

WATER PERMIT NO. 8520-3

Name of Applicant: City of Aberdeen

Address: 225 3rd Ave SE, Aberdeen SD 57401

Phone: 605 626-7015

Amount of Water Claimed: 0.33 cfs

Total Acres: NA

Source of Water Supply: groundwater (2 wells)

Water to be used for: recreational and fish & wildlife propagation

County: Brown

Type of Waste Disposal System:

Location: Wylie Park in Aberdeen

PRIORITY Date Received: 5-14-2020

Application/License Fee: \$ 700

Corrected Application Received: 6-24-2021

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: W 1/2 SE 1/4 Sec 3-T123N-R64W

Land to be Irrigated: NA

Depth of Well: 85 feet deep

Well Driller:

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 6-24-21

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

			3		
				⊗	
				⊗	

SOUTH DAKOTA
WATER PERMIT NO. 8520-3

Date of first receipt of application May 4, 2020.

Date of return to applicant for corrections, amendments or changes May 3, 2021.

Date of receipt of corrected application June 24, 2021.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8520-3 to City of Aberdeen, c/o Tyler Bierman, Park Superintendent, 225 3rd Ave SE, Aberdeen SD 57401 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. 8520-3 appropriates 9.15 acre-feet of water annually at a maximum pump rate of 0.33 cubic feet of water per second from two wells completed into the Elm:Southern Brown Aquifer (85 feet deep) located in the W 1/2 SE 1/4 Section 3-T123N-R64W. The well water will be used to maintain duck ponds and a recreational creek at Wylie Park located in northwest Aberdeen SD.
2. The water appropriated shall be used for the purpose of recreation and fish & wildlife propagation use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date from which applicant may claim right is May 3, 2021.
5. The date of approval of Permit No. 8520-3 is August 30, 2021.
6. 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 wells approved under Water Permit No. 8520-3 are located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals under this Permit shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Elm Southern Brown aquifer.
3. Water Permit No. 8520-3 authorizes a total annual diversion of up to 9.15 acre-feet of water.

WATER MANAGEMENT BOARD

By: Eric Gronlund
Eric Gronlund, Chief Engineer
Water Rights Program
Department of Agriculture and Natural Resources

SEP 27 2021
date



FORM 2: Application for uses other than irrigation
(type or print)

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8520-3</u> (office use only)	Hydrologic Unit <u>10160003</u>
	Basin <u>James River</u>	
	Newspaper <u>American News</u>	

Originally
Received
5/4/2020

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

☐ Municipal	☐ Water Distribution System	☒ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☒ Fish & Wildlife	☐ Geothermal
☐ Domestic (over 18 gpm)	☐ Industrial	☐ Other _____	

Type of Application:
(check one)

☒ New	☐ Vested Right (Use predates Mar 2, 1955)	☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____		
☐ Amendment/Correction to Permit No. _____		

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)
_____1. Name to Appear on Water Permit City of AberdeenMailing Address 225 3rd Ave SE Aberdeen ☒ SD ☒ 57401
(Address) (City) (State) (Zip Code)Phone (605) 626-7015 Mobile _____ Email tyler.bierman@aberndeen.sd.us2. Amount of water claimed 0.33 *CFS or 100 **GPM and 9.15 AF ***AF or _____ Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (***)Acrc Feet - storage capacity of dam/dugout or annual use)3. Source of water supply Shallow Well- Aquifer4. Location of point of diversion 2 wells; NW 1/4 SE 1/4 Section 3 Twp 123N Tf 64W County Brown ☒
(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☒ No

If "Yes," where will water be used? _____

(example - NW1/4 section 12-T104N-R53W)

5. County or counties where water will be used Brown6. Annual period during which water is to be used Year-Round

7. Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

Wylie Park in Aberdeen, SD has two duck ponds and a recreational creek that we want to feed with well water. We had two shallow testholes drilled in the park to check water. We now wish to make at least one of these wells a permanant well.

I, Tyler Bierman Park Superintendent, the applicant, certify under
Name of Person Title (if applicable)

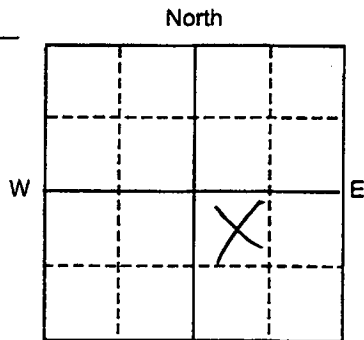
penalty of perjury that I have read this application, examined the attached map, and that the matters stated are true. I further certify, if acting on behalf of an entity or individual other than myself, that I am authorized to submit this application.

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW 1/4 SE 1/4 Sec 3 Twp 123N Rg 64WCounty Brown

Please mark well location with an "X"



Well Completion Date

3-5-20

1 Mile

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

NONE ft. from

(identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Mud Rotary

CASING DATA:

If other describe

☐ Steel ☒ Plastic ☐ Other

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>250</u> LB/FT	<u>5</u> IN	<u>13</u> FT	<u>85</u> FT	<u>7 1/8</u> IN
<u>200</u> LB/FT	<u>5</u> IN	<u>0</u> FT	<u>13</u> FT	<u>7 1/8</u> IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>#20</u>	<u>2</u>	Lb/gal	<u>0</u> Ft	<u>15</u> Ft

Describe grouting procedure

Tremie Pipe

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 5 Inches Length 72 FeetMaterial ReelSlot Size 1025 Set From 13 Feet to 85 Feet

Other information

WAS A PACKER OR SEAL USED?

☒ Yes ☐ No

If so, what material?

Enviro Plug

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How?
Chlorine

Lab to which water

☐ No, Why Not?

quality sample sent for analysis

Well Owner: Wiley Park

Business Name:

Address: 2202 24th Ave NWCity, State, Zip: Aberdeen SD 57401

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Top Soil</u>	<u>0</u>	<u>1</u>
<u>Yellow Clay</u>	<u>1</u>	<u>8</u>
<u>Fine Sand</u>	<u>8</u>	<u>12</u>
<u>Yellow Clay</u>	<u>12</u>	<u>15</u>
<u>Sand & Coal</u>	<u>15</u>	<u>34</u>
<u>Blue Clay & streaks</u>	<u>34</u>	<u>85</u>
<u>Shale</u>		

STATIC WATER LEVEL 3 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: Submersible
☐ Bailed
☐ Other

Pumping Level Below Land Surface

15 Ft. After 60 Hrs. pumped 60 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

This well was drilled under license # 722 and this report is true and accurate.Drilling firm: Stretch's Well Service Inc.

Signature of License Representative:

[Signature]

Signature of Well Owner or Equitable Property Holder:

RECEIVED

Date:

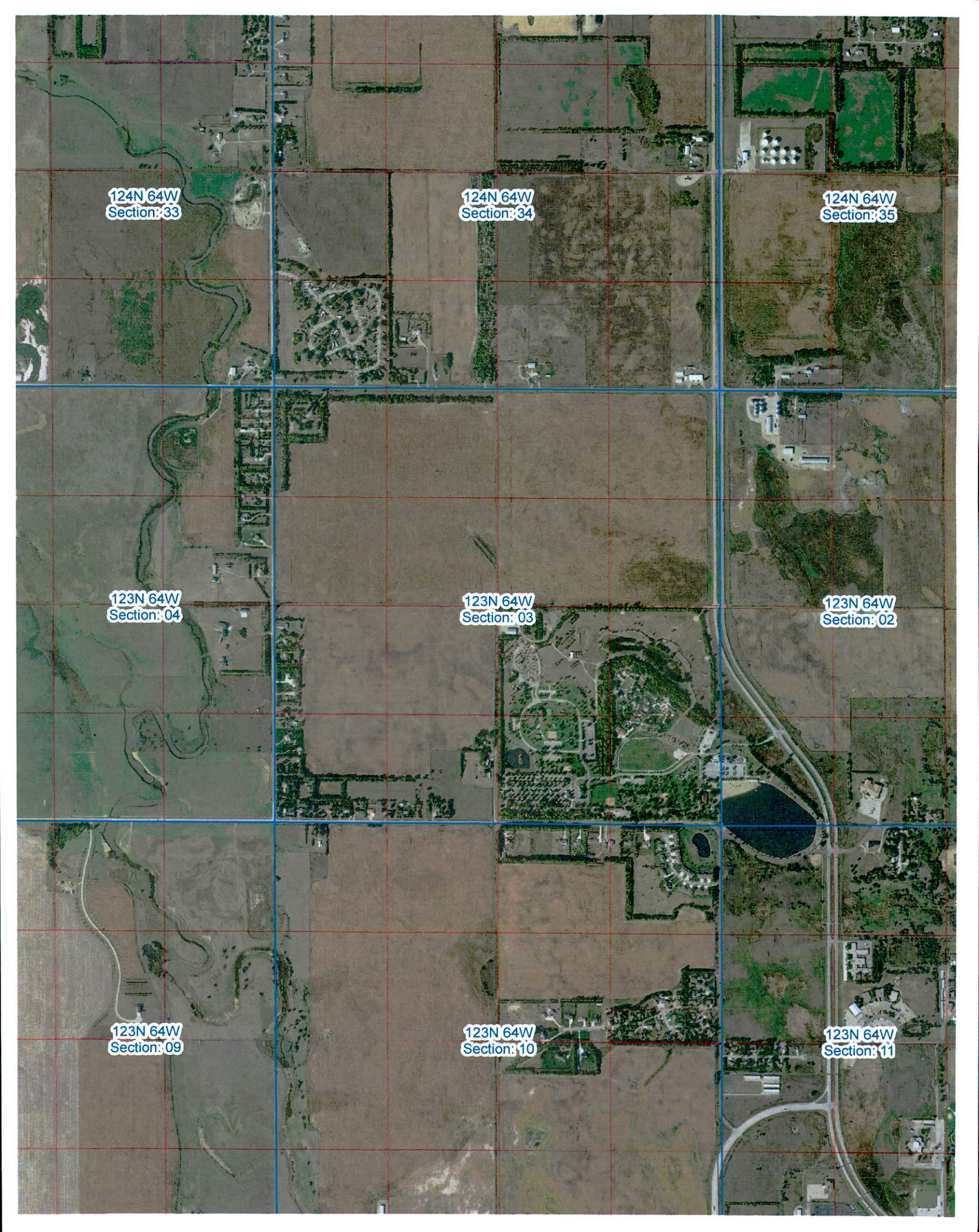
MAY 04 2020

WATER RIGHTS PROGRAM

Mark 49777
380-7682

Stretch's Well Service Inc. Drillers Log (800) 288-2128			Page No.		
Job Name		Next Location	Date	Rig No.	Foreman
Wiley Park		Aberdeen SD	3-5-20		Mark
Jt #	Depth	Time	BY ZOD	Remarks	Mark - 380-7682
1	0-15	10.15	GL-1	TOP SOIL	BLACK
2	15-30	10.30	1-8	Yellow CLAY	
3	30-45	10.55	8-12-	FINE SAND	
4	45-60	11.15	12-15	Yellow CLAY	
5	60-75	11.28	15-19	SAND	
6	75-90	12.40	19-25	SAND	different color alot of coal
7	90-105	1.25		took H2O	
			25-30	SAND drilled better	took H2O
			30-34	SAND	
			34-45	BLUE CLAY	
			45-53	Blue Sandy CLAY	Small Pebbles
			53-61	GILTY BLUE CLAY	
			61-77	SILTY Blue clay with Pebbles	
1	0-15	K		with Small Sand STREAKS	
2	15-25	DC	77-87	Harder Blue CLAY with Pebbles	
3	25-40	R		Small Sand STREAKS	
4	40-55	R	87-90	Shale	
5	55-70	R	WD 85-	WH- 8.15	
6	70-85	R +2	13' 5" SCD 40	PVC well casing	
			72' 5"	250PD PVC well screen	
			2-5"	PVC caps	
			2 bags	bentonite	
			2 bags	EVI PLUG	
			14 bags	# 30 Pack SAND	
				Pump sheet attached	





124N 64W
Section: 33

124N 64W
Section: 34

124N 64W
Section: 35

123N 64W
Section: 04

123N 64W
Section: 03

123N 64W
Section: 02

123N 64W
Section: 09

123N 64W
Section: 10

123N 64W
Section: 11

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Agriculture and Natural Resources

Date June 24, 2021

RECEIVED OF Wylie Well 123 S Lincoln St Aberdeen SD 57401

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

Fee for Application for Permit No. <u>8520-3</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>500.00</u>
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>8520-3</u>	\$ <u>200.00</u>
Fee for Filing Transfer Form _____	\$ _____
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>700.00</u>

By Eric Gronlund
Chief Engineer

DM

Water Rights Program - File Documentation

NAME: City of Aberdeen

ADDRESS: 225 3rd Ave SD, Aberdeen SD 57401

DATE: 5-3-2021

RE: Pending Application

COMMENTS:

While reviewing the well completion reports submitted for the past year a water permit application was found attached behind a well completion report and overlooked.

I called Tyler Bierman, Park Supt to explain what happened and inquired if the City still wanted to proceed with the application.

Mr. Bierman indicated the wells have been dug and are currently being used for the project described on the application. I told him we would proceed with processing the application and I would be sending him a letter requesting the fee and any other required information.



Karen Schlaak
Water Rights Program



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

May 3, 2021

City of Aberdeen
Tyler Bierman, Park Supt
225 3rd Ave SE
Aberdeen SD 57401

Dear Mr. Bierman:

As stated in our phone conversation this morning, this letter is regarding the *Application for a Permit to Appropriate Water* originally submitted on May 4, 2020. You indicated the wells have been dug and the water is being used as indicated on the application. In order to complete the application, the following is required.

- The application requests 100 gallons per minute from one well and 50 gallons per minute from the second well and a total of 9.15 acre-feet of water annually. Are these amounts still correct?
- The application states the two wells are located in the NW 1/4 SE 1/4 Section 3-T123N-R64W. From looking at the map submitted with the application, it appears that one of the wells is in the SW 1/4 SE 1/4. Do you agree with changing the location of the wells to the W 1/2 SE 1/4 Section 3-T123N-R64W?
- The application/license fee for 9.15 acre-feet of water annually will be \$700.00. Please submit that amount.

If you have any questions, please contact me.

Sincerely,

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

enclosures

Schlaak, Karen

From: Schlaak, Karen
Sent: Friday, May 14, 2021 9:57 AM
To: Tyler Bierman
Subject: RE: [EXT] Wylie Park Wells
Attachments: INVOICE.docx

Here you go.
Karen

From: Tyler Bierman <tyler.bierman@aberndeen.sd.us>
Sent: Thursday, May 13, 2021 4:13 PM
To: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Subject: [EXT] Wylie Park Wells

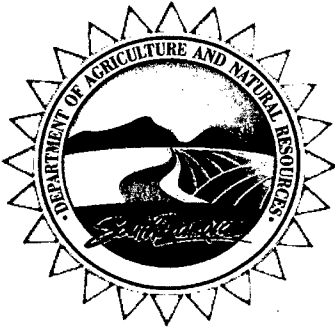
Hey,

I received your letter about our wells we drilled last year. Yes the amounts are still accurate and yes it is okay to change the location of these wells. Will you send out an actual invoice for the \$700 payment?

Thanks,

Tyler Bierman
Park Superintendent
Aberdeen, SD
(605) 626-7072





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8520-3, City of Aberdeen**

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. 8520-3, City of Aberdeen, 225 3rd Ave SE, Aberdeen SD 57401.

The Chief Engineer is recommending APPROVAL of Application No. 8520-3 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 wells approved under Water Permit No. 8520-3 are located near domestic wells and other wells which may obtain water from the same aquifer. Water withdrawals under this Permit shall be controlled so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Elm Southern Brown aquifer.
3. Water Permit No. 8520-3 authorizes a total annual diversion of up to 9.15 acre-feet of water.

See report on application for additional information.

Eric Gronlund

Eric Gronlund, Chief Engineer
August 6, 2021

Report to the Chief Engineer
On Water Permit Application No. 8520-3
City of Aberdeen

July 29, 2021

Water Permit Application No. 8520-3 proposes to appropriate up to 9.15 acre-feet of water annually at a maximum diversion rate of 0.33 cubic feet per second (cfs) from two wells completed into the Elm: Southern Brown aquifer (85 feet deep). These wells are to be located in the W ½ SE ¼ of Section 3; all in T123N-R64W for recreational and fish and wildlife propagation use. The two diversion points are located in Brown County in the City of Aberdeen, SD.

AQUIFER: Elm: Southern Brown (E:SB)

HYDROGEOLOGY:

The Elm aquifer underlies approximately 315,500 acres and contains approximately 1,134,000 million acre-feet of recoverable water in storage within three counties in South Dakota (Hedges et al., 1982). The Elm aquifer overlies the western part of the Middle James aquifer in Brown County and is hydraulically connected to it (Koch and Bradford, 1976; Tipton, 1977). The saturated thickness of the Elm aquifer on average is 25 feet but can range from approximately 2 to 112 feet (Koch and Bradford, 1976). The static water level of the Elm aquifer can range from approximately 4 to 50 feet below ground surface (Koch and Bradford, 1976). The Elm aquifer can either be unconfined or confined with the confined areas being generally located in the western portion of the aquifer (Koch and Bradford, 1976). The flow of groundwater in this area is commonly from the northwest to the southeast towards Elm River and Foot Creek (Koch and Bradford, 1976).

The Elm aquifer is composed of two management units: Elm: Northern Brown and Elm: Southern Brown. The diversion points for Water Permit Application No. 8520-3 are completed into the Southern Brown management unit of the Elm aquifer. The Elm: Southern Brown aquifer is comprised of glacial outwash of sand and gravel (Koch and Bradford, 1976; Leap, 1986). In Brown County, the Southern Brown management unit of the Elm aquifer underlies approximately 62,400 acres and contains approximately 234,000 acre-feet of recoverable water in storage (Hedges et al., 1982). The areal extent of the Elm: Southern Brown aquifer within Brown County is displayed in Figure 1 along with the location of the diversion points.

Two well completion reports were submitted with Water Permit Application No. 8520-3. The well completion report for a well completed on March 5th, 2020 lists “black topsoil” from 0 to 1 foot below the land surface, “yellow clay” from 1 to 8 feet, “fine sand” from 8 to 12 feet, “yellow clay” from 12 to 15 feet, “sand” from 15 to 19 feet, “coal and sand” from 15 to 34 feet, “Blue clay with sand streaks” from 34 to 87 feet, and “shale” from 90 to 105 feet (Water Rights, 2021d). The well completion report for a well completed on March 9th, 2020 lists “mixed topsoil” from 0 to 3 feet below the land surface, “yellow clay” from 3 to 9 feet, “fine sand” from

9 to 13 feet, “yellow clay” from 13 to 15 feet, “sand with clay streaks” from 15 to 20 feet, “sand and coal” from 20 to 42 feet, “blue clay with sand streaks” from 42 to 91 feet, and “shale” from 91 to 95 feet (Water Rights, 2021d). The measured static water levels recorded at these two locations were 11 and 3 feet below land surface, respectively (Water Rights, 2021d). The Elm: Southern Brown aquifer is confined at the diversion points based on the submitted well completion report and lithologic logs on file for nearby observation wells (SDGS, 2021; Water Rights, 2021b and 2021d). There are lithologic logs in the surrounding area that show that the aquifer can also be under unconfined conditions (SDGS, 2021).

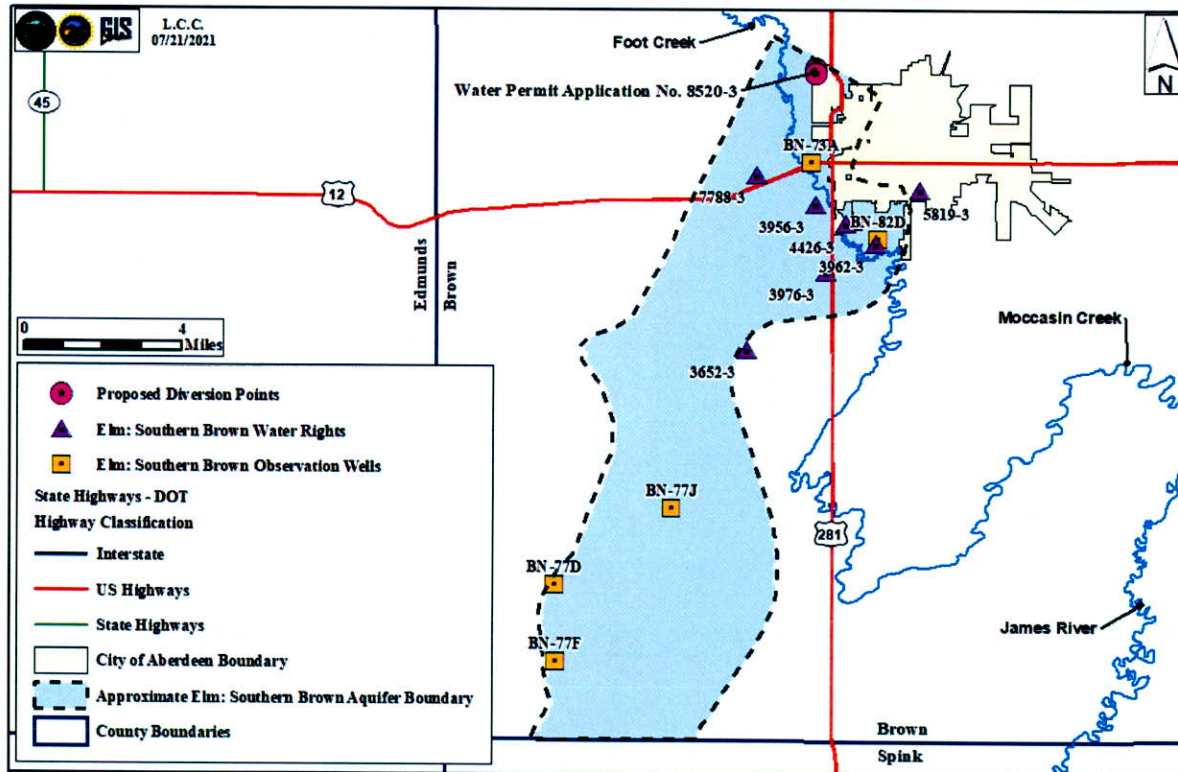


Figure 1: Map showing the approximate areal extent of the Elm: Southern Brown aquifer including observation wells, water rights/permits, and the location of Water Permit Application No. 8520-3 (Hedges et al., 1982, Water Rights, 2021b and 2021c).

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 diversion point 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 the potential for unlawful impairment of existing water rights within the Elm: Southern Brown aquifer.

WATER AVAILABILITY:

Water Permit Application No. 8520-3 proposes to appropriate water from the Elm: Southern Brown aquifer for recreational and fish and wildlife propagation uses. The probability of

unappropriated water being available from the 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. An application may be approved, however, for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems.” The Elm: Southern Brown aquifer is not older than or stratigraphically lower than the Greenhorn Formation, and the applicant’s proposed use is not for use in a water distribution system as defined by SDCL 46-1-6(17). Therefore, the average annual recharge and average annual withdrawal rates to and from the Elm: Southern Brown aquifer must be considered.

HYDROLOGIC BUDGET:

Recharge

The recharge to the Elm aquifer mainly occurs from the infiltration of precipitation, snowmelt, and surface water through overlying outwash, lake sediments, and till (Koch and Bradford, 1976). The recharge to the aquifer can either take place rapidly in level areas where permeable sediments overlie the aquifer or slowly where till overlies the aquifer (Koch and Bradford, 1976). The recharge rate to the Elm: Southern Brown aquifer that was estimated from regional flow-net analysis is approximately 0.42 inches per year according to Hedges and others (1985). Therefore, the annual recharge rate to the Elm: Southern Brown aquifer within Brown County is approximately 2,184 acre-feet.

Discharge

Natural discharge of the Elm aquifer within Brown County is to the Elm River and Foot Creek, evapotranspiration, by flow into the Middle James aquifer, and by eastward flow into lacustrine deposits underlying the Lake Dakota plain (Koch and Bradford, 1976; Leap, 1986). Currently, there are seven water rights appropriating water from the Elm: Southern Brown aquifer (Water Rights, 2021c). The use type for six of the water rights is for irrigation purposes and the remaining one water right is for commercial purposes. The water rights/permits within the Elm: Southern Brown aquifer are identified in Table 1, and annual irrigation withdrawals from the Elm: Southern Brown aquifer are shown in Table 2.

Water Permit Application No. 8520-3

Table 1: Irrigation Water rights/permits within the Elm: Southern Brown aquifer (Water Rights, 2021c).

Permit No.	Name	Status	Use	Diversion Rate cfs	Authorized Acres
3652-2	Ronne Terrell	LC	IRR	0.81	57
3956-3	Keith Lowary	LC	IRR	1.78	174
3962-3	Northwestern Public Service	LC	IRR, DOM	0.03	0
3976-3	A N Sanderson	LC	IRR	0.62	43.1
4426-3	Lakeside Estates Association	LC	COM	0.33	N/A
5819-3	Bethesda Home of Aberdeen	LC	IRR	0.09	20
7788-3	Jon Swenson	PE	IRR	0.35	0
LC: Licensed Water Permit; PE: Water Permit					
COM: Commercial; MUN: Municipal; DOM: Domestic; FWP: Fish and Wildlife Propagation; RWS: Rural Water System; IRR: Irrigation					

Table 2: Reported historic irrigation use for the Elm: Southern Brown aquifer (Water Rights, 2021a).

Year	No. of Permits	Reported Pumpage (acre-feet)	Year	No. of Permits	Reported Pumpage (acre-feet)
1979	5	27	2002	2	0
1980	5	38	2003	2	0
1981	5	26	2004	2	0
1982	4	0	2005	2	0
1983	5	86	2006	2	0
1984	5	313	2007	2	0
1985	5	269	2008	2	0
1986	5	274	2009	2	0
1987	5	319.3	2010	2	0
1988	4	526.4	2011	2	0
1989	4	262	2012	4	0
1990	4	385	2013	5	28.3
1991	4	95	2014	5	21.2
1992	4	175	2015	5	23
1993	4	28	2016	5	17.7
1994	5	123.1	2017	5	31.8
1995	3	66.4	2018	5	33.6
1996	3	43.7	2019	5	19.4
1997	3	2	2020	5	21.2
1998	2	61.8	Min	2	0
1999	2	16.9	Max	5	526
2000	2	17.4	Avg	4	80
2001	2	0	Avg (2012-2020)	5	22

Currently, Water Right No. 4426-3 is the only water right authorized to appropriate water from the Elm: Southern Brown aquifer for non-irrigation use (Water Rights, 2021c). Water Right No. 4426-3 is held by Lakesides Estates Association and is used commercially as a backup water supply to WEB Rural Water System. Water rights/permits for non-irrigation use that are limited only by diversion rate currently appropriate a total of 0.33 cfs out of the Elm: Southern Brown aquifer (Water Rights 2021c). The amount of water that can be withdrawn was estimated by assuming the non-irrigation water rights/permits limited by an annual volume will withdraw their entire appropriated volume every year. It is estimated that the non-irrigation water rights/permits

limited only by a diversion rate will pump at their maximum permitted diversion for 60% of the time. Using this assumption, the annual estimated withdrawal from the Elm: Southern Brown aquifer for non-irrigation purposes is approximately 144 acre-feet per year (Water Rights, 2021c). However, the actual withdrawal amount is likely much less than 144 acre-feet per year and probably 0 acre-feet per year since Water Right No. 4426-3 is used as backup water supply for WEB rural water (Drinking Water Program, 2021; Water Rights, 2021c). It will be assumed as using 0 ac-ft/yr for the purposes of this report.

There are domestic wells completed into the Elm: Southern Brown aquifer that do not require a water right/permit, so the withdrawal amount is unknown (Water Rights, 2021d). Since the introduction of rural water systems, many domestic wells are likely no longer in use or are not being used as primary water sources. Withdrawals from domestic wells are not considered to be a significant portion of the hydrological budget for the Elm: Southern Brown aquifer as a result of their relatively low diversion rates and the availability of rural water.

Hydrologic Budget Summary

The estimated average annual withdrawals from the Elm: Southern Brown aquifer totals approximately 89.15 acre-feet/year (irrigation: 80 acre-feet/year; non-irrigation: 0 acre-feet/year; Water Permit Application No. 8520-3 (if approved) (assuming full appropriation): 9.15 acre-feet/year). The estimated annual recharge to the Elm: Southern Brown aquifer is approximately 2,184 acre-feet/ year. The estimated annual recharge to the Elm: Southern Brown aquifer is greater than the estimated annual withdrawals. Therefore, unappropriated water is available for the appropriation proposed by this permit application.

OBSERVATION WELL DATA:

Administrative Rule of South Dakota (ARSD) 74:02:05:07 requires that the Water Management Board shall rely upon the record of observation well measurements in addition to other data to determine that the quantity of water withdrawn annually from the aquifer does not exceed the annual recharge of the aquifer.

The DNR-Water Rights Program monitors five observation wells completed into the Elm: Southern Brown aquifer. There are two observation wells that are within five miles of the diversion points. Observation well BN-73A is 2.3 miles south from the diversion points and observation well BN-82D is 4.5 miles southeast from the proposed diversion points. The hydrographs shown in Figure 2 and Figure 3 from observation wells provide insight into the behavior of the aquifer in response to regional climatic conditions and pumping within the area.

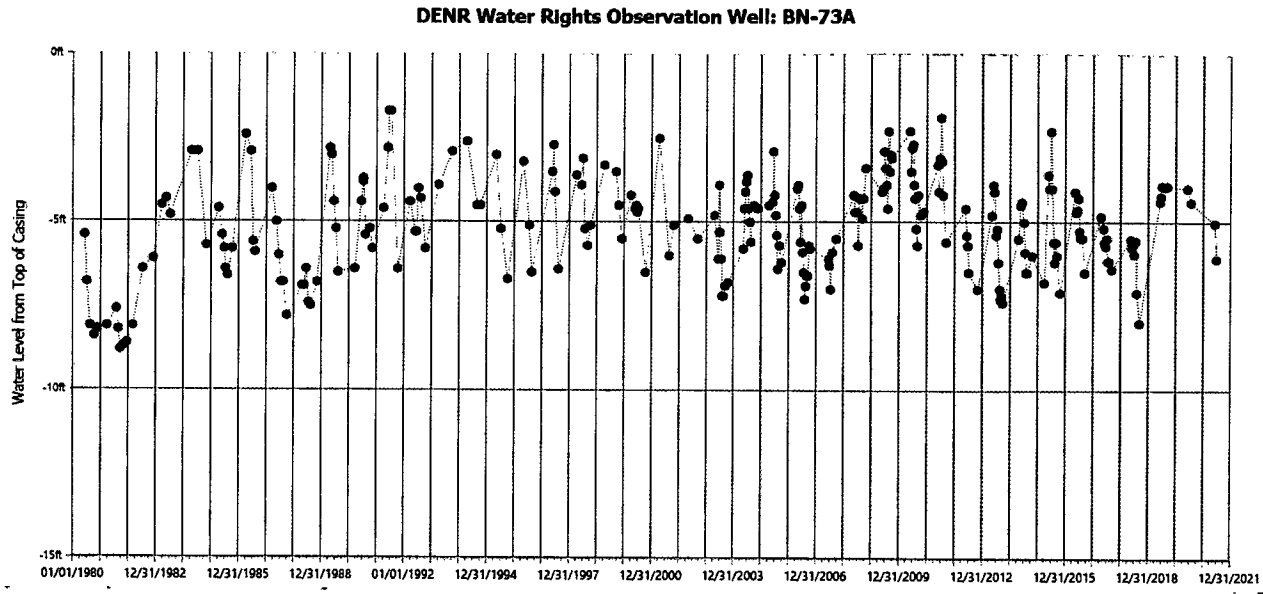


Figure 2: Hydrograph of the Elm: Southern Brown aquifer Observation Well BN-73A (Water Rights, 2021b).

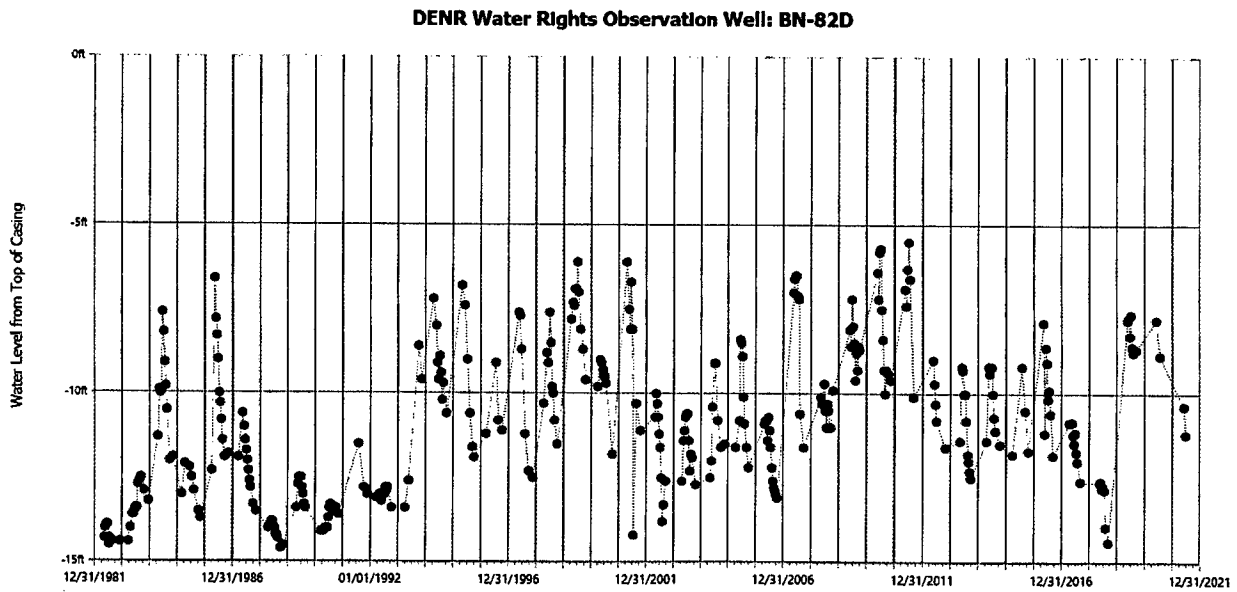


Figure 3: Hydrograph of the Elm: Southern Brown aquifer observation well BN-82D (Water Rights, 2021b).

The hydrographs for the two nearest observations wells to the diversion point demonstrate that the aquifer responds well to climatic conditions of water levels, rising during wet periods and declining during dry periods. The water levels in these observation wells indicate that the amount of recharge and natural discharge from the Elm: Southern Brown aquifer governs the long-term fluctuations in water level of the aquifer rather than the impacts of pumping within the aquifer. By recognizing that both recharge to and natural discharge from an aquifer can be captured for pumping, the observation well hydrographs document unappropriated water is available for this proposed appropriation.

POTENTIAL FOR UNLAWFUL IMPAIRMENT OF EXISTING WATER RIGHTS:

There are four water rights/permits that are authorized to appropriate water from the Elm: Southern Brown aquifer within four miles of the proposed diversion points. The four water rights/permits are shown in Figure 4 and identified in Tables 1 and 3. The nearest water right/permit to the proposed diversion point completed into the Elm: Southern Brown aquifer is Water Right No. 7788-3 approximately 3 miles southwest of the diversion points. There are a number of completions reports on file for domestic wells with the SD DANR-Water Rights Program within this area. The nearest domestic well on file with the SD DANR-Water Rights Program (not held by the applicant) completed into the Elm: Southern Brown aquifer is approximately 0.7 miles west of the diversion point (Water Rights, 2021d). There may be other wells completed into the Elm: Southern Brown aquifer that are not on file with the Water Rights Program in the area of this application.

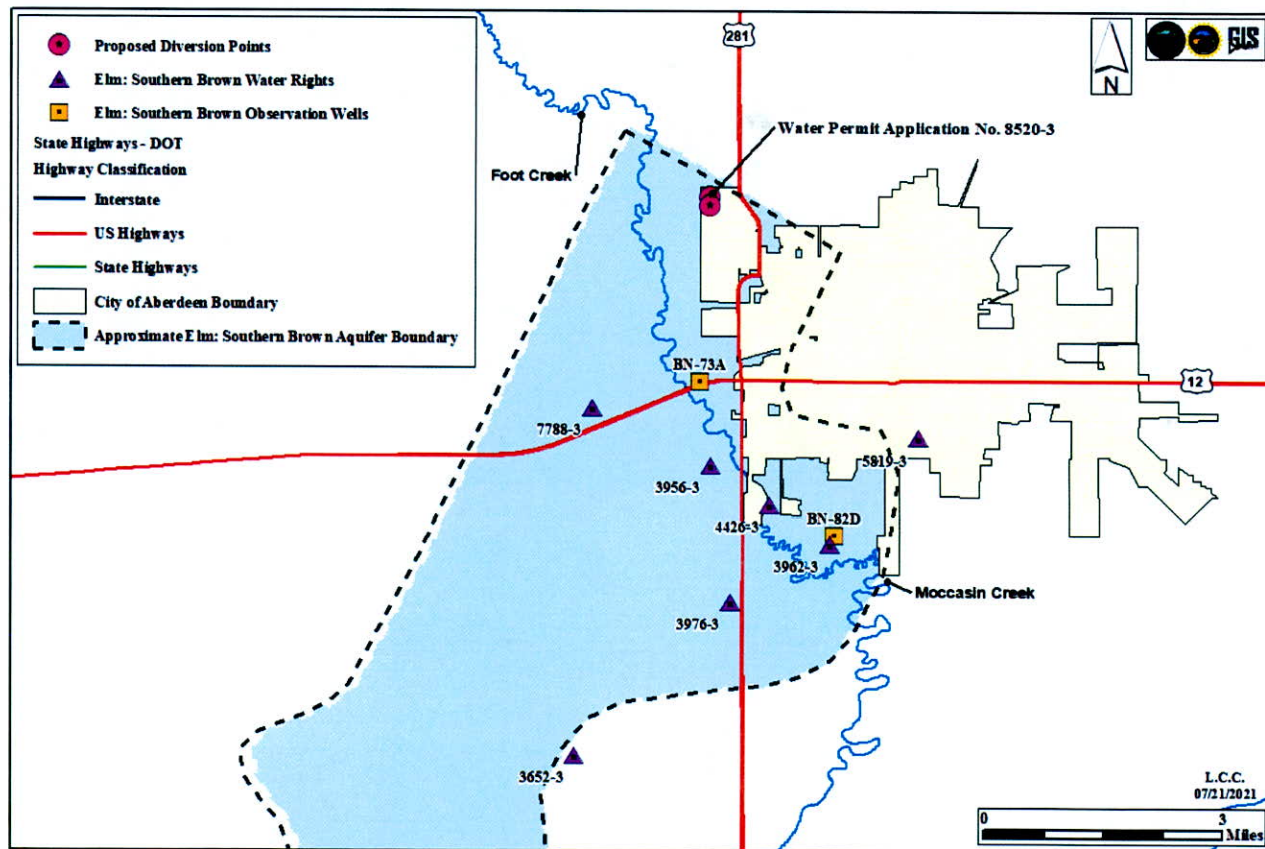


Figure 4: Map showing the site locations of Water Permit Application No. 8520-3, nearby water rights/permits, and nearby observation wells in Elm: Southern Brown (Water Rights, 2021b and 2021c).

Table 3: Water rights/permits from the Elm: Southern Brown aquifer within four miles from the diversion points (Water Rights, 2021c).

Permit No.	Name	Status	Use	Diversion Rate cfs	Authorized Acres
3956-3	Keith Lowary	LC	IRR	1.78	174
4426-3	Lakeside Estates Association	LC	COM	0.33	N/A
5819-3	Bethesda Home of Aberdeen	LC	IRR	0.09	20
7788-3	Jon Swenson	PE	IRR	0.35	0
LC: Licensed Water Permit; PE: Water Permit					
COM: Commercial; MUN: Municipal; DOM: Domestic; FWP: Fish and Wildlife Propagation; RWS: Rural Water System; IRR: Irrigation					

In Brown county, there has been one complaint submitted in August of 1980 to the DANR – Water Rights Program regarding potential well interference resulting from a neighboring irrigation dugout; however, after investigation the complaint was determined to be unsubstantiated (Water Rights 2021e). The proposed diversion points for this application are located approximately 7.3 miles north of that well complaint location.

The Elm: Southern Brown aquifer is generally under confined conditions but can be under unconfined conditions in certain areas (Koch and Bradford, 1976). The lithologic logs for the nearby observation wells as well as the submitted well completion reports show that the diversion points are under confined conditions (Water Rights, 2021b). Based on the well completion reports submitted with Water Permit Application No. 8520-3, the Elm: Southern Brown aquifer is approximately 15 feet below grade at the proposed diversion points, with a static water level of approximately 3 to 11 feet below grade, which indicates there is approximately 4 to 12 feet of artesian head pressure in the Elm: Southern Brown aquifer at the site of interest. Observation well data (see Figures 2-3) documents minimal drawdown from withdrawals of irrigation wells near the proposed diversion point. Pumping from the diversion points is not expected to significantly lower water levels within the aquifer. Drawdown created by pumping a well generally does not extend far from the pumped well in an unconfined aquifer; however, in a confined aquifer, drawdown from pumping could extend a distance from the diversion points. The exact drawdown behavior of a well cannot be known without an aquifer performance test.

The Elm: Southern Brown aquifer is expected to have a saturated thickness of approximately 25 feet and a static water level ranging from approximately 3 to 11 feet below ground surface (Koch and Bradford, 1976). This would allow for sufficient saturated thickness for a pump to be placed 20 feet below top of aquifer. The Water Management Board recognizes that putting water to beneficial use requires a certain amount of drawdown to occur. The Board has developed rules to allow water to be placed to maximum beneficial use without the necessity of maintaining artesian head pressure for domestic use. The Water Management Board defined an “adversely impacted domestic well” in ARSD 74:02:04:20(7) as:

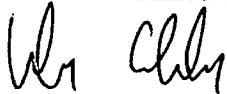
“A well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer

has declined to a level that the pump will no longer deliver sufficient water for the well owner's needs."

The Water Management Board considered the delivery of water by artesian head pressure versus maximum beneficial use during the issuance of Water Right No. 2313-2 for Coca-Cola Bottling Company of the Black Hills. The Board adopted the Findings of Facts and Conclusions of Law that noted the reservation of artesian head pressure for delivery of water would be inconsistent with SDCL 46-1-4 which states, "general welfare requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable..." (Water Rights, 1995). Furthermore, the Water Management Board found if increased cost or decreased production as a result of impacts on artesian head pressure by legitimate users is to be considered as an unlawful impairment, it would also conflict with SDCL 46-1-4 (Water Rights, 1995). With that in mind, some existing well owners may need to install or lower pumps depending on the specific characteristics of the Elm: Southern Brown aquifer at their location. However, when considering the statutes (SDCL 46-1-4 and 46-6-6.1) and ARSD 74:02:04:20 (6) and (7), the amount of artesian head pressure in observation wells and appropriative user's wells completed into Elm: Southern Brown aquifer, the estimated thickness of the Elm: Southern Brown aquifer at the applicant's location, and the lack of well interference complaints, including any complaints about usage from these existing diversion points, any drawdown created from the proposed diversion is not expected to cause an unlawful impairment on existing water rights/permits or domestic users with adequate wells. Therefore, there is a reasonable probability that any interference from the proposed appropriation by Water Permit Application No. 8520-3 will not impose unlawful impairments on existing users with adequate wells.

CONCLUSIONS:

1. Water Permit Application No. 8520-2 proposes to appropriate 9.15 acre-feet of water annually at a maximum diversion rate of 0.33 cfs of water from two existing wells completed into the Elm: Southern Brown aquifer. The two sites are located in Brown County in the City of Aberdeen, SD.
2. There is a reasonable probability that unappropriated water is available from the Elm: Southern Brown aquifer for this proposed appropriation based on the hydrologic budget and observation well data.
3. There is a reasonable probability this diversion will not unlawfully impair adequate wells authorized by existing water rights or domestic use wells.



Lindsey Cederberg
Natural Resources Engineer I
SD DANR - Water Rights Program



Adam Mathiowetz, PE
Natural Resources Engineer III
SD DANR - Water Rights Program

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- Water Rights, 2021e. County Files, SD DANR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

LOCALiQ

Aberdeen News
Watertown Public Opinion

PO Box 630567 Cincinnati, OH 45263-0567

PROOF OF PUBLICATION

Sd Dept Of Agriculture
Sd Dept Of Agriculture
523 CAPITOL AVE E
Foss Building
Pierre SD 57501-3182

RECEIVED
AUG 24 2021
WATER RIGHTS
PROGRAM

STATE OF SOUTH DAKOTA, COUNTY OF BROWN

The AMERICAN NEWS is a daily newspaper of general circulation, printed and published in Aberdeen, Brown County, South Dakota, and has been such a newspaper during the times hereinafter mentioned; and personal knowledge of the facts herein state that the notice hereto annexed was Published in said newspapers in the issue:

08/19/2021

That said newspaper is a legal newspaper published five days or more each week; with a bona fide circulation of more than two hundred copies daily; published in the English language within the said county of Brown for more than one year prior to the first publication of said notice; and printed in whole in an office maintained at the place of publication of said newspaper.
Sworn to and subscribed before on 08/19/2021

Nicole Jacobs
Legal Clerk
Sarah Bertelsen
Notary, State of WI, County of Brown
7/27/25

My commission expires

Publication Cost: \$34.12

Order No: 6166807

of Copies:

Customer No: 561459

1

PO #:

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

SARAH BERTELSEN
Notary Public
State of Wisconsin

NOTICE OF
APPLICATION NO. 8520-3
to Appropriate Water
Notice is given that City of
Aberdeen, c/o Tyler Bier-
man, Park Superintendent,
225 3rd Ave SE, Aberdeen
SD 57401 has filed an appli-
cation for a water permit
to appropriate 9.15 acre-
feet of water annually at a
maximum pump rate of
0.33 cubic feet of water per
second from two wells
completed into the
Elm:Southern Brown
Aquifer (85 feet deep)
located in the W 1/2 SE 1/4
Section 3-T123N-R64W for
recreational and fish &
wildlife propagation use.
The well water will be used
to maintain duck ponds
and a recreational creek at
Wylie Park located in
northwest Aberdeen SD.
Pursuant to SDCL 46-2A-2,
the Chief Engineer recom-
mends APPROVAL of
Application No. 8520-3 with
qualifications because 1) unappropriated water is
available, 2) existing
rights will not be unlaw-
fully impaired, 3) it is a
beneficial use of water,
and 4) it is in the public
interest. The Chief Engi-
neer's recommendation
with qualifications, the
application, and staff
report are available at
<https://danr.sd.gov/public>
or contact Ron Duvall for
this information, or other
information, at the Water
Rights Program address
provided below.

Any person interested in
opposing or supporting this
application or recommen-
dation must file a written
petition with BOTH the
applicant and Chief Engi-
neer. 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 Capi-
tol, Pierre SD 57501 (605
773-3352)" and the appli-
cant's mailing address is
given above. A petition
filed by either an inter-
ested person or the appli-
cant must be filed by
August 30, 2021.

The petition may be infor-
mal 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 peti-
tioner or the petitioner's
legal counsel, if legal coun-
sel is obtained.

If the applicant does not
contest the recommenda-
tion of the Chief Engineer
and no petition to oppose
the application is received,
the Chief Engineer shall
act on the application
pursuant to the recommen-
dation with no hearing held
before the Water Manage-
ment Board. If a petition
opposing the application or
contesting the recommen-
dation is filed, then a hear-
ing 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.

RECEIVED
AUG 24 2021
WATER RIGHTS
PROGRAM

Published once at the total
approximate cost of \$34.12.
August 19, 2021 #6166807

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, August 10, 2021 9:44 AM
To: Aberdeen News Legals (aan-legals@aberdeennews.com)
Subject: 8520-3, City of Aberdeen
Attachments: 8520-3public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on August 19, 2021.

City of Aberdeen, c/o Tyler Bierman, Park Supt, 225 3rd Ave SE, Aberdeen SD 57401 (605 626-7015) has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP to the Water Rights Program, 523 E Capitol, Pierre SD 57501.

Let me know if you have questions. Please acknowledge receipt of this email.

Karen Schlaak

DANR - Water Rights Program
(605) 773-3352

Website: <https://danr.sd.gov>



NOTICE OF APPLICATION NO. 8520-3 to Appropriate Water

Notice is given that City of Aberdeen, c/o Tyler Bierman, Park Superintendent, 225 3rd Ave SE, Aberdeen SD 57401 has filed an application for a water permit to appropriate 9.15 acre-feet of water annually at a maximum pump rate of 0.33 cubic feet of water per second from two wells completed into the Elm:Southern Brown Aquifer (85 feet deep) located in the W 1/2 SE 1/4 Section 3-T123N-R64W for recreational and fish & wildlife propagation use. The well water will be used to maintain duck ponds and a recreational creek at Wylie Park located in northwest Aberdeen SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8520-3 with qualifications 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. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

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 August 30, 2021.

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.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. 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.

Published once at the total approximate cost of__



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

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

August 10, 2021

City of Aberdeen
c/o Tyler Bierman, Park Supt
225 3rd Ave SE
Aberdeen SD 57401

Dear Mr. Bierman:

Water Permit Application No. 8520-3 for recreation and fish & wildlife propagation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the American News printed at Aberdeen SD (Ph # 605 225-4100). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization 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,

Karen Schlaak

Karen Schlaak
Water Rights Program
(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.

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, August 10, 2021 11:10 AM
To: Tyler Bierman
Subject: FW: [EXT] 6166807 - 8520-3, City of Aberdeen
Attachments: 1629.pdf; Order_Confirmation_SD (1).pdf

Attached is a copy of the report, chief engineer recommendation and information regarding the public notice for your water permit application. As stated in the letter, please contact the paper as soon as possible to authorize publication and arrange for payment. This information is being mailed to you today.

Also attached is the information needed when contacting the American News.

Karen Schlaak

DANR - Water Rights Program
(605) 773-3352
Website: <https://danr.sd.gov>



From: Gannett Legals Public Notices 4 <ganlegpubnotices4@gannett.com>
Sent: Tuesday, August 10, 2021 11:04 AM
To: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Subject: RE: [EXT] 6166807 - 8520-3, City of Aberdeen

Hi Karen,

Please find attached your order confirmation and proof of the ad. I will contact Tyler for payment.

Your ad is set to run in:

· Aberdeen American News on Aug 19 \$34.12

The total cost is \$34.12, which includes an affidavit which will be mailed to you after the ad publishes. Please reply by Aug 16 at 3 PM with changes of the ad. You will receive an affidavit 7-10 business days after the last day of printing. **Your notice is scheduled to run per your request and will publish unless you advise otherwise.**

Thanks,

Kia Thor

Public Notice Representative



LOCALiQ

Office: 844-254-5287

From: Schlaak, Karen <Karen.Schlaak@state.sd.us>
Sent: Tuesday, August 10, 2021 9:44 AM
To: SD-Aberdeen Legals <aan-legals@aberdeennews.com>
Subject: 6166807 - 8520-3, City of Aberdeen

Attached is a notice to be published on August 19, 2021.

City of Aberdeen, c/o Tyler Bierman, Park Supt, 225 3rd Ave SE, Aberdeen SD 57401 (605 626-7015) has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP to the Water Rights Program, 523 E Capitol, Pierre SD 57501.

Let me know if you have questions. Please acknowledge receipt of this email.

Karen Schlaak

DANR - Water Rights Program

(605) 773-3352

Website: <https://danr.sd.gov>





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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

SEP 27 2021

City of Aberdeen
c/o Tyler Bierman, Park Supt.
225 3rd Ave SE
Aberdeen SD 57401

Dear Mr. Bierman:

Enclosed is Water Permit No. 8520-3 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

We will schedule an inspection so that the Water License may be issued to you, thus completing your 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,

Eric Gronlund, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures