

WATER PERMIT NO. 8208-3

Name of Applicant: Lewis Bainbridge

Address: 26355 406th Ave, Ethan SD 57334

Phone: 605 999-4640

Amount of Water Claimed: no additional

Total Acres: 27 acres

Source of Water Supply: groundwater (one existing well)

Water to be used for: irrigation

County: Davison

Type of Waste Disposal System:

Location: 10 miles southwest of Mitchell

PRIORITY

Date Received: 3-11-16

Application/License Fee: \$ 700

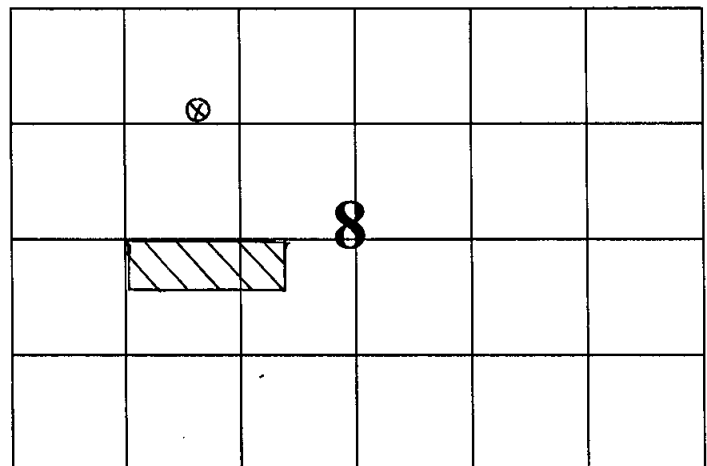
Corrected Application Received:

Period of Annual Use: April 1 – November 1

Remarks: Additional acres to Water Right No. 1362-3

Diversion Point: NW 1/4 NW 1/4 Sec 8-T101N-
R60W

Land to be Irrigated: N 1/2 SW 1/4 Sec 8-T101N-
R60W



Depth of Well: 60 feet deep

Well Driller:

Remarks:

Type of Map:

Prepared by:

Reviewed and the Number Assigned on: 3-14-16

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

FORM 2: Application for irrigation in South Dakota

(type or print)

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8208-3</u> (office use only)	Hydrologic Unit <u>10160011</u>
	Basin <u>James River</u>	
	Newspaper <u>Daily Republic - Mitchell</u>	
	<u>605-996-5514</u>	

RECEIVED

MAR 11 2016

WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

Type of Application: ☐ New ☐ Vested Right ☒ Amendment/Correction to Permit No. 1362-3
(Use predates Mar 2, 1955)

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

27 additional acres1. Name to Appear on Irrigation Permit Lewis Bainbridge

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

Mailing Address 26355 406th Ave Ethan SD 57334
(Address) (City) (State) (Zip Code)

Phone 605-227-4640 Mobile 605-999-4640 Email lbainbridge@santel.net

2. Amount of water claimed NO ADD *CFS or NO ADD **GPM NO ADD ***AF Total Acreage 27 additional acres
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply existing well

4. Location of point of diversion 1 well in NW1/4 NW1/4 Section 8 T101N R60W
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County Davison5. County or counties where water will be used Davison6. Annual period during which water is to be used Apr 1 - November 1

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
NW 1/4 SW 1/4	13		
NE 1/4 SW 1/4	14		
<u>See 8-T101N-R60W</u>			

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

Replacing an existing center pivot with a larger new pivot.

I, [Signature], the applicant, certify under
Name of Person Title (if applicable)

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

**SOUTH DAKOTA
WATER PERMIT NO. 8208-3**

Date of first receipt of application March 11, 2016.

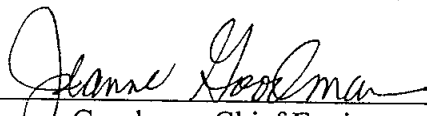
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8208-3 to Lewis Bainbridge, 26355 406th Ave, Ethan SD 57334 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 8208-3 authorizes irrigation of 27 new acres. Water Right No. 1362-3 appropriates 1.11 cubic feet of water per second from one well completed into the Ethan Aquifer (60 feet deep) located in the NW 1/4 NW 1/4 Section 8 for irrigation of 93 acres located in the NW 1/4 Section 8; all in T101N-R60W. This permit authorizes irrigation of an additional 27 acres located in the N 1/2 SW 1/4 Section 8-T101N-R60W from the existing well. This permit does not authorize any increase in the diversion rate.
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: April 1 – November 1.
3. The date from which applicant may claim right is March 11, 2016.
4. The date of approval of Permit No. 8208-3 is May 31, 2016.
5. One-fifth of the construction is to be completed on or before December 1, 2018.
6. All construction is to be completed on or before May 31, 2021.
7. Water is to be put to beneficial use on or before May 31, 2025.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under Permit Nos. 1362-3 and 8208-3 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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: 
Jeanne Goodman, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

JUN 08 2016

date

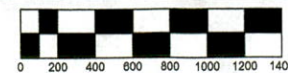




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Data Zoom 14-4

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MAR 11 2016
WATER RIGHTS
PROGRAM

NOT TO SCALE



Total Acres = 93

Prepared By:

Lynn Beck

Lynn Beck
Natural Resource Engineer
Water Rights Division
DENR
9-12-91

1362-3

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 3/11, 20 16

RECEIVED OF Lewis G Bainbridge 26355 406th Ave Ethan SD 57334

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

Fee for Application for Permit No. <u>8208-3</u> to Appropriate Water, to construct and to put water to beneficial use	500	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>8208-3</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	700 00

No. **07787**

By J. James Goodman
Chief Engineer



**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. 8208-3, Lewis Bainbridge**

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. 8208-3, Lewis Bainbridge, 26355 406th Avenue, Ethan SD 57334.

The Chief Engineer is recommending APPROVAL of Application No. 8208-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under Permit Nos. 1362-³~~2~~ and 8208-3 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. 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 9, 2016

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 8208-3
LEWIS BAINBRIDGE
MAY 6, 2016

Water Permit Application No. 8208-3 proposes to irrigate 27 acres located the N ½ SW ¼ Section 8-T101N-R60W using a well and diversion rate authorized by Water Right No. 1362-3. Water Right No. 1362-3 authorizes a maximum diversion rate of 1.11 cubic feet of water per second (cfs) from the Ethan Aquifer from a well located in the NW ¼ NW ¼ Section 8 for the irrigation of 93 acres located in the NW ¼ Section 8; all in T101N-R60W in Davison County. This application, if approved, does not authorize any increase in the diversion rate authorized by Water Right No. 1362-3.

AQUIFER: Ethan (ET)

Aquifer Characteristics:

The Ethan aquifer is comprised of glacial outwash that grades from medium to coarse sand intermixed with fine to medium gravel that generally lays directly on the Niobrara Formation (Hansen, 1983). The Ethan aquifer extends from just south of Mitchell to just a few miles into northwestern Hutchinson County (Hansen, 1983; Lindgren and Hansen, 1990). In its northern reaches, the aquifer can be found under unconfined conditions at or near land surface (Hansen, 1983). However south of T102N-R60W, the Ethan aquifer is generally under confined conditions (Hansen, 1983). Hansen (1983), and Lindgren and Hansen (1990) estimated the areal extent of the aquifer to be 26,880 acres. Hedges and others (1982) estimated the areal extent of the aquifer to be 30,600 acres with approximately 84,600 ac-ft of recoverable water in storage.

There is no well completion report on file for the well this application proposes to use. However, near the well site, the Ethan aquifer is under unconfined conditions (Water Rights, 2016a and 2016c). The water table is generally between 5 and 15 feet below grade (Water Rights, 2016a). The aquifer materials are up to 40 feet thick and are comprised of sand and gravel intermixed with “chalk”, pieces of the Niobrara Formation (Water Rights, 2016a and 2016c). Figure 1 is a map of the area including the approximate areal extent of the aquifer (Hansen, 1983; Lindgren and Hansen, 1990), observation wells (Water Rights, 2016a), and water rights/permits (Water Rights, 2016b). Table 1 is a list of the water rights/permits shown in Figure 1.

Permit No.	Name	County	Status	Use	CFS	Acres
1333-3	Elmer J Munterfering	HT	LC	IRR	2.22	232
1362-3	Lewis G Bainbridge	DN	LC	IRR	1.11	93
1480-3	Matt Bainbridge	DN	LC	IRR	1.39	162.2
HT= Hutchinson, DN= Davison, LC= Water Right, IRR= Irrigation						

Table 1- Water rights/permits authorized to withdraw water from the Ethan aquifer (Water Rights, 2016b)

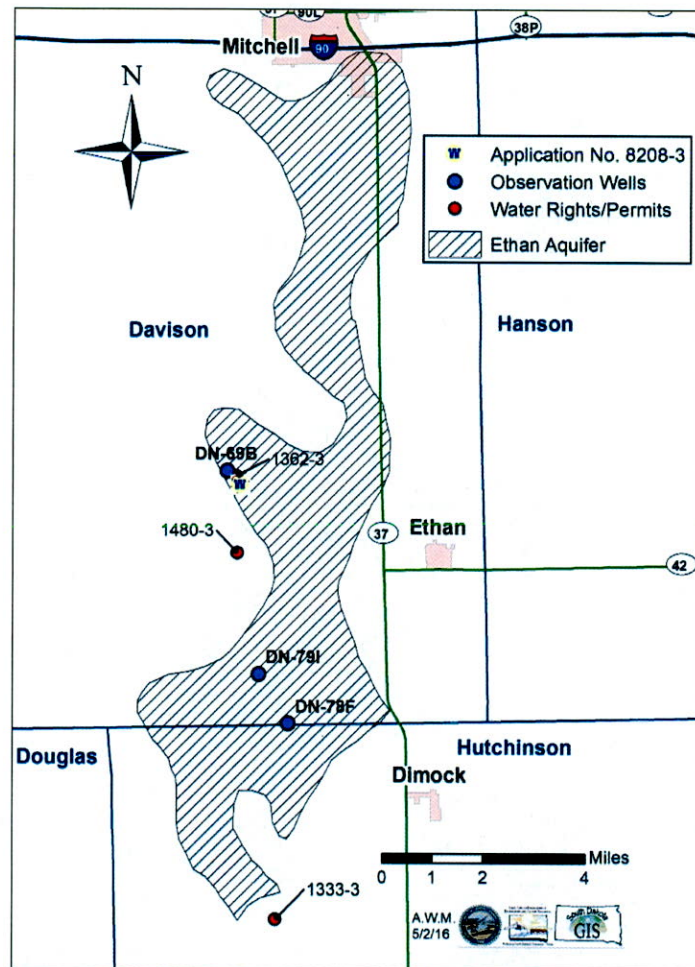


Figure 1- Map of the approximate areal extent of the Ethan aquifer (Hansen, 1983; Lindgren and Hansen, 1990), observation wells (Water Rights, 2016a), and Water Rights/Permits (Water Rights, 2016b)

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 a reasonable probability that there is unappropriated water available for this 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. This report will address the availability of unappropriated water and effects on existing rights from the aquifer that are pertinent to this application.

WATER AVAILABILITY:

This application proposes to appropriate water from the Ethan aquifer. The probability of unappropriated water available 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." If the source of the water is older or lower than the Greenhorn Formation and a water distribution system has applied for a permit, the Board

need not consider the recharge/withdrawal issue. In this case, the aquifer is not stratigraphically lower than the Greenhorn Formation and the applicant is not a water distribution system. If this application is approved, average annual pumpage is expected to be less than 27 ac-ft/yr.

Observation Well Data:

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

The DENR-Water Rights Program monitors three observation wells completed into the Ethan aquifer (Water Rights, 2016a). The hydrographs for these observation wells are shown in Figures 2, 3, and 4 (Water Rights, 2016a). The hydrographs show the water levels in the aquifer have risen over the period of record. Observation well DN-69B is within approximately 0.4 miles of the well this application proposes to use. The other two observation wells are both more than 3.5 miles away.

The water levels in DN-69B show some effects of pumping on the water level during the irrigation season but the effects are minor. Climate dominates the water levels in the observation wells. This means that recharge to and natural discharge from the aquifer significantly exceeds pumping. Recognizing that, the hydrographs for the observation wells show there is unappropriated water available for this proposed appropriation.

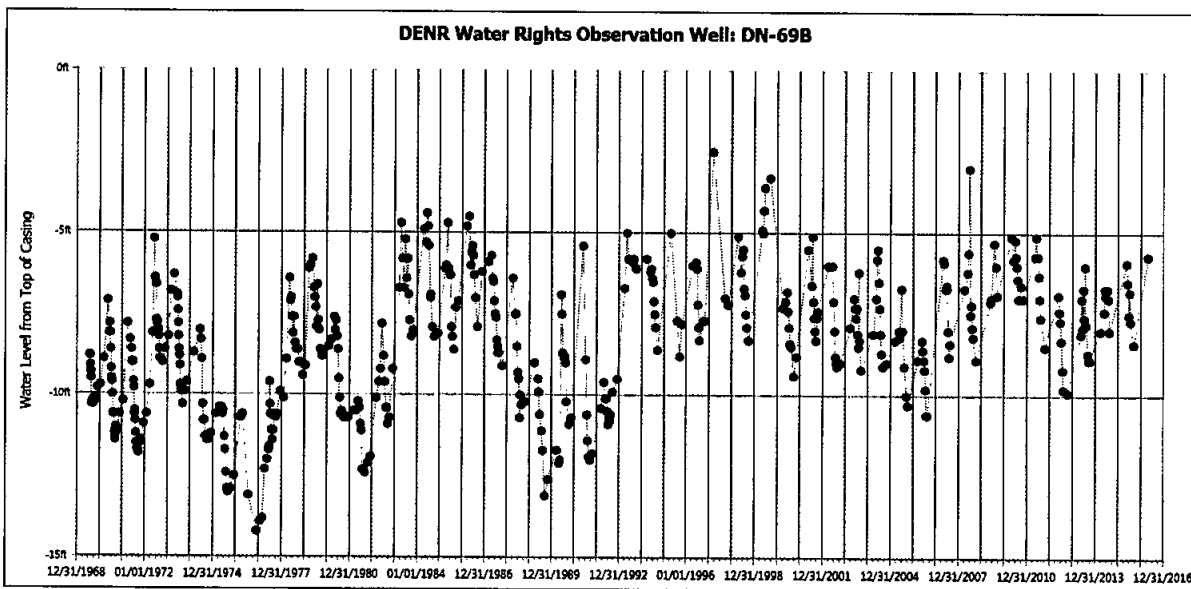


Figure 2- Hydrograph for observation well DN-69B (Water Rights, 2016a)

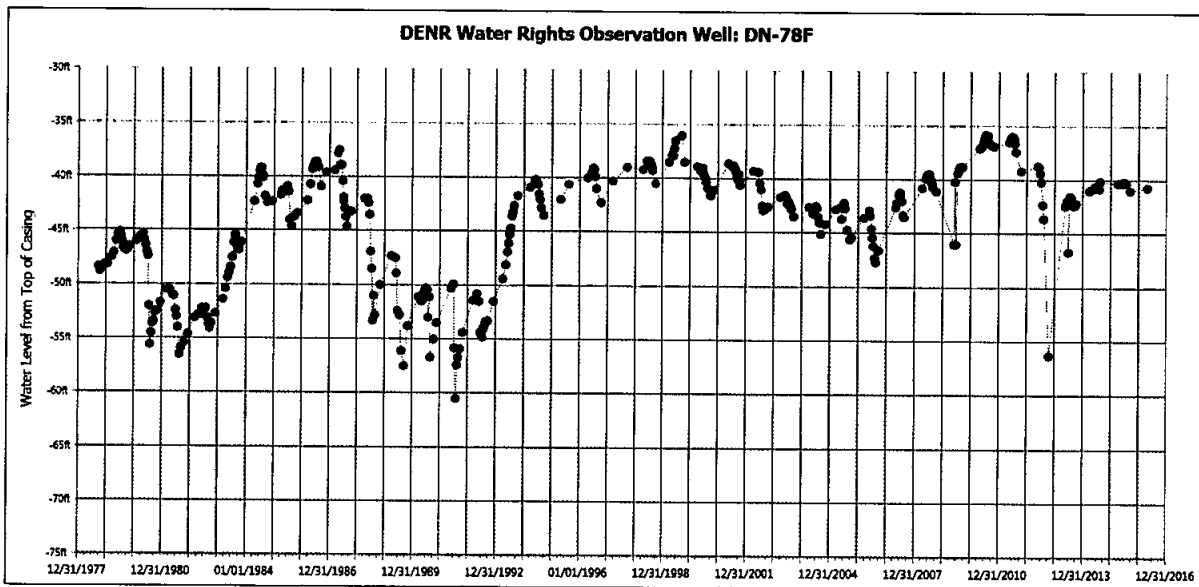


Figure 3- Hydrograph for observation well DN-78F (Water Rights, 2016a)

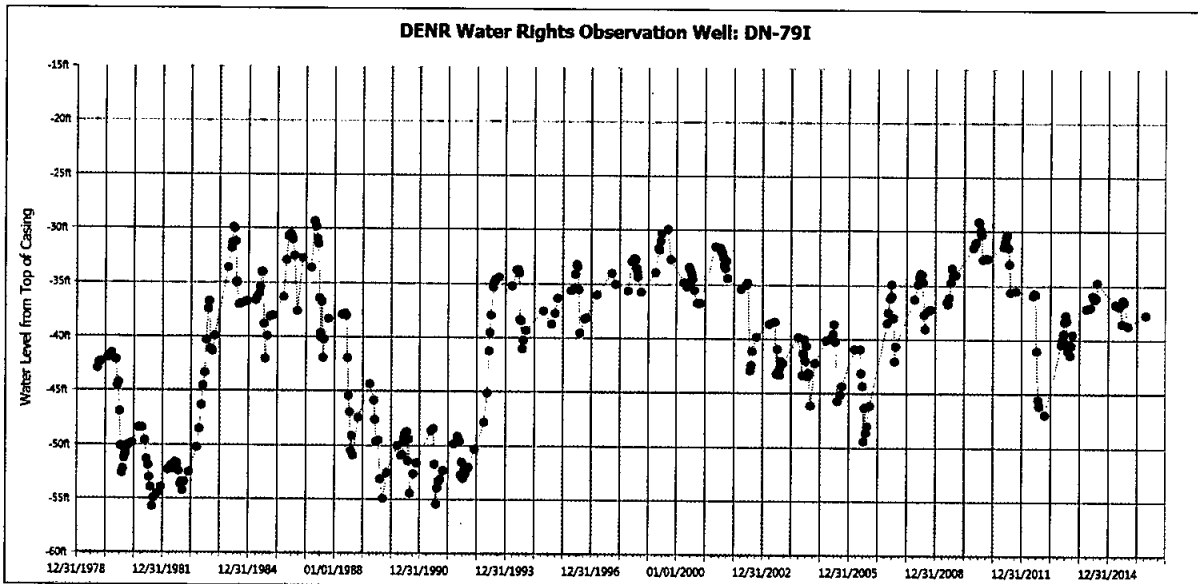


Figure 4- Hydrograph for observation well DN-79I (Water Rights, 2016a)

Recharge and Discharge:

Recharge:

Recharge to the Ethan aquifer is by “infiltration of snowmelt and rainfall during the spring and early summer where it is at or near land surface and from the Niobrara aquifer” (Hansen, 1983). There are no estimates of a recharge rate to the Ethan aquifer. Hedges and others (1985) stated for management and development programs a range of 0.15 to 0.60 inches per year (in/yr.) should be used for confined aquifers. They also stated where confined aquifers encounter unconfined conditions, the recharge rates may be higher, even into the range of 2.0 to 5.6 in/yr. estimated for surficial aquifers. Table 2 shows the estimated average annual recharge using the areas estimated by Hansen (1983) and Lindgren and Hansen (1990), and Hedges and others (1982) and the range of recharge rates from Hedges and others (1985). Since more than half of

the Ethan aquifer is under confined conditions it is likely the average annual recharge is less than 2.0 in/yr. The worst-case scenario would be to assume the entirety of the Ethan aquifer is under confined conditions and use the recharge rate range of 0.15 to 0.6 in/yr. to calculate estimated average annual recharge.

Recharge Rate (in/yr.) (Hedges et. al, 1985)		0.15	0.6
	Area (acres)	Recharge (ac-ft/yr.)	
Hansen, 1983; Lindgren and Hansen 1990	26,880	336	1,344
Hedges et. al, 1982	30,600	383	1,530

Table 2- Estimated average annual recharge to the Ethan aquifer

Discharge:

The Ethan aquifer discharges through evapotranspiration where the aquifer is at or near land surface (Hansen, 1983) and through well withdrawals for irrigation, stock, and domestic use. The three water rights authorized to withdraw water from the Ethan aquifer (see Table 1) are for irrigation. The domestic use from the Ethan aquifer is insignificant compared to the appropriative use from the aquifer. Table 3 shows the historic appropriative pumping, which is all for irrigation, from the Ethan aquifer. The average annual appropriative pumpage from the Ethan aquifer is 148 ac-ft/yr.

Hydrologic Budget:

The average annual appropriative use from the Ethan aquifer is 148 ac-ft/yr. If approved, this application is likely to pump less than 27 ac-ft/yr. Thus, estimated average annual pumping from the aquifer will likely be less than 175 ac-ft/yr. if this application is approved. The minimum estimated average annual recharge to the aquifer is 336 ac-ft/yr. Therefore there is a reasonable probability that unappropriated water is available for this proposed appropriation.

The well authorized by Water Right No. 1362-3 and proposed for use by this application is approximately 1.3 miles north of the well authorized by Water Right No. 1480-3 (Water Rights, 2016b). There are a number of domestic wells on file with the Water Rights Program within approximately one mile of the well this application proposes to use (Water Rights, 2016c).

The hydrographs for the observation wells completed into the Ethan aquifer document there is little interference caused by pumping from the aquifer. Observation well DN-69B is approximately 0.4 miles northwest of the well authorized by Water Right No. 1362-3. At that distance, the effects of pumping the irrigation well on the water level are minimal (see Figure 2). Therefore, there is a reasonable probability this proposed diversion can be made without adversely impacting existing appropriate or domestic users.

EXISTING WATER RIGHTS:

Table 3 - Historic irrigation use from the Ethan aquifer (Water Rights, 1979-2016)

Year	No. of Permits Reporting	Appropriation (ac-ft)	Pumpage Reported (ac-ft)
2015	3	1461.6	24.31
2014	3	1461.6	123.36
2013	3	1461.6	140.32
2012	3	1461.6	333.95
2011	3	1461.6	64.48
2010	3	1461.6	35.35
2009	3	1461.6	0
2008	3	1461.6	84.33
2007	3	1461.6	161.86
2006	3	1461.6	200.64
2005	3	1461.6	220.08
2004	3	1461.6	203.73
2003	3	1461.6	121.30
2002	3	1461.6	199.31
2001	3	1461.6	117.81
2000	3	1461.6	232.89
1999	3	1461.6	59.43
1998	3	1461.6	137.51
1997	3	1461.6	34
1996	3	1461.6	35.35
1995	3	1461.6	213.75
1994	3	1461.6	165.54
1993	3	1461.6	0.00
1992	3	1461.6	195.00
1991	3	2061.6	322.00
1990	4	3462.6	467.00
1989	4	3462.6	459.00
1988	4	3696	80.70
1987	4	3696	55.00
1986	4	3696	39.00
1985	4	3696	60.00
1984	4	3696	118.00
1983	4	3696	54.14
1982	4	3696	70.05
1981	4	3696	262
1980	4	3696	190.00
1979	4	3696	196.00
Min	3	1461.6	0
Max	4	3696	467
Avg.	3.3	2189.9	148.0

In the past, the Water Management Board has recognized that to place water to maximum beneficial use, a certain amount of drawdown may occur. Since the aquifer is under unconfined conditions at the well site, drawdown due to pumping would not be significant far from the well site. Furthermore, the Water Management Board defined an "adversely impacted domestic well" in ARSD 74:02:04:20(7) as:

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

Thus, depending on specific characteristics of the Ethan aquifer at the well site some existing well owners may need to lower their pumps to accommodate for deeper water levels. When considering the statute (SDCL 46-6-6.1) and the rule (ARSD 74:02:04:20(7)), well interference from this proposed diversion is not likely to cause a significant impact. Therefore, there is a reasonable probability that any interference created by pumping the proposed wells will not be adverse.

CONCLUSIONS:

1. Application No. 8208-3 proposes to irrigate 27 additional acres in Davison County using the well and diversion rate authority granted under Water Right No. 1362-3.
2. Water Right No. 1362-3 authorizes the irrigation of 93 acres using a maximum diversion rate of 1.11 cfs pumping water from the Ethan aquifer.
3. There is a reasonable probability that there is unappropriated water available for this application.
4. There is a reasonable probability that the diversion proposed by this application can be made without adversely impacting existing appropriative or domestic users.



Adam Mathiowetz, PE
SD DENR-Water Rights Program

Approved by:



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Hansen, D.S. 1983. Water Resources of Hanson and Davison Counties, South Dakota. Water Resources Investigations Report 83-4108. U.S. Geological Survey. Huron, South Dakota.
- Hedges, L.S., Allen, J., and Holly, D.E. 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, Task 7: Ground Water Recharge; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Hedges, L.S., S.L. Burch, D.L. Iles, R.A. Barari, and R.A. Schoon. 1982. Evaluation of Ground-water Resources in Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Lindgren, R.J. and Hansen, D.S. 1990. Water Resources of Hutchinson and Turner Counties, South Dakota. Water-Resources Investigations Report 90-4093. U.S. Geological Survey. Huron, South Dakota.
- Water Rights. 1979-2016. "1979-2015 Irrigation Summaries by Aquifer": SD DENR-Water Rights Program, Joe Foss Building, Pierre, South Dakota.
- Water Rights. 2016a. Observation Well Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2016b. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2016c. Well Completion Reports. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

**NOTICE OF
APPLICATION
NO. 8208-3 to
Appropriate Water**

Notice is given that Lewis Bainbridge, 26355 406th Ave, Ethan SD 57334 has filed an application for a water permit to irrigate 27 new acres. Water Right No. 1362-3 appropriates 1.11 cubic feet of water per second from one well completed into the Ethan Aquifer (60 feet deep) located in the NW 1/4 NW 1/4 Section 8 for irrigation of 93 acres located in the NW 1/4 Section 8; all in T101N-R60W. This application proposes to irrigate an additional 27 acres located in the N 1/2 SW 1/4 Section 8-T101N-R60W from the existing well. This application, if approved, does not authorize any increase in the diversion rate.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8208-3 with qualifications 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 Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605-773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by May 31, 2016.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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

Published once at the total approximate cost of \$69.68

AFFIDAVIT OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF DAVISON)

Penny Hohbach of said county, being, first duly sworn, on oath, says; that he/she is the publisher or an employee of the publisher of The Daily Republic, a daily newspaper, published in the City of Mitchell, in said County of Davison, and State of South Dakota; that he/she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive; that said newspaper has been published within the said County of Davison and State of South Dakota, for at least one year next prior to the first publication of the attached public notice, and that the notice, order or advertisement, a printed copy of which, taken from the paper in which the same was published, and which is hereto attached and made a part of this affidavit, was published in said newspaper for 1 issue(s), to wit:

Wednesday, May 18, 2016

That the full amount of the fee charged for the publication of the attached public notice insures to the sole benefit of the publisher or publishers; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever, that the fees charged for the publication thereof are: \$69.68

Signed: Penny Hohbach

Subscribed and sworn to before me this 18th day of May, 2016.

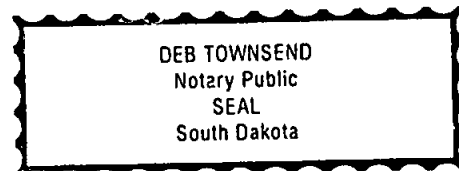
Deb Townsend

Notary Public
County of Davison

My Commission Expires: 09-18-21

Prepared by: The Daily Republic, P.O. Box 1288, Mitchell S.D. 57301 605-996-5515

RECEIVED
MAY 20 2016
**WATER RIGHTS
PROGRAM**



Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, May 10, 2016 8:38 AM
To: Hohbach, Penny (PHohbach@mitchellrepublic.com)
Subject: 8208-3, Lewis Bainbridge
Attachments: 8208-3publicnov2015.short1.docx; FORM8.FRM.doc

Attached is a notice to be published on May 18, 2016.

Lewis Bainbridge, 26355 406th Ave, Ethan SD 57334 (605 227-4640 c- 605 999-4640) has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP.

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

Karen Schlaak

Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352



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 9, 2016

Lewis Bainbridge
26355 406th Ave
Ethan SD 57334

Dear Mr. Bainbridge:

Water Permit Application No. 8208-3 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 Daily Republic printed at Mitchell SD (Ph # 605-996-5514). 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.

NOTICE OF APPLICATION NO. 8208-3 to Appropriate Water

Notice is given that Lewis Bainbridge, 26355 406th Ave, Ethan SD 57334 has filed an application for a water permit to irrigate 27 new acres. Water Right No. 1362-3 appropriates 1.11 cubic feet of water per second from one well completed into the Ethan Aquifer (60 feet deep) located in the NW 1/4 NW 1/4 Section 8 for irrigation of 93 acres located in the NW 1/4 Section 8; all in T101N-R60W. This application proposes to irrigate an additional 27 acres located in the N 1/2 SW 1/4 Section 8-T101N-R60W from the existing well. This application, if approved, does not authorize any increase in the diversion rate.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8208-3 with qualifications 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 Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605-773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by May 31, 2016.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

JUN 08 2016

Lewis Bainbridge
26355 406th Ave
Ethan SD 57334

Dear Mr. Bainbridge:

Enclosed is Water Permit No. 8208-3 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

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 8208-3 & 1362-3

I have this day, 08/21/2024, made a thorough examination of the water use system constructed by Lewis Bainbridge of 26355 406th Ave, Ethan SD 57334 holder of License No. 1362-3, bearing the priority of February 14, 1967 authorizing the diversion of 1.11 cu. ft. per second and Permit No. 8208-3, bearing the priority of March 11, 2016, authorizing **no additional diversion** of the waters of groundwater Ethan Aquifer for **irrigation use** purposes, in Davison County.

Inspection contact & relationship Lewis Bainbridge, owner

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: unknown
- 2) No. of Wells 1
- 3) Depth(s) 60 feet
- 4) Well log is available N If no, explain: using an existing well authorized by No. 1362-3

Casing:

- 1) Diameter 16 inches
- 2) Length NA feet
- 3) Type Steel

Screen:

- 1) Type NA
- 2) Length NA feet
- 3) Static water level 30 feet

Pump:

- 1) Make Grundfos
- 2) Model submersible
- 3) Capacity 500 GPM

Motor:

- 1) Make Grundfos
- 2) Model No. submersible
- 3) Horsepower rating NA hp

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

- 1) Type PVC
 - 2) Size 9 inches
 - 3) Length 400 feet
- Comments: none

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Valley w/ corner unit
- 2) Overall length 1330 feet
- 3) Number of towers 7
- 4) End gun Y
- 5) Capacity 500 GPM

Chemigation Equipment:

- 1) Does chemigate N

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y

- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Y

List any extended period of nonuse: none

- 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: from the NW corner of Sec 8 T101N-R60W 945 ft E and 1590 ft S, latitude of 43.56715 and longitude of -98.06203, SW ¼ NW ¼.

2. The works are capable of diverting and conveying to the place of use 1.11 cu. ft. per second of water which is to be used for irrigation use. Water has been put to beneficial use to the maximum extent as follows:

All land is located in Sec 8 T101N-R60W

NW ¼ NW ¼ - 19 ac

NE ¼ NW ¼ - 14 ac

SE ¼ NW ¼ - 27 ac

SW ¼ NW ¼ - 40 ac

NW ¼ SW ¼ - 13 ac

NE ¼ SW ¼ - 7 ac

comprising a total of 120 acres of land and the license should be issued for 1.11 cfs.

3. All structures, wells and lands on map Y

If no, describe: none

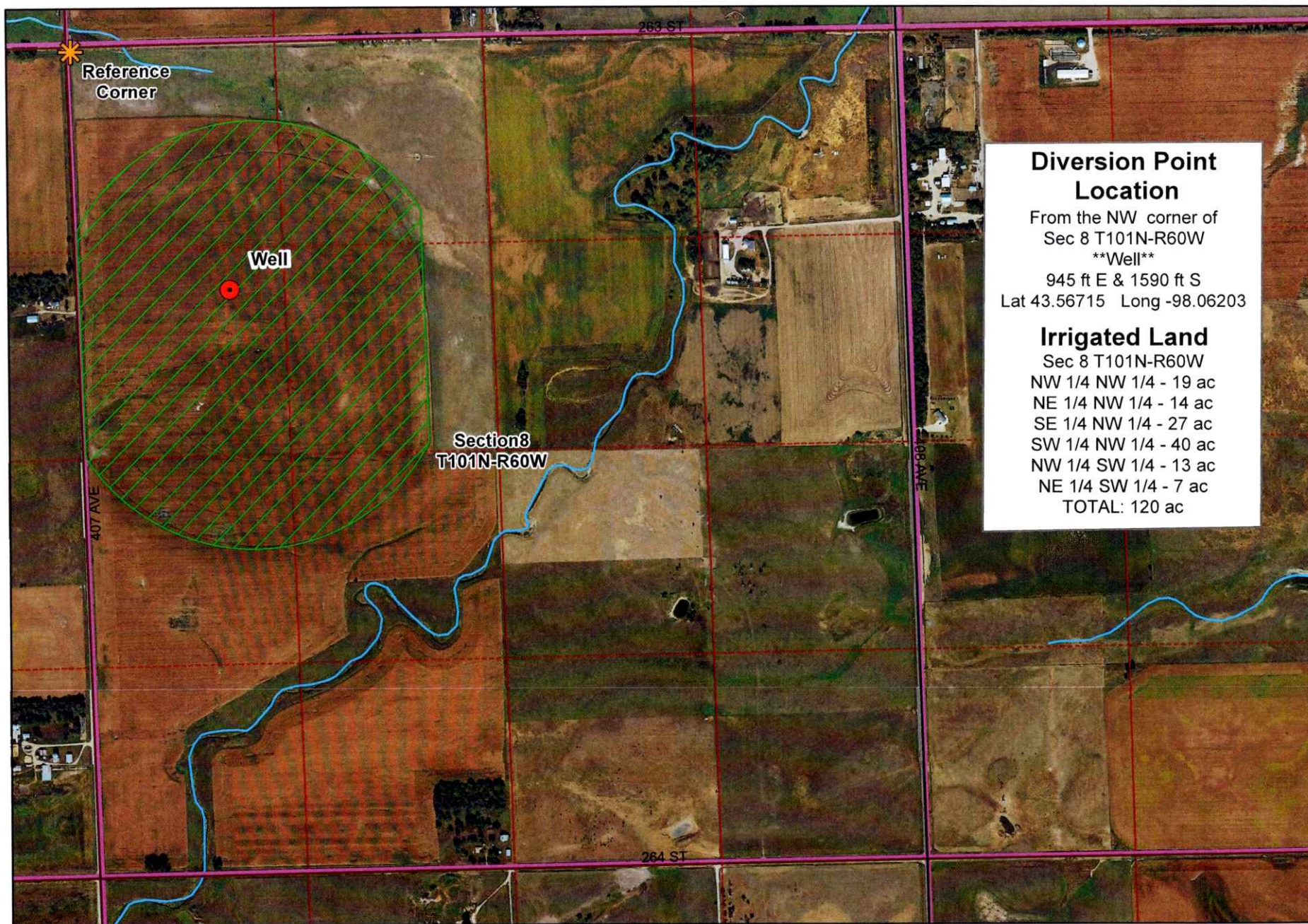
F. Comments or other permit(s) associated with the project:

The permit holder upgraded the center pivot from what was originally authorized by No. 1362-3 to a center pivot with a corner system and switched the pump in the existing well to a submersible pump.



Mark D Rath
Water Right Inspector
DANR, Water Rights Program

Date report completed: 08/27/2024



0.5 0.25 0 0.5 Miles

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

NAME: Lewis Brainbridge COUNTY: DavisonADDRESS: 26355 406th Ave, Ethan SD 57334 DATE: September 11, 2024**GENERAL DESCRIPTION OF AUTHORIZED PROJECT:**

Water Right No. 1362-3 authorizes diversion of 1.11 cfs from one well, completed into that Ethan Aquifer (ET) located in the NW ¼ NW ¼ Section 8, for irrigation of 93 acres located within the NW ¼ Section 8; all in T101N, R60W. Permit No. 8208-3 authorizes the addition 27 irrigated acres to what was already authorized by WR No. 1362-3, with no increase to the diversion rate.

AUTHORITY:

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

Developed water source same as permitted source and no additional water appropriated,

During an inspection for licensing of the irrigation system, the well authorizes under WR No. 1362-3 & WP No. 8208-3 was found to be completed into the Ethan Aquifer, in the SW ¼ NW ¼ Section 8, T101N, R60W, however, no plugging reports or well completion reports were on file, suggesting that the location change might be due to updated GPS equipment. The developed rate of diversion remains 1.11 cfs.

If irrigation, no new land is irrigated,

WR No. 1362-3 & WP No. 8208-3 combined, authorize a total of 124 acres, of which 120 acres were found to be developed upon inspection.

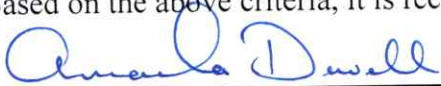
Review of Existing Diversions

The nearest permit/right also authorized for diversion from the ET is approximately 1.5 miles south of the developed well location (1480-3 held by Matt Bainbridge). There are no other permits/rights authorizing appropriation from the Ethan Aquifer for over 5 miles. It was determined that there was reasonable probability any interference due to pumping from the original diversion point location would not adversely or unlawfully impair existing rights. The same would be expected for the new location.

The closest domestic well with similar geology is approximately 2.5 miles to the northwest, located in Section 36, T102N, R61W (well location is plotted in approximate center of section due to absence of quarter-quarters on well completion report). While the well was originally drilled for Cecil Bainbridge in 1977, due to the absence of a more accurate legal description on the well completion report, the current property owner of the well location cannot be determined. The location of the domestic wells in the well completion report database maintained by the Water Rights Program is based on the location listed by the driller on the well completion report.

RECOMMENDED ACTION

Based on the above criteria, it is recommended that the change in diversion point location be approved.



Amanda Dewell, Permitting Administrator
Water Rights Program

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

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



Eric Gronlund, Chief Engineer
Water Rights Program



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

SEP 18 2024

1362-3
8208-3

Lewis Bainbridge
26355 406th Ave
Ethan SD 57334

Dear Mr. Bainbridge:

Enclosed is Water License No. 8208-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

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

NOTE: The applicable portions of Water Right No. 1362-3 have been incorporated into Water Right No. 8208-3

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 8208-3**

(1) Water Right No. 1362-3, held by Lewis Bainbridge, appropriates 1.11 cubic feet of water per second (cfs) from groundwater, one well (Ethan Aquifer), for irrigation of 93 acres. The applicable portions of Water Right No. 1362-3 have been incorporated into this license.

Lewis Bainbridge, 26355 406th Ave, Ethan SD 57334, made Application No. 8208-3, March 11, 2016, for a water permit to add an additional 27 acres for irrigation, to what is already authorized under Water Right No. 1362-3, with no increase to the diversion rate. Permit No. 8208-3, with a priority date of March 11, 2016, was approved May 31, 2016, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before May 31, 2021, and for the application to beneficial use of water on or before May 31, 2025.

An investigation conducted for licensing purposes found the diversion point developed outside of the permitted area. Pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14.01, the Chief Engineer made a finding that the change in the diversion point location did not increase the potential for adverse effects to existing diversions.

(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 1.11 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 945 ft E & 1,590 ft S of the NW corner Section 8, T101N, R60W (SW $\frac{1}{4}$ NW $\frac{1}{4}$)
(Latitude 43.56715 & Longitude -98.06203)

(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: April 1 – November 1.

(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 8, T101N, R60W			
NE $\frac{1}{4}$ NW $\frac{1}{4}$	19 acres	NE $\frac{1}{4}$ SW $\frac{1}{4}$	7 acres
NW $\frac{1}{4}$ NW $\frac{1}{4}$	14 acres	NW $\frac{1}{4}$ SW $\frac{1}{4}$	13 acres
SW $\frac{1}{4}$ NW $\frac{1}{4}$	40 acres		
SE $\frac{1}{4}$ NW $\frac{1}{4}$	27 acres	TOTAL:	120 acres

(5) Pursuant to South Dakota Water Law 46-5-30.1 Lewis Bainbridge, the holder and/or owner of Water Right No. 8208-3 is issued a license to appropriate water, the right to use 1.11 cubic feet of water per second from groundwater, one well (Ethan Aquifer), with priority dates of February 14, 1967 (93 acres & 1.11 cfs) and March 11, 2016 (27 acres), 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. 8208-3 and subject to the following qualifications:

continued

QUALIFICATIONS

1. The well approved under Permit Nos. 1362-3 & 8208-3 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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

Eric Gronlund

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

SEP 18 2024

date

