

WATER PERMIT NO. 8029-3

Name of Applicant: Dakota Dunes Community Improvement District

Address: PO Box 1997, Dakota Dunes SD 57049 Phone: 712 253-5766

Amount of Water Claimed: 0.78 cfs Total Acres: 17.8 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation County: 17.8 acres

Type of Waste Disposal System:

Location: Dakota Dunes

PRIORITY Date Received: 6-13-14 Application/License Fee: \$ 700

Corrected Application Received: Period of Annual Use: April 1 – October 31

Remarks: Requesting diversion rate greater than statutory limit

Diversion Point: SE 1/4 SE 1/4 Sec 27-T89N-
R48W

Land to be Irrigated: W 1/2 NE 1/4, W 1/2 SE 1/4,
SE 1/4 SE 1/4, SE 1/4 NW 1/4 Sec 27 and N 1/2
NE 1/4 Sec 34; all in T89N-R48W

			27		
				⊗	

Depth of Well: 110 feet deep

Well Driller:

Remarks:

Type of Map: plat

Prepared by:

Reviewed and the Number Assigned on: 6-16-14

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

FORM 2: Application for irrigation in South Dakota

(type or print)

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

No. 8029-3 (office use only)
Hydrologic Unit 10170101
Basin Missouri River 605-356-2632
Newspaper Leader Courier Box 310 Elk Point SD 57025
605-665-7811
Prairie Station, 319 Walnut Yankton SD 57028

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Application For Permit To Appropriate Water For Irrigation

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

(Use predates Mar 2, 1955)

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

1. Name to Appear on Irrigation Permit Dakota Dunes Community Improvement District

(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent Jeff Dooley, District Mgr.

(name and complete address if different than above name)

Mailing Address PO box 1997

(Address)

Dakota Dunes

(City)

sd

(State)

57049

(Zip Code)

Home Phone 605-232-4211 Cell 712-253-5766 Email _____

2. Amount of water claimed 0.78 *CFS or 350 **GPM _____ ***AF Total Acreage 17.8
(*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 well to the Missouri: Elk Point aquifer

4. Location of point of diversion 1 Well in the SE1/4 of SE 1/4 of Section 27, T89N R48W

(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County Union



5. County or counties where water will be used Union

6. Annual period during which water is to be used April 1-October 31

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
See attached list of irrigated acres			

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

Irrigation of greenbelts within the Dakota Dunes Community.

Requesting diversion rate

greater than statutory limit.

I, Jeff Dooley, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

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Total Boulevard Irrigation Acres (less streets)

N.W. ¼ of N.E. ¼ Sec. 27-89-48	Estimated 1.2 Acres	Exhibit 1A
S.W. ¼ of N.E. ¼ Section 27-89-48	Estimated 3.5 Acres	Exhibit 1A
N.W. ¼ of S.E. ¼ Section 27-89-48	Estimated 4 Acres	Exhibit 1A
S.W. ¼ of S.E. ¼ Section 27-89-48	Estimated 4 Acres	Exhibit 1A
S.E. ¼ of S.E. ¼ Section 27-89-48	Estimated .5 Acres	Exhibit 1A
N.E. ¼ of N.E. ¼ of Section 34-89-48	Estimated .1 Acres	Exhibit 2
N.W. ¼ of N.E. ¼ of Section 34-89-48	<u>Estimated .5 Acres</u>	<u>Exhibit 2</u>
Total	13.8 Acres	

Meadows Blvd and Meadows Park

S.E. 1/4 of N.W. ¼ of Section 27-89-48	Estimated 2.5 Acres	Exhibit 3
S.W. ¼ of N.E. ¼ of Section 27-89-48	<u>Estimated 1.5 Acres</u>	<u>Exhibit 3A</u>
Total	4 Acres	

SOUTH DAKOTA
WATER PERMIT NO. 8029-3

Date of first receipt of application June 13, 2014.

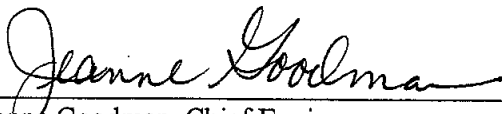
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8029-3 to Dakota Dunes Community Improvement District, PO Box 1997, Dakota Dunes SD 57049 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 8029-3 appropriates 0.78 cubic feet of water per second (cfs) from one well to be completed into the Missouri:Elk Point Aquifer (110 feet deep) located in the SE 1/4 SE 1/4 Section 27 for irrigation of 17.8 acres of greenbelts located in the W 1/2 NE 1/4, W 1/2 SE 1/4, SE 1/4 SE 1/4, SE 1/4 NW 1/4 Section 27 and N 1/2 NE 1/4 Section 34; all in T89N-R48W.
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: April 1 – October 31.
3. The date from which applicant may claim right is June 13, 2014.
4. The date of approval of Permit No. 8029-3 is September 2, 2014.
5. One-fifth of the construction is to be completed on or before March 2, 2017.
6. All construction is to be completed on or before September 2, 2019.
7. Water is to be put to beneficial use on or before September 2, 2024.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 8029-3 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. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 8029-3 authorizes a maximum diversion rate of 0.78 cfs for the irrigation of 17.8 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

SEP 22 2014

date



Supplemental Information

(type or print)

1. Well Information

(check one or both as applicable)

☒ Drilling new well(s)

☐ Using existing well(s)

a) If new wells, how many 1 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)

b) If existing wells, how many _____ Provide copy of log(s), if available. Drilled by _____

c) Well Depth 110 Depth to Top of Water Bearing Material 70 Depth to Water from Surface 25

d) Distance to nearest existing domestic well:

On applicant's property none

On property owned by others > 1 mile

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) _____

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

a) Surface Dimensions _____ Depth _____

b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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

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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____

If pipe, diameter _____

f) Secondary Spillway Capacity _____

Spillway Width _____

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

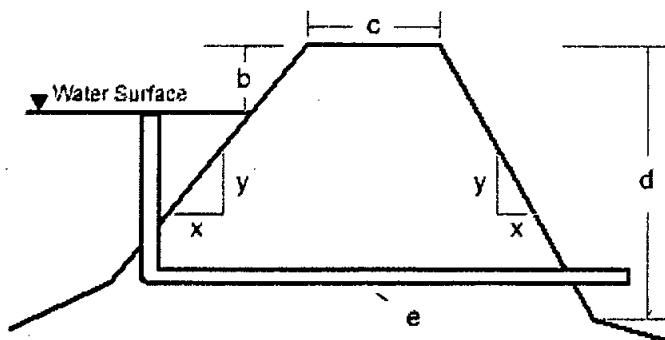
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



96.51667° W

96.50000° W

96.48333° W

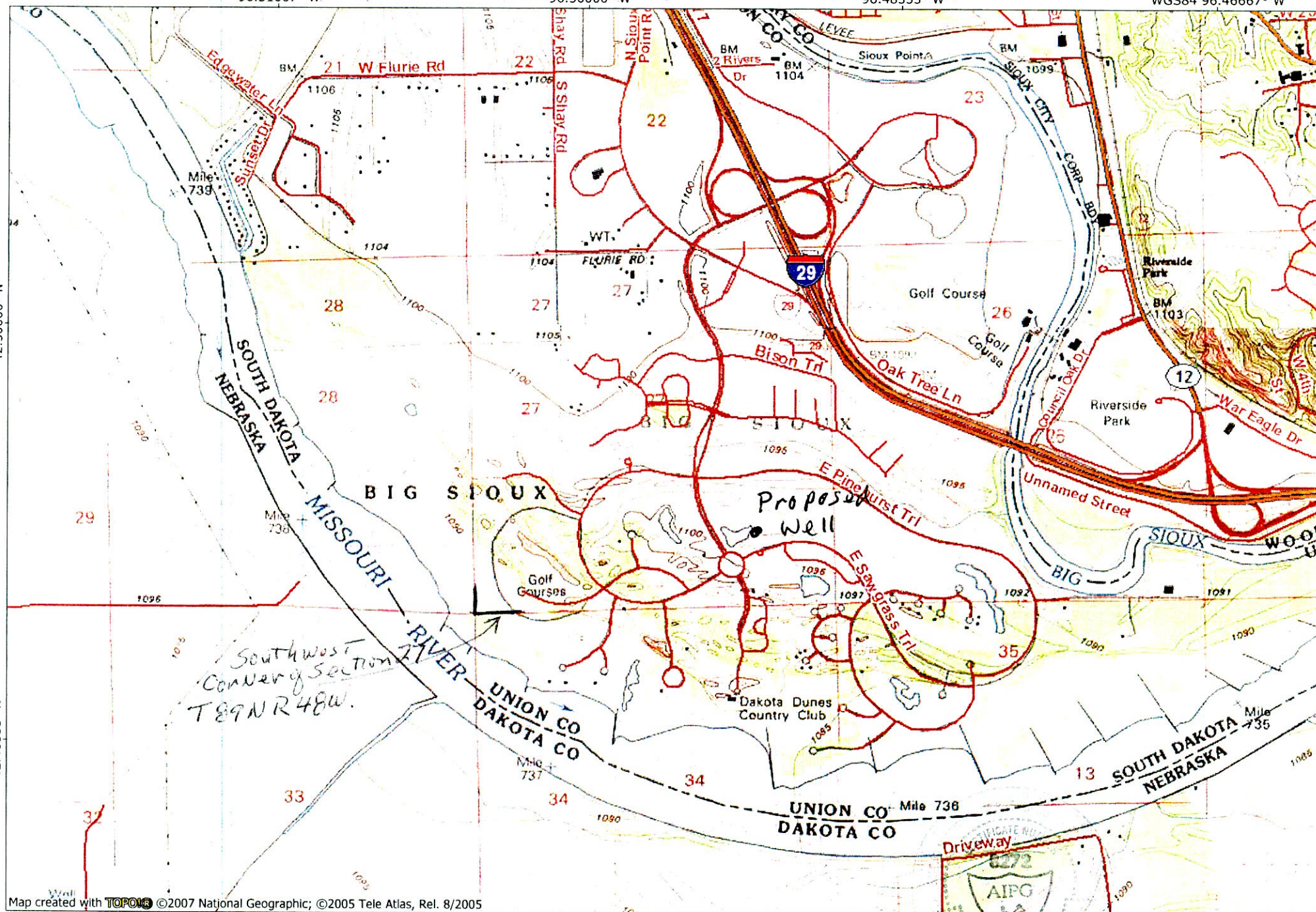
WGS84 96.46667° W

42.50000° N

42.50000° N

42.48333° N

42.48333° N



Map created with TOPOLG ©2007 National Geographic; ©2005 Tele Atlas, Rel. 8/2005

96.51667° W

96.50000° W

96.48333° W

WGS84 96.46667° W

**NATIONAL
GEOGRAPHIC**

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 miles
0.0 0.5 1.0 km

Richard A. Diamond
CP6 8272

06/03/14

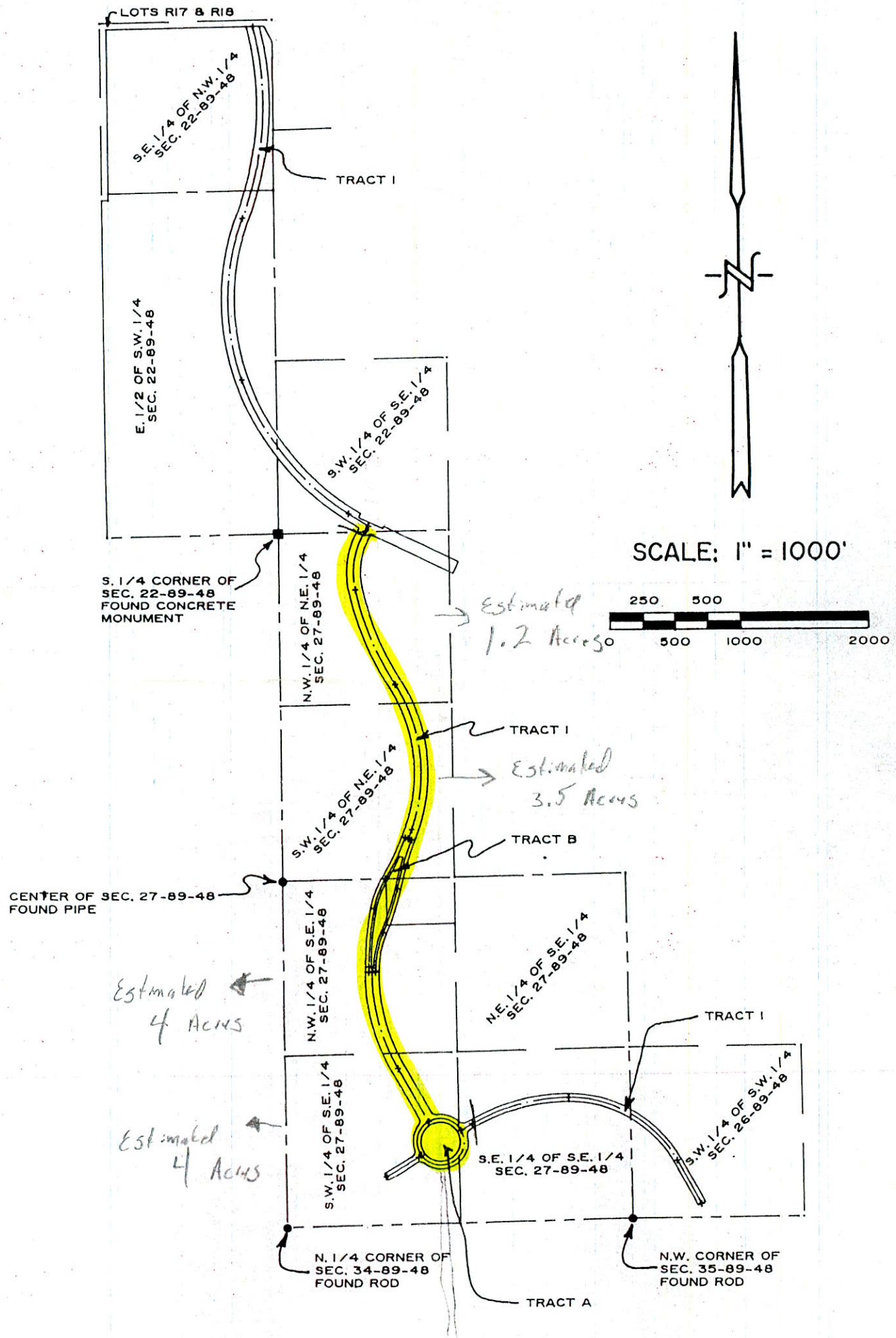


Exhibit 1

PLAT OF
DAKOTA DUNES STREET ADDITION NO. 1
IN DAKOTA DUNES, UNION COUNTY, SOUTH DAKOTA.

INDEX:

COVER SHEET	1
S.E. 1/4 OF N.W. 1/4 OF SEC. 22-89-48	2
E. 1/2 OF S.W. 1/4 OF SEC. 22-89-48	3
S.W. 1/4 OF S.E. 1/4 OF SEC. 22-89-48 & PART OF N.W. 1/4 OF N.E. 1/4 OF SEC. 27-89-48	4
PART OF N.W. 1/4 OF N.E. 1/4 OF SEC. 27-89-48 & S.W. 1/4 OF N.E. 1/4 OF SEC. 27-89-48	5
N.W. 1/4 OF S.E. 1/4 OF SEC. 27-89-48 & S.W. 1/4 OF S.E. 1/4 OF SEC. 27-89-48	6
S.E. 1/4 OF S.E. 1/4 OF SEC. 27-89-48 & S.W. 1/4 OF S.W. 1/4 OF SEC. 26-89-48	7
CERTIFICATE SHEET	8

• = SET IRON ROD

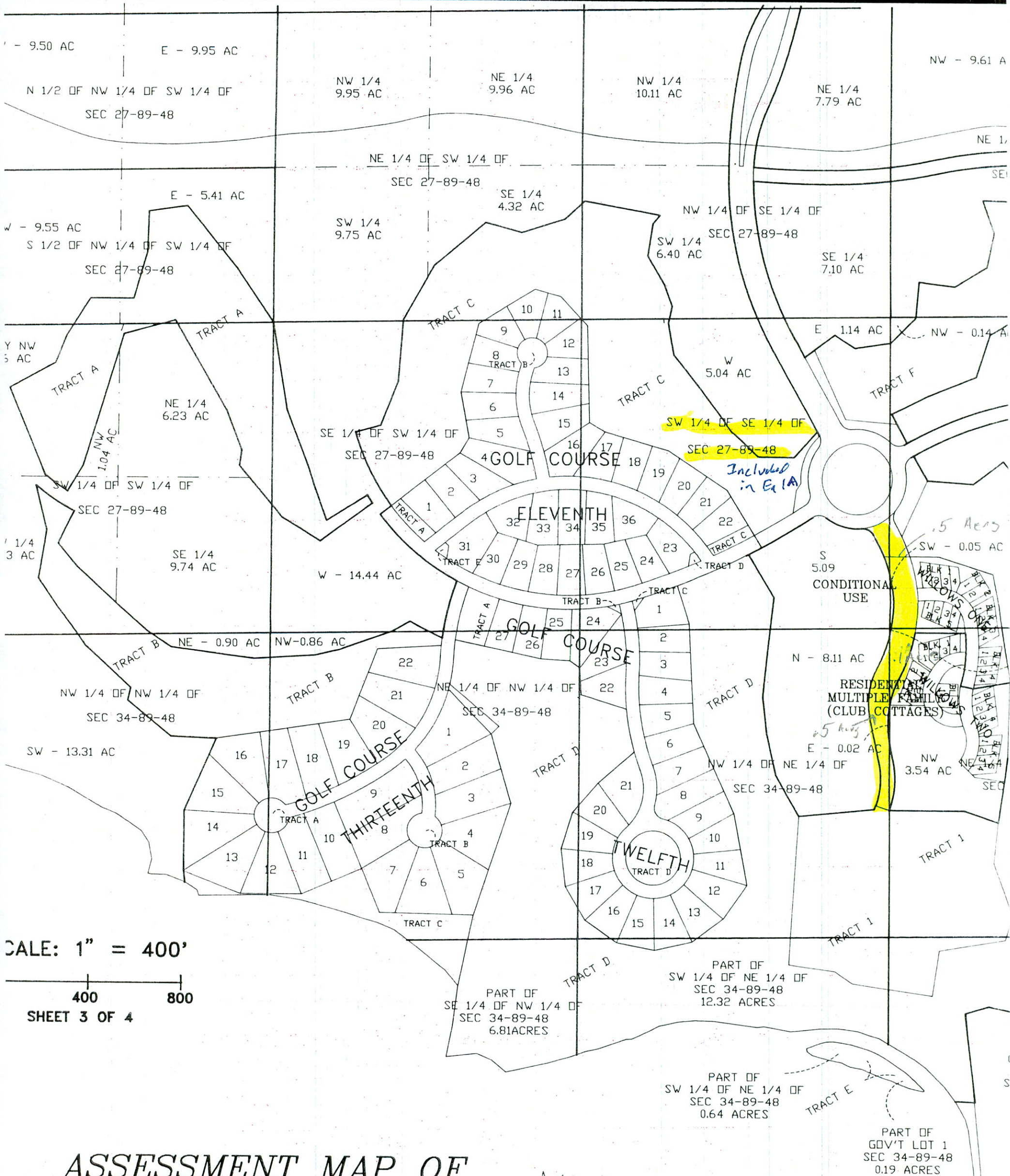
TRACT I CONTAINS 27.51 ACRES

TRACT A CONTAINS 1.62 ACRES

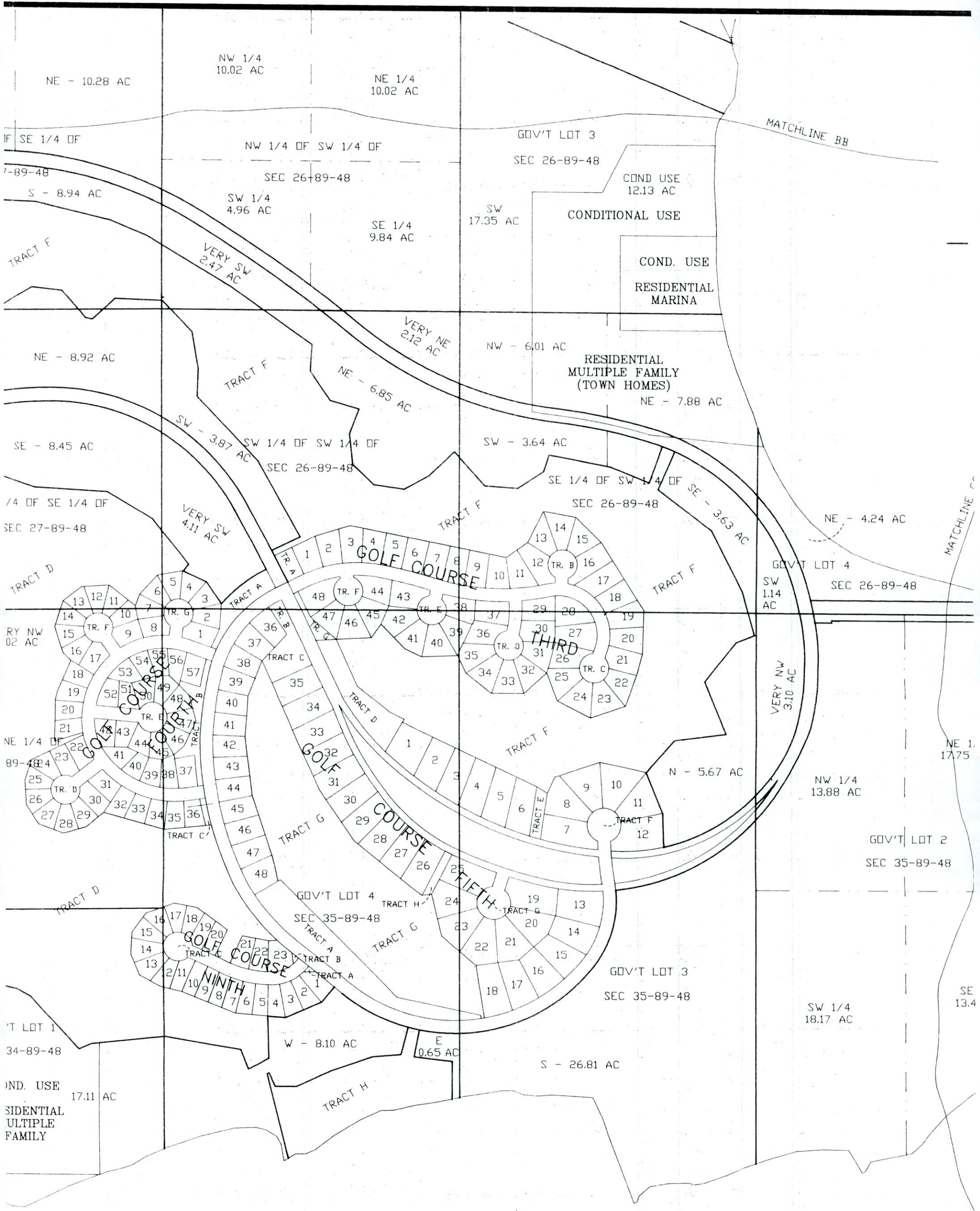
TRACT B CONTAINS 1.23 ACRES

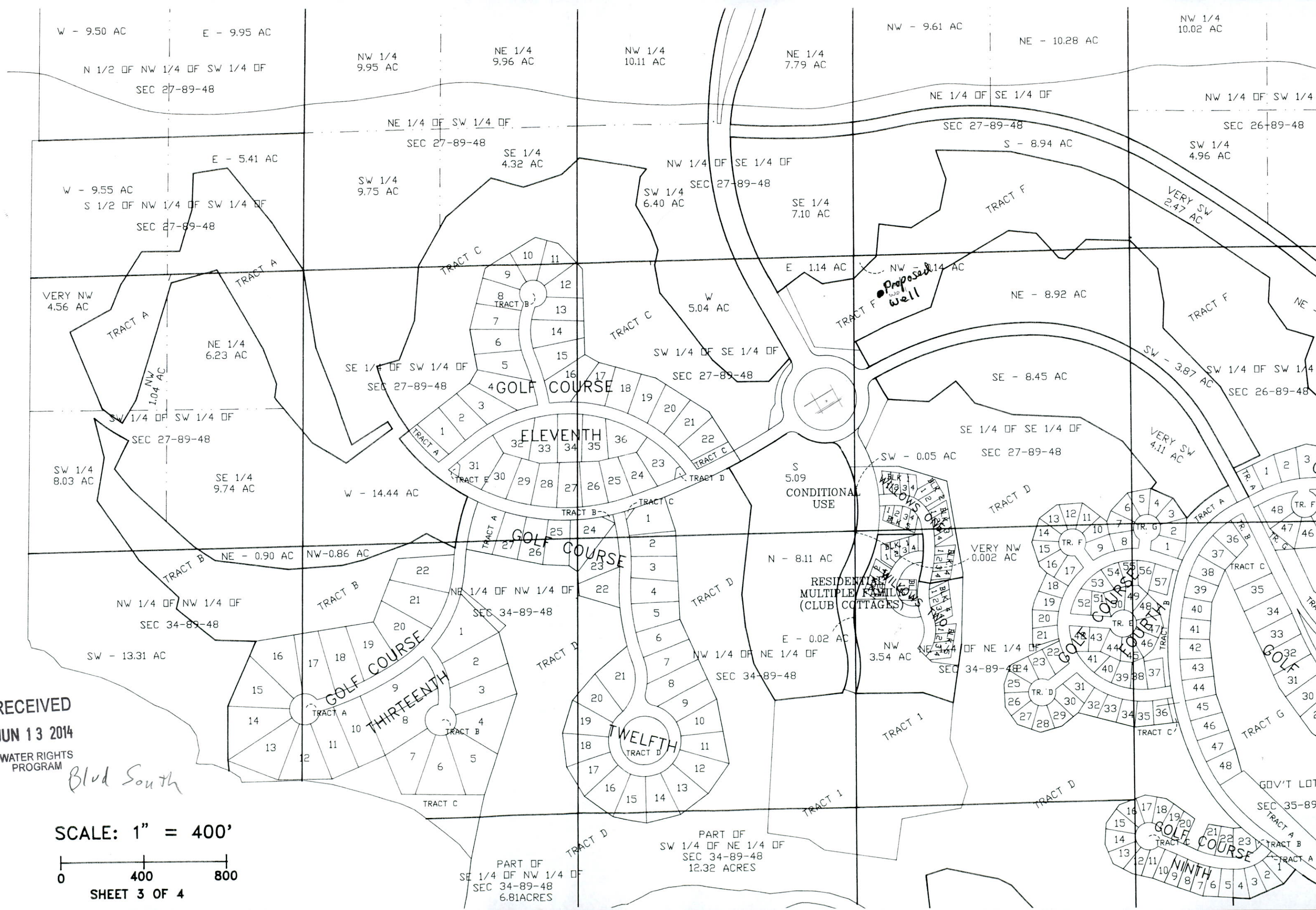
→ 11.41 Irrigated (includes all of tract A & B)

Exhibit 2



ASSESSMENT MAP OF
DAKOTA DUNES
MISSOURI
ION COUNTY, SOUTH DAKOTA





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Blud South

SCALE: 1" = 400'

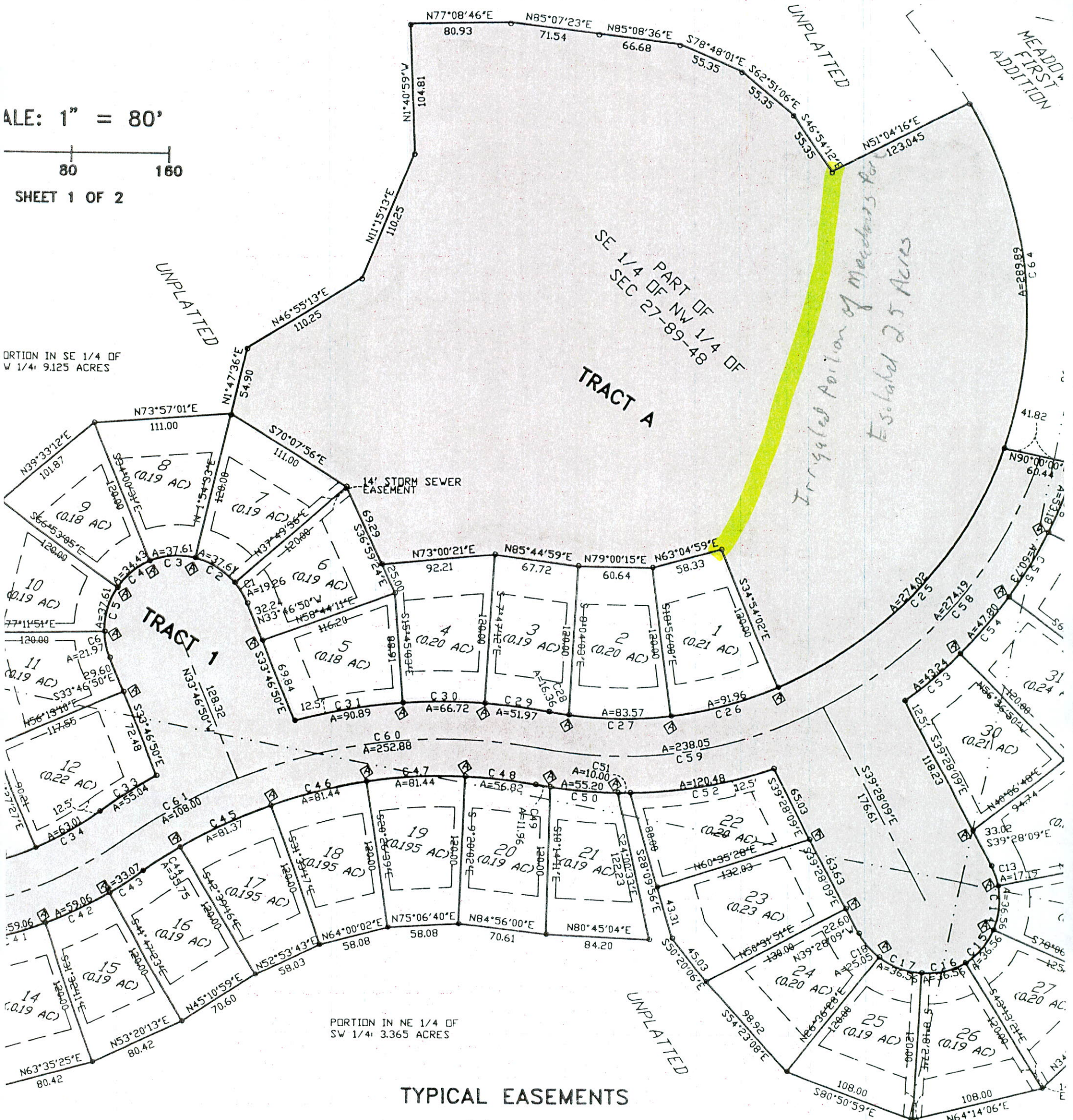


SCALE: 1" = 80'

80 160

SHEET 1 OF 2

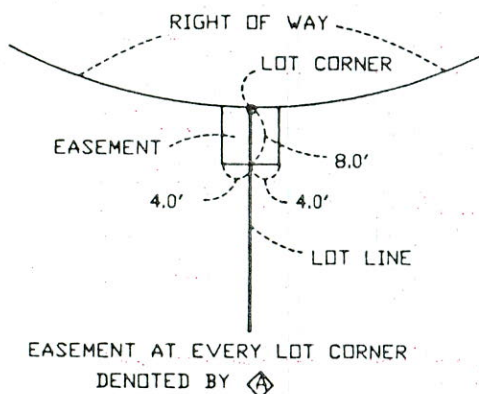
PORTION IN SE 1/4 OF
NW 1/4 9.125 ACRES



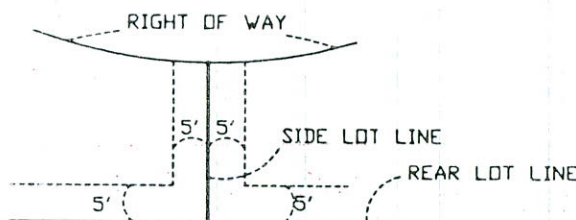
PORTION IN NE 1/4 OF
SW 1/4 3.365 ACRES

TYPICAL EASEMENTS

TYPICAL UTILITY EASEMENT
(ELECTRIC, TELEPHONE, & CABLE T.V.)

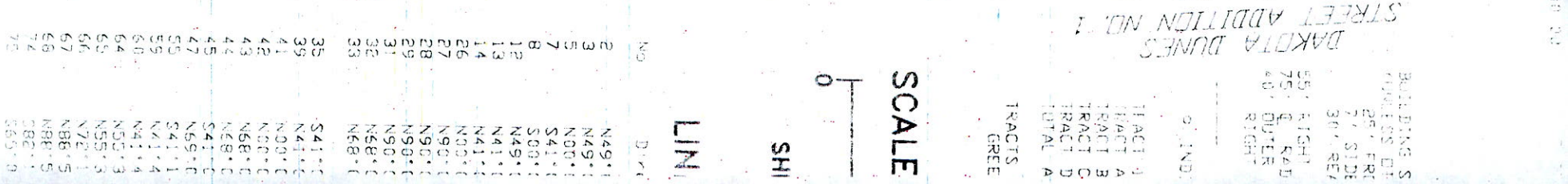


TYPICAL EASEMENT
(SURFACE DRAINAGE AND STORM SEWER)



5 FOOT EASEMENT ALONG ALL SIDE LOT LINES BETWEEN NUMBERED LOTS,
ALL REAR LOT LINES OF NUMBERED LOTS, AND ON ALL SIDE LOT
LINES BETWEEN NUMBERED LOTS AND LETTERED TRACTS.

NW 1/4 PART OF
SEC 27-89-48



RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 6/16, 20 14

RECEIVED OF Dakota Dunes Comm Improvement Dist PO Box 1997 Dakota Dunes SD 57049

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

Fee for Application for Permit No. <u>8029-3</u> to Appropriate Water, to construct and to put water to beneficial use	500	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>8029-3</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	700 00

No. **06886**

By Jeanne Goodman
Chief Engineer



Dakota Dunes Community Improvement District

PO Box 1997

Dakota Dunes SD 57049

Phone: (605) 232-4211 Fax: (605) 235-1447

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**WATER RIGHTS
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June 5, 2014

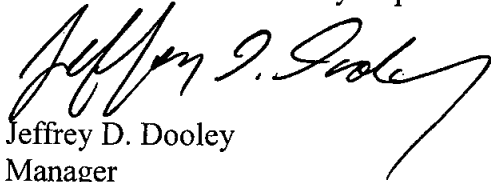
SD DENR – Water Rights
PMB 2020
523 E. Capitol Ave
Pierre, SD 57501-3128

Enclosed are two Applications for Permit to Appropriate Water for Irrigation for your consideration. Also enclosed is a check for \$700 to cover the new application fee and inspection fee. Dakota Dunes Community Improvement District is a local governmental entity in Union County, South Dakota.

Please call if you have any question and thank you in advance for your consideration.

Sincerely,

Dakota Dunes Community Improvement District



Jeffrey D. Dooley
Manager

Cc: Dick Hammond, Heine Electric & Irrigation, Inc.



**DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES**

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



**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8029-3, Dakota Dunes Community Improvement District**

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. 8029-3, Dakota Dunes Community Improvement District, c/o Jeffrey D Dooley, PO Box 1997, Dakota Dunes SD 57049.

The Chief Engineer is recommending APPROVAL of Application No. 8029-3 for 0.78 cfs 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. 8029-3 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. Pursuant to SDCL 46-5-6 which allows a greater diversion rate if the method of irrigation, time constraints, or type of soils so requires, Permit No. 8029-3 authorizes a maximum diversion rate of 0.78 cfs for the irrigation of 17.8 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
August 8, 2014

REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 8029-3
DAKOTA DUNES COMMUNITY IMPROVEMENT DISTRICT
AUGUST 5, 2014

Water Permit Application No. 8029-3 proposes to appropriate water from one well to be completed into the Missouri: Elk Point aquifer at a maximum diversion rate of 0.78 cubic feet of water per second (cfs). The well is expected to be 110 feet deep and is to be located in the SE $\frac{1}{4}$ Section 27, T89N-R48W. This application proposes a permit to irrigate 17.8 acres of green belts located in the W $\frac{1}{2}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 27, T89N-R48W and the N $\frac{1}{2}$ NE $\frac{1}{4}$ Section 34, T89N-R48W. The applicant is requesting a diversion rate greater than the statutory limit.

AQUIFER: Missouri: Elk Point (M: EP)

GENERAL:

The Missouri aquifer consists of unconsolidated glacial outwash deposits composed of fine sand to very coarse gravel. The Elk Point management unit of the Missouri aquifer underlies an estimated 210,100 acres of Yankton, Clay, and Union Counties, and contains an estimated 3,287,100 acre feet (ac-ft) of recoverable water in storage (Hedges and others, 1982). The aquifer is hydraulically connected to the Lower Vermillion Missouri and Lower James Missouri aquifers to the north, and often directly overlies the Dakota aquifer. Analyses of water-level measurements and chemical analyses indicate a hydraulic connection between the Dakota and Missouri: Elk Point aquifers (Niehus, 1994). The Missouri: Elk Point aquifer is also hydraulically connected to the Vermillion, Big Sioux, and Missouri Rivers. Lower specific conductance shown in water analysis of wells in the southern part of the aquifer probably are the result of good hydraulic connection with the Missouri River (Niehus, 1994). Water in the aquifer generally moves from the northwest to the southeast and towards the Missouri River (Stephens, 1967). The Missouri: Elk Point aquifer is predominately under water table conditions (Water Rights, 2014a).

Test holes drilled by the DENR-Geological Survey identify aquifer material in excess of 135 feet thick in this area ("Lithologic Logs Database"). A well log for an irrigation well located within a few hundred feet of the well site proposed by this application reports gravel, sand and boulders to a depth of 145 feet. The log suggests the aquifer material overlies the Dakota Formation, which is bedrock in this area (Niehus, 1994). The Missouri: Elk Point aquifer is under unconfined conditions in this area, and the static water level of a well at this proposed site is expected to be 10-20 feet below grade. The well site proposed by this application is located approximately 3,400 feet north of the Missouri River and approximately 3,600 feet east of the Big Sioux River.

SOUTH DAKOTA CODIFIED LAW (SDCL) 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is 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. 8029-3 proposes to appropriate water from the Missouri: Elk Point aquifer. Approval of this application is likely to result in an average annual water use of less than 35.6 acre-feet annually (ac-ft/yr). The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1 which requires “No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source.” If the source of the water is older or lower than the Greenhorn Formation and a public water system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Here, a public water system is not involved and the aquifer is not older or lower than the Greenhorn Formation, therefore the withdrawal/recharge issue must be considered.

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

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

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

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 Water Rights Program monitors 38 observation wells completed into the Missouri: Elk Point aquifer (Water Rights, 2014a). Twenty five Missouri: Elk Point observation wells are located in Union County. Observation well UN-78C, located approximately two miles north of the well site proposed by this application, is representative for the aquifer. A hydrograph for the well is shown in Figure 1.

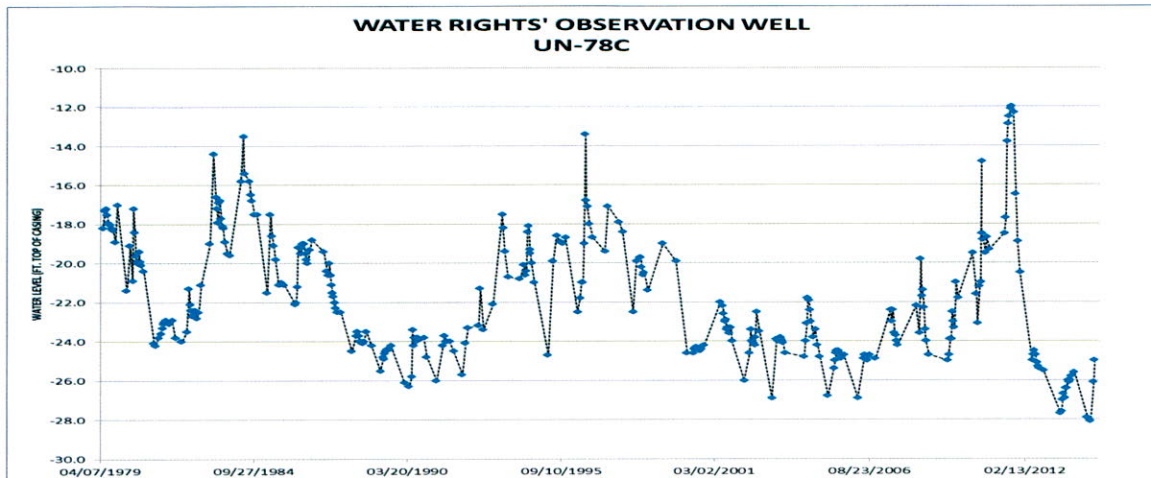


Figure 1. Observation well completed into the Missouri: Elk Point aquifer approximately two miles north of the well site proposed by Application No. 8029-3

The observation well data documents cyclic conditions of water levels, recharging during wet years and declining during dry years. In general, hydrographs of observation wells completed into the Missouri: Elk Point aquifer show a slight decline of water table. This has been attributed to entrenching of the Missouri River or controlling the flow by the Gavins Point Dam, which no longer allows inundation of the floodplain (Goodman, 2007; Stephens, 1967).

A graph plotting the Missouri River State Trend Curves at Yankton, South Dakota, clearly shows the entrenchment or bed degradation of the river since Gavins Point Dam was closed off (Figure 2). The trends in water levels between groundwater in the Missouri: Elk Point aquifer and the Missouri River are similar, indicating a strong hydraulic connection.

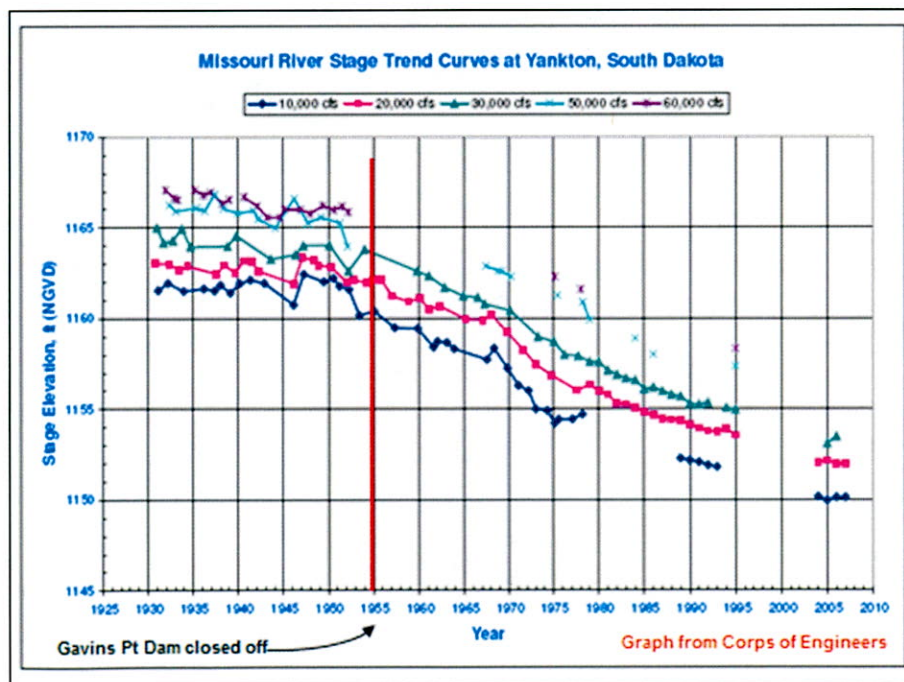


Figure 2: Graph representing Bed Degradation of the Missouri River near Yankton (Cowman)

The hydrographs of observation wells located near the Missouri River clearly document the 2011 flood event (see Figure 1) and consequently the hydraulic connection between the river and the aquifer.

The hydrographs also show the effects of nearby pumping on the aquifer. Observation well data indicates that at the current level of development temporal well withdrawal is masked by climatic conditions, indicating that recharge to and natural discharge from the aquifer greatly exceeds well withdrawal. Therefore, natural discharge from the aquifer is available for capture and additional water is available for appropriation.

Hydrologic Budget:

A hydrologic budget for the Missouri: Elk Point aquifer was developed based on the appropriations from the aquifer as of June 24, 2013 (Stonesifer, 2013). Water rights/permits and future use permits at the time account for an expected withdrawal of 81,108 ac-ft/yr, which includes expected use of new irrigation water permits. Recharge to the aquifer is estimated to be at least 91,964 ac-ft/yr, which considers induced recharge. Therefore, approximately 10,856 ac-ft/yr of unappropriated water was available at that stage of development (Stonesifer, 2013).

There have been 22 water permit applications submitted since Stonesifer's evaluation of water availability from the Missouri: Elk Point aquifer. Water permit applications filed since June 24, 2013, are shown in Table 1. Historically, for the Missouri: Elk Point aquifer, the average ratio of pumpage to appropriation is 13.7% (Stonesifer, 2013). When applying this ratio to new and pending appropriations, 5,593.78 ac-ft/yr (see Table 1), the average annual use of these new water permits is expected to be approximately 766.35 ac-ft/yr, but could vary considering the standard deviation of the pumpage to appropriation ratio of 8.4% (Stonesifer, 2013). Consequently, there is approximately 10,090 ac-ft/yr of recharge in excess of average annual withdrawal. Therefore there is a reasonable probability that unappropriated water is available for this proposed appropriation.

PERMIT NO	NAME	PRIORITY DATE	STATUS	CFS	ACRES
7848-3	MISSOURI VALLEY FARMS INC	05/31/2013	PE	3.04	213
7856-3	MIKE & STEVE ALLARD	07/01/2013	PE	1.78	129.3
7895-3	TODD HANSON	09/09/2013	PE	1.89	180
7898-3	JAMES ORR	09/12/2013	PE	1.56	132
7899-3	JUSTIN ORR	09/12/2013	PE	1.56	97
7904-3	CRAIG S MCINERNEY	09/23/2013	PE	1.78	160
7933-3	DOUGLAS G BYE	12/12/2013	PE	0.89	90
7936-3	DONALD JOHNSON	12/17/2013	PE	1.39	83
7938-3	RUSSELL M HALL	01/02/2014	PE	No add'l	53
7941-3	JOESPH F CHICOINE	01/14/2014	PE	1	37.69
7074A-3	CALVIN HANSON	01/21/2014	PE	1.78	162
7951-3	ALLEN PACE	01/24/2014	PE	1.78	150
7955-3	KARL M SCHENK	02/03/2014	PE	1.78	140
7971-3	BARRY VAN OSDEL	02/20/2014	PE	1.11	68
7980-3	FRANCIS HEINE	02/24/2014	PE	No add'l	5
7987-3	FRANCIS M ARMSTRONG LIVING TRUST	03/17/2014	PE	1.78	102
8010-3	RYAN RUSHER	04/28/2014	PE	0.1	2.5
8016-3	AMELIA BERTRAND TRUST		pending	1.67	66
8022-3	REDWOOD HOLDINGS LLP		pending	1.91	134
8023-3	REDWOOD HOLDINGS LLP		pending	4.14	290
8024-3	REDWOOD HOLDINGS LLP		pending	3.36	235.2
8025-3	REDWOOD HOLDINGS LLP		pending	3.82	267.2

Table 1. Water permit applications proposing appropriations from the Missouri: Elk Point aquifer filed since June 2013.

EXISTING WATER RIGHTS:

There are not any wells supplying water rights/permits within approximately one mile of the well site proposed by this application that are not held by Dakota Dunes. Drawdown from this proposed diversion is not likely to be measurable beyond a few hundred feet. Historically, well interference has not been an issue in wells producing from the Missouri: Elk Point aquifer and well spacing has not been a concern. The relatively high transmissivity of the aquifer results in drawdown cones that are not significant very far from individual production wells.

Since the drawdown from high capacity wells is expected to be minimal and the aquifer has a fairly substantial saturated thickness, adequate wells will not be adversely impacted if these applications are approved. The Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. Therefore, nearby adequate wells defined by ARSD 74:02:20(7) are not expected to be adversely or unlawfully impaired due to the increased use of the well.

SDCL 46-5-6

Pursuant to SDCL 46-5-6, the diversion rate for an irrigation appropriation cannot be in excess of one cubic foot of water per second for every seventy 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 No. 8029-3 proposes to divert at a rate of 0.78 cfs to irrigate 17.8 acres, or the equivalent to 3.07 cfs per 70 acres. The application does not include a justification for the proposed rate.

CONCLUSIONS:

1. Water Permit Application No. 8029-3 proposes to appropriate water from the Missouri: Elk Point aquifer.
2. Water Permit Application No. 8029-3 proposes to divert water from one well at a maximum diversion rate of 0.78 cfs.
3. Water Permit Application No. 8029-3 proposes to irrigate 17.8 acres.
4. Unappropriated water is available from the Missouri Elk Point aquifer to supply the proposed appropriations.
5. The diversions proposed by these applications will not adversely or unlawfully impair existing nearby wells.



Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

Circuit Court of South Dakota, Sixth Judicial Circuit, 2005, April 29, 2005 Memorandum Decision
re: HU04-37 Hines v. SD Department of Environment and Natural Resources

Circuit Court of South Dakota, First Judicial Circuit, 2012, April 12, 2012 Memorandum Decision
re: Hanson County Dairy v. Robert Bender and Stace Nelson

Circuit Court of South Dakota, First Judicial Circuit, 2012, May 17, 2012 Memorandum Decision
re: Longview Farms, LLP v. South Dakota Dept. of Environ. and Nat'l. Resources

Cowman, Tim. "FW: Bed Degradation." E-mail to Ken Buhler. 19 February 2014

Goodman, J.A. 2007. Report on Water Permit Application No. 6869-3 for Lewis and Clark
RWS: SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Hedges, L.S., Burch, S.L., Iles, D.L., Barari, R.A., and Schoon, R.A. 1982. Evaluation of
Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South
Dakota and Iowa, Task 1: Bedrock Topography and Distribution, Task 2: Extent of
Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report.
U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.

"Lithologic Logs Database." South Dakota Department of Environment & Natural Resources
Geological Survey. 25 July 2014

Niehus, C.A., 1994, Water Resources of Lincoln and Union Counties, South Dakota: U.S.
Geological Survey Water-Resources Investigations Report 93-4195. 57 p.

Stephens, J.C. 1967. Geology and Hydrogeology of Clay County, South Dakota, Part II: Water
Resources. South Dakota DENR-Geological Survey Bulletin 19, 62 p. Vermillion, South
Dakota.

Stonesifer, J.R., 2013, Report to the Chief Engineer, Water Availability of the Missouri: Elk Point aquifer, June 24, 2013: SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota

Water Rights. 2014a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2014b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2014c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

AFFIDAVIT OF PUBLICATION

RECEIVED

AUG 29 2014

WATER RIGHTS
PROGRAM

State of South Dakota)

:ss

County of Union)

Bruce L. Odson,

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

The Leader-Courier

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

Notice of Application No. 8029-3

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

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

on Thursday, the 14 day of August, 2014

and that the succeeding publications were

on Thursday, the _____ day of _____, _____

on Thursday, the _____ day of _____, _____

on Thursday, the _____ day of _____, _____

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

\$ 25.28, that the full amount of the fee charged insures to the benefit of the publisher of the said newspaper, that no agreement or understanding for the division thereof has been made with any other person and that no part thereof has been agreed to be paid to any other person whomsoever.



Subscribed and sworn to before me

this 14 day of August, 2014

SUSAN MY commission expires 6-21-17

NOTARY PUBLIC
SOUTH DAKOTA



Notary Public

NOTICE OF APPLICATION NO. 8029-3 TO APPROPRIATE WATER

Notice is given that Dakota Dunes Community Improvement District, c/o Jeffrey D Dooley, PO Box 1997, Dakota Dunes SD 57049 has filed an application for a water permit to appropriate 0.78 cubic feet of water per second from one well to be completed into the Missouri:Elk Point Aquifer (110 feet deep) located in the SE 1/4 SE 1/4 Section 27 for irrigation of 17.8 acres of greenbelts located in the W 1/2 NE 1/4, W 1/2 SE 1/4, SE 1/4 SE 1/4, SE 1/4 NW 1/4 Section 27 and N 1/2 NE 1/4 Section 34; all in T89N-R48W. The applicant is requesting a diversion rate greater than the statutory limit.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8029-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 2, 2014.

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. Publish Aug. 14, 2014 Published once at the total approximate cost of \$25.28 33-6-84

RECEIVED

AUG 27 2014

WATER RIGHTS
PROGRAM

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

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

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

KELLY HERTZ BEING FIRST DULY SWORN ON OATH DEPOSES
AND SAYS THAT HE IS THE MANAGING EDITOR OF, YANKTON
MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE
YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER
PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY
AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID
COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED
Notice of Application No. 8029-3

TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE
NEWSPAPER ON THE 21st DAY OF August 2014
THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION
OF SAID **NOTICE** TO WIT \$27.80 ENSURES TO THE
BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO
AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS
BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF
HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 8/21/2014

FILED ON: 8/22/2014

SUBSCRIBED AND SWORN TO BEFORE ME THIS 22nd DAY OF August

2014

NOTARY PUBLIC, SOUTH DAKOTA

MY COMMISSION EXPIRES 8/19/2015

8+21
NOTICE OF APPLICATION
NO. 8029-3 to Appropriate Water

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Published once at the total approximate cost of \$27.80.



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

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



August 8, 2014

Leader-Courier
PO Box 310
Elk Point SD 57025

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 8029-3 to Appropriate Water. Please publish the notice once on August 21, 2014. 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 Dakota Dunes Community Improvement District, c/o Jeffrey D Dooley, PO Box 1997, Dakota Dunes SD 57049 (Ph # 605-237-4211).

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

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

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



August 8, 2014

Press & Dakotan
319 Walnut
Yankton SD 57078

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605 773-3352

enclosures



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

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



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

August 8, 2014

Dakota Dunes Community Improvement District
Jeffrey D Dooley
PO Box 1997
Dakota Dunes SD 57049

Dear Mr. Dooley:

Water Permit Application No. 8029-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Leader-Courier printed at Elk Point SD (Ph # 605-356-2632) and the Press & Dakotan printed at Yankton SD (Ph # 605-665-7811). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352
enclosures

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

Instruction to Newspaper - Publish the Notice on August 21, 2014. 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.

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Published once at the total approximate cost of _____.



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

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



SEP 22 2014

Dakota Dunes Community Improvement District
Jeff Dooley
PO Box 1997
Dakota Dunes SD 57049

Dear Mr. Dooley:

Enclosed is Water Permit No. 8029-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,


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

enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

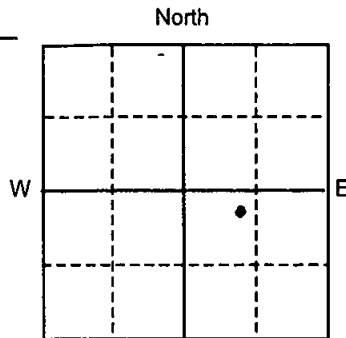
11-02

Location NW 1/4 SE 1/4 Sec 27 Twp 89N Rg 48WWell Owner: Dakota DunesCounty Union

Business Name:

Address: 335 Sioux Point Rd.City, State, Zip: Dakota Dunes, SD 57049

Please mark well location with an "X"



Well Completion Date

11-8-17

1 Mile

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

1000 ft. from septic tank (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Reverse Rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>160</u> LB/FT	<u>16</u> IN	<u>0</u> FT	<u>80</u> FT	<u>28</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Cement</u>	<u>56</u>	<u>0</u> Lb/gal	<u>0</u> Ft	<u>25</u> Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

Pumped down w/ grout pump

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 16 Inches Length 20 Feet
 Material PVC
 Slot Size .085 Set From 80 Feet to 100 Feet

Other information

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? chlorine
☐ No, Why Not?
 Lab to which water quality sample sent for analysis

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>brown top soil</u>	<u>0</u>	<u>2</u>
<u>med brown sand</u>	<u>2</u>	<u>25</u>
<u>course green sand</u>	<u>25</u>	<u>50</u>
<u>course green gravel</u>	<u>50</u>	<u>105</u>
<u>very course gravel + rocks</u>	<u>105</u>	<u>105</u>

STATIC WATER LEVEL

14

FEET

If flowing: closed in pressure

PSI

GPM flow

through

Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced flow rate

GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: pumped w/ turbine pump + engine
☐ Bailed
☐ Other

Pumping Level Below Land Surface

<u>20</u> Ft. After <u>1</u> Hrs. pumped	<u>500</u> GPM
<u>25</u> Ft. After <u>2</u> Hrs. pumped	<u>1000</u> GPM

If pump installed, pump rate: 185 GPM

REMARKS

Missouri: Elk Point AMThis well was drilled under license # 444 and this report is true and accurate.

Drilling firm:

Christensen Well & Drilling

Signature of License Representative:

Col. W. Christensen

Signature of Well Owner or Equitable Property Holder:

RECEIVED

Date:

12-22-17

JAN 24 2018

WATER RIGHTS PROGRAM