

**FORM 2: Application for irrigation in South Dakota**  
(type or print)

10:00 a.m.

|                                                                                                                 |                                     |                                 |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------|
| Mail to:<br>PMB 2020<br>DENR - Water Rights<br>523 E Capitol Ave<br>Pierre, SD 57501-3182<br>ph. (605) 773-3352 | No. <u>7717-3</u> (office use only) | Hydrologic Unit <u>10160006</u> |
|                                                                                                                 | Basin <u>James River</u>            |                                 |
|                                                                                                                 | Newspaper <u>Plainsman Box 1278</u> |                                 |
|                                                                                                                 | <u>Huron 57350 - 605-352-6401</u>   |                                 |

**RECEIVED**  
**FEB - 8 2013**  
**WATER RIGHTS**  
**PROGRAM**

## Application For Permit To Appropriate Water For Irrigation

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

(Use predates Mar 2, 1955)

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

1. Name to Appear on Irrigation Permit Terry Wieting  
 (check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent  
 (name and complete address if different than above name)

Mailing Address 870 Beach Ave Huron SD 57350  
 (Address) (City) (State) (Zip Code)

Home Phone \_\_\_\_\_ Cell 605-554-0207 Email \_\_\_\_\_

2. Amount of water claimed 1.78 \*CFS or            \*\*GPM            \*\*\*AF Total Acreage 135  
 (\*Cubic Feet per Second) (\*\*Gallons per Minute) (\*\*Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Tulare Western Spink/Hitchcock

4. Location of point of diversion 1 well located in the center of the NE 1/4 sec 10 113N-64W  
 (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

County Beadle

5. County or counties where water will be used Beadle

6. Annual period during which water is to be used May/September 30

7. List below each forty acre division, or lot, or fraction thereof and show number of acres to be irrigated in each.  
 (Attach sheet if more space is needed)

| Land Description                    | Acres | Land Description | Acres |
|-------------------------------------|-------|------------------|-------|
| NW1/4 of the NE 1/4 Sec 10 113N-64W | 33.75 |                  |       |
| NE1/4 of the NE 1/4 Sec 10 113N-64W | 33.75 |                  |       |
| SW1/4 of the NE 1/4 Sec 10 113N-64W | 33.75 |                  |       |
| SE1/4 of the NE 1/4 Sec 10 113N-64W | 33.75 |                  |       |

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

To irrigate 135 acres from one well with a center pivot at 1.78 CFS

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

**SOUTH DAKOTA**  
**WATER PERMIT NO. 7717-3 FOR IRRIGATION**

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Date of first receipt of application February 8, 2013.

The Water Management Board approved Water Permit No. 7717-3 on July 11, 2013 for Terry Wieting, 870 Beach Ave, Huron SD 57350 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. 7717-3 appropriates 1.78 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the approximate center of the NE ¼ Section 10 for irrigation of 135 acres located in the NE 1/4 Section 10; all in T113N-R64W.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: May 1 – September 30.
3. The date from which applicant may claim right is February 8, 2013.
4. One-fifth of the construction is to be completed on or before January 11, 2016.
5. All construction is to be completed on or before July 11, 2018.
6. Water is to be put to beneficial use on or before July 11, 2022.
7. 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. 7717-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

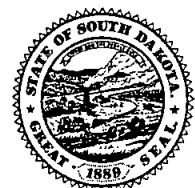
**WATER MANAGEMENT BOARD**

By: *Jeanne Goodman*

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

**AUG 29 2013**

date



## Supplemental Information

(type or print)

### 1. Well Information

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

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

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

c) Well Depth 70 Depth to Top of Water Bearing Material 35 Depth to Water from Surface 23

d) Distance to nearest existing domestic well:

On applicant's property \_\_\_\_\_ On property owned by others .75

### 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)

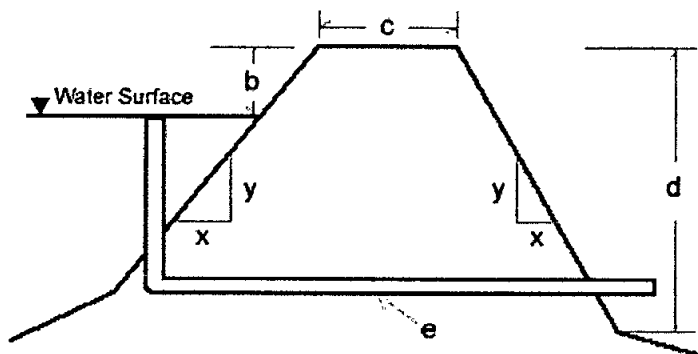
Upstream \_\_\_\_\_

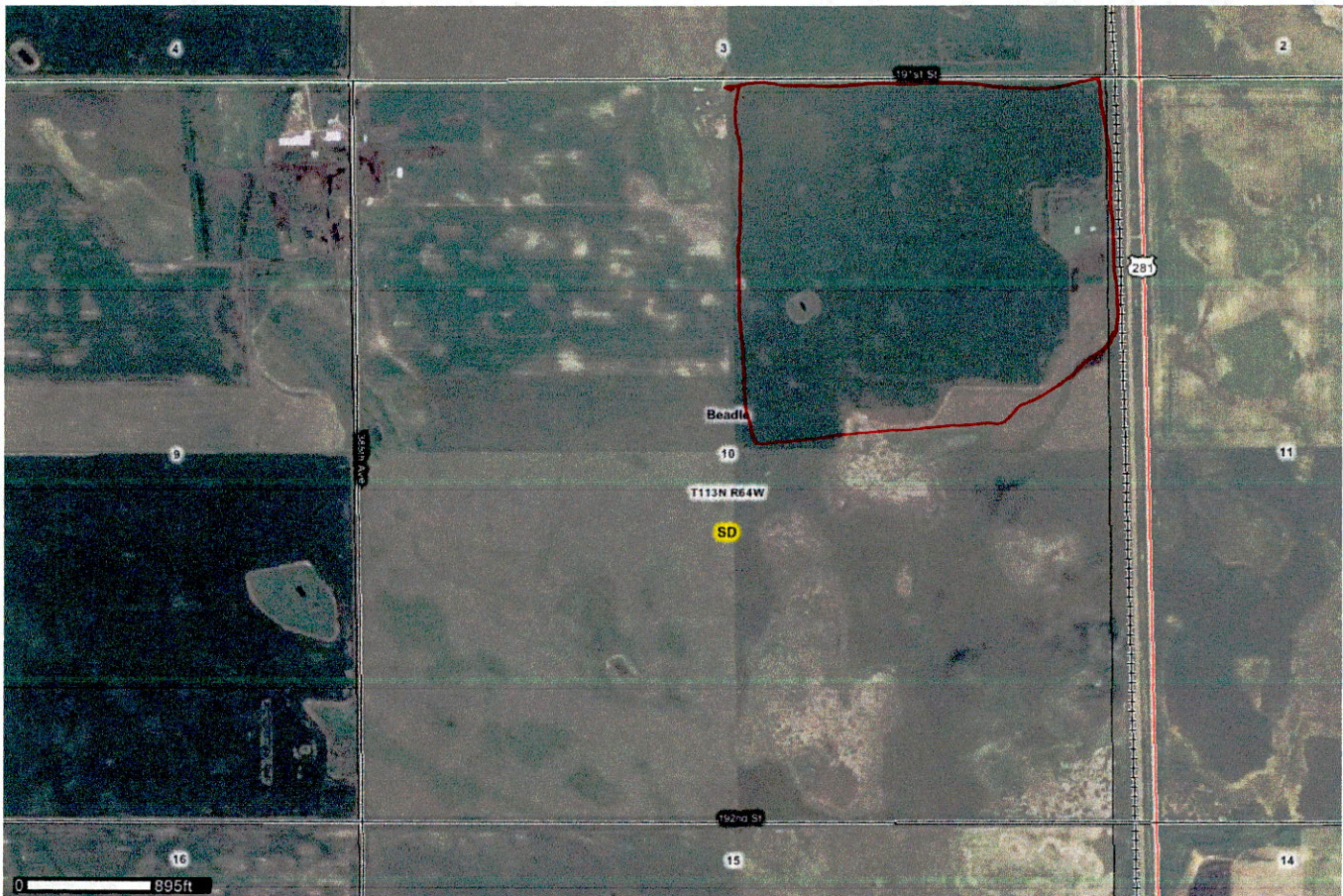
Downstream \_\_\_\_\_

h) Surface Area of Impoundment \_\_\_\_\_

i) Storage \_\_\_\_\_ Acre Feet

j) Drainage Area Above Dam \_\_\_\_\_ Acres





NE 1/4 10 113-64 135 Acres

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WATER RIGHTS  
PROGRAM

# RECEIPT

## WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 2/8, 20 13

RECEIVED OF Gary Marshall Marshall Bros 19032 388th Ave Hittcock SD 57348

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

|                                                                                                                |       |         |
|----------------------------------------------------------------------------------------------------------------|-------|---------|
| Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use | 850   | 00      |
| Fee for Application for Permit No. _____ to Appropriate Water for Future use                                   |       |         |
| Fee to retain Future Use Permit No. _____ after period of seven years.                                         |       |         |
| Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____            | 200   | 00      |
| Fee for Filing Transfer Form _____                                                                             |       |         |
| Fee for _____                                                                                                  |       |         |
| Fee for Issuing New Well Driller's License No. _____ for C.Y. _____                                            |       |         |
| Fee for Renewal of Well Driller's License No. _____ for C.Y. _____                                             |       |         |
| Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____                                         |       |         |
| Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____                                      |       |         |
| (Any Other Work Provided by Law)                                                                               | TOTAL | 1050 00 |

No. 06115

By Lance J. Erbe  
Chief Engineer

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APR - 9 2013

WATER RIGHTS  
PROGRAM

SD EForm - 0495LD V2

NOTICE OF TRANSFER OF OWNERSHIP

For assistance call (605) 773-3352

Mail to: PMB 2020  
DENR - Water Rights Program  
523 E Capitol Ave  
Pierre, SD 57501-3182

Water Right/Permit No. 7717-3

Date: 4/3/2013

I/We request that Water Right/Permit No. \_\_\_\_\_ formerly owned by:  
Marshall Bros C/O Gary Marshall be transferred to:

New Owner Name: Terry Wieting

Address: 870 Beach Ave Ne

City, State, Zip Huron ☒ Sd ☒ 57350 Telephone No. 605-554-0207

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

NE 1/4 Sec 10 113-64

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

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

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

I, Terry Wieting, the new owner, certify that the above information is true and correct.

  
(signed by new owner)

**NOTE:** Water permits may be cancelled for nonconstruction after the five year construction period has expired. Once a water permit is developed and the water used, the permit becomes a right. A water right may be lost for three reasons:

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

# RECEIPT

## WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 4/9, 20 13

RECEIVED OF Terry Wieting 870 Beach Ave NE Huron SD 57350

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

|                                                                                                                |       |       |
|----------------------------------------------------------------------------------------------------------------|-------|-------|
| Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use |       |       |
| Fee for Application for Permit No. _____ to Appropriate Water for Future use                                   |       |       |
| Fee to retain Future Use Permit No. _____ after period of seven years.                                         |       |       |
| Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____            |       |       |
| Fee for Filing Transfer Form <u>7717-3</u>                                                                     | 50    | 00    |
| 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. **06290**

By Shanne Goodman  
Chief Engineer



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

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

[denr.sd.gov](http://denr.sd.gov)

April 9, 2013

Terry Wieting  
870 Beach Ave NE  
Huron SD 57350

Dear Mr. Wieting:

Thank you for following up on the ownership change for Water Permit Application Nos. 7717-3, 7718-3, 7720-3 and 7721-3. The transfers have been completed. The applications formerly listed in the name of Marshall Brothers are now listed in your name.

Enclosed are the receipts for the transfers as well as the check for \$500.00 which is not required. If I can answer any questions for you, please contact me.

Sincerely,

Karen Schlaak  
Water Rights Program  
(605) 773-3352  
email: [karen.schlaak@state.sd.us](mailto:karen.schlaak@state.sd.us)

enclosures



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

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

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT APPLICATION  
NO. 7717-3, Terry Wieting**

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. 7717-3, Terry Wieting, 870 Beach Ave NE, Huron SD 57350.

The Chief Engineer is recommending APPROVAL of Application No. 7717-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7717-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

A handwritten signature in black ink that reads "Jeanne Goodman". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Jeanne Goodman, Chief Engineer  
May 28, 2013

REPORT TO THE CHIEF ENGINEER  
ON

WATER PERMIT APPLICATION NO. 7685-3  
MICHAEL WATSON  
WATER PERMIT APPLICATION NO. 7716-3  
DENIS AND CRAIG SLEPIKAS  
WATER PERMIT APPLICATION NO. 7719-3  
MARSHALL BROTHERS  
WATER PERMIT APPLICATION NOS. 7717-3, 7718-3, 7720-3 & 7721-3  
TERRY WIETING  
WATER PERMIT APPLICATION NOS. 7722-3, 7723-3 & 7724-3  
BRENT AND LELAND KLEINSSASER  
WATER PERMIT APPLICATION NOS. 7726-3, 7727-3, 7753-3, 7754-3 & 7759-3  
OSCAR, INC.  
WATER PERMIT APPLICATION NOS. 7725-3, 7752-3, 7755-3, 7756-3 & 7757-3  
LENNY PETERSON  
WATER PERMIT APPLICATION NOS. 7751-3 & 7758-3  
BRAD PETERSON  
WATER PERMIT APPLICATION NOS. 7731-3 & 7732-3  
RIVERSIDE HUTTERIAN BRETHREN  
WATER PERMIT APPLICATION NOS. 7733-3, 7734-3, 7735-3 & 7736-3  
VANBUSKIRK FARMS  
WATER PERMIT APPLICATION NOS. 7737-3, 7738-3, 7739-3, 7740-3, 7742-3, 7743-3,  
7744-3, 7745-3 & 7746-3  
BIXLER FARMS  
WATER PERMIT APPLICATION NO. 7790-3,  
MARTIN J. ANDERSON  
WATER PERMIT APPLICATION NO. 7799-3,  
RATHJEN FARMS  
WATER PERMIT APPLICATION NO. 7822-3 & 7823-3  
DARIN BINGER

APRIL 13, 2013

Water Permit Application No. 7685-3 proposes to appropriate water from one well completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.67 cubic feet of water per second (cfs). Water will be diverted from either an existing well authorized by Water Right No. 6175-3, located in the center of the NE $\frac{1}{4}$  Section 11, T114N-R63W, or a new well to be located in the NW $\frac{1}{4}$  SE $\frac{1}{4}$  Section 11, T114N-R63W. This application proposes to irrigate 75 acres located in the N $\frac{1}{2}$  SE $\frac{1}{4}$ , SW $\frac{1}{4}$  SE $\frac{1}{4}$  Section 11, T114N-R63W.

Water Permit Application No. 7716-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 2.28 cfs. Water is to be diverted from one well approximately 88 feet deep, located in the

approximate center of the NE ¼ Section 20, T112N-R61W. This application proposes to irrigate 160 acres located in the NE¼ Section 20, T112N-R61W.

Water Permit Application No. 7719-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 70 feet deep, located in the approximate center of the NW¼ Section 4, T113N-R62W. This application proposes to irrigate 135 acres located in the NE¼ Section 4, T113N-R62W.

Water Permit Application No. 7717-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 70 feet deep, located in the approximate center of the NE ¼ Section 10, T113N-R64W. This application proposes to irrigate 135 acres located in the NE¼ Section 10, T113N-R64W.

Water Permit Application No. 7718-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 70 feet deep, located in the approximate center of the SE ¼ Section 9, T113N-R64W. This application proposes to irrigate 135 acres located in the SE¼ Section 9, T113N-R64W.

Water Permit Application No. 7720-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 70 feet deep, located in the approximate center of the NE ¼ Section 25, T114N-R64W. This application proposes to irrigate 135 acres located in the NE¼ Section 25, T114N-R64W.

Water Permit Application No. 7721-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.33 cfs. Water is to be diverted from one well approximately 70 feet deep, located in the approximate center of the SW ¼ Section 18, T114N-R63W. This application proposes to irrigate 100 acres located in the SW¼ Section 18, T114N-R63W.

Water Permit Application No. 7722-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 80 feet deep, located in the approximate center of the NE ¼ Section 4, T111N-R61W. This application proposes to irrigate 155 acres located in the NE¼ Section 4, T111N-R61W.

Water Permit Application No. 7723-3 proposes to appropriate water from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 3.56 cfs. Water is to be diverted from two wells approximately 80 feet deep, located in the approximate centers of the NW¼ Section 3, T111N-R61W and the SW ¼ Section 3, T111N-R61W. This application proposes to irrigate 300 acres located in the W½ Section 3, T111N-R61W.

Water Permit Application No. 7724-3 proposes to appropriate water from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 3.56 cfs. Water is to be diverted from two wells approximately 80 feet deep, located in the approximate centers of the SW¼ Section 4, T111N-R61W and the SE ¼ Section 4, T111N-R61W. This application proposes to irrigate 300 acres located in the S 1/2 Section 4, T111N-R61W.

Water Permit Application No. 7726-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 2.28 cfs. Water is to be diverted from one well approximately 60-100 feet deep, located in the approximate center of the SW ¼ Section 16, T114N-R62W. This application proposes to irrigate 160 acres located in the NE¼ Section 34, T114N-R62W.

Water Permit Application No. 7727-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 2.28 cfs. Water is to be diverted from one well approximately 60-100 feet deep, located in the approximate center of the NW ¼ Section 34, T113N-R64W. This application proposes to irrigate 160 acres located in the NW¼ Section 16, T113N-R64W.

Water Permit Application No. 7753-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.50 cfs. Water is to be diverted from one well approximately 60-100 feet deep, located in the approximate center of the SE¼ Section 26, T114N-R64W. This application proposes to irrigate 105 acres located in the SE ¼ Section 26, T114N-R64W.

Water Permit Application No. 7754-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.14 cfs. Water is to be diverted from one well approximately 60-100 feet deep, located in the S½ NW¼ Section 27, T115N-R63W. This application proposes to irrigate 80 acres located in the S½ NW¼ Section 27, T115N-R63W.

Water Permit Application No. 7759-3 proposes to appropriate water from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 4.57 cfs. Water is to be diverted from two wells approximately 60-100 feet deep, located in the approximate centers of the SW¼ Section 19, T114N-R63W and the SE ¼ Section 19, T114N-R63W. This application proposes to irrigate 320 acres located in the S½ Section 19, T114N-R63W.

Water Permit Application No. 7725-3 proposes to appropriate water from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 4.57 cfs. Water is to be diverted from two wells approximately 60-100 feet deep, located in the approximate centers of the SW¼ Section 7, T113N-R63W and the SE ¼ Section 7, T113N-R63W. This application proposes to irrigate 320 acres located in the S½ Section 7, T113N-R63W.

Water Permit Application No. 7752-3 proposes to appropriate water from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 4.57 cfs. Water is to be diverted from two wells approximately 60-100 feet deep, located in the approximate centers of the NE¼ Section 26, T113N-R63W and the SE ¼ Section 26, T113N-R63W. This application proposes to irrigate 320 acres located in the E½ Section 26, T113N-R63W.

Water Permit Application No. 7755-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 2.28 cfs. Water is to be diverted from one well approximately 60-100 feet deep, located in the approximate center of the NW¼ Section 17, T113N-R63W. This application proposes to irrigate 160 acres located in the NW¼ Section 17, T113N-R63W.

Water Permit Application No. 7756-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 2.28 cfs. Water is to be diverted from one well approximately 60-100 feet deep, located in the approximate center of the SW¼ Section 21, T114N-R63W. This application proposes to irrigate 160 acres located in the SW¼ Section 21, T114N-R63W.

Water Permit Application No. 7757-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 2.28 cfs. Water is to be diverted from one well approximately 60-100 feet deep, located in the approximate center of the SW¼ Section 22, T114N-R63W. This application proposes to irrigate 160 acres located in the SW¼ Section 22, T114N-R63W.

Water Permit Application No. 7751-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 2.28 cfs. Water is to be diverted from one well approximately 60-100 feet deep, located in the approximate center of the NW¼ Section 11, T113N-R64W. This application proposes to irrigate 160 acres located in the NW¼ Section 11, T113N-R64W.

Water Permit Application No. 7758-3 proposes to appropriate water from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 4.57 cfs. Water is to be diverted from two wells approximately 60-100 feet deep, located in the approximate centers of the NW¼ Section 30, T114N-R63W and NE¼ Section 30, T114N-R63W. This application proposes to irrigate 320 acres located in the N½ Section 30, T114N-R63W.

Water Permit Application No. 7731-3 proposes to appropriate water from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 3.86 cfs. Water is to be diverted from two wells approximately 85 feet deep, located in the approximate centers of the NW¼ Section 1, T113N-R62W and SW¼ Section 1, T113N-R62W. This application proposes to irrigate 270 acres located in the W½ Section 1, T113N-R62W.

Water Permit Application No. 7732-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.93

cfs. Water is to be diverted from one well approximately 80 feet deep, located in the SW $\frac{1}{4}$  SE $\frac{1}{4}$  Section 21, T112N-R61W. This application proposes to irrigate 135 acres located in the NE $\frac{1}{4}$  Section 21, T112N-R61W.

Water Permit Application No. 7733-3 proposes to appropriate water from four wells to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 7.77 cfs. Water is to be diverted from four wells approximately 110 feet deep, located in the approximate centers of the SE $\frac{1}{4}$  Section 4, T113N-R63W and SW $\frac{1}{4}$  Section 4, T113N-R63W; and the approximate centers of the NE $\frac{1}{4}$  Section 5, T113N-R63W and SE $\frac{1}{4}$  Section 5, T113N-R63W. This application proposes to irrigate 544 acres located in the S $\frac{1}{2}$  Section 4, T113N-R63W and the E $\frac{1}{2}$  Section 5, T113N-R63W.

Water Permit Application No. 7734-3 proposes to appropriate water from five wells to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 14.0 cfs. Water is to be diverted from five wells approximately 110 feet deep, located in: 1) the approximate center of the NW $\frac{1}{4}$  Section 32, T114N-R63W; 2) the approximate center of Section 31, T114N-R63W; 3) the approximate center of the SW $\frac{1}{4}$  Section 30, T114N-R63W; 4) the approximate center of the NE $\frac{1}{4}$  Section 36, T114N-R64W. This application proposes to irrigate 982 acres located in the NW $\frac{1}{4}$  Section 32, T114N-R63W, Section 31, T114N-R64W, the SW $\frac{1}{4}$  Section 30, T114N-R63W and the NE $\frac{1}{4}$  Section 36, T114N-R64W.

Water Permit Application No. 7735-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.94 cfs. Water is to be diverted from one well approximately 110 feet deep, located in the approximate center of the NE $\frac{1}{4}$  Section 36, T113N-R64W. This application proposes to irrigate 136 acres located in the NE $\frac{1}{4}$  Section 36, T113N-R64W.

Water Permit Application No. 7736-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.94 cfs. Water is to be diverted from one well approximately 110 feet deep, located in the approximate center of the NW $\frac{1}{4}$  Section 33, T114N-R63W. This application proposes to irrigate 136 acres located in the NW $\frac{1}{4}$  Section 33, T114N-R63W.

Water Permit Application No. 7737-3 proposes to appropriate water from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 2.20 cfs. Water is to be diverted from two wells approximately 60 feet deep, located in the approximate centers of the SE $\frac{1}{4}$  Section 25, T115N-R63W and SW $\frac{1}{4}$  Section 25, T115N-R63W. This application proposes to irrigate 200 acres located in the S $\frac{1}{2}$  Section 25, T115N-R63W.

Water Permit Application No. 7738-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 70 feet deep, located in the approximate center of the SW $\frac{1}{4}$  Section 18, T114N-R62W. This application proposes to irrigate 150 acres located in the SW $\frac{1}{4}$  Section 18, T114N-R62W.

Water Permit Application No. 7739-3 proposes to appropriate water from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 3.56 cfs. Water is to be diverted from two wells approximately 60 feet deep, located in the approximate centers of the SE¼ Section 24, T114N-R63W and NE¼ Section 24, T114N-R63W. This application proposes to irrigate 320 acres located in the E½ Section 24, T114N-R63W.

Water Permit Application No. 7740-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 60 feet deep, located in the approximate center of the SW¼ Section 24, T115N-R63W. This application proposes to irrigate 150 acres located in the SW¼ Section 24, T115N-R63W.

Water Permit Application No. 7742-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 60 feet deep, located in the approximate center of the NE¼ Section 14, T115N-R63W. This application proposes to irrigate 160 acres located in the NE¼ Section 14, T115N-R63W.

Water Permit Application No. 7743-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 60 feet deep, located in the approximate center of the SW¼ Section 23, T114N-R63W. This application proposes to irrigate 160 acres located in the SW¼ Section 23, T114N-R63W.

Water Permit Application No. 7744-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 60 feet deep, located in the approximate center of the SE¼ Section 22, T114N-R63W. This application proposes to irrigate 160 acres located in the SE¼ Section 22, T114N-R63W.

Water Permit Application No. 7745-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 65 feet deep, located in the approximate center of the NW¼ Section 3, T114N-R63W. This application proposes to irrigate 160 acres located in the NW¼ Section 3, T114N-R63W.

Water Permit Application No. 7746-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.78 cfs. Water is to be diverted from one well approximately 60 feet deep, located in the approximate center of the NW¼ Section 6, T114N-R62W. This application proposes to irrigate 160 acres located in the NW¼, W ½ NE¼, N½SW¼ Section 6, T114N-R62W.

Water Permit Application No. 7790-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 1.86 cfs. Water is to be diverted from one well approximately 85 feet deep, located in the NW¼ SE¼

Section 18, T113N-R62W. This application proposes to irrigate 132 acres located in the SW¼, W ½ SE¼, Section 18, T113N-R62W.

Water Permit Application No. 7799-3 proposes to irrigate 36 new acres using a well authorized by Water Right No. 3172-3. Water Right No. 3172-3 authorizes a diversion rate of 1.78 cfs from a well 65 feet deep, completed into the Tulare: Western Spink/Hitchcock aquifer, located in the center of the NW¼ Section 20, T114N-R62W for the irrigation of 136 acres located in the NW¼ Section 20, T114N-R62W. This application proposes to irrigate 36 additional acres located in the N½ NW¼ and the N½ SW¼ Section 20, T114N-R62W from the existing well. This application, if approved, does not authorize any increase in the developed diversion rate. This application also clarifies the location of the existing 136 acres irrigated to include the N½ SW¼ Section 20, T114N-R62W.

Water Permit Application No. 7822-3 proposes to appropriate water from one well to be completed into the Tulare: Western Spink/Hitchcock aquifer at a maximum diversion rate of 2.00 cfs. Water is to be diverted from one well approximately 155 feet deep, located in the approximate center of the NE¼ Section 35, T115N-R65W. This application proposes to irrigate 135 acres located in the NE¼ Section 35, T115N-R65W.

Water Permit Application No. 7823-3 proposes to irrigate 25 new acres using a well authorized by Water Right No. 6142-3. Water Right No. 6142-3 authorizes a diversion rate of 2.22 cfs from a well completed into the Tulare: Hitchcock Aquifer, located in the NW¼ SE¼ Section 27, T115N-R65W for the irrigation of 240 acres located in the E½ Section 27, T115N-R65W. This application proposes to irrigate 25 additional acres located in the SE¼ Section 27, T115N-R65W from the existing well. This application, if approved, does not authorize any increase in the developed diversion rate.

#### **AQUIFER: TULARE: WESTERN SPINK/HITCHCOCK**

At the December 2002 Water Management Board Hearing, the Board determined that the Western Spink and Hitchcock management units of the Tulare aquifer would be considered collectively for water management purposes. At that hearing the Board deferred a number of permit applications for a five year period ending in December 2007. The Board was concerned that the aquifer may be fully appropriated based upon projected use (Goodman, 2007). A total of 37 applications proposing to irrigate 6,527 acres were deferred. At the December 2007 Water Management Board meeting the Board denied all of the deferred applications and deemed the aquifer fully appropriated. The Board found (Finding of Fact No. 41) that "The applicants wish to maintain a priority date based on the date they filed their applications, but there is no provision in the statutes to allow this."

Between 2002 and 2011 there were a number of water permit applications proposing appropriations from the Tulare: Western Spink/Hitchcock aquifer that were denied or withdrawn.

Six applications to appropriate water from the Tulare: Western Spink/Hitchcock aquifer (No. 7288-3, No. 7289-3, No. 7290-3, No. 7291-3, No. 7292-3 and No. 7293-3) were filed with the DENR-Water Rights Program in December 2011. Based on a DENR-Water Rights staff analysis

of the aquifer (Buhler, 2012a) and a stipulation between parties, Water Permit Application No. 7288-3 was withdrawn, and the appropriation requests of the five remaining applications were reduced. Following a July 11, 2012, hearing, the Water Management Board approved water permit applications totaling an amount of water approximately equal to the probable quantity of water remaining unappropriated from the aquifer based on the best information available at the time.

Three water permit applications proposing appropriations from the Tulare: Western Spink/Hitchcock aquifer (No. 7373-3, No. 7378-3 and No. 7379-3) were received in June 2012. The Chief Engineer recommended deferral of Water Permit Application No. 7373-3 and recommended denial of Application Nos. 7378-3 and 7379-3. Application Nos. 7378-3 and 7379-3 were ultimately withdrawn from consideration pursuant to SDCL 46-2A-3.

Twelve more water permit applications proposing appropriations from the Tulare: Western Spink/Hitchcock aquifer were received in December 2012. A January 2013, DENR-Water Rights Staff analysis of the Tulare: Western Spink/Hitchcock aquifer (Buhler, 2013) (see Appendix A), determined that unappropriated water was available from the aquifer to irrigate an additional 3,877 acres. At the March 2013, Water Management Board Meeting, the Board approved Water Permits No. 7373-3 authorizing the irrigation of 160 acres. The other twelve applications to authorize 1,971 acres were approved on May 2, 2013.

Between February 6, 2013, and April 10, 2013, there were 41 water permit applications submitted to the DENR-Water Rights Program proposing to irrigate additional acreage. These applications are shown in Table 1.

| APPLICATION NO. | APPLICANT                | RECIEVED         | ACRES | RUNNING ACREAGE TOTAL |
|-----------------|--------------------------|------------------|-------|-----------------------|
| 7685-3          | MICHAEL WATSON           | 2/6/13           | 75    | 75                    |
| 7716-3          | DENIS AND CRAIG SLEPIKAS | 2/8/13 8:30 AM   | 160   | 235                   |
| 7717-3          | TERRY WIETING            | 2/8/13 10:00 AM  | 135   | 370                   |
| 7718-3          | TERRY WIETING            | 2/8/13 10:00 AM  | 135   | 505                   |
| 7719-3          | MARSHALL BROTHERS        | 2/8/13 10:00 AM  | 135   | 640                   |
| 7720-3          | TERRY WIETING            | 2/8/13 10:00 AM  | 135   | 775                   |
| 7721-3          | TERRY WIETING.           | 2/8/13 10:00 AM  | 100   | 875                   |
| 7722-3          | BRENT/LELAND KLEINSSASER | 2/8/13 11:35 AM  | 155   | 1030                  |
| 7723-3          | BRENT/LELAND KLEINSSASER | 2/8/13 11:35 AM  | 300   | 1330                  |
| 7724-3          | BRENT/LELAND KLEINSSASER | 2/8/13 11:35 AM  | 300   | 1630                  |
| 7725-3          | LENNY PETERSON           | 2/8/13 10:50 PM  | 320   | 1950                  |
| 7751-3          | BRAD PETERSON            | 2/8/13 10:50 PM  | 160   | 2110                  |
| 7752-3          | LENNY PETERSON           | 2/8/13 10:50 PM  | 320   | 2430                  |
| 7753-3          | OSCAR INC                | 2/8/13 10:50 PM  | 105   | 2535                  |
| 7754-3          | OSCAR INC                | 2/8/13 10:50 PM  | 80    | 2615                  |
| 7755-3          | LENNY PETERSON           | 2/8/13 10:50 PM  | 160   | 2775                  |
| 7756-3          | LENNY PETERSON           | 2/8/13 10:50 PM  | 160   | 2935                  |
| 7757-3          | LENNY PETERSON           | 2/8/13 10:50 PM  | 160   | 3095                  |
| 7726-3          | OSCAR INC                | 2/8/13 11:00 PM  | 160   | 3255                  |
| 7758-3          | BRAD PETERSON            | 2/8/13 11:00 PM  | 320   | 3575                  |
| 7759-3          | OSCAR INC                | 2/8/13 11:00 PM  | 320   | 3895                  |
| 7727-3          | OSCAR INC                | 2/10/13 3:09 PM  | 160   | 4055                  |
| 7731-3          | RIVERSIDE COLONY         | 2/11/13          | 270   | 4325                  |
| 7732-3          | RIVERSIDE COLONY         | 2/11/13          | 135   | 4460                  |
| 7733-3          | VAN BUSKIRK FARMS LLP    | 2/15/13 12:15 PM | 544   | 5004                  |
| 7734-3          | VAN BUSKIRK FARMS LLP    | 2/15/13 12:15 PM | 982   | 5986                  |
| 7735-3          | VAN BUSKIRK FARMS LLP    | 2/15/13 12:15 PM | 136   | 6122                  |
| 7736-3          | VAN BUSKIRK FARMS LLP    | 2/15/13 12:15 PM | 136   | 6258                  |
| 7737-3          | BIXLER FARMS             | 2/19/13 3:30 PM  | 200   | 6458                  |
| 7738-3          | BIXLER FARMS             | 2/19/13 3:30 PM  | 150   | 6608                  |
| 7739-3          | BIXLER FARMS             | 2/19/13 3:30 PM  | 320   | 6928                  |
| 7740-3          | BIXLER FARMS             | 2/19/13 3:30 PM  | 150   | 7078                  |
| 7742-3          | BIXLER FARMS             | 2/19/13 3:30 PM  | 160   | 7238                  |
| 7743-3          | BIXLER FARMS             | 2/19/13 3:30 PM  | 160   | 7398                  |
| 7744-3          | BIXLER FARMS             | 2/19/13 3:30 PM  | 160   | 7558                  |
| 7745-3          | BIXLER FARMS             | 2/19/13 3:30 PM  | 160   | 7718                  |
| 7746-3          | BIXLER FARMS             | 2/19/13 3:30 PM  | 160   | 7878                  |
| 7790-3          | MARTIN J ANDERSON        | 3/13/2013        | 132   | 8010                  |
| 7799-3          | RATHJEN FARMS            | 3/19/13          | 36    | 8046                  |
| 7822-3          | DARIN BINGER             | 4/10/13          | 135   | 8181                  |
| 7823-3          | DARIN BINGER             | 4/10/13          | 25    | 8206                  |

Table 1. Pending water permit applications proposing to appropriate water from the Tulare: Western Spink/Hitchcock aquifer

Based on the best information reasonably available, unappropriated water is available from the Tulare: Western Spink/Hitchcock aquifer to irrigate an additional 1,746 acres at the historic average irrigation application rate for the aquifer of 9.32 inches per year (Buhler, 2012).

There is a reasonable probability that unappropriated water is available from the Tulare: Western Spink/Hitchcock aquifer to support the appropriations proposed by Water Permit Application Nos. 7685-3, 7716-3, 7717-3, 7718-3, 7719-3, 7720-3, 7721-3, 7722-3, 7723-3 and 7724-3 that propose to irrigate a total of 1,630 acres.

The best available information indicates that approval of any of the permit applications received after Water Permit Application No. 7724-3 would cause the estimated average annual withdrawal from the Tulare: Western Spink /Hitchcock aquifer to exceed the estimated average annual recharge to the aquifer. South Dakota Codified Law (SDCL) 46-6-3.1 requires that "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." Therefore, pursuant to SDCL 46-2A-9, additional permits to appropriate water cannot be issued from the Tulare: Western Spink/Hitchcock aquifer since there is not a reasonable probability that there is unappropriated water available from the aquifer.

#### **EXISTING WATER RIGHTS:**

There have been 310 water permit applications to appropriate water from the Tulare: Western Spink/Hitchcock aquifer. The status of these applications is shown in table 2.

| <b>STATUS</b> | <b>NUMBER</b> |
|---------------|---------------|
| CANCELLED     | 77            |
| DENIED        | 37            |
| INCORPORATED  | 46            |
| LICENSED      | 129           |
| PERMITTED     | 25            |
| WITHDRAWN     | 9             |

Table 2. Status of Water Permit Applications filed from the Tulare: Western Spink/Hitchcock aquifer.

Where the aquifer is under unconfined conditions, drawdown created by pumping is not significant and does not extend very far from the individual production well (see Figure 9). Where the aquifer is under confined conditions water level fluctuations are more pronounced (see Figure 2). Well interference has never been a problem in this aquifer (Goodman, 2002).

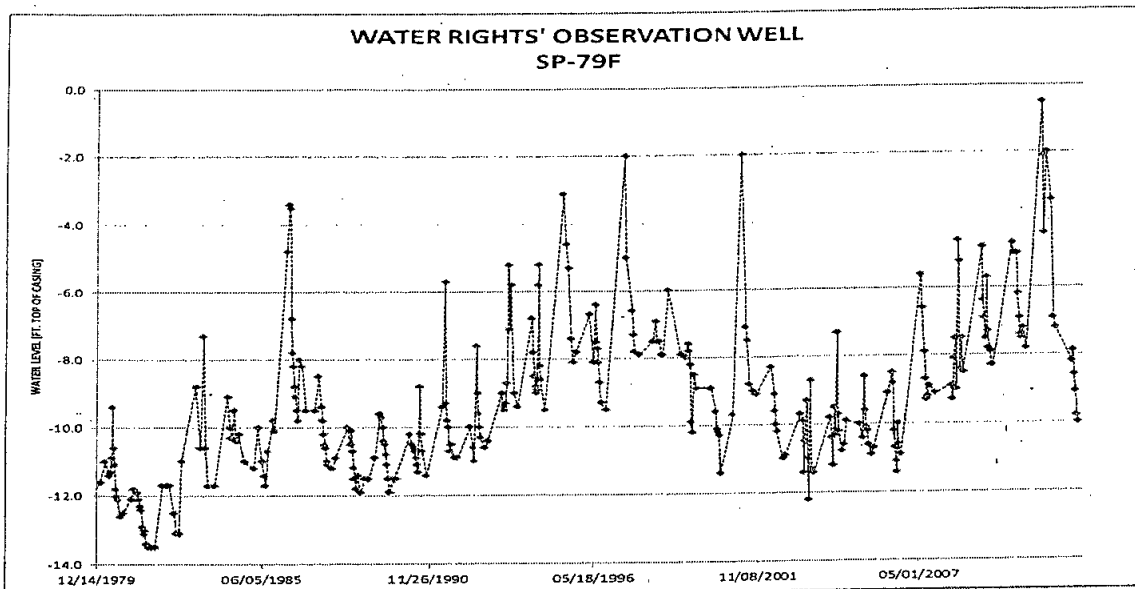


Figure 1. DENR-Water Rights' observation well completed into the unconfined portion of the Tulare:Western Spink/Hitchcock aquifer

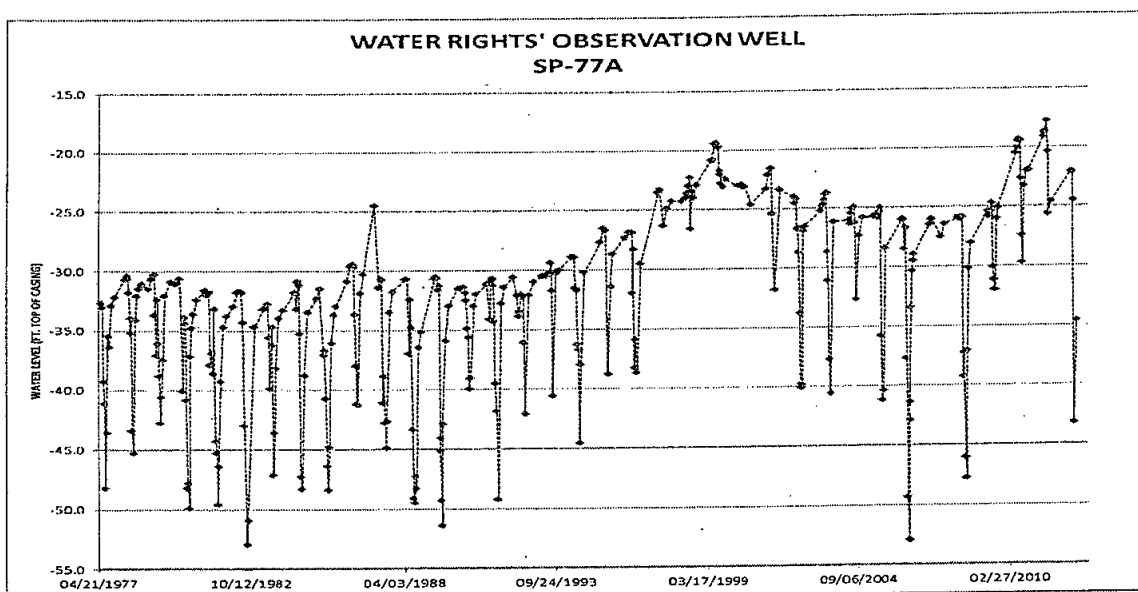


Figure 2. DENR-Water Rights' observation well completed into the confined portion of the Tulare:Western Spink/Hitchcock aquifer

Regardless, these permits, if approved should contain the standard permit qualification for most groundwater permits/rights which states:

"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".

## CONCLUSIONS:

1. Based on the historic average irrigation application rate from the Tulare: Western Spink/Hitchcock aquifer (9.32 inches per year), and the current appropriations, there is a reasonable probability that unappropriated water is available to irrigate an additional 1,746 acres.
2. Water Permit Application Nos. 7685-3, 7716-3, 7717-3, 7718-3, 7719-3, 7720-3, 7721-3, 7722-3, 7723-3 and 7724-3 that propose to irrigate a total of 1,630 acres.
3. With approval of Water Permit Application Nos. 7685-3, 7716-3, 7717-3, 7718-3, 7719-3, 7720-3, 7721-3, 7722-3, 7723-3 and 7724-3, the amount of unappropriated water available from the Tulare: Western Spink/Hitchcock aquifer would be sufficient to irrigate 116 acres at the historic average irrigation application rate for the aquifer.
4. Additional irrigation withdrawals are not expected to impair existing users.



Ken Buhler  
SD DENR-Water Rights Program

## REFERENCES:

- Buhler, K.A., 2012, Report on Water Permit Application No. 7289-3, Bixler Farms; Nos. 7290-3 and 7291-3, Lee Gatzke; No. 7293-3, Jeffery Gatzke; and No. 7292-3, Allen Gatzke; April 25, 2012: SD DENR-Water Rights Program
- Buhler, K.A., 2013, Report to the Chief Engineer on Water Permit Application No. 7373-3, Terry Wieting, Water Permit Application No. 7551-3, Wayne Binger, and Water Permit Application Nos. 7570-3, 7571-3, 7572-3, 7573-3, 7574-3, 7575-3, 7637-3, 7638-3, 7639-3 & 7640-3, Bary Marshall- Marshall Bros., Water Permit Application No. 7620-3, Oscar Inc.; January 30, 2013: SD DENR-Water Rights Program
- Goodman, J.A., 2002, Report on Water Permit Nos 6330-3, 6331-3, 6332-3, 6336-3, 6337-3, 6338-3, 6339-3, 6340-3, 6343-3, 6344-3, 6345-3, 6346-3, 6348-3, 6353-3 for Water From the Tulare Hitchcock Aquifer and Water Permit Nos. 6333-3, 6334-3, 6347-3, 6351-3, 6352-3 for Water From the Tulare Western Spink Aquifer, September 10, 2002: SD DENR-Water Rights Program
- Goodman, J.A., 2007, Report on Deferred Water Permit Applications from the Tulare Hitchcock and Tulare Western Spink Aquifers in Spink, Hand and Beadle Counties, SD: December 5, 2007 Water Management Board Minutes, SD Department of Environment and Natural Resources-Water Rights Program,

APPENDIX A

REPORT TO THE CHIEF ENGINEER  
ON

WATER PERMIT APPLICATION NO. 7373-3  
TERRY WIETING

WATER PERMIT APPLICATION NO. 7551-3  
WAYNE BINGER

WATER PERMIT APPLICATION NOS. 7570-3, 7571-3, 7572-3, 7573-3, 7574-3, 7575-3  
7637-3, 7638-3, 7639-3, & 7640-3  
GARY MARSHALL-MARSHALL BROS.

WATER PERMIT APPLICATION NO. 7620-3  
OSCAR INC.

JANUARY 30, 2013

Water Permit Application No. 7373-3 proposes to appropriate water at a maximum diversion rate of 1.78 cubic feet of water per second (cfs) from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer. The wells are to be located in the S½ SW¼ Section 16, T113N-R62W and are expected to be approximately 75 feet deep. This application proposes to irrigate 160 acres located in the SW¼ Section 16, T113N-R62W.

Water Permit Application No. 7551-3 proposes to irrigate 90 additional acres from the well authorized by Water Right No. 470A-3. This application proposes to irrigate 90 acres located in the NE¼, N ½ SE¼ Section 36, T115N-R65W from the existing well with no increase to the developed diversion rate. Water Right No. 470A-3 authorizes 1.56 cubic feet of water per second (cfs) from one well completed into the Tulare: Western Spink/Hitchcock aquifer (130 feet deep) located in the NE¼ SE¼ Section 36 for irrigation of 136 acres located in the SE¼ Section 36, T115N-R65W.

Water Permit Application No. 7570-3 proposes to appropriate water at a maximum diversion rate of 3.56 cfs from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer. The wells are to be located in the center of the NW¼ and the center of the SW¼ Section 1, T113N-R64W and are expected to be approximately 80 feet deep. This application proposes to irrigate 280 acres located in the W ½ Section 1, T113N-R64W.

Water Permit Application No. 7571-3 proposes to appropriate water at a maximum diversion rate of 1.78 cfs from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer. The wells are to be located near the center of the SE¼ Section 4, T113N-R64W and are expected to be approximately 80 feet deep. This application proposes to irrigate 160 acres located in the SE¼ Section 4, T113N-R64W.

Water Permit Application No. 7572-3 proposes to appropriate water at a maximum diversion rate of 1.78 cubic feet of water per second (cfs) from a well to be completed into the Tulare: Western Spink/Hitchcock aquifer. The well is to be located in the center of the SW¼ Section 34,

T114N-R64W and is expected to be approximately 80 feet deep. This application proposes to irrigate 140 acres located in the SW 1/4 Section 34, T114N-R64W.

Water Permit Application No. 7573-3 proposes to appropriate water at a maximum diversion rate of 1.78 cfs from a well to be completed into the Tulare: Western Spink/Hitchcock aquifer. The well is to be located near the center of the NW 1/4 Section 27, T114N-R63W and is expected to be 80 feet deep. This application proposes to irrigate 160 acres located in the NW 1/4 Section 27, T114N-R63W.

Water Permit Application No. 7574-3 proposes to appropriate water at a maximum diversion rate of 1.78 cfs from a well to be completed into the Tulare: Western Spink/Hitchcock aquifer. The well is to be located in the center of the NE 1/4 Section 35, T114N-R64W and is expected to be approximately 80 feet deep. This application proposes to irrigate 160 acres located in the NE 1/4 Section 35, T114N-R64W.

Water Permit Application No. 7575-3 proposes to appropriate water at a maximum diversion rate of 3.56 cfs from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer. The wells are to be located in the centers of the SW 1/4 and SE 1/4 Section 36, T114N-R64W and are expected to be approximately 80 feet deep. This application proposes to irrigate 280 acres located in the S 1/2 Section 36, T114N-R64W.

Water Permit Application No. 7637-3 proposes to appropriate water at a maximum diversion rate of 1.78 cfs from a well to be completed into the Tulare: Western Spink/Hitchcock aquifer. The well is to be located in the center of the SE 1/4 Section 25, T114N-R64W and is expected to be approximately 80 feet deep. This application proposes to irrigate 135 acres located in the SE 1/4 Section 25, T114N-R64W.

Water Permit Application No. 7638-3 proposes to appropriate water at a maximum diversion rate of 1.78 cfs from a well to be completed into the Tulare: Western Spink/Hitchcock aquifer. The well is to be located in the center of the SE 1/4 Section 18, T114N-R63W and is expected to be approximately 80 feet deep. This application proposes to irrigate 135 acres located in the SE 1/4 Section 18, T114N-R63W.

Water Permit Application No. 7639-3 proposes to appropriate water at a maximum diversion rate of 1.78 cfs from a well to be completed into the Tulare: Western Spink/Hitchcock aquifer. The well is to be located in the center of the NW 1/4 Section 3, T114N-R64W and is expected to be approximately 80 feet deep. This application proposes to irrigate 135 acres located in the NW 1/4 Section 3, T114N-R64W.

Water Permit Application No 7640-3 proposes to appropriate water at a maximum diversion rate of 1.78 cfs from two wells to be completed into the Tulare: Western Spink/Hitchcock aquifer. The wells are to be located near the center of the SW 1/4 Section 8, T113N-R62W and are expected to be approximately 80 feet deep. This application proposes to irrigate 160 acres located in the SW 1/4 Section 8, T113N-R62W.

Water Permit Application No. 7620-3 proposes to appropriate water at a maximum diversion rate of 1.94 cfs from a well to be completed into the Tulare: Western Spink/Hitchcock aquifer. The well is to be located in the center of the NE 1/4 Section 32, T115N-R63W and is expected to be approximately 60 feet deep. This application proposes to irrigate 136 acres located in the NE 1/4 Section 32, T115N-R63W.

#### **AQUIFER: TULARE: WESTERN SPINK/HITCHCOCK**

The Tulare: Western Spink/Hitchcock aquifer was basically considered fully appropriated in 2002 and the amount of development in the aquifer has not changed appreciably since 2003. A number of water permit applications were denied or withdrawn between 2002 and 2011. Six applications to appropriate water from the Tulare: Western Spink/Hitchcock aquifer (No. 7288-3, No. 7289-3, No. 7290-3, No. 7291-3, No. 7292-3 and No. 7293-3) were filed with the DENR-Water Rights Program in December 2011. Based on a DENR-Water Rights staff analysis of the aquifer (Buhler, 2012a) and a stipulation between parties, Water Permit Application No. 7288-3 was withdrawn and the appropriation requests of the five remaining applications were reduced. Following a July 11, 2012 hearing, the Water Management Board approved water permit applications totaling an amount of water approximately equal to the probable quantity of water remaining unappropriated from the aquifer.

Water Permit Application No. 7373-3, Terry Wieting, was received June 14, 2012, and Water Permit Application Nos. 7378-3 and 7379-3, Riverside Hutterian Brethren, were received June 29, 2012. Water Permit Application Nos. 7373-3, 7378-3 and 7379-3 proposed to irrigate an additional 565 acres from the Tulare: Western Spink/Hitchcock aquifer. Based on the 1979-2011 average annual irrigation application rate for the aquifer (i.e. 9.32 inches per acre per year) (Buhler, 2012a), the average annual withdrawal associated with these applications would be 438.8 acre-feet per year.

Based on the April 2012 analysis of the aquifer, the Chief Engineer recommended denial of Water Permit Application Nos. 7378-3 and 7379-3 because the best available information indicated that approval of these applications would cause the estimated average annual withdrawal from the Tulare: Western Spink/Hitchcock aquifer to exceed the estimated average recharge to the aquifer. South Dakota Codified Law (SDCL) 46-6-3.1 requires that "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." The applicant did not oppose the Chief Engineer's recommendation and pursuant to SDCL 46-2A-3 the applications were withdrawn from consideration.

The Chief Engineer recommended deferral of Water Permit Application No. 7373-3 pending the resolution of an existing water right (No. 282-3, Renae Veskrina Morog) appropriating water from the Tulare: Western Spink/Hitchcock aquifer that was scheduled for cancellation at the October 3, 2012 Water Management Board meeting. The water right was eventually cancelled due to forfeiture. The Chief Engineer has subsequently determined that since the availability of unappropriated water from an aquifer is based on actual use, the use or in this case nonuse of Water Right No. 282-3 was already considered when analyzing the availability of water from the Tulare: Western Spink/Hitchcock aquifer. Therefore, cancellation of the water right did not result in additional unappropriated water available from the aquifer.

At the time, the April 2012 analysis seemed plausible; however comparison of it with a similar analysis conducted later for the Tulare East James aquifer identified potential inconsistencies between the two analyses. The April 2012 analysis of the Tulare: Western Spink/Hitchcock aquifer appears to have been overly conservative. Two of the fundamental assumptions used in the analysis resulted in an extremely diminished volume of water that was available for

appropriation from the aquifer: 1) In computing the maximum number of acres that could be irrigated from the aquifer based on the average annual recharge and the average annual irrigation application rate, the analysis assumed the irrigation of 100 percent of permitted acreage when in fact, for various reasons, only a fraction of permitted acres are irrigated each year; and 2) In computing the amount that the average annual recharge to the aquifer has exceeded average annual discharge from the aquifer based on observation well data, the portion of the aquifer that was considered under unconfined conditions was estimated based primarily on 1984 data (Kuiper, 1984) which resulted in an overly contracted area.

#### **AQUIFER CHARACTERISTICS:**

Although additional data and closer scrutiny of the existing data will allow for improvements to the general deliniation of the Tulare: Western Spink/Hitchcock aquifer, alterations to the "Aquifer Characteristics" section of the April 2012 report to the Chief Engineer (Buhler, 2012a) are not warranted at this time. However, a cursory review of the data suggests that the areal extent of the aquifer as described in the report may have been optimistic.

#### **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.

#### **WATER AVAILABILITY:**

The probability of unappropriated water being available from the Tulare: Western Spink/Hitchcock 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."

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)).

The availability of unappropriated water from the Tulare: Western Spink/Hitchcock aquifer was evaluated based on observation well data and through consideration of hydrologic budgets for the aquifer.

#### **OBSERVATION WELL DATA:**

The analysis of observation well data provides a qualitative means of assessing the aquifer and provides the best information available to evaluate the Tulare: Western Spink/Hitchcock aquifer. In addition, 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 to the aquifer.”

The DENR-Water Rights Program monitors 48 observation wells completed into the Tulare: Western Spink/Hitchcock aquifer. The analysis of the DENR-Water Rights Program observation well data provides the best information reasonably available to evaluate withdrawals from an aquifer as compared with recharge to the aquifer. Observation well data showing a steady, continual decline of the aquifer’s water level or artesian pressure could indicate that withdrawals from an aquifer were exceeding recharge. In addition, water level fluctuations in an aquifer dominated by the influences of well withdrawals, or a change in the configuration of the potentiometric surface could indicate that well withdrawals are a significant component in the system relative to recharge and/or natural discharge. Examination of the observation well data to consider long term water level trends, any influences of well withdrawals and the configuration of the potentiometric surface of the aquifer are discussed below.

**Observation well water level trends:**

A rising water level indicates that recharge to the aquifer exceeds withdrawals from the aquifer and conversely a declining water level is indicative of withdrawals exceeding recharge. An equation for this relationship is:

$$\Delta S = R - D$$

Where:  $\Delta S$  = change in the volume of water in storage in the aquifer

R = Recharge

D = Discharge

The observation well data for the Tulare: Western Spink/Hitchcock aquifer has documented upward trending water levels throughout the aquifer. The average slope of linear trend lines for observation well hydrographs over the time period of January 2003 through October 2012 has been (+0.284 feet per year). The upward trending water levels indicate recharge to the Tulare: Western Spink/Hitchcock aquifer has been greater than the total of the discharges from the aquifer over the period of record.

An analysis of observation well hydrographs was used to quantify the change in volume of water in storage in the aquifer (i.e. the amount that recharge to the aquifer has exceeded discharge from the aquifer). The analysis involved identifying observation wells completed into the unconfined portion of the Tulare: Western Spink/Hitchcock aquifer and determining the annual change of the water level in each well. The amount of water represented by a change in water level was determined by multiplying the water level change by the aquifer’s specific yield (0.15) (Kuiper, 1984). The average change in storage was applied over the portion of the aquifer that is under unconfined conditions to determine the volume in acre-feet per year of the change in storage. In equation form:

$$\Delta V_{avg} = \Delta W_{at Lev_{avg}} * S_y * A$$

Where:

$\Delta V_{avg}$  = Average change in volume (ac-ft/yr)

$\text{Wat Lev}_{\text{avg}}$  = Average change in water level (ft/yr)

$S_y$  = Specific Yield

A = Area (acres)

The average annual change in water level ( $\text{Wat Lev}_{\text{avg}}$ ) in the Tulare: Western Spink/Hitchcock aquifer was determined through examination of DENR-Water Rights' observation well data. Five observation wells were used to analyze the Tulare: Western Spink/Hitchcock aquifer since they were the only ones that were in portions of the aquifer that remained unconfined for the entire period of record (Water Year 2003 through Water Year 2012) and the wells were determined to accurately reflect aquifer conditions. The results of the analysis are shown in Table 1.

| ANNUAL WATER LEVEL CHANGE (ft) |        |        |        |        |        |        |
|--------------------------------|--------|--------|--------|--------|--------|--------|
|                                | SP-79F | SP-78B | SP-80B | SP-82E | SP-82G | AVE    |
| 2003                           | -0.32  | -0.69  | -1.12  | -0.82  | -0.87  | -0.764 |
| 2004                           | 0.62   | -0.5   | -0.79  | 0.45   | -0.65  | -0.174 |
| 2005                           | -0.18  | -0.18  | 0.23   | 1.54   | 0.3    | 0.342  |
| 2006                           | 0.16   | -0.1   | 0.08   | -1.09  | 0.35   | -0.12  |
| 2007                           | 1.67   | 1.81   | 2.21   | 2.77   | 2.2    | 2.132  |
| 2008                           | 0.56   | 0      | 0.37   | 1.1    | 1.1    | 0.626  |
| 2009                           | 0.32   | 0.99   | 1.02   | -0.3   | 0.66   | 0.538  |
| 2010                           | 1.23   | 2.46   | 1.58   | 0.7    | 1.44   | 1.482  |
| 2011                           | 3.5    | 0.55   | 2.3    | 0      | -0.7   | 1.13   |
| 2012                           | -3.1   | -1.2   | -2     | -1.8   | -2.1   | -2.04  |
| AVE                            | 0.4460 | 0.3140 | 0.3880 | 0.2550 | 0.1730 | 0.3152 |

Table 1. Water Level change per year per observation well (Water Rights, 2013a).

To determine the area (A) of the Tulare: Western Spink/Hitchcock aquifer that was under unconfined conditions, ESRI @ArcMap™10.0 was used to generate a Triangulated Irregular Network (TIN) of the aquifer's potentiometric surface using October 2012 observation well readings. The TIN was converted to a raster file using a Natural Neighbors interpolation method. A second TIN was created using the elevation of the upper most aquifer material encountered in test holes drilled by the DENR-Geological Survey and DENR-Water Rights Program observation wells within the areal extent of the aquifer as defined in the April 2012 aquifer analysis. This TIN was also converted to a raster file using a Natural Neighbors interpolation method. ESRI @ArcMap™10.0 raster calculator was used to subtract the potentiometric surface raster from the "first aquifer material" raster and generate a raster where aquifer material occurred above the potentiometric surface. DENR-Geological Survey test holes (Lithologic Logs), DENR-Water Rights Program observation wells (Water Rights, 2013a), domestic wells (Water Rights, 2013b), and irrigation wells (Water Rights, 2013c) within and adjacent to this resultant raster were examined to determine if the aquifer material that was above the Tulare: Western Spink/Hitchcock potentiometric surface was actually part of the aquifer. Based on this analysis, the unconfined portion of the Tulare: Western Spink aquifer was determined to be 76,978 acres (see figure 1).

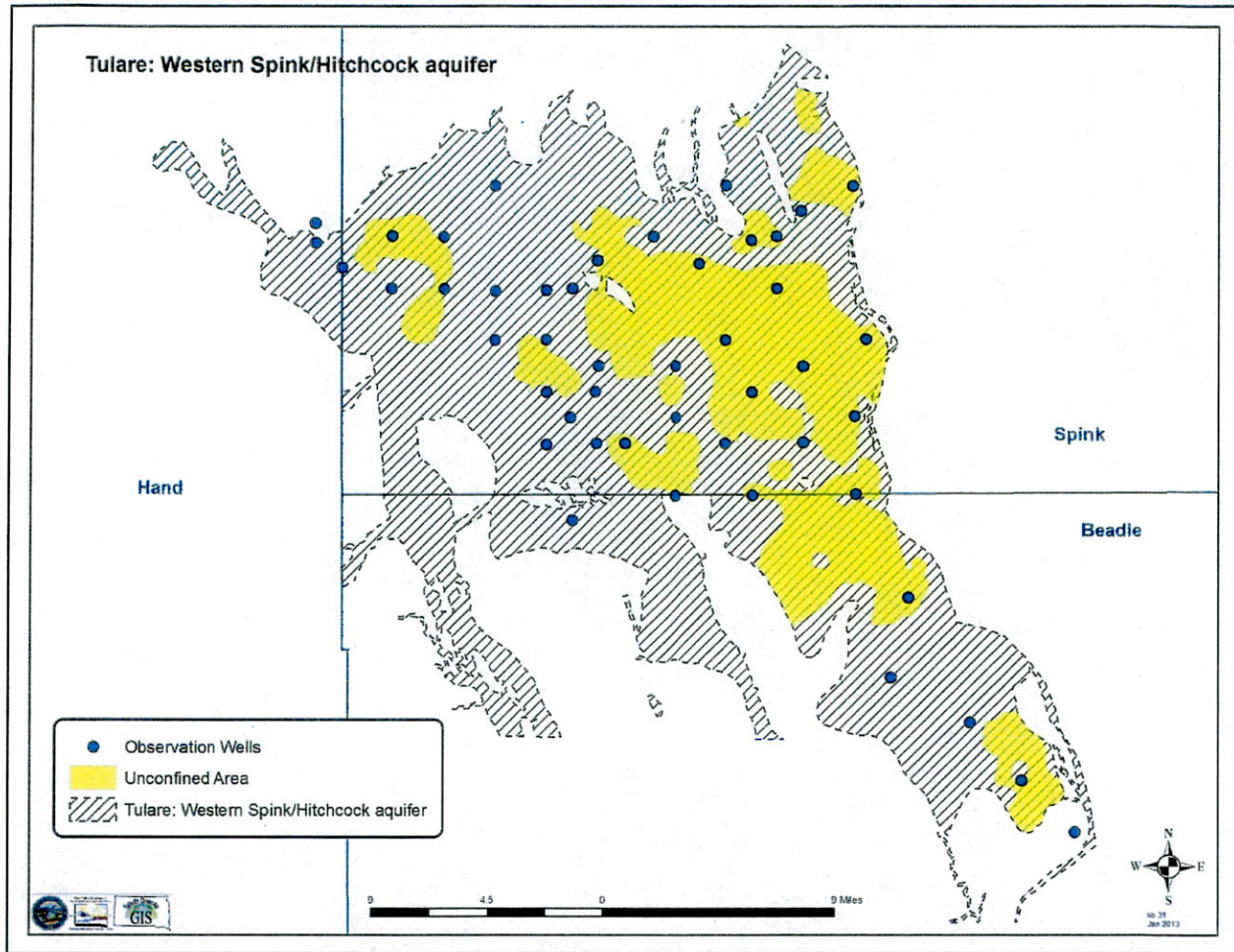


Figure 1. Areal extent of the Tulare: Western Spink/Hitchcock aquifer and the unconfined areas of the aquifer.

Substituting the values from above for the equation  $\Delta V_{avg} = \Delta W_{at Lev_{avg}} * S_y * A$ ,

$$\Delta V_{avg} = 0.3152 \text{ ft/yr} * 0.15 * 76,978 \text{ acres}$$

$$\Delta V_{avg} = 3,639.5 \text{ ac-ft/yr}$$

Therefore, the observation well data indicates that the annual recharge to the aquifer exceeded discharge from the aquifer by an average of 3,640 acre-feet per year for the period since development has been static (2003-2012).

#### **Water level fluctuations due to well withdrawals:**

Observation well data documents that the development that has occurred from the Tulare: Western Spink/Hitchcock aquifer has had an inconsequential effect on the aquifer over the long term. Figures 2-6 show hydrographs for DENR-Water Rights Program observation wells completed into the aquifer and Figure 7 shows the location of these wells. The water level records for the observation wells document that climatic conditions greatly mask the temporal effects of well withdrawals. Therefore, recharge to and natural discharge from the Tulare: Western Spink/Hitchcock aquifer significantly exceeds pumping. Recognizing that natural

discharge from the aquifer can be captured for pumping. The hydrographs document that there is unappropriated water available from the aquifer to support these appropriations.

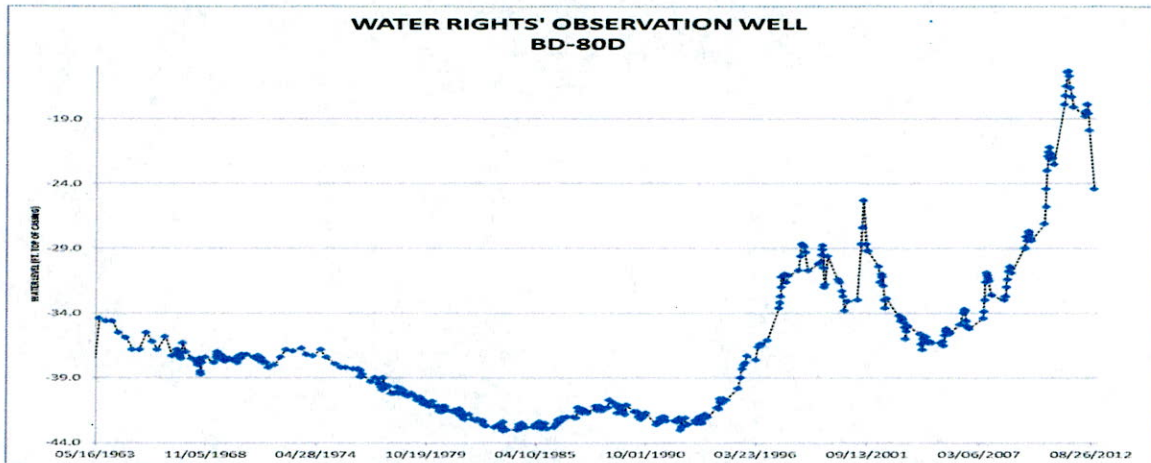


Figure 2. Hydrograph of DENR-Water Rights Program observation well completed into the Tulare: Western Spink/Hitchcock aquifer.

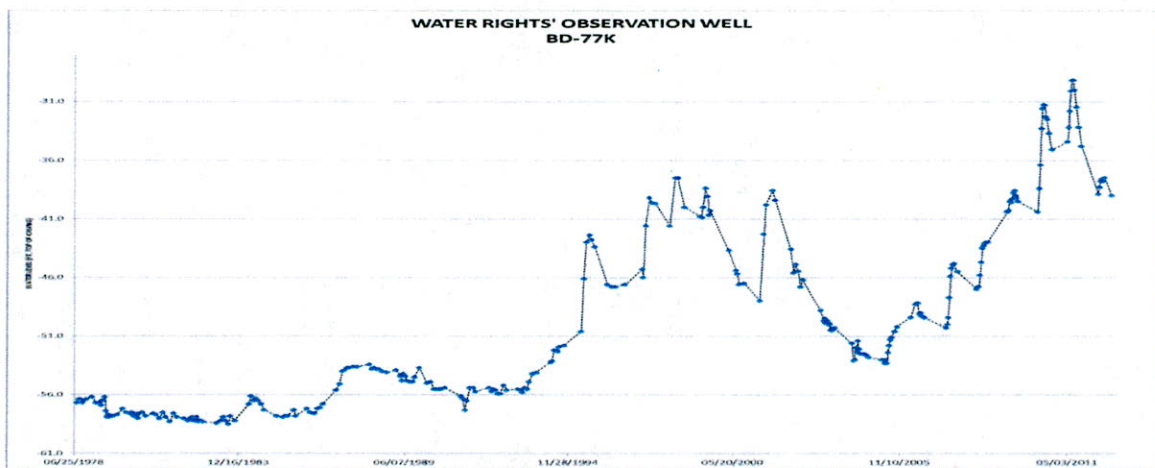


Figure 3. Hydrograph of DENR-Water Rights Program observation well completed into the Tulare: Western Spink/Hitchcock aquifer.

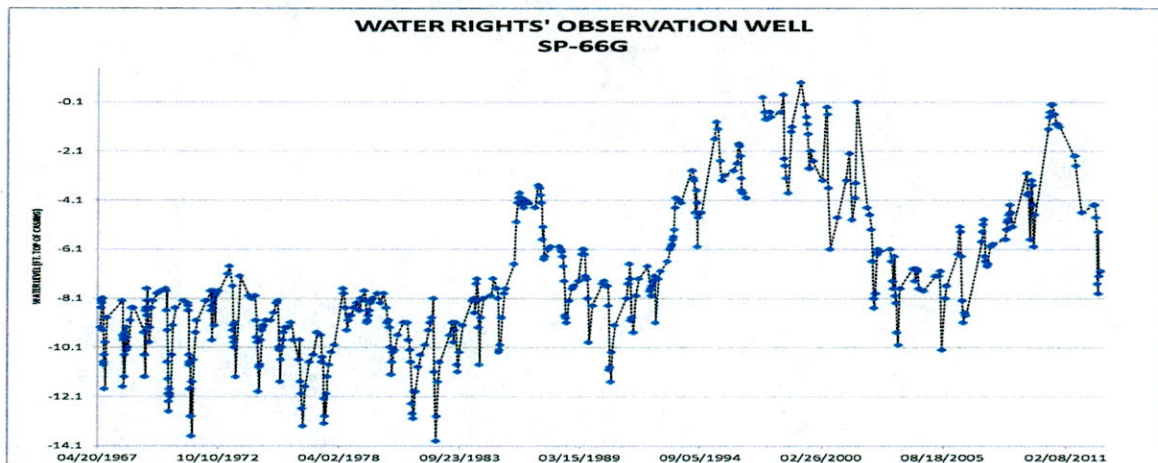


Figure 4. Hydrograph of DENR-Water Rights Program observation well completed into the Tulare: Western Spink/Hitchcock aquifer.

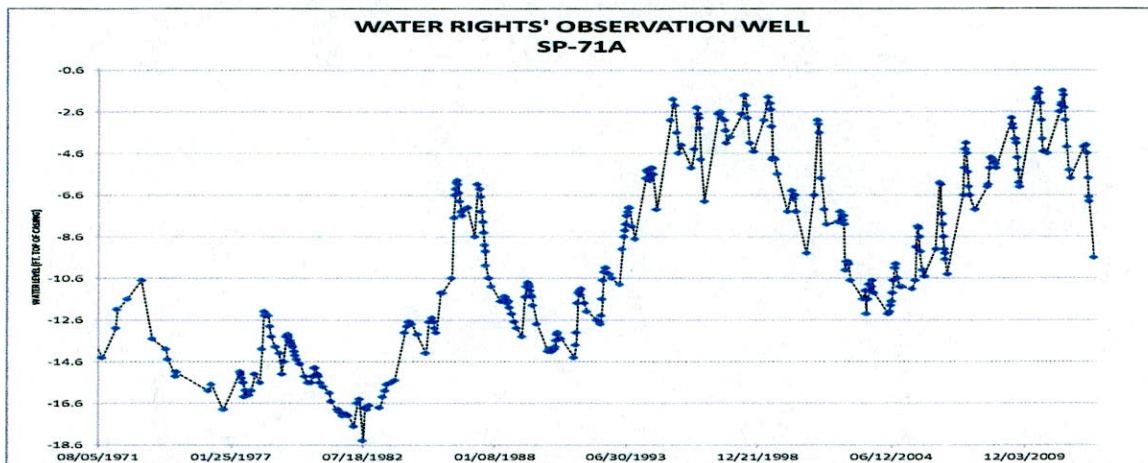


Figure 5. Hydrograph of DENR-Water Rights Program observation well completed into the Tulare: Western Spink/Hitchcock aquifer.

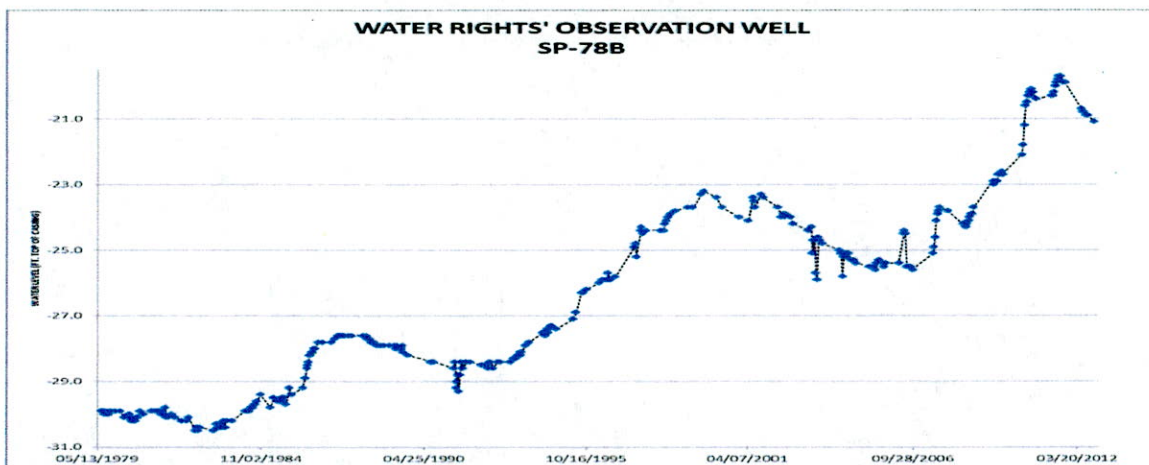


Figure 6. Hydrograph of DENR-Water Rights Program observation well completed into the Tulare: Western Spink/Hitchcock aquifer.

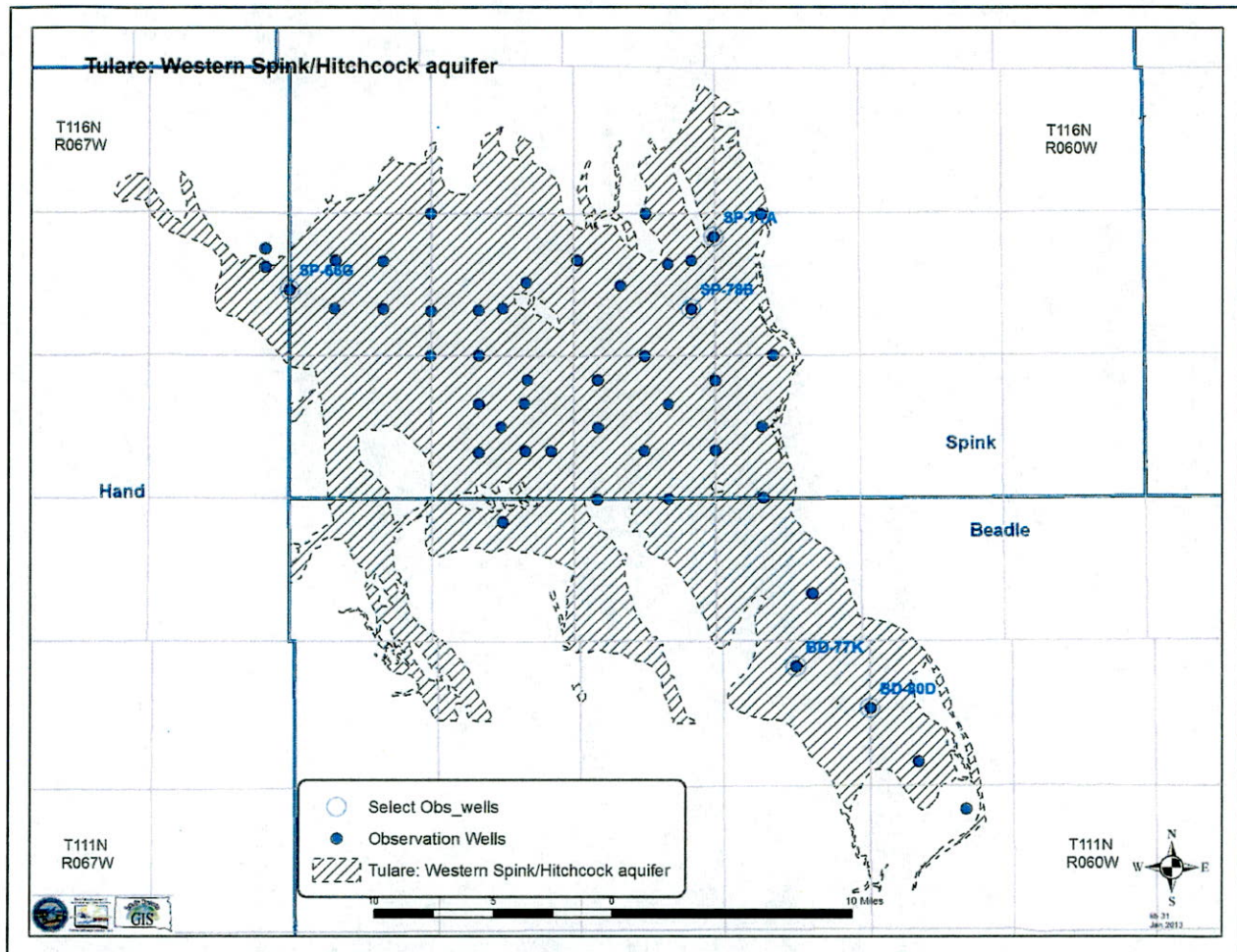


Figure 7. Location of DENR-Water Rights Program observation wells completed into the Tulare: Western Spink aquifer and wells shown in Figures 2-6.

### Potentiometric Surface:

The potentiometric surface of the Tulare: Western Spink/Hitchcock aquifer was determined for two time periods based on the observation well measurements for October 1987 and for October 2012. A map showing the two potentiometric surfaces is shown in Figure 8. It is clear that although there are some nuances in the potentiometric surfaces, the surface is essentially unchanged; indicating that discharge is not exceeding recharge and unappropriated water is available from the aquifer.

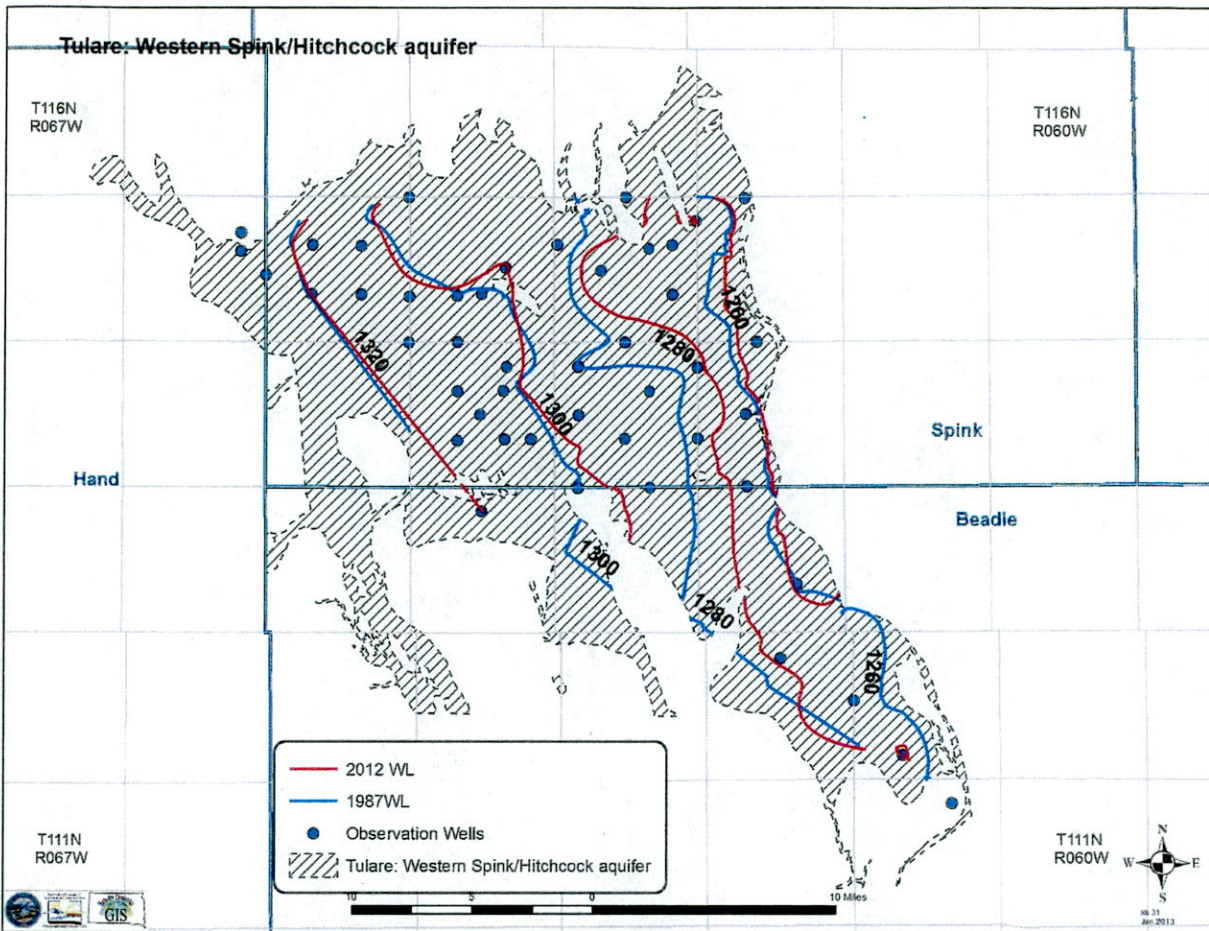


Figure 8. Comparison of the potentiometric surface of the Tulare: Western Spink/Hitchcock aquifer (October 1987 versus October 2012)

#### Regional flow net analysis using observation well data:

The recharge potential of the Tulare: Western Spink/Hitchcock aquifer was evaluated by interpreting a regional flow net analysis based on the September 2012 water level data from the DENR-Water Rights' Observation Well Network. A flow net analysis is a calculation of the amount of water flowing through the aquifer according to the equation:

$$Q = TIL$$

Where:

Q= flow in gallons per day

T= Transmissivity in gallons per day per foot

I= Hydraulic gradient in feet per mile

L= Cross sectional length in miles

The average hydraulic conductivity for the Tulare: Western Spink/Hitchcock aquifer was estimated based on the specific capacities of the 30 irrigation wells completed into the aquifer for which the data to allow these calculations was available (Water Rights, 2013b; Water Rights, 2013c). Transmissivity was calculated at each well using the wells' specific capacity ("Transmissivity from Specific Capacity"), and the transmissivity was divided by the aquifer

thickness at the well to determine an average hydraulic conductivity for the aquifer. The average hydraulic conductivity was calculated to be 1,982 gallons per day per square foot (gpd/ft<sup>2</sup>). The average transmissivity of the Tulare: Western Spink/Hitchcock aquifer of a cross section through which all of the flow of the aquifer must flow was determined by multiplying the average thickness of the cross section (36.3 feet) times the average hydraulic conductivity for the aquifer (1,982 gallons per day per square foot) to be 71,950 gallons per day per foot.

The hydraulic gradient for the Tulare: Western Spink/Hitchcock aquifer was estimated to average 4.26 feet per mile based on data from the DENR-Water Rights' Observation Well Network.

The cross section length of the Tulare: Western Spink/Hitchcock aquifer was determined to be approximately 25 miles based on the current aquifer delineation.

The amount of water moving through the Tulare: East James aquifer is estimated as follows:

$$\begin{aligned} Q &= ((71,950 \text{ gpd/ft}) \times (4.26 \text{ ft/mile}) \times (25 \text{ miles})) / (325,851 \text{ gallons/ac-ft}) \\ &= 23.5 \text{ ac-ft/day} \\ &= \underline{8,583 \text{ ac-ft/yr}} \end{aligned}$$

In order to sustain this estimated volume of groundwater moving through the aquifer, the recharge rate in inches per acre per year based on an area of the aquifer of approximately 263,000 acres would be 0.39 inches. This recharge rate cannot be considered "average annual recharge" since it used only 2012 data, and likely can be viewed as a minimum recharge rate; however the estimate does show the reasonableness of the average annual recharge estimate from Kuiper (1984).

#### **HYDROLOGIC BUDGETS:**

SDCL 46-6-3.1 and the availability of unappropriated water from the Tulare: Western Spink/Hitchcock aquifer can be evaluated by considering a hydrologic budget for the aquifer which compares the recharge to and discharge from the aquifer.

Recharge to the Tulare: Western Spink/Hitchcock aquifer occurs primarily through infiltration of precipitation where the outwash is at or near ground surface. The best information reasonably available to estimate the average annual recharge to the aquifer is from the groundwater flow model developed by Kuiper (1984). The model incorporated an average recharge rate throughout the aquifer although recharge generally occurs only in unconfined areas. The average annual recharge to the aquifer based on the groundwater flow model ranged from 0.41-1.66 inches per year with a "best fit" reflecting various simulations of 0.83 inches per year (Kuiper, 1984). Considering an areal extent of the Tulare: Western Spink/Hitchcock aquifer equal to 263,016 acres and applying a 0.83 inches per year recharge rate, the average annual recharge to the Tulare: Western Spink/Hitchcock aquifer is estimated to total 18,192 acre-feet per year.

Withdrawals from the Tulare: Western Spink/Hitchcock occur through natural discharge, domestic use and uses from appropriative rights/permits. Essentially all of the well withdrawals from the aquifer are for irrigation use. For the period of 1979 through 2011, irrigation pumpage

from the aquifer is shown in Table 2, and the average irrigation application rate over this period was 9.32 inches per acre per year (Buhler, 2012a).

| <b>REPORTED IRRIGATION PUMPING (1979-2011)</b> | <b>ACRE-FEET PER YEAR</b> |
|------------------------------------------------|---------------------------|
| Maximum                                        | 19397.25                  |
| Minimum                                        | 2200.29                   |
| Average                                        | 9725.6                    |

Table 2. Reported irrigation pumping from the Tulare: Western Spink/Hitchcock aquifer for 1979-2011 (Buhler, 2012a)

Since 1979-2012 was a time period that included new development from the aquifer, the average irrigation pumpage for this time period is likely low. However, the average application rate for this time period can be considered reflective of the irrigation practices in the aquifer.

The time period of 2003-2011 reflects fully developed conditions in the aquifer. Irrigation pumpage for this time period is shown in Table 3. The average application rate for the 2003-2011 time period was 8.71 inches per year. The application rate for 2003-2011 likely is more reflective of the climatic conditions over the relatively short (nine year) period than actual irrigation practices in the aquifer.

| <b>REPORTED IRRIGATION PUMPING (2003-2011)</b> | <b>ACRE-FEET PER YEAR</b> |
|------------------------------------------------|---------------------------|
| Maximum                                        | 19397.25                  |
| Minimum                                        | 3007.9                    |
| Average                                        | 12286.8                   |

Table 3. Reported irrigation pumping from the Tulare: Western Spink/Hitchcock aquifer for 2003-2011 (Water Rights, 2004-2012)

Two methods were used to evaluate the availability of unappropriated water with separate hydrologic budgets: 1) comparing estimated average annual recharge to the aquifer with the average annual reported well withdrawals over the time period the aquifer was fully developed; and 2) comparing the number of acres that can be irrigated based on the estimated average annual recharge to the aquifer to the number of acres currently authorized for irrigation by water rights/permits.

#### **Irrigation Questionnaire Method:**

The amount of unappropriated water that is available from the Tulare: Western Spink/Hitchcock aquifer was estimated by comparing the estimated average annual recharge rate to the average annual well withdrawal from 2003-2011. Since average annual recharge is estimated to be 18,192 ac-ft/yr and the average annual pumping was reported to be 12,286.8 ac-ft/yr, an average of 5,905 acre-feet of unappropriated water is available from the Tulare: Western Spink/Hitchcock aquifer based on this methodology.

#### Recharge to Acres Method:

The amount of unappropriated water that is available from the Tulare: Western Spink/Hitchcock aquifer was also estimated by comparing the maximum number of acres that could be irrigated from the aquifer based on the estimated average annual recharge and the average irrigation application rate, to the number of acres that are currently authorized for irrigation. The volume of water associated with the potential additional irrigable acres was converted to acre-feet per year based on the average irrigation application rate.

The maximum average annual irrigation withdrawal based on a recharge of 18,192 acre-feet per year and an application rate of 9.32 inches per year would allow for the irrigation of 23,423 acres. There are currently 23,648.8 acres authorized for irrigation from the aquifer with water rights/permits. Since 2003, the average percentage of authorized acres that have been irrigated annually ranged from a maximum of 85.58% to a minimum of 31.17% with an average of 69.02%. This irrigated to authorized percentage agrees fairly well with the same percentages calculated for Tulare: East James aquifer (i.e. Maximum=88.41%, Minimum=39.49%, Average=65.34%) (Buhler, 2012b), for the fully developed time period for that aquifer (1979-2011). Since on average, only 69.02% of authorized acres are irrigated annually, the number of acres that can be expected to be irrigated under current authorization is 23,648.8 acres \*69.02% or 16,322.4 acres. The difference between maximum allowable acres (23,423 acres) and expected irrigation acreage currently authorized (16,322.4 acres) shows that an additional 7,100 acres could be irrigated from the Tulare: Western Spink/Hitchcock aquifer. Assuming an average application rate of 9.32 inches per year applied to 7,100 acres equates to 5,514 ac-ft/yr.

In another format, the “recharge to acres method” compares the average acreage reported irrigated annually from 2003-2011 (15763.6 acres) plus 69.02% of the 810 acres added in 2012 (559.1 acres) with the maximum number that can be irrigated based on the recharge rate (23,423 acres) or 23,423 acres – (15763.6+559.1) = 7,100 acres.

#### WATER AVAILABILITY SUMMARY:

The DENR-Water Rights Program observation well data indicates that unappropriated water is available from the Tulare: Western Spink/Hitchcock aquifer. Analysis of the observation well data shows that from 2003-2012, recharge to the Tulare: Western Spink/Hitchcock aquifer has exceed discharge from the aquifer by an estimated 3,640 acre-feet per year. A comparison of the average annual pumpage reported from the aquifer from 2003-2011 with the estimated average annual recharge to the aquifer suggests that recharge exceeds pumping by 5,905 acre-feet. Comparing the number of acres that can be irrigated based on the average annual recharge rate suggests that recharge exceeds withdrawals from the aquifer by 5,514 ac-ft/yr.

The difference between the observation well method and budgeting methods for determining the amount of unappropriated water that is available from the aquifer is likely due to a number of factors. Budgeting methods resulted in greater amounts of unappropriated water available from the aquifer however: a) Irrigation questionnaire data is not available for 2012 at this time and it is likely that the 2012 data will increase the averages for the number of acres irrigated, amount of water pumped and the percentage of irrigated to permitted acres. Higher current use averages will reduce the amount of water available based on budgets; b) Budgeting methods are all dependent upon self-reporting by-way of annual irrigation questionnaires. Errors in the reporting

and/or interpretation of the irrigation questionnaires would influence the results; and c) the average annual growing season precipitation in this area for 2003-2011 was 21.19 inches per year, compared to the 20 year average growing season precipitation of 18.35 inches per year (Mathiowetz, 2012). The averages for the number of acres irrigated, amount of water pumped and the percentage of irrigated to permitted acres are likely low due to climatic conditions. Consequently, estimates based on budgets for the amount of water remaining available for appropriation and/or the number of additional acres that can be irrigated are likely too high. The observation well method: a) does reflect 2012 climatic conditions and b) is less influenced by short term trends, for example, the average water level fluctuation for observation wells was +0.315 feet per year for 2003-2012, compared with a +0.261 feet per year average for water years 1983-2012.

For the reasons listed above, and the fact that 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 to the aquifer” the amount of unappropriated water available from the Tulare: Western Spink Hitchcock aquifer is estimated to be 3,640 acre-feet per year. Based on the historic average annual irrigation application rate of 9.32 inches per year, on average an additional 4,686 acres can be irrigated from the Tulare: Western Spink/Hitchcock aquifer.

#### **EXISTING WATER RIGHTS:**

There have been 310 water permit applications to appropriate water from the Tulare: Western Spink/Hitchcock aquifer. The status of these applications is shown in table 4.

| <b>STATUS</b> | <b>NUMBER</b> |
|---------------|---------------|
| CANCELLED     | 77            |
| DENIED        | 37            |
| INCORPORATED  | 46            |
| LICENSED      | 129           |
| PERMITTED     | 13            |
| WITHDRAWN     | 8             |

Table 4. Status of Water Permit Applications filed from the Tulare: Western Spink/Hitchcock aquifer .

Where the aquifer is under unconfined conditions, drawdown created by pumping is not significant and does not extend very far from the individual production well (see figure 9). Where the aquifer is under confined conditions water level fluctuations are more pronounced (see figure 10). Well interference has never been a problem in this aquifer (Goodman, 2002).

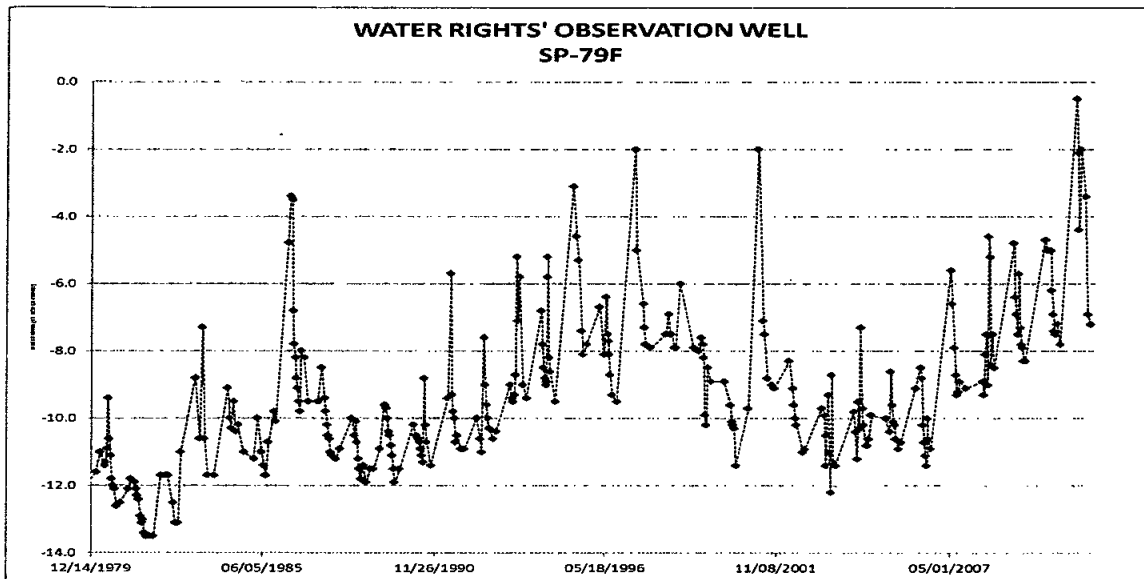


Figure 9. DENR-Water Rights' observation well completed into the unconfined portion of the Tulare:Western Spink/Hitchcock aquifer

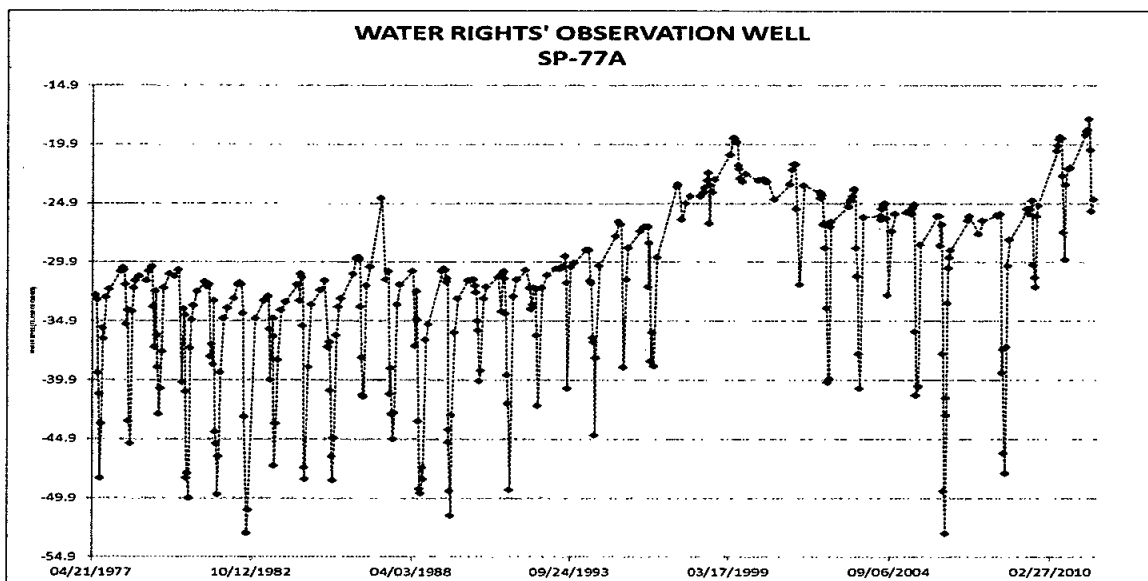


Figure 10. DENR-Water Rights' observation well completed into the confined portion of the Tulare:Western Spink/Hitchcock aquifer

Regardless, these permits, if approved should contain the standard permit qualification for most groundwater permits/rights which states:

“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”.

## **CONCLUSIONS:**

1. The best information currently available indicates the Tulare: Western Spink/Hitchcock aquifer underlies approximately 263,016 acres of Beadle, Spink, and Hand Counties.
2. The best information currently available identifies an average annual recharge rate to the Tulare: Western Spink/Hitchcock aquifer as 0.83 inches per year.
3. The volume of average annual recharge to the Tulare: Western Spink/Hitchcock aquifer based on an area of 263,016 acres and a recharge rate of 0.83 inches per year is approximately 18,192 acre-feet per year.
4. The average annual irrigation application rate for the Tulare: Western Spink/Hitchcock aquifer from 1979-2011 has been 9.32 inches per year.
5. The maximum **average** annual irrigation withdrawal based on a recharge of 18,192 acre-feet per year and an application rate of 9.32 inches per year would allow for the irrigation of 23,423 acres.
6. The best information available to determine the amount of unappropriated water available from the Tulare: Western Spink/Hitchcock aquifer is through analysis of observation well data.
7. The analysis of DENR-Water Rights' observation well data identifies that the over the period of record of 2003- 2011, average annual recharge to the aquifer has exceeded the average annual withdrawals from the aquifer by approximately 3,640 ac-ft/yr acre-feet per year.
8. The observation well data indicates that another 4,686 acres could have been irrigated over the time period of 2003- 2011, at an average application rate of 9.32 inches per year.
9. Since 810 additional acres were authorized in 2012, the actual number of additional acres that can be irrigated from the Tulare: Western Spink/Hitchcock aquifer is 3,877 acres.
10. The permit applications described on pages 1-3 of this report propose to irrigate a total of 2,131 acres.
11. Additional irrigation withdrawals are not expected to impair existing users.

Ken Buhler  
SD DENR-Water Rights Program

## **REFERENCES:**

- Buhler, K.A., 2012a, Report on Water Permit Application No. 7289-3, Bixler Farms; Nos. 7290-3 and 7291-3, Lee Gatzke; No. 7293-3, Jeffery Gatzke; and No. 7292-3, Allen Gatzke; April 25, 2012: SD DENR-Water Rights Program
- Buhler, K.A., 2012b, Report to the Chief Engineer on Water Permit Application No. 7295-3, William F. St. Clair; No. 7316-3, Van Buskirk Farms LLP; No. 7348-3, Michael Sentell; No. 7364-3, Wipf Acres LP; No. 7365-3, Huron Colony; No. 7366-3, Huron Colony; No. 7367-3, Huron Colony; No. 7368-3 Huron Colony; No. 7369-3 Huron Colony; and No. 7370-3 Huron Colony; August 23, 2012: SD DENR-Water Rights Program

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re: HU04-37 Hines v. SD Department of Environment and Natural Resources

Goodman, J.A., 2002, Report on Water Permit Nos 6330-3, 6331-3, 6332-3, 6336-3, 6337-3, 6338-3, 6339-3, 6340-3, 6343-3, 6344-3, 6345-3, 6346-3, 6348-3, 6353-3 for Water From the Tulare Hitchcock Aquifer and Water Permit Nos. 6333-3, 6334-3, 6347-3, 6351-3, 6352-3 for Water From the Tulare Western Spink Aquifer, September 10, 2002: SD DENR-Water Rights Program

Kuiper, L.K. 1984, Appraisal of the Water Resources of The Eastern Part of the Tulare Aquifer, Beadle, hand, and Spink Counties, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 84-4078, 52 p.

Mathiowetz, A.W. 2012. Unpublished data. Pierre, SD.: South Dakota Department of Environment and Natural Resources Water Rights Programs.

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Water Rights, 2013a, Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2013b, Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

Water Rights, 2013c, Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg, Pierre, SD.

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PRINTER'S AFFIDAVIT

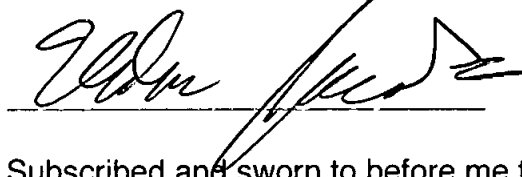
JUN 14 2013

STATE OF SOUTH DAKOTA, WATER RIGHTS  
COUNTY OF BEADLE: ss. PROGRAM

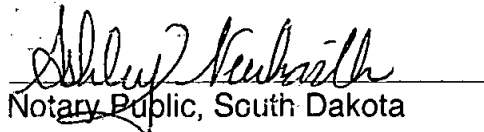
I, ELDON JACOBS, being duly sworn on oath, say that THE PLAINSMAN is a daily paper published at Huron, Beadle County, South Dakota, and that said newspaper has a bona fide circulation of at least 250 copies daily; that said newspaper has been published within said county for fifty-two consecutive weeks immediately prior to this date, that said newspaper is printed in whole or in part, in an office maintained at said place of publication; that I am Legal Advertising Coordinator of said newspaper and know the facts herein state. The annexed notice headed:

**TERRY WIETING - WATER RIGHTS**

was published for one day, in said newspaper, and not in any supplement of the said newspaper, the publication was of the 5TH day JUNE 2013. That the full NINETY-TWO & 61/100 dollars insures to the benefit of the publisher of 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 person whomsoever.



Subscribed and sworn to before me this 30TH day of JUNE 2013.



Notary Public, South Dakota

My term expires 10/25/2017

Legal # 803

F.P. 06-05-14

**NOTICE OF HEARING  
on Application  
Nos. 7717-3, 7718-3,  
7720-3 and 7721-3 to  
Appropriate Water**

Notice is given that Terry Wieting, 870 Beach Ave NE, Huron SD 57350 has filed an following applications for water permits.

Application No. 7717-3 proposes to appropriate 1.78 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the approximate center of the NE 1/4 Section 10 for irrigation of 135 acres located in the NE 1/4 Section 10; all in T113N-R64W.

Application No. 7718-3 proposes to appropriate 1.78 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in

the approximate center of the SE 1/4 Section 9 for irrigation of 135 acres located in the SE 1/4 Section 9; all in T113N-R64W.

Application No. 7720-3 proposes to appropriate 1.78 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the approximate center of the NE 1/4 Section 25 for irrigation of 135 acres located in the NE 1/4 Section 25; all in T114N-R64W.

Application No. 7721-3 proposes to appropriate 1.33 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the approximate center of the SW 1/4 Section 18 for irrigation of 100 acres located in the SW 1/4 Section 18; all in T113N-R63W.

SDCL 46-2A-4(10) provides that "if the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the Chief Engineer's recommendation and no hearing may be held before the board, unless the Chief Engineer makes a finding that an application, even if uncontested, presents important issues of public policy or public interest that should be heard by the board." In this case, the Chief Engineer finds that these applications presents important issues of public interest that should be heard by the Water Management Board.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 7717-3, 7718-3, 7720-3 and 7721-3 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.

~~The Water Management Board will consider these application at 3:00 p.m. on July 10, 2013 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendations are not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.~~

any interested person who intends to participate in the hearing shall file a petition to oppose or support these applications and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendations. 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 July 1, 2013. The petition may be informal, but shall be in writing and shall 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. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The July 10, 2013 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by July 1, 2013. If an automatic delay is requested, the hearing will be rescheduled

for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location.

Contact Eric Gronlund by July 1, 2013 at the above Chief Engineer's address to request copies of the staff report, recommendation, application or other information. Notice is given to individuals with disabilities that this hearing is being held in a physically accessible place. Please notify the Department of Environment and Natural Resources at least 48 hours before the hearing if you have a disability for which special arrangements must be made at the hearing. The telephone number for making arrangements is (605) 773-3352.

Under SDCL 1-26-17(7) notices must state that "if the amount in controversy exceeds \$2,500.00 or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17." This is a Notice of Hearing, service is being provided by publication, and the applicable date to give notice to the Chief Engineer is June 17, 2013. However, since this particular matter is a water permit application and not a monetary controversy in excess of \$2,500.00 or termination of a property right the Chief Engineer disputes the applicability of this provision and maintains that the hearing must be conducted by the Board.

As applicable, the following provides the legal authority and jurisdiction under which the hearing will be held and the particular statutes and rules pertaining to this application: SDCL 1-26-16 thru 1-26-28; SDCL 46-1-1 thru 46-1-9, 46-1-13 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-2A-1 thru 46-2A-12, 46-2A-14, 46-2A-16, 46-2A-20, 46-2A-21, 46-2A-23; 46-5-1.1, 46-5-2 thru 46-5-26, 46-5-30.2 thru 46-5-30.4, 46-5-31, 46-5-32 thru 46-5-34.1, 46-5-38 thru 46-5-39, 46-5-46, 46-5-47, 46-5-49; 46-6-1 thru 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-21, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:25.02; 74:02:01:35.01.

Steven M. Pirner,  
Secretary, Department  
of Environment and  
Natural Resources.  
No. 803 (adv.)  
Published one time at  
the total approximate  
cost of \$91.39.

**Affidavit of Publication** **RECEIVED**

STATE OF SOUTH DAKOTA,  
County of Spink: ss.

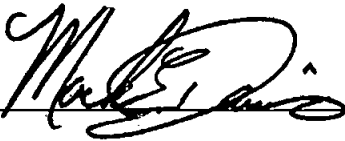
**JUN - 7 2013**

**WATER RIGHTS  
PROGRAM**

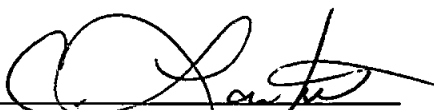
I, Mark E. Davis, of said County & State, being first duly sworn on oath, say that THE REDFIELD PRESS is a legal weekly newspaper as defined in Sec. 65.0508 South Dakota Code 1939, as amended by Chapter 298 of the Session of Laws of 1939, printed and published in the English language in the City of Redfield, in said County and State, by THE REDFIELD PRESS, and has been such newspaper during the time hereinafter mentioned, and that I Mark E. Davis, the undersigned, am Publisher of said newspaper in charge of the advertising department thereof, and have personal knowledge of all the facts stated in this affidavit, and that the legal or official notice entitled:

#363 Notice

A printed copy of which is hereto attached, was printed and published in said newspaper in 1 issue, to wit: The first publication being made on June 5th, that Sixty-five and .10/100 Dollars, insures to the benefit of the publisher of THE REDFIELD PRESS, 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 person whomsoever.

  
\_\_\_\_\_

Subscribed and sworn to before me this 5th day of June, 2013.

  
\_\_\_\_\_  
Notary Public, South Dakota

My commission expires 04/06/2016.

# Notice

#363

## NOTICE OF HEARING ON APPLICATION NOS. 7717-3, 7718-3, 7720-3 AND 7721-3 TO APPROPRIATE WATER

Notice is given that Terry Wieting, 870 Beach Ave NE, Huron SD 57350 has filed an following applications for water permits.

Application No. 7717-3 proposes to appropriate 1.78 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the approximate center of the NE 1/4 Section 10 for irrigation of 135 acres located in the NE 1/4 Section 10; all in T113N-R64W.

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Application No. 7720-3 proposes to appropriate 1.78 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the approximate center of the NE 1/4 Section 25 for irrigation of 135 acres located in the NE 1/4 Section 25; all in T114N-R64W.

Application No. 7721-3 proposes to appropriate 1.33 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the approximate center of the SW 1/4 Section 18 for irrigation of 100 acres located in the SW 1/4 Section 18; all in T114N-R63W.

SDCL 46-2A-4(10) provides that "if the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the Chief Engineer's recommendation and no hearing may be held before the board, unless the Chief Engineer makes a finding that an application, even if uncontested, presents important issues of public policy or public interest that should be heard by the board." In this case, the Chief Engineer finds that these applications presents important issues of public interest that should be heard by the Water Management Board.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 7717-3, 7718-3, 7720-3 and 7721-3 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.

The Water Management Board will consider these application at 3:00 p.m. on July 10, 2013 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendations are not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.

Any interested person who intends to participate in the hearing shall file a petition to oppose or support these applications and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendations. 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 July 1, 2013. The petition may be informal, but shall be in writing and shall 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. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

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Under SDCL 1-26-17(7) notices must state that "if the amount in controversy exceeds \$2,500.00 or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17. This is a Notice of Hearing, service is being provided by publication, and the applicable date to give notice to the Chief Engineer is June 17, 2013.

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46-2-9, 46-2-11, 46-2-17; 46-2A-1 thru 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21, 46-2A-23; 46-5-1.1, 46-5-2 thru 46-5-26, 46-5-30.2 thru 46-5-30.4, 46-5-31 46-5-32 thru 46-5-34.1, 46-5-38 thru 46-5-39, 46-5-46, 46-5-47, 46-5-49; 46-6-1 thru 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-21, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:25:02; 74:02:01:35:01.

Steven M. Pirner, Secretary  
Department of Environment and  
Natural Resources  
Published at an approximate cost of  
\$65.10. (June 5)



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

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

denr.sd.gov

May 29, 2013

Plainsman  
PO Box 1278  
Huron SD 57350

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 7717-3, 7718-3, 7720-3 and 7721-3 to Appropriate Water. Please publish the notice once on June 5, 2013. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Terry Wieting, 870 Beach Ave NE, Huron SD 57350 (Ph # 605-554-0207).

**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

## Schlaak, Karen

---

**From:** Schlaak, Karen  
**Sent:** Thursday, May 30, 2013 7:56 AM  
**To:** Ruby Crandall (rnewman.plainsman@midconetwork.com)  
**Subject:** Five Notices for June 5th  
**Attachments:** 7685-3public.wmb.docx; 7716-3public.wmb.docx; 7719-3public.wmb.docx;  
7717-21-3pluralpublic.wmb.docx; 7722-24-3pluralpublic.wmb.docx

Attached are 5 notices to be published on June 5, 2013. The applicants have been notified to authorize publication and arrange for payment.

No. 7685-3, Michael Watson, 18583 393th Ave, Hitchcock SD 57348 (605 350-1356)

No. 7716-3, Denis & Craig Slepikas, 524 4t St SW, Huron SD 57350 (605 354-2014)

No. 7719-3, Marshall Brothers, c/o Gary Marshall, 19032 388<sup>th</sup> Ave, Hitchcock SD (605 350-1401)

Nos. 7717-3, 7718-3, 7720-3 and 7721-3, Terry Wieting, 870 Beach AVE NE, Huron SD (605 554-0207)

Nos. 7722-3, 7723-3 and 7724-3, Brent/Leland Kleinsasser, 20188 401<sup>st</sup> Ave, Huron SD (605 350-2046)

If you have questions, please let me know.

*Karen Schlaak*

Water Rights Program

Phone: 605 773-3352

Fax: 605 773-4068



DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES

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

denr.sd.gov

May 29, 2013

Redfield Press  
PO Box 440  
Redfield SD 57469

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application Nos. 7717-3, 7718-3, 7720-3 and 7721-3 to Appropriate Water. Please publish the notice once on June 5, 2013. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

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Sincerely,

Eric Gronlund  
Natural Resources Engineer  
605 773-3352

enclosures

## Schlaak, Karen

---

**From:** Schlaak, Karen  
**Sent:** Thursday, May 30, 2013 8:05 AM  
**To:** 'office.redpress@midconetwork.com' (office.redpress@midconetwork.com)  
**Subject:** FW: Five Notices for June 5th  
**Attachments:** 7685-3public.wmb.docx; 7716-3public.wmb.docx; 7719-3public.wmb.docx;  
7717-21-3pluralpublic.wmb.docx; 7722-24-3pluralpublic.wmb.docx

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No. 7719-3, Marshall Brothers

Nos. 7722-3, 7723-3 and 7724-3, Brent/Leland Kleinsasser

If you have questions, please let me know.

Karen Schlaak

Water Rights Program

Phone: 605 773-3352

Fax: 605 773-4068



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

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[denr.sd.gov](http://denr.sd.gov)

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

May 29, 2013

Terry Wieting  
870 Beach Ave NE  
Huron SD 57350

Dear Mr. Wieting:

Water Permit Application Nos. 7717-3, 7718-3, 7720-3 and 7721-3 for irrigation use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Plainsman printed at Huron SD (Ph # 605-352-6401) and the Redfield Press printed at Redfield SD (Ph # 605-472-0822). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and reports on the applications 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(s) has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the applications.

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 applications.

Instruction to Newspaper – Publish the Notice on June 5, 2013. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

---

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Any interested person who intends to participate in the hearing shall file a petition to oppose or support these applications and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendations. 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 July 1, 2013. The petition may be informal, but shall be in writing and shall 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. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The July 10, 2013 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by July 1, 2013. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location.

Contact Eric Gronlund by July 1, 2013 at the above Chief Engineer's address to request copies of the staff report, recommendation, application or other information. Notice is given to individuals with disabilities that this hearing is being held in a physically accessible place. Please notify the Department of Environment and Natural Resources at least 48 hours before the hearing if you have a disability for which special arrangements must be made at the hearing. The telephone number for making arrangements is (605) 773-3352.

Under SDCL 1-26-17(7) notices must state that "if the amount in controversy exceeds \$2,500.00 or if a property right may be terminated, any party to the contested case may require the agency to use the Office of Hearing Examiners by giving notice of the request to the agency no later than ten days after service of a notice of hearing issued pursuant to SDCL 1-26-17." This is a Notice of Hearing, service is being provided by publication, and the applicable date to give notice to the Chief Engineer is June 17, 2013. However, since this particular matter is a water permit application and not a monetary controversy in excess of \$2,500.00 or termination of a property right the Chief Engineer disputes the applicability of this provision and maintains that the hearing must be conducted by the Board.

As applicable, the following provides the legal authority and jurisdiction under which the hearing will be held and the particular statutes and rules pertaining to this application: SDCL 1-26-16 thru 1-26-28; SDCL 46-1-1 thru 46-1-9, 46-1-13 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-17; 46-2A-1 thru 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21, 46-2A-23; 46-5-1.1, 46-5-2 thru 46-5-26, 46-5-30.2 thru 46-5-30.4, 46-5-31 46-5-32 thru 46-5-34.1, 46-5-38 thru 46-5-39, 46-5-46, 46-5-47, 46-5-49; 46-6-1 thru 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-21, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:25.02; 74:02:01:35.01.

Steven M. Pimer, Secretary, Department of Environment and Natural Resources. Published once at an approximate cost of \_\_\_\_\_.

## Gronlund, Eric

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**From:** Office <office.redpress@midconetwork.com>  
**Sent:** Friday, May 31, 2013 3:22 PM  
**To:** Gronlund, Eric  
**Subject:** Re: amend public notice for Terry Wieting's water permit applications

Got it. Thanks!

**From:** "Gronlund, Eric" <Eric.Gronlund@state.sd.us>  
**Date:** Fri, 31 May 2013 19:47:10 +0000  
**To:** "office.redpress@midconetwork.com" <office.redpress@midconetwork.com>, "renewman.plainsman@midconetwork.com" <renewman.plainsman@midconetwork.com>, "twieting@venturecomm.net" <twieting@venturecomm.net>  
**Cc:** "Schlaak, Karen" <Karen.Schlaak@state.sd.us>  
**Subject:** amend public notice for Terry Wieting's water permit applications

Redfield Press, The Plainsman and Mr. Wieting:

Please find the amended notice for Mr. Wieting's water permit applications set to be published on June 5th.

The correction is in the township designation on Application No. 7721-3 from T113N to **T114N**.

Thanks

Eric Gronlund

Water Rights Program, DENR

605 773-3352

[Eric.gronlund@state.sd.us](mailto:Eric.gronlund@state.sd.us)

## Gronlund, Eric

---

**From:** Gronlund, Eric  
**Sent:** Friday, May 31, 2013 2:47 PM  
**To:** office.redpress@midconetwork.com; 'renewman.plainsman@midconetwork.com'; twieting@venturecomm.net  
**Cc:** Schlaak, Karen  
**Subject:** amend public notice for Terry Wieting's water permit applications  
**Attachments:** 7717-21-3pluralpublic.wmb.docx

Redfield Press, The Plainsman and Mr. Wieting:

Please find the amended notice for Mr. Wieting's water permit applications set to be published on June 5<sup>th</sup>.

The correction is in the township designation on Application No. 7721-3 from T113N to **T114N**.

Thanks

Eric Gronlund  
Water Rights Program, DENR  
605 773-3352  
[Eric.gronlund@state.sd.us](mailto:Eric.gronlund@state.sd.us)

Instruction to Newspaper – Publish the Notice on June 5, 2013. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

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NOTICE OF HEARING on Application Nos. 7717-3, 7718-3, 7720-3 and 7721-3 to Appropriate Water

Notice is given that Terry Wieting, 870 Beach Ave NE, Huron SD 57350 has filed an following applications for water permits.

Application No. 7717-3 proposes to appropriate 1.78 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the approximate center of the NE ¼ Section 10 for irrigation of 135 acres located in the NE 1/4 Section 10; all in T113N-R64W.

Application No. 7718-3 proposes to appropriate 1.78 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the approximate center of the SE ¼ Section 9 for irrigation of 135 acres located in the SE 1/4 Section 9; all in T113N-R64W.

Application No. 7720-3 proposes to appropriate 1.78 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the approximate center of the NE ¼ Section 25 for irrigation of 135 acres located in the NE 1/4 Section 25; all in T114N-R64W.

Application No. 7721-3 proposes to appropriate 1.33 cubic feet of water per second from one well to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the approximate center of the SW ¼ Section 18 for irrigation of 100 acres located in the SW 1/4 Section 18; all in T114N-R63W.

SDCL 46-2A-4(10) provides that “if the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the Chief Engineer’s recommendation and no hearing may be held before the board, unless the Chief Engineer makes a finding that an application, even if uncontested, presents important issues of public policy or public interest that should be heard by the board.” In this case, the Chief Engineer finds that these applications presents important issues of public interest that should be heard by the Water Management Board.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 7717-3, 7718-3, 7720-3 and 7721-3 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.

The Water Management Board will consider these application at 3:00 p.m. on July 10, 2013 in the Matthew Training Center, Joe Foss Bldg, 523 E. Capitol Ave. Pierre SD. The Chief Engineer's recommendations are not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing.

Any interested person who intends to participate in the hearing shall file a petition to oppose or support these applications and the petition shall be filed with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendations. 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 July 1, 2013. The petition may be informal, but shall be in writing and shall 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. The hearing is an adversary proceeding and any party has the right to be present at the hearing and to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing and decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law.

The July 10, 2013 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any person who has filed a petition to oppose or support the application. The request for an automatic delay must be filed by July 1, 2013. If an automatic delay is requested, the hearing will be rescheduled for a future Board meeting and personal notice will be provided to all petitioners regarding the time, date and location.

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Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at an approximate cost of \_\_\_\_\_.



DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES

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

[denr.sd.gov](http://denr.sd.gov)

AUG 29 2013

Terry Wieting  
870 Beach Ave  
Huron SD 57350

Dear Mr. Wieting:

Enclosed are Water Permit Nos. 7717-3, 7718-3, 7720-3 and 7721-3 authorizing construction of your water diversion systems and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

Form 10's, *Notice of Completion of Works and Application of Water to Beneficial Use*, are enclosed. Please return the completed forms after you have finished the systems and have put the water to beneficial use. An investigation can then be scheduled so the water licenses 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

RECEIVED

MAY 05 2015

WATER RIGHTS  
PROGRAM

## NOTICE OF TRANSFER OF OWNERSHIP

To: Chief Engineer  
Water Rights Program, DENR  
523 E. Capitol  
Pierre, SD 57501-3181

No. 7717-3

Date: 4-30-15

I/We request that Water Permit No. 7717-3

formerly owned by: Terry Wieting

be transferred to: (name & address) Terry Marshall, 38735 SD Hwy 28N, Hitchcock SD 57348

Telephone No. \_\_\_\_\_

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

135 acres – NE ¼ Section 10, T113N, R64W

I/We understand that the validity of Water Permit No. 7717-3 has not been determined by this transfer action. If I/We have any questions on validity, I/We understand that only the Water Management Board has the authority to determine if a water permit/right is valid (see note).

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

**A fee of Fifty Dollars (\$50.00) is required to cover the filing fees as required under SDCL 46-2-13. This form must be signed by the new owner.**

I/We Terry Marshall, the new owner, certify that the above information is true and correct.

Terry Marshall  
(Signed by new owner)

**NOTE:** Water permits may be cancelled for nonconstruction after the five year construction period has expired. Once a water permit is developed and the water used, the permit becomes a right. A water right may be lost for three reasons:

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

# RECEIPT

## WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 5/5, 20 15

RECEIVED OF Farm Credit Services PO Box 1317 Huron SD 57350

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

|                                                                                                                |       |       |
|----------------------------------------------------------------------------------------------------------------|-------|-------|
| Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use | 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 <u>7717-3</u>                                                                     |       |       |
| 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. 07380

By Jane Salomon  
Chief Engineer



DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES

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

denr.sd.gov

May 7, 2015

7570-3  
7574-3  
7717-3

Terry Marshall  
38735 SD Hwy 28N  
Hitchcock SD 57348

Dear Mr. Marshall:

I am writing to acknowledge receipt of the transfer forms and filing fees submitted for Water Permit Nos. 7570-3, 7574-3 and 7717-3.

The ownership changes have been completed as follows:

- No. 7570-3 transferred from Terry Wieting to Terry Marshall
- No. 7574-3 transferred from Marshall Brothers to Terry Marshall
- No. 7717-3 transferred from Terry Wieting to Terry Marshall

The ownership change submitted for portions of Water Permit No. 7575-3 is being processed separately. This is done in part because the permit will need to be divided and reissued to reflect separate ownership (No. 7575A-3 - Terry Marshall and No. 7575B-3 - Gary Marshall).

Receipts for the filing fees are being forwarded by copy of this letter to Farm Credit Services in Huron. If you have any questions concerning the ownership changes, please get in touch with me.

Sincerely,

Genny McMath  
Water Rights Program  
(605) 773-3352  
email: genny.mcmath@state.sd.us

c: Farm Credit Services, PO Box 1317, Huron SD 57350  
w/Receipt Nos. 07385, 07386 & 07388

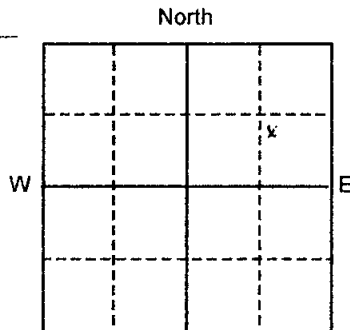
# SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE 1/4 NE 1/4 Sec 10 Twp 113 Rg 64

County Beadle

Please mark well location with an "X"



Well Completion Date

6-17-14

1 Mile

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

## PROPOSED USE:

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

## METHOD OF DRILLING:

Reverse Circulation

## CASING DATA:

If other describe ☐ Steel ☒ Plastic ☐ Other

| PIPEWEIGHT | DIAMETER     | FROM        | TO           | HOLE DIAMETER |
|------------|--------------|-------------|--------------|---------------|
| LB/FT      | <u>16</u> IN | <u>0</u> FT | <u>70</u> FT | <u>24</u> IN  |
| LB/FT      | IN           | FT          | FT           | IN            |
| LB/FT      | IN           | FT          | FT           | IN            |

## GROUTING DATA:

| Grout Type   | No. of Sacks | Grout Weight | From        | To           |
|--------------|--------------|--------------|-------------|--------------|
| <u>BH-20</u> |              | Lb/gal       | <u>0</u> Ft | <u>45</u> Ft |
|              |              | Lb/gal       | Ft          | Ft           |

Describe grouting procedure

Reverse Grout

## SCREEN:

☐ Perforated pipe ☒ Manufactured  
Diameter 16 Inches Length 30 Feet  
Material SS  
Slot Size .85 Set From 70 Feet to 100 Feet

Other information

Johnson Wire Wrap

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? Pellets

Lab to which water quality sample sent for analysis ☐ No, Why Not?

Well Owner: Gary Marshall

Business Name:

Address: 19032 388th Ave

City, State, Zip: Hitchcock SD 57348

## WELL LOG:

| FORMATION                           | DEPTH     |            |
|-------------------------------------|-----------|------------|
|                                     | FROM      | TO         |
| <u>Top Soil</u>                     | <u>0</u>  | <u>30</u>  |
| <u>S-Clay</u>                       | <u>3</u>  | <u>25</u>  |
| <u>Silty Sand</u>                   | <u>25</u> | <u>36</u>  |
| <u>M-C sand F-Gravel &amp; Coal</u> | <u>36</u> | <u>45</u>  |
| <u>Silty sand</u>                   | <u>45</u> | <u>65</u>  |
| <u>M-C sand - F-M-C Gravel</u>      |           |            |
| <u>W/Coal</u>                       | <u>65</u> | <u>101</u> |

STATIC WATER LEVEL 18 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 & Recharge  
☐ Bailed  
☐ Other

Pumping Level Below Land Surface

25 Ft. After 6 Hrs. pumped 1200 GPM

36 Ft. After 2 Hrs. pumped 1300 GPM

If pump installed, pump rate: \_\_\_\_\_ GPM

## REMARKS

RECEIVED

FEB 06 2015

WATER RIGHTS PROGRAM

This well was drilled under license # 806 and this report is true and accurate.

Drilling firm: Mid-Nebraska Drilling & Services

Signature of License Representative:

Mollie B.

Signature of Well Owner or Equitable Property Holder:

Gary Marshall

Date: 6-14

2-12-15

7717-3



DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES

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

JAN 08 2020

7571A-3  
7717-3

Terry Marshall  
38735 SD Hwy 28N  
Hitchcock SD 57348

Dear Mr. Marshall:

Enclosed is Water License No. 7571A-3. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

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

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

enclosures

**Note: Upon licensing, the applicable portions of Water Permit No. 7717-3 were incorporated into Water License No. 7571A-3.**