

WATER PERMIT NO. 7437-3

Name of Applicant: Glenn Nelson

Address: 31545 454th Ave, Meckling SD 57069

Phone: 605 660-1421

Amount of Water Claimed: 1.78 cfs

Total Acres: 160

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation

County: Clay

Type of Waste Disposal System:

Location: 3 miles southwest of Meckling

PRIORITY

Date Received: 9-17-12

Application/License Fee: \$ 1050

Corrected Application Received:

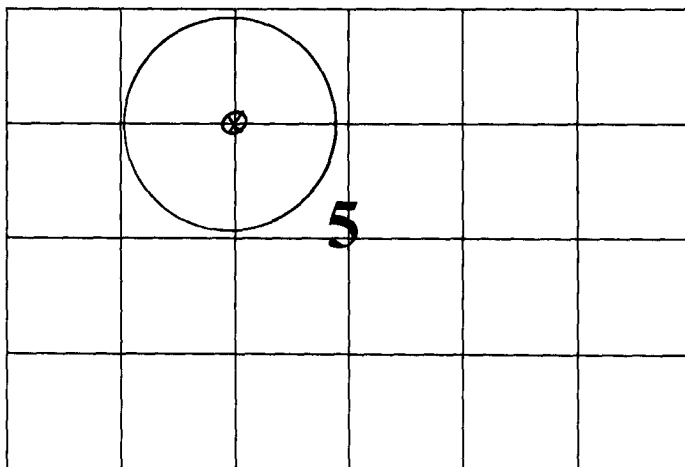
Period of Annual Use: May 1- Sept 30

Remarks:

Diversion Point: approximate center of NW 1/4

Sec 5-T92N-R53W

Land to be Irrigated: NW 1/4 Sec 5-T92N-R53W



Depth of Well: 100 feet deep

Well Driller:

Remarks:

Type of Map: aerial

Prepared by: Sheree Christensen, Clay C FSA

Reviewed and the Number Assigned on: 9-17-12

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. <u>7437-3</u>	(office use only) Hydrologic Unit <u>10170101</u>
	Basin <u>Missouri River</u>	
	Newspaper <u>Plain Talk</u>	
	<u>Press & Dakotan</u>	

RECEIVED
SEP 17 2012
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 of Applicant Glenn Nelson Home 605-267-4113
(check one) ☒ Owner ☐ Tenant/lessee Phone Cell 605-660-1421
Mailing Address 31545 454th Ave Meckling SD 57069
(Address) (City) (State) (Zip Code)
2. Amount of water claimed 1.78 *CFS or 800 **GPM ***AF Total Acreage 160
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
3. Source of water supply Missouri Aquifer
4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Clay
NW 1/4 of Sec 5 - 92N-53W (approximate center)
5. County or counties where water will be used Clay
6. Annual period during which water is to be used May 1 - Sept. 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>NW 1/4 of NW 1/4 of Sec. 5</u>	<u>40</u>	<u>own by Glenn Nelson</u>	
<u>NE 1/4 of NW 1/4 of Sec. 5</u>	<u>40</u>	<u>own by Glenn Nelson</u>	
<u>NE 1/4 of NW 1/4 of Sec. 5</u>	<u>40</u>	<u>own by Glenn Nelson</u>	
<u>SE 1/4 of NW 1/4 of Sec 5</u>	<u>40</u>	<u>own by Edith Nelson</u>	

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

Crop Irrigation of land in item 7 above with
center Pivot Equipment

STATE OF SOUTH DAKOTA)

County of Clay) SS

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

I, Glenn Nelson, 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 Glenn NelsonSubscribed and sworn to before me this 12th day of September 20 12

Melissa Eggert
Notary Public Signature
My Commission expires 11-21-2012

**SOUTH DAKOTA
WATER PERMIT NO. 7437-3**

Date of first receipt of application September 17, 2012.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7437-3 to Glenn Nelson, 31545 454th Ave, Meckling SD 57069 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. 7437-3 appropriates 1.78 cubic feet of water per second from one well to be completed into the Missouri:Elk Point Aquifer (100 feet deep) located in the approximate center of the NW 1/4 Section 5 for irrigation of 160 acres located in the NW 1/4 Section 5; all in T92N-R53W.
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 September 17, 2012.
4. The date of approval of Permit No. 7437-3 is December 3, 2012.
5. One-fifth of the construction is to be completed on or before June 3, 2015.
6. All construction is to be completed on or before December 3, 2017.
7. Water is to be put to beneficial use on or before December 3, 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. The well authorized by Permit No. 7437-3 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. 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

DEC 23 2012
date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 28" Depth 100'
- b) Casing Type PVC Diameter 16" Thickness .616
- c) Screen Type PVC Diameter 16" Thickness .616
- d) Gravel Pack armor coat Length of Gravel Pack 80'
- e) Depth to Top of Water Bearing Material 20'
- f) Depth to Water (ground surface to water level) 20'
- g) Distance to nearest existing domestic well:

On applicant's property NA On property owned by others 4000 ft

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System

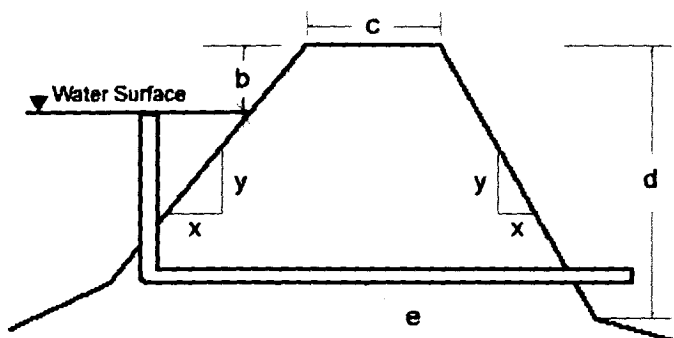
3. Dugout Information

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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

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



- b) Freeboard _____
- c) Crest Width _____
Crest Length _____
- d) Height _____
- e) Primary Outlet Capacity _____
If pipe, diameter _____
- f) Secondary Spillway Capacity _____
Spillway Width _____
- g) X & Y Slope (e.g. 3 to 1 is a typical slope)
Upstream _____
Downstream _____
- h) Surface Area of Impoundment _____
- i) Storage _____ Acre Feet
- j) Drainage Area Above Dam _____ Acres

3544
2771
4
72.88
NHFL
▼●

3544
2771
3
41.15
NHFL
▼●

X



United States Department of Agriculture
Farm Service Agency

PLSS: 5_92N_53W
Farm: 3544

Clay County, SD
1:8,268

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SEP 17 2012
WATER RIGHTS



Wetland Determination Identifiers

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

Common Land Units

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

2008 Ortho-Photography - Not to Scale

Sheree Christensen
Clay Co. FSA Prog. Tech.
March 11, 2010

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 9/17, 20 12

RECEIVED OF Glad Nelson 31545 454th Ave Meckling SD 57069

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

Fee for Application for Permit No. <u>7437-3</u> to Appropriate Water, to construct and to put water to beneficial use	850	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>7437-3</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	1050	00

No. 05581

By

Glad Nelson
Chief Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7437-3, Glenn Nelson**

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. 7437-3, Glenn Nelson, 31545 454th Avenue, Meckling SD 57069.

The Chief Engineer is recommending APPROVAL of Application No. 7437-3 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. 7437-3 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. 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
November 14, 2012

REPORT TO THE CHIEF ENIGNEER
ON
WATER PERMIT APPLICATION NO. 7437-3
GLENN NELSON
NOVEMBER 1, 2012

Water Permit Application No. 7437-3 proposes to appropriate 320 acre-feet per year (ac-ft/yr) at a maximum diversion rate of 1.78 cubic feet of water per second (cfs) from one well to be completed into the Missouri: Elk Point aquifer. The well is expected to be approximately 100 feet deep and is to be located in the NW¼ of Section 5, T92N-R53W. This permit application proposes to irrigate 160 acres located in the NE¼ of Section 5, T92N-R53W in Clay County.

AQUIFER: Elk Point management unit of the Missouri aquifer (M: EP)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The proposed well site is located in Clay County, approximately one and one quarter miles east of the Yankton County border and one and a half miles north of the Missouri River.

The Missouri: Elk Point is an alluvium mantled outwash consisting of clay and silt with small amounts of sand and gravel (Jensen, 2000). The aquifer is unconfined in the area of the proposed well site. In total, the Missouri: Elk Point aquifer underlies 219,100 acres and contains an estimated 3,287,100 acre-feet (ac-ft) of water in storage. For Clay and Yankton Counties combined, the aquifer underlies approximately 119,500 acres and contains an estimated 1,792,000 ac-ft of water in storage (Hedges and others, 1982). The Missouri: Elk Point aquifer extends east into Union County and connects to the Lower Vermillion-Missouri aquifer to the north. The aquifer overlies the Dakota aquifer in portions of Yankton and Clay Counties. The aquifer is hydraulically connected to the Vermillion River to the east and Missouri River to the south. Water in the aquifer generally moves from the northwest to the southeast towards the Missouri River (Stephens, 1967).

A test well completion report was not submitted with this application; however, sufficient information is available from area water right/permits and well completion reports to evaluate the aquifer at the proposed location. In the area of the proposed well site, the aquifer is 50 to 60 feet thick, and the static water level is approximately 18 feet below ground surface. In general, wells that are completed into the Missouri: Elk Point aquifer are highly productive, and so, a well proposed at the application's proposed location would probably yield the amount of water requested (Water Rights, 2012b; Water Rights, 2012c).

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 and pertinent to this application.

WATER AVAILABILITY:

This application proposes to appropriate 320 ac-ft/yr from the Missouri: Elk Point aquifer. If this application is approved, the actual water use will likely be less than the appropriation. 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."

HYDROLOGIC BUDGET:*Recharge:*

Recharge to the Missouri: Elk Point aquifer is due to infiltration of precipitation in areas where the aquifer is near land surface, inflow from the Lower Vermillion-Missouri aquifer at the Missouri: Elk Point aquifer's northern boundary, inflow from the Missouri River during periods of high flow, and leakage from the underlying Dakota aquifer.

Hedges and others (1985) estimated recharge, based on observation well data, of the Missouri: Elk Point aquifer to be 3.8 inches per year. Using this recharge rate and the area of the aquifer cited previously, the estimated recharge equals approximately 69,400 ac-ft/yr for the entire aquifer and 37,800 ac-ft/yr for the portion of the aquifer underlying Yankton and Clay Counties. Also, Stephens (1967) indicated that additional discharge by wells would induce additional recharge from the Missouri River.

Discharge:

Discharge from the Missouri: Elk Point aquifer occurs due to evapotranspiration in areas where the aquifer is near land surface, outflow to the Missouri River during periods of low flow, outflow into the underlying Dakota aquifer, and well withdrawals from commercial use, industrial use, fish and wildlife propagation, municipal use, recreational use, rural water systems, suburban housing development, and irrigation. There are a total of 485 water rights and permits appropriating water from the Missouri: Elk Point aquifer, with 197 of these water rights/permits in Yankton and Clay Counties (Water Rights, 2012b).

From the entire Missouri: Elk Point aquifer, current diversion rate appropriation for commercial use, industrial use, fish and wildlife propagation, recreational use, rural water systems, suburban housing development totals 15.716 cfs, with 11.314 cfs withdrawn in Yankton and Clay Counties combined. Annual volume of water currently appropriated for the previously stated uses totals 25 ac-ft/yr, all withdrawn in Yankton County.

From the entire Missouri: Elk Point aquifer, current diversion rate appropriation for municipal use totals 11.662 cfs, with 5.162 cfs withdrawn in Yankton and Clay Counties combined. Annual volume of water currently appropriated for municipal use and rural water systems totals 1,161 and 32,165 ac-ft/yr, respectively, all withdrawn in Clay County. Five future use permits reserve a total of 1,900 and 25,000 ac-ft/yr for municipal use and rural water systems, respectively, all reserved in Clay County (Water Rights, 2012b).

The amount of water than can be expected to be withdrawn by the non-irrigation use water rights/permits at the current appropriation amount can be estimated by assuming: 1) water rights/permits limited by an annual volume will pump the entire volume appropriated annually, 2) water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate at 60 percent of the time, and 3) future use permits can be fully developed. At the current appropriation amount, the total annual withdrawal from the entire Missouri: Elk Point aquifer by non-irrigation use is expected to total less than 72,144 ac-ft/yr, with less than 67,408 ac-ft/yr expected to be withdrawn in Yankton and Clay Counties combined (Water Rights, 2012b).

Lewis and Clark Rural Water System's (RWS) expected water use is a significant portion of the annual volume of water anticipated to be used under current appropriations. Lewis and Clark RWS currently has two permits appropriating at total of 32,165 ac-ft/yr and four future use permits reserving a total of 25,000 ac-ft/yr, all from the Missouri: Elk Point aquifer in Clay County (Water Rights, 2012b). Recognizing that due to the proximity of the wells to the Missouri River and the design of the wells, most of the water that will be withdrawn from the Lewis and Clark RWS wells will be induced from the Missouri River.

In 2011, the annual volume of water appropriated from the entire Missouri: Elk Point aquifer by irrigation totaled 159,700 ac-ft/yr, while the pumpage reported totaled 12,107.55 ac-ft/yr, with 4,817.85 ac-ft/yr pumped in Yankton and Clay Counties (Water Rights, 1979-2012). Figure 1 shows the Missouri: Elk Point aquifer's historic irrigation data.

In addition, there are many completion reports on file with the SD DENR-Water Rights Program in Yankton and Clay County for domestic wells that appear to be completed into the Missouri: Elk Point aquifer (Water Rights, 2012c). The annual withdrawal due to domestic use is not significant to the hydrologic budget of the aquifer.

Hydrologic Budget:

Recognizing that Lewis and Clark RWS withdraw water from the Missouri: Elk Point aquifer that is induced from the Missouri River and considering the remaining hydrologic budget, there is a reasonable probability that unappropriated groundwater is available from the Missouri: Elk Point aquifer for the proposed appropriation of 320 ac-ft/yr.

OBSERVATION WELL DATA:

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

The DENR-Water Rights Program monitors 37 observation wells located into the Missouri: Elk Point aquifer, with 12 of these observation wells located in Yankton and Clay Counties (Water Rights, 2012a). The nearest of these wells, CL-80B and YA-80KA, are located approximately 2.5 miles southeast and 2.6 northwest of the proposed well site, respectively. Hydrographs of these observation wells are shown in Figures 2 and 3.

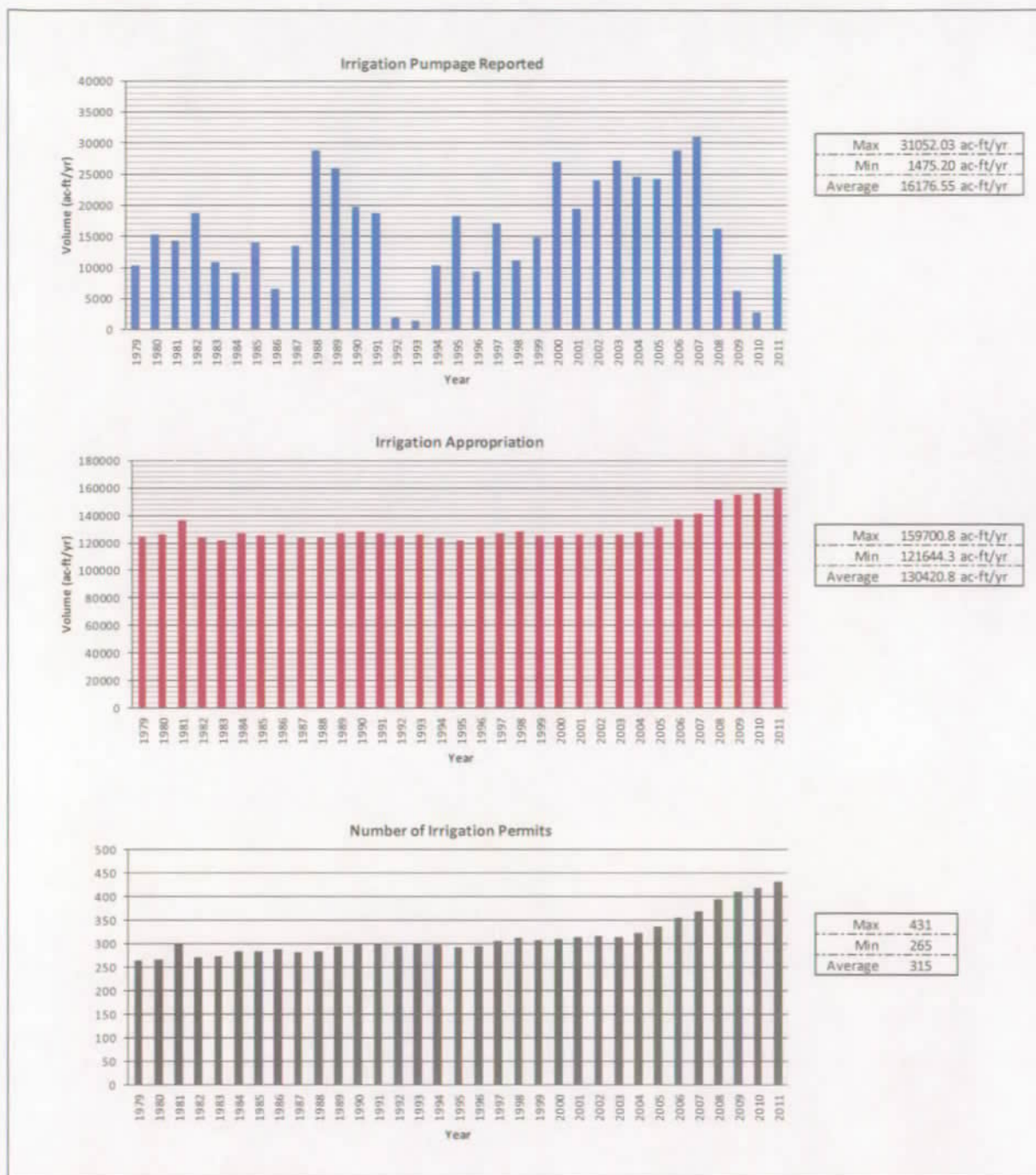


Figure 1: Historic irrigation water use from the Missouri: Elk Point aquifer (Water Rights, 1979-2012)

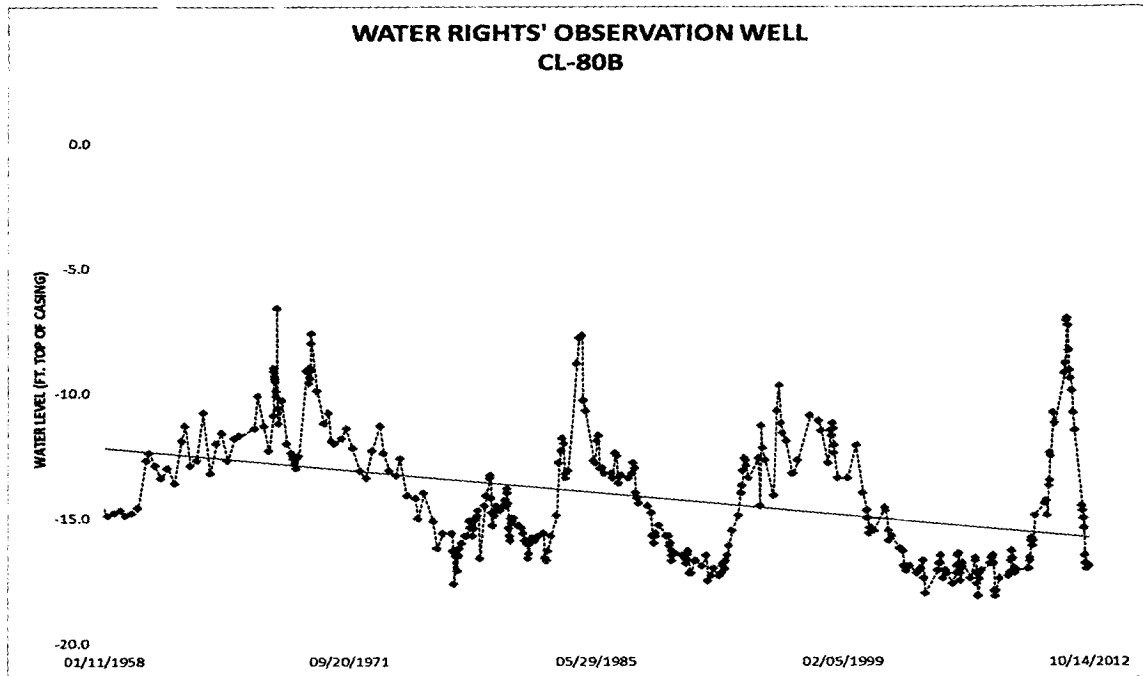


Figure 2: Hydrograph for DENR-Water Rights' observation well CL-80B (Water Rights, 2012a)

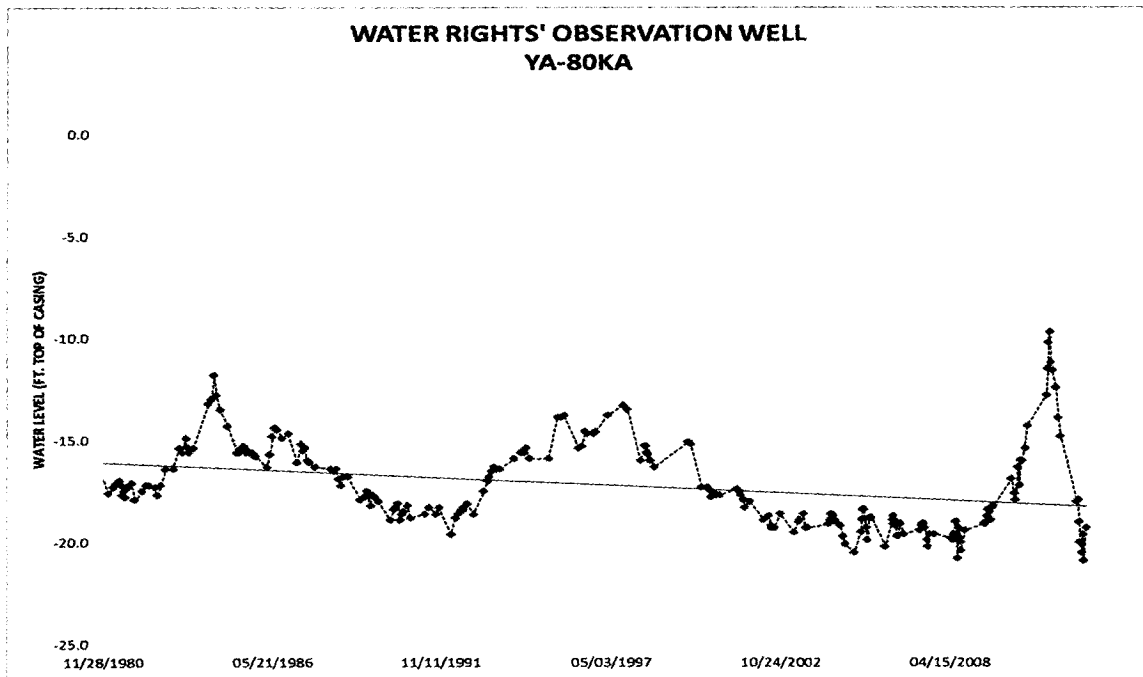


Figure 3: Hydrograph for DENR-Water Rights' observation well YA-80KA (Water Rights, 2012a)

The observation well data documents cyclic conditions of water levels, recharging during wet years and declining during dry years, which may be influenced by the aquifer's connection to the Missouri River. For example, high flows in the Missouri River during the summer of 2011 and the current drought conditions are evident in the hydrographs. The hydrographs also show the effects of nearby pumping on the aquifer. Observation well data indicates that temporal well withdrawal is masked by climatic conditions. Therefore, recharge to and natural discharge from the Missouri: Elk Point aquifer greatly exceeds well withdrawal.

Trend lines of hydrographs of the two observation wells show a slight decline of the Missouri: Elk Point aquifer's water table. This gradual decline has been attributed to entrenching the Missouri River (Goodman, 2007) or controlling the flow of the Missouri River by the Gavins Point Dam, which no longer allows inundating of the floodplain (Stephens, 1967). Regardless of cause, the declining water table levels demonstrate the hydraulic connection between the aquifer and the Missouri River. Pumping from the aquifer will induce recharge supplied by the Missouri River or capture discharge before outflowing to the river (Stephens, 1967).

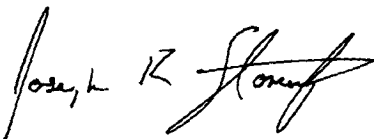
EXISTING WATER RIGHTS:

There are 197 water rights/permits appropriating water from the Missouri: Elk Point aquifer in Clay County. There are six water rights/permits within one mile of the proposed well site and all six are designated for irrigation use. The nearest wells, Water Right Nos. 7109-3 and 3628-3, are located one half mile south and one half mile west, respectively (Water Rights, 2012b). There are three well completion reports on record with the SD DENR-Water Rights Program for domestic wells within one mile of the proposed well site (Water Rights, 2012c).

Due to the relatively small diversion rate, drawdown is not expected to be significant. As shown by the observation wells, interference is not expected to be a concern of surrounding wells due to the addition of the proposed well.

CONCLUSIONS:

1. The application proposes to appropriate 320 ac-ft/yr for irrigation.
2. Most of the water that will be withdrawn from the Lewis and Clark RWS wells will be induced from the Missouri River.
3. There is a reasonable probability that unappropriated water is available from the Missouri: Elk Point aquifer to supply the proposed appropriation.
4. There is a reasonable probability that this proposed well will not cause interference in existing nearby wells.



Joseph R Stonesifer
SD DENR-Water Rights Program

REFERENCES:

- 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., and 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.
- 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. South Dakota DENR-Geological Survey, Vermillion, SD.
- Jensen, A.R. 2000. Aquifer Materials Map 1. South Dakota DENR-Geological Survey, Vermillion, SD.
- Stephens, J.C. 1967. Geology and Hydrogeology of Clay County, South Dakota, Part II: Water Resources. South Dakota DENR-Geological Survey Bulletin 19, 62 p.
- Water Rights. 1979-2012. "Annual Irrigation Summary by Aquifer": SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2012a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2012b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2012c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.

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NOV 30 2012

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

PLAIN TALK

Glenn Nelson
DENR
31545 454th Ave
Meckling, SD 57069

STATE OF SOUTH DAKOTA
COUNTY OF CLAY

TERA SCHMIDT BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT SHE IS THE CLASSIFIED MANAGER OF YANKTON
MEDIA INC., A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
PLAIN TALK, A LEGAL WEEKLY NEWSPAPER PUBLISHED AND CIRCULATED
IN THE CITY OF VERMILLION, SAID COUNTY AND STATE, AND ONE OF THE
OFFICIAL NEWSPAPERS OF THE SAID COUNTY OF FACTS STATED IN THIS
AFFIDAVIT; THAT THE ANNEXED
NOTICE ON APPLICATION NO. 7437-3 TO APPROPRIATE WATER

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 23 DAY OF NOVEMBER 2012
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID NOTICE TO WIT \$27.67 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: 11/23/12

FILED ON: 11/23/12

SUBSCRIBED AND SWORN TO BEFORE ME THIS

28th

DAY OF

November

NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES

8/19/2015

**NOTICE OF APPLICATION
NO. 7437-3 to Appropriate
Water**

Notice is given that Glenn Nelson, 31545 454th Ave, Meckling SD 57069 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second from one well to be completed into the Missouri:Elk Point Aquifer (100 feet deep) located in the approximate center of the NW 1/4 Section 5 for irrigation of 160 acres located in the NW 1/4 Section 5; all in T92N-R53W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7437-3 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 December 3, 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 once at the total approximate cost of \$27.67

Estimated publishing cost per published copy \$0.148

Published: November 23, 2012

RECEIVED

NOV 18 2012

WATER RIGHTS
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AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

11+23

NOTICE OF APPLICATION
NO. 7437-3 to Appropriate Water

Notice is given that Glenn Nelson, 31545 454th Ave, Meckling SD 57069 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second from one well to be completed into the Missouri:Elk Point Aquifer (100 feet deep) located in the approximate center of the NW 1/4 Section 5 for irrigation of 160 acres located in the NW 1/4 Section 5; all in T92N-R53W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7437-3 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 December 3, 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 once at the total approximate cost of \$24.82.

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. 7437-3**

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE NEWSPAPER ON THE 23rd DAY OF November 2012 THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION OF SAID **NOTICE** TO WIT \$24.82 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: 11/23/2012

FILED ON: 11/23/2012

SUBSCRIBED AND SWORN TO BEFORE ME THIS 23rd DAY OF November

2012

[Signature]
NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES 8/19/2015

Instruction to Newspaper - Publish the Notice on November 23, 2012. 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. 7437-3 to Appropriate Water

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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

November 14, 2012

Daily Press & Dakotan
319 Walnut
Yankton SD 57078

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7437-3 to Appropriate Water. Please publish the notice once on November 23, 2012. 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 Glenn Nelson, 31545 454th Ave, Meckling SD 57069 (Ph # 605-267-4113).

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

November 14, 2012

Plain Talk
201 W Cherry St
Vermillion SD 57069

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7437-3 to Appropriate Water. Please publish the notice once on November 23, 2012. 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 Glenn Nelson, 31545 454th Ave, Meckling SD 57069 (Ph # 605-267-4113).

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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 DATE, CONTACT
THE NEWSPAPER(S) RIGHT AWAY.

November 14, 2012

Glenn Nelson
31545 454th Ave
Meckling SD 57069

Dear Mr. Nelson:

Water Permit Application No. 7437-3 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 Plain Talk printed at Vermillion SD (Ph # 605-624-2695) and the Daily 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.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

DEC 2 9 2012

Glenn Nelson
31545 454th Ave
Meckling SD 57069

Dear Mr. Nelson:

Enclosed is Water Permit No. 7437-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

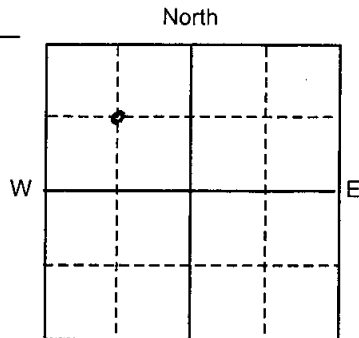
enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW 1/4 NW 1/4 Sec 5 Twp 92N Rg 53ECounty Clay

Please mark well location with an "X"



Well Completion Date

2-5-13

1 Mile

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

2400 ft. from septic tank (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>110</u> LB/FT	<u>16</u> IN	<u>0</u> FT	<u>40</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>		Lb/gal	<u>0</u> Ft	<u>40</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

pepped down w/ grout pump

SCREEN:

☒ Perforated pipe ☐ Manufactured
Diameter 16 Inches Length 60 FeetMaterial PVCSlot Size 1085 Set From 40 Feet to 100 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
☐ No, Why Not?

Lab to which water quality sample sent for analysis

Well Owner:

Glen Nelson

Business Name:

31545 454 Ave

Address:

City, State, Zip:

Meckley SD 57069

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Black top soil</u>	<u>0</u>	<u>8</u>
<u>brown clay</u>	<u>8</u>	<u>28</u>
<u>dark sand & gravel</u>	<u>28</u>	<u>75</u>
<u>coarse gravel & rocks</u>	<u>75</u>	<u>110</u>

STATIC WATER LEVEL

16

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:
pumped w/ turbine pump
☐ Bailed

☐ Other

Pumping Level Below Land Surface

44 Ft. After 1 Hrs. pumped 800 GPM48 Ft. After 2 Hrs. pumped 1000 GPM

If pump installed, pump rate:

700

GPM

REMARKS

RECEIVED

APR 24 2013

WATER RIGHTS PROGRAM

This well was drilled under license #

444

and this

report is true and accurate.

Drilling firm:

Christensen Well & Drilling

Signature of License Representative:

Cody W. Christensen

Signature of Well Owner or Equitable Property Holder:

Date:

4-18-13

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7437-3

I have this day, November 2, 2015, made a thorough examination of the water use system constructed by Glenn Nelson, 31545 454th Ave, Meckling, SD 57069 of Permit No. 7437-3, bearing the priority of September 17, 2012 authorizing the diversion of 1.78 cu. ft. per second of the waters of Missouri:Elk Point Aquifer for irrigation purposes, in Clay County.

Inspection contact & relationship to permit holder, if applicable: **Glenn Nelson, permit holder**

A. Works used to divert the water:

Well Information:

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

Casing:

- 1) Diameter 16 inches
- 2) Length 40 feet
- 3) Type PVC

Screen:

- 1) Type PVC Manufactured
- 2) Length 60 feet
- 3) Static water level 16 feet

Pump:

- 1) Make Turbine
- 2) Model _____
- 3) Capacity 800 GPM

Motor:

- 1) Make US Motors
- 2) Model No. BF48A
- 3) Horsepower rating 40 hp

C. Works used to apply water to beneficial use:**Center pivot:**

- 1) Make T-L Irrigation Systems
- 2) Overall length 1310 feet
- 3) Number of towers 8
- 4) End gun Yes
- 5) Capacity 800 GPM

Comments: T-L Irrigation uses a hydraulic drive system

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 2013.

List any extended period of nonuse: None

- 3) Exceptions to compliance are: None

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: East 1320', South 1320' from NW corner Sec 5-T92N-R53W; Lat 42.81912/Long -97.13578; approximate center of NW ¼ Sec 5-T92N-R53W.
2. The works are capable of diverting and conveying to the place of use 1.78 cfs or 800 gpm of water which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:
All land is located in Sec 5-T92N-R53W

<u>NW ¼ NW ¼ – 33 ac</u>	<u>NE ¼ NW ¼ – 33 ac</u>
<u>SW ¼ NW ¼ – 33 ac</u>	<u>SE ¼ NW ¼ – 33 ac</u>

comprising a total of 132 acres of land and the license should be issued for 1.78 cfs or 800 gpm.

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

Harold Holoch

Harold Holoch, PE
Engineer Water Rights Inspector
DENR, Water Rights Program

Date report completed: **December 7, 2015**

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

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

Date 11-2-15

FROM: Glenn Nelson
(name)
31545 454th Ave
(address)
Meckling SD 57069 605-660-1421
(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. 7437-3 states that the water use system is to be constructed by
December 3, 2017, and water is to be put to beneficial use by December 3, 2021
(date) (date)

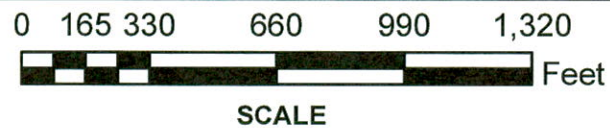
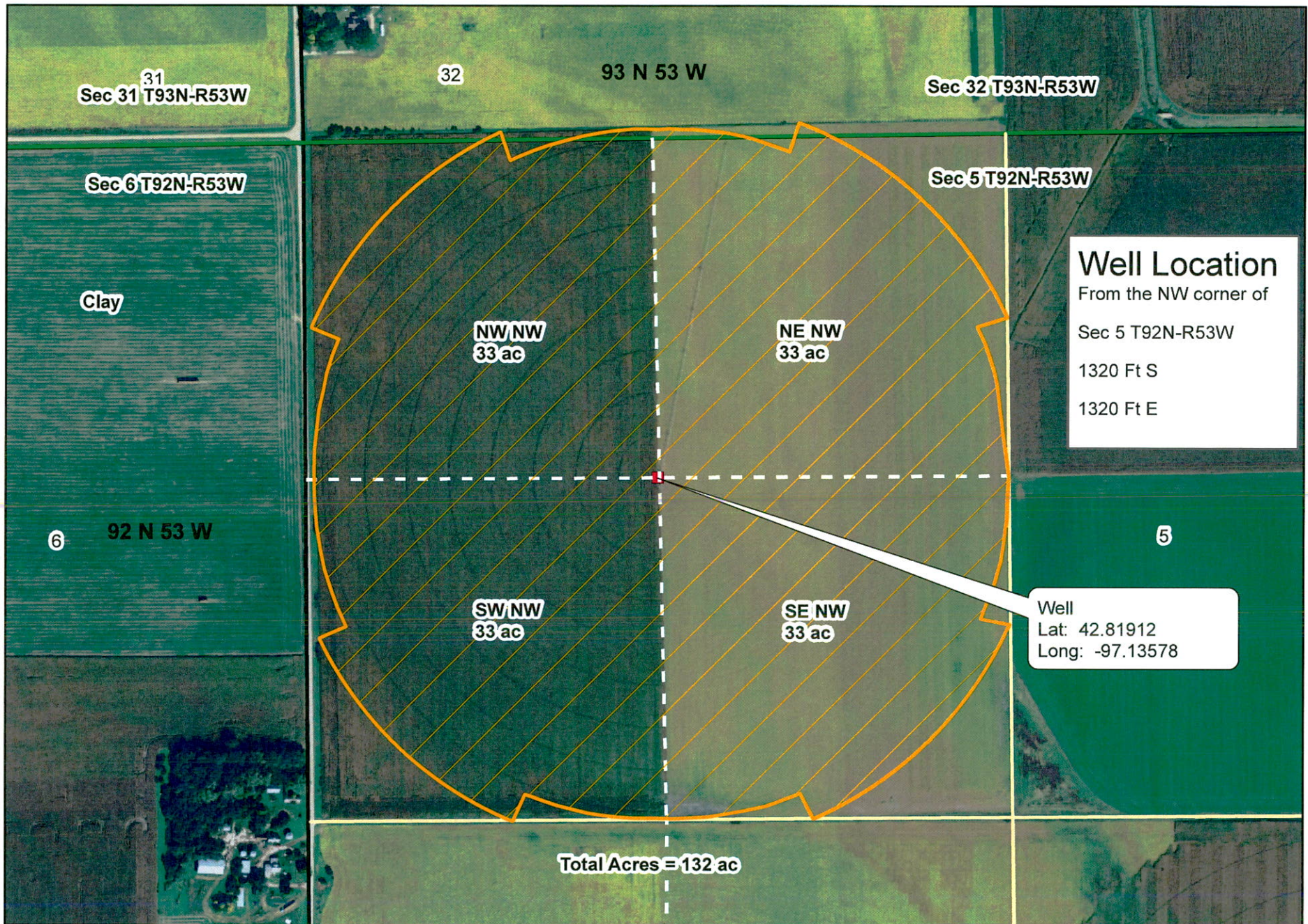
The water use system was completed on 3-1-13
(date)

Applying the water to beneficial use was completed on 7-1-13
(date)

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



7437-3



Harold Holoch, PE
Water Rights Inspector
December 3, 2015



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

DEC 22 2015

7437-3

Glenn Nelson
31545 454th Ave
Meckling SD 57069

Dear Mr. Nelson:

Enclosed is Water License No. 7437-3. 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 the owner of an existing well, such as the well authorized by Water Right No. 7437-3, 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. 7437-3**

(1) Glenn Nelson, 31545 454th Ave., Meckling SD 57069 made Application No. 7437-3, September 17, 2012 for a water permit to divert 1.78 cubic feet of water per second from ground water – one well (Missouri Elk Point Aquifer), Clay County, South Dakota for irrigation purposes. Permit No. 7437-3, with a priority date of September 17, 2012 was approved December 3, 2012 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before December 3, 2017 and for the application to beneficial use of said water on or before December 3, 2021.

The Permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" on November 2, 2015. The "*Notice*" stated the water use system was completed in March, 2013 and the water placed to beneficial use in July, 2013.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 1.78 cubic feet of water per second for beneficial use.

The location of the diversion point is 1,320 feet east and 1,320 feet south of the NW corner of Section 5, T92N, R53W (center of the NW ¼).

(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 following land:

T92N, R53W Section 5	NW ¼ NW ¼	33 acres
	SW ¼ NW ¼	33 acres
	NE ¼ NW ¼	33 acres
	SE ¼ NW ¼	33 acres
	Total	132 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Glenn Nelson, 31545 454th Ave., Meckling SD 57069 the holder and/or owner of Water Right No. 7437-3 is issued a license to appropriate water, the right to use 1.78 cubic feet of water per second from ground water – one well (Missouri Elk Point Aquifer) with a priority date of September 17, 2012 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. 7437-3 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. 7437-3 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 completed by Christensen Well & Irrigation in February, 2013. A copy of the well log is on file with the Water Rights Program.*

continued

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

Jeanne Goodman

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

DEC 22 2015

date

