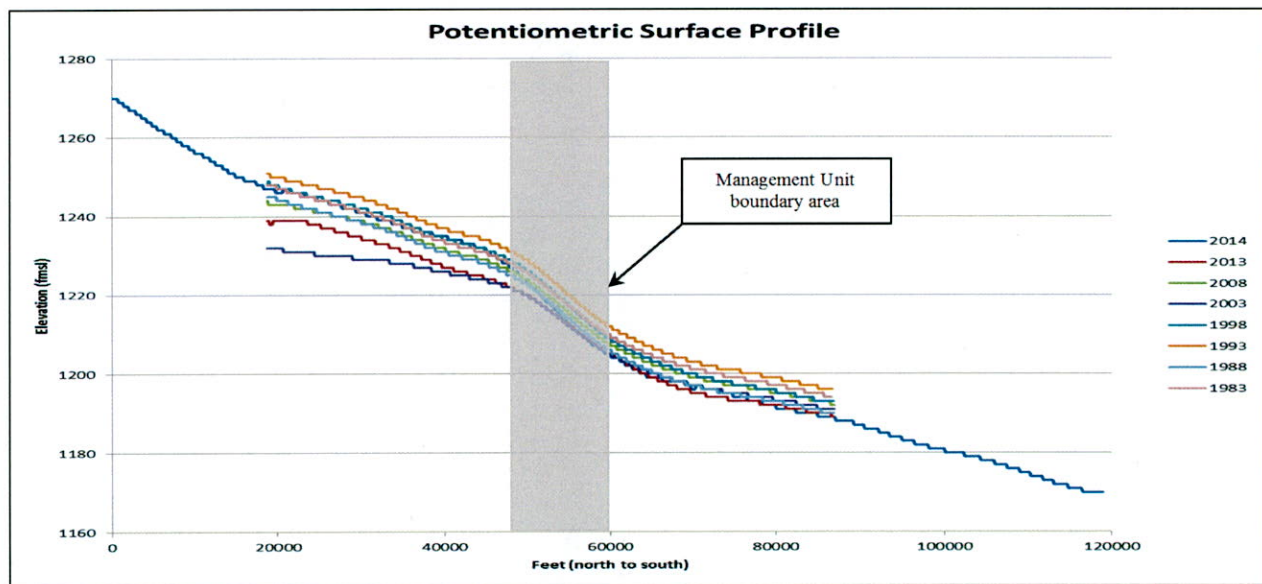


Figure 31. Profile of the potentiometric surface showing a consistent gradient in the North management units of the Upper Vermillion Missouri aquifer (Buhler, 2014).

Groundwater outflow from an aquifer can be calculated according to the equation: $Q = TIL$

Where:

Q = flow

T = Transmissivity

I = Hydraulic gradient

L = Cross sectional length

Since the hydraulic gradient of the North management unit of the Upper Vermillion Missouri aquifer has remained essentially constant, the outflow from the aquifer has also remained constant. With increased well withdrawals, constant groundwater outflow could only occur if recharge to the system increased. Currently, recharge and groundwater outflow from the Upper Vermillion Missouri: North aquifer dominate the hydrologic system, and the absence of stress on

the system from well withdrawals indicates that either additional recharge can be induced or groundwater outflow can be captured or both. Therefore analysis of the potentiometric surface of the aquifer over time indicates that unappropriated water is available from the aquifer.

EXISTING WATER RIGHTS/PERMITS

As the Upper Vermillion Missouri: North aquifer is currently delineated, there are 57 water rights/permits appropriating water from the aquifer. The approximate location of these diversion points are shown in Figure 32, and the appropriations are identified in Table 1.

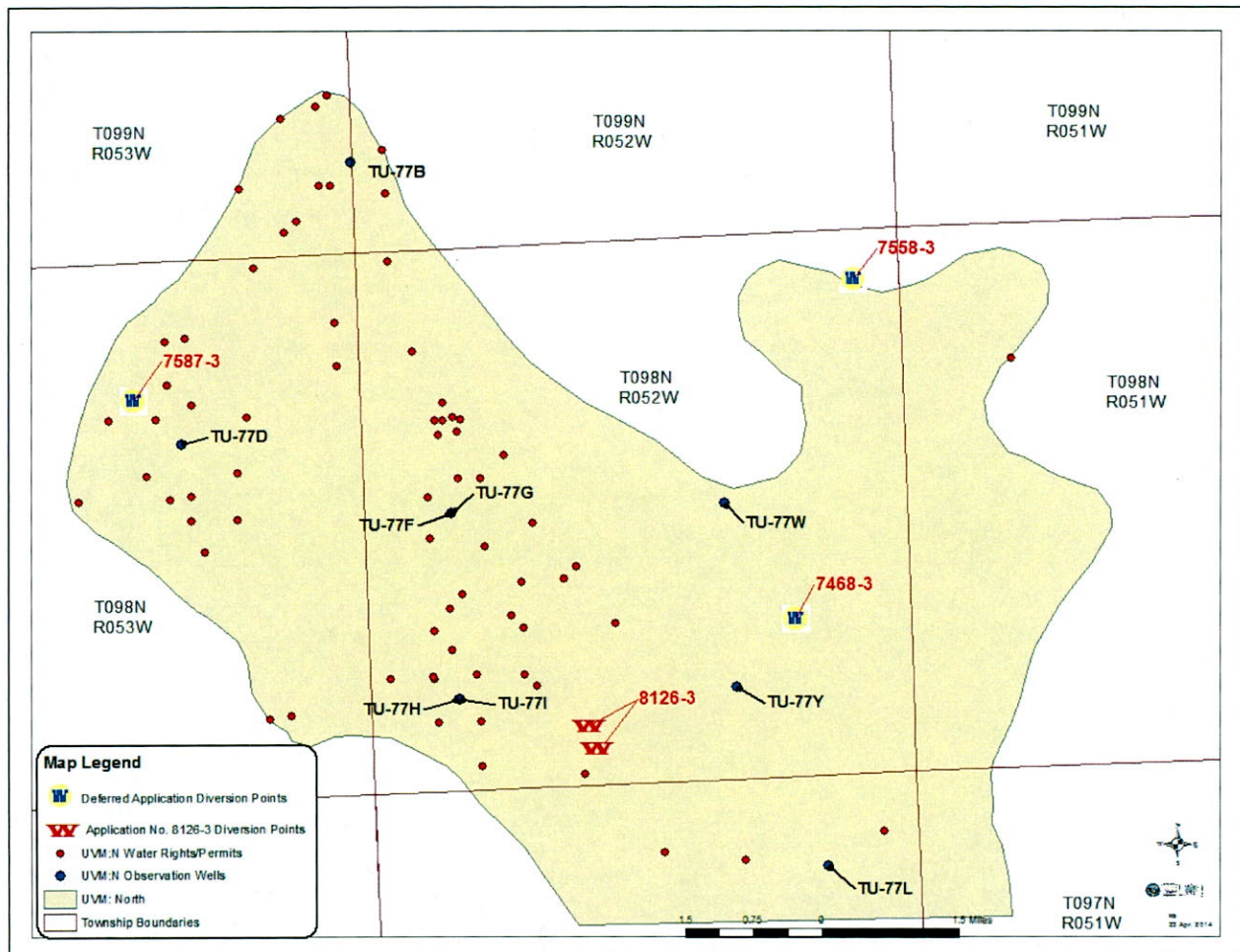


Figure 32. Approximate location of DENR-Water Rights' observation wells; existing water rights/permit diversion points; diversion points proposed by deferred Water Permit Application Nos. 7468-3, 7558-3, 7587-3; and Water Permit Application No. 8126-3 (Water Rights, 2015a, Water Rights, 2015b).

Table 1. Water Rights/Permits appropriating water from the UVM:N (Water Rights, 2015b)

PERMIT NO	NAME	STATUS	USE	CFS	ACRES
1771-3	GARY KNOCK	LC	IRR	1.33	160
1930-3	MARY G MADSEN	LC	IRR	2	132
1930-3A	LAROHN HAGENA	LC	IRR	1.56	132
1967-3	JAY & CALVIN GRABER	LC	IRR	1.88	136
2230-3	PINE KNOLL INC	LC	IRR	1.95	136
2499-3	RUSSELL C ERICKSON	LC	IRR	1.11	140
2852-3	PAUL PETERSEN	LC	IRR	2	210
3156-3	GLENNIS M TELLINGHUISEN	LC	IRR	1.88	132
3158-3	SHERYL FAST	LC	IRR	0.5	35
3410-3	HORNER FAMILY LTD PTRSHP	LC	IRR	1.6	112
3411-3	BAR K CATTLE CO INC	LC	IRR	1.97	138
3541-3	PINEKNOLL MOBILE HOME PARK	LC	IRR	3	228
3610-3	JEFFREY L HAAN	LC	IRR	2.12	331
3632-3	BAR K CATTLE CO INC	LC	IRR	1.88	136
3633-3	BAR K CATTLE CO INC	LC	IRR	3.72	261
3634-3	DARREL WESTERMAN	LC	IRR	1.78	132
3648-3	PAUL PETERSEN	LC	IRR	2	142
3675-3	HOOGESTRAAT FARM	LC	IRR	1.77	136
3735-3	NORMA M REINERS	LC	IRR	1.88	132
3784-3	LAROHN HAGENA	LC	IRR	1.88	132
3829-3	GARY R KNOCK	LC	IRR	1.29	90
3832-3	DAVID SMIT	LC	IRR	2.78	191
3833-3	LAROHN & DIANNE HAGENA	LC	IRR	1.83	128
3899-3	JON BENSON	LC	IRR	2.22	168
3900-3	ROGER R IHNEN	LC	IRR	2	140
3901-3	ROGER R IHNEN	LC	IRR	4.23	311
3902-3	ROGER R IHNEN	LC	IRR	2	156
3903-3	BURNETTE C SAWYER	LC	IRR	1.88	136
3906A-3	PAUL PETERSEN	LC	IRR	2.83	198
3926-3	BRIAN D SMIT	LC	IRR	1.88	132
3966-3	TONY BROWN	LC	IRR	1.88	132
4560-3	DUANE HAASE	LC	IRR	1.78	152
4647-3	JAMES D BONDESEN	LC	IRR	2	257
4692-3	JON REINERS	LC	IRR	1.22	135
5058-3	DOYLE CHRISTENSEN	LC	IRR	1.22	101
525-3	TOWN OF DAVIS	LC	MUN	0.45	
5259-3	GARY R KNOCK	LC	IRR	1.88	132
5261-3	PAUL PETERSEN	LC	IRR	1.77	136
5383-3	WALTER OKEEFE ESTATE	LC	IRR	1.67	132
5413-3	LEE SCHRIEVER	LC	IRR	1.4	134
5448-3	LINDA GRABER	LC	IRR	1.89	132
5555-3	PAUL PETERSEN	LC	IRR	0.97	68
5632-3	KENT WESTERMAN	LC	IRR	1	70
5833-3	ADVANCED PRESCRIPTION	LC	COM	0.11	
5920-3	PLUCKER FAMILY LTD PTRSHP	LC	IRR	1.94	136
6301-3	DAVID SMIT	LC	IRR	1.89	132
6335-3	JOE HUMMEL	LC	IRR	1.78	231
6383-3	JAMES D BONDESEN	LC	IRR	1.33	40
6435-3	SOUTH LINCOLN RWS	LC	RWS	2.45	
6561-3	DAVID SMIT	LC	IRR	1.89	136
6727-3	SOUTH LINCOLN RWS	LC	RWS	1.95	
6746-3	JARROD HAGENA	LC	IRR	2.23	158
6853-3	PINE KNOLL INC	PE	IRR	0.26	0
6853A-3	PINE KNOLL INC	PE	IRR	0	0
6868-3	JOE HUMMEL	PE	IRR	1.78	0
6984-3	DOROTHY M SCHNOSE	PE	IRR	2.22	162
7149-3	DARREL WESTERMAN	PE	IRR	1.78	132

As noted above, the Upper Vermillion Missouri: North aquifer is primarily under artesian conditions, and drawdown due to pumping may be fairly large near an individual production well. For example, the amplitude of seasonal fluctuation in 2012, when well withdrawals from the UVM:N aquifer were at the highest level in history, can be seen in Table 2.

Table 2. Amplitude of 2012 water level fluctuations measured in DENR-Water Rights' Observation Wells completed into the UVM:N (Water Rights, 2015a)

OBSERVATION WELL	2012 WATER LEVEL FLUCTUATION (YEARLY HIGH MINUS YEARLY LOW READING (ft))
TU-77B	34.3
TU-77D	20.5
TU-77F	36.8
TU-77G	38.5
TU-77H	19.1
TU-77I	31.5
TU-77L	18.3
TU-77W	31.4
TU-77Y	25.6

Even with the magnitude of seasonal fluctuations documented by the observation wells, well interference has historically not been a problem from the aquifer. Considering the distance of the diversion points proposed by these applications from existing users (see Figure 32) well interference should not be an issue.

In addition, the Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. SDCL 46-6-6.1 does not require protection of artesian head pressure as a means of groundwater delivery. However, reasonable domestic use must be assured before irrigation use is allowed. Therefore, when considering irrigation projects, the Water Management Board must give consideration to maintaining artesian head pressure as a method of delivery for domestic wells. To balance interests between irrigation use and delivery of groundwater by artesian pressure, ARSD 74:02:04:20(7) defines an adversely impacted domestic well 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.”

Depending on the specific characteristics of the Upper Vermillion Missouri aquifer at the proposed well sites, some existing well owners may need to lower their pumps to accommodate possible reduction of head pressure. Therefore, there is a reasonable probability that any well interference from the proposed appropriation will not adversely or unlawfully impair existing nearby wells.

SDCL 46-5-6

Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of one cfs for every 70 acres, or “the equivalent thereof.” The statute does provide that the Water Management Board may allow a greater diversion rate if the method of irrigation, any time constraints on diversion of water, or the type of soil so requires. Water Permit Application No. 7558-3 proposes to divert up to 1.78 cfs for the irrigation of 120 acres or the equivalent of 1.038 cfs per 70 acres. Water Permit Application No. 8126-3 proposes to divert up to 3.78 cfs for the irrigation of 220 acres or the equivalent of 1.20 cfs per 70 acres. Both applicants indicate they intend to use center pivot irrigation systems that will not be making full rotations. Center pivot systems making partial rotations require a diversion rate to acreage ratio greater than 1 cfs per 70 acres, therefore it can be considered a “method of irrigation” requirement.

CONCLUSIONS:

1. The Water Management Board deferred a number of water permit applications from the Upper Vermillion Missouri aquifer in 2013, because portions of the aquifer have experienced long-term downward trending water levels.
2. The Water Management Board adopted three management units for the Upper Vermillion Missouri aquifer in 2014.
3. In 2014, the Water Management Board continued to defer water permit applications proposing appropriations from the North management unit of the Upper Vermillion Missouri aquifer pending completion of an aquifer study.
4. The DENR-Geological Survey Program completed their study of the Upper Vermillion Missouri aquifer in the spring of 2015.
5. Although average annual recharge to the Upper Vermillion Missouri aquifer has not been quantified, the source of the recharge has been identified as leakage from the Parker Centerville aquifer.
6. The linear trend line for water levels of the Upper Vermillion Missouri: North aquifer generally has a downward trend. However, the trend lines appear to be biased by the preponderance of measurements taken when pumping from the aquifer is at a maximum.
7. Drawdown in the Upper Vermillion Missouri: North aquifer has increased with increased pumping from the aquifer. However, water levels readily recover to approximately pre-pumping levels at the conclusion of the irrigation season.
8. Linear trend lines for static conditions (water levels prior to irrigation season) for the Upper Vermillion Missouri: North aquifer identify that unappropriated water is available for appropriation from the aquifer.
9. The hydraulic gradient of the potentiometric surface for the Upper Vermillion Missouri: North aquifer has remained steady although annual pumping from the aquifer has increased.
10. A constant hydraulic gradient indicates that groundwater outflow from the Upper Vermillion: North aquifer has remained constant; hence recharge to the aquifer has increased with increased pumping.
11. Considering all available data, recharge is exceeding average withdrawals, and there is a reasonable probability that the proposed appropriations from the North management unit can be made without adversely impacting existing water rights.



Ken Buhler
DENR-Water Rights Program

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- Circuit Court of South Dakota, Sixth Judicial Circuit, 2005, April 29, 2005 Memorandum Decision re: HU04-37 Hines v. SD Department of Environment and Natural Resources
- Circuit Court of South Dakota, First Judicial Circuit, 2012, April 12, 2012 Memorandum Decision re: Hanson County Dairy v. Robert Bender and Stace Nelson
- Circuit Court of South Dakota, First Judicial Circuit. 2012, May 17, 2012 Memorandum Decision re: Longview Farms, LLP v. South Dakota Dept. of Environ. and Nat'l. Resources.
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<http://www.kgs.ku.edu/General/Geology/Sedgwick/gw01.html>
- “Theis Equation Calculator.” [i-calcul⁸](http://www.icalcul8.com/theis.php) 21 April 2015<<http://www.icalcul8.com/theis.php>”
- Water Rights, 1980-2015, “Annual Irrigation Summary by Aquifer”: SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2004-2015, “Non-Irrigation Reported Water Use”: SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2015a, Observation Well Data, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.
- Water Rights, 2015b, Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

RECEIVED
JUN - 1 2015
WATER RIGHTS
PROGRAM

CUSTOMER NUMBER:	078200	Argus Leader	
AD ORDER NUMBER:	1463356		
	5/28, 2015	P.O. Box 677349, Dallas, TX 75267-7349	\$141.02pd

David, Cathy, Brian & Krista Smit
45536 283rd St
Hurley, SD 57036

DETACH THIS STUB AND RETURN WITH PAYMENT

PAYMENT DUE UPON RECEIPT

AFFIDAVIT OF PUBLICATION-

Customer Number: 078200
Invoice Number: 1463356

Argus Leader
AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA

COUNTY OF MINNEHAHA } ss

Linda Schulte being duly sworn, says: That The Argus Leader is, and during all the times hereinafter mentioned was, a daily legal newspaper as defined by SDCL 17-2-21, as amended published at Sioux Falls, Minnehaha County, South Dakota; that affiant is and during all of said times, was an employee of the publisher of such newspaper and has personal knowledge of the facts stated in this affidavit; that the notice, order or advertisement, a printed copy of which is hereto attached, was published in said newspaper upon

Thursday the 28 day of May 2015,
the day of 2015,
the day of 2015,
the day of 2015,
the day of 2015,
the day of 2015,
the day of 2015,

and that \$141.02pd was charged for publishing the same including a \$10.00 affidavit fee.

Linda Schulte
Subscribed and sworn to before me 5/28/2015

[Signature]
Notary Public, South Dakota

My Commission expires December 22, 2015

NOTICE OF HEARING on Application No. 8126-3 to Appropriate Water. Notice is given that David, Cathy, Brian and Krista Smit, 45536 283rd St, Hurley SD 57036 has filed an application for a water permit to appropriate 3.78 cubic feet of water per second (cfs) from two wells to be completed into the Upper

Vermillion North Aquifer (200 feet deep) located in the NE 1/4 SW 1/4 and the SE 1/4 NW 1/4 Section 33 for irrigation of 220 acres located in the NW 1/4, NE 1/4 SW 1/4, W 1/2 SE 1/4, W 1/2 NE 1/4 Section 33; all in T98N-R52W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres.

SDCL 46-2A-4(10) provides that "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 Chief Engineer's recommendation and no hearing may be held before the board, unless the Chief Engineer makes a finding that an application, even if uncontested, presents important issues of public policy or public interest that should be heard by the board." In this case, the Chief Engineer finds that this application presents important issues of public interest that should be heard by the Water Management Board.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8126-3 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.

The Water Management Board will consider this application at 9:30 a.m. on July 8, 2015 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave, Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.

Any interested person who intends to participate in the hearing shall file a petition to oppose or support the application and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to 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 June 29, 2015. The petition may be informal, but shall be in writing and shall 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. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The July 8, 2015 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by June 29, 2015. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location.

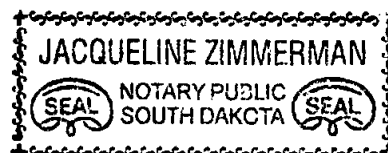
Information concerning this application is available at <http://denr.sd.gov/public>. Contact Eric Gronlund by June 29,

2015 at the above Chief Engineer's address to request copies of the staff report, recommendation, application or other information. Notice is given to individuals with disabilities that this hearing is being held in a physically accessible place. Please notify the Department of Environment and Natural Resources at least 48 hours before the hearing if you have a disability for which special arrangements must be made at the hearing. The telephone number for making arrangements is (605) 773-3352.

Under SDCL 1-26-17(7) notice must state that "if the amount in controversy exceeds \$2,500.00 or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17." This is a Notice of Hearing, service is being provided by publication, and the applicable date to give notice to the Chief Engineer is June 8, 2015. However, since this particular matter is a water permit application and not a monetary controversy in excess of \$2,500.00 or termination of a property right the Chief Engineer disputes the applicability of this provision and maintains that the hearing must be conducted by the Board.

As applicable, the following provides the legal authority and jurisdiction under which the hearing will be held and the particular statutes and rules pertaining to this application: SDCL 1-26-16 thru 1-26-28; SDCL 46-1-1 thru 46-1-9, 46-1-13 thru 46-1-18; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-2A-1 thru 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21, 46-2A-23; 46-5-1.1, 46-5-2 thru 46-5-26, 46-5-30.2 thru 46-5-30.4, 46-5-31, 46-5-32 thru 46-5-34.1, 46-5-38 thru 46-5-39, 46-5-46, 46-5-47, 46-5-49; 46-6-1 thru 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-21, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:01:25.02:74:02:01:35:01.

Steven M. Primer, Secretary, Department of Environment and Natural Resources. Published once at an approximate cost of \$141.02. 1463356 May 28, 2015



RECEIVED

JUN - 1 2015

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA)

:SS

COUNTY OF TURNER)

Allyson M. Hill, being first duly sworn, on oath says the VIBORG ENTERPRISE is a WEEKLY newspaper published in VIBORG in said county of TURNER, State of South Dakota; and that she is authorized to and does make this affidavit on behalf of said VIBORG ENTERPRISE; that affiant has personal knowledge of all facts stated in this affidavit; that said newspaper is a legal newspaper as defined by SDCL 17-2-2.1 through 17-2-2.4 inclusive as amended, has a bona fide circulation of at least two hundred copies WEEKLY, has been published in the English language within said county and has been admitted to the United States mail under the second class mailing privilege, for at least one year continuously next prior to the publication of the notice herein mentioned and was and is printed wholly or in part in an office maintained at said place of publication; that said notice, a printed copy of which taken from the paper in which the same was published is hereto attached and is made part of this affidavit, was published in said newspaper

1 time(s) as follows: that the first publication of said

notice in said newspaper aforesaid was on Thursday

the 28 day of May, 2015,

and that the succeeding publications were severally

on Thursday, the ____ day of _____, 2015;

on Thursday, the ____ day of _____, 2015;

on Thursday, the ____ day of _____, 2015;

on Thursday, the ____ day of _____, 2015;

Affiant further says that the full amount of the fees charged for the publication of said notice inures to the benefit of the publishers of said newspaper; that no agreement of understanding for the division thereof has been made with any other person, that no part thereof has been agreed to be paid to any person whomsoever; and that the fees charged for the publication thereof are:

DOLLARS (\$ 50.98)

(x) Allyson M. Hill, Allyson M. Hill

Subscribed and sworn to before me this 28 day of

May, 2015

Notary Public

My commission expires 11/14/2018.

**NOTICE OF HEARING
on Application No.
8126-3 to Appropriate
Water**

Notice is given that David, Cathy, Brian and Krista Smit, 45536 283rd St, Hurley SD 57036 has filed an application for a water permit to appropriate 3.78 cubic feet of water per second (cfs) from two wells to be completed into the Upper Vermillion:North Aquifer (200 feet deep) located in the NE 1/4 SW 1/4 and the SE 1/4 NW 1/4 Section 33 for irrigation of 220 acres located in the NW 1/4, NE 1/4 SW 1/4, W 1/2 SE 1/4, W 1/2 NE 1/4 Section 33; all in T98N-R52W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres.

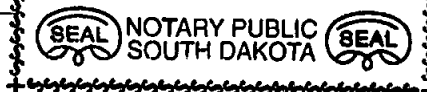
SDCL 46-2A-4(10) provides that "if the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief

Engineer shall act on the application pursuant to the Chief Engineer's recommendation and no hearing may be held before the board, unless the Chief Engineer makes a finding that an application, even if uncontested, presents important issues of public policy or public interest that should be heard by the board." In this case, the Chief Engineer finds that this application presents important issues of public interest that should be heard by the Water Management Board.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8126-3 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.

The Water Management Board will consider this application at 9:30 a.m. on July 8, 2015 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.

SHANE HILL



Any interested person who intends to participate in the hearing shall file a petition to oppose or support the application and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to 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 June 29, 2015. The petition may be informal, but shall be in writing and shall 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. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The July 8, 2015 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by June 29, 2015. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location.

Information concerning this application is available at <http://denr.sd.gov/public>. Contact Eric Gronlund by June 29, 2015 at the above Chief Engineer's address to request copies of the staff report, recommendation, application or other information. Notice is given to individuals with disabilities that this hearing is being held in a physically accessible place. Please notify the Department of Environment and Natural Resources at least 48 hours before the hearing if you have a disability for

which special arrangements must be made at the hearing. The telephone number for making arrangements is (605) 773-3352.

Under SDCL 1-26-17(7) notices must state that "if the amount in controversy exceeds \$2,500.00 or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17." This is a Notice of Hearing, service is being provided by publication, and the applicable date to give notice to the Chief Engineer is June 8, 2015. However, since this particular matter is a water permit application and not a monetary controversy in excess of \$2,500.00 or termination of a property right the Chief Engineer disputes the applicability of this provision and maintains that the hearing must be conducted

by the Board.

As applicable, the following provides the legal authority and jurisdiction under which the hearing will be held and the particular statutes and rules pertaining to this application: SDCL 1-26-16 thru 1-26-28; SDCL 46-1-1 thru 46-1-9, 46-1-13 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-2A-1 thru 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21, 46-2A-23; 46-5-1.1, 46-5-2 thru 46-5-26, 46-5-30.2 thru 46-5-30.4, 46-5-31, 46-5-32 thru 46-5-34.1, 46-5-38 thru 46-5-39, 46-5-46, 46-5-47, 46-5-49; 46-6-1 thru 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-21, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:25:02; 74:02:01:35:01.

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

*Published once at an approximate
cost of \$50.98*



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

May 19, 2015

Viborg Enterprise/Hurley Leader
PO Box H
Centerville SD 57014

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 8126-3 to Appropriate Water. Please publish the notice once on May 28, 2015. 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 and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is David, Cathy, Brian and Krista Smit, 45536 283rd St, Hurley SD 57036 (Ph # 605-238-5450).

Please send the Water Rights Program an affidavit or the enclosed Proof of Publication form immediately.

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

May 19, 2015

Argus Leader
PO Box 5034
Sioux Falls SD 57117

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 8126-3 to Appropriate Water. Please publish the notice once on May 28, 2015. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

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Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

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

May 19, 2015

David, Cathy, Brian and Krista Smit
45536 283rd St
Hurley SD 57036

Dear Sir:

Water Permit Application No. 8126-3 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 Viborg Enterprise/Hurley Leader printed at Centerville SD (Ph # 605-766-7827) and the Argus Leader printed at Sioux Falls SD (Ph # 605-331-2200). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper(s) to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

Instruction to Newspaper – Publish the Notice on May 28, 2015. 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 HEARING on Application No. 8126-3 to Appropriate Water

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

June 29, 2015

NOTICE

TO: David, Cath, Brian and Krista Smit
45536 283rd Street
Hurley SD 57036

FROM: Jeanne Goodman, Chief Engineer
Water Rights Program

SUBJECT: Change of Hearing Time for Water Permit Application No. 8126-3

The Notice of Hearing published in the Argus Leader and Viborg Enterprise schedule the Water Management Board's consideration of your Water Permit Application No. 8126-3 for 9:30 AM on July 8, 2015. Due to changes in the agenda, the hearing time will be later in the morning on July 8th.

The Water Management Board will conduct a hearing to consider Application No. 8126-3 at 11:00 AM (Central Time) on Wednesday, July 8, 2015, at the Floyd Matthew Training Center, Joe Foss Building, 523 E. Capitol Avenue, Pierre SD. The agenda time is an estimate.

Please contact Eric Gronlund at (605) 773-3352 if you have questions regarding the hearing.

c: Ann Mines-Bailey, Assistant Attorney General

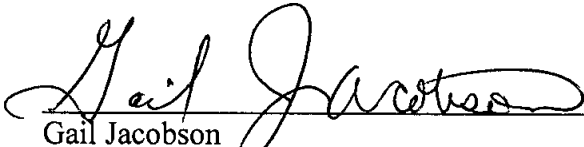
CERTIFICATION

I hereby certify that on June 29, 2015, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated June 29, 2015, regarding changing the hearing time in the matter of Water Right Permit Application No. 8126-3, as set forth below:

David, Cath, Brian and Krista Smit
45536 283rd Street
Hurley SD 57036

Sent Notice Inter-Office mail to:

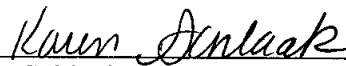
Ann Mines-Bailey, Assistant Attorney General,
8501 George S Mickelson Criminal Justice
1302 E. Hwy 14, Suite 1, Pierre SD 57501-8501



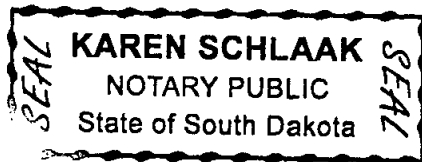
Gail Jacobson
Water Rights Program, DENR

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 29th day of June, 2015



Karen Schlaak
Notary Public
My Commission expires April 1, 2019





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

AUG 04 2015

David Cathy Brian & Krista Smit
45536 283rd St
Hurley SD 57036

Dear Sirs & Madams:

Enclosed is Water Permit No. 8126-3 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,

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

enclosures

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

Date January 28, 2019

TO: Water Rights Program, DENR
 523 E. Capitol
 Pierre, SD 57501-3181

FROM: David Smit

(name)

45536 283rd ST

(address)

Hurley SD 57036

(city, state, zip)

(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. 8126-3 states that the water use system is to be constructed by

July 8, 2020 , and water is to be put to beneficial use by July 8, 2024 .
(date) (date)

The water use system was completed on summer, 2018 .
(date)

Applying the water to beneficial use was completed on summer, 2018 .
(date)

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

1-28-2019: Mr. Smit called to let us know he was completed with his irrigation system. He didn't say "when" exactly so I just jotted down summer, 2018 since he irrigated June, July & August of 2018.

**Genny McMath
Water Rights Program**



3832-3 3926-3 6301-3
6561-3 8126-3

**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

December 5, 2023

3832-3
3926-3
6301-3
6561-3
8126-3

David Smit
45536 283rd St
Hurley SD 57036

Dear Mr. Smit:

Our office is in receipt of the 2023 Irrigation Water Use Questionnaire for multiple Water Rights/Permits. There were notations on the Questionnaires asking that the Water Rights/Permits, held David, Cathy, Brian, and Krista Smit, be transferred to Smit Family Farms.

For your convenience I have enclosed partially completed "Notice of Transfer of Ownership" forms and a postage-paid envelope. Please fill out the highlighted portions of the transfer forms and return them to our office with a check in the amount of \$250.00 (\$50.00/transfer), made payable to the SD Water Rights Program.

If you prefer to pay the \$250.00 transfer fee with a card, you may contact Megan Stephenson in our Fiscal Office at 605.773.4216.

Sincerely,

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

enclosures



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

8126-3

January 4, 2024

3832-3
3926-3
6301-3
6561-3
8126-3

Smit Family Farms
c/o David Smit
45536 283rd St
Hurley SD 57036

Dear Mr. Smit:

I have received your "Notice of Transfer of Ownership" forms and the required fees. Enclosed are receipts of payment for your records.

Water Right/Permit Nos. 3832-3, 3926-3, 6301-3, 6561-3, and 8126-3 previously owned by David Smit are now listed under Smit Family Farms.

As a reminder, so long as you use the water beneficially, as stated in the Water Rights/Permits, State Water Laws provide that you have a continuing right to use the water. Should the water not be put to beneficial use for a period longer than 3 consecutive years, without legal excuse, the Rights/Permits will be subject to cancellation.

If you have any questions, please contact me.

Sincerely,

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

enclosures

NOTICE OF TRANSFER OF OWNERSHIP

To: Chief Engineer
Water Rights Program, DANR
523 E. Capitol
Pierre, SD 57501-3181

PAID

JAN 03 2024

Ck# 1308

Rec't# 113/24

No. 8126-3

Date: 12/18/2023

I/We request that Water Permit No. 8126-3

formerly owned by: DAVID, CATHY, BRIAN, & KRISTA SMIT

be transferred to: (name & address)

Smit Family Farms
45536 283rd St. Hurley, So. Dak. 57036
Telephone No. 605-310-0640

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

36ac NE 1/4 NW 1/4, 10ac NW 1/4 NW 1/4, 38ac SE 1/4 NW 1/4, 10ac SW 1/4 NW 1/4, 36ac NE 1/4 SW 1/4

26ac NW 1/4 SE 1/4, 2ac SW 1/4 SE 1/4, 32ac NW 1/4 NE 1/4, 30ac SW 1/4 NE 1/4 **TOTAL 220ac**
all in Sec 33, T98N, R52W

I/We understand that the validity of Water Permit No. 8126-3 has not been determined by this transfer action. If I/We have any questions on validity, I/We understand that only the Water Management Board has the authority to determine if a water permit/right is valid (see note).

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 required to cover the filing fees as required under SDCL 46-2-13. This form must be signed by the new owner.

I/We Smit Family Farms, the new owner, certify that the above information is true and correct.

David Smit (manager)
(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 and the water used, the permit becomes a right. A water right may be lost for three 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.

RECEIVED

JAN 03 2024

**OFFICE OF
WATER**

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date January 3, 2024

RECEIVED OF Smit Family Farms, LLC 45536 283rd St., Hurley SD 57036

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 <u>8126-3</u>	<u>\$50.00</u>
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>\$50.00</u>

By Eric Gronlund
Chief Engineer
vm



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

May 2, 2024

8126-3

Smit Family Farm
c/o David Smit
45536 283rd St
Hurley SD 57036

Dear Mr. Smit:

I am writing in regard to Water Permit No. 8126-3. The water permit authorizes diversion of water from groundwater, two wells, completed into the Upper Vermillion Missouri Aquifer, for the irrigation of 220 acres in the NW $\frac{1}{4}$, Ne $\frac{1}{4}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, and W $\frac{1}{2}$ NE $\frac{1}{4}$ Section 33, T98N, R52W, Turner County

In reviewing your 2023 irrigation questionnaire, we have found discrepancies in the amount of water used and have some concerns. Enclosed is a copy of your questionnaire for reference purposes.

Water Permit No. 8126-3 allows you to use up to 2 acre-feet (ac-ft) (24 inches) of water, per acre, per year. On the questionnaire you reported substantially more water use. The following information is what was reported and what is authorized:

- 220 acres irrigated
- Reported water use – 580 ac-ft of water (approximately 31.5 inches)
- Authorized water use – 440 acre-feet (220 acres x 2 ac-ft per year)

We realize that water use depends greatly on climactic conditions and may vary year to year. However, it is very rare that irrigators come close to the 24 inches per acre that is authorized. Typical water use is between 8 and 12 inches per acre. Often, irrigators do not keep track of their days or hours actually pumped and estimate numbers for the questionnaires in an effort to get them completed and back in on time. While we appreciate returning the forms in a timely manner each year, we need the forms to reflect accurate information to ensure everyone is limiting their use to the amount of water appropriated to them.

The information we receive each year from irrigators across the state is very valuable. The water use data supplied by irrigators is one of the tools we use to help determine whether an aquifer or stream is nearing full appropriation.

If you do in fact apply as much water as claimed on your questionnaire, you are exceeding the limits of your water right and will have to reduce your discharge to stay within the authorized limit. If you simply estimated your water use, we ask that you please ensure the information reported is as accurate as possible. As stated before, the information you provide to us is very valuable. If you have any questions, please contact me.

Sincerely,

Amanda Dewell

Water Rights Program

605 773-3352

Amanda.Dewell@state.sd.us

enclosure

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8126-3

I have this day, October 23, 2024, made a thorough examination of the water use systems owned by Smit Family Farms, 45536 283rd Street, Hurley, SD 57036, holders of Permit No. 8126-3, bearing the priority date of February 11, 2015. This permit authorizes the diversion of 3.78 cu. ft. per second of the waters of groundwater (Upper Vermillion Missouri: North Aquifer) authorizing the irrigation of 220 acres located in Turner County.

Inspection contacts: David Smit

A. Works used to divert the water:

Well Information: (North Well)

- 1) Well Drilling Firm: Sam Heine Well Co., LLC
- 2) No. of Wells: 1
- 3) Depth(s): 200 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 16 inches
- 2) Length: 120 feet
- 3) Type: Plastic

Screen:

- 1) Diameter: 16 inches
- 2) Length: 80 feet
- 3) Type: PVC
- 4) Static water level: 12 feet

Pump:

- 1) Make:
- 2) Model:
- 3) Capacity: 900 GPM

Motor:

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

Well Information: (South Well)

- 5) Well Drilling Firm: Sam Heine Well Co., LLC
- 6) No. of Wells: 1
- 7) Depth(s): 200 feet
- 8) Well log is available: Yes

Casing:

- 4) Diameter: 16 inches
- 5) Length: 120 feet
- 6) Type: Plastic

Screen:

- 5) Diameter: 16 inches
- 6) Length: 80 feet
- 7) Type: PVC
- 8) Static water level: 12 feet

Pump:

- 4) Make:
- 5) Model:
- 6) Capacity: 900 GPM

Motor:

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

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

- | | | |
|--------------------------|-----------------------|--|
| 1) Type: <u>Aluminum</u> | Size: <u>8</u> inches | Length: <u>20</u> feet (<u>North well to the north pivot.</u>) |
| 2) Type: <u>Aluminum</u> | Size: <u>8</u> inches | Length: <u>30</u> feet (<u>South well to the south pivot.</u>) |

C. Works used to apply water to beneficial use:

Center Pivot: (North Pivot)

- 1) Make:
- 2) Overall length: 1,706 feet
- 3) Number of towers: 9
- 4) End gun: Yes Range: 100 feet
- 5) Capacity: GPM

Center Pivot: (South Pivot)

- 1) Make:
- 2) Overall length: 1,070 feet
- 3) Number of towers: 6
- 4) End gun: Yes Range: 100 feet
- 5) Capacity: 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
3) Exceptions to compliance are: None

E. Condition and Location:

- 1) The system is in good condition with the point(s) of diversion located as follows:
The north well is 2,400 feet east and 3,450 feet north of the southwest corner of Section 33-T98N-R52W, (Latitude 43.26704, Longitude -96.99489– SE1/4 of the NW1/4).
The south well is 2,610 feet east and 2,380 feet north of the southwest corner of Section 33-T98N-R52W, (Latitude 43.26415, Longitude -96.99417– NE1/4 of the SW1/4).
2) The works are capable of diverting and conveying to the places of use 4.01 cu. ft. per second of water from the well which is to be used for irrigation purposes. Water has been put to beneficial use to the maximum extent as follows: All in

<u>Section 33-T98N-R52W</u>	
<u>NW1/4NW1/4</u>	<u>10 acres</u>
<u>NE1/4NW1/4</u>	<u>36 acres</u>
<u>SW1/4NW1/4</u>	<u>7 acres</u>
<u>SE1/4NW1/4</u>	<u>31 acres</u>
<u>NW1/4NE1/4</u>	<u>30 acres</u>
<u>SW1/4NE1/4</u>	<u>29 acres</u>
<u>NE1/4SW1/4</u>	<u>33 acres</u>
<u>NW1/4SE1/4</u>	<u>21 acres</u>
<u>SW1/4SE1/4</u>	<u>1 acre</u>

comprising a total of 198 acres of land and the license should be issued for 3.78 cfs.

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

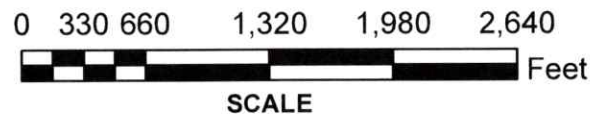
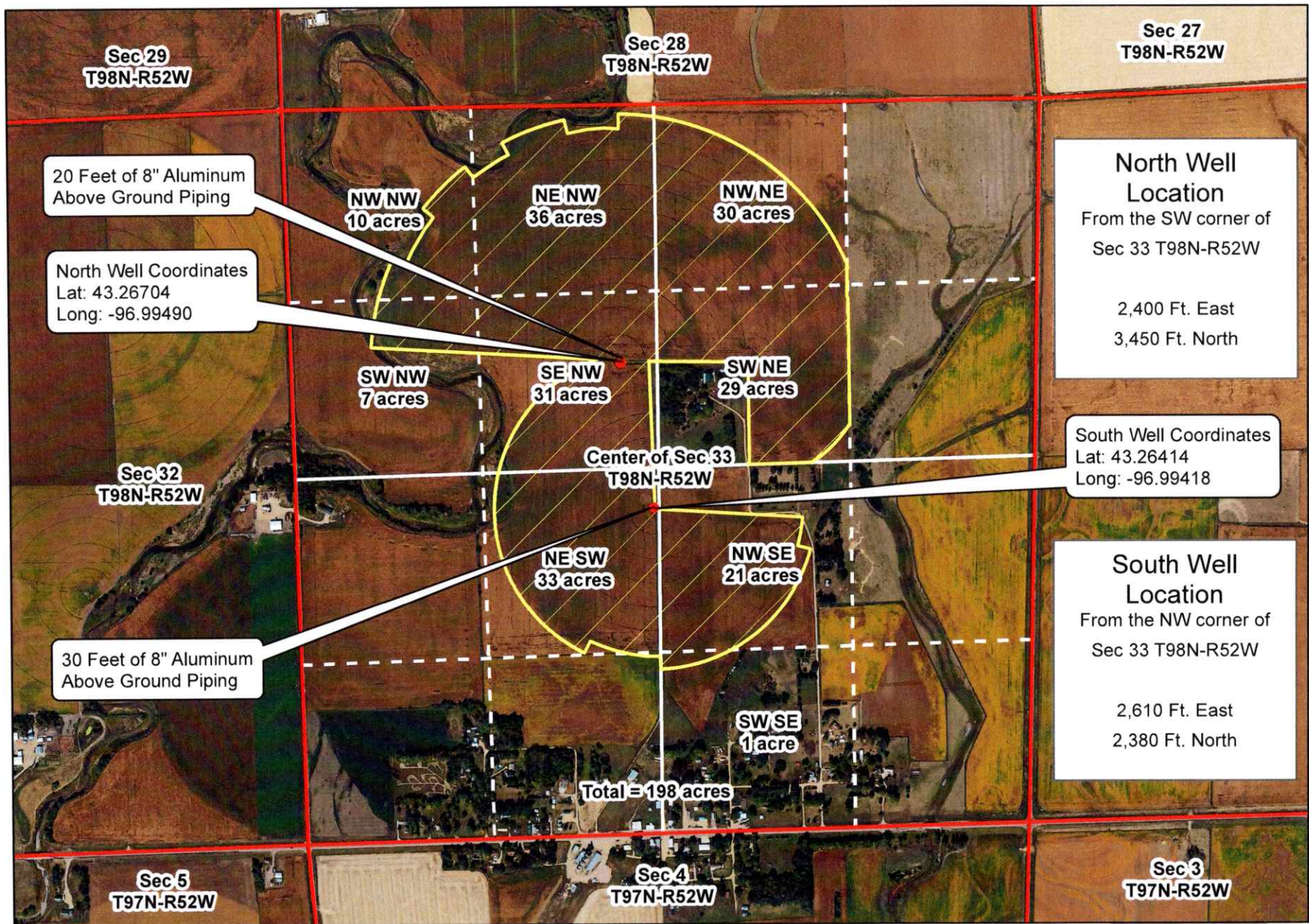
F. Comments or other permit(s) associated with the project: None

Keith DeJong

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

Date report completed: October 23, 2024

Water Permit No. 8126-3



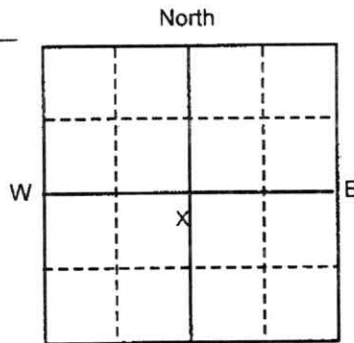
Keith DeJong
Keith DeJong, PE Ret.
Staff Engineer
October 23, 2024

8126-3

SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE 1/4 SW 1/4 Sec 33 Twp 98 Rg 52County TURNERPlease mark well
location with an "X"

Well Completion Date

November 25, 2015

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
1,500.0 ft. from SEPTIC (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

reverse circulation

CASING DATA:

☐ Steel ☒ Plastic ☐ Other
 If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
160.0 LB/FT	16.00 IN	0.0 FT	120.0 FT	28.00 IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
bent grout	40	9.5 Lb/gal	0.0 Ft	100.0 Ft
_____	_____	_____ Lb/gal	_____ Ft	_____ Ft

Describe grouting procedure
tremie pipe

SCREEN:

☒ Perforated pipe ☐ Manufactured
 Diameter 16.00 Inches Length 80.0 Feet
 Material pvc
 Slot Size 80 Set From 120.0 Feet to 200.0 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 tablets☐ No, Why Not? _____Lab to which water
quality sample sent for analysis _____Well Owner: DAVE SMIT

Business Name: _____

Address: 45536 283RDCity, State, Zip: HURLEY SD 57036

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	3
clay brown, silty	3	60
clay blue	60	105
sand/gravel	105	200

STATIC WATER LEVEL 12.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☐ Pumped Describe: _____
☐ Bailed
☐ Other _____

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

RECEIVED

JAN 30 2017

WATER RIGHTS
PROGRAMThis well was drilled under license # 805 and this
report is true and accurate.Drilling firm: SAM HEINE WELL CO., LLC

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

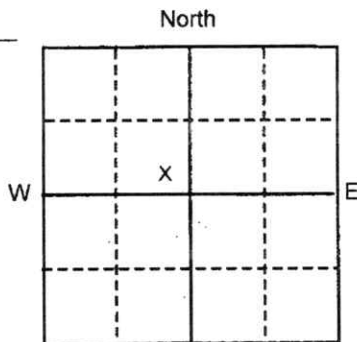
Date: _____

8126-3

SD EForm - 1621LD V1

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE 1/4 NW 1/4 Sec 33 Twp 98 Rg 52County TURNERPlease mark well
location with an "X"

Well Completion Date

November 15, 2015

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
700.0 ft. from SEPTIC (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

reverse circulation

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
160.0 LB/FT	16.00 IN	0.0 FT	120.0 FT	28.00 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
bent grout	40	9.5 Lb/gal	0.0 Ft	100.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
tremie pipe

SCREEN:

☒ Perforated pipe ☐ Manufactured
 Diameter 16.00 Inches Length 80.0 Feet
Material pvcSlot Size 80 Set From 120.0 Feet to 200.0 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 tablets
☐ No, Why Not?
Lab to which water
quality sample sent for analysisWell Owner: DAVE SMIT

Business Name:

Address: 45536 283RDCity, State, Zip: HURLEY SD 57036

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	3
clay brown, silty	3	60
clay blue	60	105
sand/gravel	105	200

STATIC WATER LEVEL 12.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe:☐ Bailed☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

RECEIVED

JAN 30 2017

WATER RIGHTS
PROGRAM

uvm: North wtd

This well was drilled under license # 805 and this report is true and accurate.Drilling firm: SAM HEINE WELL CO., LLC

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

APR 28 2025

Smit Family Farm
c/o David Smit
45536 283rd St
Hurley, SD 57036

No. 8126-3

Dear Mr. Smit:

Enclosed is Water License No. 8126-3. 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,

Mark Mayer, PE
Director of Office of Water
(605) 773-3352

Note: The inspection found your system for Water Right No. 8126-3 to be capable of diverting 4.01 cfs (approx. 1,800 gpm). Pursuant to SDCL 46-5-6 diversion of water under this license is limited to 3.78 cfs (approx. 1,697 gpm).

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8126-3**

(1) David Smit, Cathy Smit, Brian Smit, and Krista Smit, made Application No. 8126-3, February 11, 2015, for a water permit to divert 3.78 cubic feet of water per second from groundwater, two wells (Upper Vermillion Missouri: North Aquifer), Turner County, South Dakota for irrigation purposes. Permit No. 8126-3, with a priority date of February 11, 2015, was approved July 8, 2015, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before July 8, 2020, and for the application to beneficial use of water on or before July 8, 2024.

Ownership of Permit No. 8126-3 was transferred to Smit Family Farm, 45536 283rd St, Hurley, SD 57036 on January 4, 2024.

(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 3.78 cubic feet of water per second for beneficial use. The locations of the diversion points are:

- 2,400 feet E and 3,450 feet N from the SW corner of Section 33, T98N, R52W (SE $\frac{1}{4}$ NW $\frac{1}{4}$)
(Latitude 43.26704 and Longitude -96.99489)
- 2,610 feet E and 2,380 feet N from the SW corner of Section 33, T98N, R52W (NE $\frac{1}{4}$ SW $\frac{1}{4}$)
(Latitude 43.26415 and Longitude -96.99417)

(3) The amount of 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.

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

Section 33, T98N, R52W

NE $\frac{1}{4}$ NW $\frac{1}{4}$ - 36 acres	NW $\frac{1}{4}$ NE $\frac{1}{4}$ - 30 acres	NE $\frac{1}{4}$ SW $\frac{1}{4}$ - 33 acres	NW $\frac{1}{4}$ SE $\frac{1}{4}$ - 21 acres
NW $\frac{1}{4}$ NW $\frac{1}{4}$ - 10 acres	SW $\frac{1}{4}$ NE $\frac{1}{4}$ - 29 acres		SW $\frac{1}{4}$ SE $\frac{1}{4}$ - 1 acre
SW $\frac{1}{4}$ NW $\frac{1}{4}$ - 7 acres			
SE $\frac{1}{4}$ NW $\frac{1}{4}$ - 31 acres			

Total – 198 acres

(5) Pursuant to South Dakota Water Law 46-5-30.1 Smit Family Farm, the holder and/or owner of Water Right No. 8126-3 is issued a license to appropriate water, the right to use 3.78 cubic feet of water per second from groundwater, two wells (Upper Vermillion Missouri: North Aquifer), with a priority date of February 11, 2015, from the location 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. 8126-3 and subject to the following qualifications:

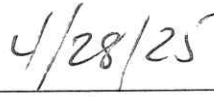
continued

Qualifications

1. The wells approved under this Permit will be located near domestic 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 wells authorized by Permit No. 8126-3 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 wells were drilled in 2015 by Sam Heine Well Co Inc. Copies of the well completion reports are 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. 8126-3 authorizes a maximum diversion rate of 3.78 cfs for the irrigation of 220 acres with an annual volume not to exceed 2 acre-feet of water per acre per year. *(The number of irrigated acres has been reduced to 198, based on the system as developed.)*
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.



Mark Mayer, PE
Director of Office of Water



date

