# Kansas Department of Agriculture Division of Water Resources

# **CHANGE: P/D WORKSHEET**

1. File Number:	2. Status Change Date:	3. Change Num:	4. Field Office:	5. GMD:		
16589		C1	4	3		
6. Status: ☐ Approved ☐ Deni	ed by DWR/GMD	Dismiss by Reques	t/Failure to Return	7. Filing Date of Change:		
				3/14/2022		
8a. Applicant(s)	Person ID 52313	8c. Landown		Person ID		
New to system	Add Seq#	New to sy	stem 🗆	Add Seq#		
DAVID KRAUSE PO BOX 252 PLAINS, KS 67869-0252						
,						
8b. Landowner(s)	Person ID 9870	8d. WUC		Person ID		
New to system □	Add Seq#	New to sy	rstem □	Add Seq#		
MERLE G KRAUSE PO BOX 619 PLAINS, KS 67869-0619		8a				
9. Documents and Enclosure(s): 🛛 DV	VR Meter(s) Date to Comp	y: <b>12/31/2022</b>	N & P Date to	Comply: 3/1/2023		
☐ Anti-Reverse Meter ☐ Meter	Seal	⊠ N & P Form		riller Copy X H & E Letter		
☐ Conservation Plan Date Require	ed: Da	te Approved:	Date to	Comply:		
10. Use Made of Water From:		To: _				
			Date Prepared: <b>4/4/20</b> Date Entered:	<b>922</b> ву: <b>АМ</b> Ву:		

File No. <b>16589</b>	11. County:	ME		Stream:								Formation Code: 211 Special Use:								
12. Points of Diversion CHK MOD DEL PDIV ENT Quali	ier S	т р	ID	s	N	100		Com	mont	(AKA I	ino		A	Authori		,		dditional		
ENI Quali		1 1			IN	VV		Com	ment	(ANA I	_irie)		Rate		Quantity af		Rate		Overlap PD Files	
DEL 16144																				
ENT NE SE	SE 33	31S 30V	<b>V</b>	11	101	526							1730	0	525		1730	525	NONE	
13. Storage: Rate	N	NF C	Quantity _					ac/ft	Ad	ddition	al Rat	e				NF	Addi	tional Quantity		ac/ft
14. Limitation:																				
Limitation:	af/yr a	ıt			gpm (				cfs) wh	nen co	mbine	d with	file nu	umber	(s)					
15. 5YR Allocation: Allo	cation Type	_ Start Y	ear	_	5 YR A	mour	nt		Amo	unt Ur	nit	_	Base	Acres		_ Co	mment _			
16. Place of Use CHK			NE1/4			NW	11/4			sv	V¹/4			s	Ε½		Total	Owner C	ng? Overlap Files	
MOD DEL ENT PUSE S	R ID		IW SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1⁄4	NW 1/4	SW 1/4	SE 1/4	NE 1⁄4	NW 1/4	SW 1/4	SE 1/4				
CHK 31549																				
Base Acres:	ear: M	inimum Re	easonable	Quan	ntity:															
Comments:																				

Garden City Field Office 4532 W. Jones, Suite B Garden City, KS 67846



Phone: 620-276-2901 Fax: 620-276-9315 www.agriculture.ks.gov

Mike Beam, Secretary

Laura Kelly, Governor

April 4, 2022

DAVID KRAUSE PO BOX 252 PLAINS, KS 67869-0252

RE: Filed Office Application for Change

Water Right, File No. 16589

Dear Sir or Madam:

Enclosed is the order executed by the designee of the Chief Engineer, Division of Water Resources, Kansas Department of Agriculture, approving the application for change under the above referenced file number.

Your attention is directed to the enclosures and to the terms, conditions, and limitations specified in this approval for change. A condition of this approval is that an acceptable water flow meter must be installed on the diversion works authorized under the referenced file number and meet current specifications. Please return the required notification of completion of the diversion works and installation of the required meter as soon as these actions are completed.

Since the order modifies the original document referred to above, it should be recorded with the Register of Deeds as other instruments affecting real estate.

Should you have any questions, please feel free contact this office. If you would prefer, you could arrange an appointment for additional assistance.

Sincerely,

Austin J. McColloch

Assistant Water Commissioner

AM: enclosures

pc: GROUNDWATER MANAGEMENT DISTRICT NO. 3

#### **CERTIFICATE OF SERVICE**

On this 4<sup>th</sup> day of April, 2022, I hereby certify that the foregoing Approval of Application for Change in Point of Diversion, Water Right, File No. 16,589 dated 4<sup>th</sup> day of April, 2022 was mailed postage prepaid, first class, US mail to the following:

DAVID KRAUSE PO BOX 252 PLAINS, KS 67869-0252

Pc:

GROUNDWATER MANAGEMENT DISTRICT NO. 3

Division of Water Resources Staff

Submit completed application to: Kansas Department of Agriculture Division of Water Resources Field Office for your area. Call for address:

Topeka -- (785) 296-5733 Stafford -- (620) 234-5311

Stockton -- (785) 425-6787 Garden City -- (620) 276-2901 http://agriculture.ks.gov/dwr

# DWR FIELD OFFICE APPLICATION FOR APPROVAL TO CHANGE THE PLACE OF USE AND/OR THE POINT OF DIVERSION



STATE OF KANSAS

Filing Fee Must Accompany the Application, K.S.A. 82a-708b(b), as amended. Fee Schedule is on the third page of this application form.

Paragraph Nos. 1, 2, 3 & 5 must be completed. Complete all other applicable portions. If change in point of diversion is greater than 100 feet, or if place of use will be changed, include a topographic map or detailed plat showing the authorized and proposed point(s) of diversion and/or place of use.

1.	Application under the The sou	e water	right w	/hich is		roval o	f the Clace o	f Use applic	nginee	n acco	Point	of Dive	ersion the cor			pribed t	M Garde ivision	3:30 MAR 1 en City	Pm 4 2022 Field Office ater Resource
2.	Name a	nd addre	ess of a		ant:			Ki							la is	15, K	KS 5 6	6786	869 9
3.	Phone N Name at PO BOX Phone N The pres Owner of	nd addre <u>( 252 PL</u> Number: sently au of Land -	ess of NA AINS (620 uthorized NA ADDRE	KS 678 ) 6 ed plac AME: ESS:	21- ce of u Ba	252 1996 se is: &	e 619	t: DAY	Email	addres	ss:	dt as	Kra	145	e (a)	s be	glo	bal./	ret
se3	ec. Twp.	Range	NE1/4	NW1/4	5W1/4	SE1/4	NE1/4		N <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub>	SE1/4	NE¼		V1/4 SW1/4	SE½	NE1/4	T	5W1/4	SE1/4	TOTAL ACRES
4.	If this ap	of Land -	NA Addre	AME: .											ged to:				
					=1/4				N1/4				V1/4				Ξ½		TOTAL ACRES
Se	ec. Twp.	Range	NE¼	NW1/4	SW1/4	SE¼	NE1/4	NW1/4	SW1/4	SE1/4	NE¼	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW <sup>1</sup> / <sub>4</sub>	SE1/4	ACITED

RECEIVED

5.	Presently authorized point of diversion:				
	One in the Quarter of the	CE	Quarter of the	SW	Quarter
	of Section 33, Township				
	in Meade County, Kansas, 1350 fee				
	Authorized Rate Authorized Quantity				
	(DWR use only: Computer ID No GPS		feet North	feet We	est)
	☐This point will not be changed ☐This point will be changed as				
	Proposed point of diversion: (Complete only if change is	requeste	ed or if existing point is b	etter describe	ed by GPS)
	One in the Quarter of the	SE	Quarter of the	SE	Quarter
	of Section, Township				
1	in Meade County, Kansas, 1101 fee	et North _	526 feet West of So	outheast corne	r of section.
	Proposed Rate Proposed Quantity		Proposed well depth (f	eet)	·
	This point is: ☐ Additional Well ☐ Geo Center List other	water righ	nts that will use this point _		
6.	Presently authorized point of diversion:				
	One in the Quarter of the		Quarter of the		Quarter
	of Section, Township		South, Range		(E/W),
	in County, Kansas, fee	et North _	feet West of S	outheast corne	r of section.
	Authorized Rate Authorized Quantity				
	(DWR use only: Computer ID No GPS				
- 1	☐This point will not be changed ☐This point will be changed as	follows:	☐ No change, point better des	scribed with GPS	as follows:
	Proposed point of diversion: (Complete only if change is	requeste	ed or if existing point is b	etter describe	ed by GPS)
	One in the Quarter of the		Quarter of the		Quarter
	of Section, Township				
	in County, Kansas, fee	et North _	feet West of S	outheast corne	r of section.
	Proposed Rate Proposed Quantity		Proposed well depth (f	eet)	·
	This point is: ☐ Additional Well ☐ Geo Center List other	water rigl	hts that will use this point _		
-					
7.	The changes herein are desired for the following reasons? (please be specific) The original well				
	is declining in your	300	North 0 200 100 0	100 200	300
		E	:		7773
		E		- /-	=
8.	If a well, is the test hole log attached? X Yes No	200	-14 + 1 = 1	+++	_  = 200
a	The change(s) (was)(will be) completed by?	100		'	\_
	June 1, 2022	[		e 1 i T	1
	1911E 1, 2022	100	<i>†</i>	1 + 1 +	1 100
10.	If the point of diversion is a well:	1	=	_	===
	(a) What are you going to do with the old well?	West 0	<del>in</del> don/ordon <b>/</b> ordon <b>&amp;</b> or	padadanja	□ □ □ □ 0 East
	Alue 5+	<b>!</b>			3
	Jud 10		<b>\</b>	r 1 + 1.	A
	(b) When will this be done? 12-31-2022	100	1 + 1 + 1 =	1 + 1 +	100
			=	-	/=
11.	Groundwater Management District recommendation attached?	200	- + =	1+1+	200
	Yes No	E		_ /_	4
				Land outlined on	Eulu
12.	Assisted by HH / GCFO	300	0 200 100 0 South	100 200	300
13a	I. If the proposed point of diversion will be relocated more than 300		South	Scale: 1 hashmo	#K-10 Jt

feet but within 2,640 feet of the existing point of diversion, attach a topographic map or aerial photograph. For groundwater sources, show all wells (including domestic) within one-half mile of the proposed point of diversion and the name and mailing of the proposed point of diversion and the name and mailing of the proposed point of diversion must be located within a 300 foot radius of the existing point of diversion, indicate its location on the diagram shown above in relation to the existing point of diversion must be located within a 300 foot radius of the existing point of diversion must be located within a 300 foot radius of the existing point of diversion must be located within a 300 foot radius of the existing point of diversion must be located within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion in the diagram shown above in relation to the existing point of diversion and the relocated military shows the proposed point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of diversion will be relocated within a 300 foot radius of the existing point of d diversion. The proposed point of diversion must be located within the circle shown above. (PLEASE NOTE: The "X" in center of diagram above represents the presently authorized point of diversion.)

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File No. 16589

lines

addresses of the owners. For surface water sources, show the names and addresses of the landowner(s) one-half mile

downstream and one-half mile upstream from your property

14. If the proposed groundwater point of diversion is 300	or fewer feet from the	existing point of diversio	n, complete the following:
(a) Does the undersigned represent all owners of the ☐ Yes ☐ No (If no, all owners must			in this application?
(b) Will the ownership interest of any owner of the of affected if this application is approved as request ☐ Yes ☐ No (If yes, all owners must be affected in the control of the contr	ted?		n this application be adversely
(c) If this application is not approved expeditiously, w ☐ Yes ☐ No (If no, all owners must			blic health or safety?
If the application proposes a surface water change in poin or a change in place of use, the application must be signe agent (attach notarized statement authorizing representati	d by all owners of the		
I hereby verify, being first duly sworn upon my or age and the owner, the spouse of the owner, or a their behalf, in regards to the water right(s) to we contained in this application are true, correct and	a duly authorized a hich this applicati d complete.	gent of the owner(s) on pertains. I furthe	to make this application on r verify that the statements
Dated at	_, Kansas, this	day of	, 20
Para Cillaria The	dp0		
Phyllis A. Krause Tra.  (Owner)  Phyllis A. Krause 7	<u> </u>	(Sp	ouse)
Phyllis A Kronge 7	Tuster		
(Please Print)		(Pleas	se Print)
Laid Warre Tast	tee		
David Krayse Trus		(Sp	ouse)
David Klayse Tras	stee _		
(Please Print)		(Pleas	se Print)
(Owner)		(Sp	ouse)
(Please Print)		(Pleas	se Print)
, , ,		(, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
State of Kansas  County of <u>Seward</u> SS			/L
I hereby certify that the foregoing application was	s signed in my pro	esence and sworn to	before me this $10^{-7}$ day
	UBLIC - STATE OF KAN	sas ma	$M_{-0}$
	JEANINE MCOL	Notary	Public
My Commission Expires 1.6 21 20 My Commission			
ONLY COMPLETE APPLICATIONS WILL BE PROCESSED. To accurate information; maps, if necessary, must be included; signathe appropriate fee must be paid.	be complete, all of the a	applicable portions of the ap	
	EEE SCHEDIII E		
Each application to change the place of use or the point of	FEE SCHEDULE f diversion under this	section shall be accompa	nied by the application fee set
forth in the schedule below: Make checks payable to: Ka	nsas Department of	Agriculture	
<ul><li>(1) Application to change a point of diversion 300</li><li>(2) Application to change a point of diversion more</li></ul>			
(3) Application to change the place of use			\$200
		RECEIVE	D
DWR 1-121 (Revised 09/11/2019)	Page 3	MAR 1 4 20	22 File No. 16589

## SUMMARY ORDER APPROVING APPLICATION FOR CHANGE AND IMPOSING CONDITIONS

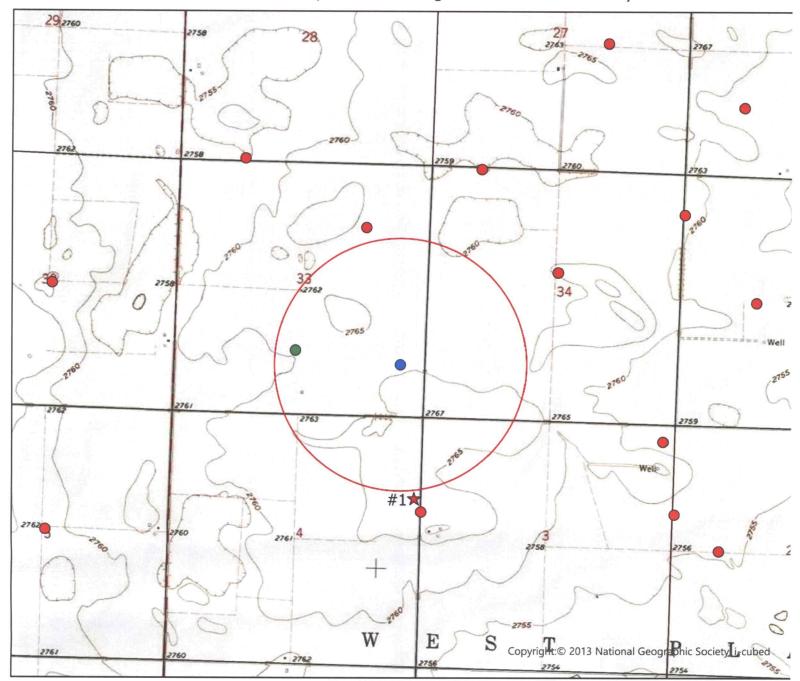
prov Witl	visions of the Kansas Water Appropriation Law, K.S.A. 82a	a-701 et. seq., and rules and regulations promulgated thereunder, ein, this Summary Order does not change the terms, conditions and
1.	A change application was received on March 14 diversion authorized under the above-referenced file nur	requesting that the place of use and / or point of mber be changed as described in the application.
2.	On and after the effective date of this summary order, the at the topographic map accompanying the application to ch	uthorized place(s) of use shall be located substantially as shown on nange the place of use.   Applicable Not Applicable
3.	The change in point of diversion shall not impair existing ric previously authorized. The point of diversion authorized radius of the authorized point(s) of diversion.	ghts and shall be limited to the same source or sources of water as by this summary order shall be located within a foot able Not Applicable
4.	The point(s) of diversion described herein is administrative Positioning System (GPS), as described in the application	vely corrected to be more accurately described using the Global on.   Applicable Not Applicable
5.	The point(s) of diversion authorized herein shall not actually authorized point(s) of diversion.	y be located more than feet from the previously Not Applicable
6.	As required by K.A.R. 5-3-5d, if the works for diversion is a or other device suitable for making water level measurem K.A.R. 5-6-13.   ☐ Applicable ☐ Not Applicable	well with a diversion rate of 100 gallons per minute or more, a tube nents shall be installed, operated and maintained in accordance with
7.	<b>December 31, 20</b> or before the first use of water operated and maintained in accordance with K.A.R. 5-1-4	roperly install an acceptable water flow meter on or before er, whichever occurs first. The water flow meter shall be installed, 4 through 5-1-12. As required by K.S.A. 82a-732, as amended, and out the reading of the water flow meter and the total quantity of water wing the end of each calendar year.
8.	authorized extension of time. By March 1, 20 3 the	e completed on or before December 31, 20, or within any e applicant shall notify the Chief Engineer that construction of the ovided by the Chief Engineer, as required by K.A.R. 5-8-4e.
9.	The completed well log shall be submitted with the req	uired notice. Applicable   Not Applicable
10.	with an in-line, automatic, guick-closing check valve cap	r foreign substance will be injected into the water shall be equipped bable of preventing pollution of the source of the water supply. The d in accordance with K.A.R. 5-3-5c. ☑ Applicable ☐ Not Applicable
11.	Additional Conditions are attached.  Yes No	
12.	water appropriated under the above-referenced file nun limitations, as amended and/or supplemented by this Suppropriation Law and the Rules and Regulations prom	A.R. 5-5-14, all of the owners of the authorized place(s) of use of other are responsible for compliance with its terms, conditions and summary Order, and with applicable provisions of the <i>Kansas Water</i> nulgated thereunder. Failure to comply with these provisions may mended, and/or the suspension or revocation and dismissal of the tions authorized by law.
4	Administrative Appeal and Effective Date of Order	FOR OFFICE USE ONLY
you Eng Agrifiled adm day revi File Leg 665	ou are aggrieved by this order, pursuant to K.S.A. 82a-1901, may request an evidentiary hearing before the Chief inneer or request administrative review by the Secretary of iculture. A request for hearing by the Chief Engineer must be within 15 days of service of this Order and a request for ninistrative review by the Secretary must be filed within 30 pursuant to K.S.A. 77-531. Any request for administrative ew must state a basis for review pursuant to K.S.A. 77-527. any request with Kansas Department of Agriculture, all Division, 1320 Research Park Drive, Manhattan, KS 02. Failure to timely request a hearing or review may clude review under the Kansas Judicial Review Act.	By:
	. c. cos ay riogistor or books	Country of Our rey
		by Austin McColloch
	RECEIVED	Signature: Notary Public
	MAR 1 4 2022	My commission expires:    JULIE JONES   My Appointment Fxoires
	Garden City Field Office Division of Water Resources	11 % "***** S December 15 7027

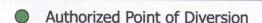
\* 1 - V

File No. <u>16589</u>

# **CHANGE IN POINT OF DIVERSION WATER RIGHT, FILE NO. 16589**

Section 33 Township 31 South Range 30 West Meade County





Proposed Point of Diversion

★ Domestic Wells within 1/2 mile

Permitted Wells within 1/2 mile

1/2 Mile Buffer

All wells of any kind within 1/2 mile of the proposed point of diversion have been plotted.

List of owner name and addresses within 1/2 mile: #1 Domestic Well Lloyd Harris



# RECEIVED

MAR 1 4 2022

Garden City Field Office Division of Water Resources

Date: 3/9/22 HH/GCFO

Downey Drilling Inc.

CUSTOMER NAME: DAVID KRAUSE TH#2

LEGAL: SW 33-31-30W

COUNTY: PLAINS CO, KS

GPS: 37.303446

-100.582469

			LOGGER: DRILLER:	DIEGO VAL	LE		WO:	21-417
TW	FROM	то	ТҮРЕ	HARDNESS	COLOR	SPEED	PULL DOWN	OTHER / DRILLING ACTION
	0	5	TOPSOIL	SOFT	DARK BROWN	SLOW		SMOOTH
	5	9	BROWN SILTY CLAY	SOFT	BROWN	SLOW		SMOOTH
	9	36	SANDY CLAY W/ CALICHE	FIRM	TAN & WHITE	SLOW		SMOOTH & CHOPPY
	36	77	SANDY CLAY	SOFT	TAN	FAST		SMOOTH
	77	90	FINE-MED-COARSE SAND	FIRM		FAST		FAST CHATTER
	90	99	SANDY CLAY	SOFT	TAN	FAST		SMOOTH
	99	118	FINE-MED-COARSE SAND	FIRM		FAST		FAST CHATTER
	118	119	HARD SPOT	HARD		SLOW	X, 800 PSI	CHATTER
	119	123	FINE-MED-COARSE SAND	FIRM		FAST		FAST CHATTER
	123	137	BROWN CLAY	STICKY	BROWN	FAST		SMOOTH
	137	146	FINE-MED-COARSE SAND	FIRM		FAST		FAST CHATTER
	146	155	BROWN CLAY	SOFT		FAST		SMOOTH
	155	164	FINE-MED-COARSE SAND	FIRM		FAST		FAST CHATTER
	164	165	HARD SPOT	HARD		SLOW	x	CHATTER
	165	167	FINE-MED SAND	FIRM		FAST		VIBRATION
	167	181	BROWN CLAY	SOFT	BROWN	FAST		SMOOTH
	181	192	FINE-MED-COARSE SAND	FIRM		FAST		FAST CHATTER
	192	230	BROWN STICKY CLAY W/ FINE-MED SAND LAYERS	STICKY	BROWN	FAST		SMOOTH & VIBRATION
	230	274	FINE-MED-COARSE SAND	FIRM		FAST		FAST CHATTER
	274	280	BROWN CLAY	SOFT	BROWN	FAST		SMOOTH
Ŋ	280	300	FINE-MED-COARSE SAND W/ BROWN CLAY LAYERS	FIRM	BROWN	FAST		FAST CHATTER & SMOOTH AT TIMES
Ç.	300	376	FINE-MED-COARSE SAND W/ LIMEROCK	FIRM	WHITE	FAST		FAST CHATTER
-	376	430	FINE-MED-COARSE SAND W/ SANDY CLAY LAYERS & LIMEROCK	FIRM	TAN & WHITE	FAST	la.	FAST CHATTER
	430	495	BROWN CLAY W/ FINE-MED SAND LAYERS	FIRM	BROWN	FAST		SMOOTH & VIBRATION
	495	509	BROWN CLAY	SOFT	BROWN	FAST		SMOOTH
1	509	515	BROWN ROCK W/ SANDSTONE	STIFF	BROWN	FAST		FAST CHATTER
	515	530	RED BED	SOFT	RED	SLOW		SMOOTH
			QUIKGEL - 9					
			WATER LOADS - 3200 GAL H2O					
			SODA ASH - 1/4					
			EZ MUD GOLD - 1/2 A BAG					
			QUICK TROLL - 1/2 A BAG					
			BRAN - 1/2 BAG					
			HOLE PLUG - 2					
			CASING SEAL - 1					

#### **ACCEPTANCE OF TRUSTEE**

COMES NOW DAVID KRAUSE, and hereby consents to serve in the capacity of Trustee of the Revocable Inter Vivos Trust of MERLE G. KRAUSE, dated December 15, 2010.

Dated this 16 day of November 2020.

DAVID KRAUSE

STATE OF KANSAS COUNTY OF Meade, SS:

NOTARY PUBLIC - STATE OF KANSAS

June M. Bender

My Commission Expires 3-3-2024

NOTARY PUBLIC

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MAR 1 4 1022

A. McColloch AM 4/4/2022

#### Theis analysis of change in point of diversion, File No. 16,589

A Theis analysis was used to evaluate the potential impacts of a change in point of diversion. The application proposes moving the point of diversion authorized by File No. 16,589 approximately 2,220 feet east. The 2068 projected saturated thickness (163.7 feet) from the GMD No. 3 groundwater model and transmissivity (2,859 ft²/day) from well logs were used. The specific storage was assumed to be 10<sup>-5</sup>, which results in a storage coefficient of 0.001637. Pumping the proposed rate and quantity at the new location was compared to pumping the ten-year average use (207 acre-feet) at the last reported rate (600 gallons per minute). Drawdowns were evaluated at the point of diversion authorized by File No. 12,297. With these assumptions, the drawdown at File No. 12,297 increases by 25 feet, or 15.3% of the projected future saturated thickness (Table 1).

Table 1: Theis analysis of drawdown at File No. 12,297;  $T = 2859 \text{ ft}^2/\text{day}$ ; S = 0.001637

	Distance	Quantity		Drawdown	Drawdown
Scenario	(Feet)	(Acre-Feet)	Rate (GPM)	(Feet)	(%ST)
Proposed	2954	525	1730	39.4	24.1%
Current	2962	207	600	14.4	8.8%
			Net:	25	15.3%



# Southwest Kansas Groundwater Management District No. 3 2009 E. Spruce Street Garden City, Kansas 67846

(620) 275-7147 phone (620) 275-1431 fax www.gmd3.org

April 1, 2022

Austin McColloch Division of Water Resources 4532 W Jones Ave., Suite B Garden City, Kansas 67846

RE:

Application for Change in Point of Diversion

Water Right, File No. 16589

Dear Austin:

We have completed a review of the application for the above referenced water right. The proposed change in point of diversion is in accordance with current area rules, K.A.R. 5-23-3, as it pertains to minimum spacing to neighboring wells and distance moved.

Well evaluations were conducted to estimate possible effects of the proposal on the supply of other wells with water rights prior to the proposal per K.S.A. 82a-708b, and the draft revised management program. Under K.S.A. 82a-708b, an applicant requesting a change in point of diversion must demonstrate to the chief engineer that any proposed change is reasonable and will not impair. The enclosed report is an analysis performed by the GMD on behalf of our membership. Under this analysis, the proposed change is considered to be reasonable and unlikely to impair if either the net in-season well-to-well effect of the proposed change is less than a strict maximum allowable threshold (4.0 ft on the sections with saturated thickness greater than 200'), or if no well with a net well-to-well effect exceeding the threshold is identified as critical. Critical wells are identified as wells that are expected to either lose or greatly diminish water supply over the next 25 years. The attached review information is based on a Theis analysis using inputs from the GMD3 aquifer model, which is considered to be the best information on well and aquifer data readily and easily available to the public. If either the applicant or the neighbors believe they have better data that might change the result of the analysis, they should contact GMD3. Conclusions of the well analysis may change if better information on well and aquifer data can be made available.

Every neighboring well within 1 mile of the proposed move was evaluated. Evaluations showed that several of the neighboring wells exceeded the net effect above the maximum allowable threshold and needed further evaluation. There could be the potential for critical wells in the area. The effects could possibly be mitigated with limitations to the proposed well. We did not receive any comments from neighbor notices. Therefore, GMD3 sees this move as meeting current rules and would recommend approval with if better information is determined to ensure that neighboring wells are not adversely affected. If aquifer conditions change or there is a change to the water right in the future, we would be happy to evaluate the effects at that time.

Thank you for the opportunity to review the applications and to provide a recommendation. If you have any questions, please don't hesitate to contact us.

Sincerely,

Jason L. Norquest Assistant Manager RECEIVED

APR 01 2022

Garden City Field Office
Division of Water Resources

Working Water Conservation Every Day Since 1976

# **GMD3** Change Review

File No(s).: 16589. DWR office: GC. App filed to change: PD. Is Landowner(s) correct in WRIS: Merle Krause Trust % David Krause. If NO, is documentation included? Is Water Use Correspondent correct in WRIS? \_\_\_. If NO, is documentation included? Regulation(s) Reviewed: KAR 5-23-3 Point of diversion ID No(s) 02 being changed. ft. North ft. West Authorized PD 1350 2750 Sect 33-31-30 Meade Co Proposed PD 1101 526 Difference 249 s 2224 e a2 + b2 = c262001 4946176 2237.896 foot move SE GPS for proposed PD: Lat: 37.303446 Long: -100.582469. Is proposed PD stacking on existing WRs? No. Is Proposed PU overlapping existing WRs? No Change. Neighboring certified well(s) notified: \_\_\_. Name Gerald Amerin (13517). Address 4072 K Rd. Zip Plains, KS 67869. Email: gamerinfarms@gmail.com Phone: <u>620-629-1833</u> Name John D Borth (22848). Address PO Box 754. Zip Meade, KS 67864. Email: johnnyborth@gmail.com Phone: 620-629-1849. Domestic well(s) notified: . . Name Shawn & Kathy Jacobs (SE of 32). Address 12145 4 Road. Zip Plains, KS 67869. Ks5jacobs@gmail.com 620-629-3528 Base Acres: . Perfected Acres: \_\_\_. Irr. Return-Flow % 16589 authorized: 525AF @ 1730gpm. 2020 GMD3 inspection showed 518gpm. 600gpm reported on 2016 WUR. Recent reported water use (2012-2021): 206.7AF/year

# **GMD3** Change Review

No log for current well.

Proposed well depth around 530'.

Is a waiver needed: Move is less than half mile. Minimum spacing to neighboring wells appears met. Analysis showed that there is a potential to have critical wells in the area.

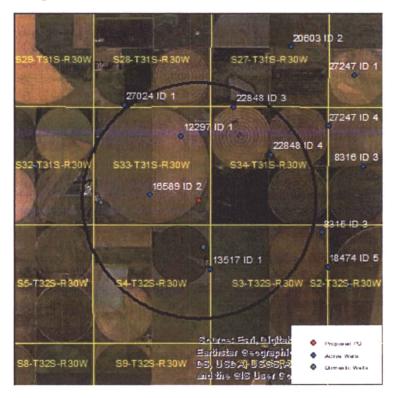
Recommendation: After review of all available information, it appears that current area rules are met. We do have concerns on possible critical wells in the area. Would recommend varication before possible approval. We did not have any comments from neighbor notices.

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APR 01 2022

#### Evaluation of proposed move for Water Right No. 16589

Proposed: Move water right no. 16589 to a new well location, 2,334 ft to the southeast.



Wells within 1 mile: 12297, 22848 ID3, 22848 ID4, 13517, a domestic well in section 33-31-30, and a domestic well in section 4-32-30.

The saturated thickness at the proposed well location is estimated to be 221 ft, based upon the GMD3 model. For saturated thickness greater than 200 ft, the drawdown allowance is 4.0 ft.

50 year Theis Analysis: The following values were used to run the analysis:

S = 0.2058, T = 3260 ft<sup>2</sup>/day (estimated from driller's log),  $tp_{current} = 90$  days,  $Q_{current} = 518$  gpm,  $tp_{proposed} = 69$  days,  $Q_{proposed} = 1730$  gpm

Theis drawdowns were calculated as follows:

12297:

Drawdown from current location = 2.74 ft

Drawdown from proposed location = 7.05 ft

Net drawdown = 4.3 ft

22848 ID3:

Drawdown from current location = 1.88 ft

Drawdown from proposed location = 5.47 ft

Net drawdown = 3.6 ft

22848 ID4:

Drawdown from current location = 1.82 ft

Drawdown from proposed location = 6.00 ft

Net drawdown = 4.2 ft

13517:

Drawdown from current location = 2.17 ft

Drawdown from proposed location = 4.67 ft

Net drawdown = 4.7 ft

Domestic 33-31-30:

Drawdown from current location = 3.33 ft

Drawdown from proposed location = 5.50 ft

Net drawdown = 2.2 ft

Domestic 4-32-30:

Drawdown from current location = 2.55 ft

Drawdown from proposed location = 8.93 ft

Net drawdown = 6.4 ft

Net drawdown exceeds the drawdown allowance of 4.0 ft for water right numbers 12297, 22848 ID4, 13517, and the domestic well in section 4-32-30. Critical well analysis was conducted for those wells.

#### Critical Well Evaluation:

#### 12297:

Water Column = 221 ft

DP = 4.3 ft (Net drawdown from the proposal indicated above)

DE = 40.3 ft (Water level decline from 2022 through 2047 based upon GMD3 model)

DD = 93.3 ft (S = 0.2058, T = 24,385 gpd/ft, Q = 931 gpm, tp = 85 days, efficiency = 70%)

DT = 137.9 ft

Economic Drawdown Constraint (EDC) = 0.4 \* 221 ft = 88.4 ft

Physical Drawdown Constraint (PDC) = 221 ft - 60 ft = 161 ft

Total drawdown of 137.9 ft is greater than the EDC, so this well is critical.

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#### 22848 ID4:

Water Column = 213 ft

DP = 4.2 ft (Net drawdown from the proposal indicated above)

DE = 27.2 ft (Water level decline from 2022 through 2047 based upon GMD3 model)

DD = 68.0 ft (S = 0.2058, T = 24,385 gpd/ft, Q = 670 gpm, tp = 102 days, efficiency = 70%)

DT = 99.4 ft

Economic Drawdown Constraint (EDC) = 0.4 \* 213 ft = 85.2 ft

Physical Drawdown Constraint (PDC) = 213 ft - 60 ft = 153 ft

Total drawdown of 99.4 ft is greater than the EDC, so this well is critical.

#### 13517:

Water Column = 209 ft

DP = 4.7 ft (Net drawdown from the proposal indicated above)

DE = 39.3 ft (Water level decline from 2022 through 2047 based upon GMD3 model)

DD = 56.9 ft (S = 0.2058, T = 24,385 gpd/ft, Q = 569 gpm, tp = 82 days, efficiency = 70%)

DT = 100.9 ft

Economic Drawdown Constraint (EDC) = 0.4 \* 209 ft = 83.6 ft

Physical Drawdown Constraint (PDC) = 209 ft - 60 ft = 149 ft

Total drawdown of 100.9 ft is greater than the EDC, so this well is critical.

#### Domestic 4-32-30:

Water Column = 209 ft

DP = 6.4 ft (Net drawdown from the proposal indicated above)

DE = 39.3 ft (Water level decline from 2022 through 2047 based upon GMD3 model)

DT = 45.7 ft

Economic Drawdown Constraint (EDC) = 0.4 \* 209 ft = 83.6 ft

Physical Drawdown Constraint (PDC) = 209 ft - 20 ft = 189 ft

Total drawdown of 61.0 ft is less than the EDC and PDC, so this well is not critical.

#### Conclusion:

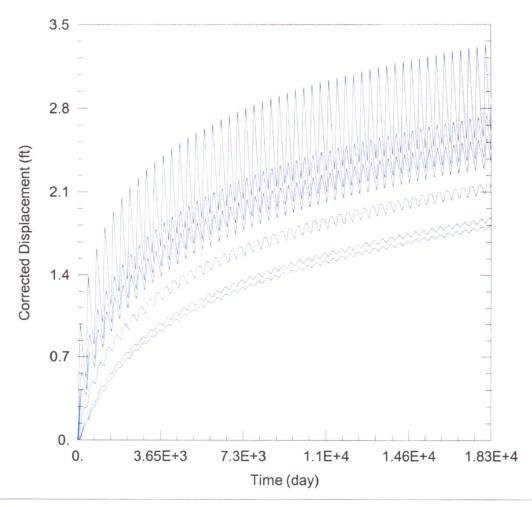
The proposed move is in an area with more than 200 ft saturated thickness, with observed pumping rates ranging between 500 gpm and 1000 gpm. Model data and estimates for transmissivity using the driller's log at the proposed location indicate that the well drawdown effects necessary to produce those rates are considerably larger than they would be in other areas with more transmissive soils. The GMD3 model shows that the estimated usable portion of the remaining aquifer, after accounting for drawdown effects, will deplete by more than 40% over the next 25 years at multiple neighboring well locations. It is likely that wells will become less productive as these depletions occur. GMD3 critical well guidelines identify a well-to-well effect of less than 4.0 ft in aquifers with more than 200 ft of thickness as "de minimis," meaning that they would likely be small enough to go unnoticed. If the proposed well is operated at its fully authorized rate and quantity, effects on some neighboring wells would exceed this standard.

The GMD3 guideline is not currently codified in rules and regulation, so this application does not require any waiver of rules. Any concerned neighbors can contact either GMD3 at (620) 275-7147, or the Division of Water Resources at (620) 276-2901 to have those concerns considered.

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APR **01** 2022

Garden City Field Office Division of Water Resources



## WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2022\_moves\16589\16589 Current.aqt

Date: 03/22/22 Time: 15:37:54

Pumping Wells

#### PROJECT INFORMATION

Company: GMD 3 Project: 16589

Location: Meade County

#### **WELL DATA**

Well Name	X (ft)	Y (ft)	Well Name	X (ft)	
16589	60891	156311	a a	60891	1
			<b>12297</b>	62310	
			- 22848 ID3	64701	1
			□ 22848 ID4	66364	
			<b>13517</b>	63633	
			<ul> <li>Domestic 33-31-30</li> </ul>	58700	1

#### SOLUTION

Aquifer Model: Unconfined

 $T = 3260. \text{ ft}^2/\text{day}$ 

Kz/Kr = 1.

Solution Method: Theis

□ Domestic 4-32-30

**Observation Wells** 

63313

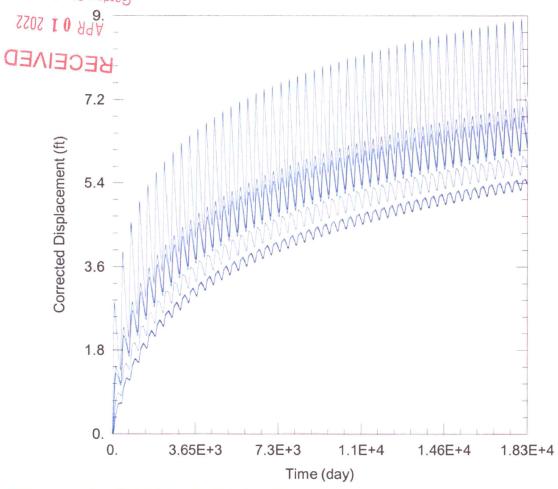
155959

153978

S = 0.2068

b = 221. ft

Garden City Field Office Division of Water Resources



#### WELL TEST ANALYSIS

Data Set: C:\Users\trevora\Documents\2022\_moves\16589\16589 Proposed.aqt

Date: 03/22/22 Time: 15:38:45

#### PROJECT INFORMATION

Company: GMD 3 Project: 16589

Location: Meade County

## WELL DATA

- t	rumping Wells	
Well Name	X (ft)	Y (ft)
16589	63111	156067

Well Name	X (ft)	Y (ft)
0	63111	156067
<ul><li>12297</li></ul>	62310	158929
□ 22848 ID3	64701	160223
□ 22848 ID4	66364	158101
<ul><li>13517</li></ul>	63633	152986
<ul> <li>Domestic 33-31-30</li> </ul>	58700	155959
<ul> <li>Domestic 4-32-30</li> </ul>	63313	153978

**Observation Wells** 

# SOLUTION

Aquifer Model: Unconfined

 $T = 3260. \text{ ft}^2/\text{day}$ 

Kz/Kr = 1.

Solution Method: Theis

S = 0.2068b = 221. ft Water Rights and Points of Diversion Within 1 mile of point defined as:

1101 Feet N and 526 Feet W of the Southeast Corner of Section 33 Twp 31S Rng 30W

Located at: 100.582470 West Longitude and 37.303446 North Latitude Both SURFACE WATER and GROUNDWATER

	SURFACE						_											2300	' on a !/		
	Number		Use	ST	SR	Dist	(ft)	Q4	Q3	Q2	Q1	FeetN	FeetW	Sec	Twp	Rng	ID	Batt	Auth_Quan	Add_Quan	
																			522.00		
	13517	00	IRR	NK	G		3125		CE	SE	NE	<b>-</b>		4	32	30W	1		360.00	360.00	
																			525.00		
AF A	22848	00	IRR	NK	G		3833		SW	SW	NE	3147	2548	34	31	30W	4		354.00	354.00	
AF Same							4443		NE	NW	NW	5262	4202	34	31	30W	3		354.00	354.00	
AF																					

Total Net Quantities Authorized:	Direct	Storage	M . 50 .
Total Requested Amount (AF) =	.00	.00	Minimum Spacing
Total Permitted Amount (AF) =	.00	.00	1
Total Inspected Amount (AF) =	.00	.00	Appenis MET.
Total Pro_Cert Amount (AF) =	.00	.00	
Total Certified Amount (AF) =	2115.00	.00	
Total Vested Amount (AF) =	.00	.00	
TOTAL AMOUNT $(AF) =$	2115.00	. 00	

An \* after the source of supply indicates a pending application for change under the file number.

An \* after the ID indicates a 15 AF exemption was granted under the file number.

A "G" in the Batt column indicates the GEO CTR of a battery. A "B" indicates a well in the battery.

The number in the Batt column is the number of wells in the battery.

Water Rights and Points of Diversion Within 1 mile of point defined as: 1101 Feet North and 526 Feet West of the Southeast Corner of Section 33 Twp 31S Rng 30W Located at: 100.582470 West Longitude and 37.303446 North Latitude Both SURFACE WATER and GROUNDWATER WATER USE CORRESPONDENTS:

File Number Use ST SR > DAVID KRAUSE 12297 - Applicant > PO BOX 252 > PLAINS KS 67869 GERALD AMERIN 4072 K RD PLAINS KS 67869 DAVID KRAUSE 16584 - Application > PO BOX 252 > PLAINS KS 67869 >-----JOHN D BORTH 22848 > PO BOX 754 > MEADE KS 67864

APR 0 1 2022

Garden City Field Office
Division of Water Resources

Garden City Field Office 4532 W. Jones, Suite B Garden City, KS 67846



Phone: 620-276-2901 Fax: 620-276-9315 www.agriculture.ks.gov

Mike Beam, Secretary

Laura Kelly, Governor

March 15, 2022

GROUNDWATER MANAGEMENT DISTRICT #3 2009 E SPRUCE ST GARDEN CITY KS 67846

Re:

Request for Recommendation,

File No. 16589

#### Dear Sir or Madam:

We are enclosing a copy of the referenced application, which was submitted by David Krause and appears to be in proper form, for your review.

We are delaying any further action for a period of 15 days from the date of this letter to allow you time to submit your recommendation concerning this application. Please submit your recommendation within the allotted time, or any authorized extension of time thereof.

If you have any questions, please contact me at (620) 276-2901. If you wish to discuss a specific file, please have the file number ready to that I may help you more efficiently.

Sincerely,

Austin McColloch

Assistant Water Commissioner

Enclosure

pc: