

**NOTICE OF INTENT TO MODIFY A PERMIT AUTHORIZING THE USE OF WATER FOR  
MUNICIPAL PURPOSES IN WEBSTER 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.

The City of Fort Dodge, Iowa DNR Log Number 34,211, requests to modify an existing water use permit (No. 635-m9) to withdraw water from four (4) Mississippian aquifer wells, all between 516 and 980 feet deep, and all located on land generally described as the E ½ of the SW ¼ of Sec. 19, T89N, R28W, with the maximum annual allocation of 2,282 million gallons per year, at the maximum rate of 5,500 gallons per minute; and from four (4) Jordan aquifer wells, all between 1,830 and 1,980 feet deep, one well located on land generally described as the SE ¼ of the NW ¼ of Sec. 24, T89N, R29W, one well located in the SW ¼ of the NW ¼ of Sec. 19, one well located in the SE ¼ of the NE ¼ of Sec. 30, and one well located in the NE ¼ of the SW ¼ of Sec. 29, T89N, R28W, in the maximum annual allocation of 2,282 million gallons per year at a maximum rate of 5,000 gallons per minute; and one (1) Mississippian-Jordan aquifer well, approximately 2,307 feet deep, located on land generally described as the NE ¼ of the SW ¼ of Sec. 19, T89N, R28W, with the maximum annual allocation of 805 million gallons per year, at a maximum rate of 2,000 gallons per minute; for a maximum combined allocation of 5,369 million gallons per year at a maximum combined annual rate of 12,500 gallons per minute for municipal purposes within and without the permittee's corporate limits consistent with its municipal distribution system and other provisions of law.

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 March 25, 2026, and should be addressed "ATTN: Chad Fields" and should specify the applicants log number (Log Number 34,211).

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

**Applicant:** City of Fort Dodge  
819 1<sup>st</sup> Ave S  
Fort Dodge, IA 50501-4739

**Application Log No.:** 34,211

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**Permit Request**

The City of Fort Dodge, Iowa DNR Log# 34,211, requests to modify their water use permit (Permit #635-m8) to increase the annual water allocation by 1,339 million gallons per year (mgy), from 4,030 mgy (635-m8) to 5,369 mgy (635-M9), while maintaining the same number of wells (nine) and decreasing the instantaneous pumping rate by 83 gallons per minute (gpm), from 12,583 gpm to 12,500 gpm.

The water for the City of Fort Dodge is derived from two distinct sources: the Mississippian aquifer (four wells) and the Jordan aquifer (four wells). One well, Well #15, is open in both Mississippian and Jordan aquifers. Water is assumed to be derived equally (50/50) from both aquifers for this well.

The public land survey system (PLSS) location of the four Mississippian aquifer wells are:

- The E ½ of the SW ¼ of Sec. 19, T89N, R28W (all four wells)

The public land survey system (PLSS) location of the four Jordan aquifer wells are:

- The SE ¼ of the NW ¼ of Sec. 24, T89N, R29W
- The SW ¼ of the NW ¼ of Sec. 19, T89N, R28W
- The SE ¼ of the NE ¼ of Sec. 30, T89N, R28W
- The NE ¼ of the SW ¼ of Sec. 29, T89N, R28W

The public land survey system (PLSS) location of the one Mississippian-Jordan aquifer well (Well #15) is:

- The NE ¼ of the SW ¼ of Sec. 19, T89N, R28W

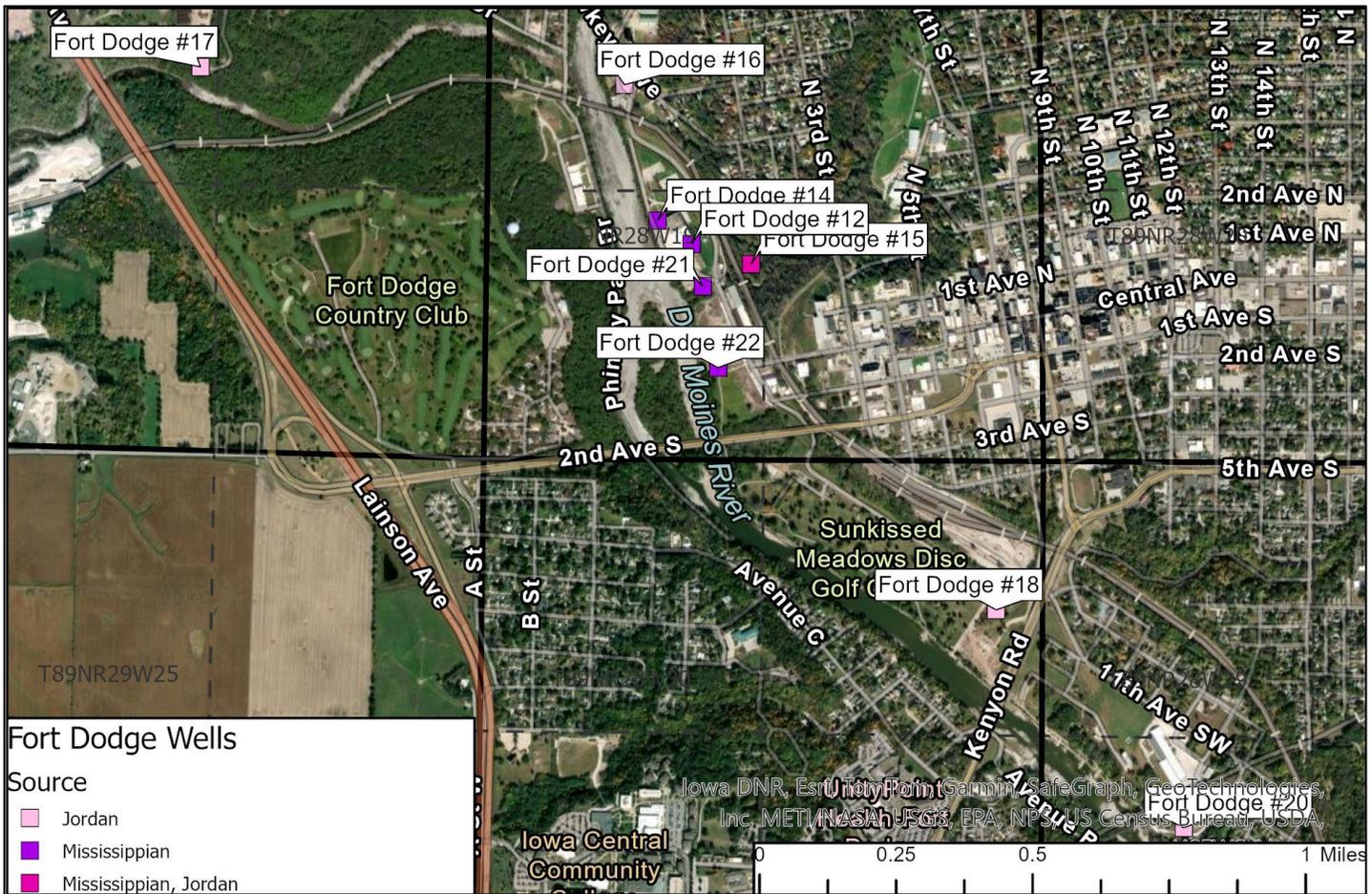
All wells are located in Webster County, Iowa. Map 1 shows the active, existing wells authorized in the permit.

In the permit modification, of the total 5,369 mgy annual allocation, and 12,000 gpm, the Mississippian aquifer total annual allocation is requested to be 2,282 mgy at 5,500 gpm. The Jordan aquifer allocation is requested to be 2,282 mgy at 5,000 gpm. The projections of use are from these requested allocations.

Well #15, open in both the Mississippian and Jordan aquifers, has a requested allocation of 805 mgy at 2,000 gpm. Allocation is divided into 402.5 mgy from each aquifer for modeling/graphing, and water level forecasting purposes.

**Beneficial Use**

Water use for the permit, including the additional wells and allocation, is for a municipal water supply for the citizens and customers of the Fort Dodge Municipality. Water utilized for municipal systems is for drinking, private household use, businesses, irrigation, and other institutions within their municipal distribution system. Municipal water supplies have jurisdiction on their distribution system and customers. Iowa Code 455B.266 identifies municipal water use as a priority beneficial use.



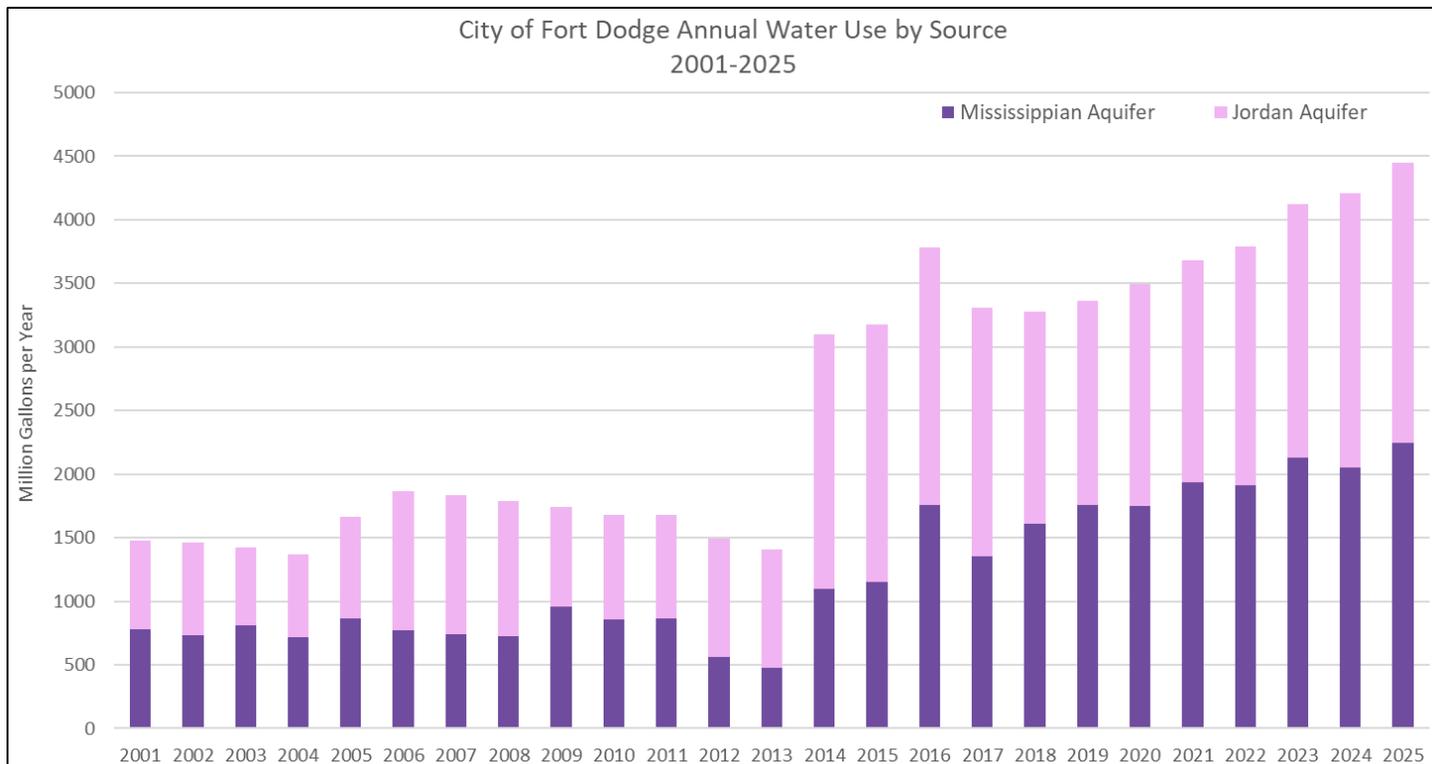
**Map 1. Map of applicant's wells open in the Mississippian, Jordan, and Mississippian-Jordan aquifer.**

### Water Use Trends

Over the past 25 years, from 2001 to 2025, the City of Fort Dodge has relied on two main sources of water: the Mississippian aquifer and the Jordan aquifer. Currently there are nine wells utilizing these two aquifers. Annual water use from these two sources is detailed in Figure 1. Four wells utilize each aquifer (Map 1). One of the nine wells, Well #15, is open in both Mississippian and Jordan aquifers. Well #15 had its total water use divided 50/50 between the two sources for modeling and graphing purposes.

Between 2001 and 2025, water use between the two aquifers was roughly equal (Figure 1). Some years (e.g., 2014, 2015) have slightly higher use from the Mississippian aquifer. The maximum use from both aquifers was at its highest in 2025, with the Mississippian aquifer at 2,204 million gallons and Jordan aquifer use at 2,242 million gallons. Industrial water use is a large portion of water use for Fort Dodge. In 2014, large industries connected to Fort Dodge water supply, doubling the water use between 2013 (1,409 mg) and 2014 (3,097 mg). Since 2018, water use in Fort Dodge has increased by approximately 200 million gallons every year. In 2025, nearly 4,500 mg was utilized by the city, increasing from 3,200 mg in 2018.

It is anticipated that the City of Manson will connect to the Fort Dodge water supply in 2026 and will receive nearly all of its source water from the City of Fort Dodge Water Supply. The City of Manson currently has an allocation of 110 mg, and utilizes 90-100 mg of that allocation. That connection with the City of Manson will add more use to the Fort Dodge water supply, in addition to the annual year-on-year increase of +200 mg noted in Figure 1.



**Figure 1. Annual water withdrawals in million gallons per year for the City of Fort Dodge from the Mississippian aquifer and Jordan aquifer. One well, Well #15, is open in both aquifers and had its use divided between the two sources equally.**

**Source Details**

There are two bedrock aquifers the City of Fort Dodge uses for its source of water. Both of these aquifers are anticipated to have an increase in use pending the approval of the modification. The aquifer and their characteristics are described below.

**Mississippian aquifer**

The Mississippian aquifer near Fort Dodge in north-central Iowa is characterized by a thick sequence of interbedded limestone and dolostone strata that reaches a maximum thickness of 470 feet in the area, though the aquifer is typically around 40-50% of the total thickness of the Mississippian units. While Paleozoic sedimentary carbonates dominate the sequence, smaller amounts of confining and semiconfining shale, siltstone, and sandstone are concentrated at the base and within the upper zones of the aquifer. In the Fort Dodge area, the Mississippian aquifer is buried beneath glacial till or younger Pennsylvanian bedrock, making surface exposures uncommon except in small areas along major rivers or within rock quarries.

The stratigraphic succession is divided into several distinct formations. At the base, the Prospect Hill siltstone and Chapin limestone overlie Devonian shale, but these units are generally less than 20 feet thick and are not considered water-producing. Above them lies the Maynes Creek Formation, which makes up the lower fourth of the sequence and can be highly productive where it is fractured or karsted. The middle third is occupied by the Gilmore City and Burlington formations; the Gilmore City reaches a thickness of approximately 140 feet near Fort Dodge. Fort Dodges’ Mississippian aquifer wells are typically 520 feet deep, with one well (Well #14), at 940 feet deep, far into the Devonian confining layers. The Devonian bedrock layers are not assumed to be an aquifer or producing a substantial portion of the water in this well.

The Mississippian aquifer is bounded by several regional confining units that restrict vertical water movement. It is underlain by 20 to 100 feet of Devonian shale. Above the Mississippian rocks, the primary confining units are the shales of the Pennsylvanian Cherokee Group.

To help characterize the Mississippian aquifer, two Mississippian aquifer capacity/pump tests were completed on two wells (Table 1). Aquifer thickness was derived from strip log and driller’s log lithologic information.

**Table 1. Hydrogeologic parameters for Fort Dodge Mississippian aquifer wells from two capacity tests.**

GeoSam ID	Well Name	Pump Test Duration (min)	Transmissivity (ft <sup>2</sup> /day)	Aquifer Thick. (feet)	Hydraulic Cond. (ft/day)	Solution
352	Fort Dodge #14	--	23,031	245	94	Specific Capacity
21118	Fort Dodge #21	--	45,756	241	189.9	Specific Capacity

**Jordan aquifer**

The Jordan aquifer is a critical bedrock groundwater aquifer for many water users in the region, and across Iowa. The Jordan aquifer, also called the “Cambrian-Ordovician aquifer” and “Prairie du Chien aquifer”, is composed of Paleozoic sedimentary rocks, including the Cambrian Jordan Sandstone at its base, the Cambrian Prairie du Chien Group carbonates in the center, and the Ordovician St. Peter Sandstone at its top. In the Fort Dodge area, the cumulative thickness of these three major units of the aquifer are between 430 and 550 feet. In the Fort Dodge area, the aquifer is located near the edge of the Manson Impact Structure. This impact structure has an effect of the water quality, water production, and confined nature of the aquifer in this region.

The Jordan aquifer is typically confined between the underlying St. Lawrence Formation - comprised of denser, dolomitic siltstone - and the overlying Decorah/Platteville/Glenwood shales. The positioning of these confining layers vital to the characterization of the aquifer because the denser layers above and below act as confining units, protecting the Jordan aquifer's water quality and maintaining the artesian pressure.

The Jordan aquifer is the most extensive and most utilized bedrock aquifer in Iowa. To ensure the availability of water from the aquifer for future generations, the Jordan aquifer has specific use and water-level based regulations. Specifically, water use wells utilizing the Jordan aquifer all have a 3-tier pumping water level depth, with specific use restrictions when/if a water use well’s pumping water level was to exceed those levels. Additionally, the area in Webster County has a protected water source designation for the Jordan aquifer. The Jordan aquifer protected water source area prevents non-public water systems from receiving a well construction permit from the county, without state approval.

To help characterize the aquifer, four of Fort Dodge’s Jordan aquifer wells have completed pump tests with lithologic records. To estimate local Jordan aquifer transmissivity, discrete interval static water levels, pumping water levels and pumping rates were entered into AQTESOLV software for available pumping tests. The Theis solution for confined conditions was used to estimate transmissivity for each well. Driller’s log and strip log lithology was used to interpret aquifer thickness. The table below shows the solution estimates. Average hydraulic conductivity for the Fort Dodge wells is 15.5 feet per day, with an average thickness of 468 feet.

**Table 2. Hydrogeologic parameters for Fort Dodge Jordan aquifer wells from four single well pump tests.**

GeoSam ID	Well Name	Pump Test Duration (min)	Transmissivity (ft <sup>2</sup> /day)	Aquifer Thick. (feet)	Hydraulic Cond. (ft/day)	Solution
13068	Fort Dodge #16	1,440	6,250	435	14.4	Theis, confined
21118	Fort Dodge #17	8,550	10,800	440	24.6	Theis, confined
65654	Fort Dodge #18	1,445	5,024	465	10.8	Theis, confined
76063	Fort Dodge #20	1,454	6,599	532	12.4	Theis, confined

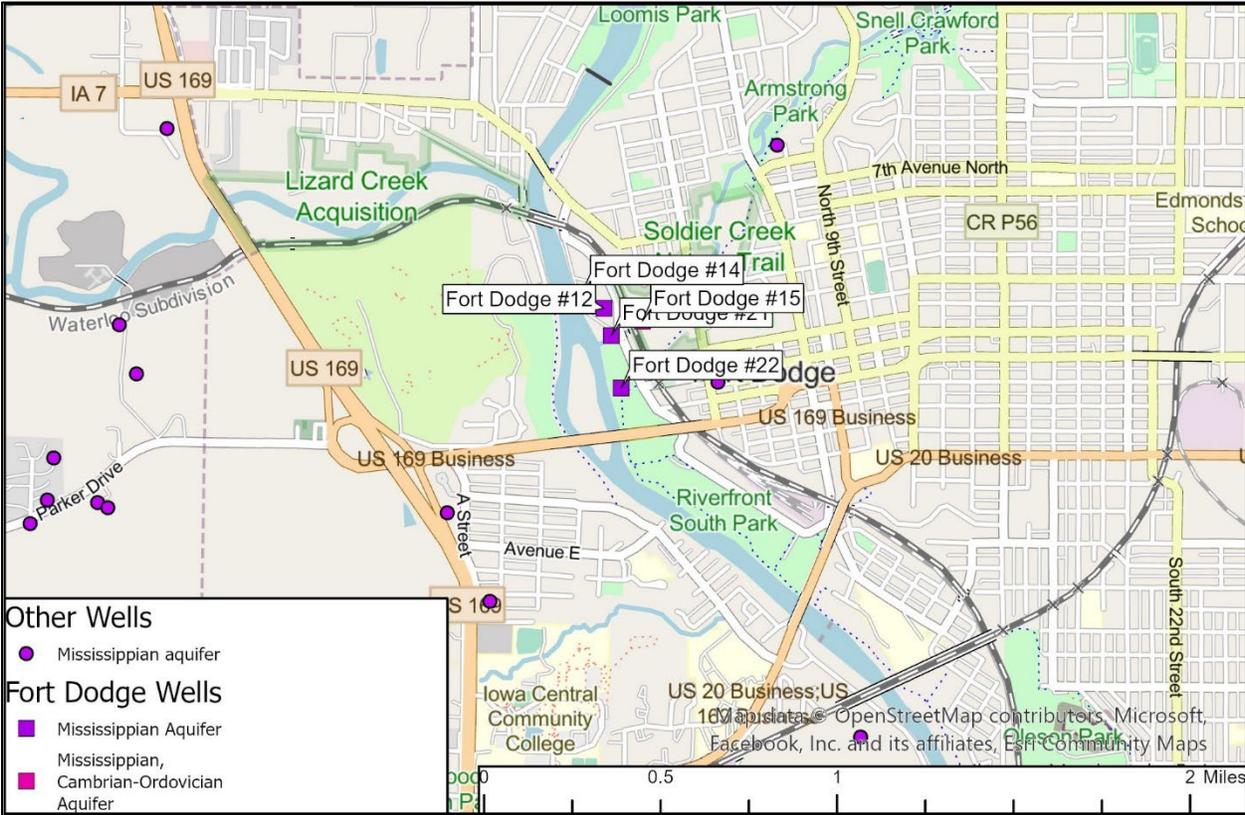
### **Nearby Wells and Potential Interference**

Due to the density and number of wells utilizing the aquifer, there are some well interference concerns with the Mississippian aquifer around Fort Dodge's wells. There are a number of other wells located in the Mississippian aquifer near the City of Fort Dodge Mississippian aquifer wells (Map #2). There is one well approximately 0.5 miles to the northeast, and two wells approximately 0.5 miles to the southwest of the Fort Dodge wellfield. There are also a cluster of private and public wells for a small subdivision located approximately two miles to the west of the Fort Dodge wellfield (Map #2).

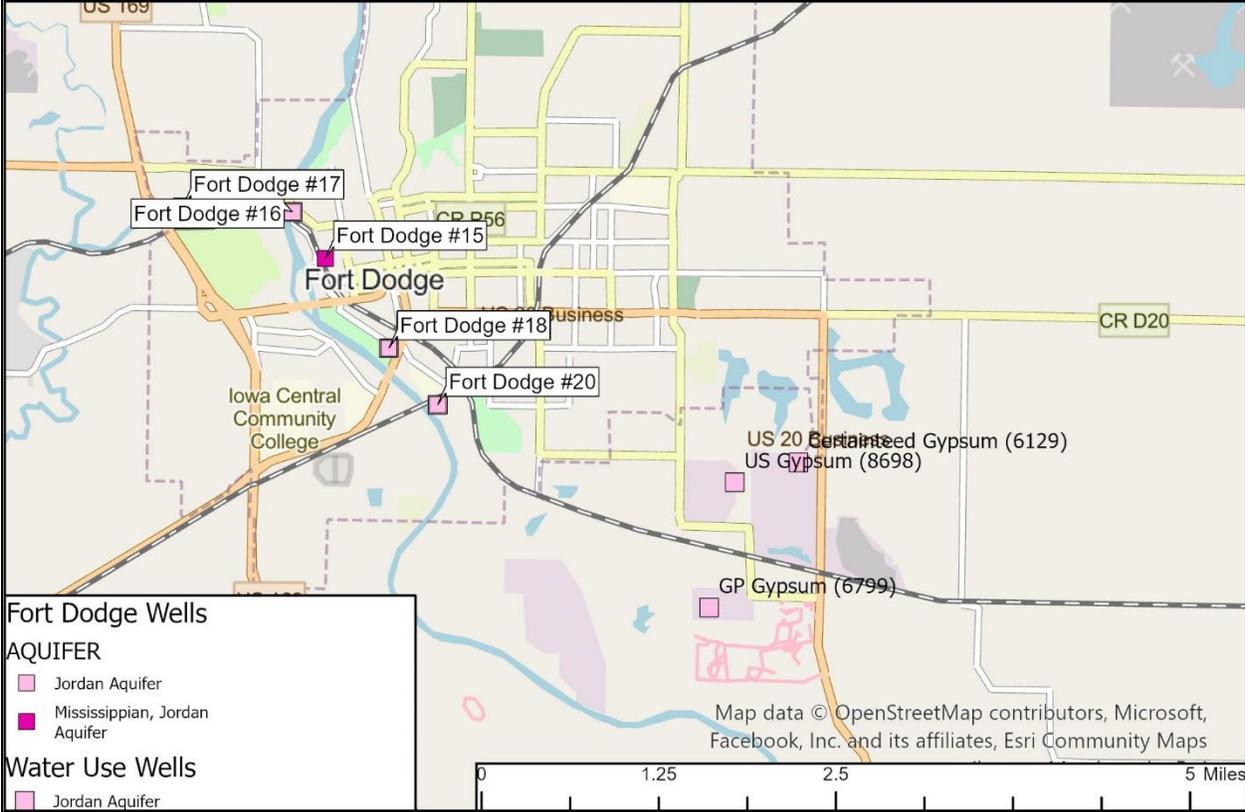
The City of Fort Dodge's active Mississippian aquifer wells have been pumping at similar rates since first being drilled. The last Mississippian well was drilled seven years ago in 2019, with two wells being drilled nearly a century ago in the 1930s, and one well drilled over a decade ago in 2013. There are no historic well interference issues recorded from any of Fort Dodge's currently active and pumping Mississippian aquifer wells/wellfield. It is not anticipated that the new annual increase, coupled with the reduction in allocated instantaneous pumping rates from all sources, including the Mississippian aquifer, will have an additional effect on the well interference, or increase the area of effect from current levels. In the event that well interference does occur, affected well owners can use well interference protocols located in Iowa Administrative Code 567 – Chapter 54.

There are no private Jordan aquifer wells in the near the vicinity of Fort Dodge's Jordan aquifer wells. There are less Jordan aquifer wells in the region due to the aquifer's depth, and the relative availability and quality of water in the shallower Mississippian aquifer. The nearest Jordan aquifer wells are for industrial water use, and have water use permits from the program. The Jordan aquifer wells are to the southeast of the facility, and are all utilized for the mining of gypsum bedrock. From north to south, the three permits are for:

- Certaineed Gypsum permit #6129. This permit is authorized for 75 mgy at a pumping rate of 1,000 gpm from the Jordan aquifer. The last five years have seen no use from this well.
- US Gypsum, permit #8698. This permit is authorized for 158 mgy at a pumping rate of 1,000 gpm from the Jordan aquifer. Over the last five years, water use has been less than 10 mgy from this well.
- Georgia Pacific Gypsum, permit #6799. This permit is authorized for 85 mgy at a pumping rate of 300 gpm from the Jordan aquifer. Over the last five years, water use has been between 50-58 mgy from this well.



Map 2. Area wells open in the Mississippian aquifer near Fort Dodge's (permit #635) Mississippian aquifer wells.



Map 3. Area wells (water use wells) open in the Jordan aquifer near Fort Dodge's (permit #635) Jordan aquifer wells.

### Jordan Aquifer Tier Levels and Groundwater Modeling

Fort Dodge Jordan aquifer wells have had static water levels readings submitted to the program since 2001, with pumping water levels submitted since 2016, when the Tier-based rule criteria was enacted for the Jordan aquifer in Iowa. Table 3 shows Fort Dodge’s four Jordan aquifer wells, along with dual completion well #15 water levels compared with Rule Tier Criteria for 2025.

**Table 2. Jordan well water levels submitted to the water use program for the annual report from 2025. Jordan aquifer Tier levels are based on 1978 potentiometric surface (static water level), Tier criteria are set on pumping water levels at 300 ft, and 400 ft below those levels.**

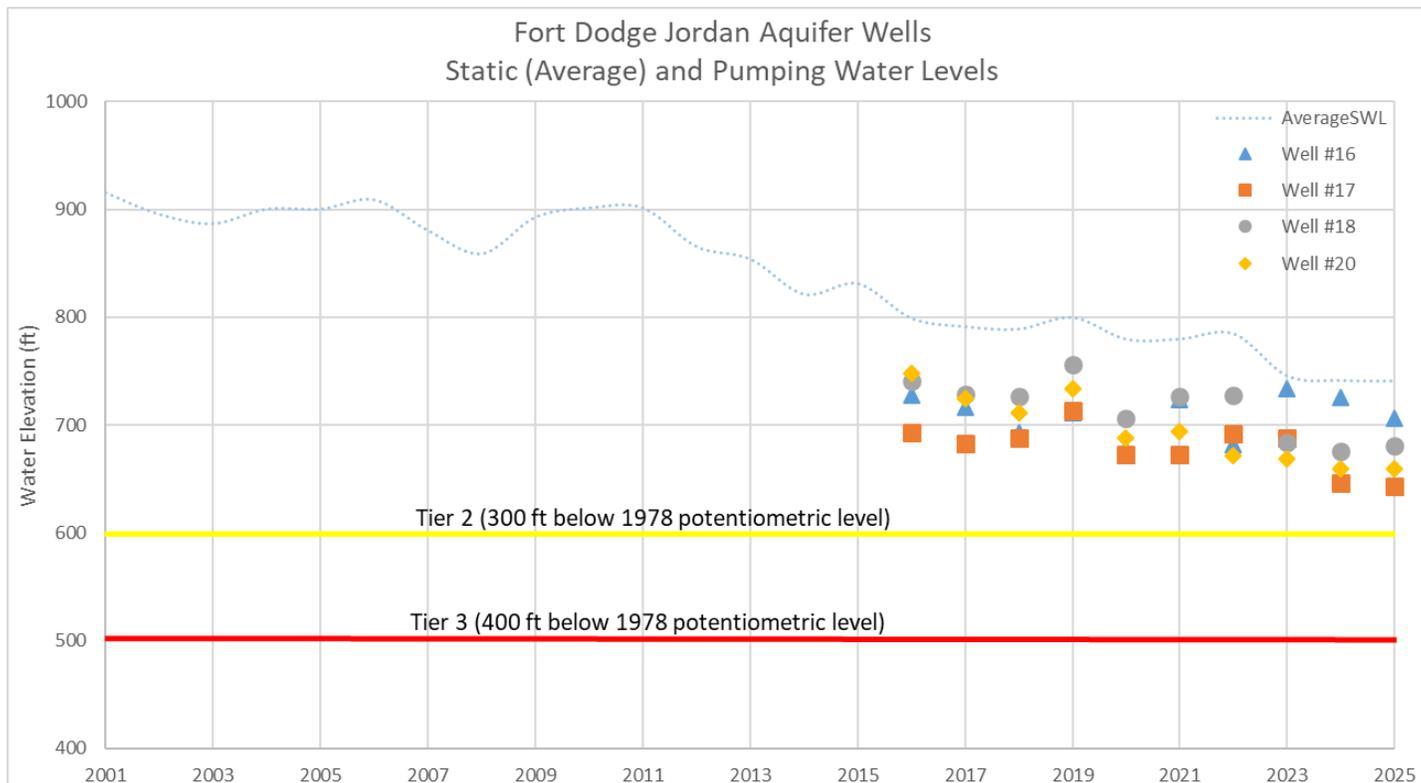
Fort Dodge Water Supply [635] Jordan Aquifer Well Water Levels					
Local Name	Well #15†	Well #16	Well #17	Well #18	Well #20
Drill Date	1/1/1949	4/1/1962	10/16/1969	11/25/2008	6/11/2013
Well Elevation (ft)	988	993	1,028	991	994
1978 Jordan Water Level Elevation (ft)	898	897	896	900	901
Total Well Depth (ft)	2,307	1,830	1,980	1,870	1,947
Total Casing Depth (ft)	269	unk.	1,500	1,500	1,512
2025 Static Water Level Depth (ft)*	128	230	258	280	275
2025 Pumping Water Level Depth (ft)*	168	287	348	310	335
1978 Jordan Baseline Level Depth (ft)	90	96	132	91	93
Jordan Tier 2 Depth (1978 level -300 ft.)	390	396	432	391	393
Jordan Tier 3 Depth (1978 level -400 ft.)	490	496	532	491	493
<b>Estimated Feet Above Tier 2 (Tier 2 – pumping)</b>	<b><u>+222</u></b>	<b><u>+109</u></b>	<b><u>+84</u></b>	<b><u>+81</u></b>	<b><u>+58</u></b>
<b>Estimated Feet Above Tier 3 (Tier 3 – pumping)</b>	<b><u>+322</u></b>	<b><u>+209</u></b>	<b><u>+184</u></b>	<b><u>+181</u></b>	<b><u>+158</u></b>

† Well #15 is open in both Mississippian and Jordan aquifers.

\*Water levels are from the 2025 annual report.

Figure 2 shows water levels through time submitted to the program. Static water level readings have been averaged from all submitted static levels from Fort Dodge’s active wells. Since 2001, ambient (static) water has declined from nearly 900 feet above sea level (asl) to 750 feet asl, a rate of -7.5 feet per year. The decline in static water levels has increased with increased withdrawals beginning in 2014 and continuing until 2023. Notably, in the six-year period from 2011 to 2016, static water levels declined over 100 feet, from an average of 900 feet asl in 2011, to 799 feet asl in 2016. Since 2023 static water levels in the area have remained the same, the past three years has seen a leveling off of average static to roughly 750 feet asl (Figure 2).

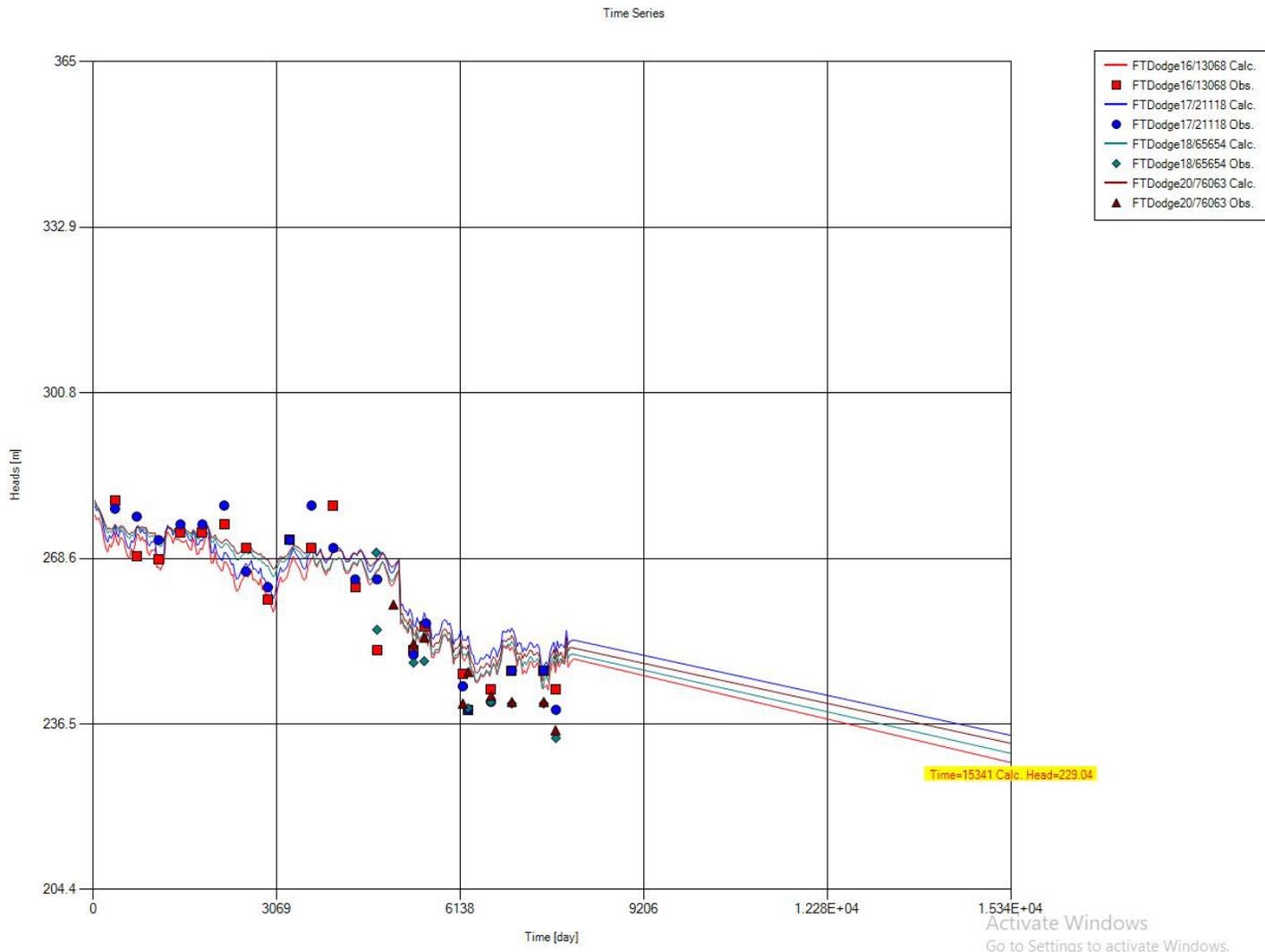
Pumping (dynamic) water level measurements have also shown a decline, though at a slower rates, between -0.2 feet/year (Well 16), to -7.2 feet per year (Well #18). All pumping water level measurements have been above the Tier 2 level of 300 feet below 1978 potentiometric surface. At 642-706 feet above sea level, the most recent pumping water level readings are 42-106 feet above the Tier 2 levels (see Table 3).



**Figure 2. Annual submitted static water level measurements submitted to the Water Use Program from 2001 to 2025. Static water levels have declined at an annual rate of -7.5 feet per year during this period, with most of the decline (100 feet) occurring between the years of 2011-2016. Public water levels submitted to the program since 2016 are included, also included are the Tier 2 and Tier 3 regulatory limits of pumping water levels.**

Due to concern from the increase in withdrawals from the Jordan aquifer, the calibrated MODFLOW model was utilized to forecast static water declines in the Fort Dodge wells from the water use increase. This model is calibrated to the static water levels of the Jordan aquifer, not the pumping (dynamic) water levels. Water use projections were completed using the additional pumping the requested allocation of 2,282 mgy from the four active Jordan aquifer wells, and 400 mgy, or 50% of the allocation requested for Well #15, open in the Mississippian and Jordan aquifer. Water use model increases begin in each scenario in 2026, then continued for 17 years, until January 1, 2042.

Figure 3 shows the projected static water level declines using a MODFLOW numerical model. When projecting water level trends at the maximum rate static water levels are noted to be 100 feet above the Tier 2 limit, maintaining the 750 feet asl level. Utilizing best management strategies such as lower pumping rates for longer periods to keep pumping water levels, the city of Fort Dodge should be able to manage the current and future production wells to avoid encountering the Jordan Tier 2 regulatory level due to increases in pumping and wells from this permit modification.



**Figure 3. Modeled water levels (heads) predicted to 2042, in days since 1/1/2000 (Time). The lowest water level measurements are 229 meters elevation, or roughly 750 feet above sea level. These predicted static water levels are approximately 150 feet above Tier 2.**

## Findings

- Within the 5-year water use permitted time frame, using forecasted annual increases. The water use permit allocation limit of 5,369 million gallons per year is a reasonable allocation limit to request.
- The forecasted water use includes the additional use from the city of Manson, anticipated to connect to the City of Fort Dodge in 2026.
- The Tier 2 level will likely not be encountered during the permit cycle, under current pumping conditions. There is a significant chance that future pumping water levels will reach Tier 2 at current pumping levels and annual rates.
- The rate of water level decline in the Jordan aquifer is noted to have been most significant during the period of 2011 to 2016. During this period, water withdrawals from the Jordan aquifer increased from Fort Dodge considerably.
- From available information, water supply from both Mississippian and Jordan aquifers should be sustainable throughout a permit cycle. A permit with the requested rates and annual allocation should be granted.

**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. There are possible adverse impacts on nearby existing Mississippian private well owners in the area. There are also uncertainties with the hydrologic characteristics and yield potential of the aquifers and vertical wells, as well as the forecasted decline noted in the groundwater model. Subject to public notice and potential revisions based on comments received, a draft permit should be issued for a term of 5-years.

IOWA DEPARTMENT OF NATURAL RESOURCES

WATER USE PERMIT

Permit issued to:

CITY OF FORT DODGE  
819 1<sup>ST</sup> AVE S  
FORT DODGE IA 50501-4739

Permit Number: 635-M10

Effective: xx/xx/2026

Expires: xx/xx/2031

The Permittee is authorized to:

withdraw water from four (4) Mississippian aquifer wells, all between 516 and 980 feet deep, located on land generally described as the E 1/2 of the SW 1/4 of Sec. 19, T89N, R28W, with the maximum annual allocation of 2,282 million gallons per year, at the maximum rate of 5,500 gallons per minute; and from four (4) Jordan aquifer wells, all between 1,830 and 1,980 feet deep, one well located on land generally described as the SE 1/4 of the NW 1/4 of Sec. 24, T89N, R29W, one well located in the SW 1/4 of the NW 1/4 of Sec. 19, one well located in the SE 1/4 of the NE 1/4 of Sec. 30, and one well located in the NE 1/4 of the SW 1/4 of Sec. 29, T89N, R28W, in the maximum annual allocation of 2,282 million gallons per year at a maximum rate of 5,000 gallons per minute; and one (1) Mississippian-Jordan aquifer well, approximately 2,307 feet deep, located on land generally described as the NE 1/4 of the SW 1/4 of Sec. 19, T89N, R28W, with the maximum annual allocation of 805 million gallons per year, at a maximum rate of 2,000 gallons per minute; for a maximum combined allocation of 5,369 million gallons per year at a maximum combined annual rate of 12,500 gallons per minute for municipal purposes within and without the permittee's corporate limits consistent with its municipal distribution system and other provisions of law.

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: xxxxxxxxxxxx, 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 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. Permittee shall be responsible for accurately measuring depth to water under non-pumping (static) conditions, depth to water under pumping conditions, and pumping rate(s) for all active wells listed in this permit, at a minimum of one measurement per year. These records shall be submitted annually to the Department.
9. As outlined in rule 567 50.11(2), the Permittee may withdraw from the Jordan aquifer only when well pumping levels are above three hundred (300) feet from the baseline, or 50% of the 1978 water level, as determined from available Department records. The following table expresses specific conditions for Jordan aquifer wells listed in this permit:

**Table 1 Jordan Aquifer water level tiers for wells owned by the City of Fort Dodge.**

<b>Fort Dodge Water Supply [635] Jordan Aquifer Well Water Levels</b>					
<b>Local Name</b>	<b>Well #15†</b>	<b>Well #16</b>	<b>Well #17</b>	<b>Well #18</b>	<b>Well #20</b>
Drill Date	1/1/1949	4/1/196 2	10/16/196 9	11/25/200 8	6/11/201 3
Well Elevation (ft)	988	993	1,028	991	994
1978 Jordan Water Level Elevation (ft)	898	897	896	900	901
Total Well Depth (ft)	2,307	1,830	1,980	1,870	1,947
Total Casing Depth (ft)	269	unk.	1,500	1,500	1,512

2025 Static Water Level Depth (ft)*	128	230	258	280	275
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<b><i>Estimated Feet Above Tier 3 (Tier 3 – pumping)</i></b>	<b><u>+322</u></b>	<b><u>+209</u></b>	<b><u>+184</u></b>	<b><u>+181</u></b>	<b><u>+158</u></b>

† Well #15 is open in both Mississippian and Jordan aquifers.

\*Water levels are from the 2025 annual report.

10. Permittee must apply to renew this water use permit using the appropriate DNR form prior to the expiration date of the current permit version.
11. 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.
12. This permit supersedes Water Use Permit No. 635-m9

**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.