

WATER PERMIT NO. 8369-3

Name of Applicant: Hybrid Turkeys

Address: 650 Riverbend Dr, Suite C, Kitchener ON N2K 3S2

Phone: 320-333-0607

Amount of Water Claimed: 0.17 cfs

Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: commercial

County: Edmunds

Type of Waste Disposal System:

Location: 1 miles southeast of Ipswich

PRIORITY

Date Received: 7-10-18

Application/License Fee: \$ 700

Corrected Application Received: 7-2-6-18

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: approximate center of NE 1/4 Sec

35-T123N-R68W

Land to be Irrigated: NA

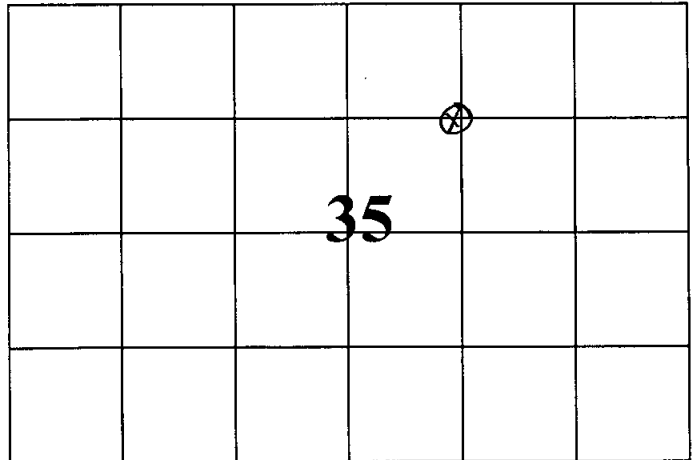
Depth of Well: 1180 feet deep

Well Driller:

Remarks:

Type of Map: aerial

Prepared by:



Reviewed and the Number Assigned on: 7-26-18

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

RECEIVED

JUL 26 2018

WATER RIGHTS
PROGRAMoriginally
received
7/10/18

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>8369-3</u> (office use only) Hydrologic Unit <u>10160008</u>
	Basin <u>James River</u>
	Newspaper <u>Ipswich Tribune</u>
	<u>American News</u>

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

Check use(s) of water:

- | | | | |
|---|--|---|--|
| ☐ Municipal | ☐ Water Distribution System | ☐ Recreational | ☐ Institutional |
| ☐ Rural Water System | ☐ Commercial | ☐ Fish & Wildlife | ☐ Geothermal |
| ☐ Domestic (over 18 gpm) | ☐ Industrial | ☐ Other <u>Livestock</u> | |

Type of Application:
(check one)

- ☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

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

1. Name to Appear on Water Permit Hybrid TurkeysMailing Address 650 Riverbend DR Suite C
(Address)Kitchener
(City)ON N2K 3S2
(State) (Zip Code)Phone _____ Mobile 320-333-0607 Email wayne.kelling@hendrix-genetics.com2. Amount of water claimed 0.17 *CFS or 75 **GPM and 4 ***AF or _____ Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use)3. Source of water supply Well (approximate center NE 1/4)4. Location of point of diversion Wells in NE 1/4 Section 35-T123N-R68W County Edmunds
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☒ NoIf "Yes," where will water be used? Facility Location: W 1/2 NE 1/4 Sec 35-T123N-R68W
(example - NW 1/4 section 12-T104N-R53W)5. County or counties where water will be used Edmunds6. Annual period during which water is to be used 1-1 to 12-31

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 water will be used for turkey barns. This include water to drink, cool, and barn cleaningI, JAYE STIEF DIRECTOR, the applicant, certify under
Name of Person Title (if applicable)

penalty of perjury that I have read this application, examined the attached map, and that the matters stated are true. I further certify, if acting on behalf of an entity or individual other than myself, that I am authorized to submit this application.

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

SOUTH DAKOTA
WATER PERMIT NO. 8369-3

Date of first receipt of application July 10, 2018.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 8369-3 to Hybrid Turkeys, 650 Riverbend Dr, Suite C, Kitchener Ontario N2K 3S2 Canada 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. 8369-3 appropriates 4 acre-feet of water annually at a maximum pump rate of 0.17 cubic feet of water per second (cfs) from one well completed into the Dakota Aquifer (1,180 feet deep) located in the approximate center of the NE 1/4 Section 35 for commercial use in a livestock confinement facility located in the W 1/2 NE 1/4 Section 35; all in T123N-R68W which is approximately 1.5 miles southeast of Ipswich SD.
2. The water appropriated shall be used for the purpose of commercial 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. 8369-3 is November 5, 2018.
5. The date from which applicant may claim right is July 10, 2018.
6. One-fifth of the construction is to be completed on or before May 5, 2021.
7. All construction is to be completed on or before November 5, 2023.
8. Water is to be put to beneficial use on or before November 5, 2027.
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 well approved under Water Permit No. 8369-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Permit No. 8369-3 is subject to compliance with requirements of the Department's Water Pollution Control Permit issued pursuant to SDCL 34A-2-36 or 34A-2-36.2 or 34A-2-112 or 34A-2-124 for concentrated animal feeding operations.
3. Water Permit No. 8369-3 is subject to compliance with all existing and applicable Water Management Board Rules including but not limited to:
 - a) Chapter 74:54:01 Ground Water Quality Standards,
 - b) Chapter 74:54:02 Ground Water Discharge Permit,
 - c) Chapter 74:51:01 Surface Water Quality Standards,
 - d) Chapter 74:51:02 Uses Assigned to Lakes,
 - e) Chapter 74:51:03 Uses Assigned to Streams, and
 - f) Chapter 74:52:01 through 74:52:11 Surface Water Discharge Provisions

(continued)

4. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Dakota aquifer.
5. Water Permit No. 8369-3 authorizes a total annual diversion of 4.0 acre feet of water.

WATER MANAGEMENT BOARD

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

NOV 29 2018

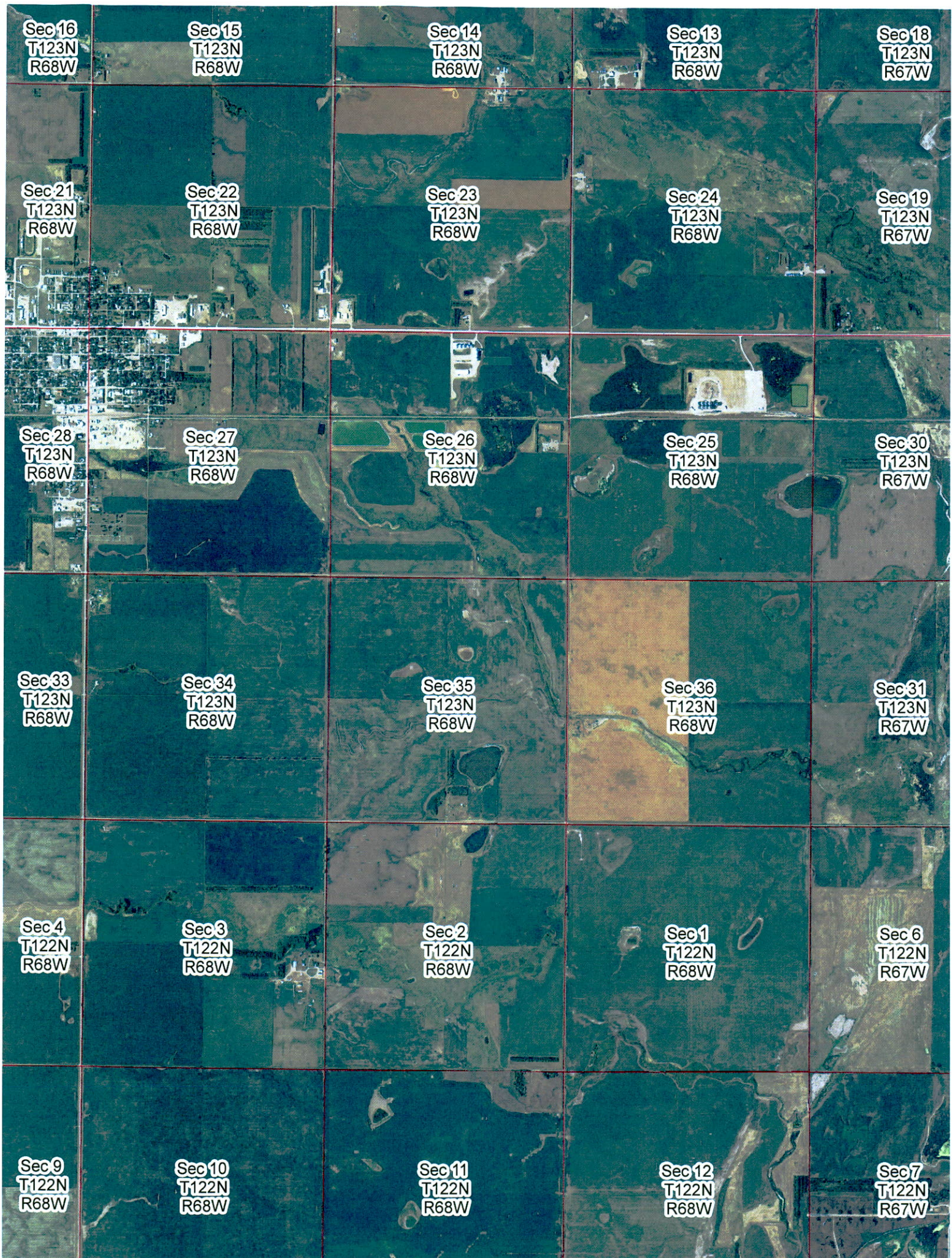
date



Well Location

Pembrook Brood





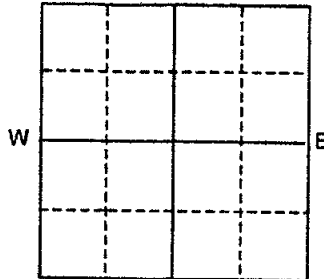
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW ¼ NW ¼ Sec 35 Twp 123N Rg 68W

County Edmunds

North

Please mark well
location with an "X"

Well Completion Date

5/14/2018

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

Mud Rotary

CASING DATA:

☐ Steel ☒ Plastic ☒ Other
 If other describe Stainless Steel

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
250 LB/FT	5 IN	0 FT	1095 FT	7 7/8 IN
SS LB/FT	2 IN	1100 FT	1180 FT	4 1/2 IN
SCH120 LB/FT	2 IN	900 FT	1100 FT	4 1/2 IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Portland	160	15 Lb/gal	0 Ft	1095 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
Pumped through 5" Pipe

SCREEN:

☐ Perforated pipe ☒ Manufactured
 Diameter 2 Inches Length 80 Feet

Material Stainless Steel

Slot Size .025 Set From 1100 Feet to 1180 Feet

Other information

WAS A PACKER OR SEAL USED? ☒ Yes ☐ No

If so, what material? Cement

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? ChlorineLab to which water ☐ No, Why Not?
quality sample sent for analysis

Well Owner:

Business Name: Hybrid Turkeys

Address: 650 Riverbend Drive Suite C

City, State, Zip: N2K3S2

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top Soil	0	10
Yellow Clay	10	25
Blue Clay	25	80
Gravel / Pea Rock	80	120
Shale	120	760
Greenhorn	760	780
Shale	780	1100
Dakota Sand	1100	1180

STATIC WATER LEVEL _____ Ground Level FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe: Air☐ Bailed☐ Other

Pumping Level Below Land Surface

_____ 10 Ft. After _____ 4 Hrs. pumped _____ 50 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

This well was drilled under license # 722 and this report is true and accurate.

Drilling firm: Stretch's Well Service Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

RECEIVED OF Hendrix Genetics USA LLC 650 Riverbend Drive, Suite C Kitchener, Ontario,
NRK 3S2 Canada Date July 10, 2018

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

Fee for Application for Permit No. <u>8369-3</u> to Appropriate Water, to construct and to put water to beneficial use	500	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>8369-3</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	700 00

No. **08719**

By

Jeanne Goodman
Chief Engineer

DM

Schlaak, Karen

To: Wayne.Kelling@hendrix-genetics.com
Subject: FW: [EXT] Water use permits submitted 7-10-18

Wayne,

Regarding the three applications for Hybrid Turkeys, more information is needed regarding the location of the facilities. With each application an aerial photo map was submitted with the location of the well identified. For purposes of the public notice, we list the location of the well to the quarter-quarter of the section. In the case of confinement facilities, we also include the location of the entire area of the facility (buildings, storage pond, lagoons etc) in the public notice. (such as SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 7 or S $\frac{1}{2}$ SW $\frac{1}{4}$ Sec 7 or whatever)

Please list the location of the entire area for each facility.

Application No. 8367-3 is for one well located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 7-T124N-R68W. *W $\frac{1}{2}$ SW $\frac{1}{4}$*

Application No. 8368-3 is for one well located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 22-T124N-R68W. *S $\frac{1}{2}$ SW $\frac{1}{4}$*

Application No. 8369-3 is for one well located in the approximate center of the NE $\frac{1}{4}$ Section 35-T123N-R68W.
W $\frac{1}{2}$ NE $\frac{1}{4}$

If you have questions, please let me know.

Karen Schlaak
SD DENR, Water Rights Program
(605) 773-3352



*Wayne called 8/7/18
and stated each facility is located within the area
indicated above.*



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 8369-3, Hybrid Turkeys**

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. 8369-3, Hybrid Turkeys, c/o Jaye Stief, Director, 650 Riverbend Drive, Suite C, Kitchener, Ontario N2K 3S2.

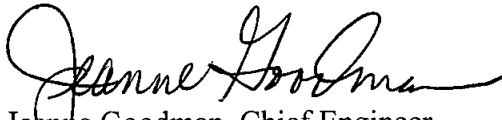
The Chief Engineer is recommending APPROVAL of Application No. 8369-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and, 4) it is in the public interest with the following qualifications:

1. The well approved under Water Permit No. 8369-3 will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner, under these Permits shall control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. Water Permit No. 8369-3 is subject to compliance with requirements of the Department's Water Pollution Control Permit issued pursuant to SDCL 34A-2-36 or 34A-2-36.2 or 34A-2-112 or 34A-2-124 for concentrated animal feeding operations.
3. Water Permit No. 8369-3 is subject to compliance with all existing and applicable Water Management Board Rules including but not limited to:
 - a) Chapter 74:54:01 Ground Water Quality Standards,
 - b) Chapter 74:54:02 Ground Water Discharge Permit,
 - c) Chapter 74:51:01 Surface Water Quality Standards,
 - d) Chapter 74:51:02 Uses Assigned to Lakes,
 - e) Chapter 74:51:03 Uses Assigned to Streams, and
 - f) Chapter 74:52:01 through 74:52:11 Surface Water Discharge Provisions

(continued)

4. The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Dakota aquifer.
5. Water Permit No. 8369-3 authorizes a total annual diversion of 4.0 acre feet of water.

See report on application for additional information.



Jeanne Goodman, Chief Engineer
October 17, 2018

NOTE: The well completed for Application No. 8369-3 was constructed using an alternative construction method that does not meet the definition of an adequate well. This type of alternative well construction is generally not allowable for commercial uses such as being made by Hybrid Turkeys now that the water use will be in excess of the reasonable domestic use criteria. Should a new or replacement well be needed it shall be constructed in accordance with the South Dakota Well Construction Standards. Hybrid Turkeys needs to be aware that given the well does not meet the definition of an adequate well it will not be afforded protection should impairment occur as a result of other diversions in the area.

REPORT TO THE CHIEF ENGINEER

Water Permit Application Nos. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3, 8374-3

Hybrid Turkeys

October 16, 2018

Water Permit Application No. 8367-3 proposes to appropriate 4 acre-feet of water per year at a maximum instantaneous diversion rate of 0.17 cubic feet per second (cfs). The diversion point for this application is one existing well (1380 feet deep) completed into the Dakota aquifer and located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 7 T124N-R68W. The water is for commercial use in a poultry confinement facility located in W $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 7 T124N-R68W, approximately 9 miles northwest of Ipswich, SD in Edmunds County.

Water Permit Application No. 8368-3 proposes to appropriate 4 acre-feet of water per year at a maximum instantaneous diversion rate of 0.17 cfs. The diversion point for this application is one existing well (1250 feet deep) completed into the Dakota aquifer and located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 22 T124N-R68W. The water is for commercial use in a poultry confinement facility located in S $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 22 T124N-R68W, approximately 6 miles north of Ipswich, SD in Edmunds County.

Water Permit Application No. 8369-3 proposes to appropriate 4 acre-feet of water per year at a maximum instantaneous diversion rate of 0.17 cfs. The diversion point for this application is one existing well (1180 feet deep) completed into the Dakota aquifer and located in the approximate center of NW $\frac{1}{4}$ Sec. 35 T123N-R68W. The water is for commercial use in a poultry confinement facility located in W $\frac{1}{2}$ NE $\frac{1}{4}$ Sec. 35 T123N-R68W, approximately 2 miles southeast of Ipswich, SD in Edmunds County.

Water Permit Application No. 8372-3 proposes to appropriate 4.6 acre-feet of water per year at a maximum instantaneous diversion rate of 0.33 cfs. The diversion point for this application is one new well (1300 feet deep) to be completed into the Dakota aquifer and located in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 35 T122N-R69W. The water is for commercial use in a poultry confinement facility located in E $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 35 T122N-R69W, approximately 8 miles southwest of Ipswich, SD in Edmunds County.

Water Permit Application No. 8373-3 proposes to appropriate 4.6 acre-feet of water per year at a maximum instantaneous diversion rate of 0.33 cfs. The diversion point for this application is one new well (1300 feet deep) to be completed into the Dakota aquifer and located in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 31 T125N-R68W. The water is for commercial use in a poultry confinement facility located in W $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 31 T125N-R68W, approximately 11.5 miles northwest of Ipswich, SD and 10.5 miles southwest of Leola, SD, in McPherson County.

Water Permit Application No. 8374-3 proposes to appropriate 4.6 acre-feet of water per year at a maximum instantaneous diversion rate of 0.33 cfs. The diversion point for this application is one new well (1300 feet deep) to be completed into the Dakota aquifer and located in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 4 T122N-R68W. The water is for commercial use in a poultry confinement facility located in NW $\frac{1}{4}$ Sec. 4 T122N-R68W, approximately 2 miles southwest of Ipswich, SD in Edmunds County.

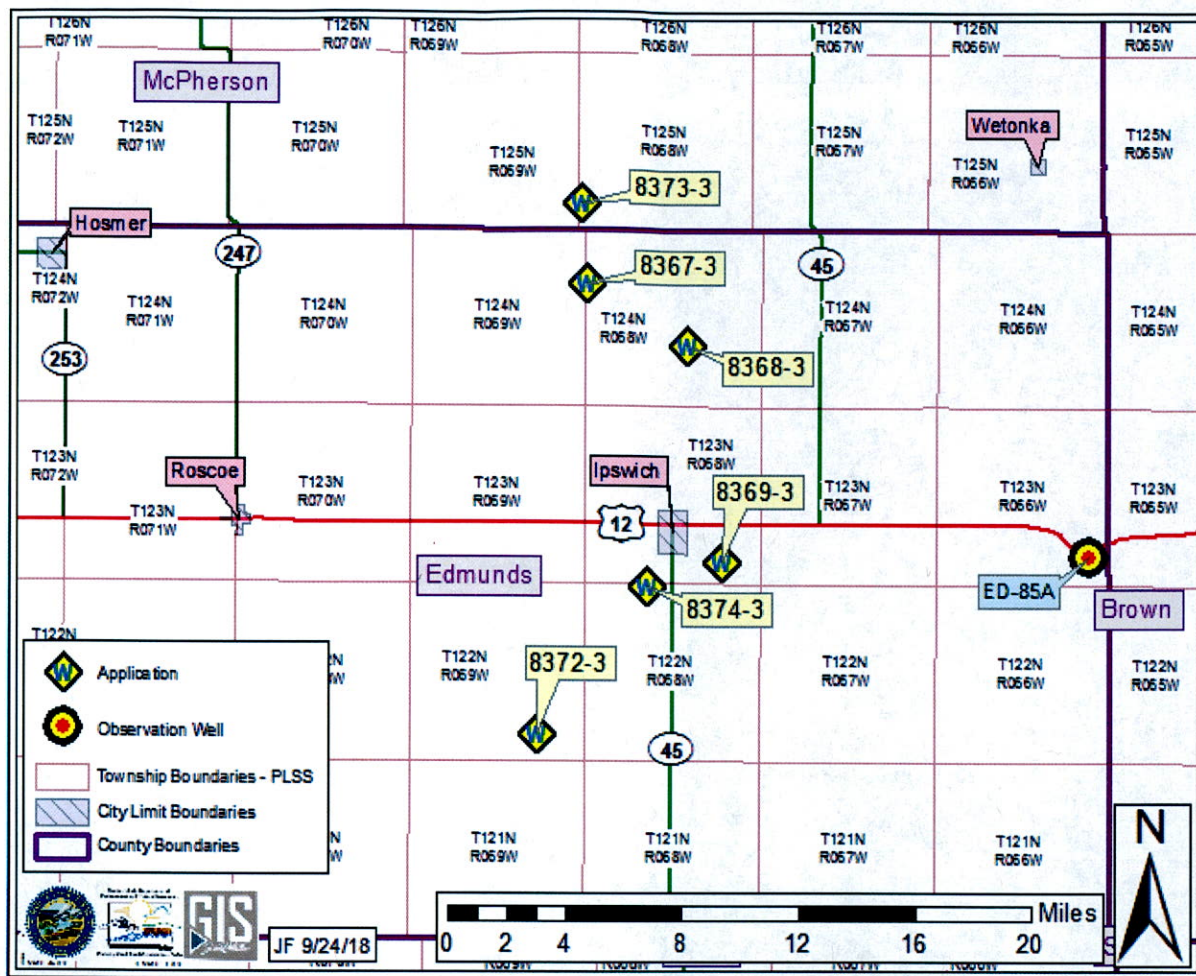


Figure 1. Map showing the location of the existing and proposed diversion points for Application Nos. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3, 8374-3 (Water Rights, 2018a; Water Rights, 2018c).

AQUIFER: Dakota (DKOT)

HYDROGEOLOGY

The Dakota Formation is defined as the first relatively continuous sandstone below the Greenhorn Limestone and extending downward to the top of the Skull Creek Shale (Schoon, 1971). The Skull Creek Shale is not continuous in Eastern South Dakota; where the shale is absent, the Dakota Formation overlies Precambrian bedrock and the Inyan Kara Group where it is present (Schoon, 1971). Within South Dakota, the Dakota Formation has been subdivided into three units (Schoon, 1971). The upper unit is a light-brown to reddish-brown, fine to medium grained friable sandstone with interbedding of gray to dark-gray shale and thin, discontinuous beds of lignite in the lower part of the upper unit. The middle unit consists of gray silty clay with small siderite pellets disseminated throughout. The lower unit is a medium to coarse grained sandstone. In total, the Dakota Formation reaches a maximum thickness of over 350 feet within McPherson, Edmunds, and Faulk Counties (Christensen, 1977).

The Dakota aquifer is comprised of the porous and permeable portions of the Dakota Formation and is a confined bedrock aquifer throughout most of South Dakota. The Dakota aquifer has been found to reach thicknesses up to 240 feet within McPherson, Edmunds, and Faulk Counties (Hamilton, 1982). Schoon (1971) estimated the Dakota aquifer underlies approximately 66,500 square miles in South Dakota with an average thickness of at least 150 feet. The amount of water in storage within the Dakota aquifer can be estimated by assuming a conservative porosity value of 15% (Schoon, 1971), and multiplying the porosity, the average thickness, and the areal extent of the aquifer together, resulting in at least 0.96 billion acre-ft of water in storage. Hedges et al. (1982) also used a porosity value of 15% and determined that there is over 381 million acre-ft of recoverable water in storage in the portion of the Dakota aquifer that lies east of the Missouri River in South Dakota. On the county level, the Dakota aquifer is estimated to have 15,285,600 acre-ft of recoverable water in Edmunds County and 13,884,000 acre-ft of recoverable water in McPherson County (Hedges et al., 1982).

At the locations applied for in these applications, the first aquifer that is expected to be encountered is the Dakota aquifer (Hamilton, 1982; Rich, 2010). The movement of groundwater within the aquifer in the area of these applications is generally from the west to the east with a slope of about 10 feet per mile (Hamilton, 1982; Schoon, 1971). At the time of completion the well for Application No. 8367-3 had a static water level of 135 feet below ground surface (completed 5/31/2018), the well for Application No. 8368-3 had a static water level of 40 feet below ground surface (completed 5/1/2018), and the well for Application No. 8369-3 had a static water level at the ground surface (completed 5/14/2018). Accounting for the ground surface elevation, these static water levels do agree with the west to east movement of the groundwater.

South Dakota Codified Law 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 and existing rights within the Dakota aquifer.

WATER AVAILABILITY

The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires "No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source." If the source of the water is older than or stratigraphically lower than the Greenhorn Formation and a water distribution system has applied for a permit, the Board need not take into consideration the balance of aquifer recharge and withdrawal. Here, the water source is older and lower than the Greenhorn Formation, however a water distribution system is not involved. Therefore, the balance of withdrawal and recharge must be considered.

Hydrologic Budget

Recharge

Recharge to the Dakota aquifer in Edmunds and McPherson counties occurs through migration of groundwater from underlying aquifers and inflow from adjacent counties (Hamilton, 1982).

As the physical properties of the aquifers and the actual areas where these aquifers are in contact with each other are both relatively unknown, an estimate of the average annual recharge to the Dakota aquifer has not been calculated. There are three different water chemistries for water within the Dakota aquifer depending upon their source of recharge (Schoon, 1971). The water chemistry that has been identified in the area of these applications indicates that the recharge to the Dakota aquifer in this area is likely coming from the Fall River Formation, the uppermost unit of the Inyan Kara Group (Schoon, 1971).

Discharge

Discharge from the Dakota aquifer in Edmunds and McPherson counties occurs through well withdrawals, uncontrolled flowing wells, and outflow to adjacent counties. Currently, there are 236 Water Rights/Permits appropriating water from the Dakota aquifer within South Dakota, excluding 6 future use permits and 3 pending applications (Water Rights, 2018a). Table 1 shows a summary of Water Rights/Permits with their limiting appropriation and estimated annual expected use. The amount of water that can be expected to be withdrawn can be estimated by assuming water rights/permits limited by an annual volume will pump the entire volume appropriated annually, water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time, and future use permits will be fully developed.

Exceptions to those typical estimated use assumptions do exist. Water rights/permits for irrigation are typically required to report their use annually, however for this report, the estimated use from irrigation was estimated assuming that turf irrigation will use 2 acre-ft per acre, and crop irrigation will apply 10 inches (0.83 acre-ft per acre). Municipal water rights/permits that were identified as being connected to rural water systems had their estimated use set to zero, as those municipalities have typically maintained a well for backup or emergency use and use a negligible amount of water. Non-irrigation water rights/permits that are required to report their annual usage had their estimated usage calculated by averaging their reported use over the period of 2003 to 2017 (Water Rights, 2003-2017).

There are six future use permits that have reserved water from the Dakota aquifer (Water Rights, 2018a). The City of Canton has 1,849 acre-ft reserved, the City of Lennox has allocated the water they had reserved, South Lincoln Rural Water System has 1,448 acre-ft reserved, and Lincoln County Rural Water System has 440 acre-ft reserved. In total, future use permits reserve 3,737 acre-ft of water from the Dakota aquifer. It is assumed that future use permits will eventually be fully utilized.

In addition to these six applications, there are currently three pending applications for the Dakota aquifer, and they are all for the same owner. The applications are for a change of use of existing water rights, from municipal use to rural water system use. The three water rights are limited to a total annual appropriation of 517 acre-ft. The municipality that owned these water rights is connected to a rural water system, so the actual usage from these water rights is expected to increase over the historic average usage as the geographic coverage area has increased. As this municipality has been connected to a rural water system, the expected use was estimated as being negligible and is currently accounted for in Table 1 under municipal use.

Table 1: Summary of the limiting appropriation and expected use of water rights/permits excluding pending and future use permits (Water Rights, 2018a)

Use Type	No. of Water Rights/Permits	Appropriation (ac-ft/yr)	Appropriation (cfs)	Expected Use (ac-ft/yr)
RWS	8	2,005	1.0	1,358.2
SHD	7		3.33	933.91
REC	2	6	0.17	195.47
COM	88	396.1	12.267	5,357.42
DOM	11	72	1.583	710.09
FWP	4	40	2.563	1,208.87
GEO	2		2.33	1,012.1
IRR	18	2,461.92		1,435.93
INS	2		1.34	582.07
IND	5		0.844	366.62
MUN	89	5,802	30.39	4,356.71
Total	236	10,783.02	55.817	17,517.39
RWS = Rural Water Supply, SHD = Suburban Housing Development, REC = Recreation, COM = Commercial, DOM = Domestic, FWP = Fish & Wildlife Propagation, GEO = Geothermal, IRR=Irrigation, INS = Institutional, IND = Industrial, MUN =Municipal				

There are a number of domestic wells on file that withdraw water from the Dakota aquifer, however the magnitude of their withdrawals is small, and since the introduction of rural water systems, many of these wells may no longer be in use (Water Rights, 2018b). The annual quantity of water withdrawn for domestic uses is considered to be negligible to the hydrologic budget of the aquifer.

It is currently unknown how much water is being discharged from the Dakota aquifer through uncontrolled flowing wells. The flow from these wells is discussed later on in this report.

These applications, if approved, are for commercial use in several poultry confinement facilities and are limited by an annual volume of 25.8 acre-ft per year in total. This 25.8 acre-ft per year is comprised of Application Nos. 8367-3, 8368-3, and 8369-3 each limited to 4 acre-ft per year and Application Nos. 8372-3, 8373-3, and 8374-3 each limited to 4.6 acre-ft per year.

Hydrologic Budget

The estimated appropriative withdrawals from the Dakota aquifer are 17,517.39 ac-ft/yr from non-irrigation and irrigation users. Including an estimated 25.8 ac-ft/yr from these applications, 3,737 ac-ft/yr from the future use reservations, and an estimated 517 ac-ft/yr from the pending applications, the estimated average annual withdrawal from the Dakota aquifer is 21,797.19 ac-ft/yr.

The estimated annual recharge to the Dakota aquifer has not been quantified. As there are wells that are drilled into the Dakota aquifer that continue to flow at the ground surface, it is likely that there are still uncontrolled flowing wells that are allowing water to flow to waste.

The estimated annual withdrawals equate to less than 0.01 percent of the available water in storage. Due to the relatively small development of this large resource, leakage from underlying aquifers, and groundwater flowing to waste, there is a reasonable probability there is unappropriated water available from the Dakota aquifer for the proposed appropriation.

Observation Well Data

In determining the availability of unappropriated water for a permit application Administrative Rule 74:02:05:07 requires the Water Management Board to rely on the record of observation well measurements, in addition to other data, to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated annual recharge.

The Water Rights Program monitors 46 observation wells completed in the Dakota aquifer (Water Rights, 2018c). The nearest observation well is ED-85A, located approximately 12.5 miles east to 20 miles east-northeast to 21 miles southeast of the proposed well locations (Figure 1). The next nearest observation well, HD-87A, is located over 72 miles to the south.

In addition to the observation well hydrographs, a record of the potentiometric surface is known through historical accounts. Looking at several recorded well readings, Hamilton (1982) shows that near Ipswich, SD, water levels have dropped more than 250 feet since the year 1885. Schoon (1971) created maps of the potentiometric surface using data modified from Darton (1909), from the State Engineer's office for the period 1914-1915, and their 3rd potentiometric surface map does not include any data from Faulk, Edmunds, or McPherson counties. Hamilton (1982) also created a potentiometric surface map, and recent well log completion reports approximate the current conditions (Water Rights, 2018b).

Table 2: Summary of historical water levels near the application locations

Data Source	Year(s)	Approximate potentiometric surface near applications (feet)
Schoon 1971 after Darton	1909	1,750 – 1,800
Schoon 1971, State Engineers Office	1914-1915	1,550 – 1,625
Hamilton 1982	1968-1970	1,535 – 1,610
Well Logs Database	2018	1,500 – 1,550

While the overall trend in these historical measurements is downward, observation well ED-85A has recorded a trend that has been stable to slightly increasing over the years 1991-2017, the period of record for the observation well (Figure 2). Elsewhere in the state, the trend is continuing to slightly decrease, however the rate of that decrease is slowing, indicating that the aquifer may be approaching a new state of equilibrium (Water Rights, 2018c). The observation well data indicates that there is a reasonable probability that there is unappropriated water available from the Dakota aquifer and that beneficial withdrawals are not exceeding the recharge to the aquifer.

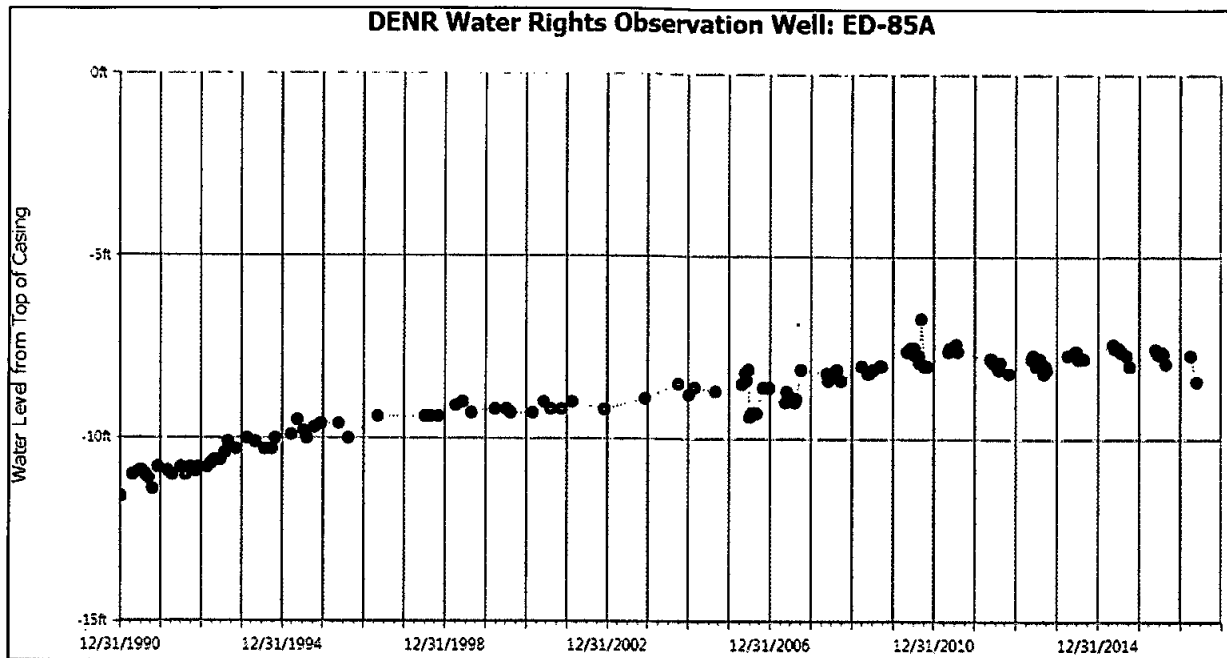


Figure 2: Hydrograph for Observation Well ED-85A (Water Rights, 2018c)

EXISTING WATER RIGHTS

Statewide, there are 236 Water Rights/Permits appropriating water from the Dakota aquifer excluding 6 future use permits and 3 pending applications (Water Rights, 2018a). The location of the diversion points for water rights/permits authorized to withdraw water from the Dakota aquifer in the vicinity of this application are shown in Figure 3. There are no areas reserved for future use permits within the map boundaries as shown.

There are 2 water rights appropriating water from the Dakota aquifer within 10 miles of any of these applications. Water Right No. 6011-3 is held by the Plainview Colony Hutterian Brethren and appropriates a combined 0.22 cfs from a well completed into the Dakota aquifer and a well completed into the Inyan Kara aquifer. Water Right No. 6128-3 is held by the Deerfield Hutterian Brethren Inc., and appropriates 0.27 cfs from four wells completed into the Inyan Kara and Dakota aquifers, of which, 70 gpm is produced from the Dakota aquifer.

While the Dakota aquifer is a confined aquifer and drawdown can extend for some distance in a confined aquifer, the drawdown created by the low diversion rates of these applications is minimal and will not adversely impact nearby adequate wells. If the annual limits were spread out over the entire year and pumped continuously, the equivalent pump rates would be 2.48 gallons per minute each for Application Nos. 8367-3, 8368-3, and 8369-3, and 2.85 gallons per minute each for Application Nos. 8372-3, 8373-3, and 8374-3.

The nearest domestic well on record with the Water Rights Program and completed into the Dakota aquifer is located ½ mile south of Application No. 8369-3. Other applications also have potential well locations at about the ½ mile distance, however there is either a well completed into a different aquifer, or no record of a well being located there. Domestic water users with adequate wells are unlikely to be adversely impacted by the proposed water appropriations.

In the past, the Water Management Board has recognized that to place water to the maximum beneficial use, a certain amount of drawdown may occur. With no history of well interference complaints from users in the Dakota aquifer in Edmunds or McPherson counties, adequate wells are not expected to be adversely impacted if this proposed appropriation is approved.

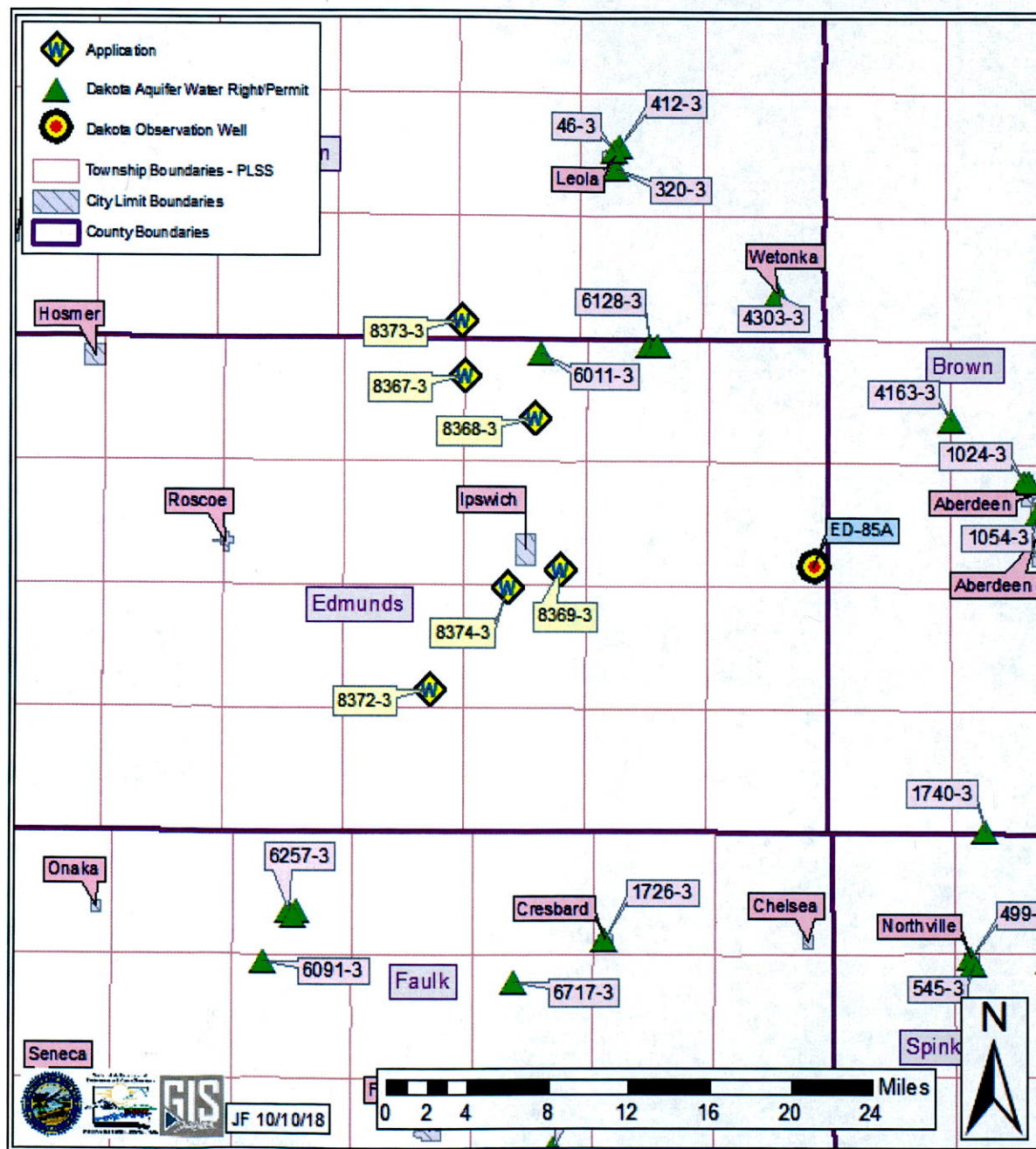


Figure 3: Map of the vicinity of Application Nos. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3, and 8374-3 including Dakota aquifer water rights/permits (Water Rights, 2018a; Water Rights, 2018c)

Special Consideration: Declining Hydraulic Head

As the Dakota aquifer is a confined aquifer, the hydraulic head causes the water within the aquifer to rise above the top of the aquifer. As soon as wells began penetrating the Dakota aquifer in the late 1800's, a decline in the aquifer's hydraulic head occurred whenever a flowing well was drilled and not properly controlled, essentially an uncontrolled release of the pressure contained within the aquifer. This decline has caused some concern on whether or not the Dakota aquifer withdrawals have exceeded the recharge to the aquifer. The Water Management Board has previously and carefully considered the declining head in the Dakota aquifer. In the deliberation and approval of Water Permit No. 5136-3, the Water Management Board approved findings of fact and conclusions of law containing the following summarized points:

- The estimated average annual recharge to the Dakota aquifer is not likely to be quantified in the near future.
- Determination of whether the withdrawals exceed the estimated average annual recharge cannot be determined solely by a decline in the hydraulic head.
- SDCL 46-6-6.1 does not require the artesian head to be protected; however the Board must consider the effect of a limitation or loss of artesian head as one of the factors under the public interest determination.
- The decline in the hydraulic head in the Dakota aquifer has been primarily due to water being discharged through uncontrolled flowing wells.
- "Water discharged from uncontrollable flowing wells does not constitute withdrawal (appropriation) pursuant to SDCL 46-6-3.1."
- That it is in the public interest to appropriate water rather than allow the water to be discharged by uncontrollable flowing wells.
- That it is not in the public interest to deny a water permit application when the effects of the withdrawal will not be measureable and will not have a significant effect upon the decline or stabilization of the hydraulic head in the Dakota aquifer.

Special Consideration: Adequate Wells

An adequate well has been defined in Administrative Rule of South Dakota (ARSD) 74:02:04:20(6) as:

"a well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet".

The wells that have been completed for Application Nos. 8367-3, 8368-3, and 8369-3 were constructed using the alternative construction method and do not meet the definition of an adequate well. The alternative well construction method (ARSD 74:02:04:35) is not allowable for commercial uses and any new or replacement wells for these applications shall be constructed to the requirements outlined in the South Dakota Well Construction Standards (ARSD Chapter 74:02:04) for an adequate well completed into a confined aquifer.

CONCLUSIONS

1. Water Permit Application No. 8367-3 proposes to appropriate 4 acre-feet of water per year at a maximum instantaneous diversion rate of 0.17 cubic feet per second (cfs) from one well completed into the Dakota aquifer in Edmunds County.
2. Water Permit Application No. 8368-3 proposes to appropriate 4 acre-feet of water per year at a maximum instantaneous diversion rate of 0.17 cubic feet per second (cfs) from one well completed into the Dakota aquifer in Edmunds County.
3. Water Permit Application No. 8369-3 proposes to appropriate 4 acre-feet of water per year at a maximum instantaneous diversion rate of 0.17 cubic feet per second (cfs) from one well completed into the Dakota aquifer in Edmunds County.
4. Water Permit Application No. 8372-3 proposes to appropriate 4.6 acre-feet of water per year at a maximum instantaneous diversion rate of 0.33 cubic feet per second (cfs) from one well completed into the Dakota aquifer in Edmunds County.
5. Water Permit Application No. 8373-3 proposes to appropriate 4.6 acre-feet of water per year at a maximum instantaneous diversion rate of 0.33 cubic feet per second (cfs) from one well completed into the Dakota aquifer in McPherson County.
6. Water Permit Application No. 8374-3 proposes to appropriate 4.6 acre-feet of water per year at a maximum instantaneous diversion rate of 0.33 cubic feet per second (cfs) from one well completed into the Dakota aquifer in Edmunds County.
7. Based on observation well data and the hydrologic budget, there is a reasonable probability that unappropriated water is available from the Dakota aquifer.
8. There is a reasonable probability that the diversion proposed by this application will not adversely impact adequate wells for existing water rights and domestic uses.
9. The proposed use of these wells is for commercial use, therefore any new or replacement wells are not allowed to be constructed using the alternative construction requirements that are allowed for domestic use and outlined in ARSD 74:02:04:35.



John Farmer
SD DENR – Water Rights Program

REFERENCES

- Christensen, C.M., 1977, Geology and Water Resources of McPherson, Edmunds, and Faulk Counties, South Dakota. Part I: Geology. South Dakota Geological Survey Bulletin 26. Vermillion, SD.
- Darton, N.H. 1909. Geology and Underground Waters of South Dakota. Water Supply Paper 227. U.S. Geological Survey, Washington D.C.
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- Hedges, L.S., Burch, S. L., Iles, D. L., Barari, R. A., and Schoon, R. A. 1982. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota, and Iowa. Task 1: Bedrock Topography and Distribution, Task 2: Extent of Aquifers, Task 3: Ground-Water Storage, Task 4: Computerized Data Base, Final Report. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Rich, T., 2010. First Occurrence of Aquifer Materials in Edmunds County, South Dakota. Aquifer Materials Map 31. South Dakota Geological Survey, Vermillion, SD.
- Schoon, R.A., 1971. Geology and Hydrology of the Dakota Formation in South Dakota. South Dakota Geological Survey Report of Investigations No. 104. Vermillion, SD.
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- Water Rights. 2018b. Well Completion Report Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2018c, "Observation Well Database", SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Affidavit of Publication

STATE OF SOUTH DAKOTA)

County of McPherson)

SS.

I, [Signature], of said county and State, being first duly sworn, on oath says: That the McPherson County Herald is a weekly newspaper of general circulation, and a legal newspaper as defined by Section 7070, 1919 Revised Code printed and published in Leola in said County

and State by [Signature] and has been such newspaper during the time hereinafter mentioned, and that

I, [Signature], the undersigned am publisher of said newspaper, in charge of the advertising department thereof, and have personal knowledge of all facts stated in this affidavit, and that the advertisement headed:

Notice of Application

a printed copy of which is hereto attached was printed and

published in the said newspaper for 1 successive issues, to-wit: The first publication being made on

October 24, 2018

the second on _____

the third on _____

the fourth on _____

the fifth on _____

the sixth on _____

That the full amount of the fees charged for publishing the same,

to-wit: the sum of \$ 52.47 inures solely to the benefit of the publisher of the McPherson County Herald. That no agreement or understanding of any division thereof has been made with any person, and that no part thereof has been agreed to be paid to any person whomsoever.

JODI L. KALLAS
Notary Public
SEAL
South Dakota

Publisher

Subscribed and sworn to before me this 1 day of

November

20 18

My commission expires

Jodi R. Kallas
My Commission Expires 08-25-2019 Notary Public

20

NOTICE OF APPLICATION
NOS. 8367-3, 8368-3, 8369-3,
8372-3, 8373-3 and 8374-3 to

Appropriate Water

Notice is given that Hybrid Turkeys, c/o Jaye Stief, Director, 650 Riverbend Dr, Suite C, Kitchener Ontario N2K 3S2 Canada has filed the following applications for water permits. Application No. 8367-3 proposes to appropriate 4 acre-feet of water annually at a maximum pump rate of 0.17 cubic feet of water per second (cfs) from one well completed into the Dakota Aquifer (1,380 feet deep) located in the SW 1/4 SW 1/4 Section 7 for commercial use in a livestock confinement facility located in the W 1/2 SW 1/4 Section 7; all in T124N-R68W which is approximately 9 miles northwest of Ipswich SD.

Application No. 8368-3 proposes to appropriate 4 acre-feet of water annually at a maximum pump rate of 0.17 cfs from one well completed into the Dakota Aquifer (1,250 feet deep) located in the SE 1/4 SW 1/4 Section 22 for commercial use in a livestock confinement facility located in the S 1/2 SW 1/4 Section 22; all in T124N-R68W which is approximately 6 miles north of Ipswich SD.

Application No. 8369-3 proposes to appropriate 4 acre-feet of water annually at a maximum pump rate of 0.17 cfs from one well completed into the Dakota Aquifer (1,180 feet deep) located in the approximate center of the NE 1/4 Section 35 for commercial use in a livestock confinement facility located in the W 1/2 NE 1/4 Section 35; all in T123NR68W which is approximately 1.5 miles southeast of Ipswich SD. Application No. 8372-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NE 1/4 NW 1/4 Section 35 for commercial use in a livestock confinement facility located in the E 1/2 NW 1/4 Section 35; all in T122N-R69W which is approximately 8 miles southwest of Ipswich SD.

Application No. 8373-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NW 1/4 NW 1/4 Section 31 for commercial use in a livestock confinement facility located in the W 1/2 NW 1/4 Section 31; all in T125N-R68W which is approximately 10 miles north of Ipswich SD.

Application No. 8374-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NW 1/4 NW 1/4 Section 4 for commercial use in a livestock confinement facility located in the NW 1/4 Section 4; all in T122NR68W which is approximately 1.5 miles south of Ipswich SD. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3 and 8374-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendations with qualifications, the applications, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting the applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 5, 2018.

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NOV 16 2018

WATER RIGHTS
PROGRAM

The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

If the applicant does not contest the recommendations of the Chief Engineer and no petition to oppose the applications is received, the Chief Engineer shall act on the applications pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider the applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Steven M. Pirner, Secretary,
Department of Environment and
Natural Resources.

Published once at the total
approximate cost of \$52.47.

**AFFIDAVIT OF
PUBLICATION**

State of South Dakota)
) SS
County of Edmunds)

D.E. Gibson of said county, being, first duly sworn on oath says: That he is the publisher or an employee of the publisher of the **Ipswich Tribune**, a weekly newspaper, published in the City of Ipswich, in said County of Edmunds, and State of South Dakota: that he has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper as defined in SDCL 17-2-2.1 through 17-2-2.4 inclusive; that said newspaper has been published within the said County of Edmunds and State of South Dakota, for at least one year next prior to the first publication of the attached public notice, and that the advertisement headed

**NOTICE OF APPLICATION
TO APPROPRIATE WATER**

a printed copy of which, taken from the paper in which the same was published, and which is hereto attached and made a part of this affidavit, was published in said newspaper for ONE successive issues.

The First publication being made on the 24 day of Oct., 20 18

The Second publication being made on the ____ day of ____, 20 ____

The Third publication being made on the ____ day of ____, 20 ____

The Fourth publication being made on the ____ day of ____, 20 ____

The Fifth publication being made on the ____ day of ____, 20 ____

That the full amount of the fee charged for the publication of the attached public notice insures to the sole benefit of the publisher; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are:

Forty-eight Dollars and

nine cents (\$ 48.09)

Signed: _____

Subscribed and sworn to before me this 1 day of Nov., 20 18

Jenna M Gibson
Notary Public - Edmunds County, South Dakota
My commission expires February 26, 2019

PUBLIC NOTICE

**NOTICE OF APPLICATION
NOS. 8367-3, 8368-3, 8369-3,
8372-3, 8373-3 and 8374-3
to Appropriate Water**

Notice is given that Hybrid Turkeys, c/o Jaye Stief, Director, 650 Riverbend Dr, Suite C; Kitchener Ontario N2K 3S2 Canada has filed the following applications for water permits.

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Application No. 8368-3 proposes to appropriate 4 acre-feet of water annually at a maximum pump rate of 0.17 cfs from one well completed into the Dakota Aquifer (1,250 feet deep) located in the SE 1/4 SW 1/4 Section 22 for commercial use in a livestock confinement facility located in the S 1/2 SW 1/4 Section 22; all in T124N-R68W which is approximately 6 miles north of Ipswich SD.

Application No. 8369-3 proposes to appropriate 4 acre-feet of water annually at a maximum pump rate of 0.17 cfs from one well completed into the Dakota Aquifer (1,180 feet deep) located in the approximate center of the NE 1/4 Section 35 for commercial use in a livestock confinement facility located in the W 1/2 NE 1/4 Section 35; all in T123N-R68W which is approximately 1.5 miles southeast of Ipswich SD.

**RECEIVED
NOV 06 2018
WATER RIGHTS
PROGRAM**

Application No. 8372-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NE 1/4 NW 1/4 Section 35 for commercial use in a livestock confinement facility located in the E 1/2 NW 1/4 Section 35; all in T122N-R69W which is approximately 8 miles southwest of Ipswich SD.

Application No. 8373-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NW 1/4 NW 1/4 Section 31 for commercial use in a livestock confinement facility located in the W 1/2 NW 1/4 Section 31; all in T125N-R68W which is approximately 10 miles north of Ipswich SD.

Application No. 8374-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NW 1/4 NW 1/4 Section 4 for

commercial use in a livestock confinement facility located in the NW 1/4 Section 4; all in T122N-R68W which is approximately 1.5 miles south of Ipswich SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3 and 8374-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendations with qualifications, the applications, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting the applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 5, 2018.

The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

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Steven M. Pirner, Secretary,
Department of Environment
and Natural Resources.

*Published once at the total
approximate cost of \$48.09
(Publish T 10-24)*

RECEIVED

OCT 26 2018

AFFIDAVIT OF PUBLICATION WATER RIGHTS PROGRAM

STATE OF SOUTH DAKOTA}

§

COUNTY OF BROWN}

Carla Renning being duly sworn, on his/her oath says: That the AMERICAN NEWS is a daily newspaper of general circulation, printed and published in Aberdeen, Brown County, South Dakota, by the Aberdeen News Company, a corporation, and has been such a newspaper during the times hereinafter mentioned; That affiant is an employee and principal clerk of said publisher and has personal knowledge of all facts stated in this affidavit; That the advertisement headed:

Legal #563472

Notice of Application to Appropriate water

a printed copy of which is hereunto attached, was printed and published in the regular and entire issue of said newspaper, and not in a supplement thereof, once each

day for 1 successive day

The first publication being made on the 24th day of Oct., 2018.

The second publication being made on the _____ day of _____, 2018.

The third publication being made on the _____ day of _____, 2018.

The fourth publication being made on the _____ day of _____, 2018.

The fifth publication being made on the _____ day of _____, 2018.

The sixth publication being made on the _____ day of _____, 2018;

That said newspaper is a legal newspaper published five days or more each week; with a bona fide circulation of more than two hundred copies daily; published in the English language within the said county of Brown for more than one year prior to the first publication of said notice; and printed in whole in an office maintained at the place of publication of said newspaper; That the whole amount of the fee paid for the publication of the annexed notice is \$ 88.49, which insures solely to the benefit of said publisher; That no agreement or understanding for a division thereof had been made with any other person; and That no part thereof has been agreed to be paid to any person whomsoever.

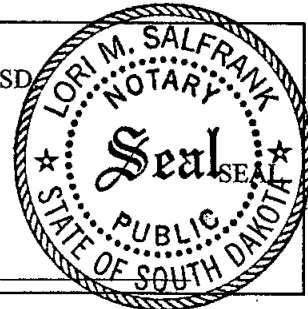
Carla Renning

Subscribed and sworn to before me this 24th day of Oct., 2018.

Daily Circulation 10,000

Priscilla

Notary Public, Brown County, SD



My commission expires March 20, 2019

(No. 563472)
(October 24, 2018 - 1T)

**NOTICE OF APPLICATION NOS.
8367-3, 8368-3, 8369-3,
8372-3, 8373-3 and 8374-3
to Appropriate Water**

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Application No. 8368-3 proposes to appropriate 4 acre-feet of water annually at a maximum pump rate of 0.17 cfs from one well completed into the Dakota Aquifer (1,250 feet deep) located in the SE 1/4 SW 1/4 Section 22 for commercial use in a livestock confinement facility located in the S 1/2 SW 1/4 Section 22; all in T124N-R68W which is approximately 6 miles north of Ipswich SD.

Application No. 8369-3 proposes to appropriate 4 acre-feet of water annually at a maximum pump rate of 0.17 cfs from one well completed into the Dakota Aquifer (1,180 feet deep) located in the approximate center of the NE 1/4 Section 35 for commercial use in a livestock confinement facility located in the W 1/2 NE 1/4 Section 35; all in T123N-R68W which is approximately 1.5 miles southeast of Ipswich SD.

Application No. 8372-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NE 1/4 NW 1/4 Section 35 for commercial use in a livestock confinement facility located in the E 1/2 NW 1/4 Section 35; all in T122N-R69W which is approximately 8 miles southwest of Ipswich SD.

Application No. 8373-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NW 1/4 NW 1/4 Section 31 for commercial use in a livestock confinement facility located in the W 1/2 NW 1/4 Section 31; all in T125N-

R68W which is approximately 10 miles north of Ipswich SD.

Application No. 8374-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NW 1/4 NW 1/4 Section 4 for commercial use in a livestock confinement facility located in the NW 1/4 Section 4; all in T122N-R68W which is approximately 1.5 miles south of Ipswich SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3 and 8374-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendations with qualifications, the applications, and staff report are available at <http://denr.sd.gov/> public or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting the applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 5, 2018.

The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

If the applicant does not contest the recommendations of the Chief Engineer and no petition to oppose the applications is received, the Chief Engineer shall act on the applications pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider the applications. Notice of the hearing will be given to the applicant and any person filing a petition.

Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of \$88.49.



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 NEWSPAPERS RIGHT AWAY.**

October 17, 2018

Hybrid Turkeys
c/o Jaye Stief, Director
650 Riverbend Dr, Suite C
Kitchener Ontarior N2K 3S2 Canada

Dear Mr. Stief:

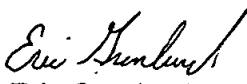
Water Permit Application Nos. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3 and 8374-3 for commercial use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the following papers:

American News, Aberdeen SD (Ph # 605 225-4100)
Ipswich Tribune, Ipswich SD (Ph # 605 426-6471)
McPherson County Herald, Leola SD (Ph # 605 439-3131)

You will need to contact the newspapers and authorize publication of this notice. For your information, a copy of the notice, the recommendations of the Chief Engineer and report on the applications are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,


Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

NOTICE OF APPLICATION NOS. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3 and 8374-3 to Appropriate Water

Notice is given that Hybrid Turkeys, c/o Jaye Stief, Director, 650 Riverbend Dr, Suite C, Kitchener Ontario N2K 3S2 Canada has filed the following applications for water permits.

Application No. 8367-3 proposes to appropriate 4 acre-feet of water annually at a maximum pump rate of 0.17 cubic feet of water per second (cfs) from one well completed into the Dakota Aquifer (1,380 feet deep) located in the SW 1/4 SW 1/4 Section 7 for commercial use in a livestock confinement facility located in the W 1/2 SW 1/4 Section 7; all in T124N-R68W which is approximately 9 miles northwest of Ipswich SD.

Application No. 8368-3 proposes to appropriate 4 acre-feet of water annually at a maximum pump rate of 0.17 cfs from one well completed into the Dakota Aquifer (1,250 feet deep) located in the SE 1/4 SW 1/4 Section 22 for commercial use in a livestock confinement facility located in the S 1/2 SW 1/4 Section 22; all in T124N-R68W which is approximately 6 miles north of Ipswich SD.

Application No. 8369-3 proposes to appropriate 4 acre-feet of water annually at a maximum pump rate of 0.17 cfs from one well completed into the Dakota Aquifer (1,180 feet deep) located in the approximate center of the NE 1/4 Section 35 for commercial use in a livestock confinement facility located in the W 1/2 NE 1/4 Section 35; all in T123N-R68W which is approximately 1.5 miles southeast of Ipswich SD.

Application No. 8372-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NE 1/4 NW 1/4 Section 35 for commercial use in a livestock confinement facility located in the E 1/2 NW 1/4 Section 35; all in T122N-R69W which is approximately 8 miles southwest of Ipswich SD.

Application No. 8373-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NW 1/4 NW 1/4 Section 31 for commercial use in a livestock confinement facility located in the W 1/2 NW 1/4 Section 31; all in T125N-R68W which is approximately 10 miles north of Ipswich SD.

Application No. 8374-3 proposes to appropriate 4.6 acre-feet of water annually at a maximum pump rate of 0.33 cfs from one well completed into the Dakota Aquifer (1,300 feet deep) located in the NW 1/4 NW 1/4 Section 4 for commercial use in a livestock confinement facility located in the NW 1/4 Section 4; all in T122N-R68W which is approximately 8 miles south of Ipswich SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3 and 8374-3 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendations with qualifications, the applications, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting the applications or recommendations must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 5, 2018.

The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

If the applicant does not contest the recommendations of the Chief Engineer and no petition to oppose the applications is received, the Chief Engineer shall act on the applications pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the applications or contesting the recommendations is filed, then a hearing will be scheduled and the Water Management Board will consider the applications. Notice of the hearing will be given to the applicant and any person filing a petition.

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

NOV 29 2018

Hybrid Turkeys
c/o Jaye Stief, Director
650 Riverbend Dr, Suite C
Kitchener ON N2K 3S2 Canada

Dear Mr. Stief:

Enclosed are Water Permit Nos. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3 and 8374-3 authorizing construction of the water diversion systems and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

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

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

Sincerely,

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

enclosures

c: Wayne Kelling, Hybrid Turkeys, 207 1st Ave, Ipswich SD 57451



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

May 23, 2025

NOTICE OF HEARING

TO: Hybrid Turkeys, 650 Riverbend Drive, Kitchener ON N2K3S

FROM: Ron Duvall, Engineer III
for Mark Mayer, PE
Director of Office of Water

SUBJECT: Violation of Permit Qualification to Report Annual Water Use

Our records indicate your 2024 annual water use has not been submitted for Permit Nos. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3, and 8374-3. The request to report water use for 2024 was dated January 3, 2025. Two follow-up attempts to get the required water use report have gone unanswered. The Water Management Board has directed owners of water permits who have not submitted the 2024 water use reporting 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 Nos. 8367-3, 8368-3, 8369-3, 8372-3, 8373-3, and 8374-3 qualification:

"The Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Dakota Aquifer."

The hearing will be held on **Wednesday, July 9, 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) 8367-3, 8368-3, 8369-3, 8372-3, 8373-3, and 8374-3 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 water use report(s) is (are) received in this office before the **July 9, 2025** hearing, you will no longer be in violation of your permit and your name will be removed from the Board agenda. You may submit your water use report by providing the information to Rachel Rodriguez at (605) 773-3352 or via email at rachel.rodriguez@state.sd.us. You may also submit the water use report via mail using the address in the NOTE at the bottom of this Notice.

NOTE: Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD 57501 or call (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Friday, June 27, 2025 8:00 AM
To: Marek Mirda
Cc: Valerie Smith
Subject: RE: [EXT] Water use report FW: Attached Image

This is perfect! These permits have been removed from the water management board meeting list.

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us



From: Marek Mirda <Marek.Mirda@hendrix-genetics.com>
Sent: Thursday, June 26, 2025 4:15 PM
To: Rodriguez, Rachel <Rachel.Rodriguez@state.sd.us>
Cc: Valerie Smith <Valerie.Smith@hendrix-genetics.com>
Subject: [EXT] Water use report FW: Attached Image

Dear Rachel,
Please note I am reaching out with a water use report for our SD Ipswich sites.

Permit 8367-3 consumed 204,456 Gal of water
Permit 8368-3 consumed 1,199,130 Gal of water
Permit 8369-3 consumed 0 gal Farm was empty
Permit 8372-3 Consumed 1,404,707 Gal of water
Permit 8373-3 consumed 1,553,226 Gal of water
Permit 8374-3 consumed 1,650,056 Gal of water

Apologies for delayed reporting. We somehow missed the information request. Please signal if this is sufficient or not.
Appreciate the support

Marek Mirda
Operations Director, Americas



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F +1 519 578 1870
M +1 519 503 4710
E marek.mirda@hendrix-genetics.com
W hendrix-genetics.com

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