

WATER PERMIT NO. 2574-2

255-5458
255-5210
Hermos
Ribbon

Name of Applicant: Dennis Hullinger

Address: 535 Oakridge, Tooele UT

Phone: 435-882-3304

Amount of Water Claimed: 2.17 add'l cfs

Total Acres: 35.8 add'l acres

Source of Water Supply: Cheyenne River

Water to be used for: irrigation

County: Custer

Type of Waste Disposal System:

Location: 12 miles east of Buffalo Gap

PRIORITY

Date Received: 12-23-05

Application/License Fee: \$200

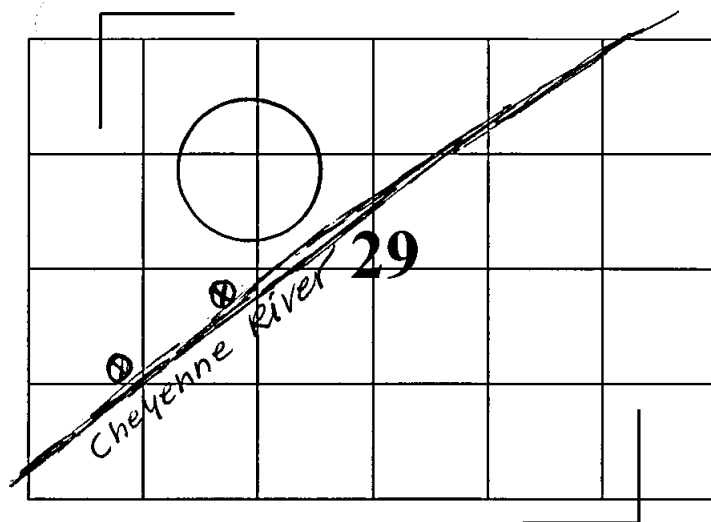
Corrected Application Received: 1-9-05
06

Period of Annual Use: March 1 - October 30
June 1 - Aug 31

Remarks: increase acreage and diversion rate to that authorized by Water Permit No. 2490-2

Diversion Point: NW ¼ SW ¼ Sec 29 and NE ¼
SE ¼ Sec 30; all in T6S-R9E

Land to be Irrigated: NW ¼ Sec 29-T6S-R9E



Depth of Well: na

Well Driller:

Remarks:

Type of Map: topo

Prepared by: Gerald T Miller, NRCS

Reviewed and the Number Assigned on: 1-9-06

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>2574-2</u> (office use only) Hydrologic Unit <u>10120109</u>
	Basin <u>Upper Cheyenne</u>
	Newspaper <u>Custer County Chronicle, Custer</u>

RECEIVED
DEC 23 2005
WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water For Irrigation

Type of Application: New Vested Right Amendment/Correction to Permit No. 2490-2
(Use predates Mar 2, 1955)

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)
Change of Diversion Rate From .83 CFS to 3.0 CFS
Using Gated Pipe & Pivot on very sandy soil

- Name of Applicant Dennis Hullinger Phone 435-882-3304
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 535 Oakridge Tooele State Utah 84074
(Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 3 (1.17 cfs add'l) **GPM ***AF Total Acreage 94 (35.8)
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable
- Source of water supply Cheyenne River
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) 1st choice Pump
location: Lot 11 Sec 29, T6S, R9E 2nd choice Pump location: Lot 6-
Sec 30 T6S R9E County (NE 1/4 SE 1/4)
- County or counties where water will be used Custer
- Annual period during which water is to be used march thru October 30
- 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
Lot 9 - Sec. 29, T6S, R9E	15	NW 1/4 NW 1/4 Sec 29 - T6S - R9E	6.4
Lot 10 - Sec. 29, T6S, R9E	19	NE 1/4 NW 1/4 Sec 29 - T6S - R9E	3.8
Lot 11 - Sec. 29, T6S, R9E	15	SW 1/4 NW 1/4 Sec 29 - T6S - R9E	17.9
Lot 6 - Sec 30, T6S, R9E	11	SE 1/4 NW 1/4 Sec 29 - T6S - R9E	5.9

(add'l acres) + 18
from those left = 35.8

- Give a description of the project. (Attach sheet if more space is needed)
Irrigation of Farm Land utilizing a pivot sprinkler
system plus flood irrigation.

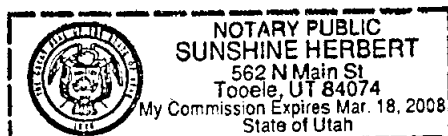
Utah
STATE OF SOUTH DAKOTA) SS
County of Tooele

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

I, Dennis Hullinger, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature Dennis Hullinger

Subscribed and sworn to before me this 14th day of November 20 05



Sunshine Herbert
Notary Public signature

SOUTH DAKOTA
WATER PERMIT NO. 2574-2

Date of first receipt of application December 23, 2005.

Date of return to applicant for corrections, amendments or changes December 27, 2005.

Date of receipt of corrected application January 9, 2006.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2574-2 to Dennis Hullinger, 535 Oakridge, Tooele UT 84074 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. 2574-2 increases the diversion rate and number of acres authorized by Water Permit No. 2490-2. Water Permit No. 2490-2 authorizes 0.83 cubic feet of water per second (cfs) from the Cheyenne River to irrigate 58.2 acres. This permit authorizes diversion of an additional 1.17 cfs from the Cheyenne River located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ (Lot 11) Section 29 or the NE $\frac{1}{4}$ SE $\frac{1}{4}$ (Lot 6) Section 30; to irrigate an additional 35.8 acres located in the NW $\frac{1}{4}$ Section 29; all in T6S-R9E. The total appropriation from the Cheyenne River is 2.0 cfs to irrigate 94 acres as described. This permit also serves as notice to define the annual period of use authorized by Permit No. 2490-2 and this permit as being March 1 through October 31.
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: March 1 – October 31.
3. The date from which applicant may claim right is December 23, 2005.
4. The date of approval of Permit No. 2574-2 is February 27, 2006.
5. One-fifth of the construction is to be completed on or before August 27, 2008.
6. All construction is to be completed on or before February 27, 2011.
7. Water is to be put to beneficial use on or before February 27, 2015.
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. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed. This permit does not authorize diversion of water from the Cheyenne River at any time when the river flow is low. Diversions under this permit shall be in accordance with any written orders issued by the Chief Engineer.
2. 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 Nos. 2490-2 and 2574-2, combined authorize a maximum diversion rate of 2.0 cfs for the irrigation of 94 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

By: Garland Erbele
Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

APR 07 2006

date



RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date December 23, 20 05

RECEIVED OF Rittberger Trucking, LLC, HC 83 Box 13, Hermosa SD 57744

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

Fee for Application for Permit No. <u>2574-2</u> to Appropriate Water, to construct and to put water to beneficial use	75	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. _____		
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	75.00

No.

002115

By

David L. Ebel
Chief Engineer *gm*

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date December 23, 2005

RECEIVED OF Dennis A. Fullinger, 535 Oakdridge Dr., Toccole UT 84074-3138

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

Fee for Application for Permit No. <u>2574-2</u> to Appropriate Water, to construct and to put water to beneficial use	50	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. _____		
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	50.00

No.

008124

By

Darland Elvele
Chief Engineer
gm

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date January 9, 20 06

RECEIVED OF Dennis Hullinger, 535 Oakridge Dr, Tootle UT 84074

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

Fee for Application for Permit No. <u>2574-2</u> to Appropriate Water, to construct and to put water to beneficial use	25	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>2574-2</u>	50	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	75.00

No.

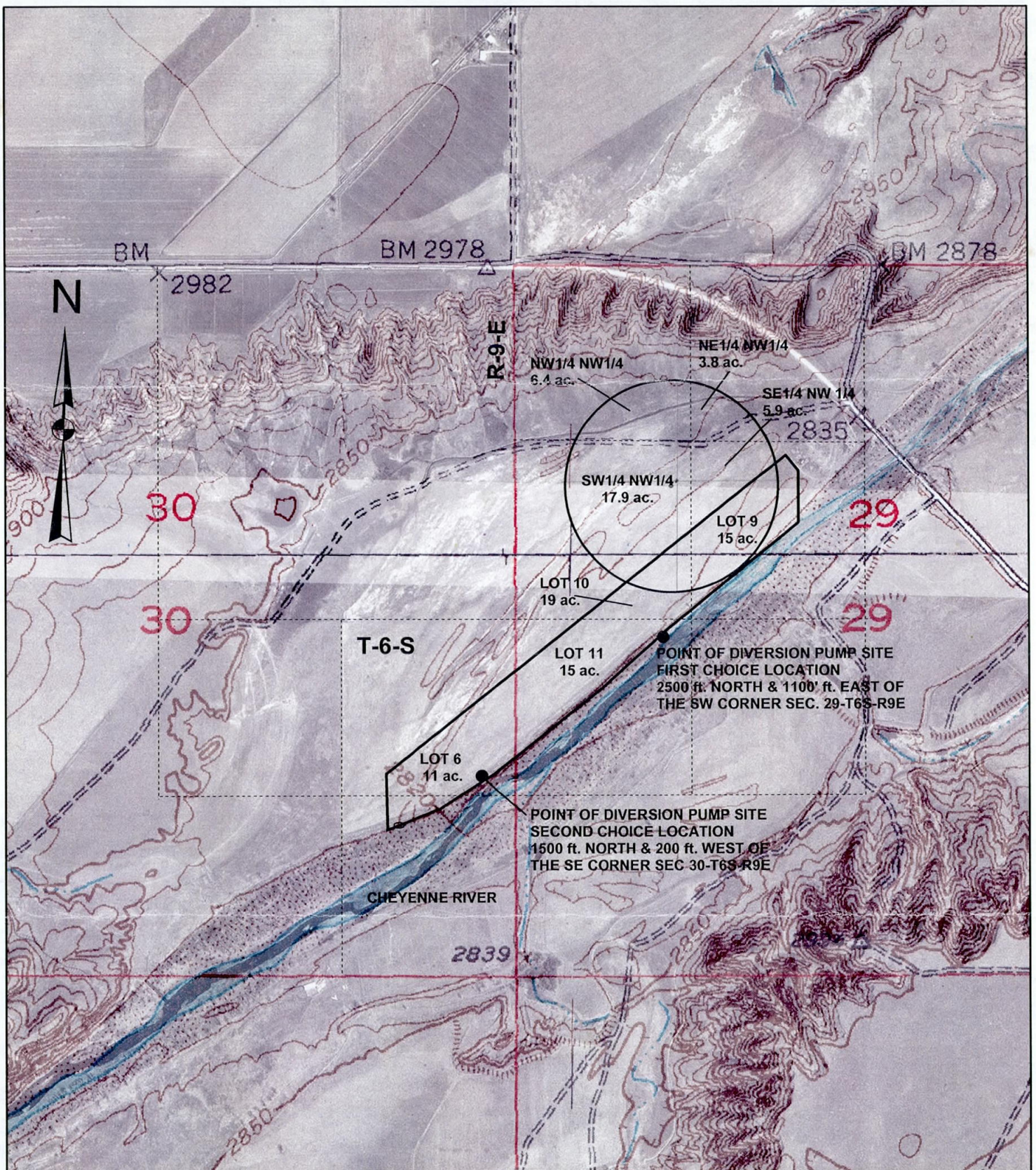
002185

By

Darland Erbe

Chief Engineer

gmm



DENNIS HULLINGER
IRRIGATION WATER RIGHTS MAP
CUSTER CO. SD., - CUSTER CD.

PREPARED BY: GERALD T MILLER *Gerald T Miller*
NRCS NATURAL RESOURCES CONSERVATION SERVICE
 RAPID CITY, SD

SCALE 1:12000 or 1" = 1000'

342-0301
 Ext 5

DATE: 12/08/2005

$$\underline{35.8 \text{ acres @ } 1\text{-cfs}/70\text{ acres} = 0.51\text{-cfs}}$$

2.5 a.f./acre for 153 days

$$2.5 \text{ a.f.} \times 43560 = 108900 \text{ ft}^3$$

$$153 \text{ days @ } 12 \text{ hr/day} = 1836 \text{ hrs} = 6,609,600 \text{ secs}$$

$$108900 \text{ cf} / 6,609,600 \text{ secs} = 0.0165 \text{ cfs/acre}$$

$$35.8 \text{ acres} \times 0.0165 \text{ cfs/acre} = \underline{\underline{0.591 \text{ cfs}}}$$

3.0 a.f./acre for 245 days

$$3.0 \text{ a.f.} \times 43560 = 130680 \text{ ft}^3$$

$$245 \text{ days @ } 12 \text{ hrs/day} = 2940 \text{ hrs} = 10,584,000 \text{ secs}$$

$$130680 \text{ cf} / 10,584,000 \text{ secs} = 0.012 \text{ cfs/acre}$$

$$35.8 \text{ acres} \times 0.012 \text{ cfs/acre} = 0.4296 \text{ cfs}$$

$$35.8 \text{ acres} \quad 2.17\text{-cfs} / 35.8 \text{ acres} = 0.06 \text{ cfs/acre}$$



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

December 27, 2005

225
50

275

150
50

.

Dennis Hullinger
535 Oakridge
Tooele UT 84074

Dear Mr. Hullinger:

Thank you for submitting the *Application for a Permit to Appropriate Water* for irrigation from the Cheyenne River. In order to complete the application the following is required.

We have received a \$125 application filing fee (\$75-Ritterberger Trucking and \$50-Dennis Hullinger). The application filing fee to irrigate the additional acreage is \$200. Please submit an additional \$75.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak

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

c: Rittberger Trucking LLC

*Please
notify me
when to
send to
newspaper
Thanks
Dennis Hullinger
1/5/06*

RECEIVED
JAN - 9 2006
WATER RIGHTS
PROGRAM

35

150
50

125

REPORT ON WATER PERMIT APPLICATION 2574-2

**Dennis Hullinger
535 Oakridge Drive
Tooele, UT 84074
(435)833-0855**

Water Permit Application No. 2574-2, Dennis Hullinger, proposes to appropriate 2.17 cubic feet per second (cfs) of water from the Cheyenne River in the NW¼ SW¼ Section 29 or the NE¼ SE¼ Section 30 to irrigate 35.8 acres in NW¼ Section 29, all in T6S R9E (Attachment 1). The period of annual use would be from March 1 to October 31. The applicant is requesting a diversion rate greater than the statutory limit of 1-cfs per 70-acres.

Proposed Project

The applicant presently holds Water Permit No. 2490-2 for the appropriation of 0.83-cfs of Cheyenne River water to irrigate 58.2-acres located in the S½ NW¼, NW¼ SW¼ Section 29 and E½ SE¼ Section 30, all T6S R9E (Attachment 1). This application proposes to increase the acreage irrigated at the site by 35.8-acres. The applicant intends to install a small pivot that will water approximately 47.3-acres, of which 11.5-acres are presently included in Water Permit No. 2490-2. (Attachment 1) A diversion rate of 2.17-cfs is requested for the 35.8-acres, over 4-times the amount authorized under the statutory limit of 1-cfs per 70-acres, 0.014-cfs/acre.

The acreage proposed for irrigation by this project is river bottom land contiguous with Angostura Irrigation District lands. The soil types at the proposed location are Pierre-Samsil-Kyle and Bankard-Glenberg-Haverson which have very low available water capacity and poor permeability. The contiguous upslope soil types are Nunn-Satanta-Pierre and Samsil-Pierre-Lismas, (Attachment 2) which have the same basic irrigative properties as the river bottom soils.

The U.S. Bureau of Reclamation (BOR) estimates the average on-site delivery of water to the Angostura Irrigation District is 2.5-acre-foot per acre during a normal May through September (153 days) irrigation season. Changing the accepted estimate of 50-percent of permitted acres being irrigated at any one time to an estimate of 12-hours per day of irrigation per acre for 153 days in the Angostura Irrigation District would correspond to 0.0165-cfs/acre, higher than the 0.014-cfs/acre statutory limit, but below the 3-acre-foot/acre maximum annual volume, 0.020-cfs/acre following the same scenario (Appendix 1. Calculations). A volume of 3 acre-feet for the March 1 through October 31 (245 days) 12 hours/day period would equate to 0.012-cfs/acre or a diversion rate of 0.43-cfs for 35.8 acres. The statutory limit of 1-cfs/70 acres equates to a diversion rate of 0.51-cfs for 35.8 acres.

The Natural Resources Conservation Service (NRCS) in Rapid City, SD estimates that 2.0-cfs for the total 94-acres, 58.2-acres authorized by Water Permit No. 2490-2 plus 35.8-acres proposed by this application, would be appropriate for irrigation by a combination of flood and pivot sprinkler systems for the type of soils present at the project location.

Review of Water Source

The water source for the proposed project is the Cheyenne River approximately thirty-two (32) river miles downstream of Angostura Dam in Fall River County, SD. Rising in the high plains of Wyoming in the Thunder Basin National Grasslands, the Cheyenne River meanders around the southern end of the Black Hills entering South Dakota about 14 miles northwest of the town

of Edgemont, SD. The river then passes through narrows south of Hot Springs, SD, the location of Angostura Dam. Construction of Angostura Dam, part of the Angostura Unit irrigation system, was completed in 1949. The Bureau of Reclamation (BOR) holds South Dakota Water Right No. US5792 for an annual one-time fill of 138,761 acre-feet of water stored in Angostura Reservoir for irrigation of 12,218 acres, and for fish, wildlife, recreation, and other purposes. Since October 1949 the flow in the Cheyenne River downstream of Angostura Dam has been regulated primarily to serve the irrigation needs of the Angostura Irrigation District. Water is diverted directly from Angostura Reservoir and delivered through a main canal to the Irrigation District. Average releases to Irrigation District lands are about 40,000 acre-feet per year providing an average on-site delivery of 2.5 acre-feet/acre.

Perennial Cheyenne River flows, above and below Angostura Reservoir, are normally low with occasional high flows occurring during spring snowmelt and periodic rainstorms. Average precipitation in the area is about 16-inches per year, most of which occurs from April through September. During a severe drought in the Upper Cheyenne River Basin, Water Rights along this reach of the Cheyenne River could be subject to Shutoff Orders by the Chief Engineer.

During the normal irrigation season, stream flow in the Cheyenne River below Angostura Dam to the Fall and Cheyenne Rivers' confluence is quite low. In the summer of 2002 the BOR, operator of the Angostura Unit, completed repairs and upgrades on Angostura Dam. These repairs lowered leakage from the radial gates, but BOR doesn't believe the overall rate of leakage from the dam was significantly lessened. Before repairs and upgrades, leakage was about 3.3 cubic feet per second (cfs) and the total return water flows to the Cheyenne River from the Irrigation District were estimated to be 54-percent of the amount released to the main canal or about 30 cfs downstream of the dam to east of Buffalo Gap, SD. There is no State of South Dakota minimum flow requirement in the Cheyenne River below Angostura Dam.

Fall River's confluence with the Cheyenne River is approximately two (2) river miles below Angostura Dam. Fed by thermal springs and wells, Fall River's base stream flow normally does not vary far from the median rate throughout the year (Table 1). Historically, the steady flow from Fall River, return water flows from the Irrigation District, and flow from other tributaries has fulfilled State water rights and domestic water use downstream of the Fall and Cheyenne Rivers' confluence.

Table 1. Fall River Median Flow Percentiles (cfs)

Percentile	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
10	20	20	20	19	20	20	21	21	21	21	21	21
25	22	22	22	21	21	22	22	22	22	22	22	22
50	23	24	24	22	22	24	24	24	24	23	24	24
75	26	26	26	26	26	26	26	26	26	26	26	26
90	29	29	30	29	29	29	29	29	29	30	29	29

An Environmental Impact Statement (EIS), in compliance with the National Environmental Policy Act, was prepared in 2002 by BOR in conjunction with renewal of the Angostura Irrigation District contract. This EIS analyzed the impacts of four (4) water management alternatives; 1) No Action, 2) Re-establishment of Natural Flows below Angostura Dam, 3) Improved Efficiencies in the Irrigation District's System, and 4) Reservoir Recreation and Fisheries. Improved Efficiencies was selected as the preferred alternative for the management of Angostura Dam and the Irrigation District.

The Improved Efficiencies Alternative within the Irrigation District includes measures such as lining canals and laterals, putting laterals into pipes, improving water measuring devices, leveling fields, irrigating by gated pipe or sprinkler, etc., with estimated water saving increases of 5-percent for the delivery system and 10-percent for on-farm efficiency. Saved water could be used for recreation, fisheries, downstream flows, or other purposes. Although return flows from the Irrigation District will lessen, a 10-percent on-farm efficiency improvement would not be expected to significantly change the Cheyenne River's flow rates during the normal irrigation season.

Consultations between BOR, the State of South Dakota, and the Irrigation District on implementation of the Improved Efficiencies Alternative and other measures pertinent to water management practices within Angostura Unit are presently in progress.

From 1968 to 1980 USGS maintained a stream flow gaging station east of Buffalo Gap, SD immediately downstream of the northern boundary of this proposed project (Attachment 1). The limited historical data from this gage for the June through August interval, when Cheyenne River flows are mainly regulated by output to the Irrigation District from Angostura Dam, indicate there is a 50-percent probability the median flow rate at the proposed project site will range from 45 to 58 cfs or greater during this interval of any given year. There is a 75-percent probability the median flow rate will range from 34 to 47 cfs or greater for the same interval at this location. (Table 2 & Attachment 2)

Table 2. Buffalo Gap Monthly Median Flow (cfs)

Percentile	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
10	41	57	55	46	43	36	39	39	56	62	60	41
25	48	60	60	52	49	41	34	47	62	64	65	54
50	58	65	66	60	59	52	45	58	66	70	71	64
75	66	72	89	90	74	84	58	67	78	74	74	71
90	70	91	158	154	235	159	82	80	88	81	80	76

Since 1998 USGS has maintained a stream flow gaging station at Red Shirt, SD approximately 18 river miles downstream of this proposed project and 12 river miles downstream of the last Irrigation District wasteway at the mouth of Cottonwood Creek. Data through 2001 from this gaging station are high flow rate biased since these years experienced above normal precipitation in the Upper Cheyenne River Basin. Limited data from this gaging station for the March through October interval, when Cheyenne River flows are mainly regulated by output to the Irrigation District from Angostura Dam, indicate there is a 50-percent probability the median flow rate will range from 78 to 198-cfs or greater downstream of the proposed project during this interval of any given year. There is a 75-percent probability the median flow rate will range from 69 to 190-cfs or greater for the same interval at this location. (Table 3 & Attachment 3)

Table 3. Red Shirt Monthly Median Flow (cfs)

Percentile	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
10	67	61	112	112	120	87	63	64	81	98	86	66
25	70	65	141	123	190	91	69	72	85	104	98	80
50	71	72	198	151	309	97	78	87	89	115	113	104
75	99	98	214	466	363	441	139	114	113	150	506	99
90	111	113	233	670	390	627	165	129	123	171	736	140

USGS Wasta, SD stream flow gaging station data from 1950 through 2001 indicate there is a 50-percent probability the median flow rate in the Cheyenne River at this location will range from 100 to 272-cfs or greater during the March through October interval of any given year. There is a 75-percent probability the median flow rate will range from 66 to 146-cfs or greater for the same interval at this location. (Table 4 & Attachment 4)

Table 4. Wasta Monthly Median Flow (cfs)

Percentile	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
10	30	50	102	78	60	53	47	47	51	62	70	45
25	48	78	146	117	95	93	72	66	73	84	93	73
50	80	110	240	214	237	272	142	104	100	112	119	100
75	135	179	471	383	623	925	353	176	152	168	160	130
90	220	349	867	839	1560	2130	725	425	282	279	292	230

The presumption can be made that the stream flow rates recorded at the cited gaging stations are post withdrawal of the majority of those Water Right allocations upstream of the gage's location during the normal irrigation season.

Review of Existing Water Rights

From the Fall and Cheyenne River's confluence to this proposed project's location there are twelve (12) Water Rights with diversions totaling 38.49 cfs. One of these Water Rights for 2 cfs withdrawal rate is post 1980, the last year the USGS stream flow gaging station was operational at Buffalo Gap, SD. The 50 and 75-percent probability ranges for the Buffalo Gap gaging station (Table 2) need only be adjusted by the post 1980 2 cfs withdrawal rate to arrive at predicted flow rates at this proposed project's location.

From this proposed project location to Red Shirt, SD including Water Permit No. 2490-2 held by the applicant, there are eight (8) water rights with diversions totaling 15.55-cfs. From Red Shirt to Wasta, SD there are eight (8) water rights with diversions totaling 22.35-cfs.

Except during severe drought conditions in the Upper Cheyenne River Basin, historical USGS stream flow data indicate that a diversion rate within the statutory limit of 0.51-cfs of water should not adversely impact any of the present water rights or domestic water use along the reach of the Cheyenne River from Angostura Dam to Wasta, SD.

Conclusions

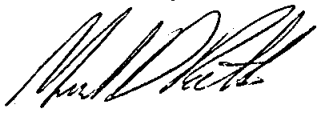
1. Water Permit Application No. 2574-2, Dennis Hullinger, proposes to appropriate 2.17 cubic feet per second (cfs) of water from the Cheyenne River to irrigate 35.8 acres, a diversion rate over 4-times greater than the statutory limit of 1-cfs per 70-acres.
2. The irrigative properties of the soils in the area of the proposed project do not justify an authorization for a diversion rate 4-times greater than the statutory limit of 1-cfs/70-acres (0.51-cfs). NRCS estimates that 2.0-cfs for the total 94-acres, 58.2-acres authorized by Water Permit No. 2490-2 plus 35.8-acres proposed by this application, would be appropriate for irrigation by a combination of flood and pivot sprinkler systems for the type of soils present at the project location.

3. The Water Management Board may allow a greater diversion, in volume or rate or both, if the method of irrigation, any time constraints on diversion of water, or the type of soil so requires. However, no annual volume may be greater than three acre-feet per acre delivered to the land.
4. Except for severe drought conditions in the Upper Cheyenne River Basin, historical USGS stream flow data indicate there is non-appropriated water available and this project diverting water at the statutory limit of 0.51-cfs should not adversely impact any of the present Water Rights or domestic water use along the reach of the Cheyenne River from Angostura Dam to Wasta, SD.
5. Implementation of the BOR's Improved Efficiency Alternative with a 10-percent on-farm improvement should not significantly change the Cheyenne River's flow rates from Angostura Dam to Wasta, SD during the normal irrigation season.
6. During a severe drought in the Upper Cheyenne River Basin, Water Rights along this reach of the Cheyenne River could be subject to Shutoff Orders by the Chief Engineer.



Donald E. Stroup
Natural Resources Project Engineer
DENR Water Rights Program

Reviewed by:



Mark D. Rath
Natural Resources Engineering Specialist
DENR Water Rights Program

Appendix 1. Calculations

Angostura Irrigation District Average on-site Delivery 2.5-acre feet/acre

Normal irrigation season of 153 days. Accepted estimate of 50-percent of permitted acres being irrigated at any one time changed to an estimate of 12-hours per day of irrigation.

153 days @ 12 hours/day = 1836 hours = 6609600 seconds

2.5-acre feet = 108900 cubic feet

108900 cf/6609600 sec = 0.0165-cfs/acre

1-cfs/70-acres = 0.014-cfs/acre

Maximum 3-acre feet per annum-Angostura Irrigation District

3-acre feet = 130680 cubic feet

130680 cf/6609600 sec = 0.02-cfs/acre

Maximum 3-acre feet per annum-Applicant

Applicant March 1 through October 31 = 245 days

245 days @ 12 hours/day = 10584000 seconds

3-acre feet = 130680 cubic feet

130680 cf/10584000 seconds = 0.012-cfs/acre

0.012-cfs/acre x 35.8-acres = 0.43-cfs

0.012-cfs/acre x 94-acres = 1.13-cfs

Statutory limit

1-cfs/70-acres = 0.014-cfs/acre

0.014-cfs/acre x 35.8-acres = 0.51-cfs

0.014-cfs/acre x 94-acres = 1.32-cfs

References:

South Dakota Department of Environment and Natural Resources, Water Rights Program Records

Bureau of Reclamation, Angostura Unit Contract Negotiation, and Water Management Environmental Impact Statement

Verbal communications with NRCS personnel

U.S. Geological Survey, NWISWeb National Water Information System, Historical Stream Flow Data for South Dakota

#2574-2
Dennis Hullinger
535 Oakridge
Tooele, UT 84074
(435)882-3304

T6S R9E

35.8 Acres

11.5 Acres

Soils: Bankard-Glenberg-Haverson

Soils: Pierre-Samsil-Kyle

Diversion
Point

Diversion
Point

#2490-2 58.2 Acres

Cheyenne River

0 0.125 0.25 0.5 Miles

29

30

30

2835

2839

2839

BM 2878

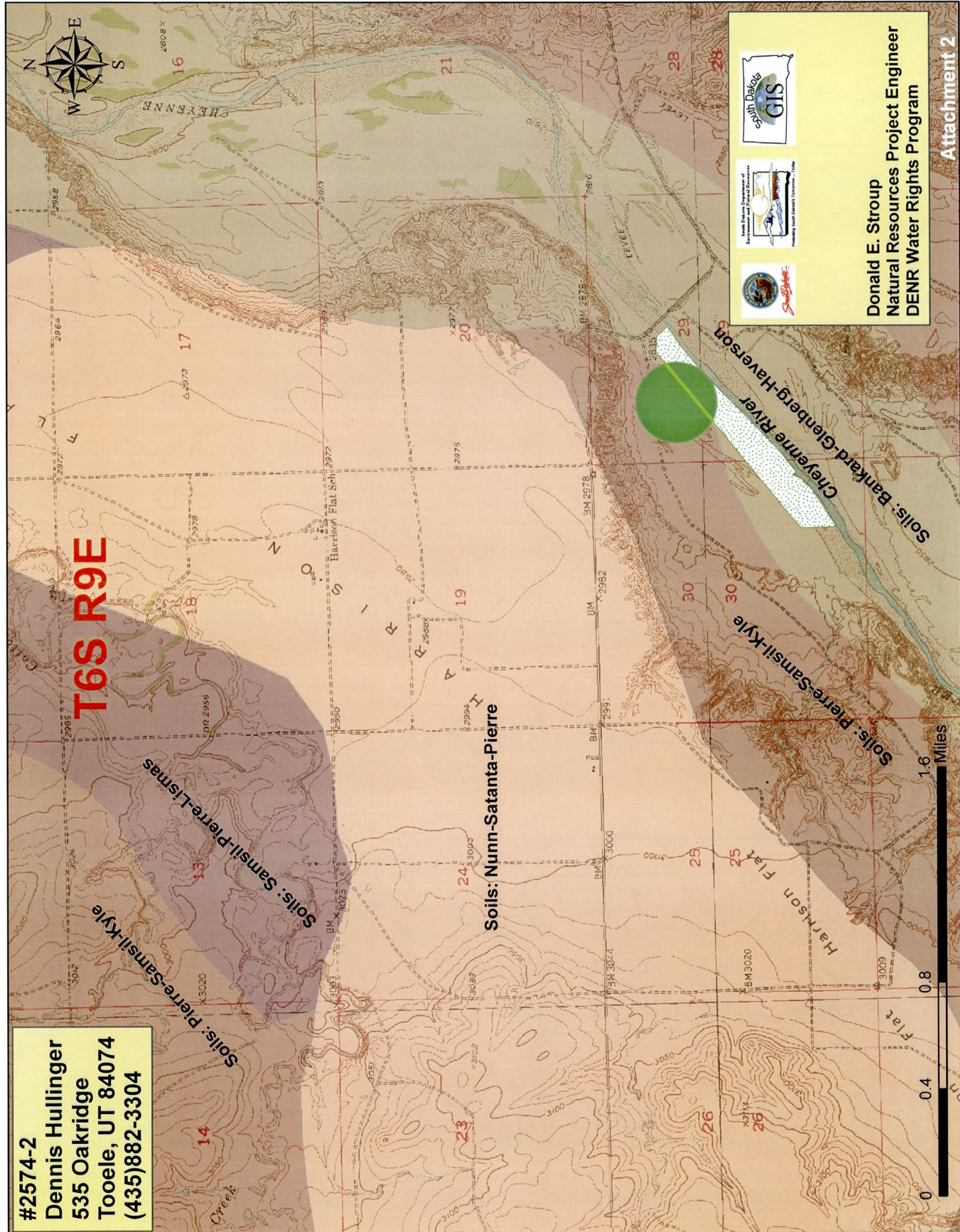
BM 2978



Donald E. Stroup
Natural Resources Project Engineer
DENR Water Rights Program

#2574-2
Dennis Hullinger
535 Oakridge
Tooele, UT 84074
(435)882-3304

T6S R9E



Donald E. Stroup
Natural Resources Project Engineer
DENR Water Rights Program



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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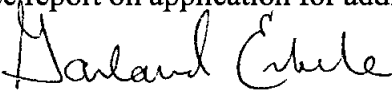
**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2574-2, Dennis Hullinger**

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. 2574-2, Dennis Hullinger, 535 Oakridge, Tooele UT 84074.

The Chief Engineer is recommending APPROVAL of Application No. 2574-2 for a total appropriation authorized by Water Permit No. 2490-2 and this application of 2.0 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. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed. This permit does not authorize diversion of water from the Cheyenne River at any time when the river flow is low. Diversions under this permit shall be in accordance with any written orders issued by the Chief Engineer.
2. 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 Nos. 2490-2 and 2574-2, combined authorize a maximum diversion rate of 2.0 cfs for the irrigation of 94 acres with an annual volume not to exceed 2 acre feet of water per acre per year.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.


Garland Erbele, Chief Engineer
February 1, 2006

Note: The application requests a diversion rate from the Cheyenne River authorized by Permit No. 2490-2 and Application 2574-2, combined, of 3.0 cfs for irrigation of a total of 94 acres. This equates to an application rate greater than two times the statutory limit for irrigation. The NRCS in Rapid City indicated to Water Rights staff that 2.0 cfs is a reasonable diversion rate for the type of soils present at the project location. If you feel this amount is not adequate, please contact us with further justification for a greater amount.

Affidavit of Publication

State of South Dakota)

)ss.

County of Custer)

Charles W. Najacht of said county, being duly sworn, on oath says that he is publisher of the Custer County Chronicle, a weekly newspaper printed and published in Custer City, said County of Custer and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive weeks next prior to the publication of the notice herein, mentioned, and was and is printed wholly or in part in an office maintained at said place of publication: that the

Dennis Hullinger

Notice of Application # 2574-2

a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once each week for 2 successive week(s), on which said newspaper was regularly published, to wit:

Feb. 8, 2006; Feb. 15, 2006;

_____, _____; _____, _____

_____, _____; _____, _____

_____, _____; _____, _____

_____, _____; _____, _____

the full amount of the fees for the publication of annexed notice is \$ 48.74

Charles W. Najacht

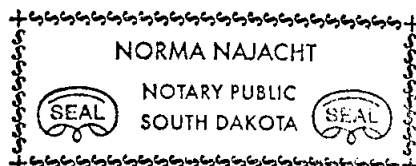
Subscribed and sworn to me before this 15

of February, 2006

Norma Najacht

NOTARY PUBLIC

MY COMMISSION EXPIRES: May 5, 2008



NOTICE OF APPLICATION NO. 2574-2

TO APPROPRIATE WATER

Notice is given that Dennis Hullinger, 535 Oakridge, Tooele UT 84074 has filed an application for a water permit to increase the diversion rate and number of acres authorized by Water Permit No. 2490-2. Water Permit No. 2490-2 authorizes 0.83 cubic feet of water per second (cfs) from the Cheyenne River to irrigate 58.2 acres. This application proposes to divert an additional 2.17 cfs from the Cheyenne River located in the NW 1/4 SW 1/4 (Lot 11) Section 29 or the NE 1/4 SE 1/4 (Lot 6) Section 30; to irrigate an additional 35.8 acres located in the NW 1/4 Section 29; all in T6S-R9E. The applicant is requesting a diversion rate greater than the

statutory limit of 1 cfs per 70 acres. This application also serves as notice to define the annual period of use authorized by Permit No. 2490-2 and this application as being March 1 through October 31.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2574-2 for a total appropriation authorized by Water Permit No. 2490-2 and this application of 2.0 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) it is a beneficial use and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the 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 the 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 February 27, 2006.

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.

#31, 2/8, 2/15



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

February 1, 2006

Custer County Chronicle
PO Box 551
Custer SD 57730-0551

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 2574-2 to Appropriate Water to be published twice. Please publish the first notice on February 8, 2006 with the second publication 7 days later. 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, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Dennis Hullinger, 535 Oakridge, Tooele UT 84074 (Ph # 435-882-3304), Kibbon Rittberger, operates the land and may call to authorize publication and arrange for payment.

Please send the Water Rights Program the first publication immediately. The publication is checked for accuracy so any corrections can be made in the second publication. You may use the form below or fax a copy of the first publication. Any fax should be sent to the attention of Karen Schlaak at (605) 773-4068. Publication errors can invalidate the public notice.

After the second publication, **please send us an affidavit or use the enclosed Proof of Publication form.** 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

-----CUT HERE-----

No. 2574-2

TO: Eric Gronlund
Water Rights Program
Joe Foss Building
Pierre SD 57501-3181

Date _____

We are in receipt of your letter of February 1, 2006 enclosing Notice to Appropriate Water by Application No. 2574-2 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper

Instruction to Newspaper - Publish first Notice on February 8, 2006 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 2574-2 to Appropriate Water

Notice is given that Dennis Hullinger, 535 Oakridge, Tooele UT 84074 has filed an application for a water permit to increase the diversion rate and number of acres authorized by Water Permit No. 2490-2. Water Permit No. 2490-2 authorizes 0.83 cubic feet of water per second (cfs) from the Cheyenne River to irrigate 58.2 acres. This application proposes to divert an additional 2.17 cfs from the Cheyenne River located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ (Lot 11) Section 29 or the NE $\frac{1}{4}$ SE $\frac{1}{4}$ (Lot 6) Section 30; to irrigate an additional 35.8 acres located in the NW $\frac{1}{4}$ Section 29; all in T6S-R9E. The applicant is requesting a diversion rate greater than the statutory limit of 1 cfs per 70 acres. This application also serves as notice to define the annual period of use authorized by Permit No. 2490-2 and this application as being March 1 through October 31.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2574-2 for a total appropriation authorized by Water Permit No. 2490-2 and this application of 2.0 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) it is a beneficial use and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the 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 the 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 February 27, 2006.

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.



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www.state.sd.us/denr

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

February 1, 2006

Dennis Hullinger
535 Oakridge
Tooele UT 84074

Dear Mr. Hullinger:

Water Permit Application No. 2574-2 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 Publisher of the Custer County Chronicle printed at Custer, SD (Ph # 605-673-2217). 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 a 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, the publisher has been instructed to publish your notice once each week for two consecutive weeks. 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

c: Rittberger Trucking, HC 83 Box 13, Hermosa SD 57744

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



**DEPARTMENT of ENVIRONMENT
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www.state.sd.us/denr

APR 07 2008

Dennis Hullinger
535 Oakridge
Tooele UT 84074

Dear Mr. Hullinger:

Enclosed is Water Permit No. 2574-2 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

c: Kibbon Rittberger, HC 85, Box 13, Hermosa SD 57744

enclosures



**DEPARTMENT of ENVIRONMENT
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PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

June 30, 2006

NOTICE OF SHUTOFF ORDER

TO: DENNIS HULLINGER
535 OAKRIDGE DRIVE
TOOELE UT 84074

FROM: GARLAND ERBELE, Chief Engineer
Water Rights Program

A handwritten signature in black ink that reads "Garland Erbele". The signature is written in a cursive, flowing style.

SUBJECT: Cheyenne River Shutoff Order for Junior Priority Date Water Rights

Shutoff Order for Water Right Nos. 2490-2 (2574-2)

To protect the senior priority water rights, the department is issuing shutoff orders to junior water right holders with priority dates after January 1, 1970 from Angostura Dam to Belle Fourche River confluence. Effective immediately, no diversions of water from the Cheyenne River and tributaries will be allowed for those permits with a priority date after January 1, 1970.

Flow in the Cheyenne River has dropped to the point where domestic use of water, which includes livestock watering from the river, has become a concern. This order will be rescinded as soon as conditions improve. If conditions do not improve, this order will remain in effect until the end of the calendar year.

I am asking for your cooperation in complying with this shutoff order. The ongoing drought is creating hardship for all the water right holders along the river. If you have any questions, please contact Mark Rath or Lynn Beck with the Water Rights Program at (605) 773-3352. Thank you.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
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www.state.sd.us/denr

September 5, 2006

2574-2 2490-2

DENNIS HULLINGER
535 OAKRIDGE DRIVE
TOOELE UT 84074

Dear Sir:

This letter is to inform you that until further notice pumping **will be allowed** to continue under your junior priority water right(s) from the Cheyenne River. Due to recent rains and cooler temperatures, flow in the Cheyenne River has improved and appears to holding steady.

We will continue to monitor the daily stream flows. If flow conditions worsen and domestic use flow is again being impacted, DENR may be forced to again limit pumping.

The USGS maintains a website where you can view real-time stream flow measurements at several sites along the Cheyenne River and it's tributaries at the following web address:

<http://waterdata.usgs.gov/sd/nwis/rt>

If you have any questions, please contact Mark Rath or Lynn Beck with the Water Rights Program at (605) 773-3352. Thank you.

GARLAND ERBELE, Chief Engineer
Water Rights Program



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

March 5, 2007

Dear Water Right Holder;

Due to the ongoing drought I am advising Cheyenne River water right holders of the possibility of shutoff orders in 2007 for the river reach from Angostura Dam to the Belle Fourche River confluence. This is **not a shutoff order**.

As a result of the continuing lack of precipitation, tributary flows throughout the Cheyenne River basin remain well below the historical average. Angostura Reservoir ended February almost 21-feet below full and the forecast for improved conditions throughout the summer months is not favorable.

This letter is only intended to give you advanced warning that your ability to divert water may be cut short this year. If shut-off orders are issued, you will receive another letter from the department. In the meantime, water right holders can help by closely monitoring water usage and trying to avoid wasting water.

South Dakota water law gives the highest priority to domestic use, which includes livestock watering. There is generally adequate water available to meet both domestic use and other needs. However, once water availability reaches critical low levels, other uses, including irrigation, will begin to interfere with domestic use. If levels become critically low, the department must issue shut-off orders to protect domestic water uses. Once these orders are issued, the department will continue to monitor water availability and should conditions improve, the shutoff orders would be rescinded.

If you are interested, the US Geological Survey has an Internet site showing river flows at 150 stream gauging stations across the state. Go to sd.water.usgs.gov and click on "Realtime streamflow data via satellite".

Thank you for your cooperation. If you have any questions, please contact Mark Rath or Mike DeFea at (605) 773-3352.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
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523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

NOTICE OF SHUTOFF ORDER

June 27, 2007

TO: DENNIS HULLINGER
535 OAKRIDGE DRIVE
TOOELE UT 84074

FROM: GARLAND ERBELE, Chief Engineer
SD DENR Water Rights Program

SUBJECT: Cheyenne River Shutoff Order for Junior Priority Date Water Rights

Shutoff Order for Water Right Nos. 2574-2 2490-2

To protect the senior priority water rights, the department is issuing shutoff orders to junior water right holders with priority dates between January 1, 1970 and present for the river reach between the Angostura Dam to Belle Fourche River confluence. Effective immediately, diversions of water from the Cheyenne River and tributaries will not be allowed for those permits with a priority date after January 1, 1970.

Flow in the Cheyenne River continues to decline to the point where domestic use of water, which includes livestock watering from the river, has become a concern. This order will be rescinded as soon as conditions improve. If conditions do not improve, this order will remain in effect until the end of the calendar year.

The USGS maintains a website where you can view real-time stream flow measurements at several sites along the river, the web address is:

<http://waterdata.usgs.gov/sd/nwis/rt>

I am asking for your cooperation in complying with this shutoff order. The ongoing drought is creating hardship for all the water right holders along the river.

If you have any questions concerning this order, please contact either Mark Rath at (605) 773-3352 or Aaron Tieman at (605) 394-2229. Thank you.

To : Mark Rath
Department of Environment and Natural Resources
PMB 2020
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

7/02/07

RECEIVED

JUL - 9 2007

WATER RIGHTS
PROGRAM

From: Dennis Hullinger
535 Oakridge Drive
Tooele, UT 84074

12770 Pine Drive
Hot Springs, SD 57747

Subject: Cheyenne River Shutoff Order for Junior Priority Date Water Users
Rights Nos. (2574-2) & 2490-2

Dear Mr. Rath

My name is Dennis Hullinger, and I am the property Manager for the Dakota Hullinger Trust farm alongside the Cheyenne River. I am writing in regards to the shutoff order dated June 27, 2007 by Mr. Garland Erbele of DENR.

Kibbon Rittberger along with his dad and brother sublease the ground with the understanding that 10% of the crops are to remain unharvested for wildlife. Last week Kibbon spoke to Erik Gronlund about our situation and Erik said he would mention it to you.

Last year a pivot was installed and alfalfa was planted and due to the shutoff order died. In it's place Canadian thistle thrived. We have replanted alfalfa and sprayed for thistle and planted 3 acres of corn and millo for wildlife. — We are asking if we could pump for a 24 hr period once every 10 to 14 days, to keep the alfalfa alive so it can cover and kill out the Canadian thistle. --- We could supply the Department with rates from the pivot if needed. — the pivot covers approximately 35 acres.

With a complete shutoff of the irrigation we are greatly concerned that the alfalfa will not become established and that the wildlife enhancing crops will fail and only Canadian thistle will be able to survive.

I appreciate your time in considering our concerns and passing them along to Mr. Erbele. I hope you can help us during this difficult weather period.

Sincerely,

Dennis Hullinger

Dennis Hullinger 435-840-0665 --- cc Rittbergers, Kibbon 605-255-5458

Report of Examination of Works and/or Application of Water to Beneficial Use For Permits No. 2574-2 and 2490-2

I have this day, May 17, 2016 made a thorough examination of the water use system constructed by Dennis Hullinger, 535 Oak Ridge Drive, Tooele, Utah 84074 of Permit No. 2574-2, bearing the priority of 12/23/2005 authorizing the diversion of 2.0 cu. ft. per second of water of the Cheyenne River for irrigation purposes, in Custer County.

This permit increases the diversion rate and number of acres authorized by Water Permit 2490-2. Permit 2490-2 authorized 0.83 cfs and 58.2 acres. This permit authorizes an additional 1.17 cfs and an additional 35.8 acres. The total appropriation is 2.0 cfs to irrigate 94 acres.

Inspection contact & relationship to permit holder : **Kibben Rittberger, tenant**
25109 Rittberger Road, Hermosa SD 57744
605-431-6254 (cell)

A. Works used to divert the water:

Pump 1:

- 1) Make Berkeley
- 2) Model B3TPMS
- 3) Size 3" X 6" 5.375" imp.
- 4) Capacity 285 gpm @ 42.4 psi

Power:

- 1) Source Electric
- 2) Horsepower rating 10 hp (1ph)

Pump 2:

- Make Berkeley
- Model B6ZRH
- Size 6" X 8" 9" imp.
- Capacity 1,120 - 1,325 gpm @ 23 feet

- Source Electric
- Horsepower rating 10 hp (1ph)

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

- 1) Type PVC pipe
- 2) Size 6 inches
- 3) Length 765 feet

- Type PVC
- Size 10 inches
- Length up to 4,600 feet

C. Works used to apply water to beneficial use:

Center Pivot

- 1) Make Reineke Hydrus Micro Pivot
- 2) Overall length 638 feet
- 3) Number of towers 5 End Gun Yes
- 4) Capacity 285 gpm (as installed) designed @ 300 gpm
- 5) Acres 34

Gated Pipe

- Size 10"
- length up to 4,600
- acres 36.9

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period Yes
- 3) List any extended period of nonuse: none
- 4) Exceptions to compliance are: none

E. Condition and Location:

1. The system is in good condition with the point of diversion located as follows: 
2,148' S and 1,881' E of the NW corner Section 29 T6S R9E (43.00023, -103.078208).

2. The works are capable of diverting and conveying to the place of use 3.59 cu. ft. per second of water (1,610 gpm) which is to be used for sprinkler and gravity irrigation. Water has been put to beneficial use to the maximum extent as follows:

Section 29 T6S R9E:

NW ¼ NW ¼ 3.9 acres
NE ¼ NW ¼ 6.6 acres
SW ¼ NW ¼ 25.6 acres
SE ¼ NW ¼ 10.9 acres
NW ¼ SW ¼ 9.0 acres

Section 30 T6S R9E:

NE ¼ SE ¼ 13.7 acres
SE ¼ SE ¼ 1.2 acres

comprising a total of 70.9 acres of land and the license should be issued for 2.0 cfs.

All structures, wells and lands on map: Yes

F. Comments or other permits associated with the project:

This permit increases the diversion rate and number of acres authorized by Permit 2490-2. Permit 2490-2 authorized 0.83 cfs and 58.2 acres. Permit 2574-2 authorizes an additional 1.17 cfs and an additional 35.8 acres. The total appropriation of 2.0 cfs to irrigate 94 acres is above the statutory limit but necessary due to the method of irrigation and soil type. The 2.0 cfs is also necessary to irrigate the 70.9 acres developed as per this inspection due to the surface irrigation being used on the extremely sandy soils. The system is currently managed for wildlife and hunting rather than maximum production. The total annual volume diverted does not exceed 2 acre feet per acre.



Steven Quissell
Water Rights Inspector
DENR, Water Rights Program

Date report completed: 5/20/2016



Diversion point and Cheyenne River



Pump for center pivot

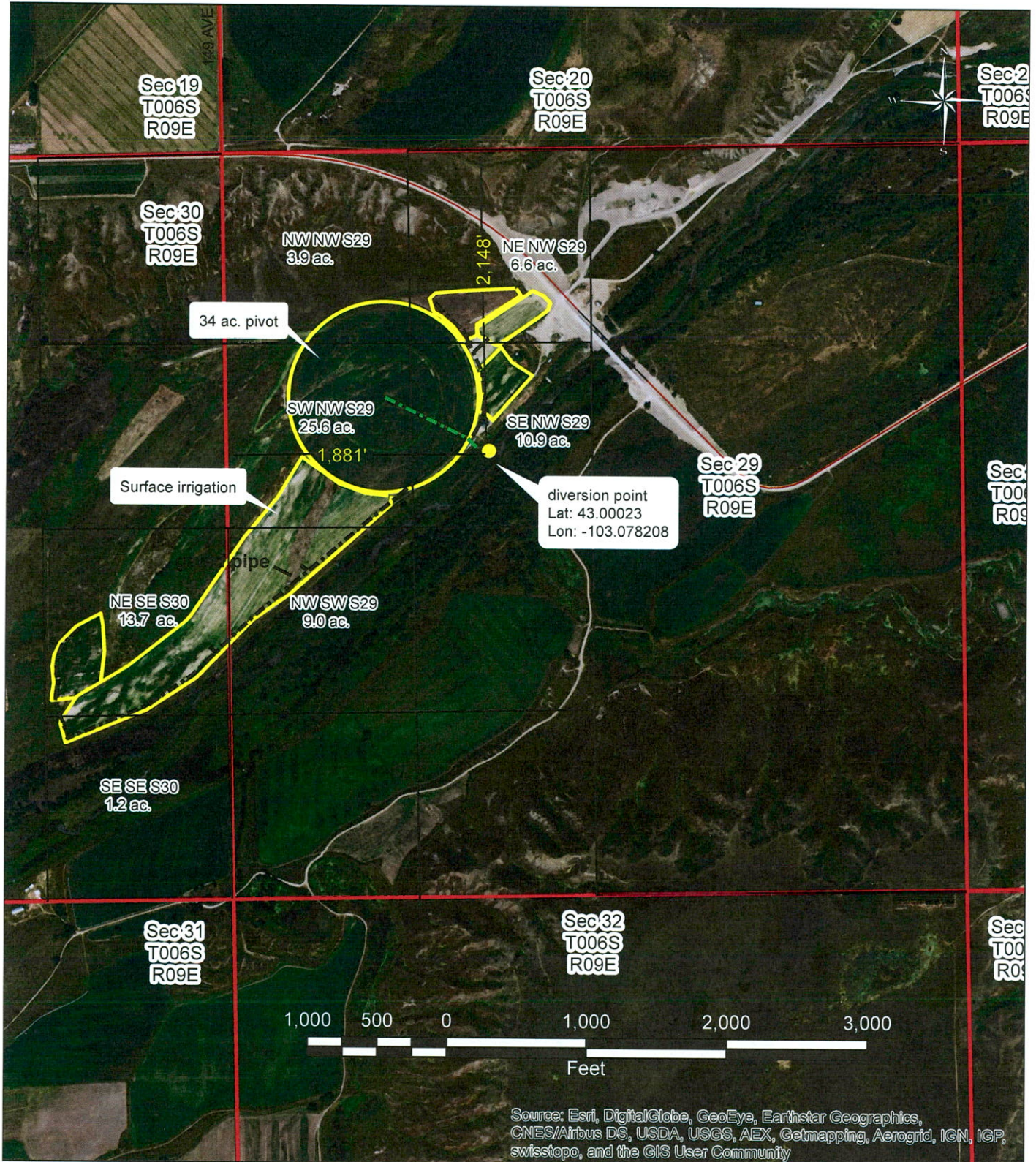


Gated pipe for surface irrigation



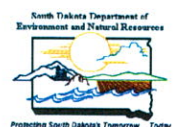
Micro-Pivot

Water Right #2574-2 and #2490-2
Dennis Hullinger
5/17/2016



Steven Quissell

Steven Quissell
Water Rights Inspector
DENR Water Rights Program



McMath, Genny

From: Quissell, Steve
Sent: Friday, May 20, 2016 9:54 AM
To: McMath, Genny
Cc: Beck, Lynn
Subject: Dennis Hullinger permits #2574-2 and #2490-2
Attachments: Dennis_Hullinger_2574-2_EOW.mxd.docm; Dennis_Hullinger_2574-2_2490-2.pdf

Genny

Attached is the EOW and Arc.pdf for Dennis Hullinger permits #2574-2 and #2490-2. Send a copy of the license to Kibben Rittberger (tenant) as well as Hullinger.

Steven Quissell

Water Right Inspector
SD Department of Environment and Natural Resources
Water Rights Program
Phone: (605) 394-6763
Fax: (605) 394-5317

Approval of Location Change and/or Additional Diversion Point(s)

NAME: Dennis Hullinger

ADDRESS: 535 Oak Ridge Drive, Tooele, UT 84074

DATE: May 25, 2016

COUNTY: Custer

TELEPHONE: (435)882-3304

AUTHORITY:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed or additional diversion points may be licensed provided the following conditions are met and the potential for interference with other existing diversions is not increased:

- **Developed water source same as permitted source and no additional water appropriated**

The developed water source is the Cheyenne River, same as permitted source.

2490-2 authorizes a diversion point located in the NW¼ SW¼ Section 29-T6S-R9E.

2574-2 authorizes a diversion point located in the NW¼ SW¼ Section 29-T6S-R9E or in the NE¼ SE¼ Section 30-T6S-R9E.

The developed diversion point is located in the SE¼ NW¼ Section 29-T6S-R9E.

- **If irrigation, no new land is irrigated**

No new land is being irrigated.

- **Review of Existing Diversions**

The closest authorized diversion points to the developed diversion point are WR 1754-2 located 1.2 miles upstream and WR 1408-2 located 1.0 mile downstream. 1754-2 authorizes the diversion of 2.0 cfs from the Cheyenne River to irrigate 140 acres and 1408-2 authorizes the diversion of 1.12 cfs from the Cheyenne River to irrigate 131 acres.

RECOMMENDED ACTION

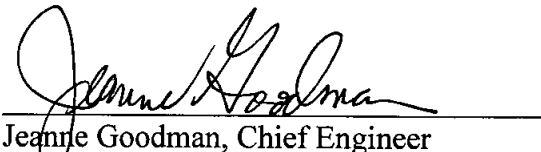
Based on the above criteria, it is recommended that the diversion point be licensed as developed.



Lynn Beck, Natural Resources Engineer III
Water Rights Program

The Chief Engineer makes a finding pursuant SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that:

This change in location of the diversion point does not increase the potential for adverse effects to existing diversions.



Jeanne Goodman, Chief Engineer
Water Rights Program

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2574-2

(1) Dennis Hullinger, 535 Oakridge, Tooele UT 84074 made Application No. 2574-2, December 23, 2005 for a water permit to increase the diversion rate and number of acres authorized under Water Permit No. 2490-2. Permit No. 2574-2 authorizes an additional 1.17 cubic feet of water per second from the Cheyenne River, Custer County, South Dakota for irrigation of 35.8 additional acres. Water Permit No. 2574-2 also defined the annual period of use for both permits as being March 1 through October 31. Permit No. 2574-2, with a priority date of December 23, 2005 was approved February 27, 2006 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before February 27, 2011 and for the application to beneficial use of said water on or before February 27, 2015.

Water Permit No. 2490-2, with a priority date of September 24, 2002 authorizes diversion of 0.83 cfs from the Cheyenne River to irrigate 58.2 acres.

An investigation conducted for licensing purposes found the Cheyenne River diversion point was not in the location authorized by Permit Nos. 2490-2 and 2574-2. Pursuant to SDCL 46-5-13.1, the Chief Engineer made a finding that the change in location of the diversion point does not increase the potential for interference with existing water rights.

The applicable portions of Water Permit No. 2490-2 are incorporated into Water License No. 2574-2.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 2.0 cubic feet of water per second for beneficial use. The location of the diversion point is 2,148 feet south and 1,881 feet east of the NW corner of Section 29, T6S, R9E (SE ¼ NW ¼).

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use to irrigate the following land:

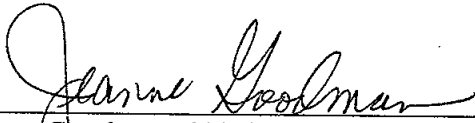
Section 29, T6S, R9E		Section 30, T6S, R9E	
NW ¼ NW ¼	3.9 acres	NE ¼ SE ¼	13.7 acres
NE ¼ NW ¼	6.6 acres	SE ¼ SE ¼	1.2 acres
SW ¼ NW ¼	25.6 acres		
SE ¼ NW ¼	10.9 acres		
NW ¼ SW ¼	9.0 acres	Total	70.9 acres

(4) Pursuant to South Dakota Water Law 46-5-30.1 Dennis Hullinger, 535 Oakridge, Tooele UT 84074 the holder and/or owner of Incorporated Water Right No. 2574-2 is issued a license to appropriate water, the right to use 2.00 cubic feet of water per second from the Cheyenne River with priority dates of September 24, 2002 (0.83 cfs) and December 23, 2005 (1.17 cfs) from the location specified in (2) of this license for irrigation purposes.

continued

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 2574-2 and subject to the following qualifications:

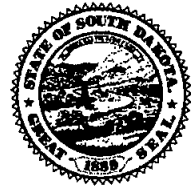
- Low flows as needed for downstream domestic use, including livestock water and prior water rights must be bypassed. This permit does not authorize diversion of water from the Cheyenne River at any time when the river flow is low. Diversions under this permit shall be in accordance with any written orders issued by the Chief Engineer.
- 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 Nos. 2490-2 and 2574-2 combined authorize a maximum diversion rate of 2.0 cfs for the irrigation of 94 acres with an annual volume not to exceed 2 acre feet of water per acre per year. **Based on the acreage actually developed, the water right is limited to irrigation of 70.9 acres.**
- This Permit is approved subject to the irrigation water use questionnaire being submitted each year.



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

JUL 22 2016

date



2574-2



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

JUL 22 2016

2490-2
2574-2

Dennis Hullinger
535 Oak Ridge Dr
Tooele UT 84074

Dear Mr. Hullinger:

Enclosed is Water License No. 2574-2. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

Upon licensing, the applicable portions of Water Permit No. 2490-2 were incorporated into Water License No. 2574-2. As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

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

enclosures

c: Kibbon Rittberger, 25109 Rittberger Rd., Hermosa SD 57744