

WATER PERMIT NO. 7893-3

Name of Applicant: Wayne and Trina Knutson

Address: 30373 452nd Ave, Volin SD 57072 Phone: 605 661-7456

Amount of Water Claimed: 0.07 cfs Total Acres: 2 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation County: Yankton

Type of Waste Disposal System:

Location: 2 miles north of Volin

PRIORITY Date Received: 9-3-13 Application/License Fee: \$ 300

Corrected Application Received: Period of Annual Use: March 1 – Nov 30

Remarks: watering lawn and landscape

Diversion Point: NE 1/4 SE 1/4 Sec 1-T94N-R54W

Land to be Irrigated: E 1/2 SE 1/4 Sec 1-T94N-R54W

			1		

Depth of Well: 172 feet

Well Driller: Thein Well Company

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 9-3-13

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

FORM 2: Application for irrigation in South Dakota

(type or print)

Mail to:
PMB 2020
DENR - Water Rights
523 E Capitol Ave
Pierre, SD 57501-3182
ph. (605) 773-3352

No. 7893-3 (office use only)
Hydrologic Unit 10170102
Basin Vermillion River
Newspaper Press & Dakotan 319 Walnut
Yankton 57028-605-665-7811

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SEP 03 2013
WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

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

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

1. Name to Appear on Irrigation Permit Wayne and Trina Knutson
(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent _____
(name and complete address if different than above name)

Mailing Address 30373 452nd Ave Volin SD 57072
(Address) (City) (State) (Zip Code)

Home Phone 605-267-2796 Cell 605-661-7856 Email Knutson@iw.net

2. Amount of water claimed 0.07*CFS or 30**GPM ***AF Total Acreage 2
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply ground water

4. Location of point of diversion NE 1/4 of SE 1/4 Sect. 1 Range 54W
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)
township 94N County Yankton

5. County or counties where water will be used: Yankton

6. Annual period during which water is to be used march 1 thru NOV 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
<u>E 1/2 of SE 1/4 sec 1 R54T94</u>	<u>2</u>		

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

lawn / landscape of home site

I, Trina Knutson, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

**SOUTH DAKOTA
WATER PERMIT NO. 7893-3**

Date of first receipt of application September 3, 2013.

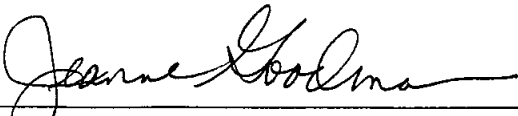
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7893-3 to Wayne and Trina Knutson, 30373 452nd Ave, Volin SD 57072 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 7893-3 appropriates 0.07 cubic feet of water per second (cfs) from one well to be completed into the Niobrara Aquifer (172 feet deep) located in the NE 1/4 SE 1/4 Section 1 for irrigation of 2 acres located in the E 1/2 SE 1/4 Section 1; all in T94N-R54W.
2. The amount of the appropriation may not exceed 3 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: March 1 – November 30.
3. The date from which applicant may claim right is September 3, 2013.
4. The date of approval of Permit No. 7893-3 is November 4, 2013.
5. One-fifth of the construction is to be completed on or before May 4, 2016.
6. All construction is to be completed on or before November 4, 2018.
7. Water is to be put to beneficial use on or before November 4, 2022.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7893-3 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. 7893-3 authorizes a maximum diversion rate of 0.07 cfs for the irrigation of 2 acres with an annual volume not to exceed 3 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, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

NOV 21 2013

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 1 Have test holes been drilled ☐ Yes ☐ No Drilled by Thein Well Company
(if yes, please provide copies of logs)b) If existing wells, how many Provide copy of log(s), if available. Drilled by ~~the~~c) Well Depth 172 ft Depth to Top of Water Bearing Material 135 ft Depth to Water from Surface 109 ft

d) Distance to nearest existing domestic well:

On applicant's property On property owned by others

2. Wastewater Disposal System Information

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

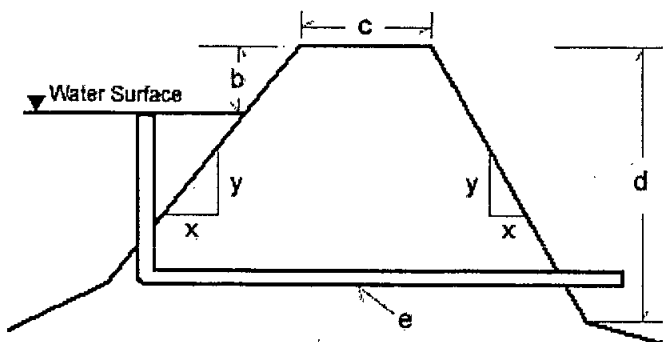
4. Water Storage Dams

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 Feetj) Drainage Area Above Dam Acres



United States Department of Agriculture
Farm Service Agency

February 11, 2011

PLSS: 1_94_54
Farm: 5587

Yankton County, SD
1:10,323



Wetland Determination Identifiers

- Restricted Use
- △ Limited Restrictions
- Exempt from Conservation Compliance Provisions

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SEP 03 2013

**WATER RIGHTS
PROGRAM**

Common Land Units

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area.
Refer to your original dermination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.

2010 Ortho-Photography - Not to Scale

2013

8-22-13
Yankton Co. FSA
Vicki Swensen, PT

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 9/3, 20 13

RECEIVED OF Wayne Knutson 30373 452nd Ave Volin SD 57072

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

Fee for Application for Permit No. <u>7893-3</u> to Appropriate Water, to construct and to put water to beneficial use	100	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>7893-3</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	300 00

No. **06421**

By *James Hardman*
Chief Engineer

Water Rights Program - File Documentation

NAME: Trina Knutson

ADDRESS: 30373 452nd Ave, Volin SD 57072

DATE: 9-3-13 **COUNTY:** Yankton **TELEPHONE:** 605 661-7456

RE: Pending application

COMMENTS:

Trina Knutson agreed with changing the legal description of the well location to the NE 1/4 SE 1/4 Section 1-T94N-R54W as identified on the map.

Ms. Knutson stated the area to be irrigated is around the home site which is about 100 yards south of the well location. Since this location appears to be approximately on the quarter-quarter line, she concurred the location of the 2 acres to be irrigated should be identified as being located in the E 1/2 SE 1/4 Section 1-T94N-R54W.



Karen Schlaak
Water Rights Program

No. 7893-3

Water Rights Program - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: Water Permit Application No. 7893-3, Knutson

ADDRESS: COUNTY: Yankton County

DATE: November 12, 2013 TELEPHONE:

RE: Condition No. 3 to water right permit

In reviewing the draft water permit for issuance, I noticed that condition No. 3 errantly stated 0.02 cfs instead of 0.07 cfs. This was not part of the public notice and is not a substantive change that would require reissuance of the recommendation. The staff report and public notice both stated the diversion rate to be 0.07 cfs. Therefore, I recommend administratively changing condition No. 3 to be for a maximum diversion rate of 0.07 cfs.

NAME: *Eric Knutson*



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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PIERRE, SOUTH DAKOTA 57501-3182

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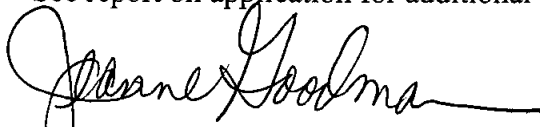
**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7893-3, Wayne and Trina Knutson**

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. 7893-3, Wayne and Trina Knutson, 30373 452nd Avenue, Volin SD 57072.

The Chief Engineer is recommending APPROVAL of Application No. 7893-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7893-3 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. 7893-3 authorizes a maximum diversion rate of 0.02 cfs for the irrigation of 2 acres with an annual volume not to exceed 3 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
October 16, 2013

REPORT TO THE CHIEF ENGINEER

WATER PERMIT APPLICATION NO. 7893-3

Wayne and Trisha Knutson

September 23, 2013

Water Permit Application No. 7893-3 proposes to divert groundwater at a maximum diversion rate of 0.07 cubic feet of water per second (cfs) from one well to be completed into the Niobrara aquifer. The well is expected to be approximately 172 feet deep, located in the NE¼ SE¼ of Section 1, T94N-R54W, in Yankton County. Water will be used to irrigate 2 acres located in the E½ SE¼ of Section 1, T94N-R54W. The application proposes a diversion rate in excess of the statutory limit.

AQUIFER: Niobrara (NBRR)

HYDROGEOLOGY:

The Niobrara aquifer is a bedrock aquifer composed of fractured, calcareous marl, interbedded with calcareous claystone, and is referred to as “chalkrock” (Bugliosi, 1986). The Niobrara formation is discontinuous throughout the state; the proposed well site is located on a portion of the formation that underlies approximately 337,000 acres in Turner, Hutchinson, Yankton, and Clay Counties (Tomhave and Shulz, 2004). Applying the ratio of aquifer area to water in storage in Turner and Hutchinson Counties, this portion of the aquifer is estimated to contain 5,655,000 acre-feet (ac-ft) of water in storage (Lindgren and Hansen, 1990).

In the area of the proposed well site, the Niobrara formation is the uppermost bedrock formation, overlain by till and underlain by shale. The top of the Niobrara formation at this location is expected to occur approximately 100 feet below ground surface (Tomhave and Shulz, 2004). The thickness of the formation is highly variable, but can be estimated to be approximately 80 feet thick at this location. Groundwater in the aquifer flows from north to south in northeastern Yankton County. The aquifer is expected to be under artesian conditions in the area of the proposed well site. A few miles south of the proposed well site the Niobrara aquifer abuts and flows into the Lower James Missouri aquifer (Bugliosi, 1986).

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 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. This report will address the availability of unappropriated water and existing rights from the aquifer that are pertinent to this application.

WATER AVAILABILITY:

The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires “No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable 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 public water system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Here, a public water system is not involved. Therefore, withdrawal/recharge issue must be considered.

Hydrologic Budget:

Recharge to this portion of the Niobrara aquifer occurs through direct infiltration of precipitation at outcrop areas, fractures in the Sioux Quartzite, leakage from till, and some discharge from the overlying Lower James Missouri aquifer. Discharge from this portion of the Niobrara aquifer occurs through outflow to overlying and underlying aquifers, including the Lower James Missouri, Upper Vermillion Missouri, and Codell aquifers, outflow to Wolf Creek, outflow to the Lower James Missouri aquifer, and well withdrawals (Lindgren and Hansen, 1990; Buligosi, 1986).

While there are numerous domestic wells on file, many are no longer used as primary sources since rural water systems have been introduced in the area. Considering this, and the relatively small withdrawal, the annual quantity of water withdrawn due to domestic wells is not significant to the hydrologic budget of the Niobrara aquifer (Water Rights, 2013c).

Currently there are 73 water rights/permits appropriating water from the Niobrara aquifer in South Dakota, with 23 of these located in the same continuous portion of the formation (Water Rights, 2013b). Assuming that non-irrigation water rights/permits will pump at the maximum permitted diversion rate 60 percent of the time and irrigation water rights/permits will apply one foot of water per acre annually, annual withdrawal from this portion of the Niobrara aquifer is estimated to be 4,650 acre feet per year (ac-ft/yr).

Like many bedrock aquifers, there is currently no estimation of recharge to the Niobrara aquifer. To balance the hydrologic budget of the aquifer, recharge must equal withdrawal. Applying the estimated area and annual withdrawal, annual recharge must be at least 0.16 inches per year (in/yr). For perspective, the suggested recharge rate to confined glacial aquifers ranges from 0.15 to 0.60 in/yr. And so, assuming that the Niobrara aquifer could produce at least this amount of recharge is not preposterous. Also for perspective, the estimated annual withdrawal accounts for 0.08 percent of the estimated volume of water in storage in this portion of the aquifer, demonstrating that the Niobrara aquifer is a tremendous resource that is relatively undeveloped.

To support these points, Hedges and others (1985) state that:

“The Niobrara Formation, Niobrara Sandstone, Inyan Kara Group, and Madison Group have such high storage and low use that it is unlikely that use is approaching or exceeding recharge. Furthermore, there is no evidence of significant head loss in any of these aquifers over the years that would suggest that use is exceeding recharge.”

Therefore, unappropriated water is available from the Niobrara aquifer for the proposed appropriation of 0.07 cfs or 30 gallons per minute (gpm).

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... to determine that the

quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge of the aquifer.”

The Water Rights Program monitors 55 observation wells completed into the Niobrara aquifer (Water Rights, 2013a). The nearest observation well, YA-80GA, is located approximately three miles west of the proposed well site. The hydrograph of this observation well is shown in Figure 1.

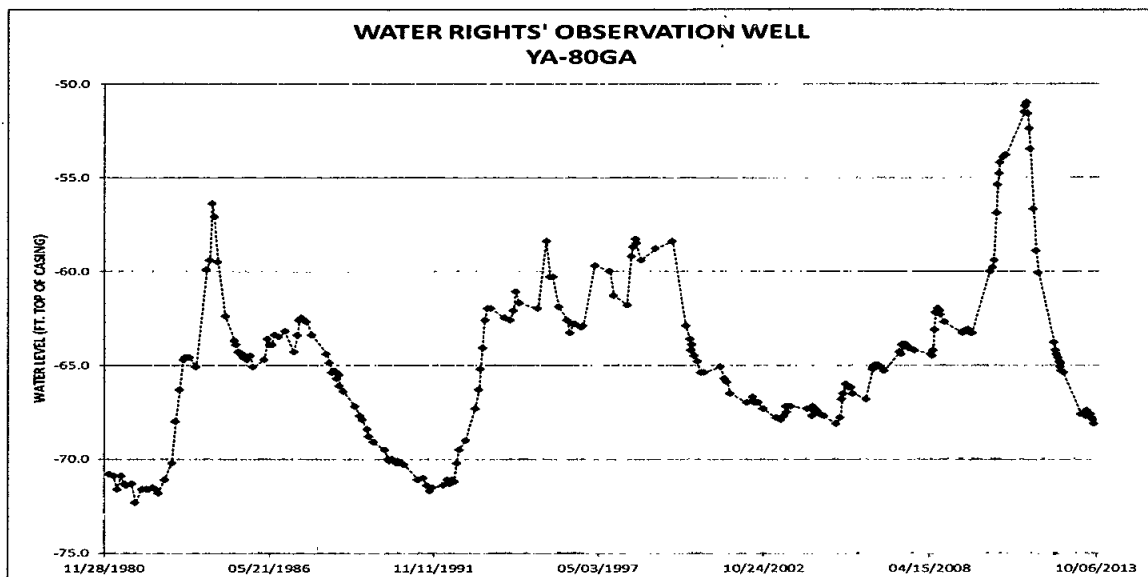


Figure 1: Hydrograph for observation well YA-80GA (Water Rights, 2013a)

The observation well data documents cyclic conditions of water levels, recharging during wet years and declining during dry years. Temporal well withdrawal of the aquifer is masked by climatic conditions, indicating that recharge to and natural discharge from the aquifer greatly exceeds well withdrawal. Therefore, this hydrograph indicates that in general unappropriated water is available from the Niobrara aquifer to support the proposed appropriation.

EXISTING WATER RIGHTS:

The Niobrara aquifer is under artesian conditions at the proposed well site. Therefore, some drawdown due to pumping is expected. However, precise drawdown cannot be quantified without aquifer testing. This is especially the case with the Niobrara aquifer due to the site specific and unpredictable characteristics. 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. Depending on the characteristics of the Niobrara aquifer at the proposed well site, some existing well owners may need to lower their pumps to accommodate possible reduction of head pressure.

Considering that there are no wells on file completed into the Niobrara aquifer within three miles of the proposed well site and the relatively small diversion rate, interference is not expected (Water Rights, 2013b; Water Rights, 2013c).

SDCL 46-5-6

Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of one cubic foot of water per second for every seventy acres, or "the equivalent thereof." The statute provides that the Water Management Board may allow a greater diversion if the method of irrigation so requires.

This water permit application proposes to divert at a rate of 0.07 cfs per 2 acres, equating to 2.45 cfs per 70 acres. The application indicates that the proposed use is irrigation of home landscaping and lawn.

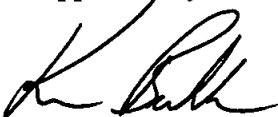
CONCLUSIONS:

1. This application proposes to divert groundwater at a maximum rate of 0.07 cfs from one well to be completed into the Niobrara aquifer for domestic irrigation use.
2. Unappropriated water is available from the Niobrara aquifer to supply the proposed appropriation.
3. The proposed well will not adversely or unlawfully impair existing nearby wells completed into the Niobrara aquifer.
4. This application has requested an additional diversion rate in excess of one cfs per 70 acres.



Joseph R Stonesifer
SD DENR-Water Rights Program

Approved by



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Bugliosi, E.F. 1986. Water Resources of Yankton County, South Dakota. Water Resources Investigations Report 84-4241. 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, Final Report. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Tomhave, D.W. and Shulz, L.D. 2004. Geologic Map Showing Configuration of the Bedrock Surface in South Dakota East of the Missouri River. SD DENR-Geological Survey, Vermillion, South Dakota.
- Water Rights. 2013a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2013b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2013c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

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NOV - 1 2013

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

Wayne and Trina Knutson
30373 452nd Ave.
Volin, SD 57072

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

KELLY HERTZ BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT HE IS THE MANAGING EDITOR OF, YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID
COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
Notice of Application No. 7893-3

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 25th DAY OF October 2013
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$26.15 ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS
BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF
HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 10/25/2013

FILED ON: 10/25/2013

SUBSCRIBED AND SWORN TO BEFORE ME THIS 25th DAY OF October

NOTARY PUBLIC, SOUTH DAKOTA

MY COMMISSION EXPIRES

8/19/2015

10+25
NOTICE OF APPLICATION
NO. 7893-3 to Appropriate Water

Notice is given that Wayne and Trina Knutson, 30373 452nd Ave, Volin SD 57072 has filed an application for a water permit to appropriate 0.07 cubic feet of water per second from one well to be completed into the Niobrara Aquifer (172 feet deep) located in the NE 1/4 SE 1/4 Section 1 for irrigation of 2 acres located in the E 1/2 SE 1/4 Section 1; all in T94N-R54W. The applicant is requesting a diversion rate greater than the statutory limit.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7893-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 4, 2013.

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

Published once at the total approximate cost of \$26.15.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

October 17, 2013

Press & Dakotan
319 Walnut
Yankton SD 57078

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7893-3 to Appropriate Water. Please publish the notice once on October 24, 2013. 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 Wayne and Trina Knutson, 30373 452nd Ave, Volin SD 57072 (Ph # 605-267-2796).

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**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

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

October 17, 2013

Wayne and Trina Knutson
30373 452nd Ave
Volin SD 57072

Dear Sir:

Water Permit Application No. 7893-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Press & Dakotan printed at Yankton SD (Ph # 605-665-7811). You will need to contact the newspaper(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 October 24, 2013. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7893-3 to Appropriate Water

Notice is given that Wayne and Trina Knutson, 30373 452nd Ave, Volin SD 57072 has filed an application for a water permit to appropriate 0.07 cubic feet of water per second from one well to be completed into the Niobrara Aquifer (172 feet deep) located in the NE 1/4 SE 1/4 Section 1 for irrigation of 2 acres located in the E 1/2 SE 1/4 Section 1; all in T94N-R54W. The applicant is requesting a diversion rate greater than the statutory limit.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7893-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 4, 2013.

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

Published once at the total approximate cost of _____.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

NOV 21 2013

Wayne & Trina Knutson
30373 452nd Ave
Volin SD 57072

Dear Sir:

Enclosed is Water Permit No. 7893-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures

RECEIVED

NOV 27 2013

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 11-25-13TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181FROM: Wayne & Trina Knutson
(name)
30373 452 Ave
(address)
Volin, S.D. 57072 605-267-2796
(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.

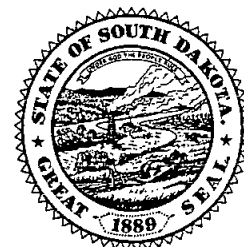
Water Permit No. 7893-3 states that the water use system is to be constructed by
11-4-2018, and water is to be put to beneficial use by 11-4-2022
(date) (date)

The water use system was completed on 11-21-2013
(date)

Applying the water to beneficial use was completed on 11-21-2013
(date)

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

Trina Knutson
(signature)



SOUTH DAKOTA WATER WELL COMPLETION REPORT

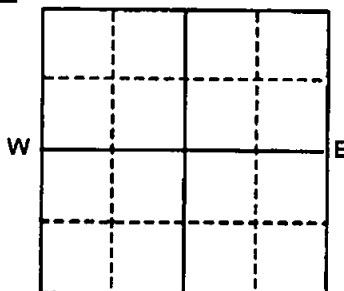
11-02

Location NE ¼ SE ¼ Sec 1 Twp 94N Rg 54W

Well Owner: Wayne & Trina Knutson

County Yankton

North

Please mark well
location with an "X"

Business Name:

Address: 30373 452nd Ave

City, State, Zip: Volin SD 57072

Well Completion Date

August 28, 2013

K 1 Mile K

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
> 50.0 ft. from septic (Identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	5.00 IN	0.0 FT	132.0 FT	7.88 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite	11	Lb/gal	0.0 Ft	130.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
tremie piped

SCREEN:

☒ Perforated pipe ☐ Manufactured
Diameter 5.00 Inches Length 40.0 Feet

Material PVC

Slot Size .013 Set From 123.0 Feet to 172.0 Feet
132.0

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? Chlorinated☐ No, Why Not?Lab to which water
quality sample sent for analysis
owner to obtain

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top soil	0	3
Yellow clay	3	22
Tan clay	22	63
Blue clay	63	134
Fine sand & blue shale layers	134	170
Blue shale	170	176

STATIC WATER LEVEL 109.0 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

121.0 Ft. After 2.0 Hrs. pumped 30.0 GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

GPS: N 42 59.204

W 97 9.698

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NOV - 7 2013

WATER RIGHTS
PROGRAMThis well was drilled under license # 475 and this
report is true and accurate.

Drilling firm: Thein Well Co. Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: 9-20-13

11-13-13

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7893-3

I have this day, October 27, 2016, made a thorough examination of the water use system constructed by Wayne and Trina Knutson, 30373 452nd Ave, Volin SD 57072 of Permit No. 7893-3, bearing the priority of September 3, 2013 authorizing the diversion of 0.07 cu. ft. per second of the waters of Niobrara Aquifer for lawn irrigation and commercial feedlot purposes, in Yankton County.

Inspection contact & relationship to permit holder, if applicable: **Wayne & Trina Knutson, permit holder**

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Thein Well Co. Inc.
- 2) No. of Wells 1
- 3) Depth(s) 172 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 5 inches
- 2) Length 132 feet
- 3) Type PVC

Screen:

- 1) Type PVC Perforated
- 2) Length 40 feet
- 3) Static water level 109 feet

Pump:

- 1) Make Berkley Submersible
- 2) Model L30P4HMGS-03
- 3) Capacity 30 GPM

Motor:

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

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

- 1) Type Polyplastic
- 2) Size 1 inches

Comments: Cattle Feedlot Water Supply is an existing installation.

C. Works used to apply water to beneficial use:

Lawn Sprinkler System & Cattle Feedlot Water Supply:

- 1) Make Rainbird Underground Lawn Sprinkler System
- 2) Capacity 30 GPM

Comments: Well supplies water to the cattle feedlot waterer only in the winter months.

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, began irrigating in 2015.

List any extended period of nonuse: None.

- 3) Exceptions to compliance are: Diversion rate exceeds statutory limit.

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: West 260', North 1730' from SE Corner of Sec 1-T94N-R54W; Lat 42.98677/Long -97.16165; NE ¼ SE ¼ Sec 1-T94N-R54W.
2. The works are capable of diverting and conveying to the place of use 0.07 cfs or 30 gpm of water which is to be used for lawn irrigation and cattle feedlot water supply. Water has been put to beneficial use to the maximum extent as follows:

All land is located in Sec 1-T94N-R54W.
NE ¼ SE ¼ - 1.2 ac

comprising a total of 1.2 acres of land and the license should be issued for 0.07 cfs or 30 gpm.

3. All structures, wells and lands on map Yes

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

Water Permit 7893-3 also provides water to an existing cattle feedlot in the winter months only.

Harold Holoch

Harold Holoch, PE
Staff Engineer
DENR, Water Rights Program

Date report completed: **January 13, 2017**

Water Rights Division - DENR

File Documentation

Name of Person: Wayne and Trina Knutson File No. 7893-3
Address: 30373 452nd Ave, Volin SD 57072 County: Yankton
Date: January 17, 2017 Telephone:
RE:

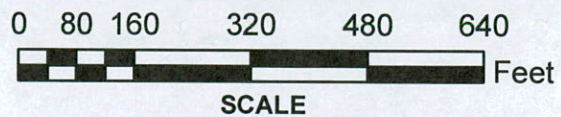
Comments:

Water from the well is also used for watering cattle in the cattle yard at the house. The well and pump capacity is 30 gpm. The water is used to water cattle only during the winter months, 90 days. The statutory "domestic use" definition states no more than an average daily use of 18 gpm. 30 gpm over 90 days results in an average use of 7.4 gpm per day over a year. I believe this use meets the definition of domestic use.



Lynn Beck
Natural Resources Engineer

7893-3



Harold Holoch
Harold Holoch, PE
Staff Engineer
January 13, 2017



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

OCT 12 2017

7893-3

Wayne and Trina Knutson
30373 452nd Ave
Volin SD 57072

Dear Mr. & Mrs. Knutson:

Enclosed is Water License No. 7893-3. 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.

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

Sincerely,

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

enclosures

STATE OF SOUTH DAKOTA
WATER LICENSE NO. 7893-3

(1) Wayne & Trina Knutson, 30373 452nd Ave, Volin SD 57072 made Application No. 7893-3, September 3, 2013 for a water permit to divert 0.07 cubic feet of water per second (30 gpm) from ground water, one well (Niobrara Aquifer), Yankton County, South Dakota for irrigation purposes. Permit No. 7893-3, with a priority date of September 3, 2013 was approved November 4, 2013 and issued to the applicants for diversion of water with construction of the described water supply system to be completed on or before November 4, 2018 and for the application to beneficial use of said water on or before November 4, 2022.

The Permit holders submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" on November 27, 2013. The "*Notice*" stated the water use system was completed and the water placed to beneficial use on November 21, 2013.

(2) It is certified that the permit holders have 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 0.07 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 260 feet west and 1,730 feet north of the SE Corner of Section 1, T94N, R54W (NE ¼ SE ¼)
Latitude 42.98677, Longitude -97.16165;

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

Section 1, T94N, R54W NE ¼ SE ¼ 1.2 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Wayne & Trina Knutson, 30373 452nd Ave, Volin SD 57072 the holders and/or owners of Water Right No. 7893-3 are issued a license to appropriate water, the right to use 0.07 cubic feet of water per second (30 gpm) from ground water, one well (Niobrara Aquifer) with a priority date of September 3, 2013 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. 7893-3 and subject to the following qualifications:

- The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The well authorized by Permit No. 7893-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28. ***The well was drilled in August, 2013 by Thein Well Company Inc. A copy of the well completion report is on file with the Water Rights Program.***

continued

- 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. 7893-3 authorizes a maximum diversion rate of 0.07 cfs for irrigation of **1.2 acres** with an annual volume not to exceed 3 acre feet of water per acre per year. *Original water permit specified 2 acres. License issued for the developed acreage of 1.2 acres.*
- This Permit is approved subject to the irrigation water use questionnaire being submitted each year.



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

OCT 12 2017

date

