

WATER PERMIT NO. 7497-3

Name of Applicant: Larry Aderhold

Address: 45794 SD Hwy 22, Castlewood SD 57223 Phone: 605 793-2407

Amount of Water Claimed: 2.0 cfs Total Acres: 131 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation County: Hamlin

Type of Waste Disposal System:

Location: 1 mile northwest of Castlewood

PRIORITY Date Received: 10-30-2012 Application/License Fee: \$ 1050

Corrected Application Received: 11/5/12 Period of Annual Use: June 1 – Sept 30

Remarks:

Diversion Point: SW 1/4 SE 1/4 Sec 27-T115N-
R52W

Land to be Irrigated: SE 1/4, E 1/2 SW 1/4 Sec 27-
T115N-R52W

Depth of Well: 37 feet deep

Well Driller: Kaiser Well Drilling

Remarks:

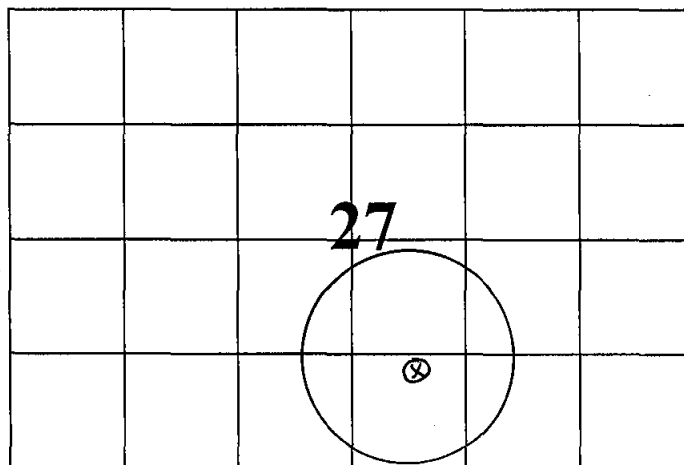
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 11-5-12

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



FORM 2: Application for irrigation in South Dakota

(type or print)

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>7497-3</u> (office use only)	Hydrologic Unit <u>10170202</u>
	Basin <u>Sioux River</u>	<u>605-793-2293</u>
	Newspaper <u>Hamlin Co. Republican Box 50 Castlewood</u>	
	<u>Public Opinion Box 10 Watertown 57201 605-886-6901</u>	

RECEIVED

OCT 30 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 Larry Aderhold Phone 793-2407 520-0367
 (check one) ☒ Owner ☐ Tenant/lessee
 Mailing Address 45794 SD Hwy 22 Castlewood State SD 57223
 (Street, RR, or Box and City) (Zip Code)
2. Amount of water claimed 1.87 *CFS or 900 **GPM ***AF Total Acreage 131
 (*Cubic Feet per Second) (**Gallons per Minute) (***) Acre Feet - storage capacity of dam/dugout or annual use if applicable
3. Source of water supply 1 New
4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Hamlin
1 new well SE1/4 SW1/4 Sec 27 TWP 115N R9 S2W
5. County or counties where water will be used Hamlin
6. Annual period during which water is to be used June-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>27-115-52 SE 1/4</u>	<u>95</u>		
<u>27-115-52 SW 1/4</u>	<u>36</u>		

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

purpose: irrigation of farm ground

STATE OF SOUTH DAKOTA) SS

County of Hamlin)

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

 I, Larry Aderhold, 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 Larry AderholdSubscribed and sworn to before me this 29 day of October 2012
 My Commission Expires
 November 10, 2014.

Marlene Mennenga
 Notary Public signature

**SOUTH DAKOTA
WATER PERMIT NO. 7497-3**

Date of first receipt of application October 30, 2012.

Date of return to applicant for corrections, amendments or changes October 30, 2012.

Date of receipt of corrected application November 5, 2012.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7497-3 to Larry Aderhold, 45794 SD Hwy 22, Castlewood SD 57223 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. 7497-3 appropriates 1.87 cubic feet of water per second (cfs) from one well to be completed into the Big Sioux:Brookings Aquifer (37 feet deep) located in SW 1/4 SE 1/4 Section 27 for irrigation of 131 acres located in the SE 1/4, E 1/2 SW 1/4 Section 27; all in T115N-R52W.
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: June 1 – September 30.
3. The date from which applicant may claim right is October 30, 2012.
4. The date of approval of Permit No. 7497-3 is January 28, 2013.
5. One-fifth of the construction is to be completed on or before July 28, 2015.
6. All construction is to be completed on or before January 28, 2018.
7. Water is to be put to beneficial use on or before January 28, 2022.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7497-3 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

FEB 19 2013

date



(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 22 Depth 37'
- b) Casing Type PVC Diameter 16" Thickness Sch 40
- c) Screen Type Johnson Screen Diameter 16" Thickness 1/4"
- d) Gravel Pack Steel 4x8 Length of Gravel Pack 20'
- e) Depth to Top of Water Bearing Material 6
- f) Depth to Water (ground surface to water level) 6' 8"
- g) Distance to nearest existing domestic well:
- On applicants property 3000' On property owned by others 1600'

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

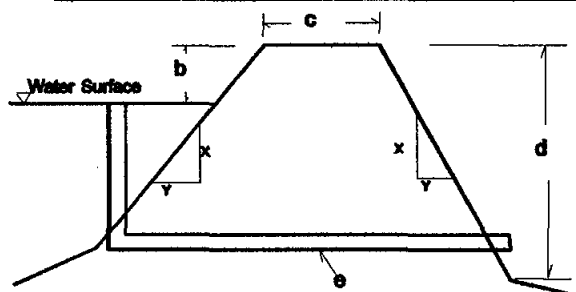
3. Dugout Information

- 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 _____
Upstream _____
Downstream _____
- h) Surface Area of Impoundment _____
- i) Storage _____ Acre Feet
- j) Drainage Area Above Dam _____ Acres

5.05 water PP

Dale's

acre
by
bea
5/16

50% Ed
50% Larry
H-22
corn
72.0 acre

277
78.05
NHSL



United States Department of Agriculture
Farm Service Agency

PLSS: 27_115N_52W
Farm: 3671

Hamlin County

1:8,382

April 21, 2010



Wetland Determination Identifiers

- Restricted Use
- ▽ Limited Restrictions

Conservation Compliance Provisions

RECEIVED

NOV - 5 2012

Common Land Units

**WATER RIGHTS
PROGRAM**

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

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location <u>SE 1/4 SE 1/4</u> Sec <u>27</u> Twp <u>11N</u> Rg <u>5W</u>		Well Owner: <u>Larry Adershold</u>																																				
County <u>Haulin</u>		Business Name: _____																																				
Address1: <u>45794 SD Hwy 22</u>		Address2: _____																																				
City, State, Zip: <u>Castleton SD 57223</u>		_____																																				
Please mark well location with an "X"		WELL LOG:																																				
Well completion Date <u>10-18-12</u>		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">FORMATION</th> <th colspan="2">DEPTH</th> </tr> <tr> <th>FROM</th> <th>TO</th> </tr> </thead> <tbody> <tr> <td><u>TS</u></td> <td><u>0</u></td> <td><u>1</u></td> </tr> <tr> <td><u>Sandy yellow clay</u></td> <td><u>1</u></td> <td><u>3</u></td> </tr> <tr> <td><u>yellow mixed gravel</u></td> <td><u>3</u></td> <td><u>15</u></td> </tr> <tr> <td><u>fine gray sand</u></td> <td><u>15</u></td> <td><u>20</u></td> </tr> <tr> <td><u>medium to coarse gray</u></td> <td><u>20</u></td> <td><u>34</u></td> </tr> <tr> <td><u>gravel</u></td> <td></td> <td></td> </tr> <tr> <td><u>Blue clay</u></td> <td><u>34</u></td> <td><u>90</u></td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		FORMATION	DEPTH		FROM	TO	<u>TS</u>	<u>0</u>	<u>1</u>	<u>Sandy yellow clay</u>	<u>1</u>	<u>3</u>	<u>yellow mixed gravel</u>	<u>3</u>	<u>15</u>	<u>fine gray sand</u>	<u>15</u>	<u>20</u>	<u>medium to coarse gray</u>	<u>20</u>	<u>34</u>	<u>gravel</u>			<u>Blue clay</u>	<u>34</u>	<u>90</u>									
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Distance from nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.) <u>21600</u> ft. from <u>IRR. Well</u> (identify source)		STATIC WATER LEVEL <u>6' 8"</u> FEET																																				
PROPOSED USE: ☐ Domestic/Stock ☐ Municipal ☐ Business ☒ Test Holes ☐ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well		If flowing: closed in pressure _____ PSI																																				
METHOD OF DRILLING: <u>Direct Rotary</u>		GPM flow _____ through _____ inch pipe																																				
CASING DATA: ☐ Steel ☐ Plastic ☐ Other If other describe _____		Controlled by ☐ Valve ☐ Reducers ☐ Other _____																																				
PIPEWEIGHT DIAMETER FROM TO HOLE DIAMETER <u>440 LB/FT</u> <u>3</u> IN <u>246</u> FT <u>24</u> FT <u>6</u> IN		Reduced flow rate _____ GPM																																				
LB/FT IN FT FT IN _____		Can well be completely shut in? _____																																				
LB/FT IN FT FT IN _____		WELL TEST DATA:																																				
GROUTING DATA: Grout Type <u>Grout Well</u> No. of Sacks <u>3</u> Grout Weight <u>54</u> Lb/gal From <u>0</u> Ft To <u>20</u> Ft <u>DI-</u> Lb/gal Ft Ft		☒ Pumped Describe: <u>air lift</u> ☐ Bailed _____ ☐ Other _____																																				
Describe grouting procedure <u>pressure pull method</u>		Pumping Level Below Land Surface																																				
SCREEN: ☐ Perforated pipe ☒ Manufactured		_____ Ft. After _____ Hrs. pumped _____ GPM																																				
Diameter <u>3</u> Inches Length <u>10</u> Feet		_____ Ft. After _____ Hrs. pumped _____ GPM																																				
Material <u>PVC</u>		If pump installed, pump rate: _____ GPM																																				
Slot Size <u>.650</u> Set From <u>24</u> Feet to <u>34</u> Feet		REMARKS																																				
Other information _____		RECEIVED OCT 30 2012 WATER RIGHTS PROGRAM																																				
WAS A PACKER OR SEAL USED? ☐ Yes ☐ No		This well was drilled under license # <u>689</u>																																				
If so, what material? _____		And this report is true and accurate.																																				
Describe packer(s) and location _____		Drilling firm: <u>RWP</u>																																				
DISINFECTION: Was well disinfected upon completion?		Signature of License Representative: _____																																				
☐ Yes, How? _____		Signature of Well Owner or Equitable Property Holder: _____																																				
☐ No, Why Not? _____		Date: <u>10-23-12</u>																																				
Lab sample sent to for water quality analysis _____		_____																																				

Please return White Copy to DENR Water Rights

523 E. Capitol Ave., Pierre SD 57501

SOUTH DAKOTA WATER WELL COMPLETION REPORT

7497-3

07-92

Location SE 1/4 SE 27 Twp 115N Rg 52W
 County SW Hamlin
 North

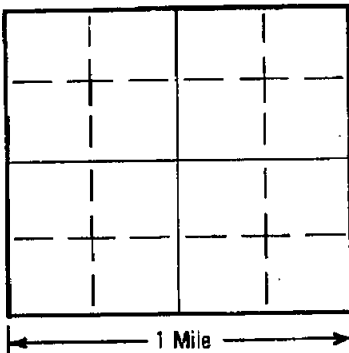
Please mark well location with an "X"

W

E

Well-Completion Date

12-20-12



LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 2500 ft. from _____ (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Bucket Rig

CASING DATA:

- ☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>Sch 16</u> LB/FT	<u>16</u> IN	<u>0</u> FT	<u>24</u> FT	<u>24</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>CEMENT</u>	<u>37</u>	<u>54</u> lb./gal	<u>0</u> ft	<u>34</u> ft
<u>DF</u>		_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure _____

SCREEN:

- ☐ Perforated pipe ☒ Manufactured

Diameter 10 IN Length 10 FEET
 Material Stainless steel
 Slot Size #32 Set From 24 Feet to 34 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: _____

_____ NO, Why Not? _____

Laboratory sent to for water quality analysis _____

Well Owner: Larry Aiderhold

Business Name: _____

Address: 45794 SD Hwy 22
Castleton SD 57223

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top Soil	.6	1
yellow clay	1	3
yellow mixed gravel	3	15
fine gray sand	15	26
medium to coarse sand	26	34
Gravel	34	40

STATIC WATER LEVEL 6 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

- ☒ Pumped Describe: Sub pump
☐ Bailed
☐ Other

Pumping Level Below Land Surface
36 ft. After 6 Hrs. pumped 600 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

Big Sioux Brookings

This well was drilled under license # _____

And this report is true and accurate.

Drilling firm Kaiser Well Drilling

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: _____

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 11/5, 20 12

RECEIVED OF Larry Aderhold 45794 SD Hwy 22 Castlewood SD 57223

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

Fee for Application for Permit No. <u>7497-3</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>7497-3</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. **05675**

By

Larry Aderhold
Chief Engineer



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

October 30, 2012

Larry Aderhold
45794 SD Hwy 22
Castlewood SD 57223

Dear Mr. Aderhold:

Thank you for submitting the *Application for a Permit to Appropriate Water* for irrigation in Hamlin County. In order to complete the application, the following is required.

- Please submit a map (aerial photo) outlining the 131 acres to be irrigated and mark the proposed well location with an "X". The map must reference a government section corner or quarter corner including section, township and range.
- The application/license filing fee will be \$1,050.00.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
605 773-3352
karen.schlaak@state.sd.us

enclosure



**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. 7497-3, Larry Aderhold**

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. 7497-3, Larry Aderhold, 45794 SD Hwy 22, Castlewood SD 57223.

The Chief Engineer is recommending APPROVAL of Application No. 7497-3 for the statutory limit of 1.87 cfs for irrigation of 131 acres 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. 7497-3 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
January 4, 2013

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO.7497-3
LARRY ADERHOLD
JANUARY 04, 2013

Water Permit Application No. 7497-3 proposes to appropriate up to 262 acre-feet (ac-ft) annually at a maximum diversion rate of 2.0 cubic feet of water per second (cfs) from one well to be completed into the Brookings management unit of the Big Sioux aquifer. The well is expected to be approximately 37 feet deep and is to be located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 27 for the irrigation of 131 acres located in the SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$ Section 27; all in T115N-R52W in Hamlin County. The applicant is requesting a diversion rate greater than the statutory limit of one cfs per 70 acres

AQUIFER: Brookings management unit of the Big Sioux aquifer (BS: B)

GEOLOGY AND AQUIFER CHARACTERISTICS:

The proposed well location is near the division between the North and Brookings management units of the Big Sioux aquifer. The discussion of which management unit the well will be completed into is academic, because at that area the aquifers are blending into one another. Other water rights/permits in the area have been identified as withdrawing water from the Big Sioux: Brookings (Water Rights, 2012c). The observation wells in the area are labeled as completed into the Big Sioux: Brookings as well (Water Rights, 2012a).

The Big Sioux: Brookings is a predominantly surficial outwash aquifer that is primarily under water table conditions in the area of this application (Koch, 1980). The Big Sioux: Brookings extends south from Hamlin County into Brookings County, and east into Deuel County. The aquifer underlies approximately 191,100 acres and contains an estimated 642,230 ac-ft of recoverable water in storage with 88,500 acres underlying and 331,880 ac-ft of water in Hamlin County (Hedges et. al, 1982). The aquifer is hydraulically connected to area lakes, streams, and the Big Sioux River (Kume, 1985). Kume (1985) determined that Big Sioux: Brookings has an average thickness of 30 feet and can be encountered at generally less than 50 feet below ground surface. Kume (1985) also stated that wells completed into the Big Sioux: Brookings aquifer could yield in excess of 1,000 gpm of water that is suitable for irrigation. The test hole log submitted with this application indicates "sandy yellow clay" from ground surface to three feet below grade and then sand and gravel from three feet to 34 feet below grade. The static water level in the test hole was 6' 8" below grade on October 18, 2012.

SDCL 46-2A-9

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

WATER AVAILABILITY:

Water Permit Application No. 7497-3 proposes to appropriate up to 262 ac-ft/yr from the Big Sioux: Brookings aquifer. Although the actual water use if this application is approved will most likely be less than 262 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.

Recharge versus Discharge:*Recharge:*

Recharge to the Big Sioux: Brookings is by infiltration of precipitation, and seepage from the Big Sioux River and its tributaries (Kume, 1985). Koch (1980) estimated a recharge rate of 6.57 inches per year (48,454 ac-ft/yr for Hamlin County) and Kume (1985) estimated an average annual recharge of 48,531 ac-ft/yr for the Big Sioux: Brookings aquifer in Hamlin and Deuel Counties.

Discharge:

The Big Sioux: Brookings natural discharge is through seepage to the Big Sioux River and its tributaries during periods of low flow and stage, and evapotranspiration (Koch, 1980). There are 106 water rights/permits appropriating water and four future use permits reserving water from the Big Sioux: Brookings aquifer in Hamlin County (Water Rights, 2012b). The amount of water that can be expected to be withdrawn through water rights/permits authorizing water use for non-irrigation purposes at the current appropriation level can be estimated by assuming: 1) water rights/permits limited by an annual volume will pump the entire volume appropriated (1,990 ac-ft/yr), 2) water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time (3,171 ac-ft/yr), and 3) future use permits can be fully developed (883 ac-ft/yr).

Table 1 shows the irrigation withdrawal from the Big Sioux: Brookings aquifer in Hamlin County. Annual withdrawal from the Big Sioux: Brookings in Hamlin County by all appropriations is expected to total less than 10,031 ac-ft at the current appropriation amount. This is much less than estimated average annual recharge. Therefore, there is a reasonable probability that unappropriated water is available from the Big Sioux: Brookings aquifer for this proposed appropriation.

Year	No. of Permits Reporting	Appropriation (ac-ft)	Pumpage (ac-ft)
2011	85	30544	4927.3
2010	84	30304	1681.63
2009	80	29384	3986.48
2008	75	28037.2	5934.02
2007	73	27571.2	5702.96
2006	69	26687.2	6807.48
2005	68	26573.2	5626.58
2004	66	26093.2	6106.78
2003	59	24353.2	5554.05
2002	60	24623.2	5620.65
2001	60	24623.2	3751.65
2000	62	25634.2	3778.59
1999	62	25646.2	3262.16
1998	63	26410.2	2908.97
1997	61	25867.7	2209
1996	61	25867.7	3624.86
1995	66	26997.7	2273.54
1994	65	26997.7	915.94
1993	67	28013.7	746.5
1992	67	27621.7	1289.6
1991	67	27732.7	4332.54
1990	76	32927.08	3352.82
1989	69	31952.4	7536.6
1988	64	31575.4	8181.4
1987	62	31060.9	4430.5
1986	64	33206.9	1453.82
1985	65	33462.9	1676.4
1984	65	33721.9	3948.1
Min	59	24353.2	746.5
Max	85	33721.9	8181.4
Avg	67.3	28338.9	3986.5

Table 1- Irrigation Water Use from the Big Sioux: Brookings in Hamlin County (Water Rights 1979-2012).

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 80 observation wells completed into the Big Sioux: Brookings aquifer with 25 located in Hamlin County (Water Rights, 2012a). The nearest observation wells are HN-57A, HN-2008B, and HN-2008A. Water levels in the observation wells show response to climatic conditions. The water levels rise (recharge) during wet years and gradually decline during dry years. The hydrographs show the effects of pumping, but it does not appear to be significant over the period of record. The climatic effects on water levels greatly mask the temporal impacts of well withdrawal. Therefore, recharge to and natural discharge from the Big Sioux: Brookings aquifer significantly exceeds pumping. Figures 1, 2 and 3 show the hydrographs for observation wells HN-57A, HN-2008B, and HN-2008A, respectively.

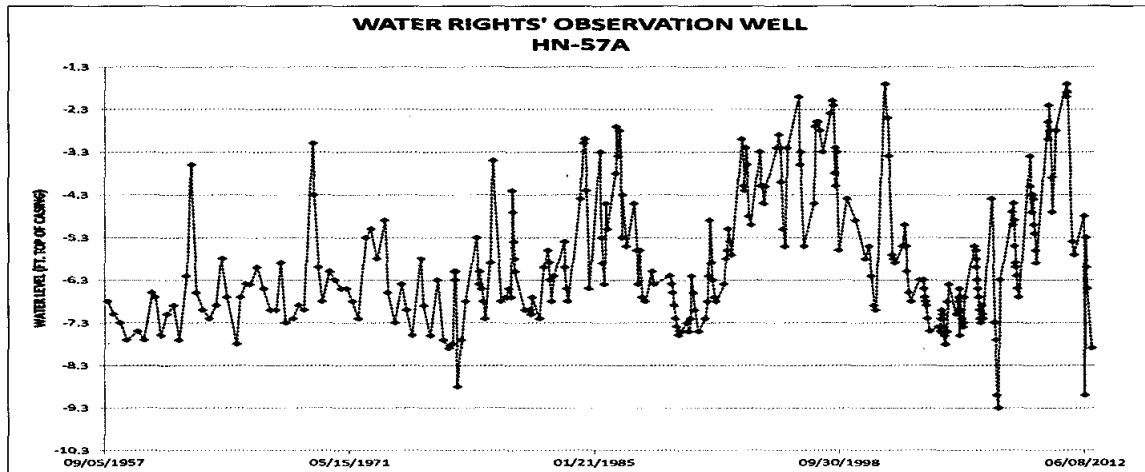


Figure 1- Hydrograph of DENR-Water Rights' observation well HN-57A, 0.5 miles southeast of the proposed well site (Water Rights, 2012a)

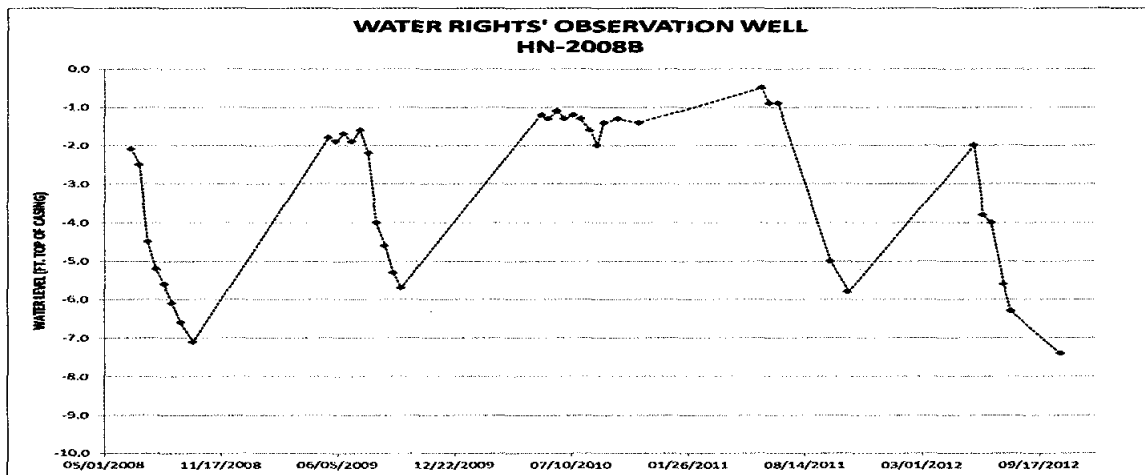


Figure 2- Hydrograph of DENR-Water Rights' observation well HN-2008B, 0.7 miles northwest of the proposed well site (Water Rights, 2012a)

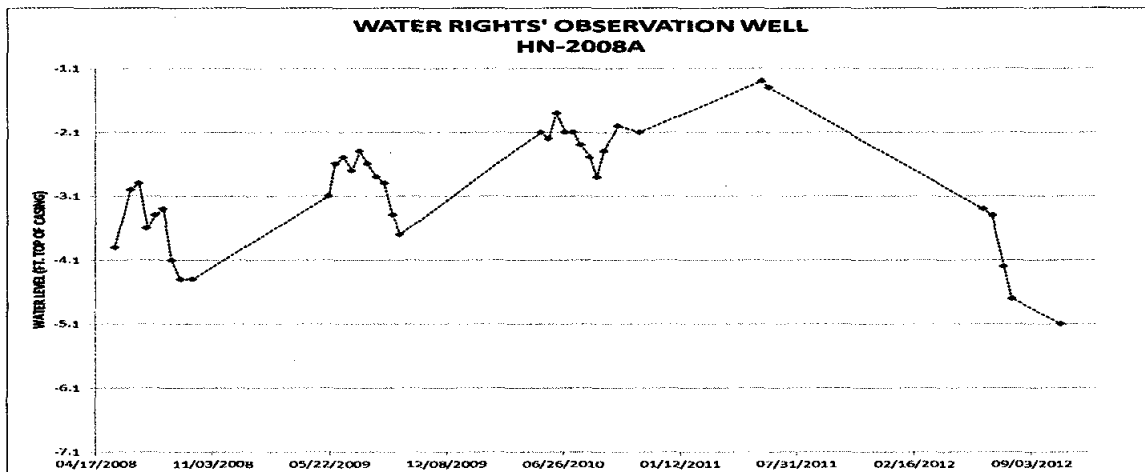


Figure 3- Hydrograph of DENR-Water Rights' observation well HN-2008A, 0.8 miles north-northwest of the proposed well site (Water Rights, 2012a)

EXISTING WATER RIGHTS:

There are 13 water rights/permits authorizing wells, two future use permits reserving water, and several domestic wells on file with the DENR-Water Rights Program within two miles of the proposed well site (Water Rights, 2012b and 2012c). Table 2 shows the water rights/permits and the future use permits within approximately two miles from the proposed well site.

Permit No.	Name	Aquifer and Mng. Unit	Status	Type	CFS	Acres
558A-3	City of Castlewood	BS:B	FU	MUN		
558B-3	City of Castlewood	BS:B	LC	MUN	0.56	
558D-3	City of Castlewood	BS:B	LC	MUN	0.33	
2036-3	James/Joan McElhany	BS:N	LC	IRR	1.89	235
5094-3	Sioux Rural Water System	BS:B	FU	RWS		
5098-3	Sioux Rural Water System	BS:B	LC	RWS	2	
5441-3	Barry Little	BS:N	LC	IRR	1.55	145
5960-3	Sioux Rural Water System	BS:B	PE	RWS	1.33	
6408A-3	Barry Little	BS:N	PE	IRR	1.53	120
6408B-3	Gordon Little	BS:N	PE	IRR	2.03	160
6424-3	Claremont Htrn. Brethren	BS:B	PE	IRR	1.14	80
6870-3	Claremont Htrn. Brethren	BS:N	PE	IRR	2.2	157
7118-3	Barry Little	BS:N	PE	IRR	0.03	35
7193-3	Claremont Htrn. Brethren	BS:N	PE	IRR	1.33	130
7296-3	Ed Aderhold	BS:B	PE	IRR	1.33	110
BS:N= Big Sioux: North, BS:B= Big Sioux: Brookings, LC = Water Right, FU= Future Use Permit, PE = Water Permit, MUN= Municipal, IRR = Irrigation, RWS= Rural Water System						

Table 2 – Water Rights/Permits within approximately two miles of the proposed well site (Water Rights, 2012b)

The hydrographs show that the impacts of pumping have not been adverse over the period of record. The minimal drawdown and interference from pumping high capacity wells is clearly shown by figures 1, 2, and 3. Figure 4 shows a map of the proposed well location, water rights/permits, and future use areas within approximately two miles of the proposed well site (Water Rights, 2012b).



Figure 4- Map of the proposed well site, water rights/permits, and future use areas within approximately two miles (Water Rights, 2012b).

The diversion proposed by this application will not limit the development of Future Use Permit No. 558A-3 and 5094-3. Each future use area is for a quarter of a section (160 acres). The nearest point of either future use area is approximately 0.8 miles away from the proposed well site. Based on the distance from the future use areas, the diversion proposed by this application should not impede utilization of water by Future Use Permit No. 558A-3 and 5094-3. Therefore due to the distance between wells, there is a reasonable probability that this proposed diversion can be made without adversely impacting existing appropriative or domestic users.

SDCL 46-5-6

Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of one cfs per second for every 70 acres, or "the equivalent thereof." The statute does provide that the Water Management Board may allow a greater diversion if the method of irrigation so requires. Water Permit Application 7497-3 proposes to divert 2.0 cfs for the irrigation of 131 acres, or the equivalent of 1.07 cfs per 70 acres. The applicant did not provide justification for the request in excess of the statutory limit.

CONCLUSIONS:

1. Water Permit Application No. 7497-3 proposes to appropriate 262 acre-feet annually for the irrigation of 131 acres at a maximum diversion rate of 2.0 cfs.
2. There is a reasonable probability that unappropriated water is available from the Big Sioux: Brookings aquifer to supply this proposed diversion.
3. There is a reasonable probability that the diversion requested by this application can be made without adversely affecting existing water rights or domestic users.
4. The applicant requested a diversion rate in excess of the statutory limit of one cfs per 70 acres. The applicant did not provide justification for this request.



Adam Mathiowetz
SD DENR-Water Rights Program

Approved by:



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Hedges, L.S., S.L. Burch, D.L. Iles, R.A. Barari, and R.A. Schoon. 1982. Evaluation of Ground-water Resources in Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report; U.S. Army Corps of Engineers Contract DACW 45-80-C-0185
- Koch, N.C. 1980. Appraisal of the Water Resources of the Big Sioux Aquifer, Brookings, Deuel, and Hamlin Counties, South Dakota. Water-Resources Investigations Report 80-100. USGS, Huron, SD.
- Kume, J. 1985. Water Resources of Deuel and Hamlin Counties, South Dakota. Water-Resources Investigations Report 84-4069. USGS, Huron SD.
- Water Rights. 1979-2012. "1979-2011 Irrigation Summaries by Aquifer": SD DENR-Water Rights Program, Joe Foss Building, 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. Well Completion Reports. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.

RECEIVED

JAN 22 2013

Form 8

WATER RIGHTS
PROGRAM

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Hamlin) SS

I, Lee Anne Dufek

certify that the attached printed Notice was taken

from the Hamlin County
Republican

printed and published in Castnewood

County of Hamlin and

state of South Dakota. The notice was published

in the newspaper on the following date:

Jan. 16, 2013

Cost of Printing \$23.76

Lee Anne Dufek
(Signature)

President
(Title)

1-16-13
(Date Signed)

NOTICE OF APPLICATION NO. 7497-3 TO APPROPRIATE WATER

Notice is given that Larry Adershold, 45794 SD Hwy 22, Castlewood SD 57223 has filed an application for a water permit to appropriate 2.0 cubic feet of water per second (cfs) from one well to be completed into the Big Sioux-Brookings Aquifer (37 feet deep) located in SW 1/4 SE 1/4 Section 27 for irrigation of 131 acres located in the SE 1/4, E 1/2 SW 1/4 Section 27; all in T115N-R52W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cubic foot of water per 70 acres. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7497-3 for the statutory limit of 1.87 cfs because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a ben-

eficial 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 January 28, 2013. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel. If legal counsel is obtained, Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Palmer, Secretary, Department of Environment and Natural Resources. Published Jan. 16, 2013, at total cost of \$23.76.

RECEIVED
JAN 25 2013
WATER RIGHTS
PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Codington) SS

I, Monica K. Saathoff

certify that the attached printed Notice was
taken

from the Watertown Public Opinion

printed and published in Watertown

County of Codington and

state of South Dakota. The notice was
published

in the newspaper on the following date:

January 16th, 2013

Cost of Printing 54.68

(Signature)

Bookkeeper

(Title)

January 16th, 2013

(Date Signed)

DEPARTMENT OF ENVIRON- MENT AND NATURAL RESOURCES

NOTICE OF APPLICATION NO. 7497-3 to Appropriate Water

Notice is given that Larry Aderhold, 45794 SD Hwy 22, Castlewood SD 57223 has filed an application for a water permit to appropriate 2.0 cubic feet of water per second (cfs) from one well to be completed into the Big Sioux/Brookings Aquifer (37 feet deep) located in SW 1/4 SE 1/4 Section 27 for irrigation of 131 acres located in the SE 1/4, E 1/2 SW 1/4 Section 27; all in T115N-R52W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cubic foot of water per 70 acres.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7497-3 for the statutory limit of 1.87 cfs 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 January 28, 2013.

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

Published once at the approximate cost of \$55.25.
(January 16, 2013)

All legal notices in the Public
Opinion and other South
Dakota newspapers can be
found at:
www.sdpublicnotices.com



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

January 7, 2013

Hamlin County Republican
PO Box 50
Castlewood SD 57223

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7497-3 to Appropriate Water. Please publish the notice once on January 16, 2013. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Larry Aderhold, 45794 SD Hwy 22, Castlewood SD 57223 (Ph # 605-793-2407).

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

January 7, 2013

Public Opinion
PO Box 10
Watertown SD 57201

ATTENTION: Legal Public Notice

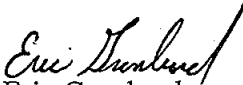
Enclosed is a Notice on Application No. 7497-3 to Appropriate Water. Please publish the notice once on January 16, 2013. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Larry Aderhold, 45794 SD Hwy 22, Castlewood SD 57223 (Ph # 605-793-2407).

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

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

Sincerely,


Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

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

January 7, 2013

Larry Aderhold
45794 SD Hwy 22
Castlewood SD 57223

Dear Mr. Aderhold:

Water Permit Application No. 7497-3 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 Hamlin County Republican printed at Castlewood SD (Ph # 605-793-2293) and the Public Opinion printed at Watertown SD (Ph # 605-886-6901). 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 January 16, 2013. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7497-3 to Appropriate Water

Notice is given that Larry Aderhold, 45794 SD Hwy 22, Castlewood SD 57223 has filed an application for a water permit to appropriate 2.0 cubic feet of water per second (cfs) from one well to be completed into the Big Sioux-Brookings Aquifer (37 feet deep) located in SW 1/4 SE 1/4 Section 27 for irrigation of 131 acres located in the SE 1/4, E 1/2 SW 1/4 Section 27; all in T115N-R52W. The applicant is requesting a diversion rate greater than the statutory limit of 1 cubic feet of water per 70 acres.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7497-3 for the statutory limit of 1.87 cfs 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 January 28, 2013.

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

Published once at the total approximate cost of _____.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

FEB 19 2013

Larry Aderhold
45794 SD Hwy 22
Castlewood SD 57223

Dear Mr. Aderhold:

Enclosed is Water Permit No. 7497-3 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

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7497-3

I have this day, April 1, 2015, made a thorough examination of the water use system constructed by Larry Aderhold, 45794 SD Hwy 22, Castlewood SD 57223 of Permit No. 7497-3, bearing the priority of October 30, 2012 authorizing the diversion of 1.87 cu. ft. per second of the waters of Big Sioux Brookings aquifer for irrigation purposes, in Hamlin County.

Inspection contact & relationship to permit holder, if applicable: **Larry Aderhold**

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Kaiser Well Drilling
- 2) No. of Wells 1

Casing:

- 1) Diameter 16 inches

- 3) Depth(s) 34 feet
- 4) Well log is available Yes

- 2) Length 24 feet
- 3) Type Plastic

Screen:

- 1) Type Stainless Steel
- 2) Length 10 feet
- 3) Static water level 6 feet

Pump/Motor:

- 1) Make GE
- 2) Size 25 hp
- 3) Capacity 800 GPM

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

- 1) Well is located at pivot center.

C. Works used to apply water to beneficial use:

Center pivot:

- 1) Make Zimmatic
- 2) Number of towers 7
- 3) End gun Y
- 4) Capacity 800 GPM

Chemigation Equipment:

- 1) Does chemigate No

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Yes, construction period has not expired
- 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: Well: approximately 2,130 feet west and 1,300 feet north from SE corner section 27-T115N-R52W (SW1/4 SE1/4, long. - 97.05525, lat. 44.73515).
2. The works are capable of diverting and conveying to the place of use 1.78 cu. ft. per second of water which is to be used for irrigation. Water has been put to beneficial use to the maximum extent as follows:

All in section 27-T115N-R52W

NE1/4 SE1/4 7 acres

NE1/4 SW1/4 14 acres

NW1/4 SE1/4 35 acres

SE1/4 SW1/4 16 acres

SW1/4 SE1/4 37 acres

SE1/4 SE1/4 8 acres

comprising a total of 117 acres of land and the license should be issued for 1.67 cfs.

3. All structures, wells and lands on map Yes

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

None.



Ron Duvall

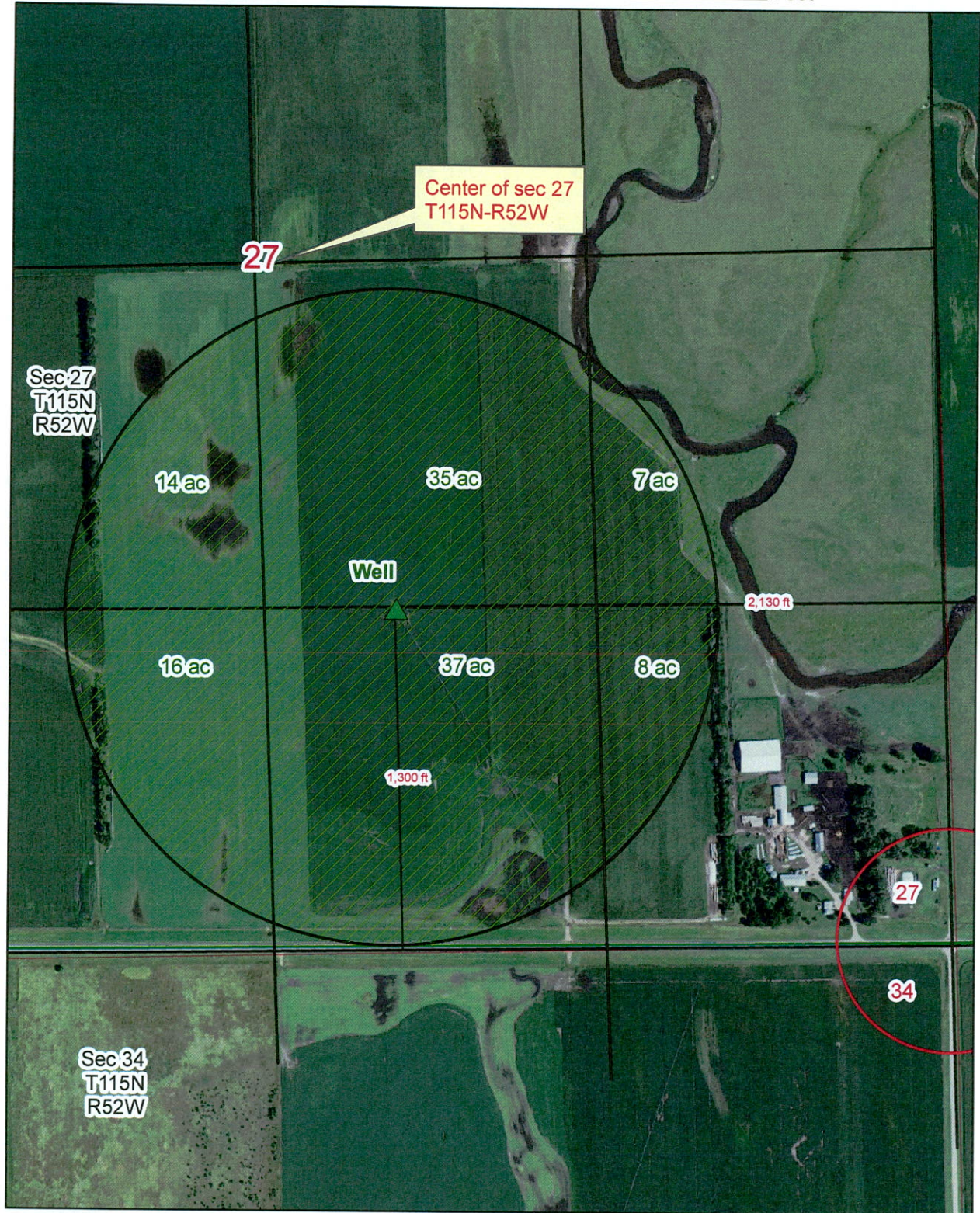
Water Rights Permitting Administrator
DENR, Water Rights Program

Date report completed: January 31, 2017

Scale: 1 inch = 578 feet

800

Feet



South Dakota
Department of Environment
& Natural Resources
Water Rights

Completed by:

Ron Duvall
Ron Duvall, W.R. Permitting Administrator
SD DENR, Water Rights Program

Diversion point(s) located using Garmin eTrex 10 GPS

Date: January 27, 2017

Water Right No. 7497-3

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

Date

4/1/15

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

FROM:

Larry Aderhold

(name)

45794 SD Hwy 22

(address)

Castlewood SD 57223

(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. 7497-3 states that the water use system is to be constructed by

Jan 28, 2018

(date)

, and water is to be put to beneficial use by

Jan 28, 2022

(date)

The water use system was completed on 2013

(date)

Applying the water to beneficial use was completed on

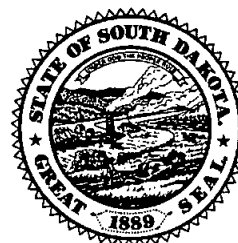
2013

(date)

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

Larry Aderhold

(signature)





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

FEB 06 2017

7497-3

Larry Aderhold
45794 SD Hwy 22
Castlewood SD 57223

Dear Mr. Aderhold:

Enclosed is Water License No. 7497-3. 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. 7497-3, 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. 7497-3**

(1) Larry Aderhold, 45794 SD Hwy 22, Castlewood SD 57223 made Application No. 7497-3, October 30, 2012 for a water permit to divert 1.87 cubic feet of water per second from ground water, one well (Big Sioux Brookings Aquifer), Hamlin County, South Dakota for irrigation purposes. Permit No. 7497-3, with a priority date of October 30, 2012 was approved January 28, 2013 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before January 28, 2018 and for the application to beneficial use of said water on or before January 28, 2022.

The Permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" indicating the water use system was completed and water placed to beneficial use in 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 1.67 cubic feet of water per second for beneficial use. The location of the diversion point is approximately 2,130 feet west and 1,300 feet north of the SE corner of Section 27, T115N, R52W (SW ¼ SE 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:

Section 27, T115N, R52W			
NE ¼ SE ¼	7 acres	NE ¼ SW ¼	14 acres
NW ¼ SE ¼	35 acres	SE ¼ SW ¼	16 acres
SW ¼ SE ¼	37 acres		
SE ¼ SE ¼	8 acres	Total	117 acres

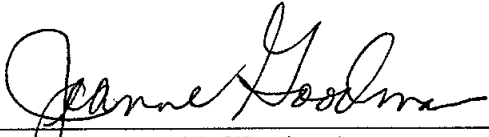
(4) Pursuant to South Dakota Water Law 46-5-30.1 Larry Aderhold, 45794 SD Hwy 22, Castlewood SD 57223 the holder and/or owner of Water Right No. 7497-3 is issued a license to appropriate water, the right to use 1.67 cubic feet of water per second from ground water, one well (Big Sioux Brookings Aquifer) with a priority date of October 30, 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. 7497-3 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. 7497-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28. ***The well was drilled in December, 2012 by Kaiser Well Drilling. A copy of the well completion report 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, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

FEB 06 2017

date





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

December 10th, 2025

7497-3

Paul Aderhold
45794 SD22
Castlewood, SD 57223

Dear Mr. Aderhold:

Each year, the State of South Dakota sends out Water Management Irrigation Questionnaires to collect information based on annual water use from our state's waters.

This year's Irrigation Questionnaire #7497-3 indicated that you are now the new owner of this property. For your convenience I have enclosed a partially completed "Transfer of Ownership" form for you to complete and return in the pre-paid envelope.

Please return the form with a check for \$50.00 made payable to "SD Water Rights Program" to cover the transfer fee. If you would prefer to pay by card you may call our Fiscal Office at 605.773.5559. This form will still need to be returned even if you are submitting payment over the phone.

Should you decide you wish to discontinue the irrigation on this piece of land, we would ask that you let us know.

If you have any questions or concerns, please give me a call. My direct number is 605.773.8204

Sincerely,

Shannon Konst

Shannon Konst
Water Rights Program
605 773-3352
Shannon.konst@state.sd.us

enclosures

PAID

JAN 05 2026

Ck# 3333

Rec't#

NOTICE OF TRANSFER OF OWNERSHIP

For assistance call (605) 773-3352

Mail to: SD DANR, Water Rights Program
523 E Capitol Ave
Pierre, SD 57501-3182

Water Right/Permit No. 7497-3

Date: 12-31-25

RECEIVED

JAN 06 2026

I/We request that Water Right/Permit No. 7497-3 formerly owned by:

Larry Aderhold

be transferred to: OFFICE OF WATER

New Owner Name:

Paul Aderhold

Address:

45794 SD 22

mobile: 605-520-3096

City, State, Zip

Castletown SD 57223

email:

pauladerhold@gmail.com

Title to the following described land(s)/property has been transferred as described above:

117 acres Located in Section 27, T115n, R52W
NE1/4 SE1/4 - 7.00 acres
NW1/4 SE1/4 - 35.00 acres
SW1/4 SE1/4 - 37.00 acres
SE1/4 SE1/4 - 8.00 acres
NE1/4 SW1/4 - 14.00 acres
SE1/4 SW1/4 - 16.00 acres

☒ I understand that the validity of Water Right/Permit No. 7497-3 has not been determined by this transfer action. If I have any questions on validity, I understand that only the Water Management Board has the authority to determine if a water right/permit is valid (see note below).

You are requested to file this "Notice of Transfer" in the appropriate file with the Water Rights Program, as evidence of the change of ownership.

A fee of Fifty Dollars (\$50.00) is included to cover the filing fee as required by SDCL 46-2-13.

I, Paul Aderhold, the new owner, certify that the above information is true and correct.

(signed by new owner)

NOTE: Water permits may be cancelled for nonconstruction after the five-year construction period has expired. Once a water permit is developed, an inspection is conducted to issue a water right license for the project as developed. A water permit/right may be cancelled for one or more of the following reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three-year period without legal excuse.
3. For a third violation of a condition of a water permit/right.

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Agriculture and Natural Resources

Date January 05, 2026

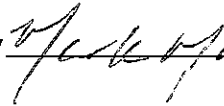
RECEIVED OF Paul Aderhold 45794 SD 22 Castlewood SD 57223

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	\$ _____
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. _____	\$ _____
Fee for Filing Transfer Form #7497-3	\$ <u>50.00</u>
Fee for _____	\$ _____
Fee for Issuing New Well Driller's License No. _____	\$ _____
Fee for Renewal of Well Driller's License No. _____	\$ _____
Fee for Issuing Well Pump Installer's License No. _____	\$ _____
Fee for Renewal of Well Pump Installer's License No. _____	\$ _____
(Any Other Work Provided by Law)	
TOTAL	\$ <u>50.00</u>

(P)

By



Chief Engineer



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

January 7th, 2026

7497-3

Paul Aderhold
45794 SD 22
Castlewood, SD 57223

Dear Mr. Aderhold,

The South Dakota Water Rights Program is in receipt of the "Notice of Transfer of Ownership" form and the required fees you submitted for Water Right No. 7497-3. Enclosed is a receipt of payment for your records.

Water Right No. 7497-3, previously held by Larry Aderhold is now listed under your name. I have also updated your contact information in our system.

As a reminder, so long as you use the water beneficially, as stated in the License (copy enclosed), State Water Laws provide that you have a continuing right to use the water. Should the water not be put to beneficial use for a period longer than 3 consecutive years, without legal excuse, the License will be subject to cancellation.

If you have any questions, please contact me.

Sincerely,

Shannon Konst
Water Rights Program
605 773-3352
Shannon.konst@state.sd.us

NOTE: The validity of Water Right No. 7497-3 has not been determined by this transfer action. Only the Water Management Board has the authority to determine if a water permit/right is valid.

enclosure