

**NOTICE OF INTENT TO MODIFY A PERMIT AUTHORIZING THE USE OF WATER FOR GENERAL CROP IRRIGATION IN  
FREMONT COUNTY, IOWA**

Notice is hereby given that pursuant to Iowa Code Chapter 455B, there is now on file with the Iowa Department of Natural Resources, Water Supply Engineering Section, 6200 Park Ave. Suite 200, Des Moines, IA 50321, an application as described below.

Tyler Binder, Iowa DNR Log Number 34,252, requests to modify their water use permit (6766) to withdraw water from thirteen Missouri River alluvial wells, located on land generally described as the SE  $\frac{1}{4}$  of SE  $\frac{1}{4}$  of Section 36, T69, R43W; the NW  $\frac{1}{4}$ , the E  $\frac{1}{2}$  of the SW  $\frac{1}{4}$ , and the N  $\frac{1}{2}$  of the SE  $\frac{1}{4}$ , and the SE  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  of Section 12, T68, R43W; the W  $\frac{1}{2}$  of the SE  $\frac{1}{4}$  of Section 31, T69, R42W; the W  $\frac{1}{2}$  of the NW  $\frac{1}{4}$  and the N  $\frac{1}{2}$  of the SW  $\frac{1}{4}$  and the S  $\frac{1}{2}$  of the SE  $\frac{1}{4}$  of Section 7, T68, R42W; the E  $\frac{1}{2}$  of the NE  $\frac{1}{4}$  of Section 14, T68, R43W; the N  $\frac{1}{2}$  of Section 13, T68, R43W; all of Section 18, T68, R42W; all of Section 17, T68, R42W lying West of Bluff Rd; the W  $\frac{1}{2}$  of the NW  $\frac{1}{4}$  of Section 20, T68, R42W; the NW  $\frac{1}{4}$  and the N  $\frac{1}{2}$  of the S  $\frac{1}{2}$  of Section 19, T68, R42W; and the NE  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  of Section 24, T68, R43W, Fremont County, Iowa, in the maximum quantity of 2,083 acre-feet per year, at a maximum rate of 11,900 gallons per minute during the period April 1 to September 30 of each year for irrigation of up to 2,083 acres of general farm crops located on said land. The water use is from one distinct source: the Missouri River alluvial aquifer (thirteen wells). Withdrawal limits have been placed on individual wells as described in the permit conditions.

This modification request for permit 6766 increases the number of Missouri River alluvial aquifer (alluvial aquifer) wells approved for irrigation of general farm crops by twelve wells: from one to thirteen wells; increase the maximum pumping rate by 10,400 gallons per minute (GPM), from 1,500 GPM to 11,900 GPM; and to increase the annual water allocation by 1,773 acre to feet per year (AFY), from 310 AFY to 2,083 AFY; and to increase the number of irrigated acres by 1,753 acres, from 330 acres to 2,083 acres, for irrigation of approximately 2,083 acres of general farm crops, all from one distinct source: the Missouri River alluvial aquifer (thirteen wells).

If this modification request is granted, three other water use permits owned by the applicant (8723, 8724, and 8725) within the proposed use area will be terminated or merged in order to condense four permits on contiguous parcels to permit 6766. These four permits currently have combined totals of 505 acres, 496 AFY, and a max pumping rate of 3,900 GPM. The total cumulative changes from the four existing permits is to increase the maximum pumping rate by 8,000 GPM; increase the total annual allocation by 1,587 AFY, and to increase the use site by 1,578 acres, all from one distinct source: the Missouri River alluvial aquifer.

The Department has determined that this use of water conforms to the relevant criteria (Iowa Code Chapter 455B and Iowa Administrative Code 567) and recommends the permit be granted. A copy of the summary report for the application is available upon request to the Department at the address listed above. Comments on the report and on this use of water must be received by May 20, 2026, and should be addressed "ATTN: Erik Day" and should specify the applicants log number (Log Number 34,252).

**IOWA DEPARTMENT OF NATURAL RESOURCES  
WATER USE PERMIT SUMMARY REPORT**

**Applicant:** Tyler Binder  
71387 624 Blvd.  
Table Rock, NE 68447

**Application Log No.:** 34,252

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**Permit Request**

Tyler Binder requests to modify their water use permit (6766) to increase the number of Missouri River alluvial aquifer (alluvial aquifer) wells approved for irrigation of general farm crops by twelve wells: from one to thirteen wells; increase the maximum pumping rate by 10,400 gallons per minute (GPM), from 1,500 GPM to 11,900 GPM; and to increase the annual water allocation by 1,773 acre to feet per year (AFY), from 310 AFY to 2,083 AFY; and to increase the number of irrigated acres by 1,753 acres, from 330 acres to 2,083 acres, for irrigation of approximately 2,083 acres of general farm crops, all from one distinct source: the Missouri River alluvial aquifer (thirteen wells). The wells and water use site are located on land generally described as the SE  $\frac{1}{4}$  of SE  $\frac{1}{4}$  of Section 36, T69, R43W; the NW  $\frac{1}{4}$ , the E  $\frac{1}{2}$  of the SW  $\frac{1}{4}$ , and the N  $\frac{1}{2}$  of the SE  $\frac{1}{4}$ , and the SE  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  of Section 12, T68, R43W; the W  $\frac{1}{2}$  of the SE  $\frac{1}{4}$  of Section 31, T69, R42W; the W  $\frac{1}{2}$  of the NW  $\frac{1}{4}$  and the N  $\frac{1}{2}$  of the SW  $\frac{1}{4}$  and the S  $\frac{1}{2}$  of the SE  $\frac{1}{4}$  of Section 7, T68, R42W; the E  $\frac{1}{2}$  of the NE  $\frac{1}{4}$  of Section 14, T68, R43W; the N  $\frac{1}{2}$  of Section 13, T68, R43W; all of Section 18, T68, R42W; all of Section 17, T68, R42W lying West of Bluff Rd; the W  $\frac{1}{2}$  of the NW  $\frac{1}{4}$  of Section 20, T68, R42W; the NW  $\frac{1}{4}$  and the N  $\frac{1}{2}$  of the S  $\frac{1}{2}$  of Section 19, T68, R42W; and the NE  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  of Section 24, T68, R43W, Fremont County, Iowa (Map 1).

If this modification request is granted, three other water use permits owned by the applicant (8723, 8724, and 8725) within the proposed use area will be terminated in order to condense four permits on contiguous parcels into permit 6766. These four permits currently have combined totals of 505 acres, 496 AFY, and a max pumping rate of 3,900 GPM.

The total cumulative changes from the four existing permits is to increase the maximum pumping rate by 8,000 GPM; increase the total annual allocation by 1,587 AFY, and to increase the use site by 1,578 acres.

The public land survey system (PLSS) location of the thirteen alluvial aquifer wells are generally described as:

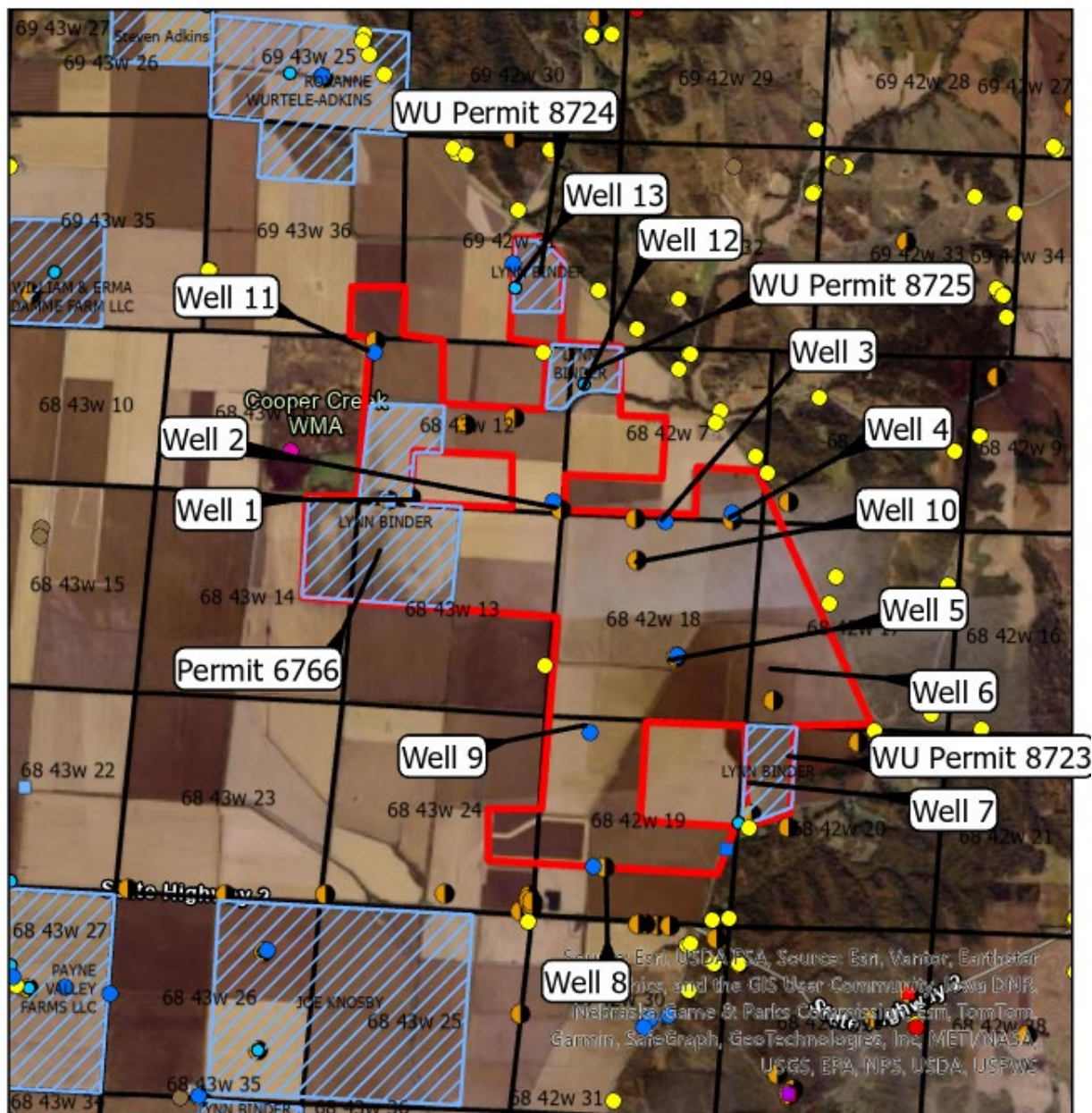
- The SW  $\frac{1}{4}$  SW  $\frac{1}{4}$  S12 T68N R43W
- The SE  $\frac{1}{4}$  SE  $\frac{1}{4}$  S12 T68N R43W
- The NE  $\frac{1}{4}$  NW  $\frac{1}{4}$  S18 T68N R42W
- The SE  $\frac{1}{4}$  SE  $\frac{1}{4}$  S7 T68N R42W
- The NW  $\frac{1}{4}$  SE  $\frac{1}{4}$  S18 T68N R42W
- The NW  $\frac{1}{4}$  SW  $\frac{1}{4}$  S17 T68N R42W
- The SW  $\frac{1}{4}$  NW  $\frac{1}{4}$  S20 T68N R42W
- The NE  $\frac{1}{4}$  SW  $\frac{1}{4}$  S19 T68N R42W
- The NW  $\frac{1}{4}$  NW  $\frac{1}{4}$  S19 T68N R42W
- The NE  $\frac{1}{4}$  NW  $\frac{1}{4}$  S18 T68N R42W
- The NW  $\frac{1}{4}$  NW  $\frac{1}{4}$  S12 T68N R43W
- The NW  $\frac{1}{4}$  NW  $\frac{1}{4}$  S7 T68N R42W
- The NW  $\frac{1}{4}$  SE  $\frac{1}{4}$  S31 T69N R42W

All wells are located in Fremont County, Iowa.

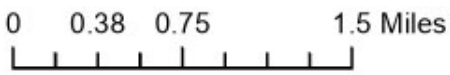
The alluvial aquifer cumulative maximum pumping rate is 11,900 GPM from thirteen wells.

The total annual allocation from the alluvial aquifer is 2,083 AFY. Water in this permit is used for irrigation of approximately 2,083 acres of general crops from April 1 to September 30 of each year on said land.

# Map 1 Binder - Irrigation Area and Irrigation Wells



- |  |                         |                     |
|--|-------------------------|---------------------|
| <b>IWIS points</b>                     | <b>Water Use Points</b> | <b>Public Wells</b> |
| ● Commercial                           | ■ Water Use Facility    | ■ Active            |
| ● Geothermal - Closed Loop GHEX System | ● Wells - Water Use     | ■ Not Used          |
| ● Household                            | ■ WaterUse Polygons     | ■ Plugged           |
| ● Irrigation                           |                         | ● GEOSAM_Pnt        |
| ● Livestock                            |                         |                     |
| ● Recreational                         |                         |                     |



Map 1. Map of applicant's wells and nearby wells assumed to be screened in the Missouri Valley alluvial aquifer. Well data is derived from the Department's Iowa Well Information System (IWIS) database, Water Allocation Compliance Online Permitting (WACOP)

database, the Iowa Geological Survey's (IGS) Geological Sampling (GeoSam) database, and from information provided by the applicant.

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### **Beneficial Use**

Water use for the permit, including the additional well, is for irrigation of general crops. Iowa Code 455B.266 identifies irrigation of general crops as a priority beneficial use.

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### **Source Details**

Only the Missouri Valley alluvial aquifer, hereby referred to as aquifer, will be detailed in this summary report, because this is the only source of water for the permit.

Based on nearby well records for Missouri River alluvial aquifer wells, the aquifer utilizes water stored in the pore space within sand and gravel that lies beneath approximately 5 to 35 feet of fine alluvial deposits of clay and silt, which overlies approximately 55 to 75 feet of fine to coarse grained sand and gravel. There are seven well logs available for the applicant's irrigation area. The applicant's irrigation wells range in depth from approximately 73 feet to 88 feet deep with saturated aquifer thickness ranging from 56 to 80 feet. The aquifer is assumed to be unconfined. The aquifer is recharged by precipitation and the Missouri River. None of the applicant's drillers log contain well development data to show pumping water levels.

At the time of this report, the physical and chemical properties of the aquifer can only be estimated through compiling and summarizing area driller's logs and nearby pumping tests. There is one pumping test available for the Missouri River alluvial aquifer from 2017 for a public water supply well (Thurman number 2) for the City of Thurman (GeoSam number 88886), located approximately 6.5 miles north of the applicant's nearest well. The pump test data indicated a transmissivity of 4320 square feet per day (ft<sup>2</sup>/day) and a hydraulic conductivity of 57.5 feet per day (ft/day), indicating high water availability. It is noted that this pump test had a maximum rate of 122 GPM, approximately 12 percent of the applicants proposed rate for each well. Besides this pumping test, the aquifer at or near this location is not characterized by any reports, digital geospatial data, or publications known to the water use program.

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### **Historic Water Use**

The applicant has 4 permits that are active in the proposed irrigation permit area. One permit (6766) has water use report data since 2002, and three permits (8723, 8724, and 8725) have water use report data since 2004. The combined annual usage and the maximum allocated amount in acre to feet per year from 2002 to 2025 are displayed in Figure 1. Their water use is consistent with other irrigators in Iowa, where water use increases during years of drought. Fremont County drought conditions from 2002 to 2025 are shown in Figure 2.

The years with the highest usage correspond to the years of severe drought in Fremont County, as 2012 to 2013 are the years with the highest reported usage, near 375 acre to feet, and 2022 to 2024 are the next highest usage. Drought conditions from 2002 to 2004 corresponded to years where the annual allocation was exceeded. Permit modifications and additional permits were issued in 2004. The applicant has not exceeded their allocated amount since then.

In 2025, the department found that the applicant irrigated approximately 1,500 acres of general crops with six new irrigation wells. The irrigation wells received construction permits by Fremont County, but the applicant did not receive water use permits from the department prior to irrigation. The department has been in contact with the applicant since July 2025, to investigate and bring the applicant into compliance. Following those initial discussions, the department received an application for a major modification in December 2025, but the complete information that was needed to process the application was not received until late March 2026. The applicant was issued a notice of violation on April 7, 2026 following the completion of the investigation, and has agreed to comply with all department rules moving forward. This summary report is for their permit modification to bring all irrigation into compliance.

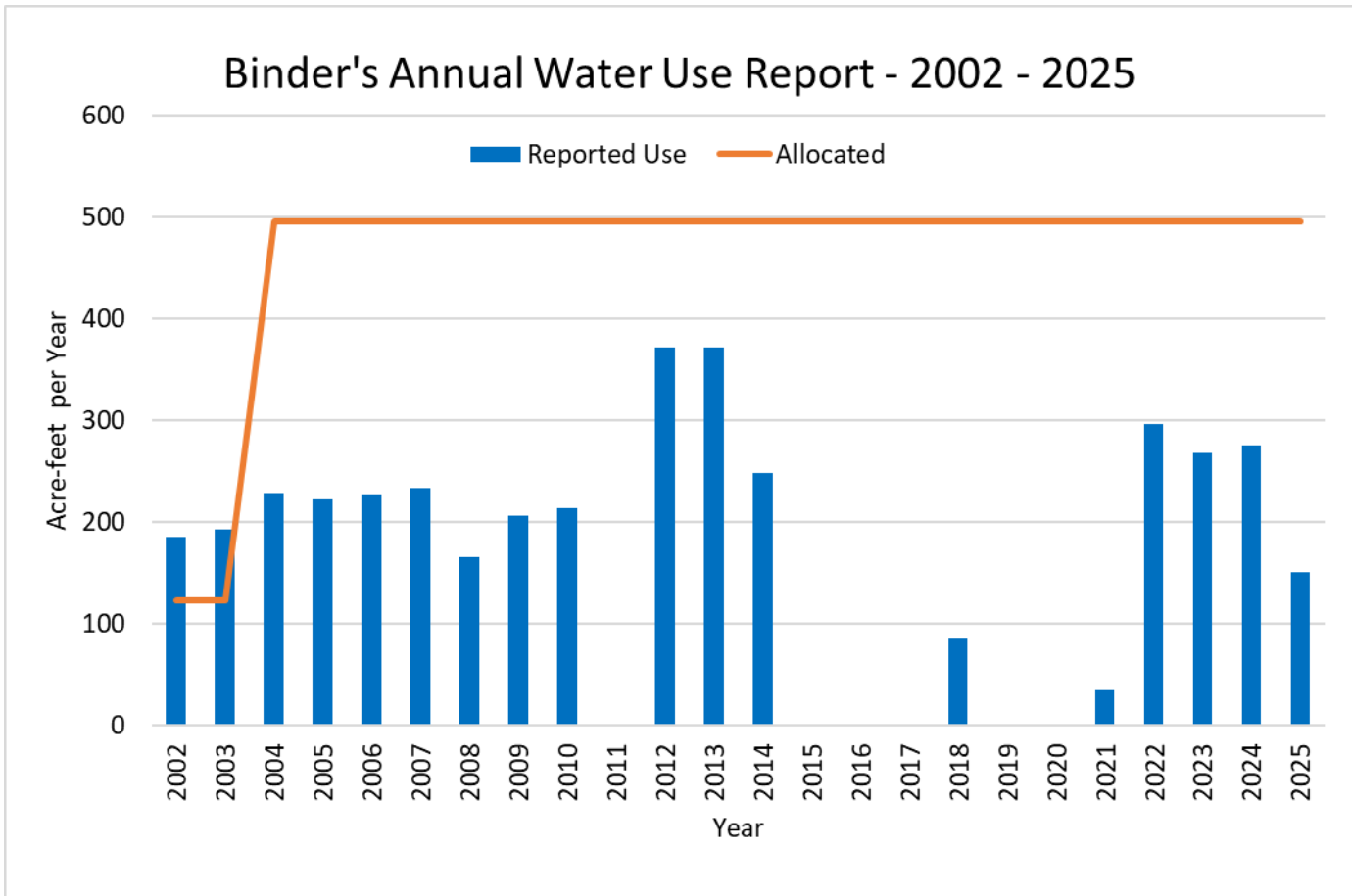
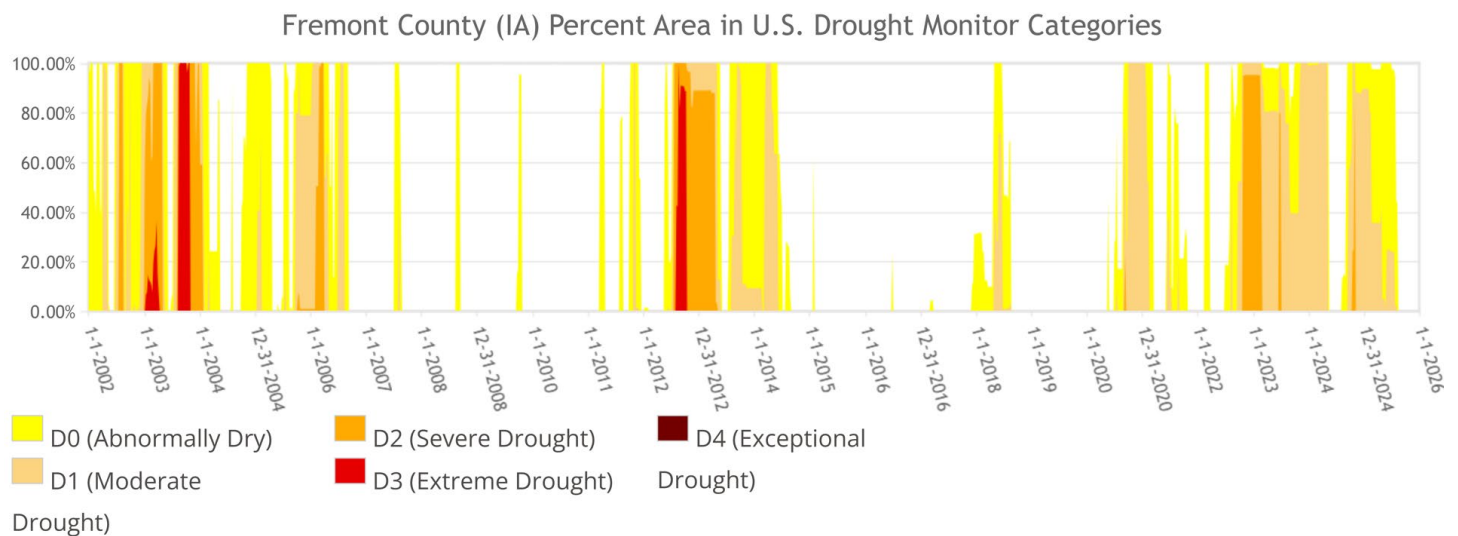


Figure 1: Annual Water Use Report and Allocation from 2002 to 2025.



From the U.S. Drought Monitor website, <https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx>, 2-10-2026



Figure 2: Fremont County drought conditions (percent area in drought) from 2002 to 2025. Years of drought tend to correspond to years of the highest reported water usage.

## Nearby Wells and Potential Interference

There are numerous household and permitted use wells within 1 mile of the applicant's wells (Map 1). The applicant's wells have all been in use for varying numbers of irrigation seasons, some were covered by water use permits, some were not. The department has not received any complaints of well interference in this area. In order to analyze potential well interference, transmissivity and storativity from a nearby pumping test in the same aquifer (City of Thurman #2 Recovery, 2017), and aquifer thickness from nearby well logs were used to calculate estimated water level drawdown in the nearest private well from each of the applicant's wells. The calculation used the maximum pumping rate for 24 hours per day until the maximum annual allocation was met. The results for all calculations are presented in Table 1.

Well 4 is anticipated to have the largest potential drawdown on the nearest private well at 2.22 feet, or approximately 4% of the saturated aquifer thickness (Appendix A). 567 Iowa Administrative Code (IAC) Chapter 49.9 requires that all private wells are constructed to allow for some aquifer drawdown from nearby permitted users. Assuming a saturated aquifer thickness of 56 feet, and considering the standard drawdown when pumping the private well, the pump must be set to allow for an additional drawdown of 28 feet (1/2 the saturated aquifer thickness), so interference with the private well capacity is not anticipated if the well was properly constructed.

The nearest private well (IWIS Well ID 2078916) is located 1,350 feet northwest of the applicant's Well 12 and approximately 1,800 feet from Well 13. That same well is located approximately 1 mile and 3/4 mile and from Well 1 and Well 2. The cumulative calculated drawdown in the that private well is approximately 0.65 feet (Table 1 and Appendix A). This is approximately one percent of the total aquifer thickness, therefore, well interference is not anticipated with that well.

The nearest permitted use well, other than the applicant's wells, is located approximately 4,250 feet south of the applicant's Well #8. The drawdown was calculated to be zero feet (Appendix A), therefore, well interference is not anticipated.

**Table 1: Calculated drawdown from the applicant's wells to each nearest private well. The largest calculated drawdown is 2.22 feet for Well 4. \*Well 10 is a standby well, so it does not add to the maximum annual allocation.**

Map Well Number	Withdrawal Rate (gallons per minute)	Maximum Annual Allocation (acre to feet/year)	Distance to nearest well (feet)	Nearest Well ID	Database	Pumping Rate (ft <sup>3</sup> /day)	Time (days)	Calculated drawdown (feet)
1	1500	305	5100	2078916	IWIS	288,751	46	0
2	1000	324	4078	2078916	IWIS	192,501	73	0.07
3	1000	315	2800	2193521	IWIS	192,501	71	0.50
4	1000	202	1350	2243517	IWIS	192,501	46	2.22
5	1000	136	3500	2112370	IWIS	192,501	31	0.01
6	1000	142	2200	2080408	IWIS	192,501	32	0.25
7	800	67	1250	2100601	IWIS	154,001	19	0.68
8	1000	207	2100	2118676	IWIS	192,501	47	0.68
9	1000	159	2100	2112370	IWIS	192,501	36	0.40
10	1000*	0*	3600	2112370	IWIS	192,501	71	0.15
11	1000	107	4400	2078916	IWIS	192,501	24	0
12	800	68	1350	2078916	IWIS	154,001	19	0.52
13	800	51	1800	2078916	IWIS	154,001	14	0.06
TOTAL	11,900	2,083						

## Aquifer Sustainability

The Missouri Valley alluvial aquifer contains many irrigation wells and a few public water supplies north (City of Thurman) and south (Hamburg) of the applicant's irrigation area. Continuous water level measurements in these wells do not exist for the irrigation wells, the City of Thurman, nor the City of Hamburg. The alluvial aquifer is highly connected to the Missouri River, therefore in order to assess aquifer sustainability, Missouri River stream gage data was analyzed for trends in streamflow over the last 20 years.

The Missouri River at Nebraska City, NE (USGS to 06807000) is the nearest Missouri River stream gage with continuous data for assessing stream flows. Daily average streamflow in cubic feet per second (cfs) are shown below in Figure 3. Lower levels of streamflow appear to correlate with persistent drought conditions during the years: 2002 to 2006, 2012, 2014, 2022, 2023, and 2025, all indicated by the red arrows in Figure 3 showing the lowest levels of streamflow. Irrigation use generally increases with drought conditions. However, the Missouri Valley alluvial aquifer is very broad and deep in Fremont County so it is unlikely that the applicant's proposed use will have an impact on the alluvial aquifer or the Missouri River.

The applicants proposed use is not likely to have an impact on long to term water availability in the alluvial aquifer.

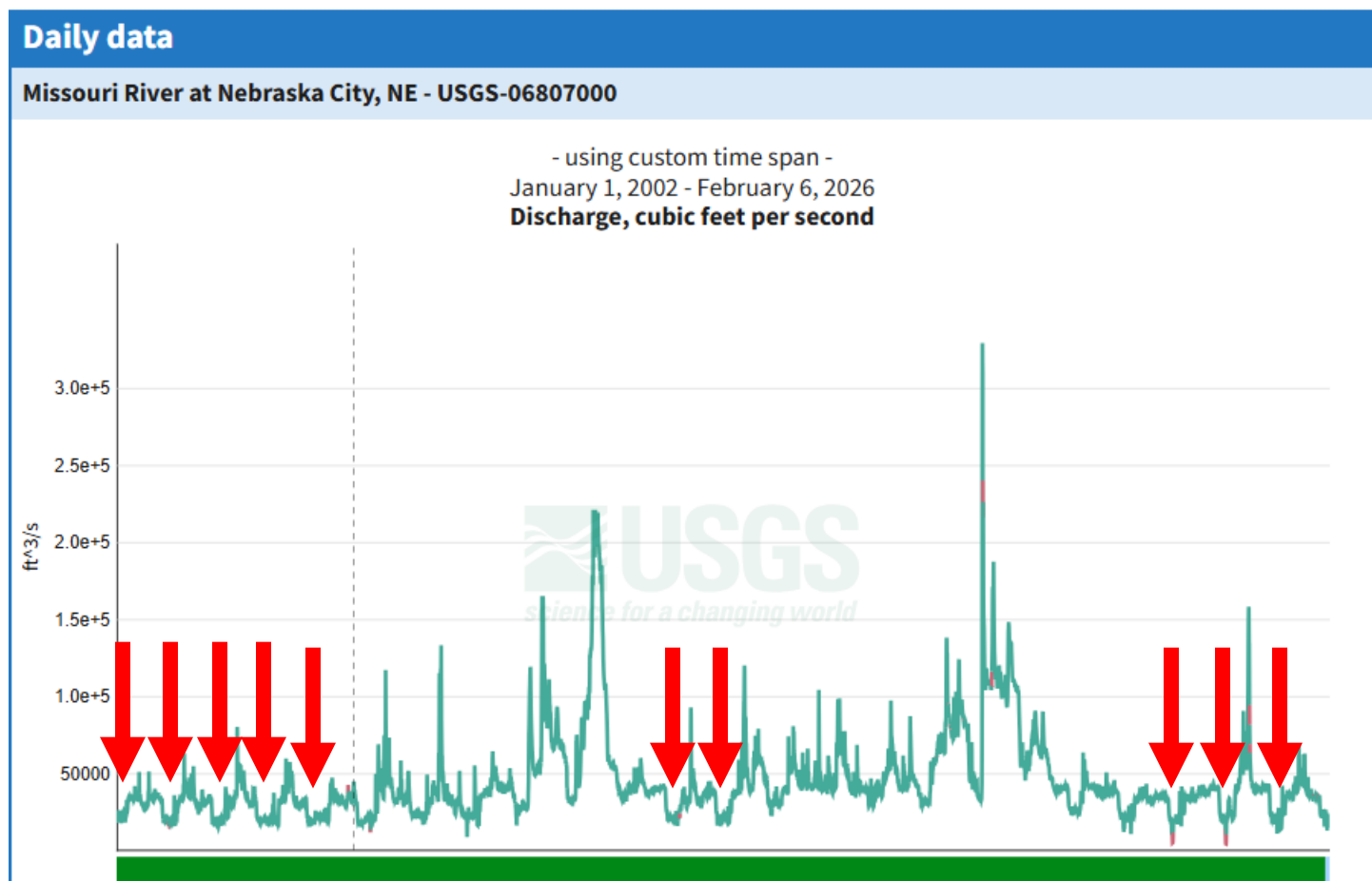


Figure 3: Daily discharge hydrograph from USGS stream gage 06807000 for the Missouri River at Nebraska City. The applicant's highest water use years shown by the red arrows correspond to the years with lowest discharge.

### **Findings**

The applicant has demonstrated the ability and intent to use a reasonable quantity of water for beneficial purposes from the proposed well. No evidence suggests the proposed use would:

- Waste water resources.
- Conflict with Iowa's comprehensive water resource plan.
- Interfere with pollution control laws.
- Directly harm public interests or property owners with prior or superior water use rights.

Drawdown calculations did not show significant well interference to nearby permitted users or private well owners. Although no well interference is anticipated, the department has rules and procedures to investigate and resolve well interference as described in 567 IAC Chapter 54.

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### **THEREFORE:**

The requested water use conforms to Division III, Part 4, Chapter 455B of the Iowa Code and Chapter 50 of Part 567 of the Iowa Administrative Code. No adverse impacts are anticipated for nearby permitted use wells or nearby private wells. Subject to a public comment period, comments received, and modifications based on comments received, a permit shall be issued for a period of ten years.



**Water Supply Engineering**  
Date: April 28, 2026



## Appendix A.

Water-level drawdown produced by pumping withdrawal from an unconfined aquifer causes a reduction in the aquifer's saturated thickness and hence its transmissivity. A correction proposed by Jacob ([Kruseman and de Ridder 1994](#)) transforms drawdown measured in an unconfined aquifer to drawdown in an *equivalent nonleaky confined aquifer*:

$$s' = s - s^2/2b \quad (1)$$

where  $s'$  is drawdown in an equivalent nonleaky confined aquifer [L],  $s$  is drawdown in unconfined aquifer [L] and  $b$  is aquifer saturated thickness before pumping [L].

Drawdown in the equivalent nonleaky confined aquifer is computed with the [Theis Equation \(Theis 1935\)](#):

$$s' = \frac{Q}{4\pi T} w(u) \quad (2)$$

$$w(u) = -0.5772 - \ln(u) + u - \frac{u^2}{2 \cdot 2!} + \frac{u^3}{3 \cdot 3!} - \frac{u^4}{4 \cdot 4!} + \dots \quad (3)$$

$$u = \frac{r^2 S}{4Tt} \quad (4)$$

where  $Q$  is pumping rate [ $L^3/T$ ],  $r$  is radial distance from pumping well to observation well [L],  $S$  is [storativity](#) in equivalent nonleaky confined aquifer [-],  $T$  is [transmissivity](#) in equivalent nonleaky confined aquifer [ $L^2/T$ ] and  $t$  is elapsed time since start of pumping [T].

After computing  $s'$  with (2), the following equation for  $s$  is found from (1) by means of the [quadratic formula](#):

$$s = b - b\sqrt{1 - 2s'/b} \quad (5)$$

### **Drawdown from the applicant's well #4 to the nearest private household well (1,350 feet away)**

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Given input

Aquifer transmissivity (T): 4320 ft<sup>2</sup>/day

Aquifer storativity (S): 0.20

Radial distance from well (r): 1350 ft

Time since pumping began (t): 46 days

Constant pumping rate (Q): 192,528 cubic feet per day (cfd) \*equivalent of 1000 gallons per minute for 24 hours

Saturated Thickness (b): 56 ft

Given output:

#### **Calculator Results**

**Transmissivity, T [L<sup>2</sup>/T]**

4320

**Storativity, S**

0.2

**Radial Distance, r [L]**

1350

**Time, t [T]**

46

**Pumping Rate, Q [L<sup>3</sup>/T]**

192501

**u (= r<sup>2</sup>S/4Tt)**

0.4585597826087

**w(u)**

0.6134

**Confined Drawdown, s' [L]**

2.175

**Unconfined Drawdown, s [L]**

2.219

**Drawdown from the applicant's well #12 to nearest permitted use well (4,250 feet away)**

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Given input:

Aquifer transmissivity (T): 4320 ft<sup>2</sup>/day

Aquifer storativity (S): 0.20

Radial distance from well (r): 4,250 ft

Time since pumping began (t): 19 days

Constant pumping rate (Q): 154,001 cubic feet per day (cfd) \*equivalent of 800 gallons per minute for 24 hours

Saturated Thickness (b): 60 ft

Given output:

**Calculator Results**

**Transmissivity, T [L<sup>2</sup>/T]**  
4320

**Storativity, S**  
0.2

**Radial Distance, r [L]**  
4250

**Time, t [T]**  
19

**Pumping Rate, Q [L<sup>3</sup>/T]**  
154001

**u (= r<sup>2</sup>S/4Tt)**  
11.002984892788

**w(u)**  
0.0000

**Confined Drawdown, s' [L]**  
0

**Unconfined Drawdown, s [L]**  
0

Source: <http://www.aqtesolv.com/calculators/theis to equation to unconfined.asp>

**IOWA DEPARTMENT OF NATURAL RESOURCES  
WATER USE PERMIT**

**Permit issued to:**

TYLER BINDER  
71387 624 BLVD  
TABLE ROCK, NE 68447-3133

**Permit Number:** 6766-M5

**Effective:** xx/xx/2026

**Expires:** xx/xx/2036

**The Permittee is authorized to:**

withdraw water from thirteen Missouri River alluvial wells, located on land generally described as the SE ¼ of SE ¼ of Section 36, T69, R43W; the NW ¼, the E ½ of the SW ¼, and the N ½ of the SE ¼, and the SE ¼ of the SE ¼ of Section 12, T68, R43W; the W ½ of the SE ¼ of Section 31, T69, R42W; the W ½ of the NW ¼ and the N ½ of the SW ¼ and the S ½ of the SE ¼ of Section 7, T68, R42W; the E ½ of the NE ¼ of Section 14, T68, R43W; the N ½ of Section 13, T68, R43W; all of Section 18, T68, R42W; all of Section 17, T68, R42W lying West of Bluff Rd; the W ½ of the NW ¼ of Section 20, T68, R42W; the NW ¼ and the N ½ of the S ½ of Section 19, T68, R42W; and the NE ¼ of the SE ¼ of Section 24, T68, R43W, Fremont County, Iowa, in the maximum quantity of 2,083 acre-feet per year, at a maximum rate of 11,900 gallons per minute during the period April 1 to September 30 of each year for irrigation of up to 2,083 acres of general farm crops located on said land. Withdrawal limits have been placed on individual wells as described in the permit conditions.

This authorization to withdraw water has been granted pursuant to the provisions of Part 4 of Division III of Chapter 455B, Code of Iowa, and Chapter 50, Part 567, Iowa Administrative Code, and is further subject to the general permit conditions within this permit.

Conditions of this permit may be appealed as provided in rule 567--50.8(3), Iowa Administrative Code. Appeal must be in writing and must be received at the Iowa Department of Natural Resources, Water Supply Engineering Section, 6200 Park Ave. Suite 200, Des Moines, Iowa 50321-1371 within thirty days of the date of the certification of the mailing of the permit.

**FOR THE DIRECTOR:**

By: \_\_\_\_\_ Date Executed: xxxxx, 2026  
cc: Permit File

**CERTIFICATE OF MAILING**

On the date shown below, a copy of the foregoing permit was mailed to the Permittee and to each person entitled to receive a copy as provided by rule 567--50.8(2), Iowa Administrative Code.

Certified by (initials): \_\_\_\_\_ Date: \_\_\_\_\_

**GENERAL PERMIT CONDITIONS**

1. Permittee shall maintain accurate and up-to-date records of monthly water use from each well and from each authorized source and submit them annually to the Department.
2. Permittee may be required to submit other information related to the regulation of this use of water as directed by the Department.
3. This Permit is issued pursuant to Iowa Code chapter 455B.265(1) to authorize the withdrawal and use of water by the permittee, subject to the terms contained herein and to the laws and rules of the Department that regulate the withdrawal and use of water. Issuance of this permit does not relieve the permittee of the responsibility to comply with applicable local, state and federal laws, ordinances, regulations or other legal requirements.
4. Permittee shall be responsible for notifying the Department when there are changes to any conditions and authorizations given in this permit, including additional water source(s), well(s), intake(s), an expansion of the facility, or any other listed condition.
5. Permittee shall construct, maintain, and monitor observation wells as directed by the Department to define the effects of Permittee's water withdrawals on groundwater resources or on other water users who might be affected by the withdrawals authorized herein.
6. Each well authorized as a source of water in this permit must be constructed to allow for accurate measurement of water levels.
7. Withdrawals from permitted wells may be made only after the Permittee has made the following information available to the Department: well location(s), well log(s), and results of yield tests. Required chip samples shall be submitted to the Iowa Geological Survey.
8. Prior to April 1 each year, the Permittee shall be responsible for accurately measuring the distance to water (static water level) in the permitted well(s). These records shall be submitted annually to the Department.
9. Permittee shall not apply fertilizers, pesticides or other materials through any irrigation system unless the system is equipped with an automatic check valve or comparable device, to prevent such materials from entering the source of irrigation water. Permittee shall conduct frequent inspections for the proper functioning of the check valve to prevent back siphoning of contaminants into the water source as required in Chapter 50.9(1)"e" of Part 567, Iowa Administrative Code.
10. Irrigation shall not be allowed on those areas with slopes greater than six (6) percent until a soil-conservation plan is prepared with the assistance of the Natural Resource Conservation Service. The plan shall be accompanied by the applicant's written statement, explaining how the plan and the operation of the irrigation system are compatible. After its submission, irrigation under this permit is contingent upon Permittee's compliance with the soil conservation plan.
11. Permittee must apply to renew this water use permit using the appropriate DNR form prior to the expiration date of the current permit version.
12. Permittee shall submit to the Department within 90 days of being notified by the Department or no later than the expiration date of this permit, whichever first occurs, a plan for implementing routine day-to-day water conservation measures and for implementing emergency water conservation measures during periods of water shortage. Until such a plan has been submitted to and approved by the Department, Permittee shall implement

those emergency water conservation measures determined to be necessary by the Department pursuant to Iowa Code Sections 455B.265 and 455B.266.

13. This permit supersedes Water Use Permit No. 6766-R4.

**SPECIAL PERMIT CONDITIONS**

1. In the event of a well interference complaint, the Permittee shall work with the complainant and/or the department to investigate and resolve the complaint as described in Iowa Administrative Code chapter 567.54.
2. Permittee shall be responsible for ensuring that each individual well does not exceed the maximum pumping rates and withdrawal limits in Table 1:

**Table 1: Withdrawal rate and allocation limits for each well. \*Well 10 is on standby and is not allocated use unless it is used to replace another well.**

Map Well Number	Withdrawal Rate (gallons per minute)	Maximum Annual Allocation (acre-feet/year)
1	1500	305
2	1000	324
3	1000	315
4	1000	202
5	1000	136
6	1000	142
7	800	67
8	1000	207
9	1000	159
10	1000*	0
11	1000	107
12	800	68
13	800	51
TOTAL	11,900	2,083

**CAVEAT**

Permittee is advised that pursuant to Section 455B.271, Code of Iowa, the authority to withdraw water provided by this permit may be modified, canceled or suspended in case of any breach of the terms or conditions herein, in case of any violation of state law pertaining to the permit, or if found necessary to prevent substantial injury to private or public interests.