

KANSAS DEPARTMENT OF AGRICULTURE

Division of Water Resources

M E M O R A N D U M

TO: Files

DATE: July 25, 2024

FROM: Lloyd Hemphill

RE: Application, File Nos. 50,895
& 51,202

Gerald Gerstner has filed the referenced applications proposing to appropriate water for irrigation use. Application, File No. 51,202 proposes to store 362 acre-feet of surface water in a reservoir at the rate of natural flows and to re-divert 250 acre-feet at the rate of 1,200 gallons per minute. Application, File No. 50,895 proposes to appropriate 320 acre-feet of groundwater from a battery of three wells at a rate of 800 gallons per minute. The wells are expected to have an insufficient yield to operate the irrigation system directly and it will be used to supplement natural runoff and keep the pond full.

Both points of diversion are in Section 11, Township 4 South, Range 9 East, Marshall County, within the Black Vermillion River Drainage Basin. The battery of wells is in the northeast quarter section and the pond is in the northwest quarter section on Tributary 2 of the Black Vermillion River. These points of diversion do not overlap any other files. The points of diversion are owned by the applicant and the applications were signed indicating legal access to the points of diversion.

These applications will irrigate a place of use including 693.5 acres owned by the Gerald Gerstner Trust and the Sheryl Ann Gerstner Trust, as described in the applications. No other files overlap this place of use. The reasonable quantity for irrigation of this acreage is nearly 763 acre-feet (693.5 acres x 1.1 AF/acre), per K.A.R. 5-3-23. The combined quantity requested for direct use is 570 acre-feet, about 75% of the maximum reasonable quantity. This appears reasonable for irrigation in this region. No quantity limitation will be necessary.

Note that Application, File No. 51,202 was filed as a replacement for dismissed Application, File No. 50,812. File No. 50,812 proposed to use an existing watershed reservoir instead of constructing a new structure, however this was abandoned because of an inability to reach agreement with the watershed district and nearby landowners. It was determined in internal discussions with various headquarters and field office staff that Application, File No. 50,812 could not be modified to reflect the new reservoir location but a new application would be required. Because of these circumstances, it was determined that these two applications could be packaged together for processing despite the significant difference in priority dates. There are no files in the vicinity that will be affected by processing the junior file along with the senior file.

File No. 50,895 (well)

A water well completion report (WWC5) was submitted for a well completed on May 24, 2023. This well log shows that the subsurface lithology is clay with some sand and gravel to a depth of 38 feet, very fine to fine clayey sand to 150 feet, fine to medium sand with gravel to 161 feet, coarse gravel to 169 feet, and shale to 175 feet. Static water level was measured at 49 feet depth resulting in 126 feet of saturated aquifer thickness. The water level is below the top of the sand formation, suggesting an unconfined aquifer. Based on the well log and a geologic map, the source of water is the glacial aquifer which overlies shale bedrock of the Council Grove Group. According to the "Saturated Thickness and Specific Yield of Cenozoic Deposits in Kansas" map by Bayne and Ward, 1967 (Map M-5), this well is located near the edge of a significant buried glacial valley which reaches a saturated thickness of more than 350 feet several miles to the east.

Per K.A.R. 5-3-11, safe yield is determined by the extent of the unconfined aquifer (glacial aquifer), within two miles of the proposed point of diversion. The extent of the aquifer was determined by reviewing nearby well logs and geologic maps. The southern portion of the area of consideration is crossed by the Black Vermillion River alluvial valley. Few well logs are available within this alluvial valley, but it appears that the bedrock elevation may be higher underneath the alluvial valley than in the glacial valley where the proposed well is located. It appears that the hydraulic gradient is toward the alluvial valley, but this is not supported by much data. It is undetermined whether the alluvial valley contributes recharge to the glacial valley, based on the available information. As a conservative analysis of safe yield, the area of consideration was truncated to exclude the alluvial valley and areas to the south. The area used for analysis includes 6,057 acres. With a potential annual recharge of 4.2 inches, and 100% of recharge available for appropriation, safe yield was determined to be 2,119.82 acre-feet. The prior appropriations total 299.13 acre-feet, leaving 1,820.69 acre-feet available for appropriation and the application meets safe yield criteria.

One nearby well owner was identified within one-half mile of the proposed point of diversion (domestic well). There are no non-domestic wells within one-half mile. A nearby notification letter was sent on May 10, 2024. A phone call and a letter were received from the domestic well owner (Jeremy Brandt). Mr. Brandt indicated that he owns two wells that are part of an open loop geothermal heating and cooling system (supply well and return well). Water from outdoor hydrants in this system is also used for lawn and garden use and watering farm animals. Mr. Brandt was concerned about any adverse effect from the proposed project but he primarily provided information to document his water use and state that there have been no problems with the wells in 18 years of use.

Before processing of this application began, Brett Bunger, Water Commissioner Topeka Field Office (now retired), met with another domestic well owner (Julie Fox) to discuss her water use from a well and an existing watershed reservoir. During this visit, the static well level was measured and is documented in the file. No notification letter was sent to Mrs. Fox because contact had already been made and the fact that the well is over 3,900 feet away from the proposed well. Also prior to the review of this application, Joe Horigan contacted the Topeka Field Office interested in establishing a domestic water right as protection against the proposed appropriation. Mr. Horigan owns a domestic well but also has a connection to rural water. He was advised that a prior domestic use is protected even without a formal quantification of the domestic water right. Mr. Horigan did not pursue a domestic application following this conversation. No notification letter was sent to Mr. Horigan because contact had already been made and the fact that his well is nearly a mile away from the proposed well.

The nearest domestic well (Brandt) is approximately 2,300 feet away. The WRIS database shows that the nearest non-domestic wells are over 1.75 miles away. The proposed well complies with the minimum spacing requirement of 1,320 feet to non-domestic wells and 660 feet to domestic wells for unconfined aquifers, per K.A.R. 5-4-4 and no information was provided to indicate the proposed appropriation will impair water rights.

File No. 51,202 (pond)

Based on an area-capacity table submitted with the application, the surface area of the pond is 19.2 acres and the storage capacity is 110.2 acre-feet at the primary spillway elevation. The DWR Dam Safety team reviewed this project under DMS-0178 and determined that it qualified for a low hazard dam exemption. Janelle Phillips, DWR Structures, also confirmed that the structure would not require permitting as a stream obstruction or floodplain fill.

Runoff computations were completed considering a normal precipitation of 33 inches, soil complex number of 76, and drainage area of approximately 383 acres. This calculation determined that the drainage basin will generate 362 acre-feet of runoff in 1 out of every five (5) years (a 20% chance). The application is requesting 250 acre-feet for direct irrigation use, 110.2 acre-feet storage capacity, and 20.8 acre-feet for evaporation, resulting in a storage quantity of 381 acre-feet. The potential runoff is the limiting factor when considering a reasonable storage quantity. The requested direct use quantity is about 2.3 times the storage capacity of the reservoir, which appears reasonable for the project.

Notification letters were sent to upstream and downstream landowners on May 10, 2024 and July 15, 2024. One phone call was received from Julie Fox. Mrs. Fox indicated that her family waters cattle from a watershed district reservoir (File No. 47,078) downstream of the proposed reservoir. She expressed concern that if the water level in the reservoir lowers, the cattle would have to walk through mud to get to water. The watershed district may not allow this access by cattle because of the damage it would cause. I discussed with Mrs. Fox that a substantial drainage area contributes runoff to the watershed reservoir that does not flow through the proposed point of diversion (329 acres, 46% of the total drainage). The potential runoff from this other drainage area appears sufficient to fill the existing reservoir on its own. I advised Mrs. Fox that a prior domestic water use would be protected from impairment by this appropriation. However, Brett Bunger previously discussed with Mrs. Fox that a reasonable lowering of the water level is acceptable and a prior use of water from a pond could be difficult to protect if reservoir levels recede beyond a property line or otherwise make access to the water impossible.

According to the WRIS database, there are several other surface water rights within a two-mile radius. Most of the points of diversion are ponds located in separate drainage areas and will have no relation with the proposed pond. The only point of diversion in the same drainage area is a watershed reservoir (File No. 47,078) located about a half mile downstream (from dam to dam). The proposed pond captures runoff from about 383 acres of the total 712 acres draining to the existing pond. There appears to be sufficient runoff from other drainage areas to satisfy File No. 47,078 and any potential domestic water rights. No senior water rights will be impaired with approval of this application.

In accordance with K.S.A. 82a-706c, the Chief Engineer retains full authority to require any water user to install meters, gages, or other measuring devices, which devices he or she or his or her agents may read at any time. Water flowmeter requirements are further described in K.A.R. 5-1-4 through K.A.R. 5-1-12. If any chemical or foreign substance is injected into the water pumped under these permits, check valves will also need to be installed.

Nathan Westrup, Water Commissioner, Topeka Field Office, recommended in a July 23, 2024 e-mail that the referenced new application should be approved. Based on the above discussion, all relevant rules and regulations are met, and senior rights will not be impaired, it is recommended that the referenced new applications be approved.

Lloyd Hemphill
Environmental Scientist
Topeka Field Office

Hemphill, Lloyd [KDA]

From: Westrup, Nathan [KDA]
Sent: Tuesday, July 23, 2024 9:46 AM
To: Hemphill, Lloyd [KDA]
Subject: RE: File Nos. 50895 & 51202: For your recommendation

Lloyd,

Sure. I appreciate your attention to detail and making sure all the T's are crossed!

I have no objection to approval.

Thanks,

Nathan Westrup, Water Commissioner

Topeka Field Office
Division of Water Resources
Kansas Department of Agriculture
Phone: 785-296-7064
Mobile: 785-230-2991
Nathan.Westrup@ks.gov

From: Hemphill, Lloyd [KDA] <Lloyd.Hemphill@ks.gov>
Sent: Tuesday, July 23, 2024 9:05 AM
To: Westrup, Nathan [KDA] <Nathan.Westrup@ks.gov>
Subject: FW: File Nos. 50895 & 51202: For your recommendation

Nate,

I have notified the Upper Black Vermillion WJD #37 and they do not have any concerns with this project.

Do you want to provide a fresh recommendation?

Thanks,
Lloyd

From: Hemphill, Lloyd [KDA]
Sent: Thursday, July 11, 2024 1:36 PM
To: Westrup, Nathan [KDA] <Nathan.Westrup@ks.gov>
Subject: File Nos. 50895 & 51202: For your recommendation

Nate,

Will you provide your recommendation on these two applications? This is a well and pond combination that will be used to irrigate the same acreage.

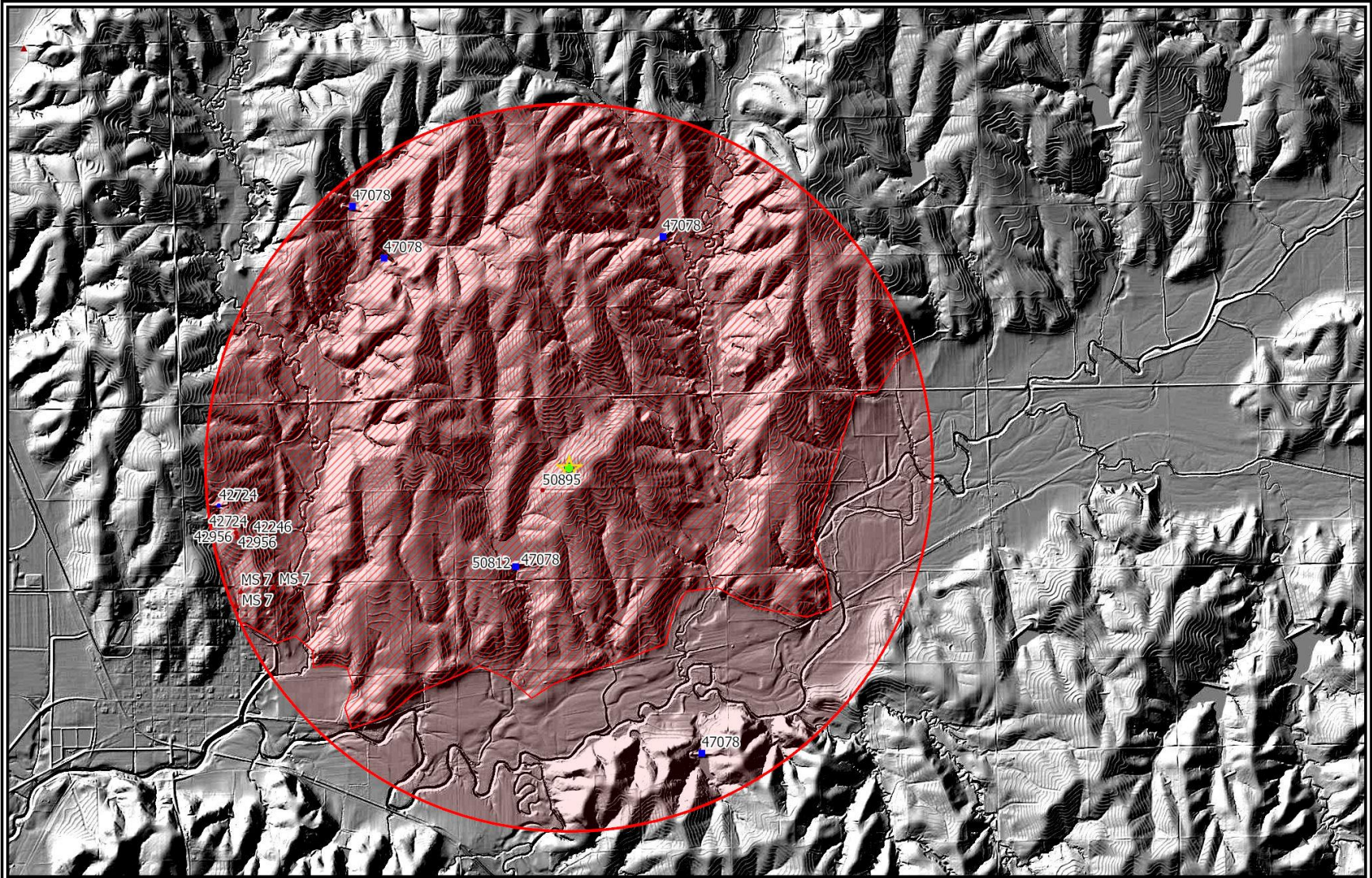
Structures determined that the pond qualifies for a low hazard dam exemption, and it was properly registered. No other Structures permitting is required.

Let me know if you have any questions.

Thanks,
Lloyd

Lloyd Hemphill, Environmental Scientist
Kansas Department of Agriculture
Division of Water Resources, Topeka Field Office
1131 SW Winding Rd, Suite 400
Topeka, KS 66615
Office: (785) 296-5733

Safe Yield Report Sheet – File No. 50,895
Water Right- Proposed Point of Diversion
Point of Diversion in 11-04S-09E
Footages from SE corner- 3,279 feet North 1,852 feet West



Analysis Results

The selected PD is in an area OPEN to new appropriations.

The safe yield based on the variables listed below is 2,119.82 AF.

Total prior appropriations in the circle is 619.13 AF – 320 AF (this application) = 299.13 AF

Total quantity of water available for appropriation is 1,820.69 AF.

Safe Yield Variables

The area used for the analysis is set at 6,057 acres.

The potential annual recharge at the circle center is estimated to be 4.2 inches.

The percent of recharge available for appropriation is 100%.

Authorized Quantity values are as of 20-OCT-2023 and are based on Appropriated and Vested ground water right and possible stream nodes for GMD #2. Domestic, Term and Temporary water rights have been excluded.

There are 4 water rights and 8 points of diversion within the circle.

| File Number | Use | ST | SR | Q4 | Q3 | Q2 | Q1 | FeetN | FeetW | Sec | Twp | Rng | ID | Qind | Auth Quant | Add Quant | Tot Acres | Net Acres |
|-------------|-----|----|----|----|----|----|----|-------|-------|-----|-----|-----|----|------|------------|-----------|-----------|-----------|
| A 42246 00 | IRR | NK | G | | SE | NE | SE | 1394 | 591 | 09 | 04 | 09E | 2 | WR | 44.00 | 44.00 | 236.00 | 236.00 |
| V MS 7 00 | MUN | AA | G | | NW | NE | NE | 0 | 0 | 16 | 04 | 09E | 2 | WR | 184.13 | 184.13 | | |
| Same | MUN | AA | G | | NE | NE | NE | 0 | 0 | 16 | 04 | 09E | 3 | WR | | | | |
| Same | MUN | AA | G | | NW | NE | NE | 4680 | 1170 | 16 | 04 | 09E | 4 | WR | | | | |
| A 42956 00 | IRR | NK | G | | SW | NE | SE | 1415 | 1071 | 09 | 04 | 09E | 15 | WR | 71.00 | 71.00 | 236.00 | 0.00 |
| Same | IRR | NK | G | | SW | NE | SE | 1669 | 1120 | 09 | 04 | 09E | 17 | WR | | | | |
| Same | IRR | NK | G | | SW | NE | SE | 1542 | 1096 | 09 | 04 | 09E | 18 | WR | | | | |
| A 50895 00 | IRR | AY | G | | | | | 2640 | 2640 | 11 | 04 | 09E | 2 | WR | 320.00 | 320.00 | 693.50 | 0.00 |

Limitations

| File Number | Seq Num | Limitations |
|-------------|---------|---------------------------|
| A 42246 00 | 1 | SEE JACKET FOR CONDITIONS |
| A 42956 00 | 1 | SEE JACKET FOR CONDITIONS |

THE STATE OF KANSAS



KANSAS DEPARTMENT OF AGRICULTURE
Mike Beam, Secretary of Agriculture

DIVISION OF WATER RESOURCES
Earl D. Lewis Jr., Chief Engineer

**APPROVAL OF APPLICATION
and
PERMIT TO PROCEED**

(This Is Not a Certificate of Appropriation)

This is to certify that I have examined Application, **File No. 50,895** of the applicant

**GERALD GERSTNER
300 E 10TH STREET
FRANKFORT, KS 66427**

for a permit to appropriate water for beneficial use, together with the maps, plans and other submitted data, and that the application is hereby approved and the applicant is hereby authorized, subject to vested rights and prior appropriations, to proceed with the construction of the proposed diversion works (except those dams and stream obstructions regulated by K.S.A. 82a-301 through 305a, as amended), and to proceed with all steps necessary for the application of the water to the approved and proposed beneficial use and otherwise perfect the proposed appropriation subject to the following terms, conditions and limitations:

1. That the priority date assigned to such application is **October 20, 2022**.
2. That the water sought to be appropriated shall be used for irrigation use on land described in the application as follows:

| Sec. Twp. Range | NE¼ | | | | NW¼ | | | | SW¼ | | | | SE¼ | | | | TOTAL |
|-----------------|------|------|------|------|------|-----|-----|------|------|------|------|------|------|------|------|------|-------|
| | NE¼ | NW¼ | SW¼ | SE¼ | NE¼ | NW¼ | SW¼ | SE¼ | NE¼ | NW¼ | SW¼ | SE¼ | NE¼ | NW¼ | SW¼ | SE¼ | |
| 11 - 4S - 9E | 40.0 | 40.0 | 40.0 | 40.0 | 27.0 | | | 40.0 | 39.0 | | | 12.0 | 40.0 | 40.0 | 37.5 | 39.0 | 434.5 |
| 12 - 4S - 9E | | | | | | | | 27.0 | 40.0 | 40.0 | 38.0 | 40.0 | | 40.0 | 34.0 | | 259.0 |

3. That the authorized source from which the appropriation shall be made is groundwater to be withdrawn by means of a battery of three (3) wells with a geographical center located in the Southeast Quarter of the Southwest Quarter of the Northeast Quarter (SE¼ SW¼ NE¼) of Section 11, more particularly described as being near a point 3,270 feet North and 1,848 feet West of the Southeast corner of said section, in Township 4 South, Range 9 East, Marshall County, Kansas, located substantially as shown on the map accompanying the application.
4. That the appropriation sought shall be limited to a maximum diversion rate not in excess of **800 gallons per minute (1.78 c.f.s.)** and to a quantity not to exceed **320 acre-feet** of water for any calendar year.

5. That installation of works for diversion of water shall be completed on or before **December 31, 2025**, or within any authorized extension thereof. The applicant shall notify the Chief Engineer and pay the statutorily required field inspection fee of \$400.00 when construction of the works has been completed. Failure to timely submit the notice and the fee will result in revocation of the permit. Any request for an extension of time shall be submitted prior to the expiration of the deadline and shall be accompanied by the required statutory fee of \$100.00.

6. That the proposed appropriation shall be perfected by the actual application of water to the proposed beneficial use on or before **December 31, 2029**, or any authorized extension thereof. Any request for an extension of time shall be submitted prior to the expiration of the deadline and shall be accompanied by the required statutory fee of \$100.00.

7. That the applicant shall not be deemed to have acquired a water appropriation for a quantity in excess of the amount approved herein nor in excess of the amount found by the Chief Engineer to have been actually used for the approved purpose during one calendar year subsequent to approval of the application and within the time specified for perfection or any authorized extension thereof.

8. That the use of water herein authorized shall not be made so as to impair any use under existing water rights nor prejudicially and unreasonably affect the public interest.

9. That the right of the appropriator shall relate to a specific quantity of water and such right must allow for a reasonable raising or lowering of the static water level and for the reasonable increase or decrease of the streamflow at the appropriator's point of diversion.

10. That this permit does not constitute authority under K.S.A. 82a-301 through 305a to construct any dam or other obstruction; nor does it grant any right-of-way, or authorize entry upon or injury to, public or private property.

11. That all diversion works constructed under the authority of this permit into which any type of chemical or other foreign substance will be injected into the water pumped from the diversion works shall be equipped with an in-line, automatic quick-closing, check valve capable of preventing pollution of the source of the water supply. The type of valve installed shall meet specifications adopted by the Chief Engineer and shall be maintained in an operating condition satisfactory to the Chief Engineer.

12. That an acceptable water flow meter shall be installed and maintained on the diversion works authorized by this permit in accordance with the Kansas Administrative Regulations 5-1-4 through 5-1-12 adopted by the Chief Engineer. This water flow meter shall be used to provide an accurate quantity of water diverted as required for the annual water use report (including the meter reading at the beginning and end of the report year).

13. That the applicant shall maintain accurate and complete records from which the quantity of water diverted during each calendar year may be readily determined and the applicant shall file an annual water use report with the Chief Engineer by March 1 following the end of each calendar year. Failure to file the annual water use report by the due date shall cause the applicant to be subject to a civil penalty.

14. That no water user shall engage in nor allow the waste of any water diverted under the authority of this permit.

15. That the right to appropriate water under authority of this permit is subject to any minimum desirable streamflow requirements identified and established pursuant to K.S.A. 82a-703c for the source of supply to which this water right applies.

16. That all wells with a diversion rate of 100 gallons per minute or more drilled under the authority of this permit shall have a tube or other device installed in a manner acceptable to, and in accordance with specifications adopted by, the Chief Engineer. This tube or device shall be suitable for making water level measurements and shall be maintained in condition satisfactory to the Chief Engineer.

17. That this permit is further limited such that all wells shall be located within a three hundred (300) foot radius circle, in the same local source of supply, shall be limited to a total maximum combined diversion rate not in excess of **800 gallons per minute (1.78 c.f.s.)** and shall supply water to a common distribution system.

18. That failure without cause to comply with provisions of the permit and its terms, conditions and limitations will result in the forfeiture of the priority date, revocation of the permit and dismissal of the application.

Ordered this 25th day of July, 2024, in Manhattan, Riley County, Kansas.

Lane P. Letourneau

Lane P. Letourneau, P.G.
Water Appropriation Program Manager
Division of Water Resources
Kansas Department of Agriculture

State of Kansas)
) SS
County of Riley)

The foregoing instrument was acknowledged before me this 25th day of July, 2024, by Lane P. Letourneau, P.G., Water Appropriation Program Manager, Division of Water Resources, Kansas Department of Agriculture.

Vickie L. Belanger

Notary Public



1320 Research Park Drive
Manhattan, KS 66502
785-564-6700
www. agriculture.ks.gov



900 SW Jackson, Room 456
Topeka, KS 66612
785-296-3556

Mike Beam, Secretary

Laura Kelly, Governor

August 2, 2024

GERALD GERSTNER
300 E 10TH STREET
FRANKFORT KS 66427

RE: Appropriation of Water
File Nos. 50,895 and 51,202

Dear Mr. Gerstner:

Enclosed are permits authorizing you to proceed with construction of the proposed diversion works and to appropriate water for beneficial use. Your attention is directed to the enclosures and to the terms, conditions, limitations, and requirements specified in these permits.

Notices must be filed on the enclosed forms once the diversion works have been completed. Failure to complete the diversion works within the time allowed, or within any authorized extension of time thereof, will result in dismissal of the permits. If you need an extension of time, you must request it before the deadline for completion set forth in the permits. Any request for an extension of time must be accompanied by the statutorily required fee, which is currently \$100.00, per file number.

Acceptable water flowmeters must be installed on the diversion and re-diversion works authorized by these permits prior to using water. An annual water use report must be filed with the Chief Engineer by March 1, following the end of each calendar year. If a complete annual water use report is not received by the deadline, then a fine may be assessed and all water use under such permit or right may be suspended. Reports may be submitted online for no fee at www.kswaterusereport.org. Reports submitted in paper form will be assessed a \$20 per file number paper filing fee.

The approval of your applications constitutes permits to appropriate water. They do not give authority to construct any dam or other stream obstruction regulated by K.S.A. 82a-301 through 305a. They not give authority to access any right-of-way or authorize trespassing upon or injury to public or private property. It may also be necessary for you to comply with other local, state or federal requirements.

Enclosed is an informational sheet that sets forth the procedure to obtain a Certificate of Appropriation which will establish the extent of your perfected water right. Additional information and applicable forms may be found on our website at agriculture.ks.gov/dwr. If you have any questions or need assistance with any of these requirements, please contact our office at 785-564-6640, or your local Topeka Field Office at 785-296-5733. If you call, please reference the file number so we can help you more efficiently.

Sincerely,

Kristen A. Baum
New Application Unit Supervisor
Water Appropriation Program

KAB:kak:lh
Enclosures
pc: Topeka Field Office

RIGHT TO A HEARING AND TO ADMINISTRATIVE REVIEW

If you are aggrieved by this Order, then pursuant to K.S.A. 82a-1901, you may request an evidentiary hearing before the Chief Engineer or request administrative review by the Secretary of Agriculture. Failure to request an evidentiary hearing before the Chief Engineer does not preclude your right to administrative review by the Secretary.

To obtain an evidentiary hearing before the Chief Engineer, a written request for hearing must be filed within 15 days after service of this Order as provided in K.S.A. 77-531 (**i.e., within a total of 18 days after this Order was mailed to you**), with: Kansas Department of Agriculture, Attn: Legal Division, 1320 Research Park Drive, Manhattan, Kansas 66502, FAX (785) 564-6777.

If you do not file a request for an evidentiary hearing before the Chief Engineer, you may petition for administrative review of the Order by the Secretary of Agriculture. A petition for review shall be in writing and state the basis for requesting administrative review. The request for review may be denied if the request fails to clearly establish factual or legal issues for review. See K.S.A. 77-527. The petition must be filed within 30 days after service of this Order as provided in K.S.A. 77-531 (**i.e., within a total of 33 days after this Order was mailed to you**), and be filed with: Secretary of Agriculture, Attn: Legal Division, Kansas Department of Agriculture, 1320 Research Park Drive, Manhattan, Kansas 66502, FAX (785) 564-6777.

If neither a request for an evidentiary hearing nor a petition for administrative review is filed as set forth above, then this Order shall be effective and become a final agency action as defined in K.S.A. 77-607(b). Failure to timely request either an evidentiary hearing or administrative review may preclude further judicial review under the Kansas Judicial Review Act.

CERTIFICATE OF SERVICE

On this 2 day of August, 2024, I hereby certify that the foregoing Approval of Application and Permit to Proceed, File No. 50,895, dated July 25, 2024, was mailed postage prepaid, first class, US mail to the following:

GERALD GERSTNER TRUST
SHERYL ANN GERSTNER TRUST
300 E 10TH STREET
FRANKFORT KS 66427

With photocopies to:

KDA-DWR Topeka Field Office



Division of Water Resources