

**NOTICE OF INTENT TO MODIFY AN EXISTING PERMIT
AUTHORIZING THE USE OF WATER
FOR GENERAL MUNICIPAL PURPOSES
IN WOODBURY 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, Iowa 50321 an application as described below.

The City of Sioux City, Iowa DNR LOG # 34,750, requests a water use permit modification allowing them to withdraw water from eight existing and two proposed vertical wells (Cretaceous Dakota Sandstone and Missouri River alluvial wells) ranging from 110 to 352 feet deep and located in the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$, the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$, the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$, the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$, the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$, the SW $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 29, and from three existing radial collector wells in the Missouri River alluvium in ((1) Riverfront) the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 29, T89, R47W, (2) (Riverside) the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 26, T89, R48W, and (3) (Southbridge) the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 26, T88, R48W; and one new Cretaceous Dakota Sandstone "Riverfront Well" approximately 320 feet deep, in the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of section 29, T89N, R47W, Woodbury County, Iowa; in the maximum quantity of 9.9 billion gallons per year at a maximum rate of 32,000 gallons per minute throughout each year for municipal purposes within and without the permittee's corporate limits including service to the cities of South Sioux City, Nebraska, Sergeant Bluff, Iowa, and Dakota Dunes, South Dakota, consistent with its municipal distribution system and other provisions of law.

This permit modification represents an addition of two vertical wells as above-described, and an increase to the annual allocation from 9.4 billion gallons per year to 9.9 billion gallons per year. The maximum instantaneous pumping amount is being increased from 30,450 gallons per minute to 32,000 gallons per minute. The well will increase/s reflect increased demands on the system and improved operational flexibility in using the wells, as described above. Similarly, the increased allocation is accommodating system growth.

The Department has determined that this use of water conforms to the relevant criteria (Iowa Code Chapter 455B and Iowa Administrative Code Chapter 567) and recommends the permit be granted. A copy of the summary report for the application is available upon a request to the Department at the address listed above. Comments on the report and on this use of water must be received by September 23, 2026, and should be addressed "ATTN.: Water Supply Engineering Section" and should specify the applicant's log number.

(By Michael K. Anderson, P.E., Water Supply Engineering Section)

WATER USE PERMIT SUMMARY REPORT

Applicant: City of Sioux City

Application Iowa DNR Log Number: 34,750

The City of Sioux City, Iowa DNR LOG # 34,750, requests a water use permit modification allowing them to withdraw water from eight existing and two proposed vertical wells (Cretaceous Dakota Sandstone and Missouri River alluvial wells) ranging from 110 to 352 feet deep and located in the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$, the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$, the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$, the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$, the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$, the SW $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 29, and from three existing radial collector wells in the Missouri River alluvium in ((1) Riverfront) the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 29, T89, R47W, (2) (Riverside) the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 26, T89, R48W, and (3) (Southbridge) the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 26, T88, R48W; and one new Cretaceous Dakota Sandstone "Riverfront Well" approximately 320 feet deep, in the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of section 29, T89N, R47W, Woodbury County, Iowa; in the maximum quantity of 9.9 billion gallons per year at a maximum rate of 32,000 gallons per minute throughout each year for municipal purposes within and without the permittee's corporate limits including service to the cities of South Sioux City, Nebraska, Sergeant Bluff, Iowa, and Dakota Dunes, South Dakota, consistent with its municipal distribution system and other provisions of law.

This permit modification represents an addition of two vertical wells as above-described, and an increase to the annual allocation from 9.4 billion gallons per year to 9.9 billion gallons per year. The maximum instantaneous pumping amount is being increased from 30,450 gallons per minute to 32,000 gallons per minute. The well will increase/s reflect increased demands on the system and improved operational flexibility in using the wells, as described above. Similarly, the increased allocation is accommodating system growth.

1. This permit represents a modification of a previously issued permit for this large municipal water system.
2. The requested amount of water allocated reflects an expected increase in population and increases in agreements to provide up to 2,738 million gallons per year to the cities of South Sioux City, Nebraska, Sergeant Bluff, Iowa, and Dakota Dunes, South Dakota.
3. The water requested is to be used for a community public water supply. By the Iowa Administrative Code, up to 200 gallons per day per capita may be provided unless additional need is demonstrated by the applicant. The Applicant has requested the maximum allowance for the projected population throughout the life of the permit, in addition to water contracted for sale to their whole sale purchasers. The amount granted is thus justified by law, barring compelling circumstances that mitigate to the contrary.
4. The radial collector well (Southbridge) is placed in Missouri River alluvium to a depth of approximately 90 feet. The static water level is anticipated to be approximately 19 feet, with the pumps set at 85-90 feet below ground surface and having a capacity of 6,944 gallons per minute. Given the amount of water available in the aquifer and the amount of water requested, it is unlikely that the alluvium will be subject to significant depletion as a result of water withdrawals made and the magnitude and rate used by the applicant.
 - A portion of the water source consists of Dakota Sandstone as described above. The aquifer is very loosely associated in this area with the Floyd and Little Sioux River drainage basin system. The geology of the northwest Iowa study area is characterized by a sequence of unconsolidated upper Cenozoic (less than about 5 million years) deposits, overlying Mesozoic Cretaceous (about 100 million years) sandstones, shales, and limestones, Paleozoic (520 million to 280 million years) sandstones, shales, and limestones, and Precambrian (2.8 billion to 1.1 billion years) quartzites, granites, and related rocks. The major sources of groundwater in this area are the sandstones in the Cretaceous Dakota Formation.
 - Most of the water-producing sandstones in the Dakota Formation are found in the basal Nishnabotna Member, although scattered sandstones in the overlying Woodbury Member also yield significant amounts of

groundwater. IGWS geologists have defined the Lower Dakota aquifer as the water-bearing sandstone and conglomerate units of the Nishnabotna Member and the directly adjacent and hydrologically contiguous sandstone bodies in the overlying Woodbury Member. An intensive one-year study of the geology and hydrogeology of this formation was undertaken to provide a more quantitative assessment of the aquifer, and to construct a groundwater flow model that can be used as a planning tool for future water development/beneficial use.

- A numerical groundwater flow model of the Lower Dakota aquifer was developed using four hydrogeologic layers. The model was created using Visual MODFLOW version 4.2. Hydrologic processes include net recharge, hydraulic conductivity, specific storage, flow through boundaries, no flow boundaries, well discharge, river boundary, and groundwater upwelling. Insertion of this water usage into the numerical model indicates that the aquifer can easily support this usage.
5. The nearest neighboring user requiring a water use permit is the Boyer Family Farm (Water Use Permit #4373), located approximately 0.6 miles southeast of the applicant's withdrawal site and involving the use of water for irrigation of general farm crops. Water withdrawal is authorized from one Missouri River alluvial well, approximately 86 feet deep, in the quantity of 269 acre-feet per year at a maximum rate of 1,500 gallons per minute. Water withdrawal has ranged from 42.7 to 82.1 acre-feet per year over the past five years. Because of the relatively large distance between the applicant's and the Boyer Family Farm wells and the large amount of water available in the aquifer, it is unlikely that the proposed withdrawal would adversely affect the Boyer Family Farm site.
 6. The next nearest neighbor requiring a water use permit is Charles H. Oehlerking (Water Use Permit #2442), located approximately 1 mile north of the applicant's withdrawal site and involving the use of water for irrigation of general farm crops. Water withdrawal is authorized from the Missouri River in the maximum quantity of 80 acre-feet per year at a maximum rate of 1,000 gallons per minute and from three Missouri River alluvial wells, each approximately 100 feet deep, in the maximum quantity of 3,000 gallons per minute. Water withdrawal has ranged from 0 to 141 acre-feet per year over the past five years. Because of the large distance between the applicant's site and the Oehlerking well and the large amount of water available in the aquifer, it is unlikely that the proposed withdrawal would adversely affect the Oehlerking site.
 7. Based on the amount of water available in this aquifer, it is unlikely that anyone living in the vicinity of the applicant and having private (non-regulated) wells in the Missouri River alluvium would experience any significant impacts in response to the proposed withdrawal by the applicant. In any event, the interests of individuals using water for domestic purposes, as well as those persons benefiting from the permits mentioned above are amply protected in the event of substantial injury, pursuant to Section 455B.271, Code of Iowa.
 8. The applicant is utilizing a reasonable amount of water in a beneficial manner (municipal use which includes drinking and human sanitation). There is no evidence that the use pursuant to a permit granted in accordance with the conclusions contained herein will constitute a waste of the water resources of the State, will be incompatible with the state comprehensive plan for water resources, will impair the effect of pollution control laws of this State or the navigability of a navigable watercourse, or will be detrimental to the public interest or to the interests of property owners with prior or superior rights who might be affected.

The requested use of water conforms to the relevant criteria in Division III, Part 4, Chapter 455B, Code of Iowa and Chapter 50 of Part 567, Iowa Administrative Code. No adverse effect upon other water users is foreseen at this time. Following publication of notice and subject to revisions in response to comments that may be submitted, the attached draft permit should be issued for a period of ten years.

August 24, 2026

Water Supply Engineering Section

IOWA DEPARTMENT OF NATURAL RESOURCES

WATER USE PERMIT

Permit issued to:	Permit Number:	773-M11
CITY OF SIOUX CITY	Effective:	XXXXX
PUBLIC WORKS DEPT	Expires:	XXXXX
PO BOX 447		
SIOUX CITY IA 51102		

The permittee is authorized to:

withdraw water from eight existing and two proposed vertical wells (Cretaceous Dakota Sandstone and Missouri River alluvial wells) ranging from 110 to 352 feet deep and located in the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$, the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$, the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$, the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$, the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$, the SW $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 29, and from three existing radial collector wells in the Missouri River alluvium in ((1) Riverfront) the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 29, T89, R47W, (2) (Riverside) the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 26, T89, R48W, and (3) (Southbridge) the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 26, T88, R48W; and one new Cretaceous Dakota Sandstone "Riverfront Well" approximately 320 feet deep, in the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of section 29, T89N, R47W, Woodbury County, Iowa; in the maximum quantity of 9.9 billion gallons per year at a maximum rate of 32,000 gallons per minute throughout each year for municipal purposes within and without the permittee's corporate limits including service to the cities of South Sioux City, Nebraska, Sergeant Bluff, Iowa, and Dakota Dunes, South Dakota, 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 Chapters 50 of 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--50.9, Iowa Administrative Code. Appeal must be in writing and must be received at the Department of Natural Resources; 6200 PARK AVE.; Des Moines, Iowa 50321 within thirty days of the date of the certification of the mailing of the permit.

FOR THE DIRECTOR:

By: _____ Date Executed: _____
(mka) XXXXX

cc: Field Office No. 3, Spencer
File CON 3-9 Water Use Permit 773, City of Sioux City

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 water use from said sources by means of water meters and submit them annually to the department. Additional records on pumping rates from said sources and other data related to the regulation of this use of water shall be maintained and submitted as directed by the department.
2. Permittee shall be responsible for securing such other permits or approvals as may be required by this department, federal, or local governmental agencies for the operation of said water supply facilities or the discharge of water or other materials due to this operation.
3. Permittee is responsible for compliance with all applicable provisions of state law and the rules and regulations of this department and of federal and local health and water pollution control agencies in the operation of its water supply facilities and in the disposal of its wastes.
4. Existing wells shall not be replaced without notifying the Iowa Department of Natural Resources. Changes to the location, depth, source aquifer, or other physical features of said wells may require that this permit be modified to accommodate the changes.
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. Once each spring prior to March 31, the permittee shall be responsible for accurately measuring the distance(s) to water (static water level) from the access port in all permitted wells. The distance to water shall be submitted to the department annually as part of the records of water use.
7. 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.
8. This permit supersedes Water Use Permit No. 773-M10.

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.