

WATER PERMIT NO. 7340-3

Name of Applicant: Heine Farms

Address: PO Box 477, Yankton SD 57078

Phone: 605 664-3395

Amount of Water Claimed: 2.78 cfs

Total Acres: 230

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation

County: Yankton

Type of Waste Disposal System:

Location: 5 east of Yankton

PRIORITY

Date Received: ³~~2~~-27-11

Application/License Fee: \$ 1350

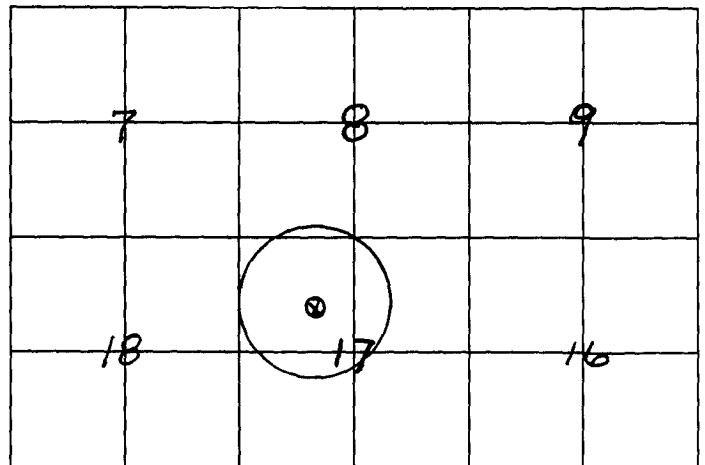
Corrected Application Received: 3-28-012

Period of Annual Use: May 1 – September 30

Remarks:

Diversion Point: SE ¼ NW ¼ Sec 17-T93N-R54W

Land to be Irrigated: NW ¼, N ½ SW ¼, NW ¼
SE ¼, W ½ NE ¼ Sec 17 and S ½ SW ¼ Sec 8; all
in T93N-R54W



Depth of Well: 100 feet deep

Well Driller: Grosch Irrigation

Remarks:

Type of Map: aerial

Prepared by: Eric Gronlund

Reviewed and the Number Assigned on: 3-28-12

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

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

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>1340-3</u> (office use only) Hydrologic Unit <u>10170101</u> Basin <u>Missouri River</u> Newspaper <u>Daily Press & Dakotan</u> <u>319 Walnut</u> <u>605-665-7811</u> <u>Yankton</u> <u>57078</u>
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RECEIVED
JUN 27 2011
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.) _____

- Name of Applicant HEINE FARMS Phone 605-664-3395
(check one) ☐ Owner ☐ Tenant/lessee
Mailing Address PO BOX 477 YANKTON State SD 57078
(Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 278*CFS or 1250 **GPM ***AF Total Acreage 230
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply GROUND
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) 1 Well in
SE 1/4, NW 1/4 Sec. 17, Twp. 93- 54 320 acres
County YANKTON
- County or counties where water will be used YANKTON
- Annual period during which water is to be used May 1 thru September 30
- List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.
(Attach sheet if more space is needed)

Land Description	Acres	Land Description	Acres
<u>see attached sheet</u>	<u>230</u>		
<u>and map prepared</u>			
<u>by Eric Ironlund</u>			

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

Well for Pivot Irrigation

STATE OF SOUTH DAKOTA)

County of YANKTON)

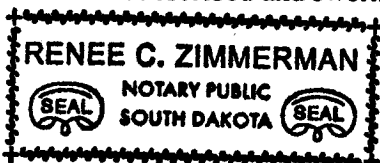
SS

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

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

Applicant's signature Ron Heine

Subscribed and sworn to before me this 24 day of June 20 11



Renee C. Zimmerman
Notary Public signature

My COMMISSION EXPIRES: October 19, 2011

**SOUTH DAKOTA
WATER PERMIT NO. 7340-3**

Date of first receipt of application June 27, 2011.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7340-3 to Heine Farms, PO Box 477, Yankton SD 57078 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. 7340-3 appropriates 2.78 cubic feet of water per second from one well completed into the Missouri:Elk Point Aquifer (100 feet deep) located in SE ¼ NW ¼ Section 17 for irrigation of 230 acres located in the NW ¼, N ½ SW ¼, NW ¼ SE ¼, W ½ NE ¼ Section 17 and S ½ SW ¼ Section 8; all in T93N-R54W. Water Right No. 4621-3 authorizes irrigation of the same acreage from the Missouri River. Due to flooding in 2011, the river pump site is no longer useable.
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 March 28, 2012.
4. The date of approval of Permit No. 7340-3 is June 11, 2012.
5. One-fifth of the construction is to be completed on or before December 11, 2014.
6. All construction is to be completed on or before June 11, 2017.
7. Water is to be put to beneficial use on or before June 11, 2021.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

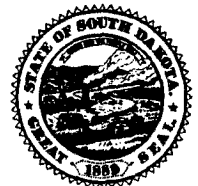
QUALIFICATIONS

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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: Garland Erbele
Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JUL 16 2012
date



RECEIVED
MAR 28 2012
WATER RIGHTS
PROGRAM

Section 17, T93N, R54W

NW 1/4 NW 1/4	31 acres
NE 1/4 NW 1/4	40 acres
SW 1/4 NW 1/4	40 acres
SE 1/4 NW 1/4	35 acres
NW 1/4 SW 1/4	8 acres
NE 1/4 SW 1/4	18 acres
NW 1/4 SE 1/4	5 acres
SW 1/4 NE 1/4	28 acres
NW 1/4 NE 1/4	19 acres

Section 8, T93N, R54W

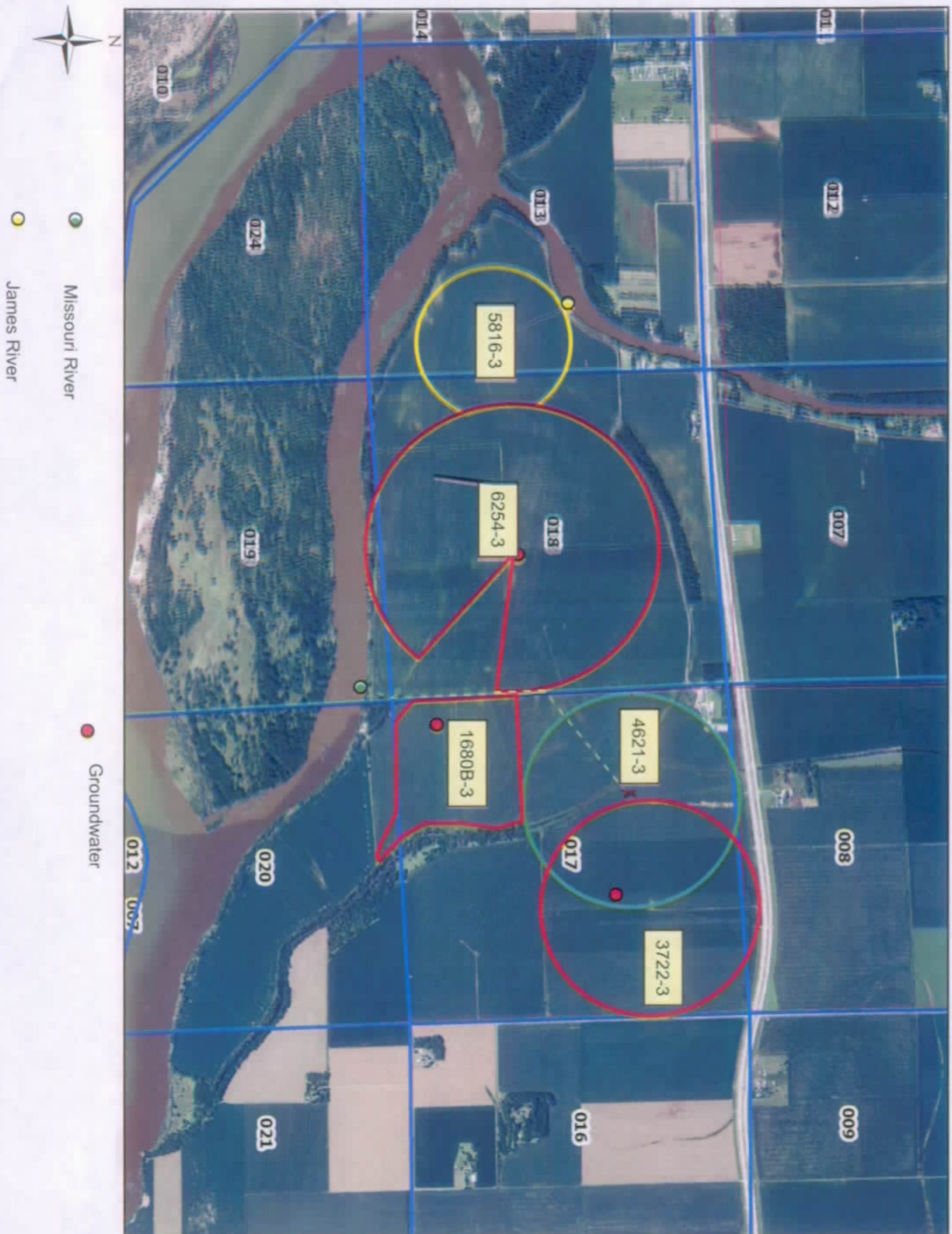
SE 1/4 SW 1/4	5 acres
SW 1/4 SW 1/4	1 acre

Water Right No. 4621-3 authorized irrigation of pivot designated in green from the Missouri River, now to be irrigated from groundwater



Eric Gronlund
Eric Gronlund
Water Rights Program, DENR
based on representation made
by Ron Heine

Heine Farms existing water rights in area

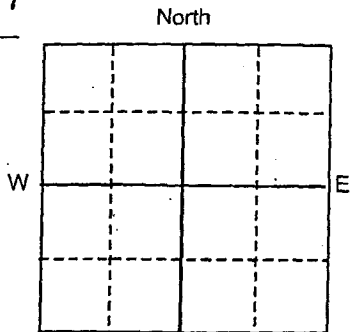


SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SW 1/4 DE 1/4 Sec 17 Twp 93 Rg 54WCounty Yankton

Please mark well location with an "X"



Well Completion Date

6-31-2011

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

Reverse Rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>20</u> LB/FT	<u>16</u> IN	<u>0</u> FT	<u>60</u> FT	<u>28</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Cement</u>	<u>50</u>	<u>15.5</u> Lb/gal	<u>20</u> Ft	<u>0</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure _____

SCREEN:

☒ Perforated pipe ☐ Manufactured
Diameter 16 Inches Length 32 FeetMaterial PVCSlot Size .51 Set From 60 Feet to 92 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? HTH☐ No, Why Not? _____

Lab to which water quality sample sent for analysis _____

Well Owner: _____

Business Name: Heine FarmsAddress: P.O. Box 477City, State, Zip: YANKTON S.D. 57078

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Top Soil - Soft</u>	<u>0</u>	<u>2</u>
<u>Clay - Hard - Black</u>	<u>2</u>	<u>55</u>
<u>Sandy with gravel - Red</u>	<u>55</u>	<u>93</u>
<u>Weathered - Hard - Black</u>	<u>93</u>	<u>100</u>

STATIC WATER LEVEL 12 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

65 Ft. After 3 Hrs. pumped 885 GPM75 Ft. After 3 Hrs. pumped 1100 GPMIf pump installed, pump rate: 900 GPM

REMARKS

RECEIVED

FEB 23 2012

WATER RIGHTS PROGRAM

This well was drilled under license # 189 and this report is true and accurate.Drilling firm: Grasch Irrigation - AlbionSignature of License Representative: 402-395-6437Signature of Well Owner or Equitable Property Holder: 10-14-11

Date: _____

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 3/28, 20 12

RECEIVED OF Heine Farms PO Box 477 Yankton SD 57078

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

Fee for Application for Permit No. <u>7340-3</u> to Appropriate Water, to construct and to put water to beneficial use	1150	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>7340-3</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	1350 00

No. **05392**

By Melvin Erbe
Chief Engineer

July 16, 2012

PAYMENT REQUEST FORM

PAYEE: Ron Heine
PO Box 477
Yankton SD 57078

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

DESCRIPTION OF SERVICE, PRODUCE OR TRANSFER

Refund on 7340-3 (overpayment)

AMOUNT: \$200.00

FUNDING SOURCE:

GENERAL: X

FEDERAL:

COMMENTS:

AUTHORIZATION:

Gail J Anderson 7/16/12

I declare and affirm under the penalties of perjury that this claim is in all things, true and correct. I further agree to comply with the provisions of the Civil Rights Act of 1964 and regulations issued thereunder relating to nondiscrimination in federal assisted programs.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

July 7, 2011

Ron Heine
Heine Farms
PO Box 477
Yankton SD 57078

Dear Ron:

The Water Rights Program received Heine Farms' application to appropriate groundwater for irrigation located east of the James River confluence with the Missouri River in Yankton County. The recently filed application is for irrigation of the SW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Section 17 from a well to be located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 17; all in T93N, R54W.

The acres requested appear to be currently covered for irrigation from wells. I thought during our phone conversation the lands to be applied for were currently being irrigated from the Missouri River. Please find the enclosed map which shows water rights held by Heine Farms in this area. The map is color coded based on water source. Those areas in red are authorized for irrigation from a well. The red dots are the approximate well locations. However, the acres on the application you submitted appear to be authorized by Water Right No. 3722-3 (NE $\frac{1}{4}$) and 1680B-3 (SW $\frac{1}{4}$). A copy of these water rights are enclosed. Also the proposed location of the well as submitted on the application matches closely to the well authorized by Water Right No. 3722-3.

The question is whether the well being applied for is the existing well authorized by Water Right No. 3722-3 or is a new well being drilled. The next question is what water source has the SW $\frac{1}{4}$ and NE $\frac{1}{4}$ Section 17 been being irrigated under. The annual irrigation questionnaires submitted for both these water rights indicate that irrigation has been taking place.

If this is new irrigation from a groundwater source, additional information including the application filing fee needs to be submitted. Necessary information includes:

- Form 2A on proposed well construction must be completed (see attached form)
- Map showing well location and outlining irrigated acres must be submitted. The map must reference a section corner and be signed by a professional engineer, surveyor or government employee who prepares maps as part of their duties (we commonly direct producers to the local FSA or NRCS office).

- Application filing fee for 320 new acres of irrigation from a non-permitted water source is \$1,350.

Please contact me at your convenience if you have questions on what is necessary to complete the application or to inquire regarding what existing water rights are held by Heine Farms in this location.

Sincerely,



Eric Gronlund
Water Rights Program, DENR
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

March 15, 2012

Ron Heine
Heine Farms
PO Box 477
Yankton SD 57078

Dear Mr. Heine:

On June 27, 2011, you submitted *an Application for Permit to Appropriate Water Within the State of South Dakota for Irrigation*. You were notified what additional information was required to complete the application. A copy of that letter and aerial photo map are enclosed. To date, we have not received clarification or the required information.

On February 23, 2012, DENR received a well completion report from Grosch Irrigation for a well they completed June 31, 2011 in Section 19-T93N-R54W (copy enclosed). Am I correct in assuming this is the well you were applying for? The completion report states Section 19 but looking at the map I doubt irrigation is taking place in this wooded area.

Obtaining a water permit that accurately reflects your water use ultimately benefits you by protecting your right to use water.

If you have any questions, please contact me. Our goal is to work with you to get proper permitting in place.

Sincerely,

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

enclosures

Water Rights Program - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: Water Permit Application for Heine Farms

ADDRESS: PO Box 477, Yankton SD COUNTY: Yankton County

DATE: March 23, 2012 TELEPHONE:

RE: Call from Ron Heine

Mr. Heine called in response to the March 15th letter regarding the water permit application filed last July and the recent well completion report filed with the Water Rights Program.

Mr. Heine confirmed that the legal location on the well completion report filed by Grosch irrigation is wrong. The correction legal is the SE ¼ NW 1/4 Section 17, T93N, R54W.

He also confirmed that the center pivot is correctly located in green on the map sent with the letter and that the well is located at the pivot center. The acres to be irrigated from the well are the same as authorized by Water Rights No. 4621-3 which appropriated water from the Missouri River. Due to flooding in early 2011, the river pump site is no longer useable causing Heine Farms to drill well to irrigate these lands.

The application filed on June 27, 2011 stated 320 acres in the SW ¼ and NE ¼ Section 17, T93N, R57W. Mr. Heine stated the pivot location and size are as shown on the map. I questioned whether 320 acres are being irrigated. He said they were. However, Water Right No. 4621-3 authorized 230 acres and using the 2010 FSA aerial map, I determined that 230 acres are encompassed by the center pivot.

Mr. Heine will be sending in the \$1,350 application filing fee.

NAME: Eric Heine

Water Rights Program - File Documentation

NAME: Ron Heine

ADDRESS: Yankton SD

DATE: 3-28-12 **COUNTY:** YA **TELEPHONE:**

RE: Pending application

COMMENTS:

Eric Gronlund called Ron Heine for clarification on the number of acres he was proposing to irrigate. Mr. Heine stated he agreed that the number of acres irrigated by this application would be 230 acres.

Eric told Mr. Heine that after action is taken on the application we would be refunding \$200 of this application license filing fee.

Karen Schlaak

Karen Schlaak
Environmental Scientist



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7340-3, Heine Farms**

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. 7340-3, Heine Farms, c/o Ron Heine, PO Box 477, Yankton SD 57078.

The Chief Engineer is recommending APPROVAL of Application No. 7340-3 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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Garland Erbele, Chief Engineer
May 17, 2012

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 7340-3
HEINE FARMS
APRIL 22, 2012

Water Permit Application No. 7340-3 proposes to appropriate 2.78 cubic feet of water per second from an existing 100 foot deep well that is completed into the Elk Point management unit of the Missouri aquifer. Water from the well is to be used to irrigate 230 acres. The location of the well and the acreage to be irrigated is shown in figure 1. Water Right No. 4621-3 currently authorizes irrigation of the same acreage from the Missouri River. Due to flooding in 2011, the river pump site is no longer useable.



Figure 1. Location of the well site and acres proposed for irrigation by Water Permit Application No. 7340-3

AQUIFER: Elk Point Management Unit of the Missouri aquifer (M:EP)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The Elk Point Management Unit of the Missouri aquifer is an alluvium mantled glacial outwash (i.e. sand and gravel, with lenses of silt and clay) deposited by meltwater as “an extensive mantle suggestive of an outwash plain or apron at the ice margin” (Simpson, 1960). The Missouri: Elk

Point aquifer extends from southeastern Yankton County along the Missouri River through Clay and Union Counties to the extreme southeast corner of the state. The Missouri aquifer underlies 45,000 acres of Yankton County and contains an estimated 675,000 acre-feet of recoverable water in storage in the county (Hedges and others, 1982). Although this aquifer is considered the Missouri: Elk Point aquifer by the DENR-Water Rights Program, it has also been identified as the southern area of the Lower James-Missouri aquifer (Bugliosi, 1986). The transmissivity of the aquifer ranges from 20,700 to 24,700 ft²/d, the specific yield is estimated to be 0.2 and specific capacity of wells generally range from 124 to 173 (gal/min)/ft (Bugliosi, 1986). The aquifer is under unconfined conditions in this area. The aquifer is hydraulically connected to the Missouri River and groundwater levels are maintained by surface water.

The well that this application proposes to use is presumably an existing well. There were two South Dakota Water Well Completion Reports submitted with this application. The reports each identified aquifer material from 55-93 feet below grade and the static water level in each well was 12 feet below grade. The clay layer identified in the logs from 2-55 feet below grade can assumed be a localized clay lens and the aquifer is assumed unconfined in this area. The well completion reports identified the specific capacities for each well of approximately 17 gallons per minute per foot of drawdown and indicated that a pump with the capacity of 900 gallons per minute was installed in each well.

The information provided by the well completion reports is not consistent with this permit application. The completion report for the well this application proposes to use indicates the installed pump is only capable of delivering 900 gallons per minute, not the 1,248 gallons per minute on the application. In addition, based on the specific capacity of the well (≈ 17 (gal/min)/ft, a pump rate of 1,248 gallons per minute would produce around 73 feet of drawdown in the well. With a pumping level 73 feet below the static water level (i.e. 85 feet below grade) and the bottom of the aquifer at 93 feet below grade, there would only be eight feet of aquifer available. The transmissivity calculated from the well's specific capacity is approximately 25,500 gallons per day per foot ("Transmissivity From Specific Capacity"). A saturated thickness of eight feet likely is insufficient to sustain a rate of 1,248 gallons per minute.

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. This report will address water availability and existing rights issues only.

WATER AVAILABILITY:

This application proposes to appropriate 460 acre-feet annually from the Missouri: Elk Point aquifer. Although the actual water use if this application is approved will be less than 460 acre-feet/year. 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 that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source."

Recharge versus Withdrawals:

Recharge:

Recharge to the Elk Point management unit in Yankton County occurs through direct penetration of precipitation, streamflow losses, upward leakage from the Dakota aquifer and subsurface inflow from adjacent areas. The average annual recharge for the Missouri: Elk Point aquifer, based on observation well analysis, is estimated to be 3.8 inches per year (Hedges and others, 1985). This recharge rate equates to 14,250 acre-feet annually to Yankton County. Since there is a hydrologic connection between the Missouri: Elk Point aquifer and the Missouri River, increased ground-water discharge by wells could actually induce additional recharge from the river.

Withdrawals:

The Missouri: Elk Point aquifer is heavily appropriated with 37 Water Permits and 49 Water Rights appropriating water from the aquifer in Yankton County alone. There currently is one application pending from the Missouri: Elk Point aquifer from Yankton County. Non-irrigation appropriations include four commercial use permits/rights, three industrial use rights, two municipal use rights, two suburban housing development rights, and two water rights for fish and wildlife propagation. There are two deferred applications from the Missouri: Elk Point aquifer in Yankton County. Water Permit Application Nos. 5749-3 and 5750-3, Stockmens Livestock Market, Inc., were deferred in 1993 until the wastewater disposal system is approved by the Department of Environment and Natural Resources and a National Point Discharge Elimination System Permit is issued for the facility, if determined to be necessary.

In 2010 there were 66 water rights/permits appropriating a total of 23,674.2 acre-feet annually for irrigation from Yankton County (Water Rights, 2011). The amount of water pumped for irrigation from Yankton County in 2010 was reported to be 613.56 acre-feet (Water Rights, 2011). Water use for irrigation in Yankton County in 2010 was relatively low (2.59% of the total appropriation) due to above normal precipitation. Normal precipitation for Yankton County is 23-25 inches ("South Dakota Precipitation Normals 1971-2000"), while the total precipitation in 2010 was 39.2 inches ("Monthly Coop Weather Data for Yankton 2E (399502) [1931-2011]").

During a "dry year" like 1989 when precipitation at Yankton was only 16.95 inches ("Monthly Coop Weather Data for Yankton 2E (399502) [1931-2011]") irrigation use was considerably higher than the 2010 total. In 1989, there were 29 permits/rights appropriating 12,417.60 ac-ft/yr from the Missouri: Elk Point aquifer and the total amount of water pumped for irrigation from Yankton County was reported to be 4,154.7 acre-feet (33.46% of the total appropriation) (Water Rights, 1990).

Considering the current irrigation appropriation from the Missouri: Elk Point aquifer (23,674.2 acre-feet annually) and applying the 1989 use to appropriation ratio, irrigation withdrawals under current appropriations should be under 8,000 acre-feet annually. The maximum total water use from all appropriative users of the Missouri: Elk Point aquifer from Yankton County is expected to be less than 12,000 acre-feet annually.

Comparison of the estimated average annual recharge to the Missouri: Elk Point aquifer with the expected maximum total withdrawals from the aquifer indicates that there is a reasonable probability that unappropriated water is available for this appropriation.

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 to the aquifer”.

The DENR-Water Rights Program monitors 38 observation wells completed into the M:EP, including seven in Yankton County (Water Rights, 2012a). There are three observation wells located within approximately three miles of the well that this application proposes to use. Hydrographs for the observation wells are shown in figures 2-4.

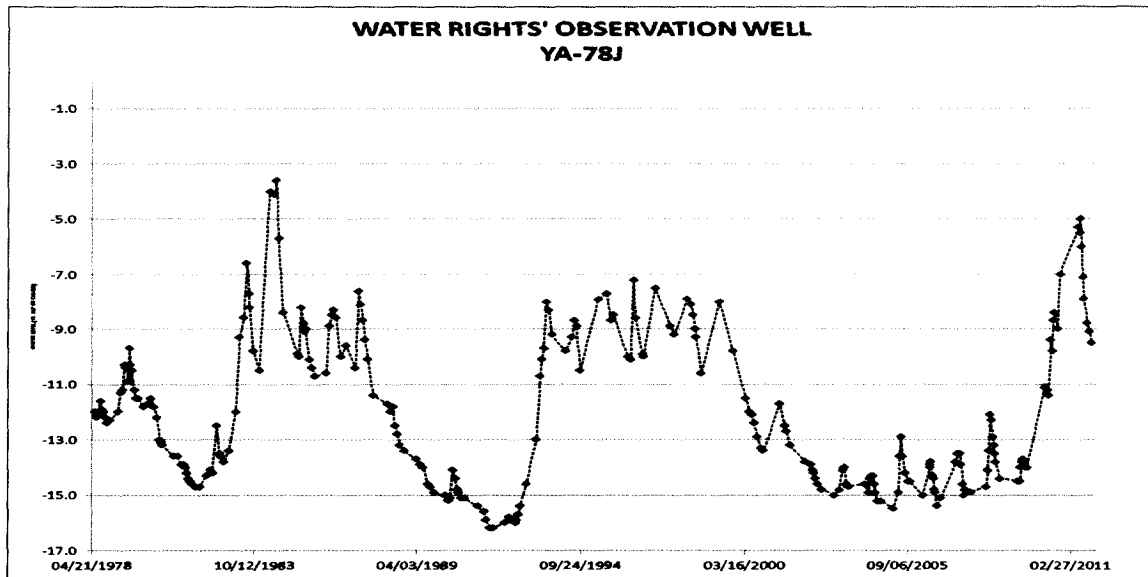


Figure 2. Hydrograph of DENR-Water Rights' Observation Well YA-78J which is located approximately one and one-half miles northeast of the well Application No. 7340-3 proposes to use.

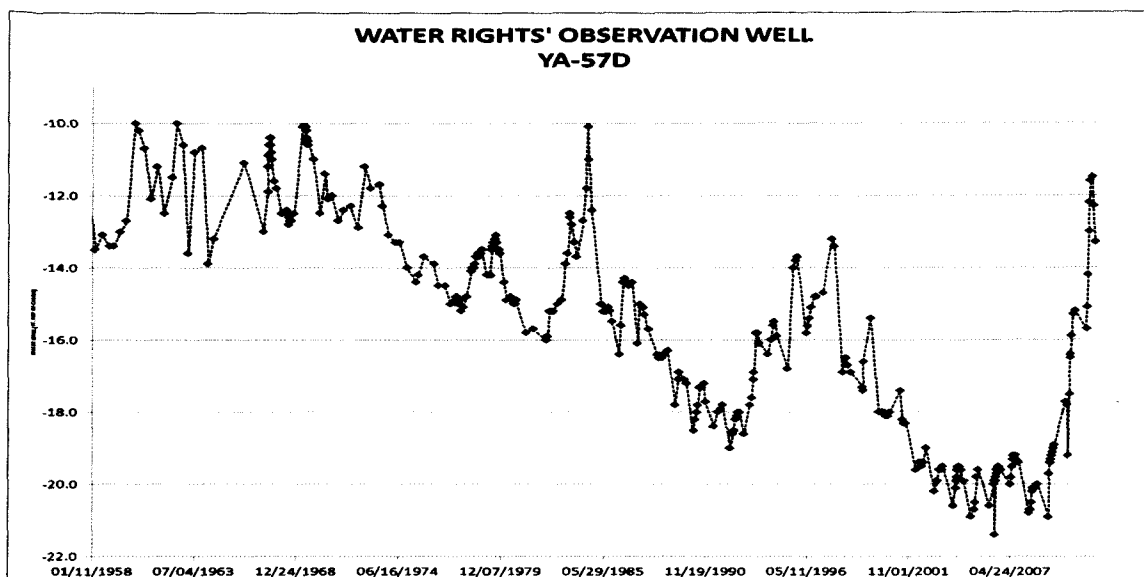


Figure 3. Hydrograph of DENR-Water Rights' Observation Well YA-57D which is located approximately one and three quarter miles northwest of the well Application No. 7340-3 proposes to use.

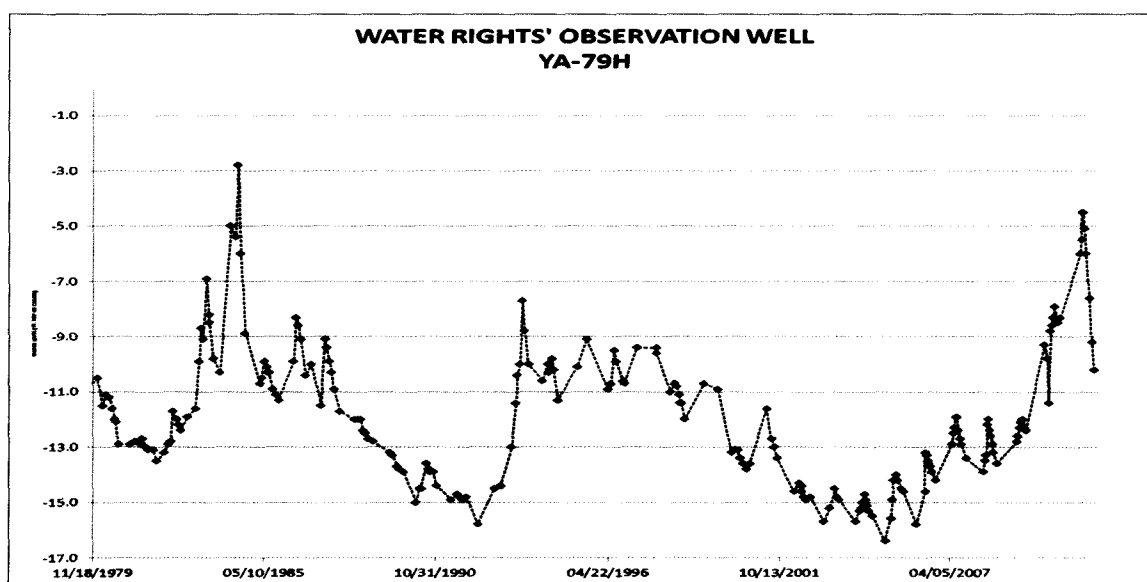


Figure 4. Hydrograph of DENR-Water Rights' Observation Well YA-79H which is located approximately two and three quarter miles north-northwest of the well Application No. 7340-3 proposes to use.

A general downward trend of the water table of the Elk Point Management Unit of the Missouri aquifer is apparent upon examination of the data for Observation Well YA-57D with a linear trend line inserted into the hydrograph (see figure 5).

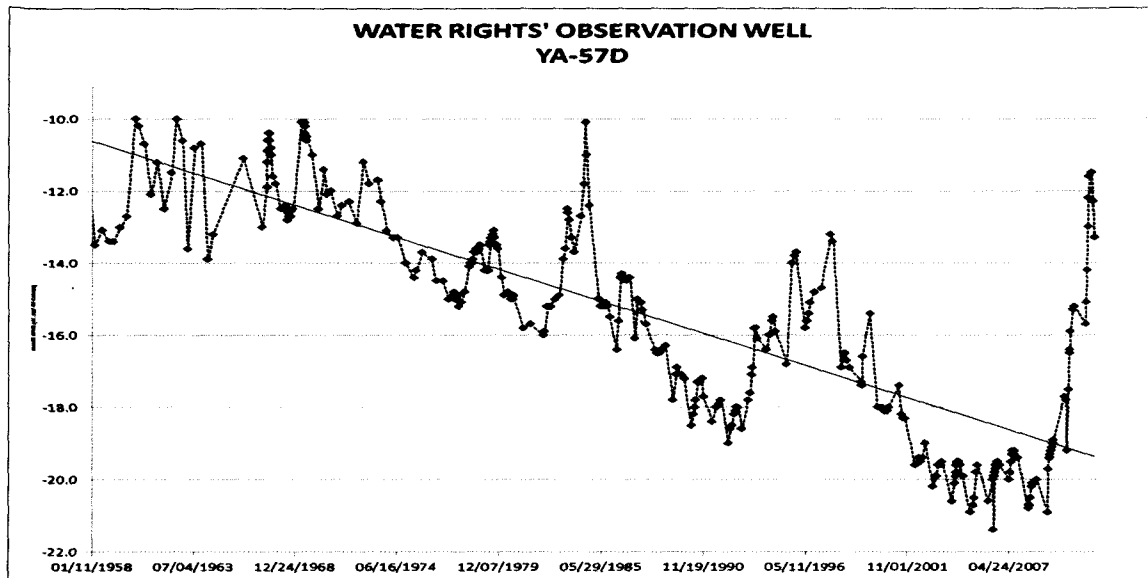


Figure 5. Hydrograph of DENR-Water Rights' Observation Well YA-57D including a linear trend line.

The lower water level documented by the observation wells represents less water in storage in the aquifer. The gradual lowering of the water table has been attributed to: (a) the entrenching of the Missouri River (Goodman, 2007) or (b) the fact that controlled flows of the Missouri River eliminating most of the flooding that used to inundate the entire floodplain and raise the water table to or above land surface (Stephens, 1967). The lower water levels that have occurred since the construction of Gavins Point Dam are likely caused by a combination of both factors cited above. Regardless of the cause, the declining water levels demonstrate the hydraulic connection between the aquifer and the Missouri River. The high flows in the Missouri River during the summer of 2011 are also very evident from the hydrographs. As stated earlier, groundwater levels are maintained by surface water and since increased ground-water discharge by wells would induce additional recharge from the river unappropriated water can be considered available for this appropriation.

EXISTING WATER RIGHTS:

Water rights/permits within approximately one mile of the well that is to be used by this application are shown in Table 1 and figure 6.

PERMIT NO	NAME	PRIOR DATE	STATUS	CFS	ACRES
1680A-3	THOMAS WHITE	05/08/1969	LC	2.93	205.3
1680B-3	HEINE FARMS	05/20/1969	LC	1.74	121.4
3722-3	HEINE FARMS	03/04/1977	LC	2	230
6254-3	HEINE FARMS	02/20/2001	LC	2.67	378

Table 1. Water Rights within approximately one mile of the well that Application No. 7340-3 proposes to use.



Figure 6. Water Rights/Permits within approximately one mile of the well that Application No. 7340-3 proposes to use.

Although the completion report for the well that this application proposes to use identifies clay from 2-55 feet below grade, the clay is likely a localized lens and the aquifer can be considered under unconfined conditions. Since the Missouri: Elk Point aquifer is under unconfined conditions, the drawdown cone will not be significant very far from the pumped well. The DENR-Water Rights' observation wells verifies this by showing very little impacts of pumping even when an observation well is located in close proximity to a high capacity well.

The Jacob straight-line method was also used to show the drawdown that can be expected in the vicinity of the well or wells that this application proposes to use, under two scenarios: (1) pumping all of the water from one well (i.e. 1248 gallons per minute from one well); and (2) equally distributing the pumping between two wells (i.e. 624 gallons per minute per well). The distance-drawdown plots under these scenarios are shown in figure 7.

Examination of figure 7 shows that drawdown can be expected to be less than 10 feet at distances greater than approximately 300 feet under either scenario. Considering the saturated thickness of the Missouri: Elk Point aquifer in this area and the distances to existing water rights/permits, approval of this application is unlikely to adversely impact existing water rights.



Figure 7. Distance-drawdown plot showing drawdown resulting from a pumping rate of 1,248 gallons per minute using either one well or two wells, and a transmissivity of 25,500 gallons per minute per foot.

CONCLUSIONS:

1. Water Permit Application No. 7340-3 proposes to appropriate 2.78 cfs from the Missouri: Elk Point aquifer to irrigate 230 acres.
2. Approval of this application will result in the appropriation of an additional 460 ac-ft annually from the Missouri: Elk Point aquifer, although the actual amount of water that will be used will be much less than appropriated.
3. There is a reasonable probability that unappropriated water is available from the Missouri: Elk Point aquifer for this proposed appropriation.
4. The additional diversion represented by this appropriation should not adversely impact existing water rights.

Eric Thurlund

for Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Bugliosi, E.F., 1986, Water Resources of Yankton County, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 84-4241, 41 p.
- Goodman, J.A., 2007, Report on Water Permit Application No. 6869-3 for Lewis and Clark RWS: SD DENR-Water Rights Program
- Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., Schoon, R.A., 1982, Evaluation of Ground-Water Resources 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

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Water Rights, 1990, “1989 Irrigation Summary by Aquifer”: SD DENR-Water Rights Program, Joe Foss Building, Pierre, SD

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Water Rights, 2012b, Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2012c, Well Completion Report Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

RECEIVED

JUN - 6 2012

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

Department of Environment and Natural Resources
PMB 2020
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

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 7340-3 Heine Farms

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 1st DAY OF June 2012
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$48.56 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: 5/25/2012 & 6/1/2012

FILED ON: 6/4/2012

SUBSCRIBED AND SWORN TO BEFORE ME THIS 4th DAY OF June 2012

Bryan J. H.
NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES 8/19/2015

NOTICE OF APPLICATION
NO. 7340-3 to Appropriate Water

Notice is given that Heine Farms, c/o Ron Heine, PO Box 477, Yankton SD 57078 has filed an application for a water permit to appropriate 2.78 cubic feet of water per second from one well completed into the Missouri:Elk Point Aquifer (100 feet deep) located in SE 1/4 NW 1/4 Section 17 for irrigation of 230 acres located in the NW 1/4, N 1/2 SW 1/4, NW 1/4 SE 1/4, W 1/2 NE 1/4 Section 17 and S 1/2 SW 1/4 Section 8; all in T93N-R54W. Water Right No. 4621-3 authorizes irrigation of the same acreage from the Missouri River. Due to flooding in 2011, the river pump site is no longer useable.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7340-3 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 June 11, 2012

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

Published twice at the total approximate cost of \$48.456

Estimated publishing cost per published copy: \$0.0028



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

May 17, 2012

Daily Press & Dakotan
319 Walnut
Yankton SD 57078

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7340-3 to Appropriate Water to be published twice. Please publish the first notice on May 25, 2012 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Heine Farms, c/o Ron Heine, PO Box 477, Yankton SD 57078 (Ph # 605-664-3395).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

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

No. 7340-3

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

Date _____

We are in receipt of your letter of May 17, 2012 enclosing Notice to Appropriate Water by Application No. 7340-3 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

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

May 17, 2012

Heine Farms
Ron Heine
PO Box 477
Yankton SD 57078

Dear Mr. Heine:

Water Permit Application No. 7340-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Publisher of the Daily Press & Dakotan printed at Yankton SD (Ph # 605-665-7811). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

Instruction to Newspaper - Publish first Notice on May 25, 2012 with the second publication 7 days later. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7340-3 to Appropriate Water

Notice is given that Heine Farms, c/o Ron Heine, PO Box 477, Yankton SD 57078 has filed an application for a water permit to appropriate 2.78 cubic feet of water per second from one well completed into the Missouri:Elk Point Aquifer (100 feet deep) located in SE ¼ NW ¼ Section 17 for irrigation of 230 acres located in the NW ¼, N ½ SW ¼, NW ¼ SE ¼, W ½ NE ¼ Section 17 and S ½ SW ¼ Section 8; all in T93N-R54W. Water Right No. 4621-3 authorizes irrigation of the same acreage from the Missouri River. Due to flooding in 2011, the river pump site is no longer useable.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7340-3 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 June 11, 2012

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

Published twice at the total approximate cost of _____.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

July 16, 2012

Heine Farms
PO Box 477
Yankton SD 57078

Dear Mr. Heine:

Enclosed is Water Permit No. 7340-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

This application was submitted with a \$1,350.00 fee. The correct fee is \$1,150.00. Therefore, \$200.00 will be refunded to you. The refund check should be received within the next couple of weeks.

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

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

Sincerely,

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

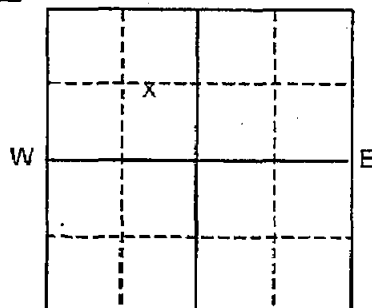
enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE 1/4 NW 1/4 Sec 17 Twp 93N Rg 54WCounty Yankton

North

Please mark well
location with an "X"

Well Completion Date

7-21-2012

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.):
2,000.0 ft. from abandoned feed lot (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Reverse Rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
160.0 LB/FT	16.00 IN	0.0 FT	40.0 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
cement	20	Lb/gal	0.0 Ft	10.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

Pumped cement grout with tremie pipe

SCREEN:

☒ Perforated pipe ☐ Manufactured
Diameter 16.00 Inches Length 60.0 FeetMaterial PVCSlot Size .080 Set From 60.0 Feet to 100.0 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: Heine Farms

Business Name:

Address: PO Box 477City, State, Zip: Yankton SD 57078

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
top soil	0	3
brown silty clay	3	25
grey clay	25	59
med sand and coarse gravel	59	100

STATIC WATER LEVEL 13.0 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: turbine pump and engine
☐ Bailed

☐ Other

Pumping Level Below Land Surface

65.0 Ft. After 4.0 Hrs. pumped 800.0 GPM75.0 Ft. After 5.0 Hrs. pumped 1,100.0 GPMIf pump installed, pump rate: 1,000.0 GPM

REMARKS

This well was drilled under license # 773 and this report is true and accurate.Drilling firm: Quality Well Services

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:



7340-3
DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

January 15, 2016

NOTICE

TO: GARY HEINE, 617 APPLEWOOD DR, YANKTON, SD 57078

FROM: Ron Duvall, Natural Resources Engineer
for Jeanne Goodman, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2015 Irrigation Questionnaires

Our records indicate your 2015 Irrigation Questionnaires have not been submitted. The request for the Questionnaires was dated October 23, 2015. The Water Management Board has directed that owners of water permits who have not submitted the 2015 Irrigation Questionnaires be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine if Permit No(s) 1680A-3, 1680B-3, 2116-3 & 3722-3 should be amended to require the Questionnaire to be submitted each year and to determine action to be taken for violation of Water Permit No(s) 1879-3, 3964-3, 4621-3, 5449-3, 5816-3, 6114-3, 6254-3 & 7340-3 qualification:

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

The hearing will be held at **Thursday, March 3, 2016 at 9:30 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD, and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation, or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1. Suspend or cancel Permit No(s) 1879-3, 3964-3, 4621-3, 5449-3, 5816-3, 6114-3, 6254-3 & 7340-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Amend Permit No(s) 1680A-3, 1680B-3, 2116-3 & 3722-3 to require the Irrigation Water Use Questionnaire to be submitted each year;
3. Postpone any action or take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 3, 2016** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. If you prefer, you can complete the questionnaire online at the following link: <http://denr.sd.gov/iq.aspx>

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

7340-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

January 26, 2016

Gary or Ron Heine
Heine Farms
617 Applewood Dr
Yankton SD 57078

RE: Water Permit or Right Nos. 1680A-3, 1680B-3, 1879-3, 2116-3, 3722-3, 3964-3, 4621-3,
5449-3, 5816-3, 6114-3, 6254-3 & 7340-3

Dear Sirs:

I am writing to acknowledge receipt of your 2015 irrigation questionnaires.

You may disregard the January 15, 2016, "Notice" concerning reporting requirements for the above listed water permits or water rights. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

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

7340-3



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

APR 19 2022

3722-3
7340-3

Ron Heine
Heine Farms
PO Box 477
Yankton SD 57078-0477

Dear Mr. Heine:

Enclosed is Water License No. 7340-3. 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 No. 7340-3.

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, 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

enclosures

NOTE: Upon licensing, the applicable portions of Water Right No. 3722-3 were incorporated into Water License No. 7340-3.

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 7340-3**

(1) Heine Farms, PO Box 477, Yankton, SD 57078 made Application No. 7340-3, June 27, 2011, for a water permit to divert 2.78 cubic feet of water per second (cfs) from ground water, one well (Missouri Elk Point Aquifer), Yankton County, South Dakota for irrigation purposes. Permit No. 7340-3, with a priority date of March 28, 2012, was approved June 11, 2012, and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before June 11, 2017, and for the application to beneficial use of said water on or before June 11, 2021.

The pivots authorized under Water Permit No. 7340-3 and Water Right No. 3722-3 overlap and irrigate portions of same acreage. Water Right No. 3722-3, with a priority date of March 4, 1977, authorizes diversion of 2.00 cfs from one well located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 17, T93N, R54W to irrigate 230 acres. The applicable portions of Water Right No. 3722-3 are incorporated into this water license. A priority date of March 4, 1977 is retained for 2.00 cfs (established under No. 3722-3) and a priority date of March 28, 2012 is retained for 2.45 cfs (established under No. 7340-3).

(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 4.45 cubic feet of water per second for beneficial use. The diversion points are located as follows:

- 1,880'E and 1,750'S of the NW corner of Section 17, T93N, R54W (SE $\frac{1}{4}$ NW $\frac{1}{4}$) (No. 7340-3)
Latitude 42.87658, Longitude -97.25300
- 1,500'S and 1,800'W of the NE corner of Section 17, T93N, R54W (SW $\frac{1}{4}$ NE $\frac{1}{4}$) (No. 3722-3)
Latitude 42.87746, Longitude -97.24703

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

Section 17, T93N, R54W				Section 8, T93N, R54W	
NW $\frac{1}{4}$ NW $\frac{1}{4}$	29 acres	NW $\frac{1}{4}$ NE $\frac{1}{4}$	40 acres	SE $\frac{1}{4}$ SW $\frac{1}{4}$	3 acres
NE $\frac{1}{4}$ NW $\frac{1}{4}$	40 acres	NE $\frac{1}{4}$ NE $\frac{1}{4}$	33 acres		
SW $\frac{1}{4}$ NW $\frac{1}{4}$	37 acres	SW $\frac{1}{4}$ NE $\frac{1}{4}$	40 acres	SW $\frac{1}{4}$ SE $\frac{1}{4}$	7 acres
SE $\frac{1}{4}$ NW $\frac{1}{4}$	40 acres	SE $\frac{1}{4}$ NE $\frac{1}{4}$	38 acres	SE $\frac{1}{4}$ SE $\frac{1}{4}$	1 acre
NW $\frac{1}{4}$ SW $\frac{1}{4}$	9 acres	NW $\frac{1}{4}$ SE $\frac{1}{4}$	18 acres		
NE $\frac{1}{4}$ SW $\frac{1}{4}$	23 acres	NE $\frac{1}{4}$ SE $\frac{1}{4}$	7 acres		

Total of 365 acres irrigated

(4) Pursuant to South Dakota Water Law 46-5-30.1 Heine Farms, PO Box 477, Yankton SD 57078 the holder and/or owner of Incorporated Water Right No. 7340-3 is issued a license to appropriate water, the right to use 4.45 cubic feet of water per second from ground water, two wells (Missouri Elk Point Aquifer) with priority dates of March 28, 2012 (2.45 cfs) and March 4, 1977 (2.00 cfs), from the locations specified in (2) of this license for irrigation purposes.

continued

Water License No. 7340-3

Page 2

This license is subject to South Dakota Water Law, any limitations or conditions listed in Incorporated Water Right No. 7340-3 and subject to the following qualifications:

- The wells approved under this water right will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this water right 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.
- This Water Right 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

APR 19 2022

date



Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7340-3

I have this day, November 8, 2021, made a thorough examination of the water use system constructed by Heine Farms, PO Box 477, Yankton, SD 57078, holder of Permit No. 7340-3, bearing the priority of March 28, 2012 authorizing the diversion of 2.78 cu. ft. per second of the waters of groundwater (Missouri: Elk Point Aquifer) for the irrigation of 230 acres located in Yankton County.

Inspection contacts: Ron Heine

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Grosch Irrigation
- 2) No. of Wells: 1
- 3) Depth(s): 100 feet
- 4) Well log is available: Yes

Casing:

- 1) Diameter: 16 inches
- 2) Length: 60 feet
- 3) Type: Plastic

Screen:

- 1) Diameter: 16 inches
- 2) Length: 32 feet
- 3) Type: PVC
- 4) Static water level: 12 feet

Pump:

- 1) Make: Grundfos
- 2) Model: Unknown
- 3) Capacity: Unknown GPM

Motor:

- 1) Make: Jensen
- 2) Model No.: JMLC
- 3) Horsepower rating: 60 hp

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

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

C. Works used to apply water to beneficial use:

Center Pivot:

- 1) Make: Valley
- 2) Overall length: 1700 feet
- 3) Number of towers: 2
- 4) End gun: Yes
- 5) Capacity: 1,100 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 well is 1,850 feet east and 1,600 feet south of the northwest corner of Section 17-T93N-R54W (Latitude 42.87658, Longitude -97.25300 – SE1/4 of the NW1/4).

2. The works are capable of diverting and conveying to the place of use 2.45 cu. ft. per second of water which is to be used for irrigation purposes. Water has been put to beneficial use to the maximum extent as follows:

Section 17-T93N-R54WSection 8-T93N-R54WNW1/4NW1/4 29 acresSE1/4NW1/4 3 acresNE1/4NW1/4 23 acresSW1/4NW1/4 37 acresSE1/4NW1/4 21 acresNW1/4SW1/4 9 acresNE1/4SW1/4 21 acresNW1/4SE1/4 2 acres

comprising a total of 145 acres of land and the license should be issued for 2.45 cfs.

3. All structures, wells and lands on map: Yes

F. Comments or other permit(s) associated with the project: The 145 acres shown above are the acres irrigated that are not included in licensed Water Right Nos. 3722-3 and 1680B-3. Water Right No. 7340-3 replaces cancelled Water Right No. 4621-3, which irrigated the same property with water from the Missouri River. The cancelled water right was licensed for 230 acres, but some of those acres overlapped the acres irrigated by Licensed Water Right Nos. 3722-3 and 1680B-3. Thus, I am including only those acres not licensed by other water rights. Also, the owner thought the pump put out 900 gpm, but he was not sure. However, the pivot is noted as being nozzled for 1,100 gpm (2.45 cfs), so that is the flow rate that I am recommending for licensing. Since licensed Water Right No. 3722-3 and Water Right No. 7340-3 overlay each other and have the same property owner, the two water rights could be combined into one license. They do have separate wells, but both wells are in the same aquifer.



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

Date report completed: April 13, 2022

Water Right No. 7340-3



Keith DeJong
Keith DeJong, PE Ret.
Staff Engineer
April 13, 2022