

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

10:00 a.m.

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

No. 7719-3 (office use only)
Hydrologic Unit 10160006
Basin James River
Newspaper Plainsman

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 Gary Marshall C/O Marshall Bros.

(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent

(name and complete address if different than above name)

Mailing Address 19032 388th Ave Hitchcock SD 57348
(Address) (City) (State) (Zip Code)

Home Phone 605-266-2720 Cell 605-350-1401 Email marshall@sbtc.net

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 2 wells located in the SW 1/4 Sec 4 113N-62W

(example - 3 wells in SW 1/4 NE 1/4 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 SW 1/4 Sec 4 113N-62W	33.75		
NE1/4 of the SW 1/4 Sec 4 113N-62W	33.75		
SW1/4 of the SW 1/4 Sec 4 113N-62W	33.75		
SE1/4 of the SW 1/4 Sec 4 113N-62W	33.75		

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

To irrigate 135 acres from two wells 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. 7719-3 FOR IRRIGATION

Date of first receipt of application February 8, 2013.

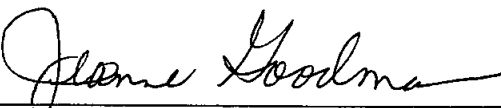
The Water Management Board approved Water Permit No. 7719-3 on July 11, 2013 for Marshall Brothers, c/o Gary Marshall, 19032 388th Ave, Hitchcock SD 57348 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 7719-3 appropriates 1.78 cubic feet of water per second from two wells to be completed into the Tulare:Western Spink Hitchcock Aquifer (70 feet deep) located in the S 1/2 SW 1/4 Section 4 for irrigation of 135 acres located in the SW 1/4 Section 4; all in T113N-R62W.
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 wells 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 wells authorized by Permit No. 7719-3 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. The diversion rate authorized by Water Right No. 4794-3 and Water Permit No. 7719-3, combined, shall not exceed the statutory limit of 1.0 cubic feet of water per second and two acre feet per acre to the land in the SW ¼ Section 4, T113N, R62W.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

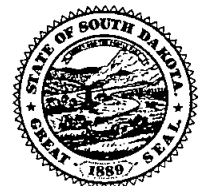
WATER MANAGEMENT BOARD

By: 

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

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 2 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 .5 mile

2. Wastewater Disposal System Information

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

b) System Capacity (gallons) ____ Year Constructed ____

c) Connected to the City of ____ Sanitary System

3. Dugout Information

a) Surface Dimensions ____ Depth ____

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

4. Water Storage Dams

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

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

b) Freeboard ____

c) Crest Width ____

Crest Length ____

d) Height ____

e) Primary Outlet Capacity ____

If pipe, diameter ____

f) Secondary Spillway Capacity ____

Spillway Width ____

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

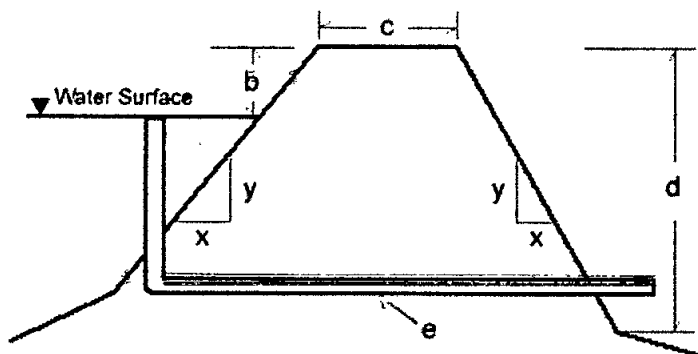
Upstream ____

Downstream ____

h) Surface Area of Impoundment ____

i) Storage ____ Acre Feet

j) Drainage Area Above Dam ____ Acres





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FEB - 8 2013

WATER RIGHTS
PROGRAM



Sec 32
T114N
R62W

Sec 33
T114N
R62W

Sec 34
T114N
R62W

Sec 5
T113N
R62W

Sec 4
T113N
R62W

Sec 3
T113N
R62W

Sec 8
T113N
R62W

Sec 9
T113N
R62W

Sec 10
T113N
R62W

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

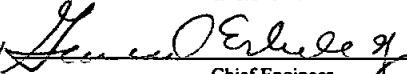
Date 2/8, 20 13

RECEIVED OF Gary Marshall c/o Marshall Bros 19032 388th Ave Hitchcock 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	750	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	950 00

No. 0611U

By 
Chief Engineer

File No. 4794-3 & New Application

WATER RIGHTS PROGRAM -- FILE DOCUMENTATION

NAME: Gary Marshall/Terry Wieting

ADDRESS: 19032 388th Ave, Hitchcock SD 57348

DATE: February 8, 2013

TELEPHONE: 605-266-2720

RE: Irrigation application for SW1/4 sec 4-T113N-R62W

COMMENTS:

An application was submitted to irrigate the SW1/4 section 4-T113N-R62W from two wells located in the S1/2 SW1/4 section 4. The acreage is currently covered by Water Right No. 4794-3 which also includes the SE1/4 section 5 for a total of 264 acres with a diversion rate of 2.22 cfs from two wells located in the SE1/4 SW1/4 section 4.

Water Right No. 4794-3 authorizes operation of one pivot at a time with the 2.22 cfs diversion rate. This new application is to increase the diversion rate by 1.78 cfs so that both pivots can be operated at the same time.

*Have a call in to find out whether using
only 2 existing wells or intend to drill
one or more new wells.*

Ron Duvall
Water Rights Permitting Administrator
Water Rights Program

RD
2/8/13

**Water Rights Program
File Documentation**

NAME OF PERSON OR FILE: Gary Marshall

ADDRESS:

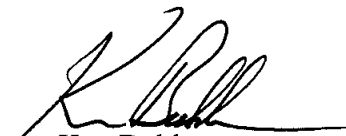
DATE: June 18, 2013

TELEPHONE: 605.350.1401

RE: Irrigated acreage for Application No. 7719-3 same as authorized by WR 4794-3

COMMENTS:

I called Gary Marshall to find out why he was filing Water Permit Application No. 7719-3. If the application is approved, the permit will authorize irrigation of the same acreage currently authorized by Water Right No. 4794-3. Mr. Marshall indicated that at this time he cannot operate two center pivots at the same time. He submitted Application No. 7719-3 so each quarter would be irrigated as an independent system. Therefore both irrigation systems could be run simultaneously.



Ken Buhler



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

June 25, 2013

Gary Marshall
Marshall Brothers
19032 388th Avenue
Hitchcock SD 57348

Dear Mr. Marshall:

Please find enclosed a supplemental report to the Chief Engineer and revised recommendation on Water Permit Application No. 7719-3 for two new wells to irrigate the SW ¼ Section 4, T113N, R62W.

Sincerely,

Eric Gronlund
Water Rights Program, DENR
605 773-3352
eric.gronlund@state.sd.us

enclosures

Gronlund, Eric

From: Gronlund, Eric
Sent: Tuesday, June 25, 2013 11:25 AM
To: Ray Rylance; Gary W. Schumacher (gary@wslawfirm.net)
Subject: Supplemental report on Application No. 7719-3, Marshall Brothers
Attachments: Marshall06252013.pdf

Please find supplemental report on Application No. 7719-3 which is one of the applications in the report on the Tulare:Western Spink Hitchcock Aquifer.

Eric Gronlund
Water Rights Program, DENR
605 773-3352
Eric.gronlund@state.sd.us



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
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denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT APPLICATION
NO. 7719-3, Marshall Brothers**

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. 7719-3, Marshall Brothers, c/o Gary Marshall, 19032 388th Ave, Hitchcock SD 57348.

The Chief Engineer is recommending APPROVAL of Application No. 7719-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The wells approved under 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 wells authorized by Permit No. 7719-3 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.

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, 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 NE $\frac{1}{4}$ Section 26, T113N-R63W and the SE $\frac{1}{4}$ Section 26, T113N-R63W. This application proposes to irrigate 320 acres located in the E $\frac{1}{2}$ 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 NW $\frac{1}{4}$ Section 17, T113N-R63W. This application proposes to irrigate 160 acres located in the NW $\frac{1}{4}$ 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 SW $\frac{1}{4}$ Section 21, T114N-R63W. This application proposes to irrigate 160 acres located in the SW $\frac{1}{4}$ 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 SW $\frac{1}{4}$ Section 22, T114N-R63W. This application proposes to irrigate 160 acres located in the SW $\frac{1}{4}$ 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 NW $\frac{1}{4}$ Section 11, T113N-R64W. This application proposes to irrigate 160 acres located in the NW $\frac{1}{4}$ 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 NW $\frac{1}{4}$ Section 30, T114N-R63W and NE $\frac{1}{4}$ Section 30, T114N-R63W. This application proposes to irrigate 320 acres located in the N $\frac{1}{2}$ 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 NW $\frac{1}{4}$ Section 1, T113N-R62W and SW $\frac{1}{4}$ Section 1, T113N-R62W. This application proposes to irrigate 270 acres located in the W $\frac{1}{2}$ 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 SW¼ SE¼ Section 21, T112N-R61W. This application proposes to irrigate 135 acres located in the NE¼ 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 SE¼ Section 4, T113N-R63W and SW¼ Section 4, T113N-R63W; and the approximate centers of the NE¼ Section 5, T113N-R63W and SE¼ Section 5, T113N-R63W. This application proposes to irrigate 544 acres located in the S½ Section 4, T113N-R63W and the E½ 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 NW¼ Section 32, T114N-R63W; 2) the approximate center of Section 31, T114N-R63W; 3) the approximate center of the SW¼ Section 30, T114N-R63W; 4) the approximate center of the NE¼ Section 36, T114N-R64W. This application proposes to irrigate 982 acres located in the NW¼ Section 32, T114N-R63W, Section 31, T114N-R64W, the SW¼ Section 30, T114N-R63W and the NE¼ 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 NE¼ Section 36, T113N-R64W. This application proposes to irrigate 136 acres located in the NE¼ 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 NW¼ Section 33, T114N-R63W. This application proposes to irrigate 136 acres located in the NW¼ 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 SE¼ Section 25, T115N-R63W and SW¼ Section 25, T115N-R63W. This application proposes to irrigate 200 acres located in the S½ 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 SW¼ Section 18, T114N-R62W. This application proposes to irrigate 150 acres located in the SW¼ 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.

STATUS	NUMBER
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).

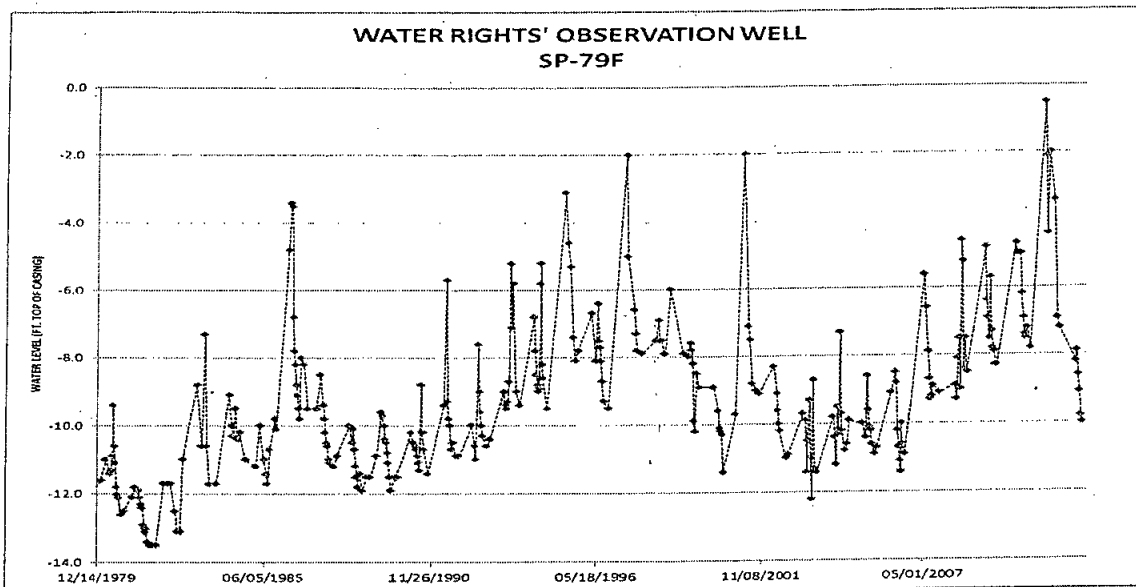


Figure 1. DENR-Water Rights' observation well completed into the unconfined portion of the Tulare:Western Spink/Hitchcock aquifer

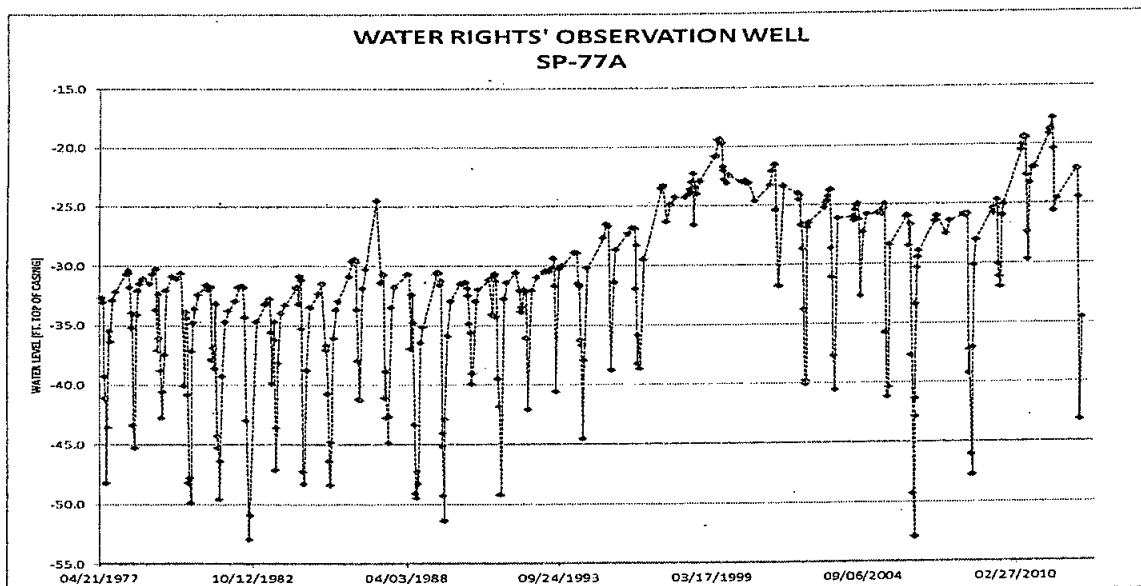


Figure 2. DENR-Water Rights' observation well completed into the confined portion of the Tulare:Western Spink/Hitchcock aquifer

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 S $\frac{1}{2}$ SW $\frac{1}{4}$ Section 16, T113N-R62W and are expected to be approximately 75 feet deep. This application proposes to irrigate 160 acres located in the SW $\frac{1}{4}$ 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 NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ 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 NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 36 for irrigation of 136 acres located in the SE $\frac{1}{4}$ 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 NW $\frac{1}{4}$ and the center of the SW $\frac{1}{4}$ Section 1, T113N-R64W and are expected to be approximately 80 feet deep. This application proposes to irrigate 280 acres located in the W $\frac{1}{2}$ 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 SE $\frac{1}{4}$ Section 4, T113N-R64W and are expected to be approximately 80 feet deep. This application proposes to irrigate 160 acres located in the SE $\frac{1}{4}$ 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 SW $\frac{1}{4}$ 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 NW¼ Section 27, T114N-R63W and is expected to be 80 feet deep. This application proposes to irrigate 160 acres located in the NW¼ 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 NE¼ Section 35, T114N-R64W and is expected to be approximately 80 feet deep. This application proposes to irrigate 160 acres located in the NE¼ 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 SW¼ and SE¼ Section 36, T114N-R64W and are expected to be approximately 80 feet deep. This application proposes to irrigate 280 acres located in the S½ 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 SE¼ Section 25, T114N-R64W and is expected to be approximately 80 feet deep. This application proposes to irrigate 135 acres located in the SE¼ 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 SE¼ 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 ¼ Section 3, T114N-R64W and is expected to be approximately 80 feet deep. This application proposes to irrigate 135 acres located in the NW¼ 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 SW¼ Section 8, T113N-R62W and are expected to be approximately 80 feet deep. This application proposes to irrigate 160 acres located in the SW ¼ 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 NE¼ Section 32, T115N-R63W and is expected to be approximately 60 feet deep. This application proposes to irrigate 136 acres located in the NE¼ 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: ΔS = 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:

ΔV_{avg} = Average change in volume (ac-ft/yr)

$Wat Lev_{avg}$ = Average change in water level (ft/yr)

S_y = Specific Yield

A = Area (acres)

The average annual change in water level ($Wat Lev_{avg}$) 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).

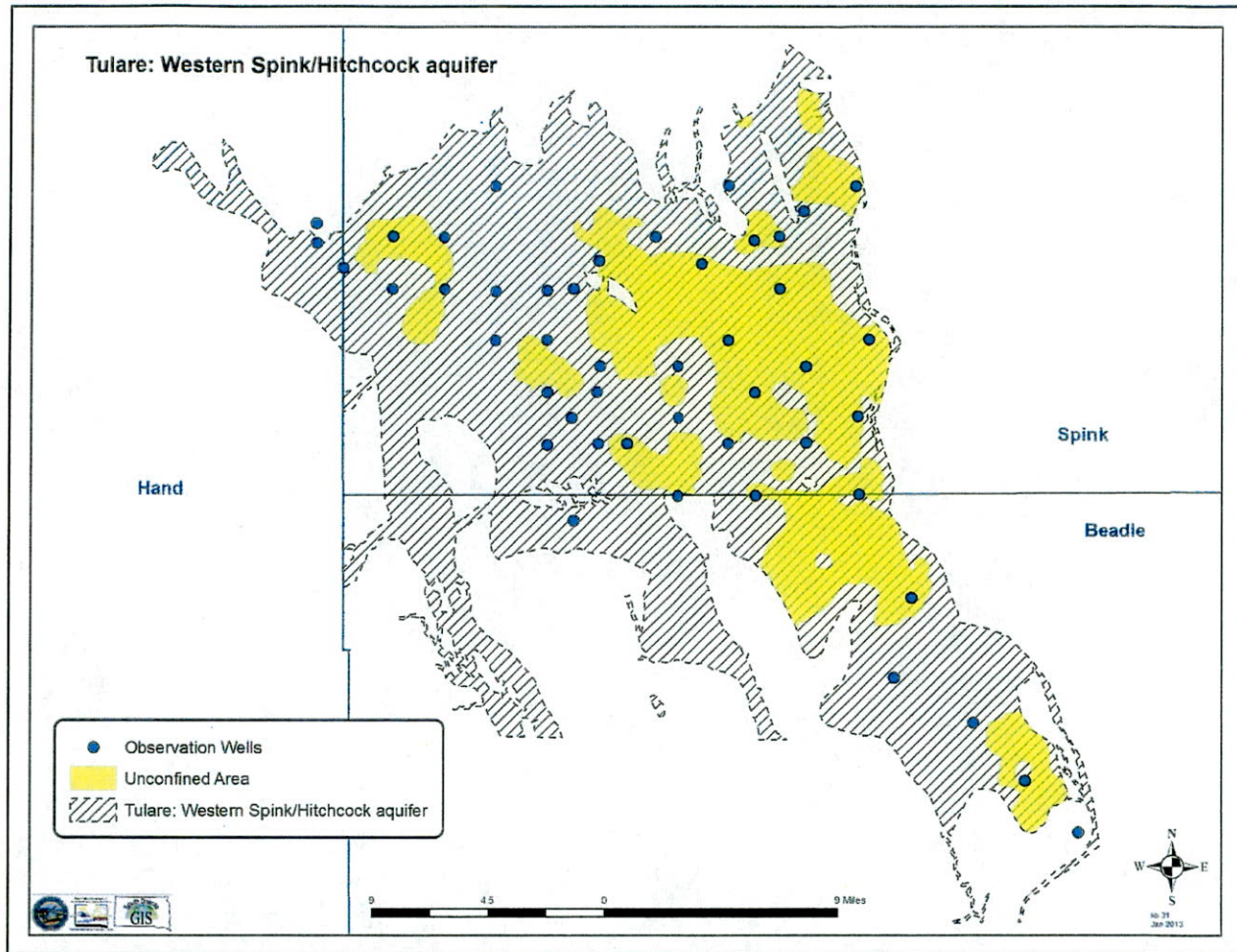


Figure 1. Areal extent of the Tulare: Western Spink/Hitchcock aquifer and the unconfined areas of the aquifer.

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.

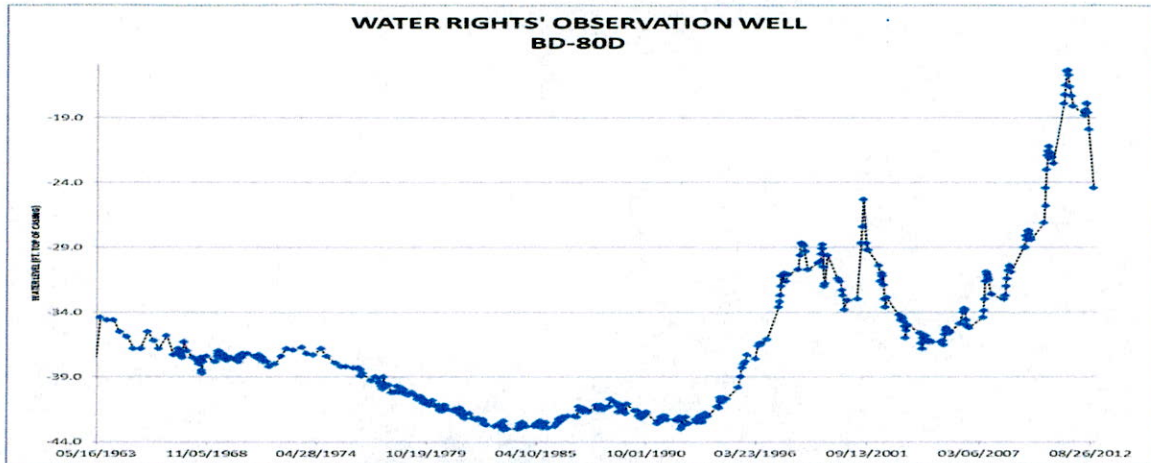


Figure 2. Hydrograph of DENR-Water Rights Program observation well completed into the Tulare: Western Spink/Hitchcock aquifer.

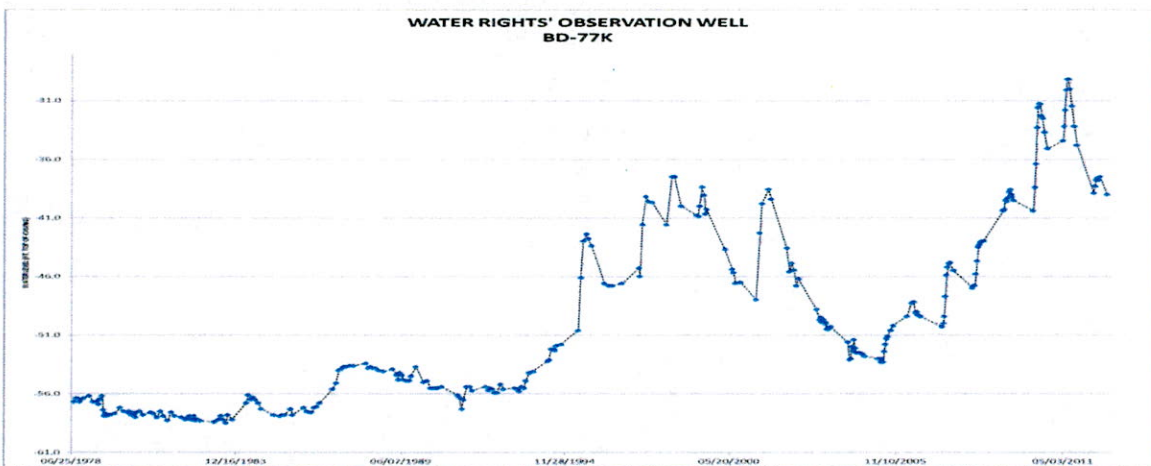


Figure 3. Hydrograph of DENR-Water Rights Program observation well completed into the Tulare: Western Spink/Hitchcock aquifer.

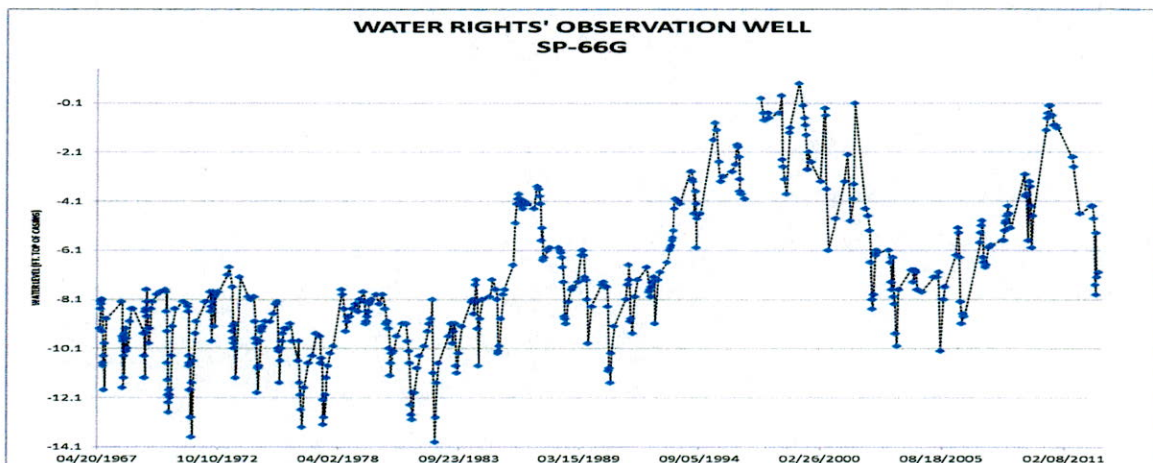


Figure 4. Hydrograph of DENR-Water Rights Program observation well completed into the Tulare: Western Spink/Hitchcock aquifer.

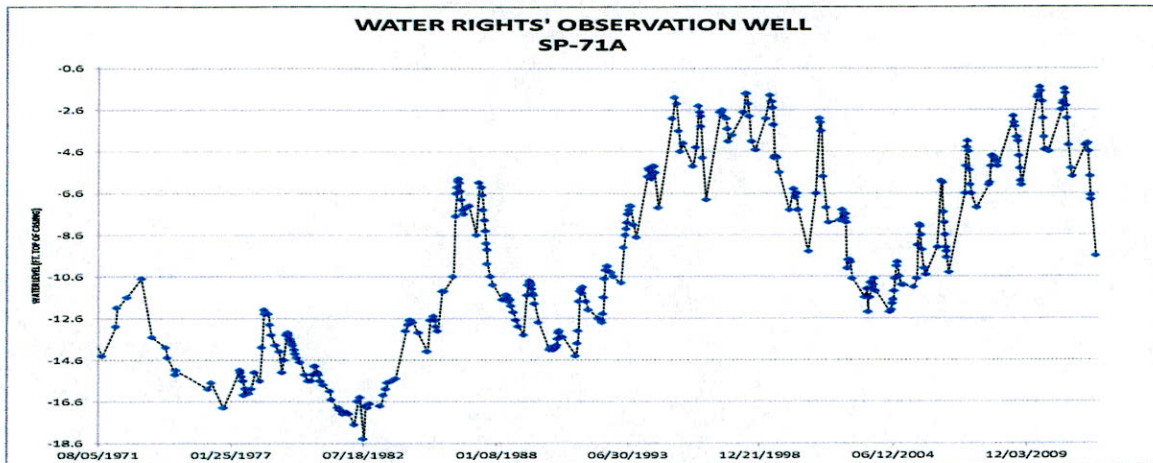


Figure 5. Hydrograph of DENR-Water Rights Program observation well completed into the Tulare: Western Spink/Hitchcock aquifer.

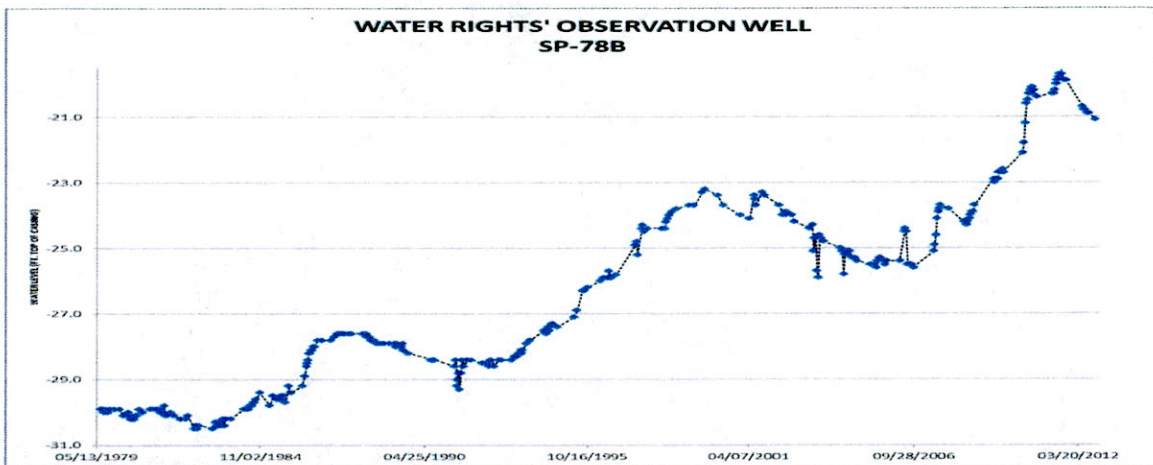


Figure 6. Hydrograph of DENR-Water Rights Program observation well completed into the Tulare: Western Spink/Hitchcock aquifer.

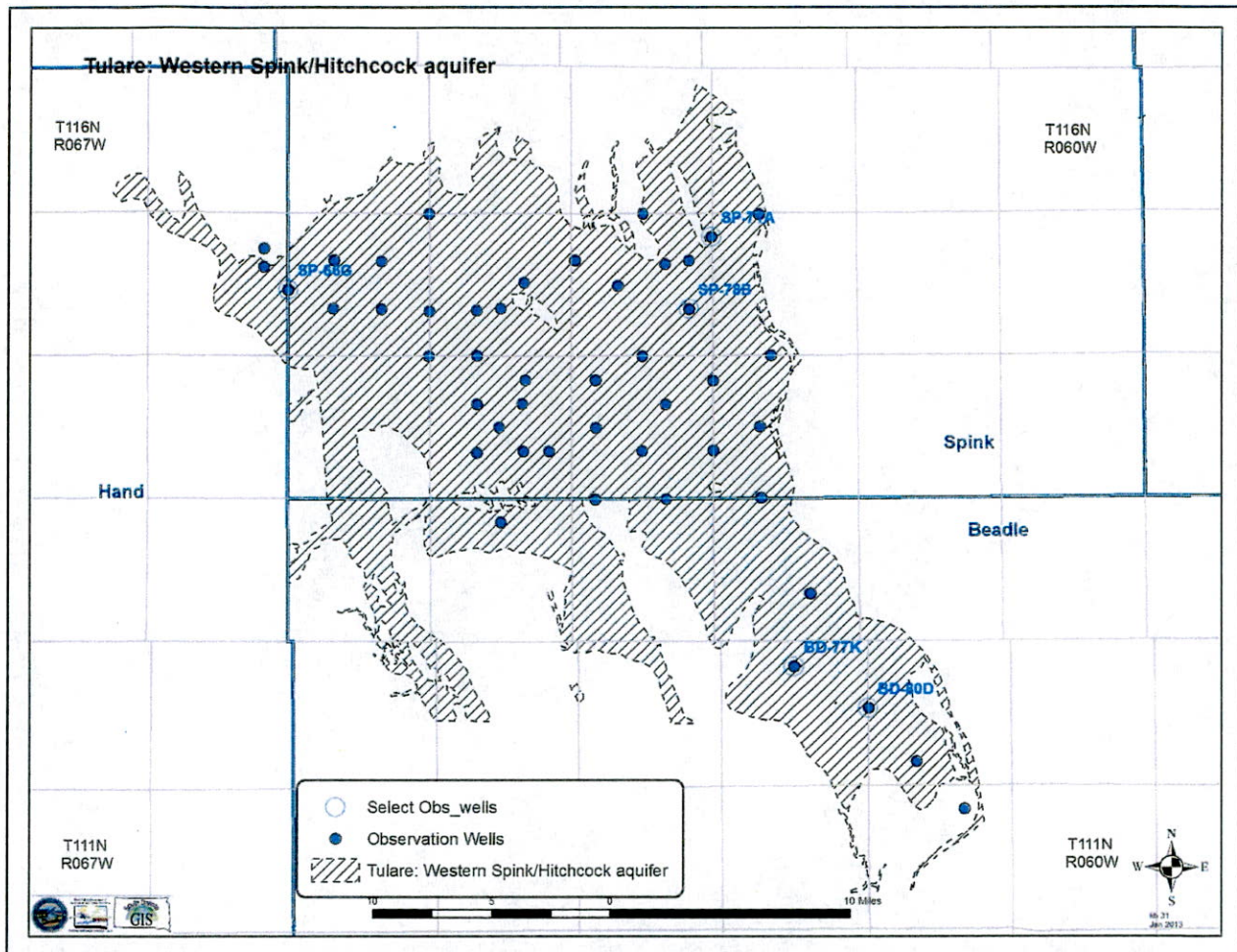


Figure 7. Location of DENR-Water Rights Program observation wells completed into the Tulare: Western Spink aquifer and wells shown in Figures 2-6.

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.

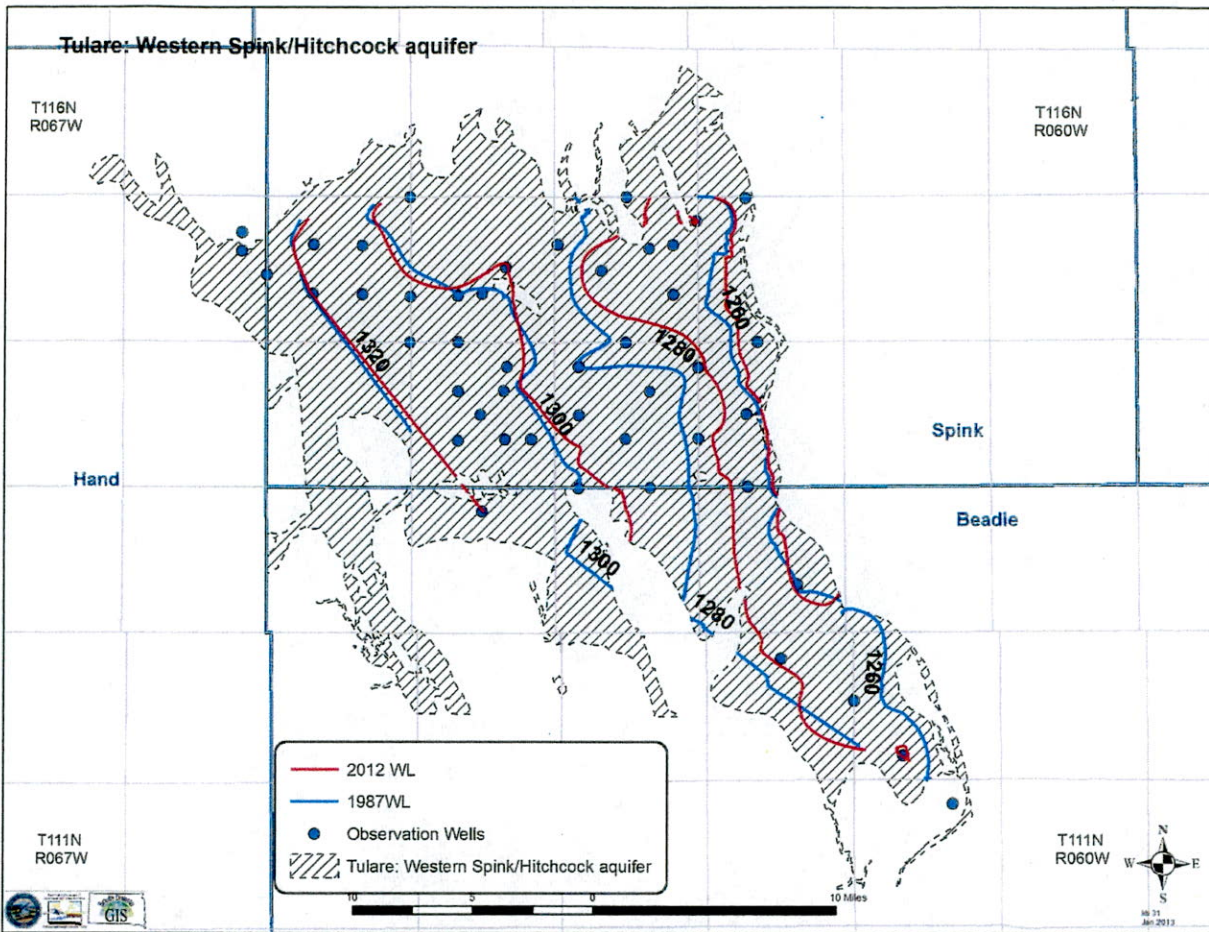


Figure 8. Comparison of the potentiometric surface of the Tulare: Western Spink/Hitchcock aquifer (October 1987 versus October 2012)

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/ft²). 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).

REPORTED IRRIGATION PUMPING (1979-2011)	ACRE-FEET PER YEAR
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.

REPORTED IRRIGATION PUMPING (2003-2011)	ACRE-FEET PER YEAR
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.

STATUS	NUMBER
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).

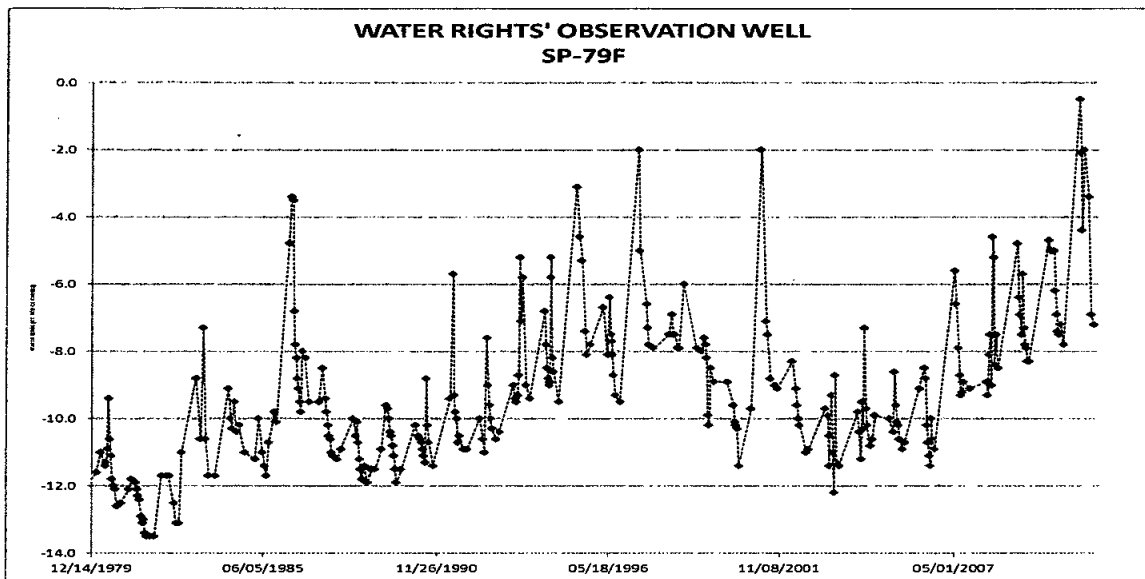


Figure 9. DENR-Water Rights' observation well completed into the unconfined portion of the Tulare:Western Spink/Hitchcock aquifer

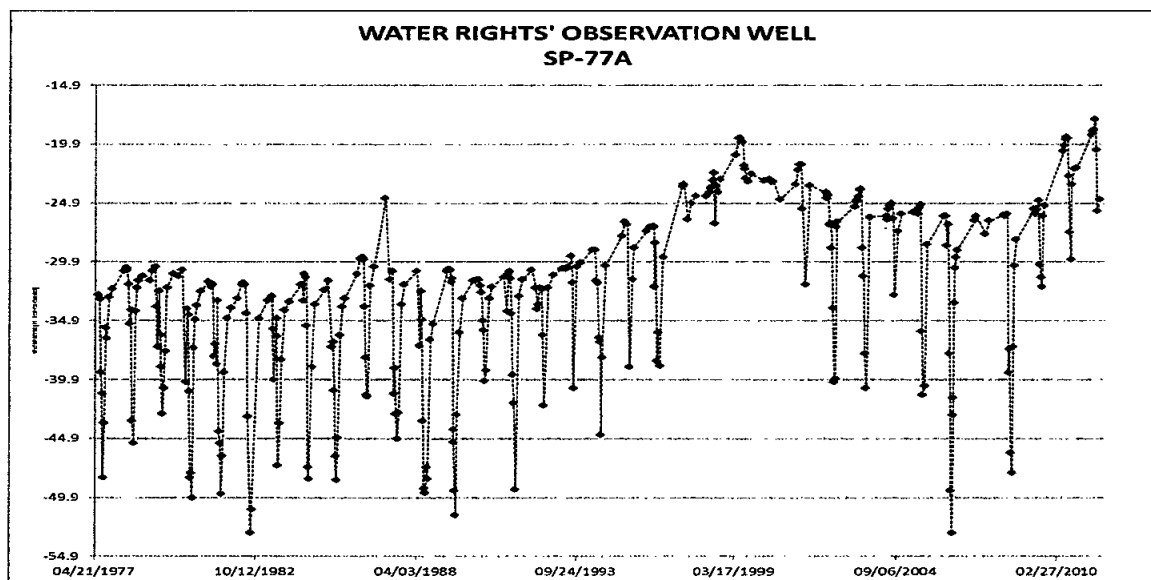


Figure 10. DENR-Water Rights' observation well completed into the confined portion of the Tulare:Western Spink/Hitchcock aquifer

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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28 January.2013< <http://www.aqtesolv.com/forum/transcap.asp>

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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.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
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PIERRE, SOUTH DAKOTA 57501-3182

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**REVISED RECOMMENDATION OF CHIEF ENGINEER FOR WATER
PERMIT APPLICATION NO. 7719-3, Marshall Brothers**

Pursuant to SDCL 46-2A-2, the following is the revised recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 7719-3, Marshall Brothers, c/o Gary Marshall, 19032 388th Avenue, Hitchcock SD 57348.

The Chief Engineer is recommending APPROVAL of Application No. 7719-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The wells approved under 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 wells authorized by Permit No. 7719-3 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. The diversion rate authorized by Water Right No. 4794-3 and Water Permit No. 7719-3, combined, shall not exceed the statutory limit of 1.0 cubic feet of water per second and two acre feet per acre to the land in the SW ¼ Section 4, T113N, R62W.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
June 24, 2013

SUPPLEMENTAL REPORT TO THE CHIEF ENGINEER
ON
WATER PERMIT APPLICATION NO. 7719-3
MARSHALL BROTHERS
JUNE 18, 2013

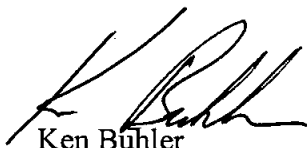
Water Permit Application No. 7719-3 proposes to appropriate water from two wells to be completed into the Tulare: Western Spink/ Hitchcock aquifer at a maximum rate of 0.78 cubic feet of water per second (cfs). Water will be diverted from wells approximately 70 feet deep, located in the S½ SW¼ of Section 4, T113N-R62W. Water is to be used to irrigate 135 acres located in the SW¼ Section 4, T113N-R62W. The acreage proposed for irrigation by this application is currently authorized for irrigation by Water Right No. 4794-3. Water Right No. 4794-3 authorizes “a change in diversion point and an additional diversion point on Water Permit No. 4722-3 and Vested Water Right No. 1608-3.” The irrigated acreage authorized by Water Right No. 4794-3, (i.e. the SE¼ Section 5 and the SW¼ Section 4, T113N-R62W) was approved by Water Permit Nos. 4722-3, 4722-3A and Vested Water Right No. 1608-3. The new wells and diversion rate authority proposed by Water Permit Application No. 7719-3 will allow two center pivot irrigation systems to be operated at the same time.

The report to the Chief Engineer for this application (Buhler, 2013) was based on an analysis of the original draft publication notice. The application was evaluated for a diversion rate of 1.78 cfs and the irrigation of 135 acres located in the NE¼ of Section 4, T113N-R62W. Subsequent information was provided to the DENR-Water Rights Program and the draft public notice was amended to reflect a permit application for water to be diverted from two wells instead of one and the location of the proposed acreage to be in the SW¼ of Section 4, T113N-R62W. The change of the location of the acres to be irrigated will not affect the volume of water that would be used by this permit, if approved. Therefore, the change will not affect the availability of water from the aquifer and there remains a reasonable probability that unappropriated water is available to allow the Chief Engineer to recommend approval of this permit.

Well interference has never been a problem in this aquifer (Goodman, 2002). Regardless, this permit, 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”.

Pursuant to SDCL 46-5-6, the diversions authorized through Water Right No. 4794-3 and Water Permit No. 7719-3, if approved, may not be in excess of the rate of one cubic foot of water per second for each seventy acres, or the or the equivalent thereof, and the volume of water diverted for use may not exceed two acre-feet per acre, delivered to the SW ¼ Section 4, T113N-R62W.



Ken Bühler

SD DENR-Water Rights Program

REFERENCES:

- Bühler, K.A., 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: 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

PRINTER'S AFFIDAVIT **RECEIVED**

STATE OF SOUTH DAKOTA, **JUN 14 2013**
COUNTY OF BEADLE: ss. **WATER RIGHTS PROGRAM**

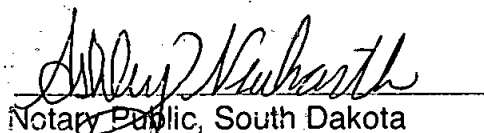
I, ELDON JACOBS, being duly sworn on oath, say that THE PLAINSMAN is a daily paper published at Huron, Beadle County, South Dakota, and that said newspaper has a bona fide circulation of at least 250 copies daily; that said newspaper has been published within said county for fifty-two consecutive weeks 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:

MARSHALL BROTHERS - 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 SEVENTY-SEVEN & 99/000 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 whom so ever.



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


Notary Public, South Dakota

My term expires 10/25/2017

Legal # 802

F.P. 06-05-14
**NOTICE OF HEARING
on Application
No. 7719-3 to
Appropriate Water**

Notice is given that Marshall Brothers, c/o Gary Marshall, 19032 388th Avenue, Hitchcock SD 57348 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second from two wells to be completed into the Tulare-Western Spink Hitchcock Aquifer (70 feet deep) located in the S 1/2 SW 1/4 Section 4 for irrigation of 135 acres located in the SW 1/4 Section 4; all in T113N-R62W.

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 this application 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 No. 7719-3 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 this 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 recommendation is 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 the application 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 recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by 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

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.

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

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.

No. 802 (adv.)
Published one time at
the total approximate
cost of \$77.99.

Affidavit of Publication

RECEIVED

STATE OF SOUTH DAKOTA,
County of Spink: ss.

JUN - 7 2013

WATER RIGHTS
PROGRAM

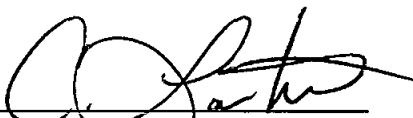
I, Mark E. Davis, of said County & State, being first duly sworn on oath, say that THE REDFIELD PRESS is a legal weekly newspaper as defined in Sec. 65.0508 South Dakota Code 1939, as amended by Chapter 298 of the Session of Laws of 1939, printed and published in the English language in the City of Redfield, 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:

#365 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 Fifty-four and .25/100 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.

Department of Environment and
Natural Resources
Published at an approximate cost of
\$54.25. (June 5)

Notice

#365

NOTICE OF HEARING ON APPLICATION NO. 7719-3 TO APPROPRIATE WATER

Notice is given that Marshall Brothers, c/o Gary Marshall, 19032 388th Avenue, Hitchcock SD 57348 has filed an application for a water permit to appropriate 1.78 cubic feet of water per second from two wells to be completed into the Tulare-Western Spink Hitchcock Aquifer (70 feet deep) located in the S 1/2 SW 1/4 Section 4 for irrigation of 135 acres located in the SW 1/4 Section 4; all in T113N-R62W.

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 this application 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 No. 7719-3 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 this 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 recommendation is 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 the application 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 recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by 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. Pirner, Secretary



**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 No. 7719-3 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 Marshall Brothers, c/o Gary Marshall, 19032 388th Ave, Hitchcock SD 57348 (Ph # 605-266-2720).

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 388th 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 401st 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

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Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

Schlaak, Karen

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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**

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

denr.sd.gov

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

May 29, 2013

Marshall Brothers
Gary Marshall
19032 388th Ave
Hitchcock SD 57348

Dear Mr. Marshall:

Water Permit Application No. 7719-3 for irrigation use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Plainsman printed at Huron SD (Ph # 605-352-6401). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions. The application will be public noticed in the Redfield Press at DENR's expense.

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

Sincerely,


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

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

Instruction to Newspaper – Publish the Notice on 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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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.

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

June 7, 2013

PAYMENT REQUEST FORM

PAYEE: Redfield Press
PO Box 440
Redfield SD 57469

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

DESCRIPTION OF SERVICE, PRODUCE OR TRANSFER

Pub notices for 7716-3, 7719-3, 7722-3, 7723-3 & 7724-3

AMOUNT: \$170.10

FUNDING SOURCE:

GENERAL: X

FEDERAL:

COMMENTS:

AUTHORIZATION:

Paul Jackson 6-7-13

I declare and affirm under the penalties of perjury that this claim is in all things, true and correct. I further agree to comply with the provisions of the Civil Rights Act of 1964 and regulations issued thereunder relating to nondiscrimination in federal assisted programs.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

AUG 29 2013

Marshall Brothers
Gary Marshall
19032 388th Ave
Hitchcock SD 57348

Dear Mr. Marshall:

Enclosed is Water Permit No. 7719-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

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

enclosures

SEP 05 2013

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 9-2-13TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181FROM: Marshall Brothers
(name)19032 388th Avenue
(address)Hitchcock S.D. 57348
(city, state, zip)266-2720
(phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

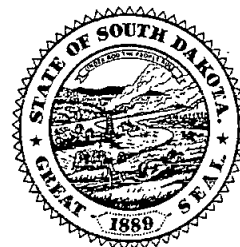
Water Permit No. 7719-3 states that the water use system is to be constructed by July 11, 2018, and water is to be put to beneficial use by July 11, 2022
(date) (date)

The water use system was completed on July 2013
(date)

Applying the water to beneficial use was completed on July 2013
(date)

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

Marshall Brothers by Gary Marshall
(signature)



7719-3



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

September 12, 2013

7637-3
7640-3
7719-3

Gary Marshall
Marshall Brothers
19032 388th Ave
Hitchcock SD 57348

Dear Mr. Marshall:

I am writing to acknowledge receipt of the "Notice of Completion of Works" forms that you sent in to let us know that you are completed with the irrigation systems authorized under Water Permit Nos. 7637-3, 7640-3 and 7719-3.

The systems are now ready for inspection. Inspections are done on a county-by-county basis as staff time permits. You have done everything you need to do and the intervening time between completion of the projects and the staff inspection has no bearing on your water permits.

Someone from our office will contact you prior to the inspection to set up a time that is convenient for you. If you have any questions, please contact me.

Sincerely,

A handwritten signature in cursive script that reads "Genny McMath".

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

RECEIVED

APR 29 2015

WATER RIGHTS
PROGRAM

NOTICE OF TRANSFER OF OWNERSHIP

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

No. 7719-3

Date: 4-29-15

I/We request that Water Permit No. 7719-3

formerly owned by: Marshall Brothers

be transferred to: (name & address) Gary Marshall, 19032 388th Avenue, Hitchcock SD 57348

Telephone No. 605 350-1401

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

135 acres – SW ¼ Section 4, T113N, R62W

I/We understand that the validity of Water Permit No. 7719-3 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 Gary Marshall, the new owner, certify that the above information is true and correct.

Gary 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 4/29, 20 15

RECEIVED OF Gary Marshall 19032 388th Ave Hitchcock 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	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>719-3</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. 07375

By


Chief Engineer

7719-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

May 7, 2015

Gary Marshall
19032 388th Ave
Hitchcock SD 57348

RE: 7721-3, 7720-3, 7719-3, 7640-3, 7639-3, 7638-3, 7637-3, 7575B-3, 7573-3, 7126A-3,
4794-3, 4723-3A, 3054A-3

Dear Mr. Marshall:

I am writing in follow-up to your office visit last week when you submitted ownership changes to the above listed water permits and water rights.

All of the ownership changes with the exception of Water Permit No. 7575B-3 have been completed. 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).

The receipts for the filing fees are enclosed. If you have any questions, please let me know.

Sincerely,

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

enclosures – receipts for the filing fees



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

August 27, 2015

4794B-3
7719-3

Terry Marshall
38735 SD Hwy 28N
Hitchcock SD 57348

Dear Mr. Marshall:

I am writing in follow-up to your August 26th phone conversation with Eric Gronlund concerning ownership changes needed for Water Permit Nos. 4794B-3 and 7719-3.

Enclosed are partially completed Notice of Transfer of Ownership forms for filing the ownership changes. Upon completion, please sign and return the forms to our office with a required filing fee of \$50.00 each (total of \$100). The check or money order for the fee can be made payable to the Water Rights Program.

If I can answer any questions for you, please let me know.

Sincerely,

A handwritten signature in cursive script that reads "Genny McMath".

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

enclosures

NOTICE OF TRANSFER OF OWNERSHIP

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

No. 7719-3
Date: 8-28-15

I/We request that Water Permit No. 7719-3

formerly owned by: Gary Marshall, 19032 388th Avenue, Hitchcock SD 57348

be transferred to: (name & address) Terry Marshall

38735 SD HWY 28

Hitchcock SD 57348

Telephone No. 605-350-3100

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

135 acres - SW ¼ Section 4, T113N, R62W

I/We understand that the validity of Water Permit No. 7719-3 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 9/8, 20 15

RECEIVED OF TDM Farms 38735 SD Hwy 28 Hitchcock 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	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>7719-3</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. 07484

By James G. Anderson
Chief Engineer



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

September 8, 2015

4794B-3
7719-3

Terry Marshall
38735 SD Hwy 28
Hitchcock SD 57348

Dear Mr. Marshall:

The transfer of ownership forms and filing fees for Water Permit Nos. 4794B-3 and 7719-3 have been received.

The ownership changes have been completed. Water Permit Nos. 4794B-3 and 7719-3 formerly held by Gary Marshall are now listed in your name.

Enclosed for your records are Receipt Nos. 07483 and 07484 in the amount of \$50 each. If I can answer any questions for you, please let me know.

Sincerely,

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

enclosures

7719-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

DEC 20 2018

4794B-3
7719-3

Terry Marshall
38735 SD Hwy 28
Hitchcock SD 57348

Dear Mr. Marshall:

Enclosed is Water License No. 4794B-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,

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

enclosures

Note: Upon licensing, the applicable portions of Water Permit No. 7719-3 were incorporated into Water License No. 4794B-3.