

WATER PERMIT NO. 7046-3

Name of Applicant: **Marvin Post**

Address: **21242 461st Ave, Volga SD 57071** Phone: **605 826-4227**

Amount of Water Claimed: **1.56 cfs** Total Acres: **160**

Source of Water Supply: **groundwater (one well)**

Water to be used for: **irrigation** County: **Brookings**

Type of Waste Disposal System:

Location: **2 miles southwest of Volga**

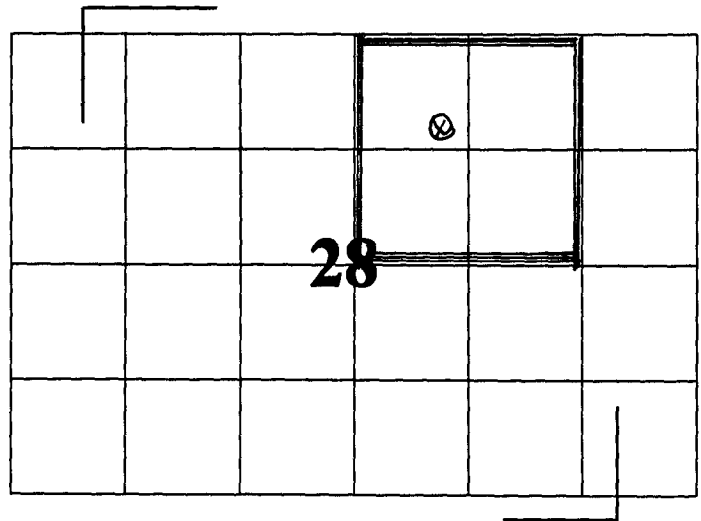
PRIORITY Date Received: **7-7-08** Application/License Fee: **\$300**

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

Remarks: **Water Permit No. 6930-3 covers same lands from a Big Sioux:Brookings Aquifer well**

Diversion Point: **NW ¼ NE ¼ Section 28-T110N-R51W**

Land to be Irrigated: **NE ¼ Sec 28-T110N-R51W**



Depth of Well: **315 feet deep**

Well Driller: : **Thein Well**

Remarks:

Type of Map: **aerial**

Prepared by: **Monica Cooper, Brookings Co FSA**

Reviewed and the Number Assigned on: **7-7-08**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

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

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	(office use only) No. <u>7046-3</u> Hydrologic Unit <u>10170202</u>
	Basin <u>Sioux River</u>
	Newspaper <u>Brookings Register P.O. Box 127</u> <u>605-692-6271</u> <u>57006</u>

RECEIVED
JUL - 7 2008
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.)

Complete a well into the Howard Aquifer to irrigate the lands authorized by Water Permit No. 6930-3

- Name of Applicant Marvin Post Phone (605) 826-4227
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 21242 461st Avenue Volga State SD 57071
(Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 1.56*CFS or 700 **GPM ***AF Total Acreage 160
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable
- Source of water supply Howard Aquifer
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Brookings
1 well in NE1/4 section 28-110-51 (NW1/4 NE1/4)
- County or counties where water will be used Brookings
- Annual period during which water is to be used April 1 - October 31
- 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
NW 1/4 NE 1/4 Sect. 28, T110N, R51W	40		
NE 1/4 NE 1/4 Sect. 28, T110N, R51W	40		
SW 1/4 NE 1/4 Sect. 28, T110N, R51W	40		
SE 1/4 NE 1/4 Sect. 28, T110N, R51W	40		

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

Wells completed into the Big Sioux:Brookings Aquifer do not provide sufficient water. Intend to complete well into the deeper Howard Aquifer. The BS:B well will be used at a lesser rate of approximately 150 gpm. The plan is to blend the Howard Aquifer well with the BS:B aquifer well to bring the salinity down to a manageable level.

STATE OF SOUTH DAKOTA) SS
County of Brookings

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

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

Applicant's signature Marvin Post

Subscribed and sworn to before me this 30th day of June 2008

Monica Cooper

Notary Public signature

My Commission expires 8-8-09

**SOUTH DAKOTA
WATER PERMIT NO. 7046-3**

Date of first receipt of application July 7, 2008.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7046-3 to Marvin Post, 21242 461st Ave, Volga SD 57071 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. 7046-3 appropriates 1.56 cubic feet of water per second (cfs) from one well to be completed into the Howard Aquifer (approximately 315 feet deep) located in NW 1/4 NE 1/4 Section 28 to irrigate 160 acres located in the NE 1/4 Section 28; all in T110N-R51W. Water Permit No. 6930-3 authorizes irrigation of the same lands from the Big Sioux:Brookings Aquifer.
2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 – October 31.
3. The date from which applicant may claim right is July 7, 2008.
4. The date of approval of Permit No. 7046-3 is September 15, 2008.
5. One-fifth of the construction is to be completed on or before March 15, 2011.
6. All construction is to be completed on or before September 15, 2013.
7. Water is to be put to beneficial use on or before September 15, 2017.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7046-3 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. Combinations of diversion authorized by Water Permit Nos. 6930-3 and 7046-3 may not exceed 1.0 cfs per 70 acres and an annual volume of 2 acre foot of water per acre.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

WATER MANAGEMENT BOARD

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

SEP 17 2008
date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- see attached from their well

- a) Drill Hole Diameter 6" Depth 315'
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well:
- On applicants property n/a On property owned by others 1200'

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 _____

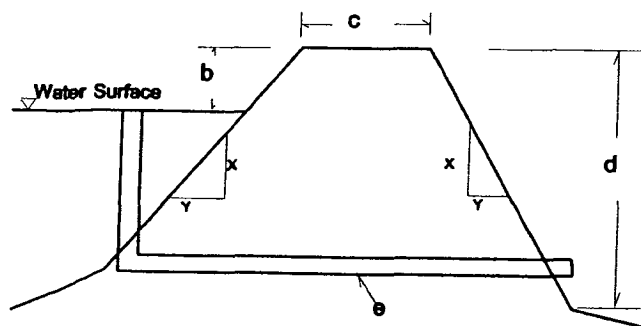
3. Dugout Information

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

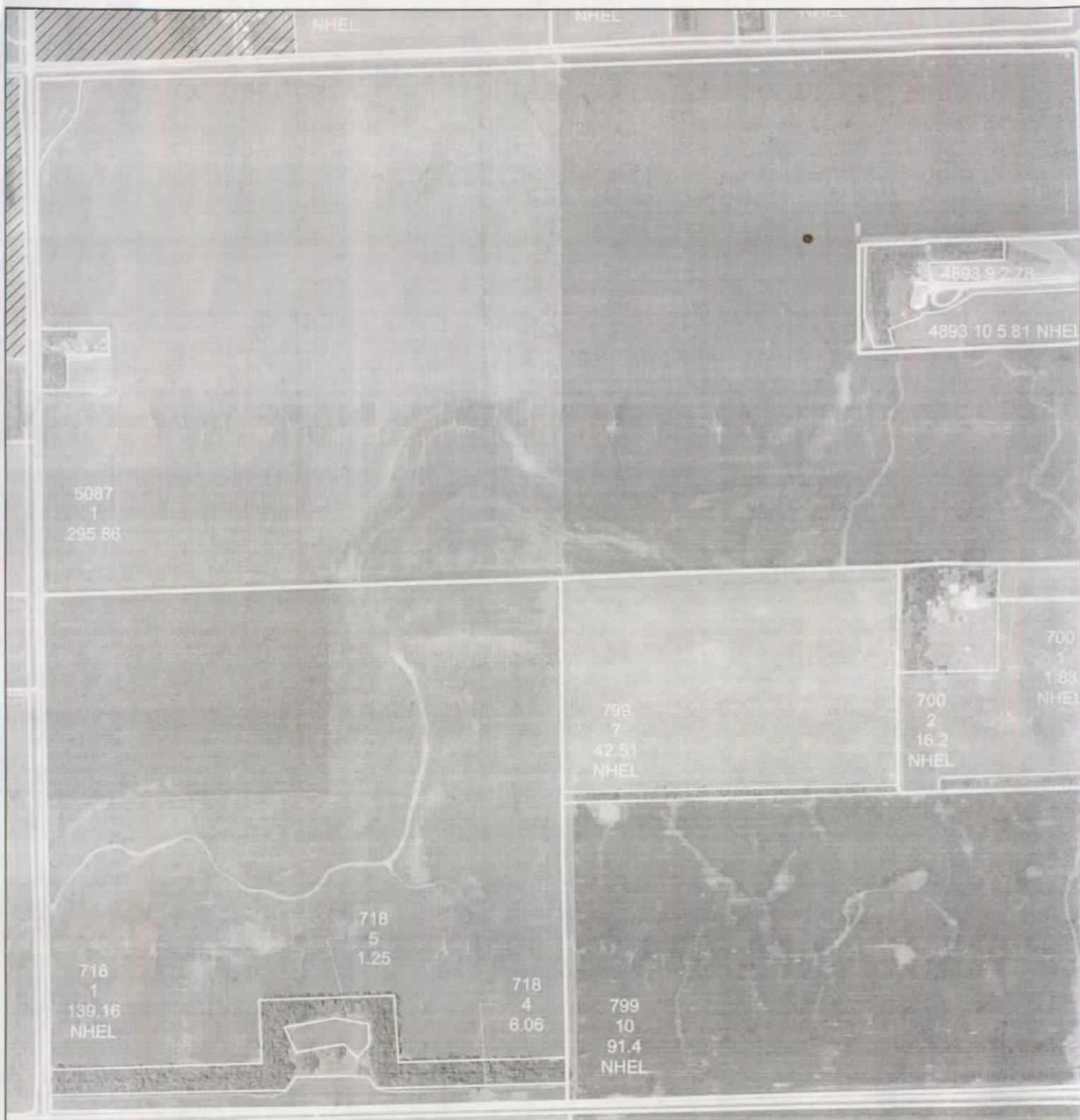
4. Water Storage Dams

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 _____
Upstream _____
Downstream _____
- h) Surface Area of Impoundment _____
- i) Storage _____ Acre Feet
- j) Drainage Area Above Dam _____ Acres



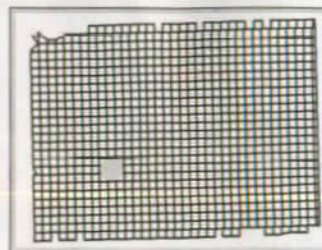
- Tract Boundaries
- Common Land Units
- CRP
- Rangeland
- Easements



USDA - Farm Service Agency
Brookings County, SD
 28-110N-51W

April 03, 2008

1:7,800



Wetland Determination Identifiers

- Restricted Use
- Limited Restrictions
- Exempt from Conservation Compliance Provisions

USDA FSA maps are for FSA Program administration only. There is no guarantee or representation to the user as to the accuracy, currency, suitability or reliability. FSA MAPS DO NOT REPRESENT A LEGAL SURVEY. The user accepts the data 'as is' and assumes all risks associated with its use. Wetland points reflect records available with NRCS and may or may not constitute a full inventory of the property. The USDA Farm Service Agency assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data.

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original determination (CPA-026) and attached maps for exact wetland boundaries and determinations, or contact NRCS.

Certified by Monica Cooper FSA 6-30-08



THEIN WELL

P.O. BOX 778, 11355 HWY. 71 NE
SPICER, MN 56288 (320) 796-2111
www.theinwell.com E-mail: theinwell@tds.net

Well Log for Marv Post

Date: 05/22/08

Well Size: 6"

Casing Length: 240'

Screen Length: 70'

Total Well Depth: 315'

SWL: 53'

Geological Material	Color	Hardness or Formation	From	To
Dirt	Black		0	1
Clay	Yellow		1	5
Gravel			5	45
Sand		Fine/Medium	45	57
Clay	Gray		57	58
Sand		Fine	58	63
Clay	Brown	Hard	63	106
Clay	Light Gray		106	161
Shale	Blue		161	217
Clay	Brown		217	221
Shale	Blue		221	241
Sandstone w/shale layers			241	315
Shale	Black		315	320

CLARA CITY, MN 56222 (320) 847-3207 · MONTICELLO, MN 55362 (763) 271-4200 · ROCHESTER, MN

MEMBER
NGWA

CERTIFIED MASTER WATER WELL CONTRACTOR
Equal Opportunity Employer

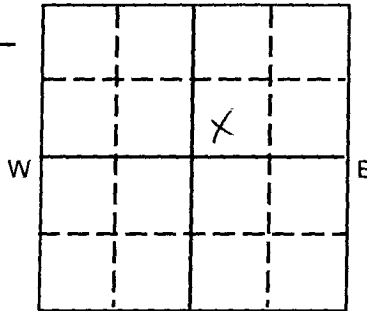
SOUTH DAKOTA WATER WELL COMPLETION REPORT

7046-3
11-02Location NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 28 Twp 109 Rg 51

County

Brookings

North

Please mark well
location with an "X"

Well Completion Date

7/1/2008

1 Mile

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

? 50.0 ft. from septic (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT LB/FT	DIAMETER IN	FROM FT	TO FT	HOLE DIAMETER IN
	12.00	0.0	243.0	18.50

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight Lb/gal	From Ft	To Ft
Neat cement	138		51.0	233.0
Volclay	10		0.0	51.0

Describe grouting procedure
Tremmie piped

SCREEN:

☐ Perforated pipe ☒ ManufacturedDiameter 12.00 Inches Length 70.0 FeetMaterial Stainless steelSlot Size .25 Set From 243.0 Feet to 313.0 Feet

Other information

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How? Chlorinated☒ No, Why Not?Lab sample sent to for
water quality analysisused for irrigationWell Owner: Marv Post

Business Name:

Address: 21242 461st AveCity, State, Zip: Volga SD 57071

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Black dirt	0	1
Brown clay	1	4
Gravel	4	45
Medium to fine sand	45	57
Gray clay	57	58
Fine sand	58	63
Brown clay	63	106
Gray clay	106	161
Continued on next page		

STATIC WATER LEVEL 51.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe:☐ Bailed☐ Other

Pumping Level Below Land Surface

174.1 Ft. After 6.0 Hrs. pumped 600.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: 525.0 GPM

REMARKS

GPS N 44 18.528
W 096 57.222

RECEIVED

AUG 22 2008

WATER RIGHTS
PROGRAMThis well was drilled under license # 475

And this report is true and accurate.

Drilling firm: Thein Well Co.

Signature of Licensee Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

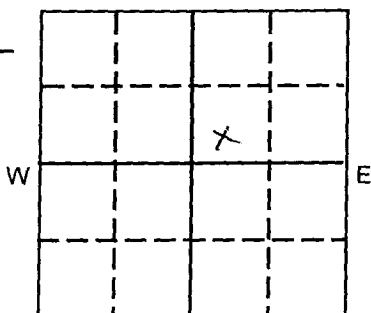
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location $\frac{1}{4}$ $\frac{1}{4}$ Sec Twp Rg County

North

Please mark well location with an "X"

Well Completion Date

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

? ft. from (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

CASING DATA:

☐ Steel ☐ Plastic ☐ Other
If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
		Lb/gal	Ft	Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

SCREEN:

☐ Perforated pipe ☐ Manufactured
Diameter Inches Length FeetMaterial Slot Size Set From Feet to FeetOther information

WAS A PACKER OR SEAL USED?

☐ Yes ☐ No
If so, what material? Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How?
☐ No, Why Not?
Lab sample sent to for water quality analysis Well Owner: Mary PostBusiness Name: Address: 21242 461st AveCity, State, Zip: Volga SD 57071

WELL LOG:

DEPTH

FORMATION	FROM	TO
Blue shale	161	217
Brown clay	217	221
Shale	221	241
Sandstone	241	314
Shale	314	320

STATIC WATER LEVEL

FEET

If flowing: closed in pressure

PSI

GPM flow through Inch pipeControlled by ☐ Valve ☐ Reducers ☐ Other Reduced flow rate GPMCan well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe:
☐ Bailed

☐ Other

Pumping Level Below Land Surface

 Ft. After Hrs. pumped GPM Ft. After Hrs. pumped GPMIf pump installed, pump rate: GPM

REMARKS

RECEIVED
AUG 22 2008
WATER RIGHT'S
PROGRAM

This well was drilled under license #

And this report is true and accurate.

Drilling firm: Signature of License Representative: Signature of Well Owner or Equitable Property Holder: Date:

SOUTH DAKOTA WATER WELL COMPLETION REPORT

7046-3
11-02Location NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 28 Twp 109 Rg 51Well Owner: Marv Post

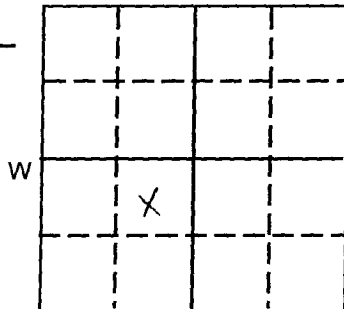
Business Name: _____

Address: 21242 461st AveCity, State, Zip: Volga SD 57071

County

Brookings

North

Please mark well
location with an "X"

Well Completion Date

3/5/2008

1 Mile

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

? 50.0 ft. from septic (Identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary

CASING DATA:

☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT LB/FT	DIAMETER IN	FROM FT	TO FT	HOLE DIAMETER IN
	<u>6.00</u>	<u>0.0</u>	<u>248.0</u>	<u>9.88</u>

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight Lb/gal	From Ft	To Ft
<u>Volclay</u>	<u>10</u>		<u>0.0</u>	<u>230.0</u>

Describe grouting procedure
Tremmie piped

SCREEN:

☐ Perforated pipe ☒ ManufacturedDiameter 6.00 Inches Length 70.0 FeetMaterial Stainless steelSlot Size .40 Set From 248.0 Feet to 318.0 Feet

Other information _____

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material? _____

Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How? Chlorinated☒ No, Why Not?Lab sample sent to for
water quality analysisused for irrigation

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Black dirt	0	2
Brown and yellow clay	2	5
Yellow clay w/sand	5	9
Yellow clay	9	18
Coarse sand to gravel	18	66
Olive green clay	66	69
Sticky blue clay	69	161
Yellow clay w/sand seams	161	167
Continued on next page		

STATIC WATER LEVEL 53.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: _____☐ Bailed☐ Other

Pumping Level Below Land Surface

89.9 Ft. After 5.0 Hrs. pumped 174.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

GPS N 44 18.534
W096 57.215RECEIVED
AUG 22 2008
WATER RIGHT
PROGRAM
478

This well was drilled under license # _____

And this report is true and accurate.

Drilling firm: Thein Well Co.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: _____

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

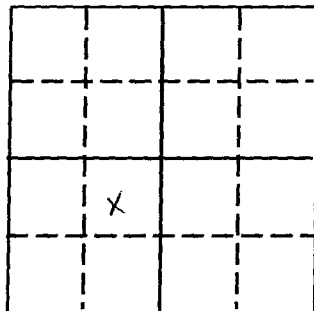
Location $\frac{1}{4}$ $\frac{1}{4}$ Sec Twp Rg County

North

Please mark well location with an "X"

W

E



1 Mile

Well Completion Date

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

? ft. from (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

CASING DATA:

☐ Steel ☐ Plastic ☐ Other
If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
		Lb/gal	Ft	Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

SCREEN:

☐ Perforated pipe ☐ Manufactured
Diameter Inches Length FeetMaterial Slot Size Set From Feet to FeetOther information

WAS A PACKER OR SEAL USED?

☐ Yes ☐ No
If so, what material? Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☐ Yes, How?
☐ No, Why Not?
Lab sample sent to for water quality analysis Well Owner: Marv PostBusiness Name: Address: 21242 461st AveCity, State, Zip: Volga SD 57071

WELL LOG:

DEPTH

FORMATION	FROM	TO
Hard sticky blue clay	167	237
Coarse sand	237	239
Blue clay w/green marl	239	270
Fine sand w/some coarse sand	270	310
Blue clay w/sand seams	310	318

STATIC WATER LEVEL

FEET

If flowing: closed in pressure

PSI

GPM flow through

Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other Reduced flow rate

GPM

Can well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe:
☐ Bailed

☐ Other
Pumping Level Below Land Surface Ft. After Hrs. pumped GPM Ft. After Hrs. pumped GPMIf pump installed, pump rate:

GPM

REMARKS

RECEIVED
AUG 22 2008
WATER RIGHTS
PROGRAM

This well was drilled under license #

And this report is true and accurate.

Drilling firm: Signature of License Representative: Signature of Well Owner or Equitable Property Holder: Date:

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 7/7, 20 08

RECEIVED OF Marvin Post 21242 461st S Ave Volga D SD 57071

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

Fee for Application for Permit No. <u>7046-3</u> to Appropriate Water, to construct and to put water to beneficial use	250	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>7046-3</u>	50	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	300 00

No.

63692

By

[Signature]
Chief Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7046-3, Marvin Post**

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. 7046-3, Marvin Post, 21242 461st Avenue, Volga SD 57071.

The Chief Engineer is recommending APPROVAL of Application No. 7046-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 7046-3 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. Combinations of diversion authorized by Water Permit Nos. 6930-3 and 7046-3 may not exceed 1.0 cfs per 70 acres and an annual volume of 2 acre foot of water per acre.
4. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

See report on application for additional information.

Garland Erbele, Chief Engineer
August 20, 2008

REPORT ON WATER PERMIT APPLICATION NO. 7046-3

For Marvin Post

August 5, 2008

Application No. 7046-3 proposes to appropriate 1.56 cfs (700 gpm) from one well approximately 315 feet deep located in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ of section 28 to irrigate 160 acres located in the NE $\frac{1}{4}$ of section 28; all in T110N R51W in Brookings County. Water Permit No. 6930-3 authorized irrigation of these same lands from the Big Sioux Brookings aquifer. Water Permit No. 6930-3 and this application combined may not exceed one cfs for each 70 acres irrigated.

AQUIFER – HOWARD (HO)

The Howard is a buried outwash (sand and gravel) under artesian conditions at this site. The aquifer underlies 835 square miles and contains an estimated 3.0 million acre-feet of water in storage in Brookings and Kingsbury Counties (Hamilton, 1989). The aquifer extends into Hamlin County to the north and Moody and Lake Counties to the south. Ground water movement appears to be west to east in the area of this application (Hamilton, 1989). Hamilton also reports that the water quality of this aquifer is marginal to unsuitable for irrigation use.

A test well submitted with the application indicates sandstone with clay from a depth of 241 to 315 feet below land surface. The driller actually described sandstone but it should be sand and gravel of glacial origin not sandstone of a bedrock formation. This depth fits reasonably well with the county study information and with other well information from the area. Two existing production wells obtaining water from the Howard aquifer and located within three miles of this proposed site are capable of producing 8.3 gpm/ft of drawdown and 10.7 gpm/ft of drawdown.

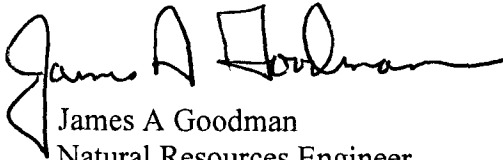
The Water Rights Program monitors an observation well BG-2000A located about two and one-half miles southeast of this application that is completed into the Howard aquifer. Water levels for this well show some seasonal response to pumping but in general the response is relatively benign. A hydrograph for this observation well is included with this report. The water level record indicates the aquifer is capable of sustaining additional development (Water Rights, 2008).

REVIEW OF EXISTING WATER PERMITS/RIGHTS

There are two existing Water Right Nos. 5955-3 (0.444 cfs, industrial use) and 6194-3 (0.67 cfs, irrigation of 84 acres) that are within three miles of this well site. The well for 6194-3 is about two miles northeast and the well for 5955-3 is about three miles to the northeast all from this proposed well site. Interference will occur however all that means is that there will be overlapping cones of depression. This effect should not be adverse and should not affect water availability from the aquifer. If the specific capacity data is reliable then a pump would have to be placed to a depth of at least 70 feet below the static water in the well. That would allow a diversion rate of 700 gpm and assuming a specific capacity of about 10 gpm/ft of drawdown. This specific capacity is relatively small for an aquifer consisting of outwash but still the water appears to be available.

CONCLUSIONS

1. Water is available from the Howard aquifer.
2. The aquifer is under artesian conditions. Drawdown will occur as a result of pumping. The amount of drawdown can be estimated from existing wells and appears potentially to be large within the production well. But this is not expected to cause any adverse effects for two reasons. First the distance between wells is relatively large and second the observation well record indicates drawdown occurs but is not significant at a distance of two to two and one-half miles from existing production.
3. This well must be constructed in accordance with SD Well Construction Standards.
4. The applicant apparently realizes how poor the water quality from the Howard aquifer is and plans on mixing the water with the Big Sioux aquifer water to lower the salinity for irrigation purposes. This is a management decision but any impact upon water quality of the shallow overlying Big Sioux Brookings aquifer could affect the quality of the water used by the City of Volga which is located immediately down gradient of this site and obtains water from the Big Sioux Brookings aquifer.



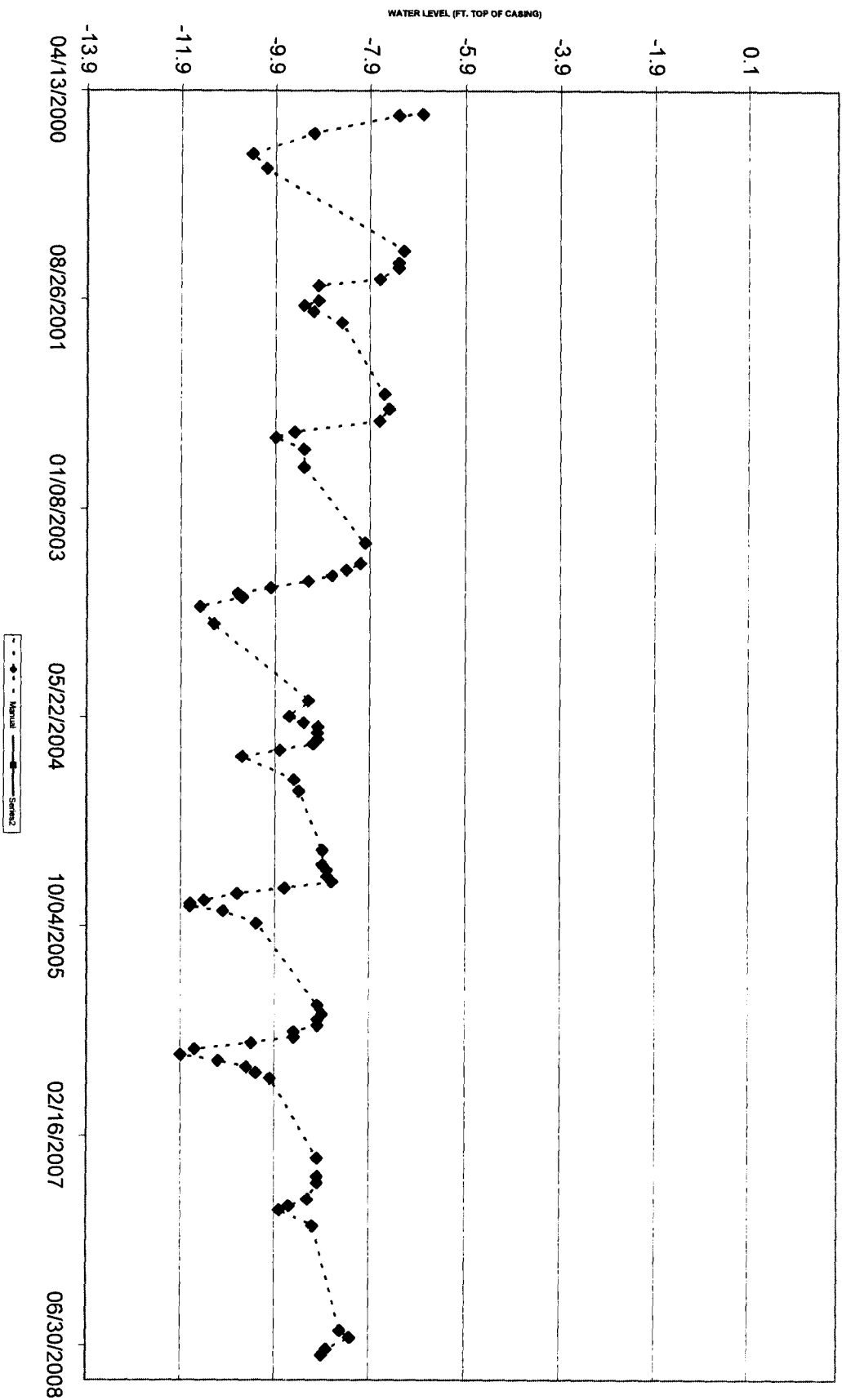
James A Goodman
Natural Resources Engineer

BIBLIOGRAPHY

Hamilton, L.J., 1989, Water Resources of Brookings and Kingsbury Counties, South Dakota, Water-Resources Investigations Report 88-4185, USGS, Huron, SD, 57350.

Water Rights, 2008, Unpublished Observation Well Data for Brookings County, SD DENR, DES, Water Rights Program, Pierre, SD, 57501.

**WATER RIGHTS' OBSERVATION WELL
BG-2000A**



Affidavit of Publication

State of South Dakota

ss

County of Brookings

RECEIVED

SEP 10 2008

WATER RIGHTS
PROGRAM

Exhibit "A"

Amy B. Larsen of said county, first duly sworn, on oath, says: That she is the office clerk of THE BROOKINGS REGISTER, a daily newspaper, printed and published in the City of Brookings, in said County of Brookings, and State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper and has a bona fide circulation of at least two hundred copies of each issue daily; that said newspaper has been published within the said County of Brookings and State of South Dakota, for more than one year prior to the first publication of Exhibit "A," hereto attached and herein mentioned, and was and is printed that the

Legal #524 M Post

a printed copy of which, taken from the paper in which the same was published, is hereto attached marked Exhibit said newspaper for _____ 2 times, to-wit:

August 28, 2008

September 4, 2008

said Exhibit "A" inures to the sole benefit for the publishers of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are:

Fourty-seven dollars and sixty-nine cents \$47.69

Subscribed and sworn to before me this 5th day of

September 2008

Notary Public in and for the County of Brookings, South Dakota.
My Commission expires April 27, 2012

Legal 542, 2x, 8/20, 9/4
NOTICE OF APPLICATION NO. 7046-3 to
Appropriate Water
Notice is given that Marvin Post, 21242 461st Ave, Volga SD 57071 has filed an application for a water permit to appropriate 1.56 cubic feet of water per second (cfs) from one well to be completed into the Howard Aquifer (approximately 315 feet deep) located in NW 1/4 NE 1/4 Section 28 to irrigate 160 acres located in the NE 1/4 Section 28; all in T110N-R51W. Water Permit No. 6930-3 authorizes irrigation of the same lands from the Big Sioux-Brookings Aquifer. Water Permit No. 6930-3 and this application, combined, may not exceed 1 cfs for each 70 acres irrigated.
Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7046-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.
Any person interested in opposing or supporting this application or recom-

mendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 15, 2008.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

Christine Nelson





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

August 20, 2008

Brookings Register
PO Box 177
Brookings SD 57006

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7046-3 to Appropriate Water to be published twice. Please publish the first notice on August 28, 2008 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Marvin Post, 21242 461st Ave, Volga SD 57071 (Ph # 605-826-4227).

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

After the second publication, **please send us an affidavit or use the enclosed Proof of Publication form.** The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

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

No. 7046-3

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

Date _____

We are in receipt of your letter of August 20, 2008 enclosing Notice to Appropriate Water by Application No. 7046-3 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

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

August 20, 2008

Marvin Post
21242 461st Ave
Volga SD 57071

Dear Mr. Post:

Water Permit Application No. 7046-3 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 Publisher of the Brookings Register printed at Brookings SD (Ph # 605-692-6271). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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 first Notice on August 28, 2008 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 7046-3 to Appropriate Water

Notice is given that Marvin Post, 21242 461st Ave, Volga SD 57071 has filed an application for a water permit to appropriate 1.56 cubic feet of water per second (cfs) from one well to be completed into the Howard Aquifer (approximately 315 feet deep) located in NW ¼ NE ¼ Section 28 to irrigate 160 acres located in the NE ¼ Section 28; all in T110N-R51W. Water Permit No. 6930-3 authorizes irrigation of the same lands from the Big Sioux:Brookings Aquifer. Water Permit No. 6930-3 and this application, combined, may not exceed 1 cfs for each 70 acres irrigated.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7046-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 15, 2008.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

SEP 17 2008

Marvin Post
21242 461st Ave
Volga SD 57071

Dear Mr. Post:

Enclosed is Water Permit No. 7046-3 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,

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

enclosures

7046-3

RECEIVED

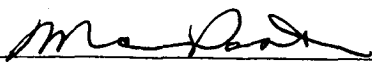
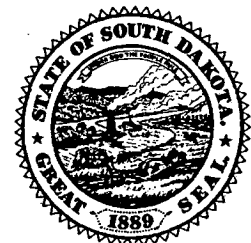
SEP 26 2008

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 9-19-08TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181FROM: Marvin Post
(name)
21242 46th Ave.
(address)
Volga, SD 57071 605-826-4227
(city, state, zip) (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. 7046-3 states that the water use system is to be constructed by9-15-2013, and water is to be put to beneficial use by 9-15-2017.
(date) (date)The water use system was completed on 8-1-08.
(date)Applying the water to beneficial use was completed on 9-15-08.
(date)

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


(signature)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

September 29, 2008

7046-3

Marvin Post
21242 461st Ave
Volga SD 57071

Dear Mr. Post:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with your irrigation system.

The system is 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 the completion of your project and the staff inspection has no bearing on your water permit.

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



7046-3
DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

January 24, 2012

NOTICE

TO: MARVIN POST, 21242 461ST AVE, VOLGA, SD 57071

FROM: Ron Duvall, Natural Resources Engineer
for Garland Erbele, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2011 Irrigation Questionnaire(s)

Our records indicate that the 2011 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 6929-3, 6930-3 & 7046-3. The request for the Questionnaire was dated October 14, 2011. The Water Management Board has directed that owners of water-permits who have not submitted the 2011 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 6929-3, 6930-3 & 7046-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held at **10:00 am, March 7, 2012** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation, or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1. Suspend or cancel Permit No(s) 6929-3, 6930-3 & 7046-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office on/or before **March 2, 2012**, you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. If you prefer, you can complete the questionnaire online at the following link: <http://denr.sd.gov/iq.aspx>

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.

7046-3



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
PMB 2020
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.denr.sd.gov

February 13, 2012

6929-3
6930-3
7046-3

Marvin Post
21242 461st Ave
Volga SD 57071

Dear Mr. Post:

I am writing to acknowledge receipt of your 2011 irrigation questionnaires.

You may disregard the January 24, 2012, "Notice" concerning reporting requirements for Water Permit Nos. 6929-3, 6930-3 & 7046-3. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

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

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



7046-3
DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

January 26, 2018

NOTICE

TO: MARVIN POST, 21242 461ST AVE, VOLGA, SD 57071

FROM: Ron Duvall, Natural Resources Engineer
for Jeanne Goodman, Chief Engineer
Water Rights Program

SUBJECT: Reporting Requirement for 2017 Irrigation Questionnaire(s)

Our records indicate your 2017 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 6929-3, 6930-3 & 7046-3. The request for the Questionnaire was dated October 20, 2017. The Water Management Board has directed that owners of water permits who have not submitted the 2017 Irrigation Questionnaire(s) be given notice of permit violation and a hearing to be held by the Board. The hearing is to determine what action is to be taken for violation of Water Permit No(s) 6929-3, 6930-3 & 7046-3 qualification:

"This permit is approved subject to the Irrigation Water Use Questionnaire being submitted each year."

The hearing will be held at **Wednesday, March 7, 2018 at 10:00 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. According to SDCL 46-1-12, the Board may suspend a permit for a period of up to one year for the first violation of a permit qualification or up to three years for a second violation, or cancel a permit for a third violation. Following the hearing, the Water Management Board can:

1. Suspend or cancel Permit No(s) 6929-3, 6930-3 & 7046-3 in accordance with applicable provisions of SDCL 46-1-12;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 7, 2018** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at genny.mcmath@state.sd.us. If you prefer, you can complete the questionnaire online at the following link: <http://denr.sd.gov/iq.aspx>

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.

7046-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

February 7, 2018

6929-3
6930-3
7046-3

Marvin Post
21242 461st Ave
Volga SD 57071

Dear Mr. Post:

I am writing to acknowledge receipt of your 2017 irrigation questionnaires.

You may disregard the January 26, 2018, "Notice" concerning reporting requirements for Water Permit Nos. 6929-3, 6930-3 and 7046-3. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink that reads 'Genny McMath'.

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