

WATER PERMIT NO. 8080-3

Name of Applicant: Larry & Melvin Donnelly

Address: 47423 324th St, Elk Point SD 57025 Phone: 712-899-8465

Amount of Water Claimed: 1.78 cfs Total Acres: 160 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation County: Union

Type of Waste Disposal System:

Location: 5 miles west of Elk Point

PRIORITY Date Received: 1-20-15 Application/License Fee: \$ 1050

Corrected Application Received: Period of Annual Use: May 1 – September 30

Remarks:

Diversion Point: approximate center of the NE 1/4
Sec 17-T91N-R50W

Land to be Irrigated: NE 1/4 Sec 17-T91N-R50W

Depth of Well: 100-112 feet deep

Well Driller:

Remarks:

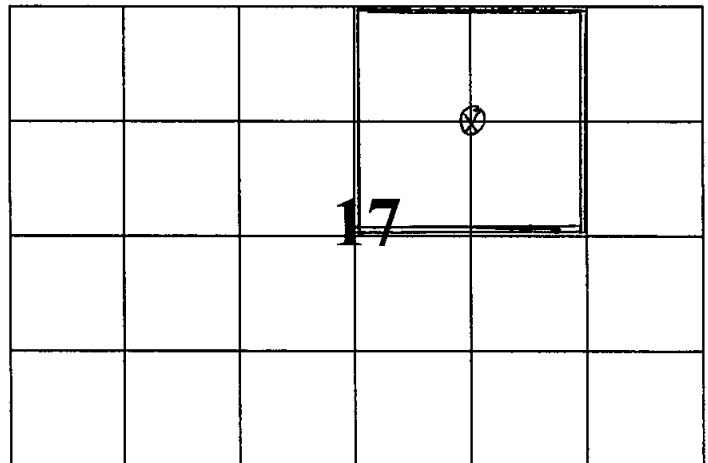
Type of Map: aerial photo

Prepared by:

Reviewed and the Number Assigned on: 2-22-15

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>8080-3</u> (office use only) Hydrologic Unit <u>10170101</u>
	Basin <u>Vermillion River</u> <u>605-356-2632</u>
	Newspaper <u>Leader/Courier</u> <u>PO Box 310 Elk Point 57025</u>
	<u>Press of Dakotan</u> <u>319 Walnut Yankton 57078</u>

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Application For Permit To Appropriate Water For Irrigation

Type of Application: ☒ New ☐ Vested Right ☐ Amendment/Correction to Permit No. _____

(Use predates Mar 2, 1955)

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

1. Name to Appear on Irrigation Permit Larry & melvin Donnelly(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent

(name and complete address if different than above name)

Mailing Address 47423 324th St. Elk Point S.D 57025

(Address)

(City)

(State)

(Zip Code)

Home Phone 605-356-2149 Cell 712-899-8965 Email melvin.Donnelly@hotmail.com2. 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 well (approximate center NE 1/4)4. Location of point of diversion 1 well NE 1/4 sec 17 township 91 North

(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)

range 50, west of the 5th P.M. Union County SD County Union5. County or counties where water will be used Union6. 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>NE 1/4 sec 17 91-N-50</u>	<u>160</u>		
<u>Approx 135 Acres will be</u>		<u>covered by Pivot</u>	

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

Irrigation will be a center PivotI, Larry Donnelly, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

SOUTH DAKOTA
WATER PERMIT NO. 8080-3

Date of first receipt of application January 20, 2015.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8080-3 to Larry & Melvin Donnelly, 47423 324th St, Elk Point SD 57025 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. 8080-3 appropriates 1.78 cubic feet of water per second from one well to be completed into the Missouri:Elk Point Aquifer (100-112 feet deep) located in the approximate center of the NE 1/4 Section 17 for irrigation of 160 acres located in the NE 1/4 Section 17; all in T91N-R50W.
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 January 20, 2015.
4. The date of approval of Permit No. 8080-3 is April 6, 2015.
5. One-fifth of the construction is to be completed on or before October 6, 2017.
6. All construction is to be completed on or before April 6, 2020.
7. Water is to be put to beneficial use on or before April 6, 2024.
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. 8080-3 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: *Jeanne Goodman*

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

APR 23 2015

date



Supplemental Information

(type or print)

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

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

b) If existing wells, how many None Provide copy of log(s), if available. Drilled by ____

c) Well Depth 100-112 Depth to Top of Water Bearing Material ____ Depth to Water from Surface ____

d) Distance to nearest existing domestic well: 1/2 mile to west

On applicant's property yes On property owned by others ____

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)

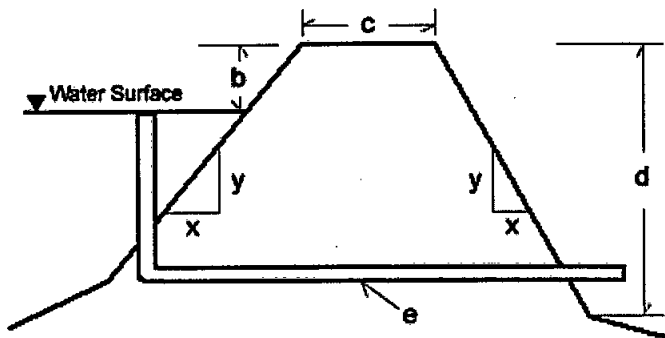
Upstream ____

Downstream ____

h) Surface Area of Impoundment ____

i) Storage ____ Acre Feet

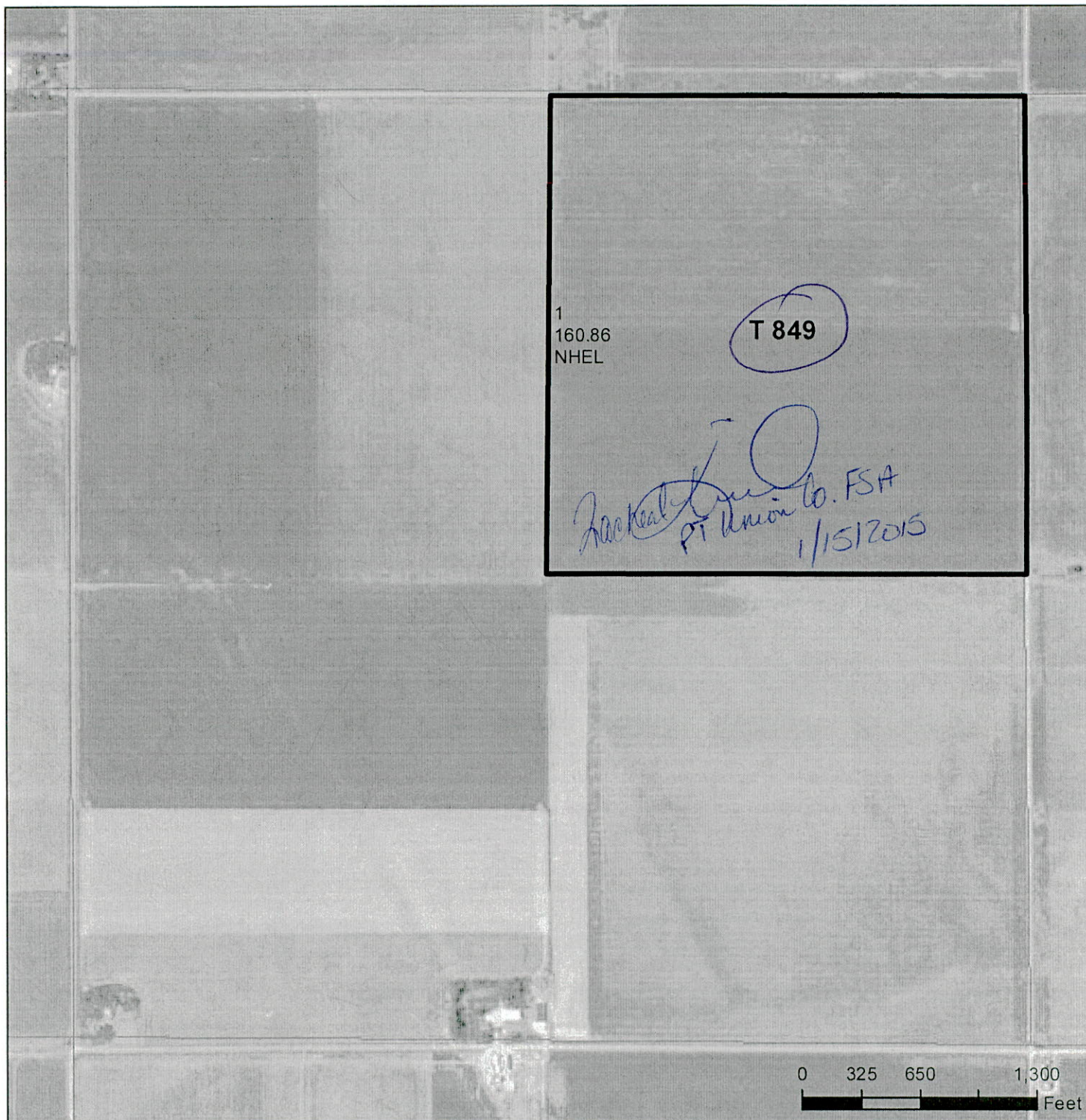
j) Drainage Area Above Dam ____ Acres





United States
Department of
Agriculture

Union County, South Dakota



Common Land Unit
Cropland // Non-cropland
Conservation Reserve Program

Wetland Determination Identifiers

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

Tract Boundary Section Line



2012 Ortho-Photography - not to scale

2014 Program Year

Map Created February 18, 2014

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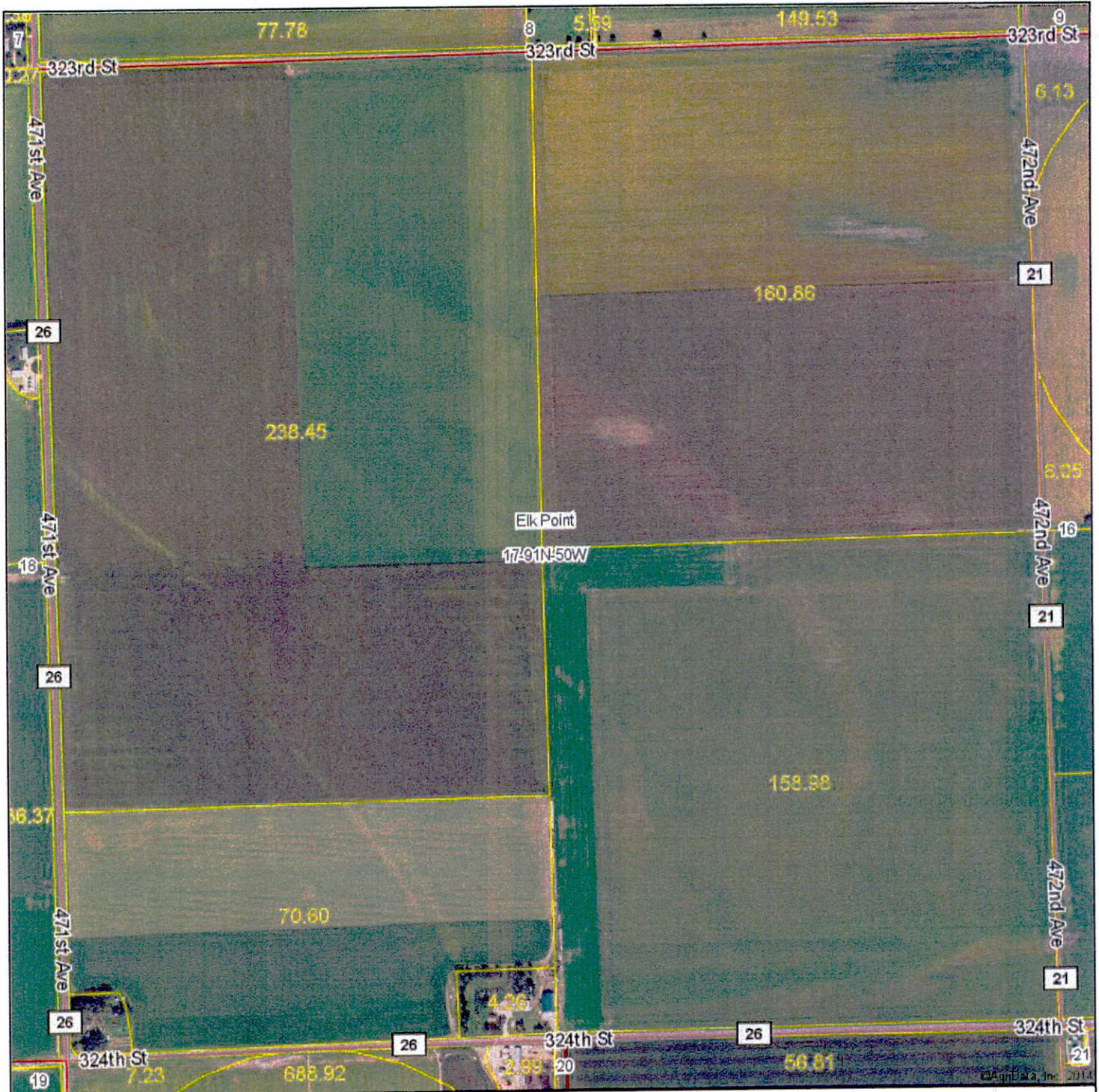
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17 -91N -50W

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly from the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data outside FSA Programs. 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 boundaries and determinations or contact USDA Natural Resources Conservation Service (NRCS).

Aerial Map



Crop Production Services 

Maps Provided By:

 **surety**
CUSTOMIZED ONLINE MAPPING
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**17-91N-50W
Union County
South Dakota**

map center: 42° 41' 57.86, 96° 46' 35.57

scale: 9519

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1/15/2015

Field borders provided by Farm Service Agency as of 5/21/2008. Aerial photography provided by Aerial Photography Field Office.

Aerial Map



©AgriData, Inc. 2014

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Maps Provided By:

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**17-91N-50W
Union County
South Dakota**

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map center: 42° 42' 10.92, 96° 46' 18.1

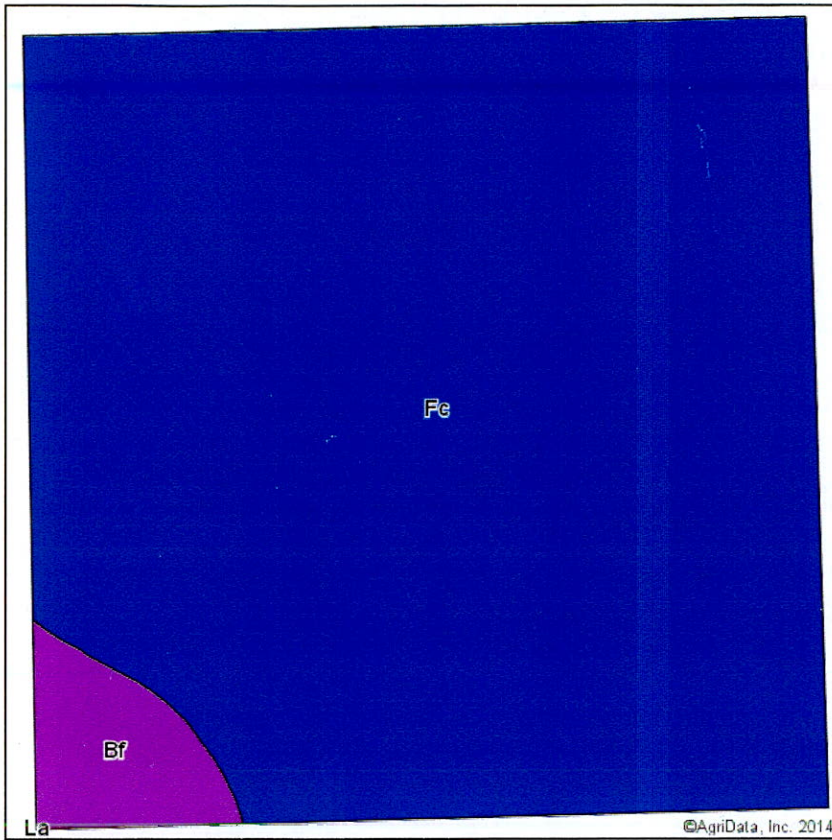
scale: 5038



1/15/2015

JAN 20 2015

Soil Map

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State: **South Dakota**
 County: **Union**
 Location: **17-91N-50W**
 Township: **Elk Point**
 Acres: **160.86**
 Date: **1/15/2015**

**Crop
Production
Services** 

Maps Provided By:

 **surety**
 CUSTOMIZED ONLINE MAPPING
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Area Symbol: SD127 Soil Area Version: 18

Code	Soil Description	Acres	Percent of field	PI Legend	Water Table	Non-Irr Class	Productivity Index	State Productivity Index	Alfalfa hay	Cor n	Soybeans
Fc	Forney silty clay	153.76	95.6%		2ft.	IIw	67	67	3.5	85	30
Bf	Blencoe silty clay	7.10	4.4%		3ft.	IIw	91	91	3.6	98	35
Weighted Average							68.1	68.1	3.5	85.6	30.2

Area Symbol: SD127, Soil Area Version: 18

Field borders provided by Farm Service Agency as of 5/21/2008. Aerial photography provided by Aerial Photography Field Office.

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 1/20, 20 15

RECEIVED OF Melvin Donnelly PO Box 966 Elk Point SD 57025

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

Fee for Application for Permit No. <u>8080-3</u> to Appropriate Water, to construct and to put water to beneficial use	425	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>8080-3</u>	100	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	525 00

No. 07140

By J. Lorne Hoodman
Chief Engineer

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 1/20, 20 15

RECEIVED OF Larry Donnelly 47423 324th At Elk Point SD 57025

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

Fee for Application for Permit No. <u>8080-3</u> to Appropriate Water, to construct and to put water to beneficial use	425	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>8080-3</u>	100	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	525 00

No. 07139

By Jacques Goodman Jr
Chief Engineer

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, January 20, 2015 1:20 PM
To: 'MelvinDonnelly@hotmail.com'
Subject: Water Permit Applications

Mr. Donnelly,

We received the two water permit applications. On the second page of each application there is a question regarding your proposed well depth. Please let me know the proposed well depth for each application.

Also, I am assuming since one application is listed in the name of Melvin & Larry Donnelly, PO Box 966, Elk Point and the other is listed as Larry & Melvin Donnelly, 47423 324th St, Elk Point, you want each application to be public noticed that way.

If you have questions, please let me know.

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

*no response
called Larry 1-22-15*

Water Rights Program - File Documentation

NAME: Larry Donnelly

ADDRESS: Elk Point

DATE: 1-22-15 **COUNTY:** UN **TELEPHONE:** 712 899-8465

RE: Pending applications for Larry & Melvin Donnelly

COMMENTS:

I called Larry Donnelly and he stated the proposed well depth for each of the Donnelly applications should be 100-112 feet deep.



Karen Schlaak
Water Rights Program



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8080-3, Larry and Melvin Donnelly**

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. 8080-3, Larry and Melvin Donnelly, 47423 324th Street, Elk Point SD 57025.

The Chief Engineer is recommending APPROVAL of Application No. 8080-3 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. 8080-3 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.

Jeanne Goodman, Chief Engineer
March 18, 2015

Report to the Chief Engineer

Water Permit Application Nos. 8079-3 and 8080-3

Melvin & Larry Donnelly

February 20, 2015

Water Permit Application Number 8079-3 proposes to appropriate water from the Elk Point management unit of the Missouri aquifer at a maximum diversion rate of 1.78 cubic feet of water per second (cfs). Water is to be used for the irrigation of 160 acres located in the SE ¼ Section 17-T91N-R50W. The proposed well location is in the approximate center of the SE ¼ Section 17-T91N-R50W with an estimated well depth of 100 to 112 feet.

Water Permit Application Number 8080-3 proposes to appropriate water from the Elk Point management unit of the Missouri aquifer at a maximum diversion rate of 1.78 cubic feet of water per second (cfs). Water is to be used for the irrigation of 160 acres located in the NE ¼ Section 17-T91N-R50W. The proposed well location is in the approximate center of the NE ¼ Section 17-T91N-R50W with an estimated well depth of 100 to 112 feet.

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

Aquifer Characteristics and Hydrogeology

The Missouri: Elk Point aquifer underlies portions of Clay, Union, and Yankton counties (Hedges et al., 1982 and 1985). It is comprised primarily of glacial outwash consisting of fine sand to coarse gravel underlying alluvium on the floodplains of the Missouri River. Much of the floodplain alluvium is permeable and forms a single aquifer where the outwash underlies the floodplain (Stephens, 1967). Elsewhere the aquifer underlies glacial till (Niehus, 1994; Bugliosi, 1986; and Stephens, 1967). The aquifer can be found under both water table and artesian conditions (Stephens, 1967). The aquifer has an area of about 219,100 acres and contains about 3,287,100 acre-feet of recoverable water (Hedges, 1982). The Missouri: Elk Point aquifer is hydraulically connected to the Missouri River along its southern boundary, the Lower-Vermillion-Missouri aquifer, the Big Sioux River, the Vermillion River, and the Lower James-Missouri aquifer (Niehus, 1994; Bugliosi, 1986; and Stephens, 1967). Groundwater movement is generally southeast toward the Missouri River (Stephens, 1967).

The applicant estimates well depths in the range of 100 to 112 feet for both applications. In examining well completion reports for this area of the Missouri: Elk Point well depths within and slightly deeper than the applicant's predictions are on record. About 0.5 miles east of the location of these applications Water Right No. 2466-3 has two 120-foot deep wells, and about 0.5 miles to the south the well for Water Permit No. 7711-3 is 143 feet deep (Water Rights, 2015b). About a mile to the north of these applications there are several wells in the 100 to 109 feet depth (Water Rights, 2015b). In the area of these proposed well sites the aquifer is under

water table conditions (Water Rights, 2015a, Water Rights, 2015b, and Water Rights, 2015b). These proposed well sites are located about 2.5 miles from the Missouri River.

South Dakota Codified Law (SDCL) 46-2A-9

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

Water Availability

Water Permit Application No. 8079-3 and No. 8080-3 propose to appropriate water from the Missouri: Elk Point aquifer. Approval of these applications is likely to result in an average annual water use of less than 320 acre-feet annually (ac-ft/yr). 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." If the source of the water is older or lower than the Greenhorn Formation and a public water system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Here, a public water system is not involved and the Missouri: Elk Point aquifer is not older or lower than the Greenhorn Formation, therefore the withdrawal/recharge issue must be considered.

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

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

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

Hydraulic Budget

Recharge to the Missouri: Elk Point occurs by infiltration of precipitation, seepage from rivers/streams, and leakage from other aquifers (Bugliosi, 1986). Hedges et al. (1985) estimated that recharge to the aquifer was approximately 3.8 inches per year, based on observation well data. Utilizing this information and the area of the aquifer, average annual natural recharge can be estimated at 69,382 acre-feet. Stonesifer (2013) estimated induced recharge to the aquifer from the Missouri River due to the operation of the Lewis and Clark Water Treatment System to be 22,582 acre-feet per year. This results in an estimated average annual recharge of 91,964 acre-feet per year. Additionally, Stonesifer (2013) notes the further potential for induced recharge to the aquifer from the Missouri, Vermillion, James, and Big Sioux Rivers.

Withdrawals from the Missouri: Elk Point aquifer includes well withdrawals, outflow to the Missouri and Big Sioux Rivers, and evaporation in locations where the aquifer is near the land's surface (Niehus, 1994; Bugliosi, 1986; and Stephens, 1967). Withdrawals from the Missouri: Elk Point as of June 24, 2013, were extensively examined in Stonesifer (2013), which estimated average annual withdrawals at 81,108 acre-feet per year. Therefore Stonesifer (2013) estimated annual recharge exceeded average annual withdrawal by 10,856 acre-feet.

The water availability for this application can be evaluated considering the water permits issued since June 24, 2013, in conjunction with the water availability analysis of Stonesifer (2013). There have been 24 water permits and two reinstated permits (7074A-3 and 7009A-3) in the aquifer since Stonesifer (2013). There are also two deferred applications for the aquifer and one pending application. These water permits/applications are summarized in Table 1, along with the amount of water appropriated for each permit in the case of irrigation permits.

For new irrigation permits the average annual pumping can be estimated in a similar manner as Stonesifer (2013), where the average ratio of pumpage to appropriation from developed appropriations was applied to new appropriations, and developed appropriations were considered to be permits authorized prior to 2006. In Stonesifer (2013) this percentage was 13.7%. In updating the pumpage to appropriations ratio, developed appropriations were considered to be those past their five year construction period in the same manner as Mathiowetz (2014). With the inclusion of the irrigation data from 2013 the updated percentage of pumpage to appropriation for developed appropriations is 14.0%. By applying this percentage of pumpage to appropriation to the irrigation permits issued since June 24, 2013, the average annual withdrawal from these appropriations can be estimated to be about 823 acre-feet. The inclusion of Application No. 8079-3 and No. 8080-3 in this estimate results in an estimated average annual withdrawal for new permits and pending applications of 868 acre-feet.

Table 1: Water Permits Issued/Reinstated Since Stonesifer (2013) (Water Rights, 2015b)						
Irrigation						
Permit No.	Name	Status	Use	Rate (cfs)	Acres	Appropriation (ac-ft/yr)
7848-3	Missouri Valley Farms Inc.	PE	IRR	3.04	213	426
7856-3	Mike & Steve Allard	PE	IRR	1.78	129.3	258.6
7895-3	Todd Hanson	PE	IRR	1.89	180	360
7898-3	James Orr	PE	IRR	1.56	132	264
7899-3	Justin Orr	PE	IRR	1.56	97	194
7904-3	Craig S. Mcinerney	PE	IRR	1.78	160	320
7933-3	Douglas G. Bye	PE	IRR	0.89	90	180
7936-3	Donald Johnson	PE	IRR	1.39	83	166
7938-3	Russell M. Hall	PE	IRR	0	53	106
7074A-3	Calvin Hanson	PE	IRR	1.78	162	324
7941-3	Joseph F. Chicoine	PE	IRR	1	37.69	75.38
7951-3	Allen Pace	PE	IRR	1.78	150	300
7955-3	Karl M. Schenk	PE	IRR	1.78	140	280
7971-3	Barry Van Osdal	PE	IRR	1.11	68	136
7980-3	Francis Heine	PE	IRR	0	5	10
7987-3	Francis M. Armstrong Living Trust	PE	IRR	1.78	102	204
8010-3	Ryan Rusher	PE	IRR	0.1	2.5	5
8016-3	Amelia Bertrand Trust	PE	IRR	1.67	66	132
8022-3	Redwood South Dakota Holdings LLP	PE	IRR	1.91	134	268
8023-3	Redwood South Dakota Holdings LLP	PE	IRR	4.14	290	580
8024-3	Redwood South Dakota Holdings LLP	PE	IRR	3.36	235.2	470.4
8025-3	Redwood South Dakota Holdings LLP	PE	IRR	3.82	267.2	534.4
8029-3	Dakota Dunes Comm. Improvement District	PE	IRR	0.78	17.8	35.6
8040-3	Heine Electric & Irrigation Inc.	PE	IRR	0.33	3	6
7009A-3	Roger D. Hanson	PE	IRR	1.78	120	240
					Total	5875
Non-Irrigation						
8031-3	Dakota Protein Conversion Inc.	PE	COM	0.22	0	
5749-3	Stockmen's Livestock Market Inc.	DF	COM	0.03	0	
5750-3	Stockmen's Livestock Market Inc.	DF	COM	0.09	0	
8069-3	Cimpl's LLC	AP	COM	0.44	0	

*PE=permit, IRR=irrigation, COM= commercial, DF=deferred, AP=pending application

For non-irrigation use, average annual use can be estimated by assuming that pumping will occur at the maximum diversion rate 60% of the time for water rights/permits limited by rate only. For water rights/permits limited to an annual volume, full use of that volume is assumed for estimation of average annual withdrawal. The pending application for Cimpl's LLC would limit their Water Right No. 5616-3 and Water Permit No. 8069-3 (if approved) to a total annual diversion of 452 acre-feet. The hydraulic budget for the Missouri: Elk Point aquifer prepared by Stonesifer (2013) considered the appropriation associated with Water Right No. 5616-3 to be 191 acre-feet per year. This would result in an additional appropriation from the aquifer of 261 acre-feet per year. Therefore the annual withdrawal for new, deferred, and pending non-irrigation appropriations can be estimated at 409 acre-feet.

In considering new permits, deferred applications, and pending applications since June 24, 2013, the average annual withdrawal for irrigation and non-irrigation use is estimated to be 1,277 acre-feet. When examining new permits in conjunction with the water availability analysis in Stonesifer (2013) average annual recharge to the Missouri: Elk Point aquifer exceeds average

annual withdrawals by about 9,579 acre-feet. Therefore there is a reasonable probability that water is available to meet the needs of this application.

Observation Well Data

In determining the availability of unappropriated water for a permit application Administrative Rule 74:02:05:07 requires the Water Management Board to rely on the record of observation well measurements, in addition to other data, to determine that average annual withdrawals from the aquifer do not exceed the estimated annual recharge. Observation well data offers a picture of conditions in the aquifer over the period of record.

The Water Rights Program monitors 37 observation wells in the Missouri: Elk Point aquifer. The nearest of these is observation well UN-77L, which is located about 1.26 miles east southeast of the location of Application No. 8079-3 and 1.68 miles northeast of the location of Application No. 8080-3. The hydrographs for this well are shown in Figure 1.

The observation well hydrograph shows cyclic patterns based on the effect of climatic conditions on the aquifer. Increases in water levels occur during wetter periods (recharge), and decreases in water levels occur during drier periods. Stephens (1967) notes the close relation of the water table under the floodplain to Missouri River water levels and the lowering of the water table in response to the closure of Gavins Point Dam. Additionally, Iles (1979) notes that the ongoing entrenchment of the Missouri River is also tied to lowering water table levels in the aquifer, and this has been linked by Goodman (2007) to the declining water levels in observation wells in this aquifer near the Missouri River. The hydrograph for the Missouri River at the USGS gaging station near Yankton, SD, is shown in Figure 1. By examining Figure 1, the relation between trends in the Missouri River water levels and trends in the water levels in the observation well can be observed. At the current level of development the temporal effects of pumping are masked by the strong hydraulic connection between the aquifer and the Missouri River and climatic conditions. This shows that the hydrographs are dominated by natural conditions, and water is available for capture. Therefore, there is a reasonable probability that there is water available to support this application.

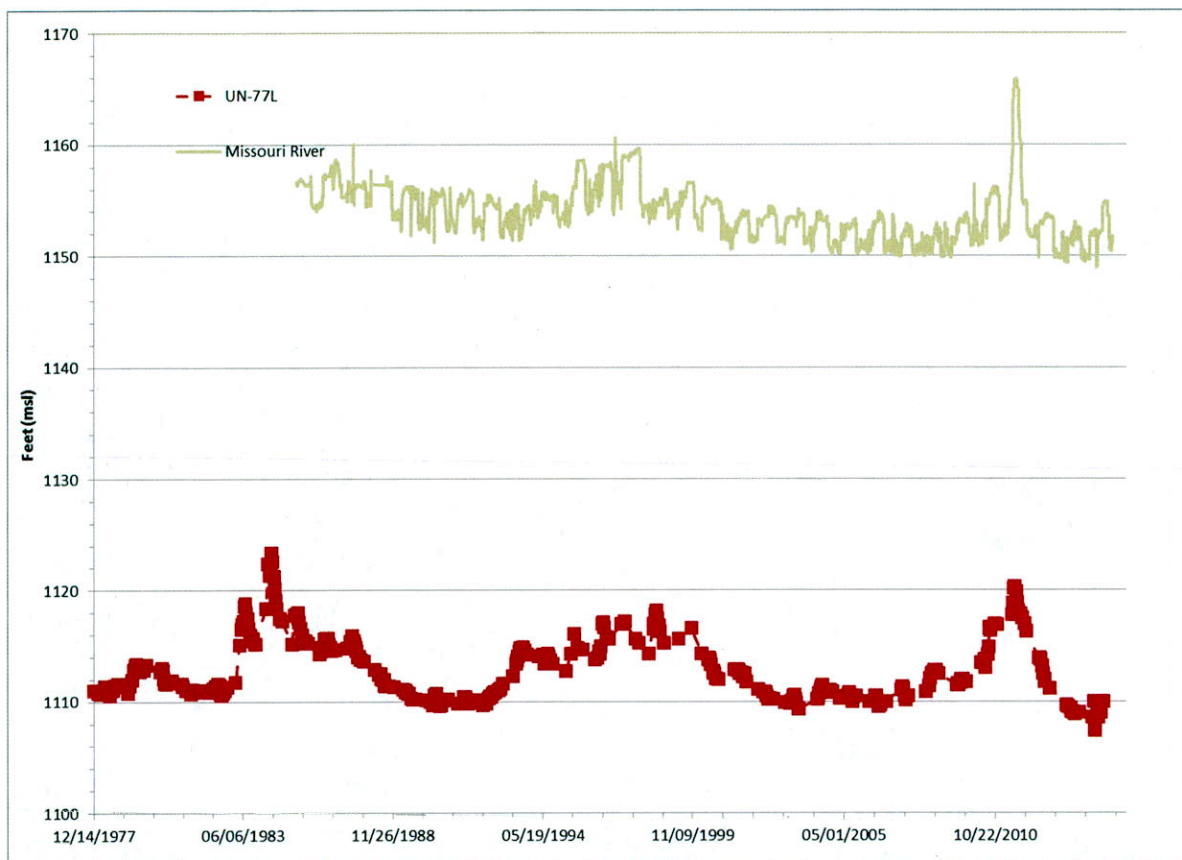


Figure 1: Hydrographs of Observation Well UN-77L, and the Missouri River Near Yankton, SD (USGS, 2015 and Water Rights, 2015b)

Existing Water Rights/Permits

There are 17 water rights/permits within two miles of the locations for Application No. 8079-3 and No. 8080-3. These Water Rights/Permits are summarized in Table 2, and locations are shown in Figure 2. The nearest Water Right/Permit to Application No. 8079-3 is Water Permit 7711-3 located about 0.5 miles away. The nearest Water Right/Permit to Application No. 8080-3 is Water Right No. 2466-3 located about 0.5 miles away. There are several domestic wells on file with the SDDENR-Water Rights Program within two miles of this application that could be completed into the Missouri: Elk Point aquifer.

Table 2: Water Rights/Permits Located within Two Miles of Application No. 8079-3 and No. 8080-3
(Water Rights, 2015b)

Permit No.	Name	Status	Use	Rate (cfs)	Acres
314-3	James Donnelly	LC	IRR	2.67	280
324-3	Calvin L. Chaussee	LC	IRR	2.28	160
2141-3	Calvin L. Chaussee	LC	IRR	2.28	160
2466-3	Carol A. Donnelly	LC	IRR	3.88	272
3549-3	Marcella Flannery Estate	LC	IRR	1.89	132
4032-3	Dawn & Gary Glover	LC	IRR	0.57	40
4045-3*	Floyd Davis	LC	IRR	9.61	673
4421-3	Missouri Valley Farms Inc.	LC	IRR	3.41	239
6179-3	Timber8 LLC	LC	IRR	4.29	300
6180-3	Timber8 LLC	LC	IRR	4.44	326
6181-3	Timber8 LLC	LC	IRR	2	142
7221-3	Mike Chicoine	PE	IRR	2.01	141
7222-3	Mike Chicoine	PE	IRR	2.01	141
7223-3	Mike Chicoine	PE	IRR	2.01	141
7711-3	Mike Chicoine	PE	IRR	1.67	115
7712-3	James Chicoine	PE	IRR	1.78	74.54
7848-3	Missouri Valley Farms Inc.	PE	IRR	3.04	213

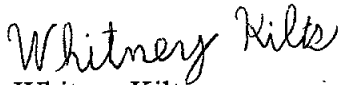
*Uses both ground and surface water

LC=license. PE=permit, IRR=irrigation

thickness is less than 20 feet.” In the past the Water Management Board has recognized that to place water to maximum beneficial use a certain amount of drawdown may occur.

Conclusions

1. Water Permit Application No. 8079-3 and No. 8080-3 propose to appropriate water from the Elk Point management unit of the Missouri aquifer with both applications requesting a maximum diversion rate of 1.78 cubic feet of water per second (cfs) both for the irrigation of 160 acres.
2. There is a reasonable probability that water is available to meet the needs of this application.
3. There is a reasonable probability that this application will not adversely impact nearby adequate wells.


Whitney Kilts
SDDENR-Water Rights Program

Approved by


Ken Buhler
SDDENR-Water Rights Program

References

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- In the Matter of Water Permit Application No. 7239-3, by Hanson County Dairy v. Robert Bender and Stace Nelson, South Dakota First Judicial Court Civ. No. 11-54 (Memorandum Decision, April 11, 2012)
- In the Matter of Water Permit Application 7209-3, Longview Farms, LLP v. South Dakota Dept. of Environment and Natural Resources, South Dakota First Judicial Court Civ. No. 11-146 (Memorandum Decision, May 17, 2012)
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AFFIDAVIT OF PUBLICATION

RECEIVED

MAR 30 2015

State of South Dakota)

:ss

County of Union)

WATER RIGHTS
PROGRAM

Bruce L. Odson,

the publisher of the Leader-Courier, deposes and says that

The Leader-Courier

is a legal weekly newspaper of a general circulation, printed and published in Elk Point, County of Union, State of South Dakota, and has been such legal newspaper during the time hereinafter mentioned, and that affiant is and was during all the time hereinafter mentioned in charge of the advertising department thereof, and has personal knowledge of all the facts stated in this affidavit: and that the notice and advertisement headed:

Notice of Application No. 8080-3

a printed copy of which is hereunto attached and made a part hereof, was printed and published in the said newspaper at least once in

each week for 1 successive weeks; that said newspaper at the time of the first publication of said notice hereinafter stated, had, and still has, a bona fide circulation of over two hundred paid copies weekly, and had been published in the said County of Union for more than one year immediately prior to the date of the said publication of said notice, and that said newspaper during said times, was, and is, printed in part in an office maintained at said city of Elk Point, the said place of publication; that the first publication of said notice in said newspaper was

on Thursday, the 26 day of March, 2015

and that the succeeding publications were

on Thursday, the _____ day of _____, _____

on Thursday, the _____ day of _____, _____

on Thursday, the _____ day of _____, _____

that the fees for the printing and publishing of said notice and advertisement in said newspaper as aforesaid were

\$ 23.78, that the full amount of the fee charged insures to the benefit of the publisher of the said newspaper, that no agreement or understanding for the division thereof has been made with any other person and that no part thereof has been agreed to be paid to any other person whomsoever.



Subscribed and sworn to before me

this 26 day of March, 2015

My commission expires 6-21-17

SUSAN ODSON
NOTARY PUBLIC
SOUTH DAKOTA

Notary Public

NOTICE OF APPLICATION NO. 8080-3 TO APPROPRIATE WATER

Notice is given that Larry & Melvin Donnelly, 47423 324th St, Elk Point SD 57025 have 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 (100-112 feet deep) located in the approximate center of the NE 1/4 Section 17 for irrigation of 160 acres located in the NE 1/4 Section 17; all in T91N-R50W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8080-3 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 April 6, 2015.

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. Information concerning this application is available at <http://denr.sd.gov/public>. 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.

Publish March 26, 2015
Published once at the total approximate cost of \$23.78
13-15-79

RECEIVED

MAR 30 2015

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

3+26
NOTICE OF APPLICATION NO.
8080-3 to Appropriate Water

Notice is given that Larry & Melvin Donnelly, 47423 324th St, Elk Point SD 57025 have 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 (100-112 feet deep) located in the approximate center of the NE 1/4 Section 17 for irrigation of 160 acres located in the NE 1/4 Section 17; all in T91N-R50W.

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Published once at the total approximate cost of \$26.81.

Department of Environment and Natural Resources
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 Application No. 8080-3

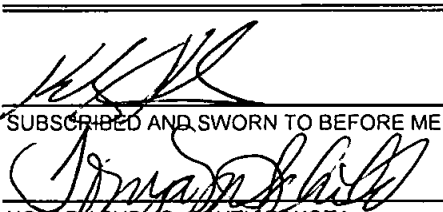
TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE NEWSPAPER ON THE 26th DAY OF March 2015 THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION OF SAID NOTICE TO WIT \$26.81 ENSURES TO THE BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO AGREEMENT AND UNDERSTANDING FOR THE DIVISION 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: 3/26/2015

FILED ON: 3/26/2015

SUBSCRIBED AND SWORN TO BEFORE ME THIS 26th DAY OF March

2015


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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

March 18, 2015

Leader Courier
PO Box 310
Elk Point SD 57078

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 8080-3 to Appropriate Water. Please publish the notice once on March 26, 2015. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Larry & Melvin Donnelly, 47423 324th St, Elk Point SD 57025 (Ph # 712-899-8465).

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

The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

March 18, 2015

Press & Dakotan
319 Walnut
Yankton SD 57078

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 8080-3 to Appropriate Water. Please publish the notice once on March 26, 2015. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

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Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

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

March 18, 2015

Larry & Melvin Donnelly
47423 324th St
Elk Point SD 57025

Dear Sirs:

Water Permit Application No. 8080-3 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 Leader Courier printed at Elk Point SD (Ph # 605-356-2632) and the Press & Dakotan printed at Yankton SD (Ph # 605-665-7811). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

Instruction to Newspaper - Publish the Notice on March 26, 2015. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 8080-3 to Appropriate Water

Notice is given that Larry & Melvin Donnelly, 47423 324th St, Elk Point SD 57025 have 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 (100-112 feet deep) located in the approximate center of the NE 1/4 Section 17 for irrigation of 160 acres located in the NE 1/4 Section 17; all in T91N-R50W.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8080-3 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.

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Published once at the total approximate cost of _____.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

APR 23 2015

Larry & Melvin Donnelly
47423 324th St
Elk Point SD 57025

Dear Sirs:

Enclosed is Water Permit No. 8080-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

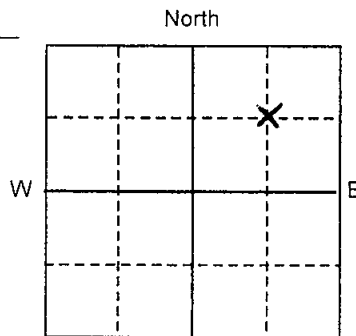
enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location center $\frac{1}{4}$ NE $\frac{1}{4}$ Sec 17 Twp 91N Rg 50WCounty Union

Please mark well location with an "X"



Well Completion Date

11/10/15Distance 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>sch40</u> LB/FT	<u>16</u> IN	<u>0</u> FT	<u>82</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>Bentonite</u>		Lb/gal	<u>0</u> Ft	<u>45</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

Pressure Grouted

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 16 Inches Length 30 Feet
 Material PVC
 Slot Size .080" Set From 82 Feet to 112 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 Tablets
☐ No, Why Not?

Lab to which water quality sample sent for analysis

Well Owner: Larry Donnelly

Business Name:

Address: 47423 324th St.City, State, Zip: Elk Point, S.D. 57025

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Gumbo Clay</u>	<u>0</u>	<u>12</u>
<u>Sand w/ clay layers</u>	<u>12</u>	<u>45</u>
<u>Sand + small gravel</u>	<u>45</u>	<u>83</u>
<u>Coal layer</u>	<u>83</u>	<u>85</u>
<u>Gravel</u>	<u>85</u>	<u>94</u>
<u>coal layer</u>	<u>94</u>	<u>98</u>
<u>Gravel w/ cobble</u>	<u>98</u>	<u>112</u>

STATIC WATER LEVEL

15.9'

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

33.6' Ft. After 1 Hrs. pumped 1000 GPM

Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: 800 GPM

REMARKS

Permit # 8080-3Missouri: Elk PointThis well was drilled under license # 763 and this report is true and accurate.Drilling firm: Salmon Well Co.

Signature of License Representative:

Scott Salmon

Signature of Well Owner or Equitable Property Holder:

Larry DonnellyDate: 11/17/15

RECEIVED

DEC - 7 2015

WATER RIGHTS PROGRAM

SD EForm - 1311LD V1

Form 10

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

MAIL TO: PMB 2020

Date 10-19-16

DENR - Water Rights Program

523 E Capitol Ave

Pierre, SD 57501-3182

ph. (605) 773-3352

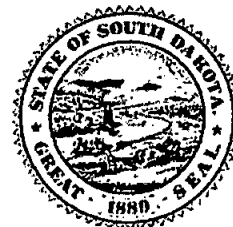
FROM:

Larry Donnelly
(name)47423 324th St
(address)Elkhart
(city)S.D
(state)57025
(zip)712-899-8465
(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. 8080-3 states that the water use system is to be constructed byApril 6, 2020
(date), and water is to be put to beneficial use by April 6, 2024
(date)The water use system was completed on 3-15-15
(date)Applying the water to beneficial use was completed on July 2015
(date)

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



8080-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

OCT 10 2017

8080-3
8248-3

Larry Donnelly
47423 324th St
Elk Point SD 57025

Dear Mr. Donnelly:

Enclosed is Water License No. 8248-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

A handwritten signature in cursive script that reads 'Jeanne Goodman'.

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

enclosures

Note: Upon licensing, the applicable portions of Water Permit No. 8080-3 were incorporated into Water License No. 8248-3.