

**WATER PERMIT NO. 8009-3**

Name of Applicant: City of Groton

Address: PO Box 587, Groton SD 57445

Phone: 605 397-7458

Amount of Water Claimed: 0.133 cfs

Total Acres: 112 acres

Source of Water Supply: groundwater (one well)

Water to be used for: irrigation (golf course)

County: Brown

Type of Waste Disposal System:

Location: south side of city

PRIORITY

Date Received: 4-28-14

Application/License Fee: \$ 950

Corrected Application Received:   

Period of Annual Use: April 1 – October 31

Remarks: Replacement well drilled into different water formation

Diversion Point: SE 1/4 SE 1/4 Sec 19-T123N-  
R60W

Land to be Irrigated: SE 1/4 Sec 19 and SW 1/4  
SW 1/4 Sec 20; all in T123N-R60W

Depth of Well: 147 feet deep

Well Driller: Lenius Well Drilling

Remarks:

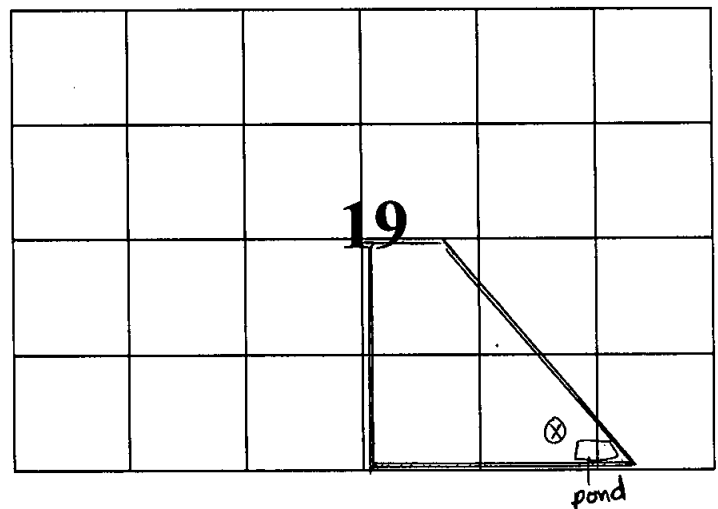
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 4-29-14

By: **Karen Schlaak**

Notice of Hearing - date to intervene: \_\_\_\_\_



RECEIVED

APR 28 2014

WATER RIGHTS  
PROGRAM

|                                                                                                                 |                                                                        |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Mail to:<br>PMB 2020<br>DENR - Water Rights<br>523 E Capitol Ave<br>Pierre, SD 57501-3182<br>ph. (605) 773-3352 | No. <u>8009-3</u> (office use only)<br>Hydrologic Unit <u>10160005</u> |
|                                                                                                                 | Basin <u>James River</u>                                               |
|                                                                                                                 | Newspaper <u>American News Box 4430</u>                                |
|                                                                                                                 | <u>Aberdeen 57402 605. 225-4100</u>                                    |

## Application For Permit To Appropriate Water For Irrigation

Type of Application: ☐ New ☐ Vested Right ☒ Amendment/Correction to Permit No. 5905-3  
(Use predates Mar 2, 1955)

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

Change Backup Supply Well for Olive Grove Golf Course Irrigation

1. Name to Appear on Irrigation Permit City of Groton  
(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent dba - Olive Grove Golf Course  
(name and complete address if different than above name)

Mailing Address PO Box 587 Groton SD 57445  
(Address) (City) (State) (Zip Code)

Work Phone 605-397-8422 Cell 605-397-7458 Email grotonsd@grotonsd.net  
(Terry Merron)

2. Amount of water claimed 0.133 cfs holding Pond 1.6 \*CFS or 60 \*\*GPM \*\*\*AF Total Acreage 112  
(\*\*Cubic Feet per Second) (\*\*Gallons per Minute) (\*\*\*Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Mud Creek overflow to dugout + diked dam and well #5

4. Location of point of diversion Intersection of Hwy 12 + Old Hwy 12 - SE 1/4 SE 1/4 Sect 19, Twp 123, R 60W  
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)  
+ SW 1/4 SW 1/4 Sect 20, Twp 123, Range 60W + Well on SE 1/4 SE 1/4 Sect 19, Twp 123, R 60W County Brown

5. County or counties where water will be used Brown County

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

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

| Land Description                               | Acres     | Land Description                                | Acres    |
|------------------------------------------------|-----------|-------------------------------------------------|----------|
| <u>NW 1/4 SE 1/4 Sect 19, Twp 123 N, R 60W</u> | <u>40</u> | <u>SW 1/4 SW 1/4 Sect. 20, Twp 123 N, R 60W</u> | <u>5</u> |
| <u>SW 1/4 SE 1/4 Sect 19, Twp 123 N, R 60W</u> | <u>40</u> |                                                 |          |
| <u>SE 1/4 SE 1/4 Sect 19, Twp 123 N R 60W</u>  | <u>20</u> |                                                 |          |
| <u>NE 1/4 SE 1/4 Sect 19, Twp 123 N R 60W</u>  | <u>7</u>  |                                                 |          |

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

Continued Use of drainage waters from Mud Creek + 4th St Drainage way overflows and Replace Well water from Well 5 to irrigate Olive Grove Golf Course. Due to Well 3 capped in 2010 + Well 5 drilled 2013. Well 5 has 60 gal/min pump at 100' in 147' deep well. Well water will be used during dry conditions when Mud Creek overflow waters are not available

I, Anita Lowary, City Finance Officer, 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. 8009-3**

Date of first receipt of application April 28, 2014.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8009-3 to City of Groton, PO Box 587, Groton SD 57445 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. 8009-3 appropriates 0.133 cubic feet of water per second (cfs) from a well (No. 5) completed into the Pleistocene Series:Unknown Aquifer (147 feet deep) located in the SE 1/4 SE 1/4 Section 19 for irrigation of 112 acres of the Olive Grove Golf Course located in the SE 1/4 Section 19 and SW 1/4 SW 1/4 Section 20; all in T123N-R60W. Water Right No. 5905-3 authorizes 0.66 cfs from Well No. 3 and up to 44.45 cfs (Mud Creek/city runoff) to fill the holding pond (20 acre-feet storage capacity) to irrigate the golf course. Well No. 5 is a replacement well for Well No. 3 and was developed into a different water formation. Well No. 5 serves as a back-up supply for irrigation of the golf course during dry conditions when Mud Creek overflow waters are not available.
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 April 28, 2014.
4. The date of approval of Permit No. 8009-3 is July 14, 2014.
5. One-fifth of the construction is to be completed on or before January 14, 2017.
6. All construction is to be completed on or before July 14, 2019.
7. Water is to be put to beneficial use on or before July 14, 2023.
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. This Permit is approved subject to the irrigation water use questionnaire being submitted each year.

**WATER MANAGEMENT BOARD**

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

AUG 18 2014

date



## Supplemental Information

(type or print)

*Well Completion Report on file*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 1 Provide copy of log(s), if available. Drilled by Walt Lenius Well Drillingc) Well Depth 147' Depth to Top of Water Bearing Material 100' Depth to Water from Surface 2'

d) Distance to nearest existing domestic well:

On applicant's property 3/4 mileOn property owned by others 1/4 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 300' x 400' est. Depth 9'b) Depth to water (ground surface to water level) 12' est.

## 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 &amp; Y Slope (e.g. 3 to 1 is a typical slope)

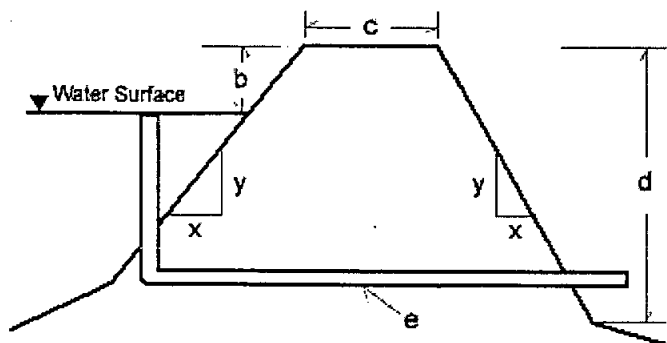
Upstream \_\_\_\_\_

Downstream \_\_\_\_\_

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

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

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



Sec 13  
T123N  
R61W

Sec 18  
T123N  
R60W

Sec 17  
T123N  
R60W

Sec 24  
T123N  
R61W

Sec 19  
T123N  
R60W

Sec 20  
T123N  
R60W

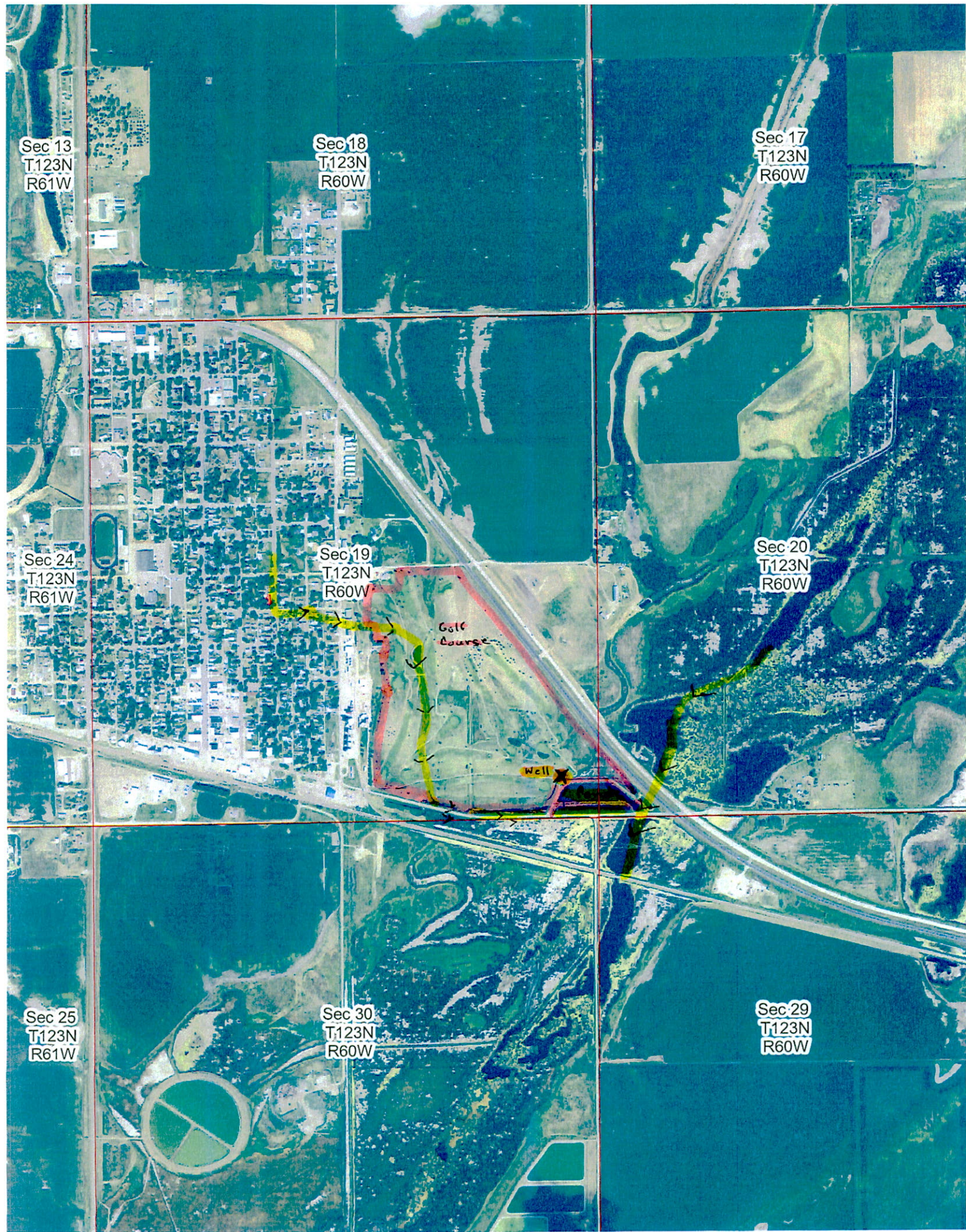
Sec 25  
T123N  
R61W

Sec 30  
T123N  
R60W

Sec 29  
T123N  
R60W

Golf Course

Well



# RECEIPT

## WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 4/29, 20 14

RECEIVED OF City of Groton PO Box 587 Groton SD 57445

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

|                                                                                                                        |       |        |
|------------------------------------------------------------------------------------------------------------------------|-------|--------|
| Fee for Application for Permit No. <u>8009-3</u> 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. <u>8009-3</u>            | 200   | 00     |
| Fee for Filing Transfer Form _____                                                                                     |       |        |
| Fee for _____                                                                                                          |       |        |
| Fee for Issuing New Well Driller's License No. _____ for C.Y. _____                                                    |       |        |
| Fee for Renewal of Well Driller's License No. _____ for C.Y. _____                                                     |       |        |
| Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____                                                 |       |        |
| Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____                                              |       |        |
| (Any Other Work Provided by Law)                                                                                       | TOTAL | 950 00 |

No. **06843**

By James Goodman  
Chief Engineer



DEPARTMENT OF ENVIRONMENT  
and NATURAL RESOURCES

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



March 26, 2014

City of Groton  
c/o Anita Lowary, Finance Officer  
PO Box 587  
Groton SD 57445

Dear Ms. Lowary:

I am writing in regard to a well driller's report filed by Lenius Well Drilling Co. The report shows a new well was completed for the City on November 28, 2013 located in the SE 1/4 SE 1/4 Section 19-T123N-R60W for irrigation use.

A review of our files indicates the City holds Water Right No. 5905-3 for 300 gallons per minute (gpm) from Well No. 3 located in the NW 1/4 SW 1/4 Section 19-T123N-R60W and Mud Creek/city runoff to fill a holding point (20 acre-feet storage capacity) for irrigation of the golf course (copy enclosed).

Is this well a replacement well or an additional well which does not increase the total appropriation of 300 gpm? If the authorized diversion rate is to be increased, a new water permit will need to be obtained. Once we have a little more information we can determine what additional action, if any, needs to be taken to ensure the city's water rights accurately reflect its actual use.

Please contact Eric Gronlund or me regarding the status of this well or if you have any questions.

Sincerely,

*Karen Schlaak*

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

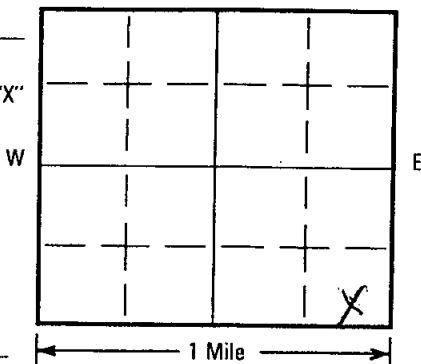
enclosures

## SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location SE 1/4 SE 1/4 Sec 19 Twp 123 Rg 60  
County Brown North

Please mark well location with an "X"



Well-Completion Date

11-28-13

## LOCATION:

Distance from 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:

FORWARDCASING DATA: ☐ Steel ☒ Plastic ☐ Other

If other describe \_\_\_\_\_

| PIPEWEIGHT       | DIAMETER    | FROM         | TO            | HOLE DIAMETER |
|------------------|-------------|--------------|---------------|---------------|
| <u>200</u> LB/FT | <u>5</u> IN | <u>+2</u> FT | <u>137</u> FT | <u>8</u> IN   |
| _____ LB/FT      | _____ IN    | _____ FT     | _____ FT      | _____ IN      |
| _____ LB/FT      | _____ IN    | _____ FT     | _____ FT      | _____ IN      |

## GROUTING DATA

| Grout Type    | No. of Sacks | Grout Weight        | From           | To             |
|---------------|--------------|---------------------|----------------|----------------|
| <u>CEMENT</u> | <u>6</u>     | <u>5000</u> lb./gal | <u>110</u> ft. | <u>620</u> ft. |
| _____         | _____        | _____ lb./gal       | _____ ft.      | _____ ft.      |

Describe grouting procedure \_\_\_\_\_

SCREEN: ☐ Perforated pipe ☒ ManufacturedDiameter 5 IN Length 30 FEETMaterial PLASTICSlot Size 18 Set From 137 Feet to 147 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: \_\_\_\_\_

☒ NO, Why Not? Flow

Laboratory sent to for water quality analysis \_\_\_\_\_

Well Owner: CITY GROTONBusiness Name: 209 N MAINAddress: GROTON, S.D. 57446

## WELL LOG:

## FORMATION

## DEPTH

## FROM

## TO

|                   |     |     |
|-------------------|-----|-----|
| Top soil          | 0   | 2   |
| yellow clay       | 2   | 24  |
| blue clay         | 24  | 38  |
| Sand              | 38  | 47  |
| blue clay         | 47  | 109 |
| coarse mixed sand | 109 | 154 |

JRS via phone call w/ Walt  
3/12/14STATIC WATER LEVEL Flow + 2

Feet

If flowing: closed in pressure \_\_\_\_\_ PSI

GPM flow \_\_\_\_\_ through \_\_\_\_\_ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other \_\_\_\_\_

Reduced Flowrate \_\_\_\_\_ GPM

Can well be completely shut in? \_\_\_\_\_

## WELL TEST DATA:

☒ PumpedDescribe: AIR PUMPED☐ Bailed125-150 GPM☐ Other \_\_\_\_\_

Pumping Level Below Land Surface

\_\_\_\_\_ ft. After \_\_\_\_\_ Hrs. pumped \_\_\_\_\_ GPM

\_\_\_\_\_ ft. After \_\_\_\_\_ Hrs. pumped \_\_\_\_\_ GPM

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

## REMARKS

RECEIVED

DEC 26 2013

WATER RIGHTS  
PROGRAMThis well was drilled under license # 209

And this report is true and accurate.

Drilling firm LENIUS WELL DRILLING

Signature of license Representative:

Walter Lenius

Signature of Well Owner or Equitable Property Holder:

Scott HanlonDate: 12-11-13

## Schlaak, Karen

---

**From:** City of Groton <grotonsd@grotonsd.net>  
**Sent:** Wednesday, April 02, 2014 9:11 AM  
**To:** Schlaak, Karen  
**Subject:** Groton Well

Karen:

In 2010 Groton City Well 3 was capped as well as 2 other city wells. Olive Grove Golf Course used only run-off waters for irrigation for 2010-2013. 2013 proved that in dryer years, well water is needed for some of the irrigation water. So the City of Groton hired Lenius Well Drilling to sink a new well near the golf course holding pond. The new well reported to you is new, but will replace Well 3 for irrigation needs. It will NOT replace Well 3 for any municipal needs.

No change is needed in the Water Rights Permit except the water source will be this new well rather than Well 3. The new well is on the northeast side of the holding pond and will be pumped directly into the pond.

If you have any questions, please feel free to contact me.

Thanks

Anita Lowary



**DEPARTMENT OF ENVIRONMENT  
and NATURAL RESOURCES**

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



April 22, 2014

City of Groton  
c/o Anita Lowary, Finance Officer  
PO Box 587  
Groton SD 57445

Dear Ms. Lowary:

Thank you for your email reply. We have reviewed the information you submitted and it will be necessary for the City to apply for a new permit for the new well.

Based on the depth information, staff determined the new well which is 157 feet deep is completed into a different water formation. Our records indicated that Well No. 3 and the other wells are approximately 900 to 1000 feet deep which would be the Dakota Formation wells. Since the city developed an additional well and into a different water source than originally permitted, a new permit will be required.

Enclosed is an application and instruction sheet. I have included an aerial photo map. Please mark the well location with an "X" and outline the area to be irrigated. Also mark the location of the pond.

If you have any questions regarding completion of the application, map or fee, please contact Eric Gronlund or me. As previously stated, we want ensure the city's water rights accurately reflect its actual use.

Sincerely,

*Karen Schlaak*

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

enclosures



**DEPARTMENT OF ENVIRONMENT  
and NATURAL RESOURCES**

JOE FOSS BUILDING  
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denr.sd.gov



**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT  
APPLICATION NO. 8009-3, City of Groton**

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. 8009-3, City of Groton, c/o Anita Lowary, Finance Officer, PO Box 587, Groton SD 57445.

The Chief Engineer is recommending APPROVAL of Application No. 8009-3 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. 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 25, 2014

# **REPORT TO THE CHIEF ENGINEER**

## **WATER PERMIT APPLICATION NO. 8009-3**

**City of Groton**

**May 23, 2014**

Water Permit Application No. 8009-3 proposes to withdraw groundwater at a maximum diversion rate of 0.133 cubic feet of water per second (cfs) from one well (Well No. 5). The well is 147 feet deep, located in the SE¼ SE¼ of Section 19, T123N-R60W. Water will be used to irrigate 112 acres of a golf course located in the SE¼ of Section 19 and the SW¼ SW¼ of Section 20, T123N-R60W, in Brown County.

Water Right No. 5905-3 authorizes 0.66 cfs from Well No. 3 completed into the Dakota aquifer and 44.45 cfs from Mud Creek and city runoff to fill a 20 acre-feet (ac-ft) holding pond to irrigate the golf course. Well No. 5 is a replacement well for Well No. 3. However, Well No. 5 was completed into a different aquifer than Well No. 3.

### **AQUIFER: Pleistocene Series: Unknown (PS:U)**

#### **HYDROGEOLOGY:**

Historically, the Water Management Board has approved water permit applications to appropriate water from these Pleistocene Series: Unknown aquifers. However, in interpreting 46-6-3.1, the First Judicial Circuit Court ruled in *Hanson County Dairy v. Bender* that evidence needs to show that water is available for proposed appropriations. In other words, data must be presented to show that the average annual recharge exceeds the average annual discharge by at least the amount requested by the water permit application being considered (Memorandum Decision, April 11, 2012). This could be interpreted as necessitating the identification and quantification of recharge and discharge of an individual outwash deposit from which the applicant proposes to withdraw water.

To determine this information, the areal extent and altitude interval of the individual outwash deposit must be identified. A thorough investigation was conducted including data from lithologic logs on record with the SD DENR-Geological Survey Program, domestic wells on file with the SD DENR-Water Rights Program, and hydrologic reports published by the SD DENR-Geological Survey Program and the US Geological Survey. No identified glacial aquifers are present at the location of the well. Most local lithologic logs and well reports documented shale at the expected depth of the aquifer materials the well is completed into. Five lithologic logs and two domestic wells on file recorded aquifer materials at the expected depth (Water Rights, 2014c, SD Geological Survey, 2014). From this, the minimum and maximum areal extent of the aquifer materials was estimated, shown in Figure 1. At minimum, aquifer materials underlie an estimated 235 acres. At maximum, aquifer materials underlie as estimated 6,000 acres.

This is a buried outwash that appears to often be under artesian conditions. No hydraulic connections are known. Only two wells on file appear to be completed into this outwash (Water Rights, 2014c). This could be attributed to limited areal extent.

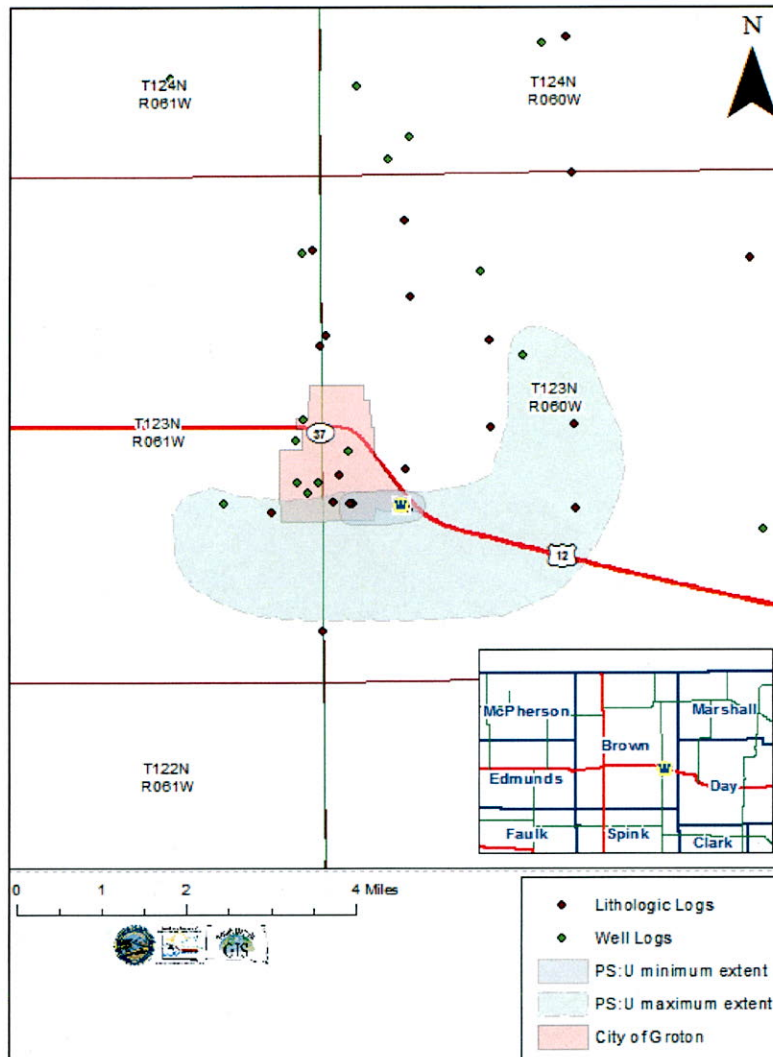


Figure 1: Extent of the Pleistocene: Unknown aquifer near Groton (Water Rights, 2014c, SD Geological Survey, 2014)

#### South Dakota Codified Law (SDCL) 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest. This report will address the availability of unappropriated water from the aquifer and the potential for impairment of existing rights.

#### WATER AVAILABILITY:

The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires that no application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge. If the source of the groundwater is older or lower than the Greenhorn

formation and will be used for a public water system, recharge and withdrawal does not need to be considered.

Here a public water system is not involved and the aquifer is above the Greenhorn formation. So, recharge and withdrawal must be considered. This will be considered by two methods: a hydrologic budget considering quantified values of recharge and withdrawal and an observation well analysis considering water levels.

### **HYDROLOGIC BUDGET:**

Recently, circuit courts have ruled that if average annual recharge is considered, average annual withdrawals should also be considered to determine if unappropriated water is available. Also, data must be presented to show that it is probable that the average annual recharge exceeds the average annual discharge by at least the amount requested by the water permit application being considered (Memorandum Decision, April 29, 2005; Memorandum Decision, April 11, 2012).

#### **Hydrologic Budget:**

##### *Recharge:*

While buried, recharge to the outwash could be through infiltration of precipitation. The outwash is likely hydraulically connected to adjacent aquifer materials if present. Recharge for this portion has not been quantified. However, for management and development programs, Hedges and others (1985) suggests a conservative recharge rate range of 0.15 to 0.60 inches per year (in/yr) for confined glacial aquifers. Applying the minimum area of this outwash and the suggested recharge range, recharge to the aquifer equals 3 to 12 ac-ft/yr. Applying the maximum area of this outwash and the suggested recharge range, recharge to the aquifer equals 75 to 300 ac-ft/yr.

##### *Discharge:*

Discharge from this outwash could occur through hydraulically connected aquifer materials and well withdrawals. There are no appropriative rights completed into this outwash (Water Rights, 2013b). There are two well completion reports on file that appear to be completed into this outwash (Water Rights, 2012c). The annual withdrawal due to domestic use is not significant to the hydrologic budget of an aquifer.

##### *Conclusion:*

The maximum recharge to this aquifer is estimated to be up to 300 ac-ft/yr. The maximum permitted application rate is two feet of water per acre. Applying this application rate results in an annual use of 224 ac-ft/yr. However, pumping continuously year round at the maximum diversion rate proposed equates to 96 ac-ft/yr. Even this amount is not expected as golf courses would not irrigate during winter months. Therefore, there is a reasonable probability that water is available from this Pleistocene Series: Unknown aquifer to supply the proposed appropriation.

#### **Observation Well Data:**

Administrative Rule of South Dakota (ARSD) 74:02:05:07 states the Board will rely on the record of observation well measurements to determine that the annual withdrawals from the aquifer does not exceed the estimated average annual recharge.

The Water Rights Program does not monitor any observation wells completed into these aquifer materials (Water Rights, 2013b). Therefore, the probability of unappropriated water available from this outwash cannot be evaluated by this method.

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

If approved, this well could be located near other wells that obtain water from the same aquifer. The drawdown due to pumping is expected due to the confined conditions of the aquifer; however, precise drawdown cannot be quantified without aquifer testing. Considering the relatively small proposed diversion rate, the amount of drawdown is expected to be relatively minor. The Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. SDCL 46-6-6.1 does not require protection of artesian head pressure as a means of groundwater delivery.

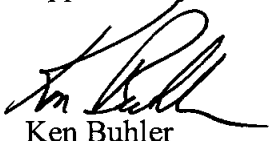
Therefore, nearby adequate wells defined by ARSD 74:02:20(7) are not expected to be adversely impaired due to the additional diversion. If other domestic wells are currently, or in the future, completed into this outwash, these domestic wells would have precedence over water rights/permits in the same aquifer.

#### **CONCLUSIONS:**

1. The water permit application proposes to withdraw groundwater at a maximum diversion rate of 0.133 cfs from one well completed into a Pleistocene Series: Unknown aquifer for the irrigation of 112 acres.
2. There is a reasonable probability that unappropriated water is available from this aquifer to supply the proposed appropriation.
3. The Water Rights Program does not monitor any observation wells completed into these aquifer materials.
4. There is a reasonable probability that the proposed appropriation will not adversely impair existing users.

Joseph R Stonesifer  
SD DENR-Water Rights Program

Approved by



Ken Buhler  
SD DENR-Water Rights Program

## **REFERENCES:**

Hedges, L.S., Allen, J., and Holly, D.E. 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Task 7: Ground Water Recharge. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.

In the Matter of Water Permit Application No. 6431-3, by Phillip W. Hines v. SD Department of Environment and Natural Resources, South Dakota Sixth Judicial Court Civ. No. HU04-37 (Memorandum Decision, April 29, 2005)

In the Matter of Water Permit Application No. 7239-3, by Hanson County Dairy v. Robert Bender and Stace Nelson, South Dakota First Judicial Court Civ. No. 11-54 (Memorandum Decision, April 11, 2012)

SD Geological Survey. 2014. Lithologic Logs Database, SD DENR- Geological Survey Program, Vermillion, SD.

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

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

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

RECEIVED

JUL - 8 2014

WATER RIGHTS  
PROGRAM

Form 8

(No. 1802807)  
(July 3, 2014 - 17)

**NOTICE OF APPLICATION NO. 8009-3  
to Appropriate Water**

**PROOF OF PUBLICATION**

STATE OF SOUTH DAKOTA )  
County of Brown ) SS

I, May Baska

certify that the attached printed Notice was  
taken

from the Aberdeen American News

printed and published in Aberdeen

County of Brown and

state of South Dakota. The notice was  
published

in the newspaper on the following date:

July 3, (51.48)

Cost of Printing \$ 51.48

May Baska  
(Signature)

Adv. Billing Spec  
(Title)

7/7/14

(Date Signed)

Notice is given that the City of Groton, c/o Anita Lowary, Finance Officer, PO Box 587, Groton SD 57445 has filed an application for a water permit to appropriate 0.133 cubic feet of water per second (cfs) from a well (No. 5) completed into the Pleistocene Series: Unknown Aquifer (147 feet deep) located in the SE 1/4 SE 1/4 Section 19 for irrigation of 112 acres of the Olive Grove Golf Course located in the SE 1/4 Section 19 and SW 1/4 SW 1/4 Section 20, all in T123N-R60W. Water Right No. 8009-3 authorizes 0.66 cfs from Well No. 3 and up to 44.45 cfs (Mud Creek/city runoff) to fill the holding pond (20 acre-feet storage capacity) to irrigate the golf course. Well No. 5 is a replacement well for Well No. 3 and was developed into a different water formation. Well No. 5 serves as a back supply for irrigation of the golf course during dry conditions when Mud Creek overflow waters are not available.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8009-3 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 July 14, 2014.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel. If legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Rimer, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of \$51.48.



DEPARTMENT OF ENVIRONMENT  
and NATURAL RESOURCES

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



June 25, 2014

American News  
PO Box 4430  
Aberdeen SD 57402

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 8009-3 to Appropriate Water. Please publish the notice once on July 3, 2014. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is City of Groton, c/o Anita Lowary, Finance Officer, PO Box 587, Groton SD 57445 (Ph # 605-397-8422).

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

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

Sincerely,

Eric Gronlund  
Natural Resources Engineer  
605 773-3352

enclosures



DEPARTMENT OF ENVIRONMENT  
and NATURAL RESOURCES

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



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

June 25, 2014

City of Groton  
Anita Lowary  
Finance Officer  
PO Box 587  
Groton SD 57445

Dear Ms. Lowary:

Water Permit Application No. 8009-3 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 American News printed at Aberdeen SD (Ph # 605-225-4100). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

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

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

Instruction to Newspaper - Publish the Notice on July 3, 2014. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

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#### NOTICE OF APPLICATION NO. 8009-3 to Appropriate Water

Notice is given that the City of Groton, c/o Anita Lowary, Finance Officer, PO Box 587, Groton SD 57445 has filed an application for a water permit to appropriate 0.133 cubic feet of water per second (cfs) from a well (No. 5) completed into the Pleistocene Series: Unknown Aquifer (147 feet deep) located in the SE 1/4 SE 1/4 Section 19 for irrigation of 112 acres of the Olive Grove Golf Course located in the SE 1/4 Section 19 and SW 1/4 SW 1/4 Section 20; all in T123N-R60W. Water Right No. 5905-3 authorizes 0.66 cfs from Well No. 3 and up to 44.45 cfs (Mud Creek/city runoff) to fill the holding pond (20 acre-feet storage capacity) to irrigate the golf course. Well No. 5 is a replacement well for Well No. 3 and was developed into a different water formation. Well No. 5 serves as a back supply for irrigation of the golf course during dry conditions when Mud Creek overflow waters are not available.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 8009-3 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 July 14, 2014.

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

Published once at the total approximate cost of \_\_\_\_\_.



DEPARTMENT OF ENVIRONMENT  
and NATURAL RESOURCES

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



AUG 18 2014

City of Groton  
Anita Lowary – Finance Officer  
PO Box 587  
Groton SD 57445

Dear Ms. Lowary:

Enclosed is Water Permit No. 8009-3 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

8009-3  
RECEIVED  
AUG 22 2014  
WATER RIGHTS  
PROGRAM

NOTICE OF COMPLETION OF WORKS AND  
APPLICATION OF WATER TO BENEFICIAL USE

Date 8/21/14

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

FROM: City of Groton / Olive Grove Golf Course  
(name)  
PO Box 587  
(address)  
Groton, SD 57445-0587 605-397-8422  
(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.

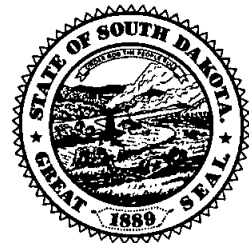
Water Permit No. 8009-3 states that the water use system is to be constructed by  
July 14, 2019, and water is to be put to beneficial use by July 14, 2023.  
(date) (date)

The water use system was completed on August 21, 2014.  
(date)

Applying the water to beneficial use was completed on August 21, 2014.  
(date)

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

City of Groton by Anita Lowery  
(signature) Finance Officer





**DEPARTMENT OF ENVIRONMENT  
and NATURAL RESOURCES**

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



August 25, 2014

8009-3

Anita Lowry, Finance Officer  
City of Groton  
PO Box 587  
Groton SD 57445-0587

Dear Ms. Lowry:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know the city is completed with the irrigation system for the Olive Grove Golf Course.

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 the project and the staff inspection has no bearing on the 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,

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



**DEPARTMENT of AGRICULTURE  
and NATURAL RESOURCES**  
JOE FOSS BUILDING  
523 E. CAPITOL AVE  
PIERRE SD 57501-3182  
danr.sd.gov

January 14, 2025

**NOTICE**

TO: CITY OF GROTON, TOM MAHAN, PO BOX 587, GROTON, SD 57445 0587

FROM: Ron Duvall, Engineer III  
for Eric Gronlund, Chief Engineer  
Water Rights Program

SUBJECT: Reporting Requirement for 2024 Irrigation Questionnaire(s)

Our records indicate your 2024 Irrigation Questionnaire(s) has not been submitted for Permit No(s) 5905-3 & 8009-3. The request for the Questionnaire was dated October 23, 2024. The Water Management Board has directed owners of water permits who have not submitted the 2024 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) 5905-3 & 8009-3 qualification:

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

The hearing will be held on **Wednesday, March 5, 2025, at 9:30 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) 5905-3 & 8009-3 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 5, 2025**, 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 Amanda Dewell at (605) 773-3352 or email at [amanda.dewell@state.sd.us](mailto:amanda.dewell@state.sd.us). **If you prefer, you can complete the questionnaire online at the following link: <https://danr.sd.gov/iq> using this password: NQGLSI**

**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.



**DEPARTMENT of AGRICULTURE  
and NATURAL RESOURCES**

JOE FOSS BUILDING  
523 E. CAPITOL AVE  
PIERRE SD 57501-3182  
danr.sd.gov

January 30, 2025

5905-3

8009-3

City of Groton  
c/o Tom Mahan  
PO Box 587  
Groton SD 57445

Dear Mr. Mahan:

I am writing to acknowledge the receipt one of the City's 2024 irrigation questionnaires.

You may disregard the January 14, 2025, "Notice" concerning the reporting requirements for Water Permit No(s). 5905-3. The information was received prior to the March 5, 2025, Water Management Board meeting and the above listed permit number has been removed from the agenda.

However, the irrigation questionnaire for Permit No. 8009-3, which was mailed to the above address (attn: Ms. Lowery, Finance Officer), has not been returned and is still scheduled to be reviewed for suspension or cancellation by the Board.

If you have any questions or concerns, please contact me.

Sincerely,

Amanda Dewell  
Permitting Administrator  
Water Rights Program  
605 773-3352  
Amanda.Dewell@state.sd.us

Cc: City of Groton, c/o Anita Lowary, PO Box 587, Groton SD 57445



**DEPARTMENT of AGRICULTURE  
and NATURAL RESOURCES**

JOE FOSS BUILDING  
523 E. CAPITOL AVE  
PIERRE SD 57501-3182  
danr.sd.gov

February 25, 2025

8009-3

City of Groton  
c/o Tom Mahan or April Ablen  
PO Box 587  
Groton SD 57445

Dear Mr. Mahan or Ms. Ablen:

I am writing to acknowledge the receipt of your 2024 irrigation questionnaire(s).

You may disregard the January 14, 2025, "Notice" concerning the reporting requirements for Water Permit No(s). 8009-3. The information was received prior to the March 5, 2025, Water Management Board meeting and the above listed permit number(s) have been removed from the agenda.

If you have any questions or concerns, please contact me.

Sincerely,

Amanda Dewell  
Permitting Administrator  
Water Rights Program  
605 773-3352  
Amanda.Dewell@state.sd.us