

NOTICE

This scan only represents the application as filed. The information contained herein meets the requirements of K.A.R. 5-3-1 or K.A.R. 5-5-1, and has been found acceptable for filing in the office of the Chief Engineer. The application should not be considered to be a complete application as per K.A.R. 5-3-1b or K.A.R. 5-5-2a.

SEP 18 2023

1252



THE STATE OF KANSAS

KANSAS DEPARTMENT OF AGRICULTURE
Mike Beam, Secretary of Agriculture

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

File Number 51106
This item to be completed by the Division of Water Resources.

APPLICATION FOR PERMIT TO APPROPRIATE WATER FOR BENEFICIAL USE
Filing Fee Must Accompany the Application
(Please refer to Fee Schedule attached to this application form.)

To the Chief Engineer of the Division of Water Resources, Kansas Department of Agriculture,
1320 Research Park Drive, Manhattan, Kansas 66502:

1. Name of Applicant (Please Print): City of Maize
Address: PO Box 245
City: Maize State KS Zip Code 67101
Telephone Number: (316) 722-4854

2. The source of water is: [] surface water in (stream)
OR [x] groundwater in Arkansas River (drainage basin)

Certain streams in Kansas have minimum target flows established by law or may be subject to administration when water is released from storage for use by water assurance district members. If your application is subject to these regulations on the date we receive your application, you will be sent the appropriate form to complete and return to the Division of Water Resources.

3. The maximum quantity of water desired is 1,062 acre-feet OR 346,054,000 gallons per calendar year, to be diverted at a maximum rate of 800 gallons per minute OR --- cubic feet per second. Once your application has been assigned a priority, the requested maximum rate of diversion and maximum requested quantity of water under that priority number can NOT be increased. Please be certain your requested maximum rate of diversion and maximum quantity of water are appropriate and reasonable for your proposed project and are in agreement with the Division of Water Resources' requirements.

4. The water is intended to be appropriated for (Check use intended):
(a) [] Artificial Recharge (b) [] Irrigation (c) [] Recreational (d) [] Water Power
(e) [] Industrial (f) [x] Municipal (g) [] Stockwatering (h) [] Sediment Control
(i) [] Domestic (j) [] Dewatering (k) [] Hydraulic Dredging (l) [] Fire Protection
(m) [] Thermal Exchange (n) [] Contamination Remediation

YOU MUST COMPLETE AND ATTACH ADDITIONAL DIVISION OF WATER RESOURCES FORM(S) PROVIDING INFORMATION TO SUBSTANTIATE YOUR REQUEST FOR THE AMOUNT OF WATER FOR THE INTENDED USE REFERENCED ABOVE.

For Office Use Only:
F.O. 2 GMD 2 Meets K.A.R. 5-3-1 (YES/NO) Use MUN Source G/S County SG ALB Date 9/18/23
Code RE3 Fee \$ 460 TR # Receipt Date 9/18/23 Check # 76661

5. The location of the proposed wells, pump sites or other works for diversion of water is: **KS DEPT OF AGRICULTURE**

Note: For the application to be accepted, the point of diversion location must be described to at least a 10 acre tract, unless you specifically request a 60 day period of time in which to locate the site within a specifically described, minimal legal quarter section of land.

(A) One in the SE quarter of the NE quarter of the NE quarter of Section 36, more particularly described as being near a point 4,080 feet North and 175 feet West of the Southeast corner of said section, in Township 26 South, Range 2 West, Sedgwick County, Kansas.

(B) One in the _____ quarter of the _____ quarter of the _____ quarter of Section _____, more particularly described as being near a point _____ feet North and _____ feet West of the Southeast corner of said section, in Township _____ South, Range _____ East/West (circle one), _____ County, Kansas.

(C) One in the _____ quarter of the _____ quarter of the _____ quarter of Section _____, more particularly described as being near a point _____ feet North and _____ feet West of the Southeast corner of said section, in Township _____ South, Range _____ East/West (circle one), _____ County, Kansas.

(D) One in the _____ quarter of the _____ quarter of the _____ quarter of Section _____, more particularly described as being near a point _____ feet North and _____ feet West of the Southeast corner of said section, in Township _____ South, Range _____ East/West (circle one), _____ County, Kansas.

If the source of supply is groundwater, a separate application shall be filed for each proposed well or battery of wells, except that a single application may include up to four wells within a circle with a quarter (1/4) mile radius in the same local source of supply which do not exceed a maximum diversion rate of 20 gallons per minute per well.

A battery of wells is defined as two or more wells connected to a common pump by a manifold; or not more than four wells in the same local source of supply within a 300 foot radius circle which are being operated by pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which supply water to a common distribution system.

6. The owner of the point of diversion, if other than the applicant is (please print):

Bridger Maize LLC, 5540 Ellsworth Ave, Dallas TX 75206-5309
(name, address and telephone number)

(name, address and telephone number)

You must provide evidence of legal access to, or control of, the point of diversion from the landowner or the landowner's authorized representative. Provide a copy of a recorded deed, lease, easement or other document with this application. In lieu thereof, you may sign the following sworn statement:

I have legal access to, or control of, the point of diversion described in this application from the landowner or the landowner's authorized representative. I declare under penalty of perjury that the foregoing is true and correct.

Executed on September 11, _____, 20 23. _____
Applicant's Signature

The applicant must provide the required information or signature irrespective of whether they are the landowner. Failure to complete this portion of the application will cause it to be unacceptable for filing and the application will be returned to the applicant.

7. The proposed project for diversion of water will consist of one municipal well
(number of wells, pumps or dams, etc.)

and (will be) completed (by) December 31, 2024
(Month/Day/Year - each was or will be completed)

8. The first actual application of water for the proposed beneficial use was or is estimated to be 1/1/2025
(Mo/Day/Year)

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9. Will pesticide, fertilizer, or other foreign substance be injected into the water pumped from the diversion works?
 Yes No If "yes", a check valve shall be required.

All chemigation safety requirements must be met including a chemigation permit and reporting requirements.

10. If you are planning to impound water, please contact the Division of Water Resources for assistance, prior to submitting the application. Please attach a reservoir area capacity table and inform us of the total acres of surface drainage area above the reservoir.

Have you also made an application for a permit for construction of this dam and reservoir with the Division of Water Resources? Yes No

- If yes, show the Water Structures permit number here _____
- If no, explain here why a Water Structures permit is not required _____

11. The application must be supplemented by a U.S.G.S. topographic map, aerial photograph or a detailed plat showing the following information. On the topographic map, aerial photograph, or plat, identify the center of the section, the section lines or the section corners and show the appropriate section, township and range numbers. Also, please show the following information:

- (a) The location of the proposed point(s) of diversion (wells, stream-bank installations, dams, or other diversion works) should be plotted as described in Paragraph No. 5 of the application, showing the North-South distance and the East-West distance from a section line or southeast corner of section.
- (b) If the application is for groundwater, please show the location of any existing water wells of any kind within 1/2 mile of the proposed well or wells. Identify each existing well as to its use and furnish the name and mailing address of the property owner or owners. If there are no wells within 1/2 mile, please advise us.
- (c) If the application is for surface water, the names and addresses of the landowner(s) 1/2 mile downstream and 1/2 mile upstream from your property lines must be shown.
- (d) The location of the proposed place of use should be shown by crosshatching on the topographic map, aerial photograph or plat.
- (e) Show the location of the pipelines, canals, reservoirs or other facilities for conveying water from the point of diversion to the place of use.

A 7.5 minute U.S.G.S. topographic map may be obtained by providing the section, township and range numbers to: Kansas Geological Survey, 1930 Constant, Campus West, University of Kansas, Lawrence, Kansas 66047.

12. List any application, appropriation of water, water right, or vested right file number that covers the same diversion points or any of the same place of use described in this application. Also list any other recent modifications made to existing permits or water rights in conjunction with the filing of this application.

None on the point of diversion. _____

Place of Use Overlaps: 43912 & 43913 _____

Proposed Place of Use is the City of Maize and Immediate Vicinity _____

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File No. _____

- 13. Furnish the following well information if the proposed appropriation is for the use of groundwater. If the well has not been completed, give information obtained from test holes, if available.

Information below is from: Test holes Well as completed Drillers log attached

Well location as shown in paragraph No.	(A)	(B)	(C)	(D)
Date Drilled	_____	_____	_____	_____
Total depth of well	_____	_____	_____	_____
Depth to water bearing formation	_____	_____	_____	_____
Depth to static water level	_____	_____	_____	_____
Depth to bottom of pump intake pipe	_____	_____	_____	_____

- 14. The relationship of the applicant to the proposed place where the water will be used is that of Municipality/Agent.
(owner, tenant, agent or otherwise)

- 15. The owner(s) of the property where the water is used, if other than the applicant, is (please print):

City of Maize and immediate vicinity
(name, address and telephone number)

(name, address and telephone number)

- 16. The undersigned states that the information set forth above is true to the best of his/her knowledge and that this application is submitted in good faith.

Dated at Maize, Kansas, this 11th day of September, 2023
(month) (year)

of



(Applicant Signature)

By



(Agent or Officer Signature)

Nick Vestering, Deputy Public Works Director

(Agent or Officer - Please Print)

Assisted by EKF

SFFO/ESII

(office/title)

Date: 8/16/2023

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FEE SCHEDULE

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1. The fee for an application for a permit to appropriate water for beneficial use, except for domestic use, shall be (see paragraph No. 2 below if requesting storage):

ACRE-FEET	FEE
0-100	\$200.00
101-320	\$300.00
More than 320	\$300.00 plus \$20.00 for each additional 100 acre-feet or any part thereof.

2. The fee for an application in which storage is requested, except for domestic use, shall be:

ACRE-FEET	FEE
0-250	\$200.00
More than 250	\$200.00 plus \$20.00 for each additional 250 acre-feet of storage or any part thereof.

Note: If an application requests both direct use *and* storage, the fee charged shall be as determined under No. 1 or No. 2 above, whichever is greater, but not both fees.

3. The fee for an application for a permit to appropriate water for water power or dewatering purposes shall be \$100.00 plus \$200.00 for each 100 cubic feet per second, or part thereof, of the diversion rate requested.

Note: The applicant shall notify the Chief Engineer and pay the statutorily required field inspection fee of \$400.00 when construction of the works for diversion has been completed, except that for applications filed on or after July 1, 2009, for works constructed for sediment control use and for evaporation from a groundwater pit for industrial use shall be accompanied by a field inspection fee of \$200.00.

MAKE CHECKS PAYABLE TO THE KANSAS DEPARTMENT OF AGRICULTURE

ATTENTION

A Water Conservation Plan may be required per K.S.A. 82a-733. A statement that your application for permit to appropriate water may be subject to the minimum desirable streamflow requirements per K.S.A. 82a-703a, b, and c may also be required from you. After the Division of Water Resources has had the opportunity to review your application, you will be notified whether or not you will need to submit a Water Conservation Plan. You also may be required to install a water flow meter or water stage measuring device on your diversion works prior to diverting water. There may be other special conditions or Groundwater Management District regulations that you will need to comply with if this application is approved.

CONVERSION FACTORS

- 1 acre-foot equals 325,851 gallons
- 1 million gallons equal 3.07 acre-feet

Applicant's Name City of Maize
(Please Print)

MUNICIPAL (PUBLIC WATER SUPPLY) APPLICATION SUPPLEMENTAL INFORMATION SHEET

Application File Number

(assigned by DWR)

SECTION 1: PRESENT WATER USE SUMMARY (IF NO PREVIOUS MUNICIPAL WATER USE HAS BEEN UTILIZED, PROCEED TO SECTION 3)
NOTE: WORKSHEET FOR WATER PUMPED, PURCHASED, AND SOLD BY YOUR WATER DISTRIBUTION SYSTEM.

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Raw Water Diverted Under Your Rights	Water Purchased From All Sources	Water Sold to Other Public Water Suppliers	Water Sold to Your Industrial, Stock, and Bulk Customers	Water Sold to Your Residential and Commercial Customers	Other Metered Water	Remaining Water Used (See Below Explanation)
178,075,000	0	0	21,941,000	142,061,000	25,075	6,000,000
TOTAL WATER = Columns 1 + 2		ACCOUNTED FOR WATER = Columns 3 + 4 + 5 + 6				UNACCOUNTED FOR WATER

UNACCOUNTED FOR WATER = TOTAL WATER - ACCOUNTED FOR WATER

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- Column 1: The amount of raw water diverted from all of your points of diversion.
- Column 2: The amount of water purchased wholesale from all other public water supply systems or the Kansas Water Office.
- Column 3: The amount of water sold wholesale to all other public water supply systems.
- Column 4: The amount of water sold retail to all industrial, pasture, stockwater, feedlot, and bulk water service connections. Include the amount of water sold to all farmsteads using at least 200,000 gallons of water per year.
- Column 5: The amount of water sold retail to your residential and commercial customers and to industries and farmsteads using less than 200,000 gallons of water per year.
- Column 6: The amount of water used that is metered at individual service connections and supplied free, such as for public service, treatment processes, and connections receiving free water.
- Column 7: The amount of remaining water used. The gallons reported in this column are found by adding the numbers in Columns 1 and 2 and subtracting the numbers in Columns 3, 4, 5, and 6.

UNACCOUNTED FOR WATER

Use the following to calculate your distribution system's Unaccounted For Water:

Start with the amount in Column 1 and add the amount in Column 2, then subtract the amounts in Columns 3, 4, 5, and 6 leaving an amount of water representing your unaccounted for water to enter in Column 7.

Use the following to calculate the percent Unaccounted For Water versus the Total Water of your system:

$$\text{Percent Unaccounted For Water} = \frac{\text{Unaccounted For Water}}{\text{Total Water (Columns 1,2)}} \times 100$$

If this number exceeds 20%, please explain the large amount of unaccounted for water and describe any steps being taken to reduce it.

SECTION 2: PAST WATER USE

COMPLETE THE FOLLOWING TABLE FROM YOUR PAST WATER USE RECORDS.

	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
	Raw Water Diverted Under Your Rights	Water Purchased From All Sources	Water Sold to Other Public Water Suppliers	Water Sold to Your Industrial, Stock, and Bulk Customers	Water Sold to Your Residential and Commercial Customers	Other Metered Water	Remaining Water Used (See Above Explanation)
20 years ago	34,000,000	0	0	0	0	0	0
15 years ago	72,600,000	0	0	3,000,000	64,300,000	331,000	5,000,000
10 years ago	90,100,000	0	0	2,900,000	80,000,000	1,400,000	6,100,000
5 years ago	136,500,000	0	0	4,600,000	107,400,000	10,100,000	14,400,000
	TOTAL WATER = Columns 1 + 2		ACCOUNTED FOR WATER = Columns 3 + 4 + 5 + 6				UNACCOUNTED FOR WATER

SECTION 3: PROJECTED FUTURE WATER NEEDS

PLEASE COMPLETE THE FOLLOWING TABLE SHOWING YOUR FUTURE WATER REQUIREMENTS FOR THE NEXT 20 YEARS:

	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	
	Raw Water Diverted Under Your Rights	Water Purchased From All Sources	Water Sold to Other Public Water Suppliers	Water Sold to Your Industrial, Stock, and Bulk Customers	Water Sold to Your Residential and Commercial Customers	Other Metered Water	Remaining Water Used (See Explanation on other side)	
Year 5	280,700,000	0	0	30,059,170	194,623,570	34,352	8,220,000	
Year 10	388,700,000	0	0	38,776,329	251,064,405	44,314	10,603,800	
Year 15	510,800,000	0	0	48,082,648	311,319,862	54,950	13,148,712	
Year 20	632,500,000	0	0	57,699,177	373,583,834	65,940	15,778,454	
	TOTAL WATER = Columns 1 + 2		ACCOUNTED FOR WATER = Columns 3 + 4 + 5 + 6				UNACCOUNTED FOR WATER	

SECTION 4: POPULATION AND SERVICE CONNECTIONS

ESTIMATE THE NUMBER OF PERSONS DIRECTLY SERVED BY YOUR WATER DISTRIBUTION SYSTEM

PAST POPULATION - PROVIDE INFORMATION BELOW:
(CENSUS BUREAU INFORMATION)

LAST 20 YEARS	POPULATION
20 years ago	1,950
15 years ago	3,100
10 years ago	3,823
5 years ago	5,300
Last Year	6,100

PROJECTED FUTURE POPULATION

ESTIMATE FUTURE POPULATION AND SUBSTANTIATE NUMBERS ON SEPARATE ATTACHMENTS

NEXT 20 YEARS	POPULATION
Year 5	9,172
Year 10	12,128
Year 15	15,476
Year 20	18,810

Provide number of current active service connections:

1928 Residential 10 Industrial 7 Other (specify) City Free
 89 Commercial 0 Pasture/ Stockwater/ Feedlot 2034 Total

SECTION 5: PRESENT GALLONS PER PERSON PER DAY

CALCULATE YOUR GALLONS PER PERSON PER DAY

Water in Columns 5, 6, and 7 ÷ Population ÷ 365 Days/Year = Gallons per Person per Day

$$\frac{156,134,000}{\text{Amount of water in Columns 5, 6, and 7 of Section 1}} \div \frac{6,100}{\text{Population from Last Year of Section 4}} \div 365 \text{ Days/Year} = 70.13 \text{ GALLONS PER PERSON PER DAY.}$$

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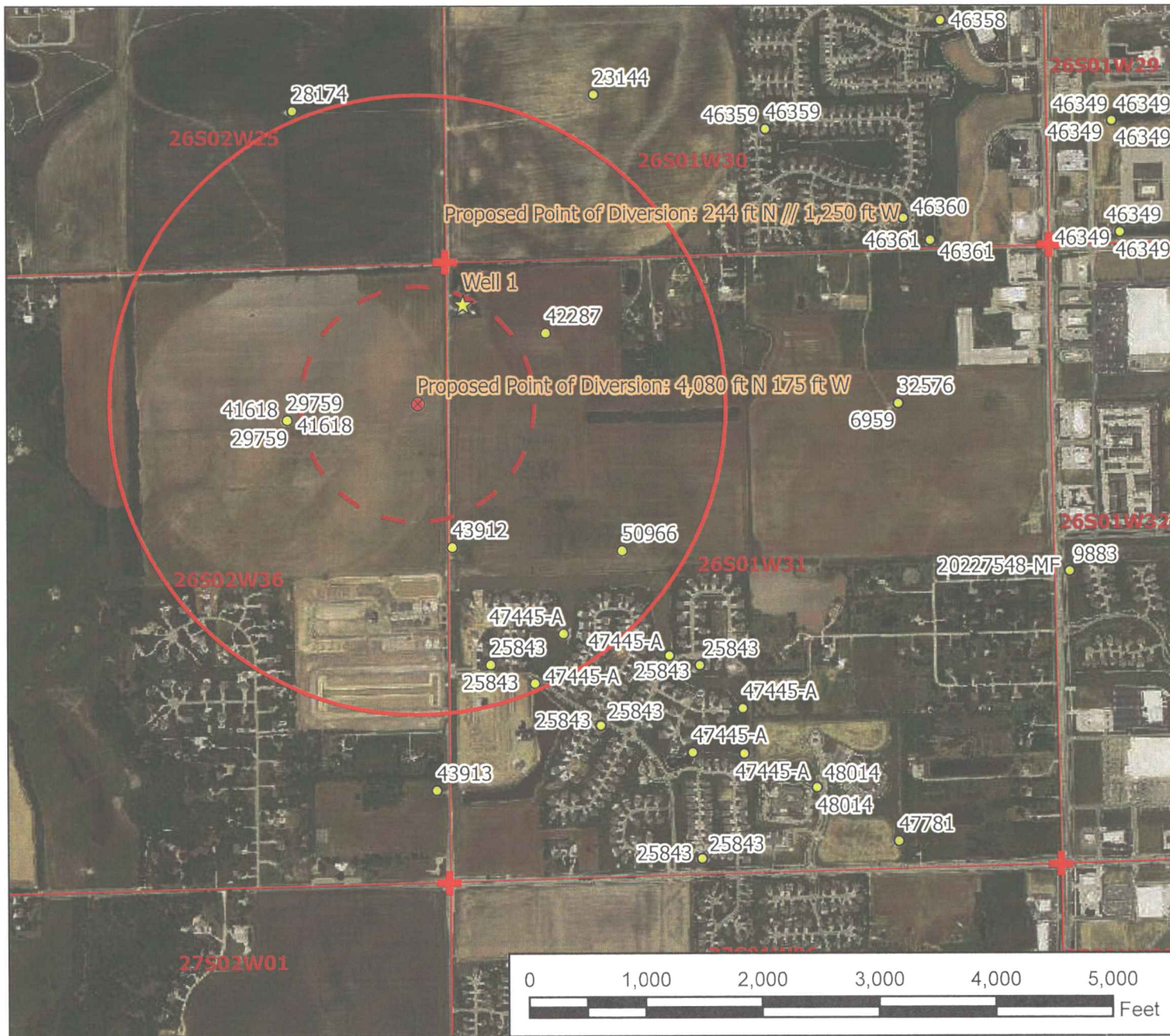
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SECTION 6: AREA TO BE SERVED

Describe the area to be served or provide the legal description of the location where the water is to be used including any other city of water supply system (i.e. Rural Water District): _____

The City of Maize and Immediate Vicinity

You may attach additional information you believe will assist in informing the Division of the need for your request.



Legend

- Water Appropriation
- Proposed Point of Diversion
- ★ Domestic Well
- ⊕ Section Corner
- Section Line
- Half Mile Circle
- 1,000 ft Circle

Appropriation, File No. _____

New Application Map 36-26S-2W // Sedgwick County



To the best of my knowledge, all wells within 1,000 feet of the proposed point of diversion have been shown. Assistance with a public notice may be needed.

September 11, 2023

Signature / Date

8/16/2023 EKF/SFFO 1:15,000 scale

File No. _____ New Application Nearby Well Owners

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Domestic Well 1
Eugene Neigenfind
3700 N 119th St W
Wichita KS 67205-7631

File No. 43912
Applicant

File No. 42287
Janis K Mertes
PO Box 442
Colwich KS 67030-0442

Water Right File No. 29759 & 41618

HS5 LLC	Bridger Development
1831 S Anna St	5540 Ellsworth Ave
Wichita KS 67209	Dallas TX 75206

WGB LLC	Miller Family Homes
1800 S Spring Lake Rd	1907 S Hydraulic Ave
Halstead KS 67056	Wichita KS 67211

Water Right, File No. 25843 (File No. 47445-A is a
surface water right) Fontana Master Association
727 N Waco Ave
Wichita KS 67203-3951

Water Right File No. 50966
Kelsey Investments, Inc.
716 N. 119th St. W.
Wichita KS 67235



Domestic Well 2

3338 N 124TH ST W
MAIZE, KS 67223

Owner: FOWLER MICHAEL ADAM
Owner Address: 3338 N 124TH ST W
WICHITA, KS 67233-6909

Domestic Well 3

3326 N 124TH ST W
MAIZE, KS 67223

Owner: VOEGELI DANIEL J TR
Owner Address: 3226 N 124TH ST W
WICHITA, KS 67223

Domestic Well 4

3314 N 124TH ST W
MAIZE, KS 67223

Owner: AGPOON MARK
Owner Address: 3314 N 124TH ST W
WICHITA, KS 67223-6909

Domestic Well 5

3300 N 124TH ST W
MAIZE, KS 67223

Owner: PERCIVAL MATTHEW S &
HEATHER M
Owner Address: 3300 N 124TH ST W
WICHITA, KS 67223-6909

Domestic Well 6

3244 N 124TH ST W
MAIZE, KS 67223

Owner: OLTMANN JERRY L &
CYNTHIA D
Owner Address: 3244 N 124TH ST W
WICHITA, KS 67223-6907

Domestic Well 7

3232 N 124TH ST W
MAIZE, KS 67223

Owner: BEYNON LYLE S & LESLIE A
LIV TR
Owner Address: 3232 N 124TH ST W
WICHITA, KS 67223-6907

Domestic Well 8

3359 N 124TH CT W
MAIZE, KS 67223

Owner: PHILLIPS JOSEPH M &
JEANNE D
Owner Address: 3359 N 124TH CT W
WICHITA, KS 67223-6900

Domestic Well 9

3355 N 124TH CT W
MAIZE, KS 67223

Owner: COHOON PATRICIA D & TY J
Owner Address: 3355 N 124TH CT W
WICHITA, KS 67223-6900

Irrigation Well 1

12002 W 33RD ST N
MAIZE, KS 67205

Owner: BREL HOLDINGS LLC
Owner Address: 191 S CIDERBLUFF CT
GODDARD, KS 67052-9050

Irrigation Well 2

12106 W 33RD ST N
MAIZE, KS 67205

Owner: THOMAS KELSIE C & JARED R
Owner Address: 701 W PUTTER CT
ANDOVER, KS 67002-8857

Irrigation Well 3

12124 W 33RD ST N
MAIZE, KS 67205

Owner: MS FOX & COMPANY LLC
Owner Address: 2916 N GULF BREEZE CT
WICHITA, KS 67205-1146

Irrigation Well 4

12142 W 33RD ST N
WICHITA, KS 67205

Owner: BUTLER AMY & JAMES L
Owner Address: 12142 W 33RD ST N
WICHITA, KS 67205

Irrigation Well 5

12126 W CORA ST
WICHITA, KS 67205

Owner: JETT HOLDINGS LLC
Owner Address: 2819 FOSSIL RIM ST
WICHITA, KS 67205-3516

Irrigation Well 6

12049 W 33RD ST N
MAIZE, KS 67205

Owner: AIR CAPITAL LEASING LLC
Owner Address: 11703 W BELLA VISTA ST
WICHITA, KS 67212-6448

Irrigation Well 7

3333 N 119th St W
MAIZE, KS 67205

Owner: BRYAN LAGALY PROPERTIES LLC
Owner Address: 1517 N OBSIDIAN CT
WICHITA, KS 67235-1559

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Irrigation Well 8

12052 CORA ST
MAIZE, KS 67205
PIETRAS TONY & MICHELLE
Owner Address: 3160 E 165TH AVE
BRIGHTON, CO 80602-7629

Irrigation Well 9

12056 W CORA ST
MAIZE, KS 67205
KW DEVELOPMENTS LLC
Owner Address: PO BOX 9224
WICHITA, KS 67277-0224

Irrigation Well 10

12135 W CORA ST
MAIZE, KS 67205
Owner: NEW HOLLAND CAPITAL LLC
Owner Address: 1645 S WEST ST
WICHITA, KS 67213-1101

Irrigation Well 11

12014 W FONTANA ST
MAIZE, KS 67205
Owner: TKR LLC
Owner Address: 3127 N FOREST LAKE
CT
WICHITA, KS 67205-1905

Irrigation Well 12

12014 W SHADOW LAKES ST
MAIZE, KS 67205
Owner: KDOLL ENTERPRISES LLC
Owner Address: 751 E SPRING AVE
CONWAY SPRINGS, KS 67031-8128

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September 11, 2023

(Date)

Kansas Department of Agriculture
Division of Water Resources
Earl D. Lewis, Jr, Chief Engineer
1320 Research Park Drive
Manhattan, Kansas 66502

Re: Application
File No. _____

Minimum Desirable Streamflow

Dear Sir:

I understand that a Minimum Desirable Streamflow requirement has been established by the legislature for the source of supply to which the above referenced application applies.

I understand that diversion of water pursuant to this application will be subject to regulation any time Minimum Desirable Streamflow requirements are not being met.

I also understand that if this application is approved, there could be times, as determined by the Division of Water Resources, when I would not be allowed to divert water. I realize that this could affect the economics of my decision to appropriate water.

I am aware of the above factors, and with the knowledge thereof, request that the Division of Water Resources proceed with processing and approval, if possible, of the above referenced application.



Signature of Applicant

Nick Vestering, City of Maize

(Print Applicant's Name)

State of Kansas)
) ss
County of Sedgewick)

I hereby certify that the foregoing instrument was signed in my presence and sworn to before me this 14th day of September, 2023.


Notary Public

My Commission Expires:



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DES

**MINIMUM DESIRABLE STREAMFLOW FORM TO BE USED WHEN
APPLICABLE WHEN FILING AN APPLICATION FOR PERMIT
TO APPROPRIATE WATER FOR BENEFICIAL USE**

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The Kansas Legislature has established minimum desirable streamflows for the streams listed below. If your proposed diversion of water is going to be from one of these watercourses or adjacent alluvial aquifers, please complete the back side of this page and submit it along with your application for permit to appropriate water.

Arkansas River
Big Blue River
Chapman Creek
Chikaskia River
Cottonwood River
Delaware River
Little Arkansas River
Little Blue River
Marais des Cygnes River
Medicine Lodge River
Mill Creek (Wabaunsee Co. area)
Neosho River

Ninnescah River
North Fork Ninnescah River
Rattlesnake Creek
Republican River
Saline River
Smoky Hill River
Solomon River
South Fork Ninnescah
Spring River
Walnut River
Whitewater River

JEFF WINTER, PRESIDENT
VIN KISSICK, VICE PRESIDENT
DAVID BOGNER, SECRETARY
MIKE MCGINN, TREASURER
TIM BOESE, MANAGER
THOMAS A. ADRIAN, ATTORNEY



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DIRECTORS:
MICHAEL BAALMANN
JOE BERGKAMP
ALAN BURGHART
RODNEY EGGLESTON
ETHAN REIMER
DALE SCHMIDT
DAVID STROBERG

EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NO. 2

313 SPRUCE STREET • HALSTEAD, KANSAS 67056-1925 • PHONE (316) 835-2224 • FAX (316) 835-2225 • equusbeds@gmd2.org • www.gmd2.org

November 29, 2022

Brad Vincent
vincentbrad@hotmail.com

RE: Preliminary Safe Yield Evaluation - 361.114

Dear Mr. Vincent:

A preliminary safe-yield evaluation you requested for a proposed application with a point of diversion located near the center of the East side of the Northeast quarter of Section 36, Township 26 South, Range 2 West, Sedgwick County, has been completed.

The results of the preliminary evaluation indicate that there **MAY** be water available for appropriation at the proposed location.

Before the District can make an official determination of the available groundwater appropriation, you must file a water permit application with the Chief Engineer, Division of Water Resources. This preliminary evaluation does **NOT** guarantee that water is, or will be, available for appropriation at the time an application is filed. Additionally, an application must comply with all applicable rules and regulations and the District's Management Program. This could possibly mean that an application would not be recommended for approval by the District, even if water is available according to the District's safe yield regulation.

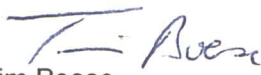
Additionally, the proposed point of diversion described in an application must meet minimum spacing requirements to domestic and non-domestic points of diversion. The location you requested may not meet the minimum spacing requirements to one or more existing points of diversion.

The Equus Beds Groundwater Management District office or the Division of Water Resources office in Stafford can assist you in filing the application.

Please note that this preliminary evaluation is being provided for information only and by acceptance of the preliminary evaluation you agree to not hold the District accountable for any actions you or others take or don't take based on the evaluation results.

If you have any questions, please feel free to contact our office.

Sincerely,
EQUUS BEDS GROUNDWATER
MANAGEMENT DISTRICT NO. 2


Tim Boese
Manager

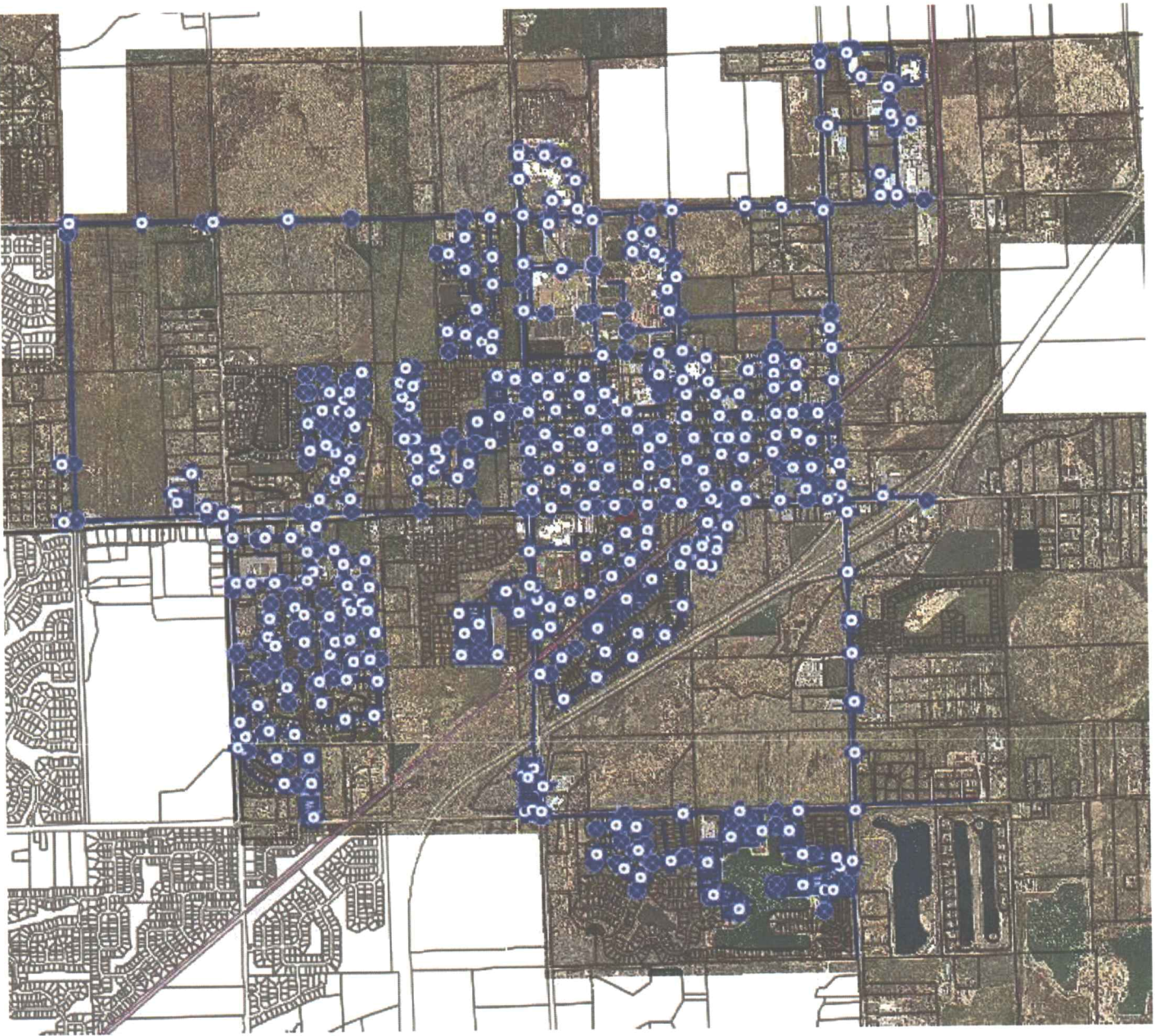
TDB/db
Enclosure



SEP 18 2023

City of Maize Public Water Supply Distribution System

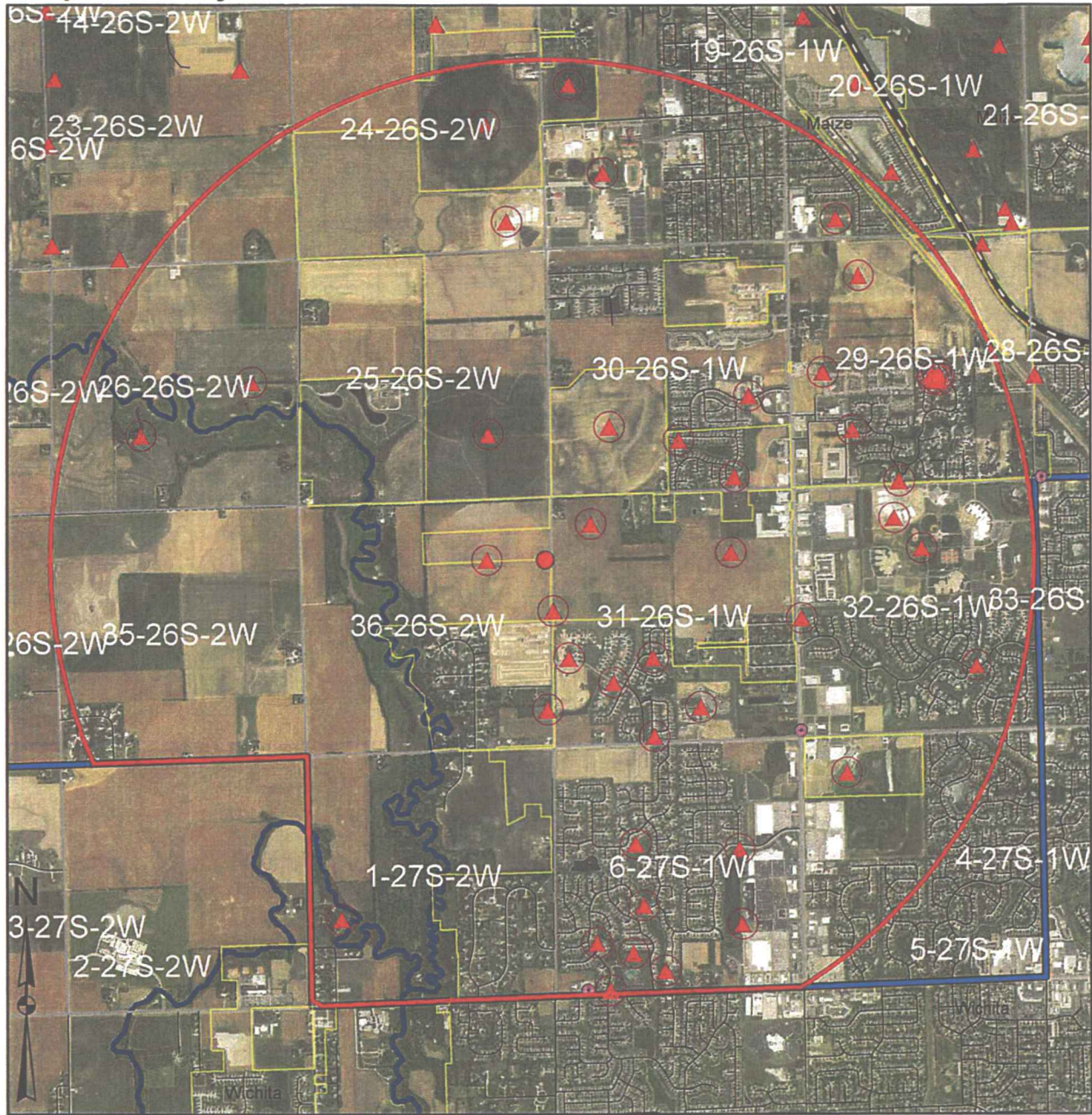
KS DEPT OF AGRICULTURE



Equus Beds Groundwater Management District No. 2

Preliminary Safe Yield Evaluation - Brad Vincent - City of Maize

SE-NE-NE (3960'N & 100'W) 36-26S-02W, Sedgwick Co.
 Prepared By: B. Barton Date: 11/28/2022



Map Legend		
● Proposed Point of Diversion	Major Highway	Burrton IGUCA
Area of Consideration Boundary	Other Roadway	Hollow Nikkel SWQUA
● Monitoring Wells	Major Stream	McPherson IGUCA
▲ Points of Diversion	County Boundary	Old District Boundary
District Boundary	Approx. City Boundary	

0.5 0.25 0 0.5 Miles

Equus Beds Groundwater Management District No. 2
 313 Spruce Street, Halstead, KS 67056
 316-835-2224, equusbeds@gmd2.org

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 SEP 18 2023
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SEP 18 2023

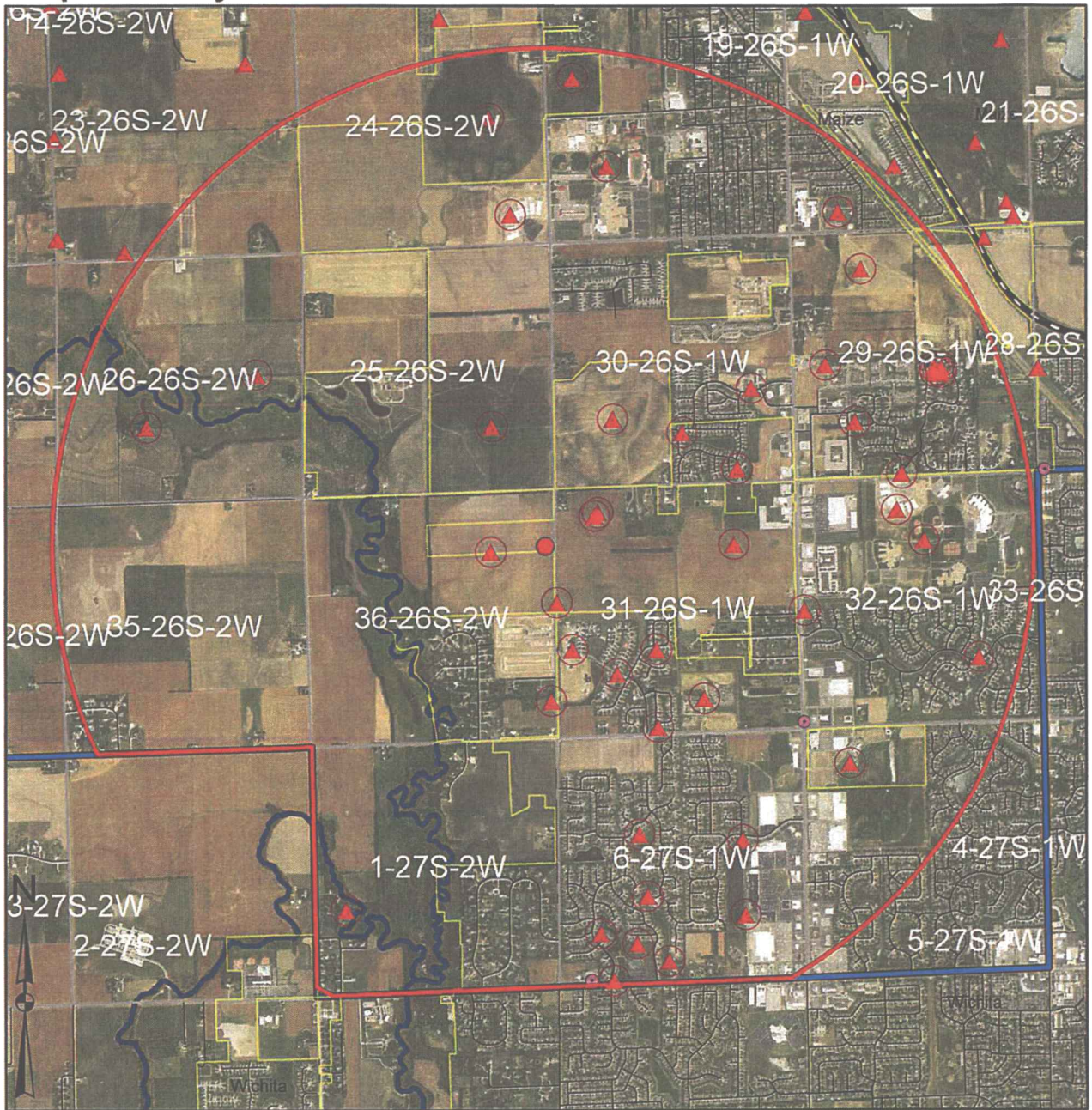
KS DEPT OF AGRICULTURE

PRELIMINARY SAFEYIELD EVALUATION - Brad Vincent - City of Maize							
LOCATION: SE-NE-NE (3960'N & 100'W) 36-265-02W, Sedgwick County							
SPECIAL USE AREA: None							
EVALUATION DATE:- 11/9/2022							
Total Areas: 7,500 acres; Area in 3 inch discharge zone: 0 acres; Area in 6 inch discharge zone: 7,500 acres							
FILE_ID	WELL_ID	TOWNSHIP	RANGE	SECTION	QUALIFIER	USE	AUTHQUANTITY
A00695900	515	26S	01W	31	39601360	IRR	26
A00988300	3248	26S	01W	32	23995159	IRR	26.7
A01214500	217	27S	01W	6	NCS252NE	IRR	68
A01984600	460	26S	02W	24	26601280	IRR	168
A02314400	1411	26S	01W	30	13403900	IRR	187.5
A0240181R	192	26S	01W	32	13461420	IRR	43.35
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A02584300	3980	26S	01W	31	803090	REC	4.3
A02584300	3981	26S	01W	31	17403090	REC	3.2
A02584300	3982	26S	01W	31	17604890	REC	3.5
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A04146100	2144	27S	01W	5	45004250	REC	14
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A044477RE	2830	27S	01W	6	18473394	REC	1.76
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A044478RE	2832	27S	01W	6	31553541	REC	2.51
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A05047400P	5322	26S	01W	32	44953148	IRR	10.6
A05047500P	5323	26S	02W	24	6090843	IRR	13.3
Allowable Appropriations	3,750.00				Total Existing Appropriation		2,687.48
Small User Quantity	29.23				Non Consumptive Appropriations		0
Remaining SUQ	15.77				Consumptive Appropriations		2,687.48
Note- Values are in acre-feet					Available Appropriations		1,062.52

Equus Beds Groundwater Management District No. 2

Preliminary Safe Yield Evaluation - City of Maize - Brad Vincent

SE-NE-NE (4080'N & 175'W) 36-26S-02W, Sedgwick Co.
 Prepared By: B. Barton Date: 12/23/2022



Proposed Point of Diversion	Map Legend	Burtton IGUCA
Area of Consideration Boundary	Major Highway	Hollow Nikkel SWQUA
Monitoring Wells	Other Roadway	McPherson IGUCA
Points of Diversion	Major Stream	Old District Boundary
District Boundary	County Boundary	Old District Boundary
	Approx. City Boundary	

0.5 0.25 0 0.5 Miles

Equus Beds Groundwater Management District No. 2
 313 Spruce Street, Halstead, KS 67056
 316-835-2224, equusbeds@gmd2.org

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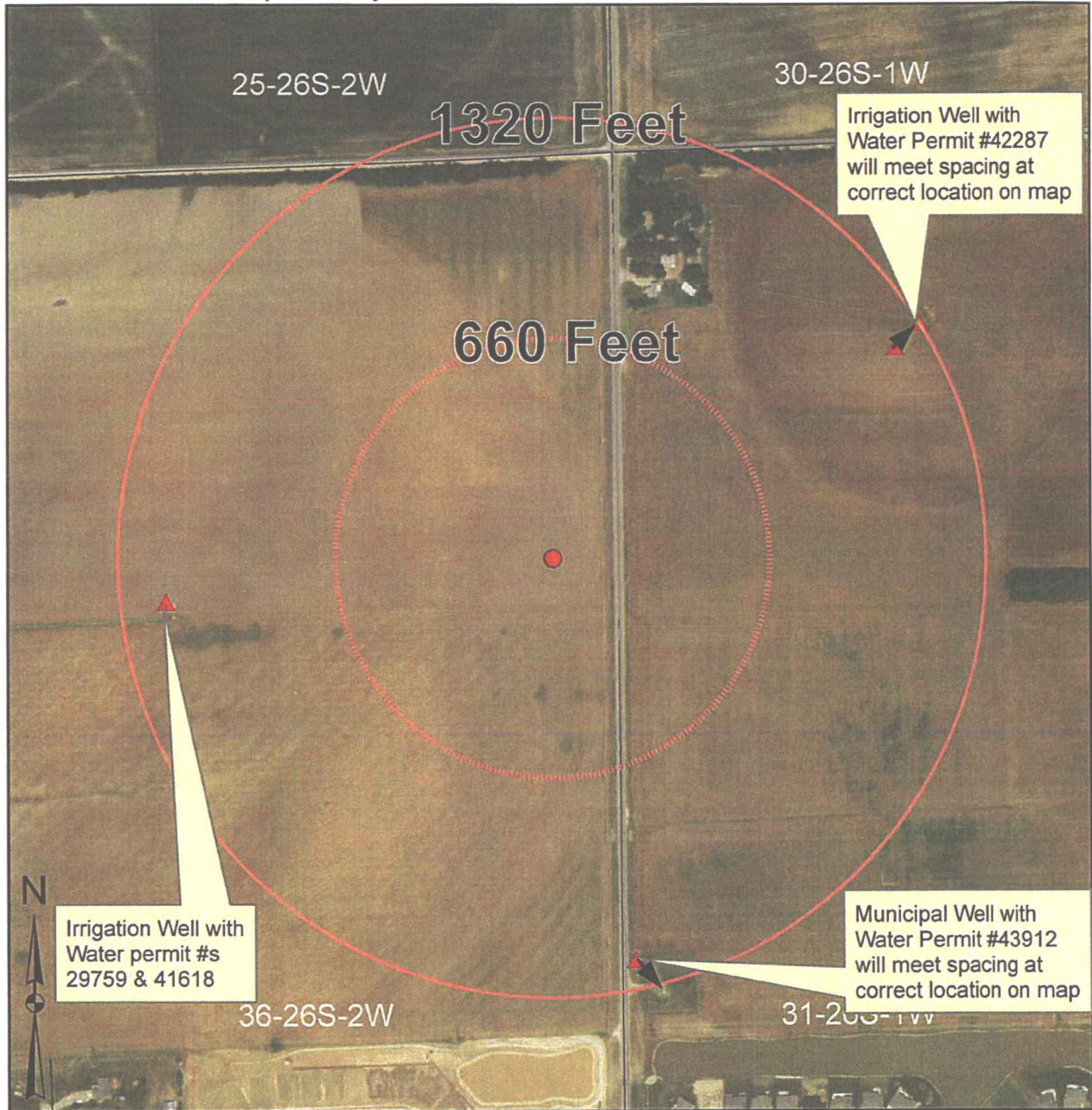
KS DEPT OF AGRICULTURE

PRELIMINARY SAFEYIELD EVALUATION - City of Maize - Brad Vincent							
LOCATION: SE-NE-NE (4080'N & 175'W) 36-26S-02W, Sedgwick County							
SPECIAL USE AREA: None							
EVALUATION DATE:- 12/23/2022							
Total Areas: 7,532 acres; Area in 3 inch discharge zone: 0 acres; Area in 6 inch discharge zone: 7,532 acres							
FILE_ID	WELL_ID	TOWNSHIP	RANGE	SECTION	QUALIFIER	USE	AUTHQUANTITY
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A00988300	3248	26S	01W	32	23995159	IRR	26.7
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A047421RE	3624	26S	01W	29	000-92995	REC	12.3
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A048014RE	4032	26S	01W	31	6802090	REC	6.9
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A05031000P	5293	26S	01W	29	4351388	REC	18.67
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A05047500P	5323	26S	02W	24	6090843	IRR	13.3
Allowable Appropriations	3,766.00	Total Existing Appropriation				2,687.48	
Small User Quantity	29.23	Non Consumptive Appropriations				0	
Remaining SUQ	15.77	Consumptive Appropriations				2,687.48	
Note - Values are in acre-feet		Available Appropriations				1,078.52	

Equus Beds Groundwater Management District No. 2 SE-NE-NE (4080'N & 175'W) 36-26S-02W, Sedgwick County SPACING EVALUATION (Potential well for City of Maize) SPECIAL USE AREA: NONE

Prepared By: BRAD BARTON

Date: 1/24/2023



Map Legend		
<ul style="list-style-type: none"> ● Proposed Point of Diversion ▲ Points of Diversion ● Monitoring Wells District Boundary 	<ul style="list-style-type: none"> Major Highway Other Roadway Major Stream County Boundary 	<ul style="list-style-type: none"> Burrton IGUCA Hollow Nikkel SWQUA McPherson IGUCA Old District Boundary
<p>0 660 1,320 Feet</p>		
<p style="color: blue;">WATER RESOURCES RECEIVED SEP 18 2023 KS DEPT OF AGRICULTURE</p>		
<p> Equus Beds Groundwater Management District No. 2 313 Spruce Street, Halstead, KS 67056 316-835-2224, equusbeds@gmd2.org</p>		

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Maize Water Rights Study

City of Maize, Kansas



April 28, 2023



Prepared by:
Eric G. Gasper, PE

Digitally Signed 04/28/2023



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1.0 Introduction

The City of Maize, Kansas currently has water rights from their existing 2 public water supply wells in the total amount of 772 acre-feet per year. Maize is currently in the process of obtaining additional water rights for a 3rd well in the amount of 165 acre-feet per year. After completing a safe yield analysis of the area, Groundwater Management District No. 2 has indicated that there is approximately 1,000 acre-feet of water that is currently unappropriated.

The purpose of this study is to evaluate City of Maize population growth and water demand projections for a 20-year period. Based upon the results of this study, the City of Maize will seek to procure additional water rights to serve the City's future needs.

2.0 Population Projections

2.1 Historical Population Trends

2.1.1 U.S. Decennial Census Data

Table 2-1: U.S. Decennial Census Population Data shows the City of Maize historical population data for the 40-year period from 1980-2020 as obtained from the U.S. Decennial Census Data.

Table 2-1: U.S. Decennial Census Population Data

Year	Population ¹	10-Yr Average Annual Growth Rate	20-Yr Average Annual Growth Rate
1980	1,294	---	---
1990	1,520	1.62%	--
2000	1,868	2.08%	1.85%
2010	3,420	6.23%	4.14%
2020	5,735	5.30%	5.77%

¹ Population data obtained from U.S. Decennial Census data at data.census.gov

2.1.2 Average Annual Growth Rate

As shown in Table 2-1: U.S. Decennial Census Population Data, the average annual growth rate for the City of Maize in the 20-year period from 2000-2020 was approximately 5.77%. The average annual growth rate for the most recent 10-year period from 2010-2020 was approximately 5.30%.

2.1.3 Housing Units and Residential Density

The American Community Survey provides annual estimates for housing units. In the 2020 estimate for Maize, the estimated number of total housing units in was 1,989. Based on this housing unit estimate and U.S. Decennial population estimate from Table 2-1: U.S. Decennial Census Population Data, the 2020 residential density for Maize equates to approximately 2.88 persons per housing unit.

2.2 Future Population Projections

2.2.1 Wichita-Sedgwick County Planning

The Wichita-Sedgwick County Planning Department estimates that Maize will have a population of 6,850 in 2035 according to the 2022 Development Trends Report. This estimate would indicate an average annual growth rate for the City of Maize of only 1.19% which is significantly less than the historical growth rate experienced by Maize over the past 20 years.

2.2.2 Maize Land Use Plan

The Maize Land Use Plan shown in Figure 2-1: Future Land Use Map indicates a significant portion of the City limits slated for residential growth that is currently undeveloped. There are currently 1,346 platted lots that are available for building permits and development. Assuming 2.88 persons per housing unit as estimated in Section 2.1.3, once developed, these available lots would account for a population increase of 3,877 persons.

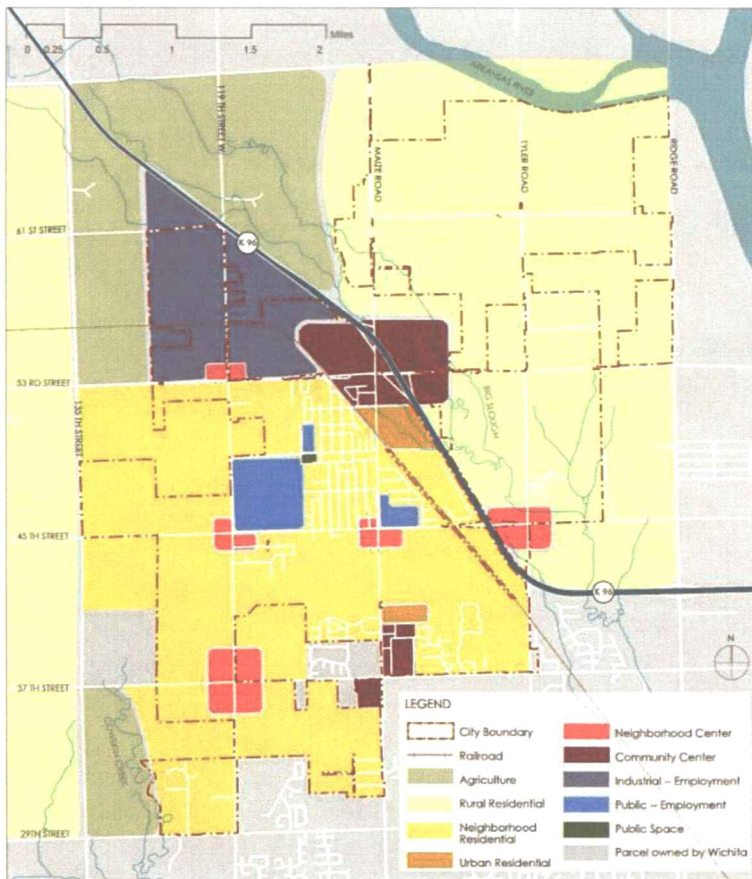


Figure 2-1: Future Land Use Map

2.2.3 Planned Average Annual Growth Rate

Since the historical annual population growth of 5.30% since 2010 greatly outpaces the 2035 population projection of 6,850 listed in the Wichita-Sedgwick County 2022 Development Trends Report, an average annual growth rate of 5.30% will be used to project the overall Maize growth through 2043. Based on a 5.30% average annual growth rate, the 2043 population of Maize is projected to be 18,810 people. While the average annual growth rate projected through 2043 is 5.30%, it is anticipated that Maize will experience a higher percentage of growth initially considering the large number of available lots already platted for development. As rapid growth in the large undeveloped area starts to taper off, development will become limited to infill within the City limits. Table 2-2: Maize Population Projections and Figure 2-2: Maize Population Projections, shows a potential scenario of population growth for the City of Maize through 2043.

Table 2-2: Maize Population Projections

Design Horizon	Population	Average Annual Growth Rate
2020	5,735	--
2023	6,696	5.30%
2028	9,172	6.50%
2033	12,128	5.75%
2038	15,476	5.00%
2043	18,810	3.98%

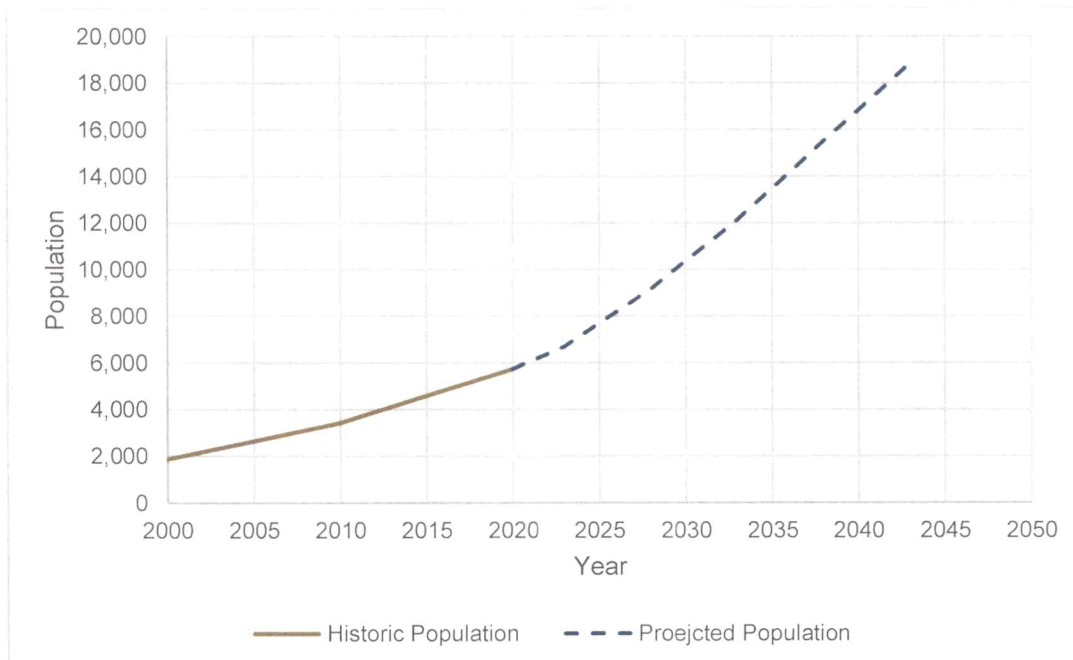


Figure 2-2: Maize Population Projections

3.0 Water Demand Projections

3.1 Historic Water Usage

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The City of Maize created its municipal water service system in 2003. The main components of the water system consist of two wells that pump water from the Equus Beds Aquifer and a 500,000-gallon elevated storage tank. The City has kept logs of daily well production since 2003. The annual water production volumes, as well as the annual population as estimated by the U.S. Decennial census, are shown in Figure 3-1: City of Maize Historic Water Production. It should be noted that the large spike in water production in 2010 appears to be related to the elevated storage tank being offline in the months of September to October for maintenance rather than an increase in consumption. The well pumps were operating 24 hours a day, 7 days a week during this time period to maintain system pressures. Figure 3-2: Water Production Per Capita shows the corresponding well production per capita for 2003 through 2022. The average well production per capita for 2003 to 2022 was approximately 70 gallons per capita per day (gpcd). These per capita values are lower than similar municipalities but is likely the result of irrigation water in Maize primarily being provided by private groundwater wells.

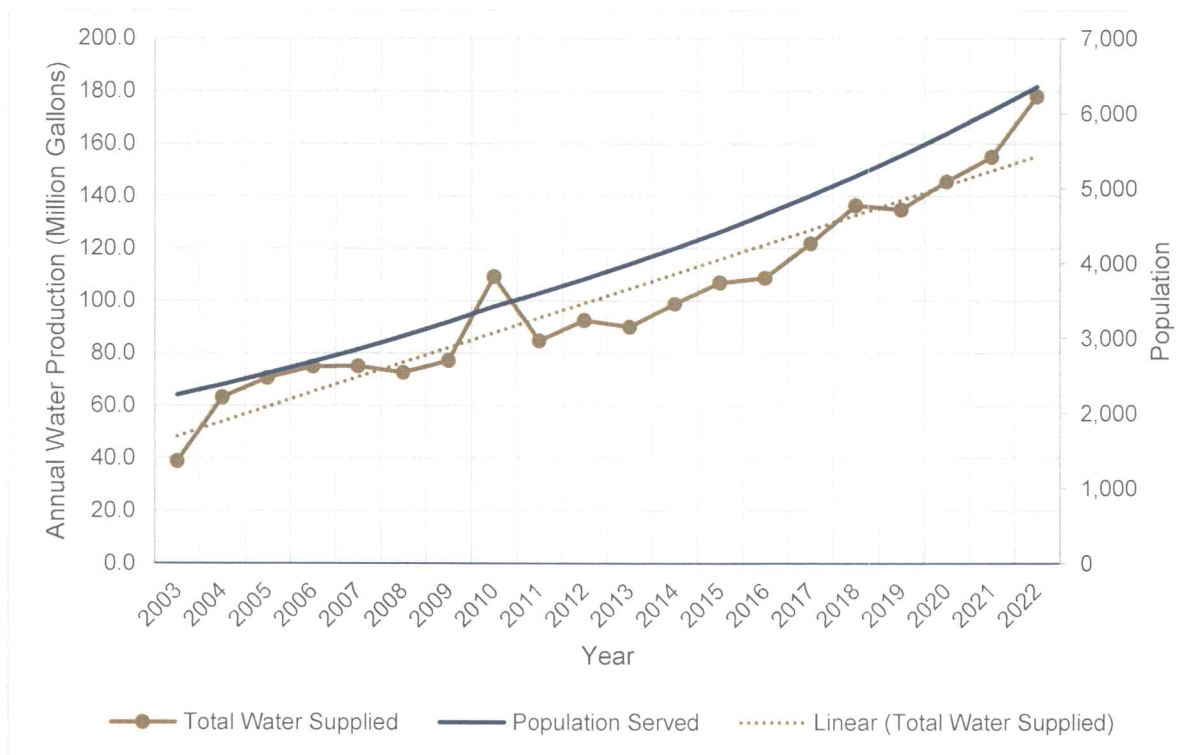


Figure 3-1: City of Maize Historic Water Production

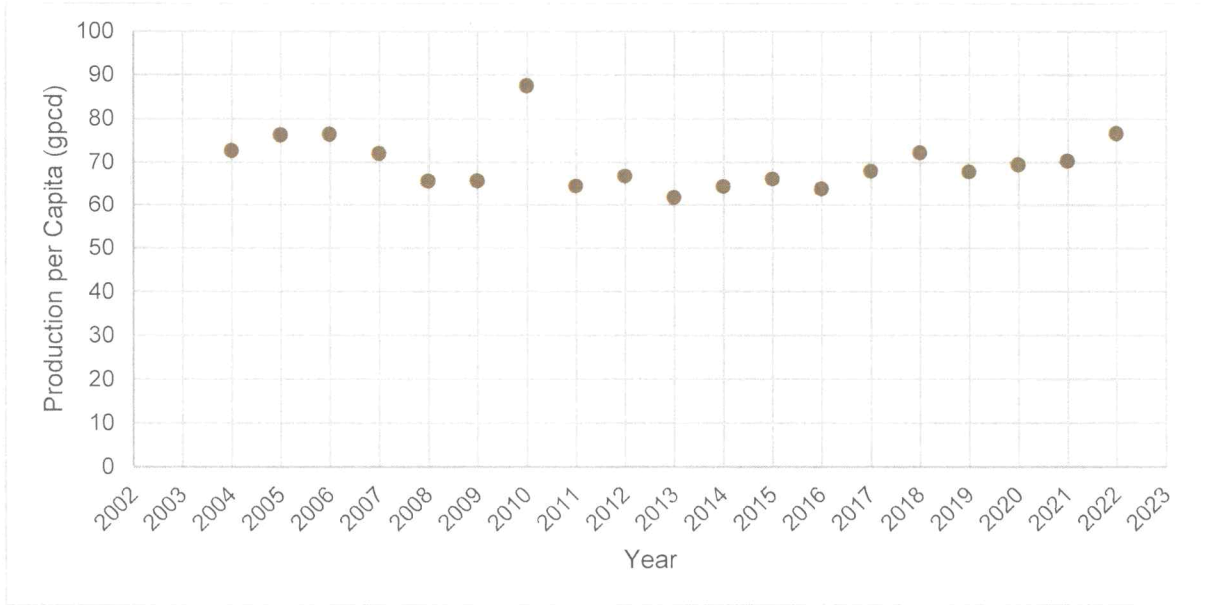


Figure 3-2: Water Production Per Capita

3.2 Future Water Usage Projections

3.2.1 Future Water Usage Per Capita

As described in Section 3.1, the historic per capita water usage for the City of Maize is approximately 70 gpcd through 2022. As Maize develops, it is not anticipated that residential housing units will have their own irrigation wells which is currently typical across the City. Due to this increase in residential demand in combination with the uncertainty associated with future industrial growth, and associated water usage, in the Northwest part of the City, Garver recommends using a more typical per capita water usage of 100 gpcd for conservative planning purposes. The 100 gpcd will be used for all population growth beyond 2022. For the existing population estimate through 2022 of 6,359, the 70 gpcd will remain.

3.2.2 Future System-Wide Water Demand Projections

To project a future water demand for the overall Maize system, Garver utilized the growth rates discussed in Section 2.2.3, and shown in Table 2-2: Maize Population Projections, in addition to a well production per capita value of 100 gpcd for population growth beyond 2022. The resulting annual water production and population projections through 2043 are shown in Figure 3-3: Future Projected Maize Water Production and Population and Table 3-1: Future Projected Maize Water Production and Population. The 2043 water demand projections for the City of Maize are approximately 632.5 million gallons per year, or 1,941 acre-feet per year.



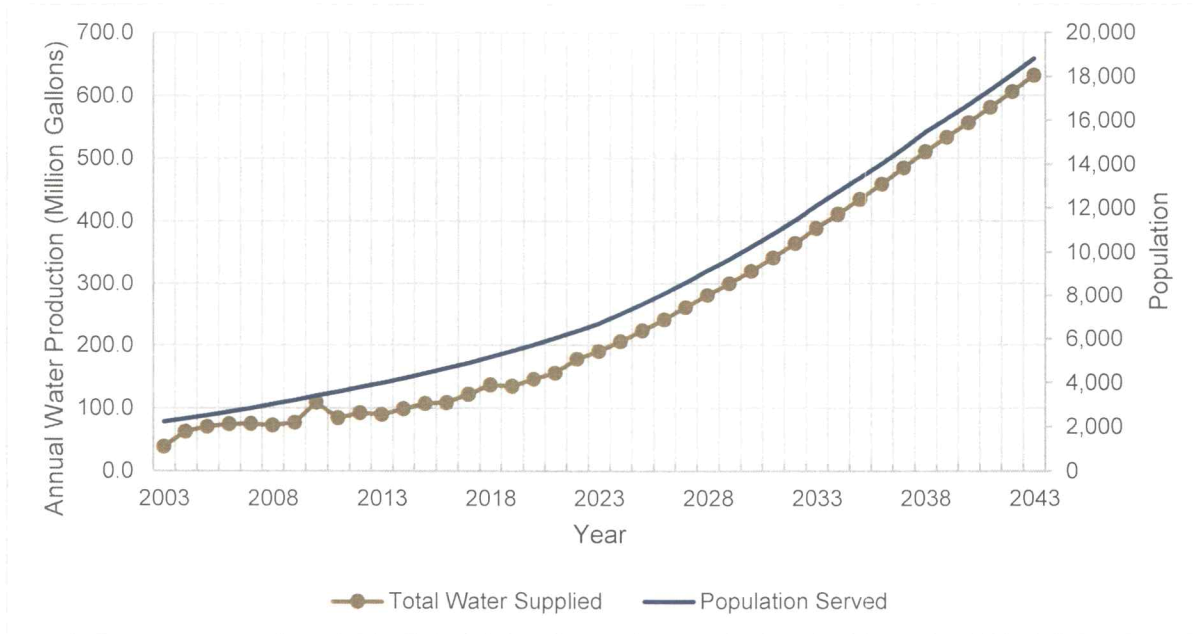


Figure 3-3: Future Projected Maize Water Production and Population

Table 3-1: Future Projected Maize Water Production and Population

Design Horizon	Population	Projected Annual Water Usage, MG	Projected Annual Water Usage, ac-ft
2020	5,735	145.6	447
2023	6,696	190.4	584
2028	9,172	280.7	861
2033	12,128	388.7	1,193
2038	15,476	510.8	1,567
2043	18,810	632.5	1,941

4.0 Recommendations

The City of Maize, Kansas currently has water rights from their existing 2 public water supply wells in the total amount of 772 acre-feet per year. Based upon the population and water usage projections described in the previous sections of this study, the City of Maize will need 1,941 total acre-feet per year in the year 2043. Groundwater Management District No. 2 has indicated that there is approximately 1,000 acre-feet of water that is currently unappropriated. To keep up with the projected growth of the City and increasing water demands, it is recommended that the City of Maize apply for the entirety of the unappropriated 1,000 acre-feet of groundwater and evaluate alternative water supply sources as the City continues to grow.





WATER RESOURCES
RECEIVED

SEP 18 2023

KS DEPT OF AGRICULTURE

"Where Community Counts."

Date: 9/11/2023

To: Chief Engineer of the Division of Water Resources,
Kansas Department of Agriculture,
1320 Research Park Drive, Manhattan, Kansas 66502

From: Nick Vestering, Deputy Public Works Director, City of Maize

Subject: APPLICATION FOR PERMIT TO APPROPRIATE WATER FOR BENEFICIAL USE (MUNICIPAL)

To whom it may concern,

Please find attached application for permit to appropriate water for beneficial use for the City of Maize, KS. Also included in the packet are an additional page to include all known wells of any kind within a half mile circle of the proposed point of diversion, two preliminary safe yields dated November 29, 2022, there were two safe yields ran due to moving the proposed site 75' ft west after the initial safe yield to meet spacing. Also, you will find attached a map of the City of Maize Public Water Supply Distribution System, as well as a Water Rights Study conducted by Garver Engineering that demonstrates the need for the requested water.

Thank you,

A handwritten signature in black ink, appearing to be "Nick Vestering", written over a horizontal line.

Nick Vestering, Deputy Public Works Director