

WATER PERMIT NO. 6417-3

Name of Applicant: City of Lake Norden

Address: PO Box 213, Lake Norden SD

Phone: 605 785-3602

Amount of Water Claimed: 1.56 cfs (808 AF)

Total Acres: NA

Source of Water Supply: groundwater (six wells)

Water to be used for: municipal

County: Hamlin

Type of Waste Disposal System:

Location: 1 mile north of Lake Norden

PRIORITY

Date Received: 5-14-2003

Application/License Fee: \$300

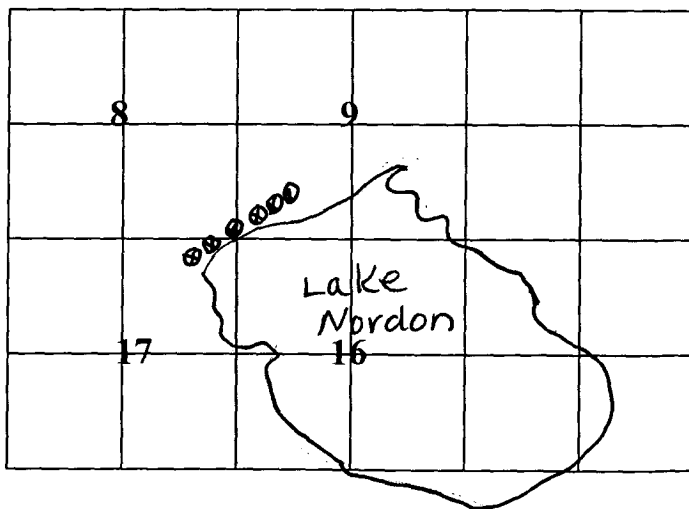
Corrected Application Received:

Period of Annual Use: January 1 – December 31

Remarks: Amend future use area authorized by 6261-3 and place water to beneficial use as authorized by 4055-3 and 6261-3

Diversion Points: NE ¼ NE ¼ Sec 17; SE ¼ SE ¼ Sec 8 and SW ¼ SW ¼ Sec 9; all in T113N-R53W

Land to be Irrigated: NA



Depth of Well: 40 feet

Well Driller:

Remarks:

Type of Map: topo

Prepared by: Kevin J Kuebler, PE

Reviewed and the Number Assigned on: 5-14-03

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

SOUTH DAKOTA
WATER PERMIT NO. 6417-3

Date of first receipt of application September 19, 2003.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 6417-3 to City of Lake Norden, 508 Main Avenue, PO Box 213, Lake Norden SD 57248-0213 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. 6417-3 authorizes 1.45 cubic feet of water per second (630 acre-feet annually) from two wells (Big Sioux:Brookings Aquifer) 90 and 93 feet deep located in the N ½ NE ¼ Section 17-T113N-R53W. This water was appropriated and reserved by Future Use Permit No. 4055-3 (108 acre-feet annually) and Future Use Permit No. 6261-3 (522 acre-feet annually).
2. The water appropriated shall be used for the purpose of municipal use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 6417-3 is December 1, 2003.
5. The dates from which applicant may claim right are March 14, 1977 (established by No. 4055-3) and May 10, 2001 (established by No. 6261-3).
6. One-fifth of the construction is to be completed on or before June 1, 2006.
7. All construction is to be completed on or before December 1, 2008.
8. Water is to be put to beneficial use on or before December 1, 2012.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

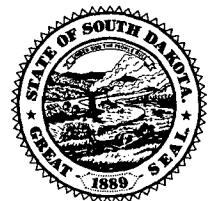
1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 6417-3 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) from the producing formation to the surface pursuant to Section 74:02:04:28.
3. The city of Lake Norden shall report to the Chief Engineer annually the amount of water withdrawn each year from the Big Sioux:Brookings Management Unit Aquifer.

WATER MANAGEMENT BOARD

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

FEB 20 2004

date



FORM 2: Application for uses other than irrigation
(type or print)

Amended app

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	(office use only)
	No. <u>6417-3</u> Hydrologic Unit <u>1017020</u>
	Basin <u>Sioux River</u>
	Newspaper <u>Estelline Journal, Estelline</u>

RECEIVED
SEP 19 2003
WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

☒ Municipal	☐ Suburban Housing	☐ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☐ Fish & Wildlife	☐ Geothermal Heat
☐ Domestic (over 18 gpm)	☐ Industrial	☐ Other	

Type of Application: ☐ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
(check one) ☒ Place to Beneficial Use Water Reserved by Future Use Permit No. 4055-3 & 6261-3
☒ Amendment/Correction to Permit No. 6261-3

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

Amend area reserved for future use permit 6261-3 to include both the NW 1/4 and the NE 1/4 of Section 17 - T113N-R53W. Also construct 2 new water supply wells to place to beneficial use 108 Acre-Ft of water from future use permit 4055-3 and 522 Acre-Ft from future use permit 6261-3.

1. Name of Applicant City of Lake Norden, South Dakota Phone 605-785-3602
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 508 Main Avenue P.O. Box 213 Lake Norden State SD 57248-0213
(Street, R.R. or Box) (Zip Code)

2. Amount of water claimed 1.45 *CFS or 650 **GPM 630 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Ground Water - 2 Wells

4. Location of point of diversion (example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)
Two (2) New Wells, One (1) located in the NE 1/4 NE 1/4 and One (1) located in the NW 1/4 NE 1/4, both in Section 17 - T113N - R53W, Hamlin County, South Dakota

County Hamlin

5. County or counties where water will be used Hamlin

6. Annual period during which water is to be used January 1 - December 31

7. Give a description of the project. When available include any preliminary engineering report or other Reports or information that will help explain the project. (Attach sheet if more space is needed).

The City of Lake Norden intends to use the water reserved under these permits to supply additional water to the existing water distribution system for the consumers of Lake Norden, South Dakota.

STATE OF SOUTH DAKOTA)

County of Hamlin)

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, Larry Steffensen, Mayor, 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

Signed

Larry Steffensen

Subscribed and sworn to before me this 18 day of September, 2003

Delores Kangas

Notary Public

(type or print in ink)

1. Well Information - Proposed Construction - Well #7

- a) Drill Hole Diameter 24" Depth 93'
- b) Casing Type Steel Diameter 12" Thickness 0.375"
- c) Screen Type Stainless Steel Diameter 12" Thickness 0.345"
- d) Gravel Pack 6" Length of Gravel Pack 60'
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well: **Unknown**
- On applicants property _____ On property owned by others **X** _____

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 _____

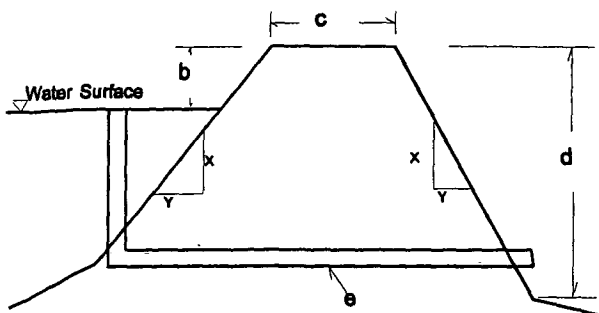
3. Dugout Information

- 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

(type or print in ink)

1. Well Information - Proposed Construction - Well #8

- a) Drill Hole Diameter 24" Depth 90'
- b) Casing Type Steel Diameter 12" Thickness 0.375"
- c) Screen Type Stainless Steel Diameter 12" Thickness 0.345"
- d) Gravel Pack 6" Length of Gravel Pack 60'
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well: **Unknown**

On applicants property _____

On property owned by others X

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 _____

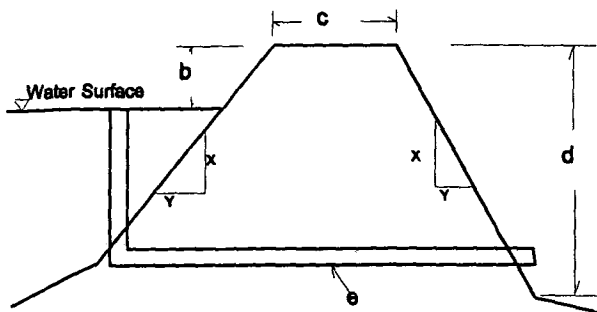
3. Dugout Information

- 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

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date May 14, 20 03

RECEIVED OF City of Lake Norden, PO Box 213 Lake Norden SD 57248-0213

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

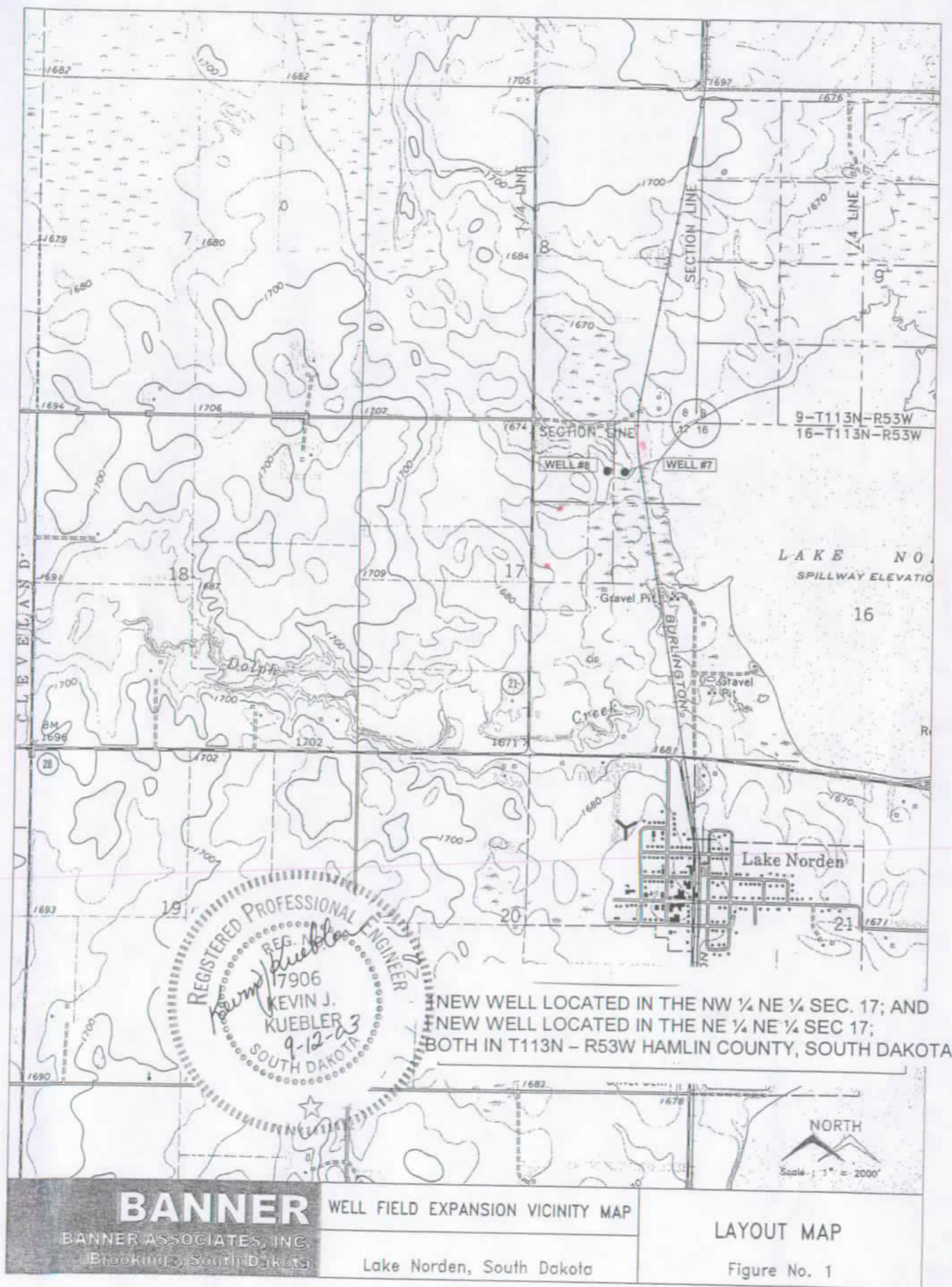
Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	350	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____	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	400.00

No.

000777

By

Darland Erbe
Chief Engineer *gm*



SOUTH DAKOTA WATER WELL COMPLETION REPORT

6417-3

07-92

Location SE 1/4 SE 1/4 Sec 8 Twp 113 Rg 53
County NE 1/4 17 KS North

Hamlin

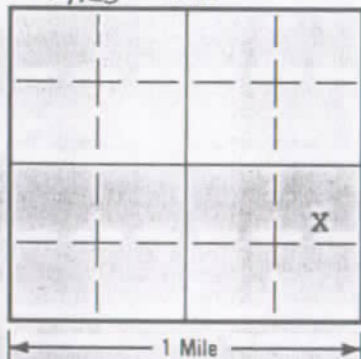
Please mark well location with an "X"

W

E

Well Completion Date

7/24/03

Well Owner: City of Lake Norden

Business Name: _____

Address: PO Box 213Lake Norden, SD 57248-0213

WELL LOG:

DEPTH

FORMATION

FROM

TO

Topsoil05Yellow clay515Blue clay1530Sand Gravel3093

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 3500 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 ☒ OtherIf other describe stainless steel

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>49.56</u> LB/FT	<u>12</u> IN	<u>0</u> FT	<u>63</u> FT	<u>24</u> IN
<u>ss screen</u>	<u>12</u> IN	<u>63</u> FT	<u>93</u> FT	<u>24</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Portland</u>	<u>70</u>	_____ lb./gal	<u>0</u> ft	<u>35</u> ft
_____	_____	_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure tremie pipeSCREEN: ☐ Perforated pipe ☒ ManufacturedDiameter 12 IN Length 30 FEETMaterial 304 stainless steelSlot Size 40 Set From 63 Feet to 93 FeetOther information gravel packedWAS A PACKER OR SEAL USED? ☒ YES ☐ NOIf so, what material? bentoniteDescribe packer(s) and location? 35 to 43'

DISINFECTION: Was well disinfected upon completion?

☒ YES, How: HTHLaboratory sent to for water quality analysis NO, Why Not?Pierre, SDSTATIC WATER LEVEL 15 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: submersible pump☐ Bailed☐ Other

Pumping Level Below Land Surface

35 ft. After 8 Hrs. pumped 600 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

RECEIVED

JAN 12 2004

WATER RIGHTS
PROGRAMThis well was drilled under license # 94

And this report is true and accurate.

Drilling firm Huron Drilling Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder: _____

Date: August 25, 2003

SOUTH DAKOTA WATER WELL COMPLETION REPORT

6417-3

07-92

Location SW SW NE 14 17 1/4 Sec 8 Twp 113 Rg 53
County Hamlin North

Please mark well location with an "X"

W

E

Well Completion Date

8-25-03

1 Mile

Well Owner: City of Lake Norden

Business Name:

Address: PO Box 213Lake Norden, SD 57248-0213

WELL LOG:

DEPTH

FORMATION	DEPTH	
	FROM	TO
<u>Topsoil</u>	<u>0</u>	<u>5</u>
<u>Yellow clay</u>	<u>5</u>	<u>15</u>
<u>Blue clay</u>	<u>15</u>	<u>25</u>
<u>Sand gravel</u>	<u>25</u>	<u>90</u>

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 3500 ft. from septic (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

RotaryCASING DATA: ☒ Steel ☐ Plastic ☒ OtherIf other describe stainless steel

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>49.56</u> LB/FT	<u>12</u> IN	<u>0</u> FT	<u>60</u> FT	<u>24</u> IN
<u>ss screen</u>	<u>12</u> IN	<u>60</u> FT	<u>90</u> FT	<u>24</u> IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Portland</u>	<u>70</u>		<u>0</u> ft	<u>32</u> ft

Describe grouting procedure tremie pipeSCREEN: ☐ Perforated pipe ☒ ManufacturedDiameter 12 IN Length 30 FEETMaterial 304 stainless steelSlot Size 40 Set From 60 Feet to 90 FeetOther information gravel packedWAS A PACKER OR SEAL USED? ☒ YES ☐ NOIf so, what material? bentoniteDescribe packer(s) and location? 32' to 40'

DISINFECTION: Was well disinfected upon completion?

☒ YES, How: HTHLaboratory sent to for water quality analysis NO, Why Not?Pierre, SDSTATIC WATER LEVEL 13 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:

☒ Pumped Describe: submersible pump☐ Bailed _____☐ Other _____

Pumping Level Below Land Surface

39 ft. After 8 Hrs. pumped 600 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

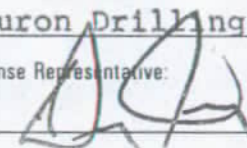
RECEIVED

JAN 12 2004

WATER RIGHTS PROGRAM

This well was drilled under license # 94

And this report is true and accurate.

Drilling firm Huron Drilling Inc.Signature of License Representative: 

Signature of Well Owner or Equitable Property Holder:

Date: August 25, 2003

BANNER ASSOCIATES, INC.
409 22nd Avenue South • P.O. Box 298
Brookings, South Dakota 57006-0298
(605) 692-6342
FAX: (605) 692-5714

April 7, 2003

RECEIVED

APR 9 2003

WATER RIGHTS
PROGRAM

Water Rights Program
Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, SD 57501

Attn. James Goodman

RE: Water Rights for New Wells for
City of Lake Norden, SD.
SD Water Right Nos. 4055-3 and
6261-3.

Dear Mr. Goodman:

Eric Gronlund, from DENR, and I recently discussed that the city of Lake Norden is planning the construction and development of six additional wells for the City water system. Three wells will be constructed this summer and three additional wells will be constructed within 3 to 5 years. The proposed wells will be located in the NE ¼ of Section 17, the SE ¼ of Section 8, and the SW ¼ of Section 9, all in T113N, R53W, Hamlin County South Dakota. The wells will be installed north of Lake Norden.

A request for permit to appropriate water from future use permit Nos. 4055-3 and 6261-3 will be filed after the drilling for the wells are complete. The capacity of the wells will be more closely determined after the wells are drilled, screened, cased, and test pumped. The City is aware that it may be necessary to expand the area reserved for future use in the two permits. The City of Lake Norden hereby requests permission from the SD Department of Environment and Natural Resources to construct three wells as test wells and then apply for an appropriation of water consistent with the demonstrated capacity of the wells.

The water appropriated will be used to supply water to the city water system. The water will be used year-round (January 1 to December 31). If you have any questions regarding this matter please call Larry Steffensen, Mayor, City of Lake Norden at 605-785-3602 or Daryl Englund or myself, at 605-692-6342.

Sincerely,



Kevin J. Kuebler, PE

CC: City of Lake Norden



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

April 11, 2003

Kevin J. Kuebler, PE
Banner Associates, Inc.
409 22nd Ave. South
P.O. Box 298
Brookings, SD 57006-0298

Dear Mr. Kuebler:

As requested, pursuant to South Dakota Well Construction Standard 74:02:04:21, the City of Lake Norden is authorized to construct a three test wells prior to approval of a water permit. The test wells are to be constructed in Sec.8 and Sec.9, T113N-R53W, Hamlin County, SD. The test wells must be constructed in accordance with the SD Well Construction Standards. Any test holes that are abandoned must be plugged pursuant to the SD Well Construction Standards.

A SD Water Permit must be obtained before water from this well can be used. Approval of this test well does not assure issuance of a water permit. Following review of a Water Permit Application; and assessing the availability of water, the potential impacts to existing users, the beneficial use, and the public interest of a permit, the Chief Engineer will make a recommendation to the Water Management Board regarding the application. The recommendation to approve, deny, or defer the application will be publicly noticed and an opportunity afforded for the public to intervene. A public hearing may be required to consider the water permit.

Very truly yours,

JAMES A. GOODMAN, P.E.
Natural Resources Engineer
for GARLAND ERBELE, Chief Engineer
Water Rights Program
(605) 773-3352

Schlaak, Karen

From: Kevin Kuebler [kevink@bannerbkgs.com]
Sent: Friday, January 30, 2004 3:48 PM
To: Karen.Schlaak@state.sd.us
Subject: RE: Lake Norden

Karen,

That is correct. The two new production wells are in the NE ¼ of 17-113-53. Huron Well Drilling possibly made a mistake on the report.

Thanks

Kevin Kuebler

-----Original Message-----

From: Karen.Schlaak@state.sd.us [mailto:Karen.Schlaak@state.sd.us]
Sent: Thursday, January 29, 2004 10:58 AM
To: Kevin Kuebler
Subject: Lake Norden

We have received two well completion reports from Huron Drilling, Inc. for wells drilled 7-24-03 and 8-25-03 for Lake Norden. The reports indicate the wells are located in Sec 8-T113N-R53W, 90 and 93 feet deep.

Water Permit No. 6417-3 was approved for Lake Norden in December. The permit was for 2 wells, 90 and 93 feet deep located in the NE 1/4 Sec 17-T113N-R53W. I am thinking that these reports have the wrong legal description. Please let me know if this is correct.

Karen Schlaak
Water Rights Program
605 773-3352

1/30/2004

CITY OF LAKE NORDEN

508 Main Avenue
PO Box 213
Lake Norden, SD 57248-0213

RECEIVED

SEP 18 2003

September 18, 2003

WATER RIGHTS
PROGRAM

Water Rights Program
Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, SD 57501

Attn: Eric Gronlund

RE: Water Rights for New Wells for
City of Lake Norden, SD.
SD Water Right Nos. 4055-3 and
6261-3.

Dear Mr. Gronlund:

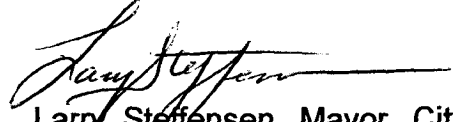
Attached hereto are two (2) copies of a completed application for a permit to appropriate water within the State of South Dakota. The application includes a request to amend the area reserved for future use permit No. 6261-3 to include the NE ¼ of section 17, the SE ¼ of Section 8 and the SW ¼ of Section 9 in T-113N-R53W, Hamlin County, South Dakota.

The City of Lake Norden proposes to construct 6 new wells and is requesting to place to beneficial use 108 Acre-Ft from permit No. 4055-3 and 700 Acre-Ft from permit No. 6261-3.

We have also enclosed herewith, the required \$350 fee for the requested 808 Acre-Ft of water, plus the \$50 inspection fee for a total of \$400.

If you have any questions regarding this matter please call Kevin Kuebler or Daryl Englund, Banner Associates, Inc. at 605-692-6342.

Sincerely,

A handwritten signature in black ink, appearing to read "Larry Steffensen", with a long horizontal flourish extending to the right.

Larry Steffensen, Mayor, City of
Lake Norden

Enclosures

CC: Banner Associates, Inc.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

November 3, 2003

Dan Lemmer
19236 448th Avenue
Lake Norden SD 57248

Dear Mr. Lemmer:

Please find enclosed a copy of the report, recommendation and public notice for Water Permit Application No. 6417-3 filed by the city of Lake Norden. The public notice will be published in the Estelline Journal on November 12 and 19, 2003.

This information is being sent to you because of the interest you expressed in the application a few months ago.

Sincerely,

Eric Gronlund
Water Rights Program, DENR
(605) 773-3352

REPORT ON WATER PERMIT APPLICATION NO. 6417-3
For City of Lake Norden
October 21, 2003

Application No. 6417-3 proposes to amend Future Use Permit No. 6261-3 to expand the future use area and to construct and place to beneficial use water reserved by Future Use Permit Nos. 4055-3 and 6261-3.

Future Use Permit No. 6261-3 reserves 784 acre-feet of water annually from ground water located in the NW ¼ of section 17, T113N R53W. This application proposes to expand the future use area to include the NE ¼ of section 17, T113N R53W in Hamlin County.

Application No. 6417-3 also proposes to construct and place to beneficial use 1.45 cfs (650 gpm) (630 acre-feet annually) from two wells approximately 90 and 93 feet deep located in the N ½ NE ¼ of section 17, SE ¼ SE ¼ of section 8 and the SW ¼ SW ¼ of section 9; all in T113N R53W. This water was appropriated and reserved by Future Use Permit No. 4055-3 (108 acre-feet annually) and Future Use Permit No. 6261-3 (522 acre-feet annually). The water will be used for municipal purposes.

AQUIFER – BIG SIOUX BROOKINGS (BS-B)

The Big Sioux Brookings is a surficial outwash (sand and gravel) that is under water table conditions in this area. The aquifer underlies 88,500 acres and contains an estimated 331,880 acre-feet of recoverable water in storage in Hamlin County (Hedges, 1982). The aquifer is hydraulically connected to area creeks, sloughs and Lake Norden and is areally extensive into Brookings County to the south and into Codington County to the north. Ground water movement is from northwest to southeast and toward Lake Norden in the area of this application (Kume, 1985). Recharge has been estimated at 6.57 inches per year (Koch, 1980).

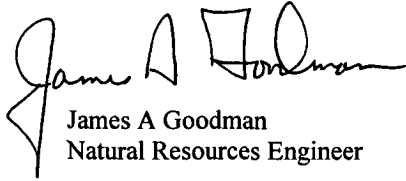
The Water Rights Program monitors an observation well, HN-76D, that is located within one-half mile of the proposed wells in this application. Water levels for this well show good response to climatic conditions, that is, rising water levels during wet years (recharge) and gradually declining water levels during dry years. The water level record indicates that the aquifer is capable of sustaining additional withdrawals (Water Rights, 2003). A hydrograph for this observation well is included with this report.

REVIEW OF EXISTING WATER PERMITS/RIGHTS

There is an existing water right No. 141-3 which is located within one mile of this proposed well field. Interference is not a concern. The observation well in the area does not show drawdown to be a significant problem. The only other water user in the immediate area is the City of Lake Norden. Lake Norden existing wells #4 and the South well are located within one-half mile southwest of this application. Also existing Lake Norden wells 1,2 and 3 are located within one-quarter mile to the northeast of this application.

CONCLUSIONS

1. Water is available from the Big Sioux Brookings aquifer.
2. The aquifer is under water table conditions in this area. Drawdown created by pumping is not expected to be significant. Interference is not expected to be a concern.
3. The wells authorized by this application must be constructed in accordance with SD Well Construction Standards.
4. Approval of this application will leave 262 acre-feet remaining under Future Use Permit No. 6261-3. Any water not developed under this application will revert to Permit No. 6261-3. All the water claimed and remaining under Future Use Permit No. 4055-3 will be developed by this application.
5. This amount of water is far more than a town the size of Lake Norden would normally use, however, this water will be used to supply a dairy processing plant.



James A Goodman
Natural Resources Engineer

BIBLIOGRAPHY

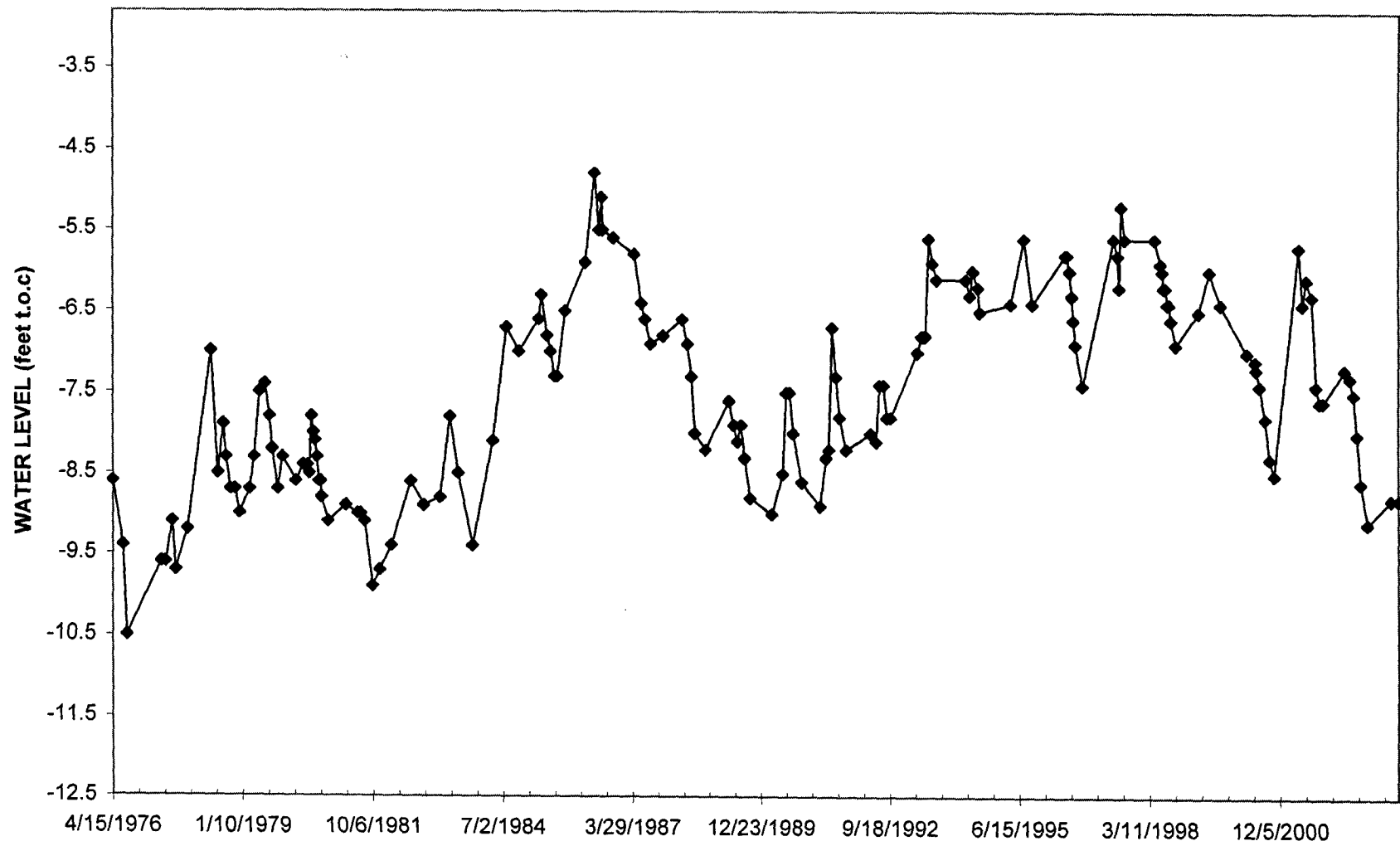
Hedges, L.S., and others, 1982, Evaluation of Ground-Water Resources Eastern SD and Upper Big Sioux River, SD and Iowa, for US Army Corps of Engineers, SD DENR, SDGS, Vermillion, SD, 57069.

Koch, N.C., 1980, Appraisal of the Water Resources of the Big Sioux Aquifer, Brookings, Deuel, and Hamlin Counties, South Dakota, Water Resources Investigations 80-100, USGS, Huron, SD, 57350.

Kume, J., 1985, Water Resources of Deuel and Hamlin Counties, South Dakota, Water Resources Investigations Report 84-4069, USGS, Huron, SD, 57350.

Water Rights, 2003, Unpublished Observation Well Data for Hamlin County, SD DENR, DES, Water Rights Program, Pierre, SD, 57501.

**WATER RIGHTS' OBSERVATION WELL
HN-76D**





**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. 6417-3, City of Lake Norden**

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. 6417-3, City of Lake Norden, c/o Larry Steffensen, Mayor, PO Box 213, Lake Norden SD 575248-0213.

The Chief Engineer is recommending APPROVAL of Application No. 6417-3 because 1) the proposed diversion can be developed without unlawful impairment of existing rights, 2) the proposed use is a beneficial use and 3) it is in the public interest with the following qualifications:

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 6417-3 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) from the producing formation to the surface pursuant to Section 74:02:04:28.
3. The city of Lake Norden shall report to the Chief Engineer annually the amount of water withdrawn each year from the Big Sioux-Brookings Management Unit Aquifer.

See report on application for additional information.

Garland Erbele, Chief Engineer
October 30, 2003



**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.**

November 3, 2003

City of Lake Norden
% Larry Steffensen Mayor
508 Main Ave
PO Box 213
Lake Norden SD 57248-0213

Dear Mayor Steffensen:

Water Permit Application No. 6417-3 for municipal use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Estelline Journal printed at Estelline, SD (Ph # 605-873-2475). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Hearing 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 with the last publication to occur twenty days before the board meeting. 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

cc: Kevin Kuebler, Banner & Assoc., PO Box 298, Brookings SD 57006-0298

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

November 3, 2003

Estelline Journal
214 Main St.
Estelline SD 57234-0159

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application No. 6417-3 to Appropriate Water to be published twice. Please publish the first notice on November 12, 2003 with the second publication 7 days later.

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 City of Lake Norden, %Larry Steffensen, Mayor, PO Box 213, Lake Norden, SD (Ph # 605-785-3602).

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. 6417-3

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

Date _____

We are in receipt of your letter of November 3, 2003 enclosing Notice of Hearing to Appropriate Water by Application No. 6417-3 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper

Instruction to Newspaper - Publish first Notice on November 12, 2003 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF WATER PERMIT APPLICATION NO. 6417-3

Notice is given that the City of Lake Norden, PO Box 213, Lake Norden SD 57248-0213 has filed an application to amend Future Use Permit No. 6261-3 to expand the future use area and to construct and place to beneficial use water reserved by Future Use Permit Nos. 4055-3 and 6261-3.

Future Use Permit No. 6261-3 reserves 784 acre-feet of water annually from groundwater (Big Sioux Aquifer) located in the NW ¼ Section 17-T113N-R53W. This application proposes to expand the future use area to include the NE ¼ Section 17-T113N-R53W.

Application No. 6417-3 also proposes to construct and place to beneficial use 1.45 cubic feet of water per second (630 acre-feet annually) from two wells (Big Sioux:Brookings Aquifer) 90 and 93 feet deep located in the N ½ NE ¼ Section 17-T113N-R53W. This water was appropriated and reserved by Future Use Permit No. 4055-3 (108 acre-feet annually) and Future Use Permit No. 6261-3 (522 acre-feet annually). The water will be used for municipal purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6417-3 because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by December 1, 2003.

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.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)

County of Hamlin) SSI, Lynne Archer

certify that the attached printed Notice was taken

from the EstellineJournalprinted and published in EstellineCounty of Hamlin and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

Nov. 12, 2003Nov. 19, 2003Cost of Printing 48.63Lynne Archer
(Signature)Publisher
(Title)

(Date Signed)

RECEIVED

NOV 24 2003

WATER RIGHTS
PROGRAMNOTICE OF WATER PERMIT
APPLICATION NO. 6417-3

Notice is given that the City of Lake Norden, PO Box 213, Lake Norden, SD 57248-0213 has filed an application to amend Future Use Permit No. 6261-3 to expand the future use area and to construct and place to beneficial use water reserved by Future Use Permit Nos. 4055-3 and 6261-3.

Future Use Permit No. 6261-3 reserves 784 acre-feet of water annually from groundwater (Big Sioux Aquifer) located in the NW 1/4 Section 17-T113N-R53W. This application proposes to expand the future use area to include the NE 1/4 Section 17-T113N-R53W.

Application No. 6417-3 also proposes to construct and place to beneficial use 1.45 cubic feet of water per second (630 acre-feet annually) from two wells (Big Sioux: Brookings Aquifer) 90 and 93 feet deep located in the N 1/2 NE 1/4 Section 17-T113N-R53W. This water was appropriated and reserved by Future Use Permit No.

4055-3 (108 acre-feet annually) and Future Use Permit No. 6261-3 (522 acre-feet annually). The water will be used for municipal purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6417-3 because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written

petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 East 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 December 1, 2003.

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 above petitioner's 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 Environmental and Natural Resources
(publish nov. 12 and 19, 2003)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

FEB 20 2004

City of Lake Norden
Larry Steffensen Mayor
PO Box 213
Lake Norden SD 57248-0213

Dear Mayor Steffensen:

Enclosed is Water Permit No. 6417-3 authorizing construction of your water diversion system and placement of the water to beneficial use, 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.

Also enclosed is the reissued Future Use Permit No. 6261-3, as approved by the Water Management Board.

When plans are made to put any portion of the water reserved by this future use permit to beneficial use, an application to construct and place to beneficial use shall be submitted and approved before construction is initiated.

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

PAYMENT REQUEST FORM

PAYEE: City of Lake Norden
PO Box 213
Lake Norden SD 57248-0213

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

DESCRIPTION OF SERVICE, PRODUCE OR TRANSFER

Refund of \$25.00 for overpayment of application/license fee

AMOUNT: \$25.00

FUNDING SOURCE:

GENERAL: X

FEDERAL:

COMMENTS:

AUTHORIZATION:

Barbula Cohl

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

February 26, 2004

City of Lake Norden
Delores Kangas, Finance Officer
PO Box 213
Lake Norden SD 57248-0213

Dear Ms. Kangas:

Recently you should have received the approval of Water Permit No. 6417-3. At the time of application, an application/license fee of \$400 was submitted. The application was later amended which decreased the fee. Therefore, \$25.00 will be refunded to the city. You should be receiving a refund check within the next couple of weeks.

Sincerely,

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

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

Date March 18, 2004

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

RECEIVED
MAR 22 2004
WATER RIGHTS
PROGRAM

FROM: City of Lake Norden
(name)

508 Main Avenue
(address)

Lake Norden, SD 57248-0213 605-785-3602
(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.

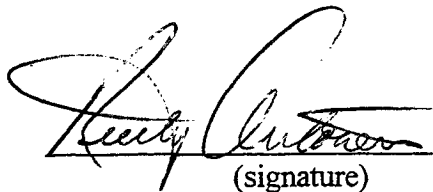
Water Permit No. 6417-3 states that the water use system is to be constructed by

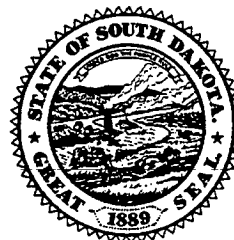
December 1, 2008 , and water is to be put to beneficial use by December 12, 2012 .
(date) (date)

The water use system was completed on November 24, 2003 .
(date)

Applying the water to beneficial use was completed on November 24, 2003 .
(date)

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


(signature)



Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 6417-3

I have this day, April 1, 2015, made a thorough examination of the water use system constructed by City of Lake Norden, 508 Main Ave, PO Box 213, Lake Norden SD 57248-0213 of Permit No. 6417-3, bearing the priority of March 14, 1977 (Future Use Permit No. 4055-3) and May 10, 2001 (Future Use Permit No. 6261-3) authorizing the diversion of 1.45 cu. ft. per second and 630 acre-feet of the waters of Big Sioux Brookings aquifer for municipal purposes, in Hamlin County.

Inspection contact & relationship to permit holder, if applicable: **Phillip Johnson, Water & Wastewater Supt.**

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Huron Drilling Inc.
- 2) No. of Wells 2 (Well #7 is emergency standby and Well #8 is capped)
- 3) Depth(s) 90 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 12 inches
- 2) Length 60 feet
- 3) Type steel

Screen:

- 1) Type stainless steel
- 2) Length 30 feet
- 3) Static water level 13 feet

Motor/Pump:

- 1) Make Submersible
- 2) Capacity 650 GPM (Mr. Johnson confirmed gpm with former water supt.)

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

Comments: Well # 8 has been capped and the Well #7 is maintained only for standby emergency needs by the City of Lake Norden. The water quality is poor and using water results in water quality complaints from water users.

C. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
- 2) Exceptions to compliance are: none

D. Condition and Location:

1. The system is in good condition with the point of diversion located as follows: Well #7: 825 feet south and 1,395 feet west from NE corner of section 17-T113N-R53W (NW1/4 NE1/4, Long. -97.21466, Lat. 44.59895).
2. The works are capable of diverting and conveying to the place of use 1.45 cu. ft. per second of water and 630 acre-feet of water annually which is to be used for municipal purposes. Water has been put to beneficial use to the maximum extent and the license should be issued for 1.45 cfs and 630 acre-feet of annually (108 acre-feet with March 14, 1977 priority and 522 acre-feet with May 10, 2001 priority).
3. All structures, wells and lands on map Yes.

E. Comments or other permit(s) associated with the project:

Well #8 does not qualify for inclusion on the water license since the well has been capped since 2010. Well #7 is for emergency standby use only and will not be used except when absolutely necessary due to poor water quality. Since the water appropriated under No. 6417-3 was taken from future use and will likely seldom be used, it may be advantageous for the city to someday transfer the diversion authority to a new well site with better water quality. A transfer of diversion authority would allow the city to retain the priority dates established under Future Use Permit Nos. 4055-3 and 6261-3.



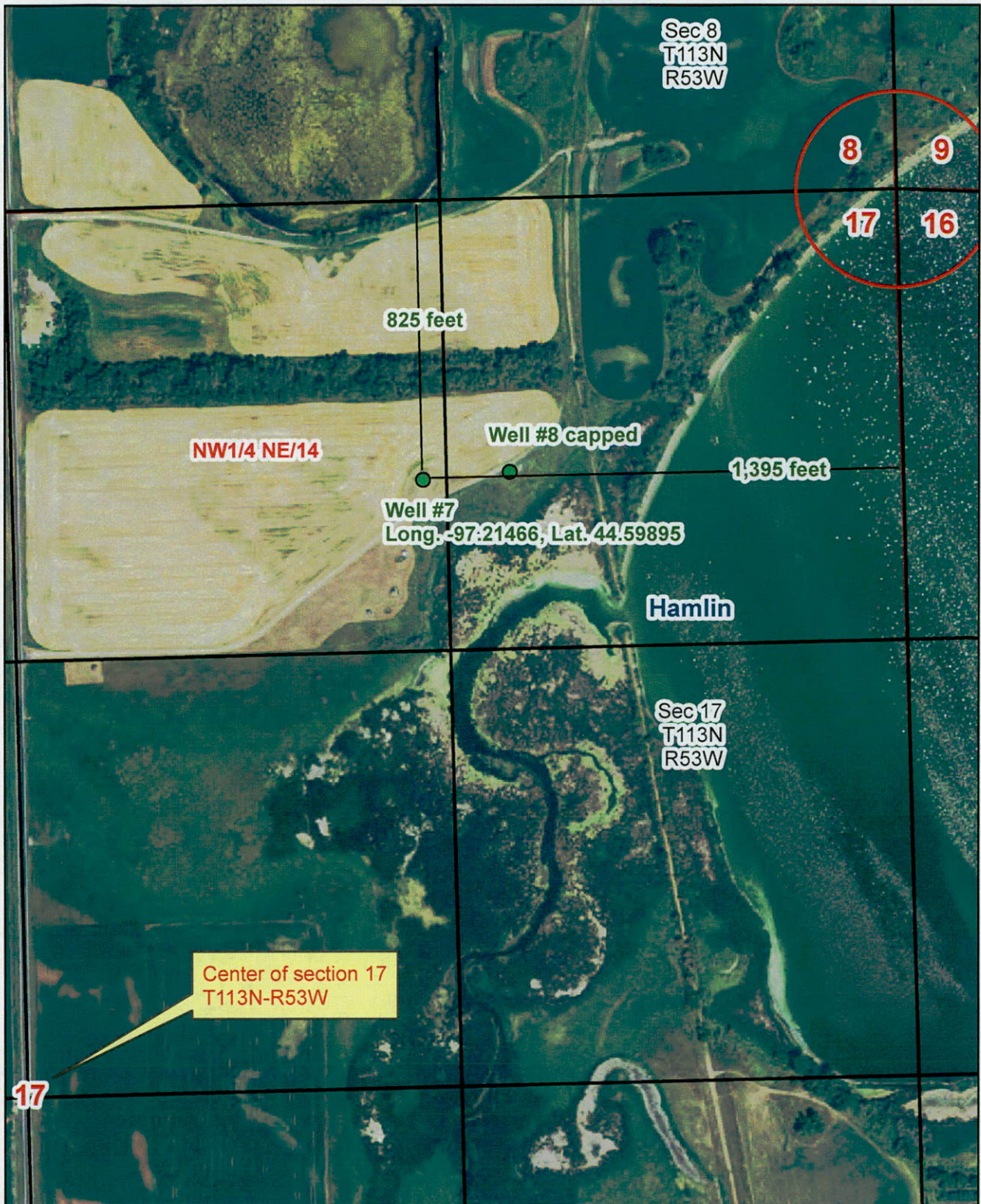
Ron Duvall
Water Rights Permitting Administrator
DENR, Water Rights Program

Date report completed: May 20, 2015

Scale: 1 inch = 439 feet

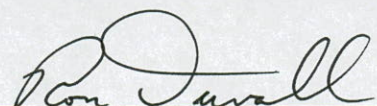
610

Feet



South Dakota
Department of Environment
& Natural Resources
Water Rights

Completed by:


Ron Duvall, WR Permitting Administrator
Water Rights Program

Diversion point(s) located using a Garmin eTrex 10 GPS

Date: May 20, 2015

Water Right No. 6417-3



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

MAY 28 2015

6417-3

Delores Kangas, Finance Officer
City of Lake Norden
PO Box 213
Lake Norden SD 57248 0213

Dear Ms. Kangas:

Enclosed is Water License No. 6417-3. This is the final water right document completing the process of obtaining a Water Right. Included with the license is a map prepared by the staff engineer who conducted the field investigation.

For your information SDCL 46-6-27 requires that if the owner of an existing well, such as the well authorized by Water Right No. 6417-3, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

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

Sincerely,

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

enclosures

Note: The water appropriated under No. 6417-3 was taken from future use and will likely not be utilized to full capacity since the well is now maintained only for standby purposes. It may be advantageous for the city to transfer the diversion authority to a new well site with better water quality. A transfer of diversion authority would allow the city to retain the priority dates established under Future Use Permit Nos. 4055-3 and 6261-3.

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 6417-3**

(1) The City of Lake Norden, PO Box 213, Lake Norden SD 57248 made Application No. 6417-3, September 19, 2003 for a water permit to divert 1.45 cubic feet of water per second (630 acre feet annually) from ground water (two wells, Big Sioux Brookings Aquifer), Hamlin County, South Dakota for municipal purposes. Permit No. 6417-3, with priority dates of March 14, 1977 and May 10, 2001 was approved December 1, 2003 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before December 1, 2008 and for the application to beneficial use of water on or before December 1, 2012.

Water Permit No. 6417-3 authorized construction and placement to beneficial use water reserved by the following:

- Future Use Permit No. 4055-3 (priority date of March 14, 1977) for 108 acre feet annually;
- Future Use Permit No. 6261-3 (priority date of May 10, 2001) for 522 acre feet annually.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the water supply system and is entitled to divert 1.45 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 825 feet south & 1,395 feet west of the NE corner of Section 17, T113N, R53W (NW ¼ NE ¼).

Two wells were originally authorized – well #8 was capped in 2010 and well #7 (described above) is maintained for emergency standby use only.

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

(4) Pursuant to South Dakota Water Law 46-5-30.1 the City of Lake Norden, PO Box 213, Lake Norden SD 57248 the holder and/or owner of Water Right No. 6417-3 is issued a license to appropriate water, the right to use 1.45 cubic feet of water per second (630 acre feet annually) from ground water (one well, Big Sioux Brookings Aquifer) with priority dates of March 14, 1977 (108 acre feet) and May 10, 2001 (522 acre feet) from the location specified in (2) of this license for municipal purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 6417-3 and subject to the following qualifications:

- 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.
- The well authorized by Permit No. 6417-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the 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. **The well maintained as a backup supply was drilled by Huron Drilling Inc. A copy of the log is on file with the Water Rights Program.**
- The city of Lake Norden shall report to the Chief Engineer annually the amount of water withdrawn each year from the Big Sioux Brookings Aquifer.



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

MAY 28 2015

date



RECEIVED
OCT 05 2015
WATER RIGHTS
PROGRAM

6417-3
BANNER
Engineering | Architecture | Surveying
Banner Associates, Inc. | 409 22nd Ave So | PO Box 298
Brookings, South Dakota 57006
Tel | 605.692.6342 Fax | 605.692.5714
Toll Free | 1.855.323.6342
www.bannerassociates.com

October 2, 2015

Mr. Eric Gronlund
SDDENR – Water Rights
523 East Capitol
Pierre, SD 57501

Re: Lake Norden - Additional Diversion Point to Water Right 6417-3
BAI. No. 07685.00.04
F:\07685-00-04\Well 1 Water Rights.doc

Dear Mr. Gronlund,

As we had discussed on our previous phone conversation, I am writing this letter on behalf of the City of Lake Norden, South Dakota. The City has received authorization to construct a test well. They have since had Kaiser Well Drilling do this work and have found it to be of good capacity and acceptable water quality. The City is requesting to add this well on as an additional diversion point to their existing Water Right #6417-3.

The City's intent with this well is not to draw additional water from the aquifer, but to provide the City with some redundancy in their water supply system. This well will be equipped with a variable frequency drive unit similar to the rest of the wells in their wellfield. The City would prefer to turn down the volumes pumped from the existing wells and use all of their wells in conjunction with each other to maintain similar run times throughout their wellfield while maintaining a consistent water quality entering their treatment plant. They would be capable of increasing the flow from the remaining wells if one would need to be removed from service for routine maintenance or for some other unexpected reason.

Attached are copies of the water quality analysis and the Well Driller's log. The well is approximately 46 feet deep and in the same vicinity as the most of the City's other wells. A map showing the existing Lake Norden wellfield is also attached. This shows the four existing production wells currently owned and operated by the City along with their proposed new Well #1.

Please feel free to contact me at the number listed above or email @ greggi@bannerassociates.com if you have any questions and/or comments.

Sincerely,



Gregg Jorgenson, PE
Banner Associates, Inc.

Encl. Water Quality analysis
 Well Driller's Log
 Lake Norden Wellfield map

Cc: Delores Kangas – City of Lake Norden (w/ attachments)
 Philip Johnson – City of Lake Norden (w/ attachments)



**DIVISION OF
ADMINISTRATION**
Public Health Laboratory

615 East Fourth Street
Pierre, South Dakota 57501-1700
605/773-3368 FAX: 605/773-6129
www.state.sd.us/doh/lab/index.htm

RECEIVED

OCT 05 2015

Referral copy to:

**WATER RIGHTS
PROGRAM**

* Page 1 of 1*
Date: 9/17/2015

LAKE NORDEN, CITY OF-0187
PO BOX 213
LAKE NORDEN, SD 57248-0213

Submitter:
KAISER WELL DRILLING-104957
45550 193RD ST
LAKE NORDEN, SD 57248

Spec #: E15WB011791
Subm #:
Lab: ENV CHEMISTRY
Tel #: (605) 773-3368

Source

LAKE NORDEN/CITY WATER

Source Address:

Date Rcvd: 9/10/2015	Telephone Numb*: 7853602
Time Rcvd: 0744	Near Town: LAKE NORDEN
Date Coll: 9/8/2015	Miles N: .5
Time Coll: 0430	Sample County: HAMLIN
Spec Type: WATER	Township: 113N
Coll Site: WELL	Range: 53W
Coll By: JOHN	Section: 17
Date drilled: 8-29-15	Quarter: NE
Drilled by: KAISER WELL	Supply Type: PRIVATE
DRILLING	Well Diameter: 8"
Pump inst by: TEST PUMP	Sample Purpose: ROUTINE

Final Results

Sulfate -	192 mg/L	
Sodium	17.6 mg/L	
Conductivity	894 umho/cm	
Nitrate	Nitrate-N	<0.2 mg/L Limit: 10.0

NITRATE RESULT: SAFE AT TIME OF SAMPLING.
TOTAL COLIFORM-10 TUBE TOTAL COLIFORM
<1.1 MPN/100 ml

BACTERIOLOGICALLY SAFE AT THE TIME OF SAMPLING

SOUTH DAKOTA WATER WELL COMPLETION REPORT

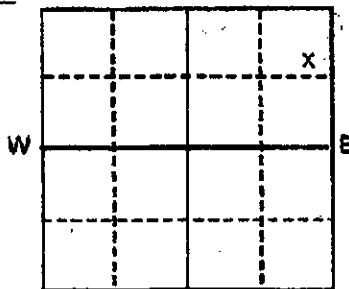
11-02

Location NE ¼ NE ¼ Sec 17 Twp 113N Rg 53W

County HAMLIN

North

Please mark well location with an "X"



Well Completion Date:

8-27-15

1 Mile

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

PROPOSED USE:

☐ Domestic/Stock ☒ Municipal ☐ Business ☐ Test holes
☐ Irrigation ☐ Industrial ☐ Institutional ☐ Monitoring well
METHOD OF DRILLING:
DIRECT ROTARY

CASING DATA:

If other describe

☐ Steel ☒ Plastic ☐ Other
 PIPEWEIGHT DIAMETER FROM TO HOLE DIAMETER
 40.0 LB/FT 8.00 IN 0.0 FT 36.0 FT 14.00 IN
 LB/FT IN FT FT IN
 LB/FT IN FT FT IN

GROUTING DATA:

 Grout Type No. of Sacks Grout Weight From To
 3RT WELDF 10 54.0 Lb/gal 0.0 Ft 36.0 Ft
 Lb/gal Ft Ft
Describe grouting procedure
TREMIE

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 8.00 Inches Length 10.0 Feet
 Material PVC
 Slot Size 80 Set From 36.0 Feet to 46.0 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? HTH
☐ No, Why Not?

Lab to which water quality sample sent for analysis

SD PHL-PIERRE

Well Owner:

Business Name: CITY OF LAKE NORDEN

Address: PO BOX 213

City, State, Zip: LAKE NORDEN SD 57248

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
TOP SOIL	0	2
YELLOW CLAY	2	8
YELLOW GRAVEL	8	46
BLUE CLAY	46	

STATIC WATER LEVEL 5.0 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: 350 GPM☐ Bailed☐ Other

Pumping Level Below Land Surface

36.0 Ft. After 6.0 Hrs. pumped 350.0 GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

RECEIVED

OCT 05 2015

WATER RIGHTS
PROGRAM

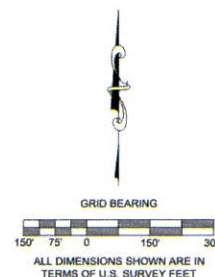
This well was drilled under license # 689 and this report is true and accurate.

Drilling firm: KAISER WELL DRILLING INC

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:



BANNER

409 22nd Ave. S. P.O. Box 298
 Brookings, South Dakota 57006
 Tel: 605-692-6342
 Toll Free: 1-855-323-6342
 www.bannerassociates.com

CONSULTANTS

FOR
 REVIEW ONLY
 NOT FOR
 CONSTRUCTION

PROJECT TITLE

LAKE
 NORDEN
 WELL LAYOUT

PROJECT LOCATION
 NEAR LAKE NORDEN
 SOUTH DAKOTA

REV	DATE	DESCRIPTION

DRAWN BY: JLV
 DESIGNED BY: GJL
 CHECKED BY: GJL
 JOB NO.: 07685-20-04
 DATE: OCTOBER 2015

SHEET TITLE

WELL
 PLACEMENT



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

October 27, 2015

6417-3

City of Lake Norden
c/o Delores Kangas, Finance Officer
PO Box 213
Lake Norden, SD 57248

Dear Delores Kangas:

Water Right No. 6417-3 appropriates 1.45 cubic feet per second (cfs) from two wells completed into the Brookings Management Unit of the Big Sioux aquifer at depths of 90 and 93 feet below ground surface. Water from these wells, located in the N ½ NE ¼ of Section 17, T113N-R53W is for municipal use for the City of Lake Norden. The original permit was conditioned with the standard well interference qualification.

On behalf of the City of Lake Norden, Banner Associates, Inc. submitted a request to add an additional well in the approximate center of the NE ¼ of Section 17, T113N-R53W to be completed to a depth of approximately 46 feet below ground surface. The purpose of this well is to provide the City of Lake Norden with redundancy in their water system should they experience problems with an existing well. No increase in the maximum diversion rate of 1.45 cfs or annual volume of 603 acre-feet of water was requested.

Upon review of the request and pursuant to SDCL 46-5-13.1, the additional well location is authorized without application or publication of a notice of hearing pursuant to SDCL 45-2A-4. No increase in the authorized diversion rate of 1.45 cfs or annual volume of 603 acre-feet of water under Water Permit No. 6417-3 has been requested or approved. If the total diversion rate or annual volume increases, a new water permit will need to be obtained from the SD DENR Water Rights Program.

Water Right No. 6417-3 will be re-issued to reflect the authorization of the additional well and to delete any reference to Well #7 being maintained for emergency use only.

Sincerely,


Jeanne Goodman
Chief Engineer
Water Rights Program

Cc: Banner Associates, Inc.
c/o Gregg Jorgenson
PO Box 298
Brookings, SD 57006

File No. 6417-3

Approval of Additional Diversion Point

NAME: City of Lake Norden

ADDRESS: PO Box 213, Lake Norden, SD 57248

DATE: October 15, 2015

COUNTY: Hamlin

TELEPHONE: (605) 785-0213

BACKGROUND:

Water Right No. 6417-3 appropriates 1.45 cubic feet per second (cfs) with a maximum annual volume of 603 acre- feet from one well completed into the Brookings Management Unit of the Big Sioux aquifer at a depth of 90 feet below ground surface. Water from this well, located in the N ½ NE ¼ of Section 17, T113N-R53W is for municipal use for the City of Lake Norden. The original permit was conditioned with the standard well interference qualification.

Water Right No. 6417-3 was licensed in May 2015 based on an inspection by Ron Duvall with the Water Rights Program. The inspection report notes that the water quality from the existing well is poor and the well is only for standby emergency needs by the city. The issuance of the water license states "Well #7 is maintained for emergency standby use only." Pursuant to ARSD 74:02:01:37.02, which provides for exception to nonuse of water, water maintained for fire protection or standby purpose is not nonuse of the water right if the works are maintained in working condition for immediate use upon demand. There appears to be no indication that the water right has been abandoned or forfeited for nonuse and is not limited to emergency standby use only.

On behalf of the City of Lake Norden, Banner Associates, Inc. submitted a request to add an additional well in the approximate center of the NE ¼ of Section 17, T113N-R53W to be completed to a depth of approximately 46 feet below ground surface. The purpose of this well is to provide the City of Lake Norden with some redundancy in their water system should they experience problems with an existing well. No increase in the maximum diversion rate of 1.45 cfs was requested.

AUTHORITY:

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

- **Developed water source is the same as licensed source and no additional water is appropriated.**

The water source authorized by Water Right No. 6417-3 is the Brookings Management Unit of the Big Sioux aquifer. The additional well is expected to draw water from the Brookings Management Unit of the Big Sioux aquifer.

No additional appropriation of water is authorized. Water Permit No. 6417-3 appropriates 1.45 cfs to a maximum of 603 acre feet of water annually and no additional diversion rate authority is being requested.

Review of Existing Diversions

The well completion report and water rights databases were reviewed for the nearest water rights/permits on file. The nearest water right drawing water from the Brookings Management Unit of the Big Sioux

aquifer and not controlled by the City of Lake Norden is Water Right No. 141-3, located approximately 0.75 miles to the northwest. Since this new well site is not appreciably closer to Water Right No. 141-3 and does not propose to divert additional water, increased interference of existing water rights/permits is not expected to be a concern.

Observation Well Data

The Water Rights Program monitors 80 observation wells completed into the Brookings Management Unit of the Big Sioux aquifer. The closest observation wells completed into this aquifer are HN-2005A, HN-2005B, and HN-76D, all located within approximately 0.25 miles of the new well site. These observation wells have been in place since 2005 (HN-2005A and HN-2005B) and 1976 (HN-76D). Both HN-2005A and HN-76D show static water level fluctuations of four to 11 feet below the top of the casing with water levels in HN-2005B varying between 12 and 19 feet below the top of the casing. Historic water levels in these three observation wells indicate a climatically controlled system with water levels rising in wet years and declining in dry years.

CONCLUSION:

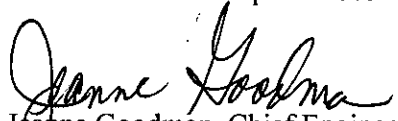
- The change in diversion point does not propose to appropriate additional water.
- The new diversion point will be pumping water out of the same source, the Brookings Management Unit of the Big Sioux aquifer.
- Unlawful impairment of existing water rights/permits and domestic wells is not expected to occur.
- Water Right no. 6417-3 is not subject to abandonment or forfeiture and should not be limited to emergency standby use only.

RECOMMENDED ACTION:

Based on the above criteria, it is recommended that the request for an additional diversion point in the center of the NE ¼ of Section 17, T113N-R53W be approved and that Water Right No. 6417-3 be re-issued to remove reference to emergency standby use only.

Bracken Capen
Natural Resources Engineer

The Chief Engineer makes a finding pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14:01 that: The additional diversion point does not increase the potential for adverse effects to existing diversions.


Jeanne Goodman, Chief Engineer
Water Rights Program