Kansas Department of Agriculture Division of Water Resources

CHANGE: P/U WORKSHEET

1. File Number: 44,424	2. Status Change Date: 4/21/2022	3. Change Num:	4. Field Office: 02	5. GMD: 02
6. Status: ⊠ Approved ☐ Den	ied by DWR/GMD ☐	Dismiss by Reques	t/Failure to Return	7. Filing Date of Change: 6/22/2020
8a. Applicant(s) New to system □	Person ID 55142 Add Seq#	8c. Landowne		Person ID Add Seq#
NICKERSON USD 309 - SO 4501 W 4 TH AVE HUTCHINSON KS 67501-91				
8b. Landowner(s) New to system □ 7a	Person ID Add Seq#	8d. WUC New to sy	stem □	Person ID Add Seq#
9. Documents and Enclosure(s): DN Anti-Reverse Meter	Seal	2023	☐ Water Tube ☐ D	Comply: H & E Letter Comply:
10. Use Made of Water From:		To: _		
			Date Prepared: 2/28/2 Date Entered: 4/26/2 LMoo	2022 By:

5/9/2022

File No.	44,424	ļ	11.	Coun	ty: RI	ENO	Ва	sin: 19	0					S	tream:	ARK	ANSA	S RIV	ER BA	SIN		Fo	ormation	Code:	Special Use:	
12. Poin CHK	ts of Diver	sion																Rate	and Q	uantity						
MOD	PDIV																	A	Authori	zed		А	dditional			
ENT	I DIV	Qualifier		S	Т		R	ID	,	N	ʻW		Com	ment	(AKA I	Line)		Rate gpm		Quanti af	ty	Rate gpm		uantity af	Overlap PD Files	
NO CHA	NGE																									
13. Stora	ge: Rate				_ NF		Quai	ntity					ac/ft	A	ddition	al Rat	e				NF	- Addi	tional Qı	uantity		_ ac/ft
14. Limita	ation:			af/y	r at				(gpm (_				cfs) wl	nen co	mbine	d with	file n	umber	(s) NO	NE N	O CH	ANGE			
Limita	ation:			af/y	r at _					gpm (_				cfs) wl	nen co	mbine	d with	file n	umber	(s)						
15. 5YR	Allocation:	Allocation	Туре	·		Star	t Yea			5 YR	Amou	nt		Amo	ount Ur	nit	_	Base	Acres		C	omment _				
16. Plac	e of Use		NE	Ξ1⁄4	NW1/4					SW1/4				SE¼			Total	Owner	Chg ²	? Overlap Files						
MOD DEL ENT I	PUSE	STR		ID		NE ¼	NW 1⁄4	SW ½	SE ¼	NE ¼	NW ¼	SW 1/4	SE ¼	NE ½	NW 1⁄4	SW ½	SE ¼	NE 1⁄4	NW 1⁄4	SW 1/4	SE ¼					
		16 22 7			:	24.6																24.6	7a	N	44,425 & 5	50,403
MOD																										
Base Acr	es: 12	Year: 201	1 N	Minim	um R	leaso	nable	Quant	tity: 1	3.4"																
Commen	ts:															5/9	9/202	22								

KANSAS DEPARTMENT OF AGRICULTURE Division of Water Resources

<u>MEMORANDUM</u>

TO: Files DATE: December 9, 2021

FROM: Jessica Engelbrecht **RE:** Application, File No. 50,403

Water Right File Nos 44,424 & 44,425

USD 309 Nickerson South Hutchinson has filed the referenced application to Appropriate Water for Beneficial Use as well as applications to Change the Place of Use for Water Appropriation File Nos. 44,424 & 44,425. The goal is to create a complete overlap in place of use among all files: File Nos. 44,424; 44,425; and 50403. All three files are a battery of two wells and overlap each other in Points of Diversion. The Points of Diversion are located in Section 16, Township 22 South, Range 7 West, in Reno County, Kansas. The Points of Diversion are in the Arkansas River Basin.

The current Place of Use for Appropriation File Nos. 44,424 and 44,425 is 12 acres in the Northeast Quarter of Section 16, Township 22 South, Range 2 West. File No. 44,424 has an authorized quantity of 13.38 acre-feet at a rate of 150 gallons per minute. File No. 44,425 has an authorized quantity of 13.86 acre-feet at a rate of 150 gallons per minute. Application File No. 50,403 is requesting 33 acrefeet at a rate of 200 gallons per minute. The proposed Place of Use will consist of 24.6 acres in Section 16, Township 22 South, Range 7 West, Reno County, Kansas. An overall limitation will be put into place on File No. 50,403, limiting the rate to 200 gallons per minute when combined with File Nos. 44,424 and 44,425. Each Change Application has been properly notarized and signed by Doctor Jeanne Stroh, representative for Nickerson USD 309.

Three domestic wells were identified within ½ mile of the three referenced file numbers. Nearby letters, referencing New Application, File No. 50,403 and two Change Applications, were mailed on July 21, 2020, by Doug Schemm, former Environmental Scientist from the Topeka Field Office. A public notice was printed in the local paper for three consecutive weeks with the first publication being publish on August 20, 2020 and the last on September 3, 2020. No responses of any kind were received.

New Application File No. 50,403 and Change in Place of Use Applications File Nos. 44,424 and 44,425 lay within the boundaries of Groundwater Management District 2 (GMD2). A copy of Application File No. 50,403 and copies of Change in Place of Use Applications 44,424 and 44,425 were sent to Tim Boese, manager at GMD 2, on September 16, 2020 for review and recommendation by Doug Schemm, former Environmental Scientist from the Topeka Field Office.

A recommendation for denial was received on May 28, 2021 for Application File No. 50,403. Tim Boese cited in the recommendation letter the following reasons for denial; Application File No. 50403 does not comply with K.A.R. 5-22-1(n) Battery of Wells definition, K.A.R.5-22-2(b) Well Spacing, and K.A.R. 5-22-14(a)(1) Maximum Reasonable Quantity for Beneficial Use.

The applicant appealed the GMD 2 recommendation for denial in a letter received by the GMD on June 25, 2021. The applicant was able to supply justification for waivers. The wells are 663 ft apart which does not comply with the "battery of wells" definition 5-22-1(n). However, GMD 2 granted an exemption to the senior files on June 13, 2001. The proposed Point of Diversion does not meet spacing to several wells. The domestic wells appear to be used for lawn irrigation and are not used for typical household use and drinking water. Furthermore, a public notice was published in the local paper and no comments 5/9/2022or concerns were received from domestic well owners. The applicant was able to obtain signed spacing consent forms from nearby Water Rights.

Approval of the application would exceed the Maximum Reasonable Quantity when in combination with Water Appropriation Files 44,424 and 44,425. Water Right Nos. 44,424 and 44,425 and Application for Appropriation File No. 50,403 have a combined quantity of 60.24 acre-feet on 24.6 acres which equals 2.45 acre-feet per acre, exceeding the Maximum Reasonable Quantity. The application is for irrigation of turf grass which GMD 2 has granted exceptions for when previously reviewing similar applications.

In a letter dated September 2, 2021, GMD 2 recommended approval of Application File No. 50,403 with exceptions for K.A.R. 5-22-1(n), K.A.R.5-22-2(b) and K.A.R. 5-22-14(a)(1). Noted in the information provided by GMD 2, the application meets safe yield, saturated thickness in the area is approximately 50-75 feet and groundwater level in the area has been stable. Waivers for spacing and Maximum Reasonable Quantity will be needed to approve the application. In a letter dated September 2, 2021, GMD 2 recommended approval of Application to Change the Place of Use for File Nos. 44,424 and 44,425.

In an e-mail dated February 24, 2022, Jeff Lanterman, Water Commissioner of the Stafford Field Office, recommended approval of the referenced application. Based on the above discussion, waivers, and approval of the application will not impair senior water rights nor prejudicially or unreasonably affect the public interest, it is recommended that the referenced application be approved.

5/9/2022

Received

Base	Acre Review	File No.	44,424 & 44,425	_16-22S-7W	Co
	Approval Date: Acres Authorized:	12/6/2005 130		Reno	Co.
YEAR	ACRES REPORTED				
2001	11.6				
2002	11.6				
2003	11.6				
2004	11.6				
2005	11.6				
2006	11.6				
2007	11.6				
2008	11.6				
2009	11.6				
2010	11.6				_
2011	12		Base Acres =	= 12	
			Year =	= 2011	
					_
			Reviewer	: JNE	Date: 2/28/2022

Engelbrecht, Jessica [KDA]

From: Lanterman, Jeff [KDA]

Sent: Thursday, February 24, 2022 10:29 AM

To: Engelbrecht, Jessica [KDA]

Subject: RE: Change Apps 44424 & 44425 & New App 50403

Follow Up Flag: Follow up Flag Status: Flagged

Jessica I recommend approval of this package of applications with the appropriate waivers on 50403

From: Engelbrecht, Jessica [KDA] < Jessica. Engelbrecht@ks.gov>

Sent: Wednesday, February 23, 2022 2:51 PM **To:** Lanterman, Jeff [KDA] <Jeff.Lanterman@ks.gov>

Subject: FW: Change Apps 44424 & 44425 & New App 50403

Importance: High

From: Engelbrecht, Jessica [KDA]

Sent: Tuesday, February 8, 2022 9:11 AM

To: Lanterman, Jeff [KDA] <

Subject: FW: Change Apps 44424 & 44425 & New App 50403

Importance: High

Apparently I lost track of this one.

From: Engelbrecht, Jessica [KDA]

Sent: Monday, December 13, 2021 10:14 AM

To: Lanterman, Jeff [KDA] <
Subject: Change Apps 44424 & 44425 & New App 50403

Jeff –

Attached are the documents for change Apps 44424 & 44425 as well as New App 50403.

Nickerson schools applied for additional quantity of 33 AF from a battery of two wells, and also applied to change the place of use on the two senior files to create a place of use overlap.

50403 will have a limited quantity of 200 GPM when combined with 44424 and 44425.

Application File No. 50403 will require waivers.

Jessica Engelbrecht, Environmental Scientist

KDA Division of Water Resources

Stafford Field Office

(620) 234-5311 Office

(620) 234-6900 Fax

Jessica.engelbrecht@ks.gov

www.agriculture.ks.gov

5/9/2022



Topeka Field Office 1131 SW Winding Rd, Suite 400 Topeka, KS 66615

Mike Beam, Secretary

Laura Kelly, Governor

Phone: 785-296-5733

www.agriculture.gov

September 16, 2020

GROUNDWATER MANAGEMENT DISTRICT NO 2 % TIM BOESE 313 SPRUCE ST HALSTEAD KS 67056-1925

Re: Pending Application, File No. 50,403

Dear Mr. Boese:

We are enclosing a copy of the application referred to above which appears to be in proper form. Application, File No. 50,403 is requesting 33 acre-feet of additional groundwater at a diversion rate of 200 gallons per minute from an **existing well battery** currently authorized under File Nos. 44,424 and 44,425.

Notification letters were sent out to nearby well owners on July 31, 2020. A telephone call was received from Bob Mummey who owns the groundwater pit to the south permitted under File No. 47,931. Mr. Mummey was concerned that approval of the application would lower the water level in his groundwater pit. We discussed the seniority of his water right, and that the relatively low pumping rate and quantity of water requested under this pending application, is unlikely to cause drawdown at his pit. No written responses of any kind were received. In addition, the applicant published a Public Notice in "THE STERLING KANSAS BULLETIN" on August 20; August 27; and September 3, 2020. The final day to comment is September 18, 2020. No comments of any kind have been received in response to the public notice. The applicant has provided an Affidavit of Publication from the newspaper's publisher.

We are delaying any further action for a period of <u>30 days</u> 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 (785) 296-3495. If you wish to discuss a specific file, please have the file number ready so that I may help you more efficiently.

Sincerely,

Douglas W. Schemm Environmental Scientist

Douglas W. Schemm

Topeka Field Office

Enclosures 5/9/2022



DIRECTORS:
JOE BERGKAMP
ALAN BURGHART
DALE SCHMIDT
BOB SEILER
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

May 28, 2021

Chief Engineer, Division of Water Resources Attn: Douglas W. Schemm, Topeka Field Office 1131 SW Winding Road, Suite 400 Topeka, KS 66615

Re: Appropriation Application No. 50403 - Nickerson USD 309 - South Hutchinson

Dear Mr. Schemm:

The Equus Beds Groundwater Management District reviewed the referenced application on May 28, 2021, using the District's Revised Management Program (effective May 1, 1995) and Rules and Regulations K.A.R. 5-22-1 through 5-22-17.

The District's review found that the application does not comply with the following:

- 1. "Battery of wells" definition K.A.R. 5-22-1(n), as the individual wells of the proposed well battery are located more than 300 feet from the proposed geographic center of the well battery.
- 2. Well Spacing Regulation K.A.R. 5-22-2(b), as the proposed well battery geographic center is located less than 960 feet to multiple domestic wells; less than 1,620 feet to the groundwater pit authorized by Water Right No. 47931; and possibly less than 1,620 feet to the municipal well authorized by Water Rights No. RN-005, 2764, and 31246.
- 3. Maximum Reasonable Quantity for Beneficial Use Regulation K.A.R. 5-22-14(a)(1), as the proposed water to land ratio exceeds the maximum of 1.4 acre-feet per acre for Reno County.

Additionally, the District's review found that the proposed place of use appears to form a partial place of use overlap with Water Right Nos. 44424 and 44425, and that the proposed well battery geographic center north footage measurement may be in error.

Based upon the review findings, the application is recommended for denial by the Equus Beds Groundwater Management District.

A District decision may be appealed to the District Board of Directors by submitting a written petition to the District office within 30 days from the date of this notification, pursuant to K.A.R. 5-22-12. An appeal petition must state the basis for the appeal and must include information/documentation supporting the appeal.

Please contact the District should you have any questions regarding the review or recommendation.

Sincerely,

EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NO. 2

- Boese

Tim Boese Manager TDB/db

Enclosures

pc:

Nickerson USD 309 – South Hutchinson, Applicant, with copy of K.A.R. 5-22-12 Bob Mummey, Water Right No. 47931 groundwater pit owner Jeff Lanterman, Division of Water Resources - Stafford

Received

= = = = This is a

recommendation by the Equus Beds

Groundwater

Management

District and not a

dismissal of an

application or

water permit.

H:\MSOFFICE\LETTERS\APP\NewApp\Recommendation\Deny\#50403_Nickerson_USD309.docx

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III



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(1)

EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NO. 2 FINAL APPLICATION REVIEW CHECKLIST

1) 2) 3) 4)	Application No. 50403 Applicant: Nickerson USD 309 - South H Proposed maximum quantity: 33 acre-fe Proposed Use: Irrigation		Date filed:	6/23/20 County: 200 GPM	Reno				
5) 6)	P/D location: SE NE NE 16-22S-79 Number and type of points of diversion listed of			North <u>4365 (4356?)</u> 1 battery of 2					
7)	Meter required K.A.R. 5-22-4a or K.A.R. 5-22-	-8?		⊠Yes □No,	Why				
8)	Meets Safe Yield K.A.R. 5-22-7? (a) Total allowable appropriations: (b) Total existing appropriations: (c) Total small user exemptions: (d) Total non-consumptive use: (e) Total consumptive use: (Total existing appropriations) – (Total non-consumptive (f) exempt from regulation? Cite exemption	☐Yes	af/yr af/yr	⊠Yes ∏No	□N/A				
9)	Meets Well Spacing K.A.R. 5-22-2? (a) POD in enhanced well spacing area? (b) Domestic well spacing interval: (c) Non-Domestic well spacing interval:	□Yes <960 ft <1620 ft	⊠No	∐Yes ⊠No	□N/A				
10)	Meets Max Reasonable Quantity K.A.R. 5-22-			□Yes ⊠No	□N/A				
	(a) Irrigation max quantity: application paragraph 3 value (acre-feet) /		e-feet / acre cres = Q						
	 (b) Stockwater max quantity: (c) Industry max quantity: Industry standard: (d) Municipal max quantity: 	GF	PD unit cre	5/9/2022					
	Lesser of either 200 GCD or $1.10 * (X - Y) * 365 d * (z + t)$			Receive	ed				
	X - Average of last three years usage in Gallons Y - water usage for industries that use over 200,0 Z - Projected population in 20 years T - Reasonable projected water use for industries (e) Pond max quantity is	ooo gal/yr (GCD s that use over 2)	Stafford Fie					
	(Net evap + seepage)/12 x pond area + an (f) Groundwater pit max Q: Net evap * pit area/12	y initial fill							
	Reasonable rate for intended use? Depth to water: <u>8.95</u> bls at observation well:	EB266A	<u>A</u>	⊠Yes ⊡No	∐N/A				
14)	13) Date reviewed: <u>May 28, 2021</u> 14) Reviewed by: <u>T. Boese</u> Title: <u>Manager</u> 15) District recommendation: □Approve ☑Deny □Other, see comment								

16) Comments and Calculations:

Review completed for a new application submitted by Nickerson USD 309- South Hutchinson for irrigation in Reno County. Existing Water Right Nos. 44424 & 44425 authorize the same PD and partial PU overlap. No. 44424 authorizes 13.38 AF on 12 acres; No.44425 authorizes 13.86 on 12 acres (may be same 12 acres authorized by 44424?), for a total of 27.24 AF on 12 acres (2.27 AF/A). Nos. 44424 & 44425 were originally approved for a total of 27.24 AF on 19.46 acres (1.4 AF/A). DWR issued certificates for both in 2014, and appeared to allow 2.27 AF/A total if same 12 acres are authorized by both. No. 50403 proposes an additional

33 AF on 24.6 acres (12 acres of which are already apparently authorized by Nos. 44424 & 44425). No change in PU applications filed on Nos. 44424 and 44425.

Proposed geo-center footage measurements may be slightly off. Based on individual well footage measurements, the geo-center should be 4356' N& 511' W.

Item 9: Proposed well battery is within 960 feet of multiple domestic wells. No spacing consent forms received. Spacing consent forms where submitted for Nos. 44424 and 44425 when they were applied for in 2000/2001. Proposed well battery geo-center is also within 1620 feet of non-domestic groundwater pit authorized by No. 47931 (Nickerson USD 309 gave written consent in 2011 for No. 47931 groundwater pit to be located closer than 1320 feet) Proposed geo-center may be within 1620 feet of the municipal well authorized by Nos. RN-005, 2764, 31246 (authorized footage measurements indicate municipal well is located 1653 feet from proposed well battery, but spacing evaluation map indicated municipal well is less than 1,620 feet to proposed well battery.

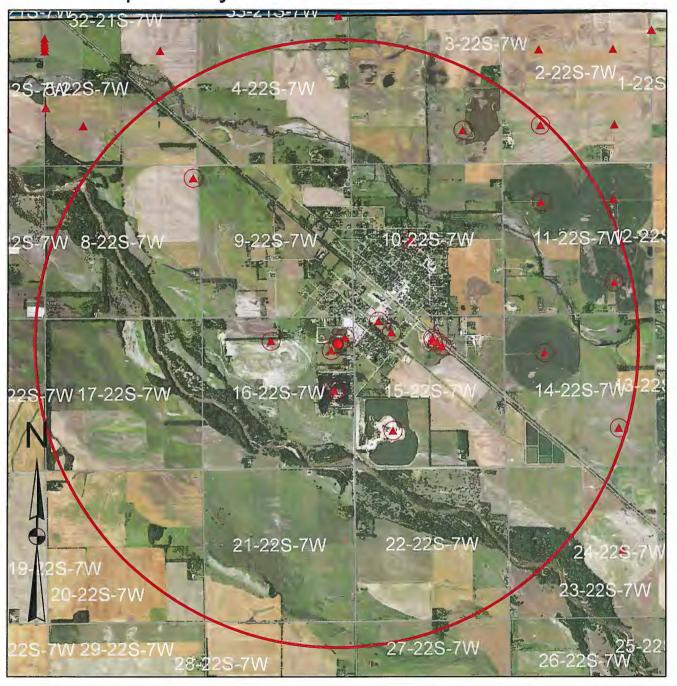
Item 10: Proposed quantity of 33 AF + 27.24 AF authorized by Nos. 44424 & 44425 = 60.24 AF / 24.6 acres = 2.45 AF/A. Proposed water to land ratio may actually be higher if less than 24.6 acres will be irrigated. It appears the proposed PU includes some buildings, sidewalks, track, etc, and also non-athletic fields grass areas that may not be irrigated. If only the 12 acres authorized by Nos. 44424 and 44425 will be irrigated, then the proposed water to land ratio is 60.24 AF / 12 acres = 5.02 AF/A.

Proposed battery of two wells does not comply with well battery definition, as the wells are located more than 300 feet from the geo-center. Based on the individual wells' footage measurements and the corrected geo-center footage measurements (4356' N & 511' W), the wells are each located ~329 feet from the geo-center. Nos. 44424 and 44425 were granted exceptions to the battery of wells definition by GMD2 Board in 2001, subject to any future change in PD applications complying with the battery of wells definition.

Recommend denial, does not comply with Well Spacing Regulation K.A.R. 5-22-2(b), Maximum Use Regulation K.A.R. 5-22-14(a)(2), and "Battery of wells" definition K.A.R. 5-22-1(n)

5/9/2022

Equus Beds Groundwater Management District No. 2 Safe Yield Evaluation #50403 - Nickerson USD 309 SENENE (4356'N & 511'W) 16-22S-07W, Reno County Prepared By: T. Boese Date:5/20/2021





SAFEYIELD EVALUATION - NO. 50403 - NICKERSON USD 309

LOCATION: SENENE (4356'N & 511'W) 16-22S-07W, Reno County

SPECIAL USE AREA: None EVALUATION DATE:- 5/20/2021

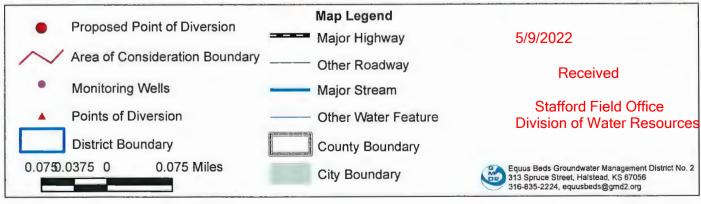
Total Areas: 8,042 acres; Area in 3 inch discharge zone: 0 acres; Area in 6 inch discharge zone: 8,042 acres

FILE_ID	WELL_ID	TOWNSHIP		SECTION	QUALIFIER	USE	AUTHQUANTITY	
A00276400	1257	22\$	07W	15	47283988	MUN	12.43	
A00276400	1256	225	07W	15	50904440	MUN	12.43	
A01332200	1304	22\$	07W	2	13203960	IRR	232.5	
A03047000	1192	225	07W	14	39603960	IRR	195	
A03124600	1324	225	07W	15	51354402	MUN	15.39	
A03124600	1325	225	07W	15	47283988	MUN	15.39	
A03300100	1090	225	07W	10	26243243	MUN	138	
A03685600	1695	225	07W	11	39103960	IRR	141	
A03745700	1843	22\$	07W	8	48450269	IRR	195	
A04134300	2195	225	07W	15	13203960	IND	285	
A04199500	2247	22S	07W	3	11511372	IRR	99	
A04442400	2894	22S	07W	16	43650511	IRR	13.38	
A04442400	2814	22S	07W	16	41340754	IRR	0	
A04442400	2892	225	07W	16	45770267	IRR	0	
A04442500	2893	22S	07W	16	41340754	IRR	0	
A04442500	2895	22S	07W	16	43650511	IRR	13.86	
A04442500	2815	225	07W	16	45770267	IRR	0	
A04477500	2887	22\$	07W	11	10991379	IRR	175	
A04578700	3139	22S	07W	8	48450269	IRR	0	
A04696400	3481	225	07W	15	43702385	IND	50	
A04696400	3482	225	07W	15	45092541	IND	0	
A04696400	3879	225	07W	15	42352215	IND	0	
A04696400	3890	22\$	07W	15	44142532	IND	0	
A04769800	3746	22\$	07W	16	44842845	IRR	127.4	
A04793100	3819	225	07W	16	27320649	REC	45	
A04823600	3994	225	07W	14	13201320	IRR	182	
A05040300P	5277	22\$	07W	16	41340754	IRR	0	
A05040300P	5278	225	07W	16	45770267	IRR	0	
A05040300P	5279	22\$	07W	16	43560511	IRR	33	
VRN000500	1548	22\$	07W	15	50904440	MUN	41.43	
VRN000500	1549	225	07W	15	47504070	MUN	41.43	
Allowable Appr	opriations	4,021.00			ting Appropriat		2,063.64	
Small User Qua	ntity	0			umptive Appro		0	
Remaining SUQ		45		Consumptive Appropriations 2,063			2,063.64	
Note- Values ar	e in acre-feet			Available Appropriations 1,9				

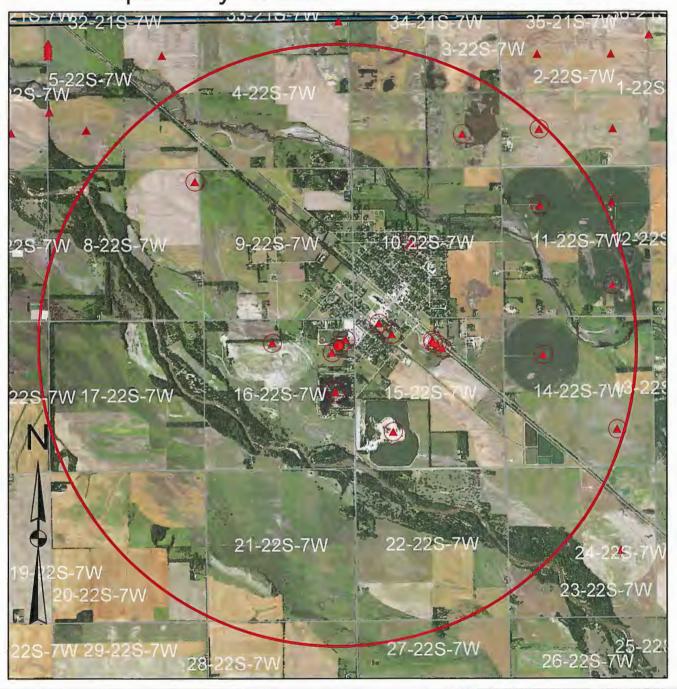
5/9/2022

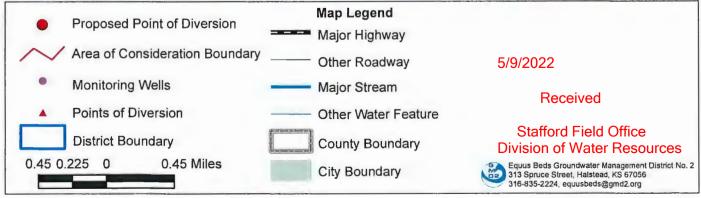
Equus Beds Groundwater Management District No. 2 Spacing Evaluation #50403 - Nickerson USD 309 SENENE (4356'N & 511'W) 16-22S-07W, Reno County Prepared By: T. Boese Date:5/20/2021





Equus Beds Groundwater Management District No. 2 Safe Yield Evaluation #50403 - Nickerson USD 309 SENENE (4365'N & 511'W) 16-22S-07W, Reno County Prepared By: T. Boese Date:5/20/2021





SAFEYIELD EVALUATION - NO. 50403 - NICKERSON USD 309

LOCATION: SENENE (4365'N & 511'W) 16-22S-07W, Reno County

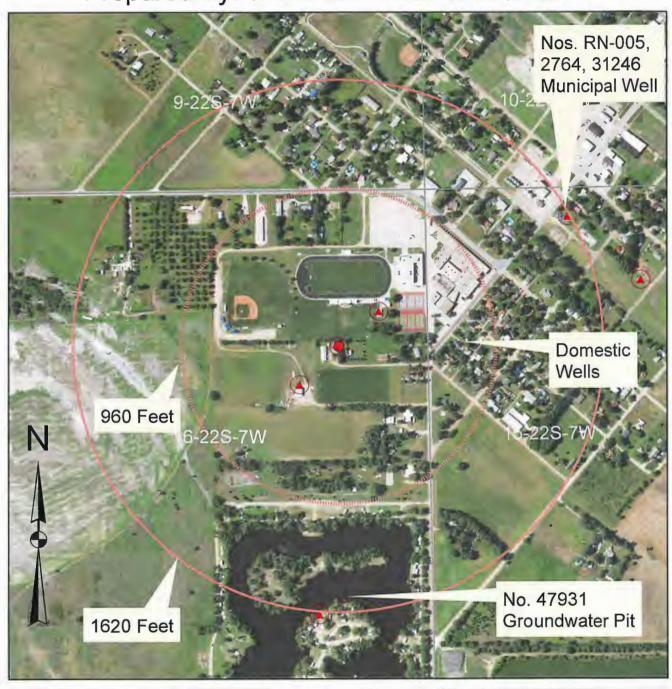
SPECIAL USE AREA: None EVALUATION DATE:- 5/20/2021

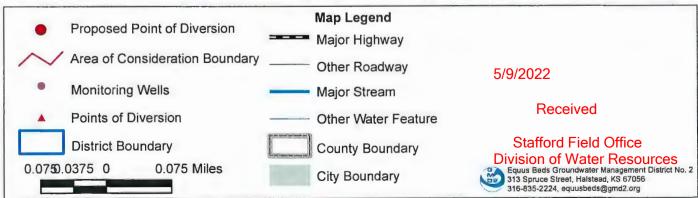
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A00276400	1256	225	07W	15	50904440	MUN	12.43
A01332200	1304	225	07W	2	13203960	IRR	232.5
A03047000	1192	22S	07W	14	39603960	IRR	195
A03124600	1324	22S	07W	15	51354402	MUN	15.39
A03124600	1325	22S	07W	15	47283988	MUN	15.39
A03300100	1090	22S	07W	10	26243243	MUN	138
A03685600	1695	22S	07W	11	39103960	IRR	141
A03745700	1843	22S	07W	8	48450269	IRR	195
A04134300	2195	22S	07W	15	13203960	IND	285
A04199500	2247	22S	07W	3	11511372	IRR	99
A04442400	2894	22S	07W	16	43650511	IRR	13.38
A04442400	2814	22S	07W	16	41340754	IRR	0
A04442400	2892	22S	07W	16	45770267	IRR	0
A04442500	2893	22S	07W	16	41340754	IRR	0
A04442500	2895	22\$	07W	16	43650511	IRR	13.86
A04442500	2815	22S	07W	16	45770267	IRR	0
A04477500	2887	22S	07W	11	10991379	IRR	175
A04578700	3139	22S	07W	8	48450269	IRR	0
A04696400	3481	22S	07W	15	43702385	IND	50
A04696400	3482	22 S	07W	15	45092541	IND	0
A04696400	3879	22 S	07W	15	42352215	IND	0
A04696400	3890	22 S	07W	15	44142532	IND	0
A04769800	3746	22S	07W	16	44842845	IRR	127.4
A04793100	3819	225	07W	16	27320649	REC	45
A04823600	3994	225	07W	14	13201320	IRR	182
A05040300P	5277	225	07W	16	41340754	IRR	0
A05040300P	5278	22 S	07W	16	45770267	IRR	0
A05040300P	5279	22S	07W	16	43650511	IRR	33
VRN000500	1548	22S	07W	15	50904440	MUN	41.43
VRN000500	1549	225	07W	15	47504070	MUN	41.43
Allowable Appro		4,021.00		Total Exist	ing Appropriati	on	2,063.64
Small User Quan	tity	0			ımptive Approp		0
Remaining SUQ		45	Consumptive Appropriations 2,06				
Note- Values are	in acre-feet			Available A	1,957.36		

5/9/2022

Equus Beds Groundwater Management District No. 2
Spacing Evaluation #50403 - Nickerson USD 309
SENENE (4365'N & 511'W) 16-22S-07W, Reno County
Prepared By: T. Boese Date:5/20/2021





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



DIRECTORS:
JOE BERGKAMP
ALAN BURGHART
DALE SCHMIDT
BOB SEILER
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

September 2, 2021

Chief Engineer, Division of Water Resources Attn: Jessica Engelbrecht 300 S. Main Street Stafford, KS 67578

Re: Appropriation Application No. 50403 - Nickerson - South Hutchinson USD 309

Dear Ms. Engelbrecht:

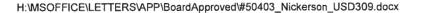
The referenced application was reviewed by the Equus Beds Groundwater Management District No. 2 Board of Directors at the August 18, 2021, meeting. District staff, the applicant, and the applicant's consultant presented information regarding the application. Upon review of information presented and discussed at the meeting, and based on findings that:

- 1. Application No. 50403 proposes 33.00 AF at 200 GPM for irrigation of 24.60 acres from an existing battery of two wells with a geographic center located in the Southeast quarter of the Northeast quarter of the Northeast quarter (4356'N & 511'W), Section 16, Township 22 South, Range 7 West, Reno County.
- 2. Application No. 50403 proposed point of diversion forms an identical overlap with Water Rights Nos. 44424 and 44425 authorized point of diversion.
- 3. Application No. 50403 proposed place of use partially overlaps the place of use authorized by Water Right Nos. 44424 and 44425. Change in place of use applications have been field on Nos. 44424 and 44425 to create an identical place of use overlap with No. 50403.
- 4. The application does not comply with the "battery of wells" definition K.A.R. 5-22-1(n)(2)(B), as the individual wells are each located approximately 329 feet from the well battery geographic center, which exceeds the maximum allowable distance of 300 feet by 29 feet (9.7%).
- 5. Exceptions to the well battery definition were recommended by the District Board of Directors in 2001 for Nos. 44424 and 44425 and the applications were approved, subject to any change in point of diversion application(s) filed on Nos. 44424 and 44425 would comply with the battery of wells definition.
- 6. The application does not comply with the Well Spacing Rule and Regulation K.A.R. 5-22-2(b), as the proposed point of diversion (battery of two wells) does not meet the minimum spacing requirements of 960 feet to several domestic wells and 1,620 feet to the groundwater pit authorized by Water Right No. 47931, and possibly to the municipal well authorized by Nos. RN-005, 2764, & 31246.
- 7. There are multiple possible domestic wells located within 960 feet of the proposed well battery geographic center. The applicant advised that USD 309 staff went door-to-door to try to obtain signed spacing consent forms from owners that did have a domestic well. The applicant advised that some did not have a domestic well and the applicant provided four signed consent forms from those they were able to talk to that had a domestic well.
- 8. A review of Nos. 44424 and 44425 found that it appears that 12 signed spacing consent forms were submitted from domestic wells owners with domestic wells within 660 feet of the individual wells proposed by Nos. 44424 and 44425. Therefore, it does not appear that all of the domestic wells owners within 960 feet of No. 50403 submitted spacing consent forms.
- 9. The domestic wells appear to be used for lawn irrigation and are not used for typical household use and drinking water.
- 10. A public notice was published in the local newspaper (Sterling Kansas Bulletin) and no comments from domestic well owners were received by DWR.

Received

5/9/2022

11. The proposed well battery geo-graphic center is located closer than 1,620 feet to the edge of the groundwater pit authorized by Water Right No. 47931. The proposed well battery geographic center is located approximately 1,050 feet from the nearest edge of the groundwater pit.





Jessica Engelbrecht, Division of Water Resources Appropriation Application No. 50403 Page 2

- 12. No. 47931 was an existing unpermitted groundwater pit that was approved in 2014. No. 47931 did not meet the minimum 1,320 feet spacing requirement to the USD 309 wells authorized by Nos. 44424 and 44425 and USD 309 signed a spacing consent form in 2011 to allow the pit to be located closer than 1,320 feet to the wells authorized by Nos. 44424 and 44425.
- 13. Although the groundwater pit owner cannot simply grant consent to allow No. 50403 to be located less than 1,620 feet to the groundwater pit by signing a spacing consent form, Lakeside Recreation LLC, the owner of No. 47931, did sign a spacing consent form thereby indicating that they have no objection to the proposed well battery being located less than 1.620 feet to the groundwater pit.
- 14. The proposed well battery may be located closer than 1,620 feet to the City of Nickerson municipal well authorized by Water Right Nos. RN-005, 2764, and 31246. Based on the authorized footage measurements, the municipal well is located 1,652 feet from the No. 50403 proposed well battery geocenter. However, the spacing evaluation map indicates the municipal well appears to be located less than 1.620 feet away. The City of Nickerson submitted a letter dated June 21, 2021, indicating the City had no objection to No. 50403.
- 15. The application does not comply with the District's Maximum Reasonable Quantity for Beneficial Use Regulation K.A.R. 5-22-14(a)(1). Water Right Nos. 44424 and 44425 authorize a total of 27.24 AF on 12 acres, which is proposed to be changed to 24.6 acres. No. 50403 requests an additional 33 AF on 24.60 acres, resulting in a total of 60.24 AF on 24.6 acres. This equals a water to land ratio of 2.45 acre-feet per acre, which exceeds the maximum allowable for Reno County of 1.4 acre-feet per acre.
- 16. The applicant's turf grass consultant provided information (Exhibit B) showing the difference in irrigation needs between corn and turf grass using 2012 and the Sterling weather station as an example. The information showed corn required 14.77 inches (1.23 feet) of irrigation from June 1, 2012 through August 31, 2012, while turf grass required 34.17 inches (2.85 feet) from March 15, 2012 to November 30, 2012. The information also advised that sports turf grass requires more water and irrigation than home lawns and needs irrigation starting in March for seed establishment for repairs and continues until October or November for athlete safety.
- 17. The application complies with the Safe Yield Rule and Regulation K.A.R. 5-22-7(a).
- 18. Hydrologic data indicates that saturated thickness in the application area is approximately 50-75 feet and that the groundwater level in the area has been stable and has not shown a declining trend.
- 19. Drawdown caused by the pumping of the well battery's proposed and existing authorized total quantity would be minimal and impairment of nearby points of diversion is not anticipated.
- 20. The Board of Directors has previously reviewed similar applications that did not meet either the "Battery of wells" definition K.A.R. definition K.A.R. 5-22-1(n); the Well Spacing Regulation K.A.R. 5-22-2(b); and/or the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), and recommended exception(s) and the application(s) for approval.

It was the decision of the Board of Directors to recommend that the application be granted exceptions to the "Battery of wells" definition K.A.R. 5-22-1(n); the Well Spacing Regulation K.A.R. 5-22-2(b); and the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), subject to any application to change the point of diversion authorized by No. 50403 shall comply with the definition of a battery of wells as set forth in K.A.R. 5-22-1, and the maximum rate of diversion is further limited to 200 GPM when combined with Nos. 44424 and 44425.

A District Board of Director's decision may be requested for reconsideration by the Board by submitting a written request to the District office within 15 days from the date of this notification, pursuant to K.A.R. 5-22-12.

Please contact the District if you have any questions regarding the District's findings or recommendation.

Sincerely.

EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NO. 2

Tim Boese Manager TDB/db

pc:

Enclosure

Brett Wiens, Turf Solutions, Inc.

Nickerson - South Hutchinson USD 309, Applicant Kristen Baum, Division of Water Resources, Manhattan 5/9/2022

Received

APPLICATION REVIEW INFORMATION

NAME Nickerson - S. Hutch USD 309 APPLICATION NO. 50403 ADDRESS 4501 W. 4th Ave. NEW APPL. X Hutchinson, Kansas 67501-9131 COUNTY Reno TRACT SE-NE-NE WELL LOCATION S 16 T 22S R 7W CHG. P/U CHG. P/D CHG. USE QUANT 33.00 AF/Y RATE 200 GPM WELL SPACING D<960', ND<1620' T18S T18S PAWNEE RD T19S 195024 T20S 20S 2W COMMANCHE RD CHEROKEE RD T21S T21S 7 Miles 3.5 ARROWHEAD RD NW DUTCH AVE T22S T22S 225 tansas Res 2348 NW 36TH NW 12TH T23S 235 8 Burton [50]· SW 36TH Abbyville 248 8W Partridge T24S 24S 6W RON NIC Bentl T25S Mount Hope PARALLEL RD SILVER LAKE RD T26S 275 Received R6W R5W R4W R₁W R8W R7W R3W

Figure 1. General location of application within the District indicated by the star.

5/9/2022

ISSUE:

The new application does not comply with: The "Battery of wells" definition K.A.R. 5-22-1(n); the Well Spacing Regulation K.A.R. 5-22-2(b); and the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1). Additionally, there is partial place of use overlap with two existing water rights owned by the applicant.

BACKGROUND INFORMATION:

<u>JUN 23, 2020</u> – The applicant filed a new permit application for 33.00 AF at 200 GPM for irrigation of 24.60 acres from an existing battery of two wells with a geographic center located in the Southeast quarter of the Northeast quarter (4356'N & 511'W), Section 16, Township 22 South, Range 7 West, Reno County (Figures 1-3).

MAY 28, 2021 – In response to a request from the Division of Water Resources (DWR), District Staff reviewed the application using the adopted management program, and rules and regulations. The review found that the application did not comply with the "Battery of wells" definition K.A.R. 5-22-1(n); the Well Spacing Regulation K.A.R. 5-22-2(b); the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1); and appears to have a partial place of use overlap with two existing rights. Based on the District's review, the application was recommended for denial.

<u>JUN 25, 2021</u> – The applicant filed an appeal petition dated January 22 2021, with the District, pursuant to K.A.R. 5-22-12 (Exhibit A). The appeal petition advised that additional information would be submitted to support the appeal.

JUL 30, 2021 – The applicant submitted additional information (Exhibit B) to the District.

<u>AUG 11, 2021</u> – The applicant and the applicant's turf grass consultant were notified by letter that the appeal was scheduled for hearing by the Board of Directors at the August 18, 2021, meeting.

FINDINGS:

The application was reviewed using the District's Aquifer Management Program and Rules and Regulations, K.A.R. 5-22-1 through K.A.R. 5-22-17.

Application No. 50403 proposes 33.00 AF at 200 GPM for irrigation of 24.60 acres from an existing battery of two wells with a geographic center located in the Southeast quarter of the Northeast quarter (4356'N & 511'W), Section 16, Township 22 South, Range 7 West, Reno County (Figures 1-3).

The proposed point of diversion is the existing battery of two wells authorized by Water Right No. 44424 and 44425. Water Right No. 44424 authorizes 13.38 AF at 150 GPM for irrigation of 12 acres. Water Right No. 44425 authorizes 13.86 AF at 150 GPM (limited to 150 GPM with No. 44424) for irrigation of the same 12 acres. No. 50403 proposed place of use of 24.6 acres appears to overlap the 12 acres authorized by No. 44424 and 44425, creating a partial place of us overlap. DWR advised on August 13, 2021, that Change in Place of Use applications were filed on Nos. 44424 and 44425 to create an identical place of use overlap with No. 50403.

5/9/2022



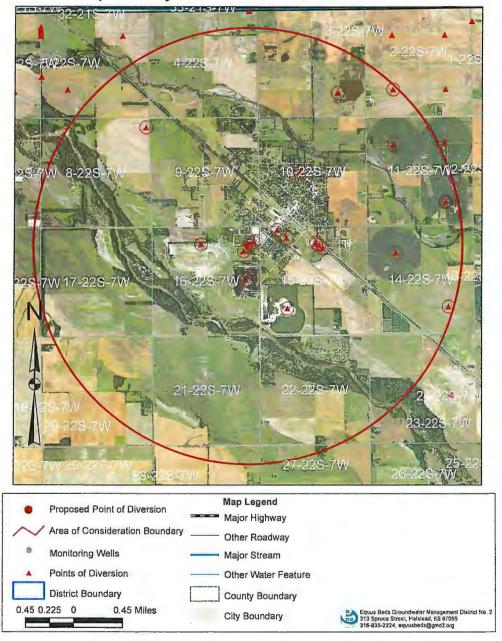
Figure 2. No. 50403 Application map

5/9/2022

Received

The application complies with Safe-Yield Rule and Regulation K.A.R. 5-22-7. Total consumptive appropriations including the proposed application totaled 2,063.64 acre-feet, which is 1,957.36 acre-feet below the maximum allowable quantity of 4,021 acre-feet for the area of consideration (2 mile circle) (Figure 3 & 4).

Equus Beds G. Jundwater Manageme it District No. 2 Safe Yield Evaluation #50403 - Nickerson USD 309 SENENE (4356'N & 511'W) 16-22S-07W, Reno County Prepared By: T. Boese Date:5/20/2021



5/9/2022

Figure 3. Safe yield evaluation map.

r	SAF	EYIELD EVALU	ATION - N	IO. 50403 -	NICKERSON US	D 309	
					-225-07W, Ren		
]			A STATE OF THE PARTY OF THE PAR	SE AREA: N			
		EVA	LUATION	DATE:- 5/2	0/2021		
Tota	al Areas: 8,042 a	cres; Area in 3 incl	h discharge :	zone: 0 acres;	Area in 6 inch discl	harge zone: 8,	042 acres
FILE_ID	WELL_ID	TOWNSHIP	RANGE	SECTION	QUALIFIER	USE	AUTHQUANTITY
A00276400	1257	225	07W	15	47283988	MUN	12.43
A00276400	1256	22\$	07W	15	50904440	MUN	12.43
A01332200	1304	225	07W	2	13203960	IRR	232.5
A03047000	1192	22S	07W	14	39603960	IRR	195
A03124600	1324	225	07W	15	51354402	MUN	15.39
A03124600	1325	225	07W	15	47283988	MUN	15.39
A03300100	1090	225	07W	10	26243243	MUN	138
A03685600	1695	225	07W	11	39103960	IRR	141
A03745700	1843	225	07W	8	48450269	IRR	195
A04134300	2195	225	07W	15	13203960	IND	285
A04199500	2247	225	07W	3	11511372	IRR	99
A04442400	2894	225	07W	16	43650511	IRR	13.38
A04442400	2814	225	07W	16	41340754	IRR	0
A04442400	2892	22S	07W	16	45770267	IRR	0
A04442500	2893	225	07W	16	41340754	IRR	0
A04442500	2895	225	07W	16	43650511	IRR	13.86
A04442500	2815	225	07W	16	45770267	IRR	0
A04477500	2887	225	07W	11	10991379	IRR	175
A04578700	3139	225	07W	8	48450269	IRR	0
A04696400	3481	225	07W	15	43702385	IND	50
A04696400	3482	225	07W	15	45092541	IND	0
A04696400	3879	225	07W	15	42352215	IND	0
A04696400	3890	225	07W	15	44142532	IND	0
A04769800	3746	225	07W	16	44842845	IRR	127.4
A04793100	3819	225	07W	16	27320649	REC	45
A04823600	3994	225	07W	14	13201320	IRR	182
A05040300P	5277	225	07W	16	41340754	IRR	0
A05040300P	5278	225	07W	16	45770267	IRR	0
A05040300P	5279	225	07W	16	43560511	IRR	33
VRN000500	1548	225	07W	15	50904440	MUN	41.43
VRN000500	1549	225	07W	15	47504070	MUN	41.43
Allowable Appro	priations	4,021.00		Total Exist	ing Appropriati	ion	2,063.64
Small User Quar	ntity	0		Non Consu	ımptive Approp	oriations	0
Remaining SUQ		45		Consumpt	ive Appropriati	ons	2,063.64
Note- Values are	in acre-feet			Available A	Appropriations		1,957.36

Figure 4. Safe yield evaluation spreadsheet.

5/9/2022

Received

The application does not comply with the "battery of wells" definition K.A.R. 5-22-1(n)(2)(B), which requires the individual wells of the battery to be located within 300 feet of the well battery geographic center. Based on the footage measurements as determined by DWR for Water Right Nos. 44424 and 44425, the individual wells are each located approximately 329 feet from the well battery geographic center, which exceeds the maximum allowable distance of 300 feet by 29 feet (9.7%). Exceptions to the well battery definition were recommended by the District Board of Directors in 2001 for Nos. 44424 and 44425 and the applications were approved, subject to any change in point of diversion application(s) filed on Nos. 44424 and 44425 would comply with the battery of wells definition. The Board's recommendation of exceptions to the well battery definition were based upon the facts that the proposed point of diversion consisted of existing wells, the 300 foot requirement was exceeded by only about 10%, and the Board's previous exception recommendation on a similar application.

The application does not comply with the Well Spacing Rule and Regulation K.A.R. 5-22-2(b), as the proposed point of diversion (battery of two wells) does not meet the minimum spacing requirements of 960 feet to several domestic wells and 1,620 feet to the groundwater pit authorized by Water Right No. 47931, and possibly to the municipal well authorized by Nos. RN-005, 2764, and 31246 (Figure 5).

There are multiple possible domestic wells located within 960 feet of the proposed well battery geographic center. No spacing consent forms were submitted with the original application. At the request of the applicant's turf grass consultant, the District compiled and provided the consultant on June 25, 2021 with a map and list of the 25 potential domestic wells owners within 960 feet. The applicant advised that USD 309 staff went door-to-door to try to obtain signed spacing consent forms from owners that did have a domestic well. The applicant advised that some did not have a domestic well and the applicant provided four signed consent forms from those they were able to talk to that had a domestic well. A review of Nos. 44424 and 44425 found that it appears that 12 signed spacing consent forms were submitted from domestic wells owners with domestic wells within 660 feet of the individual wells proposed by Nos. 44424 and 44425. Therefore, it does not appear that all of the domestic wells owners within 960 feet of No. 50403 submitted spacing consent forms. The domestic wells appear to be used for lawn irrigation and are not used for typical household use and drinking water. Additionally, a public notice was published in the local newspaper (Sterling Kansas Bulletin) and no comments from domestic well owners were received by DWR.

The proposed well battery geo-graphic center is located closer than 1,620 feet to the edge of the groundwater pit authorized by Water Right No. 47931. The proposed well battery geographic center is located approximately 1,050 feet from the nearest edge of the groundwater pit (Figure 5). No. 47931 was an existing unpermitted groundwater pit that was approved in 2014. No. 47931 did not meet the minimum 1,320 feet spacing requirement to the USD 309 wells authorized by Nos. 44424 and 44425. However, USD 309 signed a spacing consent form in 2011 to allow the pit to be located closer than 1,320 feet to the wells authorized by Nos. 44424 and 44425. Although the owner cannot reciprocate and simply grant consent to allow No. 50403 to be located less than 1,620 feet to the groundwater pit, Lakeside Recreation LLC, the owner of No. 47931, did sign a spacing consent form thereby indicating that they have no objection to the proposed well battery being located less than 1,620 feet to the groundwater pit.

The proposed well battery may be located closer than 1,620 feet to the City of Nickerson municipal well authorized by Water Right Nos. RN-005, 2764, and 31246. Based on the authorized footage measurements, the municipal well is located 1,652 feet from the No. 50403 proposed well battery geo-center. However, the spacing evaluation map indicates the municipal well appears to be located less than 1,620 feet away (Figure 5). The City of Nickerson Received submitted a letter dated June 21, 2021, indicating the City had no objection to No. 50403.

5/9/2022

Equus Beds G. Jundwater Manageme. It District No. 2 Spacing Evaluation #50403 - Nickerson USD 309 SENENE (4356'N & 511'W) 16-22S-07W, Reno County Prepared By: T. Boese Date:5/20/2021



Figure 5. Spacing evaluation map.

Received

The application does not comply with the District's Maximum Reasonable Quantity for Beneficial Use Regulation K.A.R. 5-22-14(a)(1). Water Right Nos. 44424 and 44425 authorize a total of 27.24 AF on 12 acres, which is proposed to be changed to 24.6 acres. No. 50403 requests an additional 33 AF on 24.60 acres, resulting in a total of 60.24 AF on 24.6 acres. This equals a water to land ratio of 2.45 acre-feet per acre, which exceeds the maximum allowable for Reno County of 1.4 acre-feet per acre.

The applicant' turf grass consultant provided information (Exhibit B) showing the difference in irrigation needs between corn and turf grass using 2012 and the Sterling weather station as an example. The information showed corn required 14.77 inches (1.23 feet) of irrigation from June 1, 2012 through August 31, 2012, while turf grass required 34.17 inches (2.85 feet) from March 15, 2012 to November 30, 2012. The information also advised that sports turf grass requires more water and irrigation than home lawns and needs irrigation starting in March for seed establishment for repairs and irrigation continues until October or November for athlete safety.

A review of the historical water use as reported to DWR for Nos. 44424 and 44425 combined is shown below.

YEAR	REPORTED WATER USE	REPORTED ACRES	WATER TO LAND RATIO
2001	21.891 AF	12	1.82 AF/A
2002	27.723 AF	12	2.31 AF/A
2003	31.649 AF	12	2.64 AF/A
2004	24.647 AF	12	2.05 AF/A
2005	14.388 AF	12	1.20 AF/A
2006	23.370 AF	12	1.95 AF/A
2007	16.566 AF	12	1.38 AF/A
2008	11.143 AF	12	0.93 AF/A
2009	19.331 AF	12	1.61 AF/A
2010	15.862 AF	12	1.32 AF/A
2011	53.752 AF	12	4.48 AF/A
2012	45.432 AF	12	3.79 AF/A
2013	20.684 AF	12	1.72 AF/A
2014	11.070 AF	12	0.92 AF/A
2015	24.677 AF	12	2.06 AF/A
2016	9.486 AF (meter issue?)	12	0.79 AF/A
2017	23.557 AF	12	1.96 AF/A
2018	22.841 AF	12	1.90 AF/A
2019	20.713 AF	12	1.73 AF/A
2020	19.095 AF	14	1.36 AF/A
AVG			1.9 AF/A

The average water use from 2001-2020 was approximately 1.9 AF/A. The Reno County net irrigation requirement for corn in a 50% chance rainfall year is 0.95 feet.

The DWR "Maximum reasonable annual quantity..." Regulation K.A.R. 5-3-20 allows for an exception and higher water to land ratio for specialty crops in K.A.R. 5-3-20(c). The District's Maximum Reasonable Quantity for Beneficial Use Regulation K.A.R. 5-22-14 does not contain an exception for specialty crops.

5/9/2022

The Board has previously reviewed similar applications requesting greater water to land ratio than allowed by K.A.R. 5-22-14. The Board granted exceptions and allowed a greater quantity for lawn/turf grasses, including in 2016 for Application Nos. 49284 and 49285, which were approved for 3.1 acre-feet per acre for turf grass at a housing development in Sedgwick County.

Drawdown calculations using the Theis Equation and pumping the total authorized and proposed quantity of 60.24 AF at 200 GPM continuously for 68 days indicates that drawdown at the nearby domestic and non-domestic points of diversion would be less than 0.30 feet based on continuous pumping until the entire quantity has been pumped, as shown below.

Nearby PD	Distance	Drawdown		
Closest Domestic Well	~500 feet	0.28 feet		
No. 47931 GW Pit	~1,050 feet	0.21 feet		
No. RN-005, 2764, 31246	~1,600 feet	0.16 feet		
Municipal Well				

*Drawdown based on the following parameters:

Q = 200 gpm

S = 0.15

 $T = 60000 \text{ ft}^2/\text{d}$

Time = 68 days

Hydrologic data indicates that depth to bedrock is approximately 60-80 feet bls. Depth to static water level at the site is approximately 5-10 feet below land surface and the saturated thickness was calculated at approximately 50-75 feet.

Water level data from Groundwater Monitoring Site EB 265C, located approximately 1.2 miles north of Application No. 50403, recorded water level changes for the period from January 24, 1997, to July 21, 2021 (figure 6). Water levels typically range from approximately 3 to 7 feet below land surface and the water level has been stable and has not shown a declining trend.

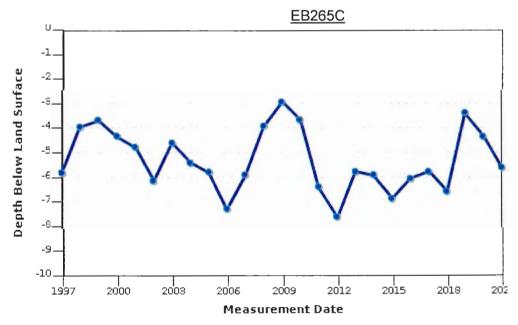


Figure 6 - A hydrograph of the average annual water level measurements taken at EB265C Location: SE-SE-SE - SEC. 4, T22S, R7W, Reno County

Received

5/9/2022

STAFF RECOMMENDATION:

Based on District findings and information provided by the applicant that:

- 1. Application No. 50403 proposes 33.00 AF at 200 GPM for irrigation of 24.60 acres from an existing battery of two wells with a geographic center located in the Southeast quarter of the Northeast quarter of the Northeast quarter (4356'N & 511'W), Section 16, Township 22 South, Range 7 West, Reno County.
- 2. Application No. 50403 proposed point of diversion forms an identical overlap with Water Rights Nos. 44424 and 44425 authorized point of diversion.
- 3. Application No. 50403 proposed place of use partially overlaps the place of use authorized by Water Right Nos. 44424 and 44425. Change in place of use applications have been field on Nos. 44424 and 44425 to create an identical place of use overlap with No. 50403.
- 4. The application does not comply with the "battery of wells" definition K.A.R. 5-22-1(n)(2)(B), as the individual wells are each located approximately 329 feet from the well battery geographic center, which exceeds the maximum allowable distance of 300 feet by 29 feet (9.7%).
- 5. Exceptions to the well battery definition were recommended by the District Board of Directors in 2001 for Nos. 44424 and 44425 and the applications were approved, subject to any change in point of diversion application(s) filed on Nos. 44424 and 44425 would comply with the battery of wells definition.
- 6. The application does not comply with the Well Spacing Rule and Regulation K.A.R. 5-22-2(b), as the proposed point of diversion (battery of two wells) does not meet the minimum spacing requirements of 960 feet to several domestic wells and 1,620 feet to the groundwater pit authorized by Water Right No. 47931, and possibly to the municipal well authorized by Nos. RN-005, 2764, and 31246.
- 7. There are multiple possible domestic wells located within 960 feet of the proposed well battery geographic center. The applicant advised that USD 309 staff went door-to-door to try to obtain signed spacing consent forms from owners that did have a domestic well. The applicant advised that some did not have a domestic well and the applicant provided four signed consent forms from those they were able to talk to that had a domestic well.
- 8. A review of Nos. 44424 and 44425 found that it appears that 12 signed spacing consent forms were submitted from domestic wells owners with domestic wells within 660 feet of the individual wells proposed by Nos. 44424 and 44425. Therefore, it does not appear that all of the domestic wells owners within 960 feet of No. 50403 submitted spacing consent forms.
- 9. The domestic wells appear to be used for lawn irrigation and are not used for typical household use and drinking water.
- 10. A public notice was published in the local newspaper (Sterling Kansas Bulletin) and no comments from domestic well owners were received by DWR.
- 11. The proposed well battery geo-graphic center is located closer than 1,620 feet to the edge of the groundwater pit authorized by Water Right No. 47931. The proposed well battery geographic center is located approximately 1,050 feet from the nearest edge of the groundwater pit.
- 12. No. 47931 was an existing unpermitted groundwater pit that was approved in 2014. No. 47931 did not meet the minimum 1,320 feet spacing requirement to the USD 309

5/9/2022

- wells authorized by Nos. 44424 and 44425 and USD 309 signed a spacing consent form in 2011 to allow the pit to be located closer than 1,320 feet to the wells authorized by Nos. 44424 and 44425.
- 13. Although the groundwater pit owner cannot simply grant consent to allow No. 50403 to be located less than 1,620 feet to the groundwater pit by signing a spacing consent form, Lakeside Recreation LLC, the owner of No. 47931, did sign a spacing consent form thereby indicating that they have no objection to the proposed well battery being located less than 1,620 feet to the groundwater pit.
- 14. The proposed well battery may be located closer than 1,620 feet to the City of Nickerson municipal well authorized by Water Right Nos. RN-005, 2764, and 31246. Based on the authorized footage measurements, the municipal well is located 1,652 feet from the No. 50403 proposed well battery geo-center. However, the spacing evaluation map indicates the municipal well appears to be located less than 1,620 feet away. The City of Nickerson submitted a letter dated June 21, 2021, indicating the City had no objection to No. 50403.
- 15. The application does not comply with the District's Maximum Reasonable Quantity for Beneficial Use Regulation K.A.R. 5-22-14(a)(1). Water Right Nos. 44424 and 44425 authorize a total of 27.24 AF on 12 acres, which is proposed to be changed to 24.6 acres. No. 50403 requests an additional 33 AF on 24.60 acres, resulting in a total of 60.24 AF on 24.6 acres. This equals a water to land ratio of 2.45 acre-feet per acre, which exceeds the maximum allowable for Reno County of 1.4 acre-feet per acre.
- 16. The applicant' turf grass consultant provided information (Exhibit B) showing the difference in irrigation needs between corn and turf grass using 2012 and the Sterling weather station as an example. The information showed corn required 14.77 inches (1.23 feet) of irrigation from June 1, 2012 through August 31, 2012, while turf grass required 34.17 inches (2.85 feet) from March 15, 2012 to November 30, 2012. The information also advised that sports turf grass requires more water and irrigation than home lawns and needs irrigation starting in March for seed establishment for repairs and continues until October or November for athlete safety.
- 17. The application complies with the Safe Yield Rule and Regulation K.A.R. 5-22-7(a).
- 18. Hydrologic data indicates that saturated thickness in the application area is approximately 50-75 feet and that the groundwater level in the area has been stable and has not shown a declining trend.
- 19. Drawdown caused by the pumping of the well battery's proposed and existing authorized total quantity would be minimal and impairment of nearby points of diversion is not anticipated.
- 20. The Board of Directors has previously reviewed similar applications that did not meet either the "Battery of wells" definition K.A.R. definition K.A.R. 5-22-1(n); the Well Spacing Regulation K.A.R. 5-22-2(b); and/or the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), and recommended exception(s) and the application(s) for approval.

Staff Recommends:

The application be granted exceptions to the "Battery of wells" definition K.A.R. 5-22-1(n); the Well Spacing Regulation K.A.R. 5-22-2(b); and the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), subject to any application to change the point of diversion authorized by No. 50403 shall comply with the definition of a battery of wells as set forth in K.A.R. 5-22-1, and the maximum rate of diversion is further limited to 200 Received.

5/9/2022

4501 W 4th Ave Hutchinson KS 67501

June 22, 2021

Mr. Tim Boese, Manager GMD2:

Please consider this letter an official request by USD 309 for an appeal hearing regarding the recommendation of denial for Appropriation Application No. 50403.

This appeal is based upon documentation the school district has gathered or is in the process of gathering, and will be presented to Groundwater Management District 2 as soon as it has been compiled. Some of the items that will be included are as follows:

- A request for a waiver to the definition of "Battery of Wells". The wells have been in existence for quite some time, are only approximately 30' past the 300' definition and within the margin of error for well placement. Additionally, File No. 44424 and 44425 were permitted under a waiver of the battery of well rules.
- A request for a exemption to the spacing requirement to the groundwater pit south of the battery of wells (Water Right 47931) and letter of support from the owner of the groundwater pit for the application stating that they see no impairment issues to their water right. In fact, USD 309 signed a letter of consent when Water Right 47931 was applied for.
- Multiple letters of consent from owners of domestic wells within 960' from the geographic center of USD 309's battery of wells.
- The Maximum Reasonable Quantity for Beneficial Use used within GMD2 was based upon agricultural operations that have a much smaller window of time annually for which irrigation is required and are a much lower value crop on a per acre basis. Outside of the District, K.A.R. 5-3-20(C) could be applied, which would allow for higher quantity of water per acre, as turfgrass is considered a "specialty crop". Documentation from Kansas State University will be included showing the dramatic difference in quantity needed to adequately irrigate turfgrass when compared to corn or soybeans.
- Included with this request is a letter of support for the application from the City of Nickerson. The denial letter states the City's well (Water Rights RN-005, 2764, and 31246) is "possibly", according to the denial letter, less than 1,620' from the geographic center of USD 309 battery of wells.

Thank you for being willing to consider this additional information at your next board meeting.

Sincerely

Mike Howell
Director of Facilities, USD 309

5/9/2022

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JUN 25 2021

Stafford Field Office
Division of Water Resources

Received

EQUUS BEDS GMD #2



City of Nickerson

P.O. Box 52, Nickerson, KS 67561

June 21, 2021

USD 309 Nickerson/South Hutchinson,

The Nickerson City Council under the advisement of our Kansas Rural Water Association Technical Assistant, Jon Steele, and our Certified Water Operator, Casey Hartman, finds no objections to the USD 309 School District's request of additional water rights at the High School campus located at 305 South Nickerson Street, Nickerson, KS.

A copy of the meeting minutes has been provided for your records.

Sincerely,

Peggy/Rugbke, Mayor

April-Beshears, City Clerk

5/9/2022

Received

Stafford Field Office Division of Water Resources RECEIVED

JUN 2 5 2021

4501 W 4th Ave Hutchinson KS 67501

July 29, 2021

Mr. Tim Boese, Manager GMD2:

This letter accompanies documentation in support of the appeal filed by USD 309 of the recommendation of denial for Appropriation Application No. 50403.

- USD 309 requests for a waiver to the definition of "Battery of Wells". The wells have been in existence for quite some time, are only approximately 30' past the 300' definition and well within the margin of error for well placement. Additionally, File No. 44424 and 44425 were permitted under a waiver of the battery of well rules.
- USD 309 requests an exemption to the spacing requirement to the groundwater pit south of the battery of wells (Water Right 47931). A letter of support from the owner of the groundwater pit for the application is included. Ironically, USD 309 signed a letter of consent when Water Right 47931 was applied for, but now that water right is a barrier to the school's request for water.
- USD 309 staff has gone door-to-door, talking with potential owners of domestic wells within 960' of the geographic center of its own battery of wells. Multiple letters of consent are included from owners who were available to speak and also own a well. Most property owners did not own a well. Additionally, as required by the Kansas Dept of Agriculture in lieu of going door-to-door, a public notice has been run in the local newspaper, and the Affidavit of Publication is included.
- The Maximum Reasonable Quantity for Beneficial Use used within GMD2 was based upon agricultural operations that have a much smaller window of time annually for which irrigation is required and are a much lower value crop on a per acre basis. Outside of the District, K.A.R. 5-3-20(C) could be applied, which would allow for higher quantity of water per acre, as turfgrass is considered a "specialty crop". Documentation from Kansas State University is included showing the dramatic difference in quantity needed to adequately irrigate turfgrass when compared to corn or soybeans.
- A letter of support for the application from the City of Nickerson is included. The denial letter states the City's well (Water Rights RN-005, 2764, and 31246) is "possibly", according to the denial letter, less than 1,620' from the geographic center of USD 309 battery of wells.

Thank you for being willing to consider this additional information.

Sincerely,

Mike Howell

Director of Facilities, USD 309

5/9/2022

RECEIVED

Received

JUL 30 2021

AFFIDAVIT OF PUBLICATION

STATE OF KANSAS, RICE COUNTY, ss:

Frank W. Mercer being first duly sworn, deposes and says: That he is publisher of

THE STERLING KANSAS BULLETIN

A weekly newspaper printed in the State of Kansas, and published in and of general circulation in Rice County, Kansas, with a general paid circulation on a weekly basis in Rice County, Kansas, and that said newspaper is not a trade, religious or fraternal publication.

Said newspaper is a weekly, published at least weekly 50 times a year; has been so published continuously and uninterruptedly in said county and state for a period of more than five years prior to the first publication of said notice; and has been admitted at the post office of Sterling, Kansas, in said County as second class matter.

That the attached notice is a true copy thereof and was published in the regular and entire issue of said newspaper for three consecutive weeks, the first being made as aforesaid on the

September

Publisher

Subscribed and swom to before me this

Notary Public

KONI HENDRICKS
NOTARY PUBLIC
STATE OF KANSAS
MY APP. Exp. 7 20 3

My commission expires 111, 20 2035/9/202

Public Notice File No. 50,403

Nickerson USD 309 - South Hutchinson has filed a new application for permit to appropriate water for beneficial use, Identified as File No. 50,403, with the Division of Water Resources, Kansas Department of Agriculture. The application proposes the appropriation of 33 acre-feet of groundwater to be diverted at the rate of 200 gallons per minute from an existing battery of two wells. The geographic center of the well battery is located in the Southeast Quarter of the Northeast Quarter of the Northeast Quarter of Section 16, in Township 22 South, Range 7 West, in Reno County, Kansas.

Anyone owning wells within one-half mile of this battery of wells, is invited to submit written comments regarding Application, File No. 50,403. Persons submitting comments should specifically indicate their interest in the proposed appropriation of water. Comments regarding the application will be accepted through September 18, 2020.

Written comments or questions regarding this application may be directed to the Office of the Chief Engineer, Division of Water Resources, Kansas Department of Agriculture, 1320 Research Park Drive, Manhattan, Kansas 66502. If you wish more information concerning this application, you may also contact Doug Schemm, Environmental Scientist, in the Topeka Field Office of the Water Appropriation Program at (785) 296-3495.

(Published In the Sterling Kansas Bulletin, Sterling, Rice County, Kansas, on August 20, 2020; August 27, 2020 and September 3, 2020).

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JUL 3 6 2021

(Open WATER Pit)

DOMESTIC WATER WELL OWNER WATER WELL SPACING CONSENT FORM

K.A.R. 5-22-2(e)(4)

, own a dom	estic well at		
KS	175/1	Addres	S
State	Postal Code	Telephon	'
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t <u>Nickerson U</u>	ISD 309 – S. Hutch	either file	ed a change in
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Division of W	/ater Resources, I g	grant my pern	nission to locate
. Kansas, this	26 day of 3	Tel	20 2/
Signed by:	Der Vid	(Board 1	~mboe)
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	Received		JUL 30 2021
	Stafford Field Off		3111 311 /11/1
	s and use. Told t Nickerson Use a existing was to withdraw location of a 1/4 NE 1/4 Courons per minuse at the propose acing interval at the minimum response to the minimum response acing interval at the propose aci	t Nickerson USD 309 – S. Hutch Applicant Name n existing water permit # to withdraw or appropriate gro location of a proposed non-dom l/4 _ NE _ 1/4 of Section _ 16 County, and will allow the considering interval of 660 or 960 feet, cove and without waiving any Division of Water Resources, I go the minimum required spacing interval of Signed by: Signed by:	State Postal Code Telephone s and use. That said water well was drilled a t Nickerson USD 309 – S. Hutch either file Applicant Name n existing water permit # or not withdraw or appropriate groundwater for location of a proposed non-domestic water water water water and the proposed non-domestic water water water and the proposed non-domestic water wa



DOMESTIC WATER WELL OWNER WATER WELL SPACING CONSENT FORM

K.A.R, 5-22-2(e)(4)

David B. Green	, own a dom	nestic well at	305	WAVE.	<u>H</u> ,
Name Domestic Water Well Owner	KS	67561		Address	
City	State	Postal Code	-'	Telephone	
to supply water for domestic need on	s and use.	That said water	well wa	as drilled ar	d constructed
I understand and acknowledge that	A	Applicant Name			
point of diversion application or #50403 for a water permit beneficial use.	n existing w to withdraw	ater permit #_ or appropriate	groun	or ne ndwater for	w application non-domestic
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Dated at MChusov	, Kansas, thi	s Way of	Domest	C Well Dwner	2021.
Witnessed by:					
Address:					
		5/9/2022		R	ECEIVED
Telephone:		Receive	ed		JL 30 2021

Stafford Field Office
Division of Water Resources QUUS BEDS GMD #2



DOMESTIC WATER WELL OWNER WATER WELL SPACING CONSENT FORM

K.A.R. 5-22-2(e)(4)

David & Green	, own a dome	estic well at	507	S. Morgan St. #
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Oily				Telephone
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Witnessed by:				
Address:				
				RECEIVED
Telephone:		5/9/2022		JUL 3 0 2021
		Rece	eived	EQUUS BEDS GMD #2



DOMESTIC WATER WELL OWNER WATER WELL SPACING CONSENT FORM

K.A.R. 5-22-2(e)(4)

Rand Rame	Acadom a do	mestic well at	P.D. Box	25
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City	State	Postal Code	Teleph	ione
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	Signed by		Domestic Well Ov 5/9/2	
Witnessed by:				Received
Address:				afford Field Office ion of Water Resource
			F	RECEIVED
Telephone:				JUL 30 2021
			EQI	UUS BEDS GMD #2

DOMESTIC WATER WELL OWNER WATER WELL SPACING CONSENT FORM

K.A.R. 5-22-2(e)(4)

I. CARY GRABIER Name Domestic Water Well Owner City			5 Smith	Nickerson St.
Name Domestic Water Well Owner	, own a dome	estic well at	Add	ress
NICKERSON	<u>K</u> 5.	6756/ ,_	620-42	2-333/
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I understand and acknowledge that	Ap	plicant Name		
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Witnessed by:	<i></i>			
Address:				
		7	F	ECEIVED
Telephone:			C.	IUL 30 2021
		5/9/2022	EQU	IUS BEDS GMD #2

Received

AFFIDAVIT OF PUBLICATION

STATE OF KANSAS, RICE COUNTY, ss:

Frank W. Mercer being first duly sworn, deposes and says: That he is publisher of

THE STERLING KANSAS BULLETIN

A weekly newspaper printed in the State of Kansas, and published in and of general circulation in Rice County, Kansas, with a general paid circulation on a weekly basis in Rice County, Kansas, and that said newspaper is not a trade, religious or fraternal publication.

Said newspaper is a weekly, published at least weekly 50 times a year; has been so published continuously and uninterruptedly in said county and state for a period of more than five years prior to the first publication of said notice; and has been admitted at the post office of Sterling, Kansas, in said County as second class matter.

That the attached notice is a true copy thereof and was published in the regular and entire issue of said newspaper for three consecutive weeks, the first being made as aforesaid on the

August 27, 20, 20 Deptembre 320, 20 U. W.

Publisher

Subscribed and sworn to before me this

Baptomba 4, 2020

Noury Public

Public Notice File No. 50,403

Nickerson USD 309 - South Hutchinson has filed a new application for permit to appropriate water for beneficial use, identified as File No. 50,403, with the Division of Water Resources, Kansas Department of Agriculture. The application proposes the appropriation of 33 acre-feet of groundwater to be diverted at the rate of 200 gallons per minute from an existing battery of two wells. The geographic center of the well battery is located in the Southeast Quarter of the Northeast Quarter of the Northeast Quarter of Section 16, in Township 22 South, Range 7 West, in Reno County, Kansas.

Anyone owning wells within one-half mile of this battery of wells, is invited to submit written comments regarding Application, File No. 50,403. Persons submitting comments should specifically indicate their interest in the proposed appropriation of water. Comments regarding the application will be accepted through September 18, 2020.

Written comments or questions regarding this application may be directed to the Office of the Chief Engineer, Division of Water Resources, Kansas Department of Agriculture, 1320 Research Park Drive, Manhattan, Kansas 66502. If you wish more information concerning this application, you may also contact Doug Schemm, Environmental Scientist, in the Topeka Field Office of the Water Appropriation Program at (785) 296-3495.

(Published in the Sterling Kansas Bulletin, Sterling, Rice County, Kansas, on August 20, 2020; August 27, 2020 and September 3, 2020). 5.50

KONI HENDRICKS
NOTARY PUBLIC
STATE OF KANSAS
My App. Exp. 200

My commission expires &

5/9/2022

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JUL 3 0 2021

Received

Stafford Field Office EQUUS BEDS GMD #2

Division of Water Resources

Irrigation Needs of Turfgrass Compared to Corn

Compiled by



5/9/2022

Received

Stafford Field Office Division of Water Resources JUL 30 2021
EQUUS BEDS GMD #2

Included here are two reports from the year 2012 that compare the water requirements of corn and soybeans with that of turfgrass. The reports are daily weather observations from the K-State Mesonet station in Sterling KS. The "Summary" line is a running total at the end of each page. The "Summary" line on the last page is the total of the requested time period.

The most relevant numbers to the water requirements for growing corn or turfgrass are the "Precip" and "ETo" columns. "Precip" is measured precipitation in inches and "ETo" is evapotranspiration, or the amount of water lost to evaporation and plant consumption (transpiration) combined. If rainfall and irrigation were both 100% efficient, ETo - Precip would equal total inches of water needed to grow a crop. In reality, neither irrigation nor rainfall is 100% efficient. Irrigation varies greatly in efficiency based upon type of system, system design, and weather. Rainfall varies mostly based upon soil moisture level and precipitation rate. If rain falls on previously saturated soil, the water runs off and is 0% efficient. If rain falls more quickly than the soil can absorb it, the difference between precipitation rate and infiltration rate runs off. Either way, rarely is rainfall 100% usable by a plant. Since the efficiency of either irrigation or rainfall would be difficult to ascertain for certain, one can assume than ETo - Precip is a place to start, and the actual total irrigation needs will be higher.

If corn is used as the basis for Maximum Reasonable Quantity for Beneficial Use, and June 1 through August 31 is used for a possible irrigation window per year, during that time period in 2012 ETo was 23.86" and Precip was 9.09". This leaves a deficit of 14.77", or 1.23 acre-feet. Factoring in any efficiency factor at all would result in Reno County's maximum allowable usage of 1.4 acre feet would be inadequate. Most farmers came up far short in 2012.

When corn is compared to turfgrass, and in particular, sports turf, the needs are dramatically different. Water use typically begins in mid-March instead of June. When dealing with established home lawns, rainfall usually outpaces ET by significant margins through much of March and April. Sports turf is significantly different. Due to the unique demands of sports turf, irrigation often begins in March to provide adequate soil moisture to allow for aeration and seed establishment that is needed to repair the turf from the previous year's usage. Irrigation also must occur much later into the fall when irrigating turfgrass. While corn's irrigation needs stop around the end of August, turfgrass health and athlete safety requires water through October and into November, if possible. Using the same Mesonet station, but extending the irrigation season from March 15 to November 30, ETo - Precip equals 34.17", or 2.85' per acre. This number does not take into account additional needs for seed establishment or any efficiency factor. The request made for 2.45' per acre is a very conservative request that will require diligent management on the part of the school. Typically outside the District, when Turf Solutions assists with an application, we apply for, and receive, 3' per acre by applying K.A.R. 5-3-20(C) since turfgrass is considered a "Specialty Crop".

Nickerson USD 309 requests that the GMD2 board waive the Maximum Reasonable Quantity for Beneficial Use, based upon a different crop, and grant 2.45' per acre.

5/9/2022

Received

Stafford Field Office
Division of Water Resources

JUL 30 2021

Detailed Report of Corn Water Consumption

5/9/2022

Received

Stafford Field Office Division of Water Resources RECEIVED

JUL 3 0 2021

EQUUS BEDS GMD #2

Historical Weather



Mesonet Data Policy EQUUS BEDS GMD #2

Sterling

2012-06-01 - 2012-08-31

		Air Temp	erature	Precip	Wind	Speed	Solar Radiation	ЕТо
		Max °F	Min °F	Total inches	Avg mph	Max mph	Total ly	Grass inches
	06-01	61.2	44.9	0.02	4.0	13.9	257.8	0.06
	06-02	84.1	47.8	0	3.7	14.2		
	06-03	88.1	65.5	0	6.9	20.1	608.4	0.23
	06-04	93.9	63.5	0	4.4	19.4	707.4	0.27
	06-05	88.7	61.7	0	5.9	19.2	727.9	0.28
	06-06	84.1	60.3	0	7.1	23.4	649.6	0.25
	06-07	83.4	59.7	0	6.3	20.9	676.4	0.25
	06-08	85.0	57.9	0	6.7	20.1	723.9	0.28
	06-09	89.7	62.6	0	13.2	30.0	699.0	0.31
	06-10	95.6	71.6	0	13.1	30.5	684.5	0.31
	06-11	88.2	58.5	0	8.9	23.9	744.4	0.33
	06-12	83.8	58.0	0	6.5	20.9	612.4	0.25
	06-13	89.7	60.3	0	10.8	27.1	709.3	0.32
	06-14	94.5	62.8	1.24	12.8	37.2	657.8	0.30
	06-15	83.1	63.2	0.59	5.1	21.8	682.6	0.22
	06-16	88.6	61.9	0.59	6.2	39.4	602.1	0.20
	06-17	92.6	67.6	0	8.9	27.6	696.9	0.30
	06-18	93.4	69.6	0	14.1	28.1	713.4	0.32
	06-19	90.2	71.7	0	16.2	32.8	707.4	0.32
	06-20	88.8	65.6	0	15.3	33.2	334.1	0.19
	06-21	82.4	61.5	0.62	6.7	23.3	701.2	0.23
	06-22	85.7	60.8	0	5.8	17.6	719.6	0.26
	06-23	97.9	67.3	0	12.4	29.1	692.8	0.37
	06-24	102.0	72.8	0	10.3	21.3	713.4	0.37
	06-25	103.7	67.2	0	3.5	10.9	703.1	0.28
	06-26	105.1	70.3	0	7.3	21.1	707.4	0.34
	06-27	107.6	76.8	0	12.8	27.0	719.6	0.44
F (0.10000	06-28	104.1	71.2	0	9.0	20.6	707.4	0.37
5/9/2022	06-29	101.7	73.8	0	10.7	24.9	604.3	0.36
Re	c elivad	100.4	73.0	0	8.1	20.6	567.1	0.30
	ummary d Field Of f Water R		65.9	9.09	7.1	39.4	606.0	23.86

		Air Temperature		Precip	Wind	Speed	Solar Radiation	ЕТо
		Max °F	Min °F	Total inches	Avg mph	Max mph	Total ly	Grass inches
	07-01	96.8	73.3	0	7.4	20.2	534.1	0.27
	07-02	96.3	69.3	0	8.5	25.8	651.6	0.30
	07-03	98.1	72.6	0	9.8	25.6	661.8	0.34
	07-04	99.0	76.6	0	11.7	27.6	690.7	0.38
	07-05	98.4	73.3	0	7.3	26.8	672.3	0.32
	07-06	100.9	75.3	0	7.2	22.6	672.3	0.33
	07-07	103.0	73.2	0.66	5.6	25.8	606.2	0.28
	07-08	89.4	69.8	0.02	7.3	19.4	595.9	0.23
	07-09	80.5	70.2	0	7.0	18.7	334.1	0.13
	07-10	87.9	68.9	0	6.5	15.4	647.5	0.25
	07-11	92.2	57.7	0	3.9	15.7	713.4	0.26
	07-12	95.9	62.8	0	3.3	13.2	676.4	0.26
	07-13	99.0	68.9	0	6.1	20.2	682.6	0.30
	07-14	98.5	70.1	0	4.6	13.9	690.7	0.28
	07-15	96.0	70.6	0	6.4	17.7	682.6	0.30
	07-16	94.2	68.3	0	7.3	19.6	641.3	0.28
	07-17	99.7	70.6	0	9.2	22.9	688.8	0.35
	07-18	103.2	77.6	0	9.3	26.0	668.0	0.37
	07-19	104.7	70.3	0	4.2	21.1	554.7	0.25
	07-20	99.2	68.5	0	5.1	13.9	688.8	0.30
	07-21	97.8	64.8	0	4.4	13.4	661.8	0.28
	07-22	100.3	68.3	0	5.1	24.3	686.6	0.30
	07-23	98.6	71.2	0	6.1	20.2	670.2	0.31
	07-24	101.8	75.2	0	10.3	24.9	676.4	0.38
	07-25	104.3	72.2	0.25	11.7	28.8	643.4	0.39
	07-26	93.6	69.4	0.17	3.5	13.5	674.2	0.23
	07-27	100.7	70.0	0	3.2	11.4	684.5	0.26
	07-28	102.9	71.6	0	8.1	24.9	651.6	0.35
	07-29	104.0	74.4	0.35	6.9	20.9	628.9	0.31
	07-30	96.9	74.9	0	5.7	19.1	548.4	0.25
	07-31	99.9	73.2	0	5.4	15.9	495.0	0.22
	08-01	101.0	70.7	0	6.6	25.3	591.9	0.27
	08-02	94.0	71.3	0	6.9	30.7	488.8	0.22
	08-03	100.6	71.6	0	5.4	27.0	575.4	0.23
	08-04	90.1	66.9	0	9.0	27.0	402.1	0.19
5/9/2022	08-05	92.6	55.2	0	4.2	17.1	668.0	0.25
	08-06 ceived summary	99.3 92.9	60.8 65.9	0 9.09	5.6 7.1	18.6 R	ECENTED 606.0	0.28 23.86
	d Field O			-	-		UL 30 2021	

Stafford Field Office Division of Water Resources

	Air Temp	Air Temperature		Wind	Wind Speed		ETo
	Max °F	Min °F	Total inches	Avg mph	Max mph	Total ly	Grass inches
08-07	87.9	69.5	1.29	6.7	37.7	129.8	0.12
08-08	98.7	64.9	0	5.1	18.9	637.2	0.26
08-09	85.6	65.1	0	8.2	20.2	655.8	0.25
08-10	87.2	58.6	0	4.2	14.9	595.9	0.21
08-11	90.0	57.4	0	5.7	16.2	536.0	0.23
08-12	90.3	64.8	0.01	7.7	24.1	641.3	0.28
08-13	85.4	57.7	0	6.2	17.7	637.2	0.22
08-14	75.6	62.2	0.36	5.7	19.4	431.0	0.12
08-15	93.4	58.7	0	7.1	20.8	585.7	0.23
08-16	79.7	63.2	0	9.5	23.3	511.5	0.20
08-17	81.1	52.8	0	3.2	11.7	486.6	0.16
08-18	86.9	61.2	0	3.8	14.2	451.6	0.16
08-19	79.8	52.9	0	6.1	16.1	624.8	0.21
08-20	88.4	49.7	0	2.9	13.2	600.0	0.21
08-21	92.2	56.4	0	3.5	20.1	600.0	0.23
08-22	90.3	62.2	0	9.3	25.5	608.4	0.29
08-23	91.6	69.6	0	11.1	27.3	455.6	0.26
08-24	81.0	65.4	0.88	9.8	21.4	363.0	0.13
08-25	78.3	65.3	2.04	5.4	25.3	175.2	0.06
08-26	86.3	66.5	0	4.0	13.4	515.5	0.16
08-27	91.2	62.3	0	2.8	11.7	548.4	0.19
08-28	91.7	63.6	0	3.6	17.1	540.3	0.20
08-29	94.1	64.6	0	5.1	17.6	525.8	0.22
08-30	97.3	65.6	0	3.2	14.5	563.0	0.22
08-31	91.0	61.9	0	4.8	21.6	579.5	0.23
summary	92.9	65.9	9.09	7.1	39.4	606.0	23.86

5/9/2022

Received

Stafford Field Office Division of Water Resources

RECEIVED
JUL 3 0 2021

Detailed Report of Turfgrass Water Consumption

5/9/2022

Received

Stafford Field Office Division of Water Resources RECEIVED

JUL 30 2021

EQUUS BEDS GMD #2

Historical Weather

RECEIVED JUL 30 2021

Sterling

2012-03-15 — 2012-11-30

EQUUS BEDS GMD #2

		Air Temp	erature	Precip	Wind	Speed	Solar Radiation	ЕТо
		Max °F	Min °F	Total inches	Avg mph	Max mph	Total ly	Grass inches
	03-15	77.9	59.5	0	9.4	22.1	451.6	0.15
	03-16	77.0	51.2	0	11.5	28.1	426.7	0.14
	03-17	78.5	61.0	0	17.6	32.7	406.2	0.16
	03-18	72.1	60.3	0	19.3	33.2	202.1	0.09
	03-19	67.5	51.4	0.37	14.6	43.4	119.6	0.04
	03-20	54.3	48.2	0.27	7.4	21.9	121.7	0.03
	03-21	53.8	45.3	0.68	6.9	23.3	86.6	0.02
	03-22	52.2	42.3	0.06	8.0	18.6	224.8	0.04
	03-23	63.6	44.2	0	6.3	15.0	348.4	0.08
	03-24	73.9	42.2	0	4.3	12.5	544.4	0.16
	03-25	75.9	42.0	0	7.3	22.4	527.9	0.17
	03-26	77.7	52.7	0	13.1	30.8	507.2	0.18
	03-27	77.8	55.9	0	8.3	33.7	525.8	0.18
	03-28	73.2	54.9	0	6.2	15.9	313.4	0.09
	03-29	82.0	58.1	0	11.8	26.8	552.7	0.18
	03-30	79.1	48.3	0	4.6	16.7	560.9	0.17
	03-31	82.7	51.7	0	7.2	18.1	554.7	0.20
	04-01	86.2	59.6	0	11.6	24.8	476.4	0.19
	04-02	81.7	54.9	0	14.2	29.5	544.4	0.21
	04-03	61.8	48.1	0.17	9.7	28.6	187.6	0.05
	04-04	58.5	50.6	0.53	8.2	17.6	216.5	0.05
	04-05	54.4	50.3	0	8.1	15.0	101.0	0.03
	04-06	56.8	43.9	0	7.3	17.1	191.9	0.04
	04-07	63.8	47.0	0	11.1	29.6	554.7	0.16
	04-08	66.1	33.0	0	5.9	16.4	600.0	0.17
	04-09	67.6	41.2	0	4.9	18.7	364.9	0.11
	04-10	65.8	45.2	0	10.6	22.6	571.1	0.19
	04-11	58.2	49.4	0	12.0	21.1	315.5	0.13
	04-12	63.0	50.0	0.05	14.7	28.3	134.1	0.06
5/9/2022	04-13	74.7	56.1	0	9.2	32.7	550.6	0.17
Ra	04-14 ceived	73.7	57.8	0	16.0	55.3	158.7	0.07
	ummary	80.3	53.9	14.40	8.4	56.3	454.0	48.57

Stafford Field Office Division of Water Resources

		Air Temperature		Precip	Wind Speed		Solar Radiation	ЕТо
		Max °F	Min °F	Total inches	Avg mph	Max mph	Total ly	Grass inches
	04-15	70.9	44.6	0	19.3	44.4	480.4	0.18
	04-16	65.6	39.2	0	6.1	17.2	604.3	0.16
	04-17	72.2	44.9	0	9.6	23.1	627.0	0.20
	04-18	79.8	52.5	0	11.8	32.3	631.0	0.23
	04-19	71.8	50.6	0	12.6	26.1	453.7	0.16
	04-20	62.9	43.4	0	11.2	26.1	523.9	0.14
	04-21	75.4	36.8	0	6.9	22.6	620.8	0.19
	04-22	65.0	43.3	0	9.6	24.3	639.1	0.19
	04-23	71.9	34.2	0	5.4	16.6	661.8	0.20
	04-24	97.1	44.4	0	9.1	33.5	661.8	0.31
	04-25	90.5	53.5	0	6.8	18.2	635.1	0.26
	04-26	82.9	57.1	0	7.7	25.6	431.0	0.20
	04-27	83.6	57.8	0	17.3	34.2	393.8	0.20
	04-28	70.3	44.4	0	8.9	21.6	598.1	0.18
	04-29	68.9	52.9	0.03	7.4	19.7		
	04-30	75.5	53.5	0.06	8.3	28.5	278.3	0.09
	05-01	84.2	58.0	0	13.5	31.2	564.9	0.20
	05-02	86.5	64.6	0.01	12.7	25.1	632.9	0.24
	05-03	85.9	67.0	0	8.4	26.6	529.8	0.19
	05-04	92.3	67.9	0	10.8	30.3	664.0	0.28
	05-05	87.5	63.9	0	11.7	26.8	674.2	0.26
	05-06	77.7	60.0	0	14.0	31.0	313.4	0.14
	05-07	67.6	44.9	0	13.5	28.3	408.4	0.19
	05-08	76.6	42.1	0	5.8	22.3		
	05-09	77.5	43.4	0	5.2	13.9	705.3	0.23
	05-10	86.0	50.1	0	10.0	24.9	705.3	0.30
	05-11	75.9	50.7	0.05	4.5	19.4	344.4	0.12
	05-12	67.9	48.6	0	9.2	19.9	587.6	0.17
	05-13	75.7	44.4	0	4.8	14.4	591.9	0.19
	05-14	83.3	49.0	0	4.5	15.9	552.7	0.20
	05-15	90.8	50.7	0	3.9	20.9	707.4	0.26
	05-16	87.5	56.0	0	8.5	22.1	703.1	0.31
	05-17	91.2	56.0	0	11.9	29.1	686.6	0.35
	05-18	90.0	67.3	0	16.1	35.7	661.8	0.38
	05-19	89.6	58.9	0.03	14.1	31.8	517.7	0.26
	05-20	78.5	53.1	0	8.3	21.6	686.6	0.25
5/9/2022	05-21	81.2	49.1	0	5.4	13.5	RECEIVED	0.25
Red	05-22 ceived	84.6	55.1	0	12.3	29.1	670.2	0.29
	summary	80.3	53.9	14.40	8.4	56.3	JUL 3454.02021	48.57

Stafford Field Office
Division of Water Resources
of 8

		Air Temp	erature	Precip	Wind Speed		Solar Radiation	ЕТо
		Max °F	Min °F	Total inches	Avg mph	Max mph	Total ly	Grass inches
	05-23	93.4	66.2	0	18.7	40.7	666.1	0.38
	05-24	88.1	62.3	0	9.9	27.3	670.2	0.28
	05-25	88.9	65.3	0.01	13.6	27.8	400.0	0.21
	05-26	96.2	75.2	0	16.4	30.0	563.0	0.32
	05-27	91.8	69.8	0	17.8	35.0	635.1	0.33
	05-28	90.4	62.9	0	8.6	25.1	748.4	0.33
	05-29	89.2	54.8	0	8.1	22.4	723.9	0.32
	05-30	88.5	60.6	0.45	8.4	31.0	529.8	0.23
	05-31	70.4	51.7	0	11.7	28.5		
	06-01	61.2	44.9	0.02	4.0	13.9	257.8	0.06
	06-02	84.1	47.8	0	3.7	14.2		
	06-03	88.1	65.5	0	6.9	20.1	608.4	0.23
	06-04	93.9	63.5	0	4.4	19.4	707.4	0.27
	06-05	88.7	61.7	0	5.9	19.2	727.9	0.28
	06-06	84.1	60.3	0	7.1	23.4	649.6	0.25
	06-07	83.4	59.7	0	6.3	20.9	676.4	0.25
	06-08	85.0	57.9	0	6.7	20.1	723.9	0.28
	06-09	89.7	62.6	0	13.2	30.0	699.0	0.31
	06-10	95.6	71.6	0	13.1	30.5	684.5	0.31
	06-11	88.2	58.5	0	8.9	23.9	744.4	0.33
	06-12	83.8	58.0	0	6.5	20.9	612.4	0.25
	06-13	89.7	60.3	0	10.8	27.1	709.3	0.32
	06-14	94.5	62.8	1.24	12.8	37.2	657.8	0.30
	06-15	83.1	63.2	0.59	5.1	21.8	682.6	0.22
	06-16	88.6	61.9	0.59	6.2	39.4	602.1	0.20
	06-17	92.6	67.6	0	8.9	27.6	696.9	0.30
	06-18	93.4	69.6	0	14.1	28.1	713.4	0.32
	06-19	90.2	71.7	0	16.2	32.8	707.4	0.32
	06-20	88.8	65.6	0	15.3	33.2	334.1	0.19
	06-21	82.4	61.5	0.62	6.7	23.3	701.2	0.23
	06-22	85.7	60.8	0	5.8	17.6	719.6	0.26
	06-23	97.9	67.3	0	12.4	29.1	692.8	0.37
	06-24	102.0	72.8	0	10.3	21.3	713.4	0.37
	06-25	103.7	67.2	0	3.5	10.9	703.1	0.28
	06-26	105.1	70.3	0	7.3	21.1	707.4	0.34
E/0/2022	06-27	107.6	76.8	0	12.8	27.0	719.6	0.44
5/9/2022	06-28	104.1	71.2	0	9.0	20.6	707.4RE	CE 0.3ED
Re	06-29 ceived	101.7	73.8	0	10.7	24.9	604.7	3048.571
	summary	80.3	53.9	14.40	8.4	56.3	454.0	48.57

Stafford Field Office Division of Water Resources

		Air Te	mperature	Precip	Wi	nd Speed	Solar Radiation	ЕТо
		Max °F	Min °F	Total inche	s Avg mph	Max mph	Total ly	Grass inches
	06-30	100.4	73.0	0	8.1	20.6	567.1	0.30
	07-01	96.8	73.3	0	7.4	20.2	534.1	0.27
	07-02	96.3	69.3	0	8.5	25.8	651.6	0.30
	07-03	98.1	72.6	0	9.8	25.6	661.8	0.34
	07-04	99.0	76.6	0	11.7	27.6	690.7	0.38
	07-05	98.4	73.3	0	7.3	26.8	672.3	0.32
	07-06	100.9	75.3	0	7.2	22.6	672.3	0.33
	07-07	103.0	73.2	0.66	5.6	25.8	606.2	0.28
	07-08	89.4	69.8	0.02	7.3	19.4	595.9	0.23
	07-09	80.5	70.2	0	7.0	18.7	334.1	0.13
	07-10	87.9	68.9	0	6.5	15.4	647.5	0.25
	07-11	92.2	57.7	0	3.9	15.7	713.4	0.26
	07-12	95.9	62.8	0	3.3	13.2	676.4	0.26
	07-13	99.0	68.9	0	6.1	20.2	682.6	0.30
	07-14	98.5	70.1	0	4.6	13.9	690.7	0.28
	07-15	96.0	70.6	0	6.4	17.7	682.6	0.30
	07-16	94.2	68.3	0	7.3	19.6	641.3	0.28
	07-17	99.7	70.6	0	9.2	22.9	688.8	0.35
	07-18	103.2	77.6	0	9.3	26.0	668.0	0.37
	07-19	104.7	70.3	0	4.2	21.1	554.7	0.25
	07-20	99.2	68.5	0	5.1	13.9	688.8	0.30
	07-21	97.8	64.8	0	4.4	13.4	661.8	0.28
	07-22	100.3	68.3	0	5.1	24.3	686.6	0.30
	07-23	98.6	71.2	0	6.1	20.2	670,2	0.31
	07-24	101.8	75.2	0	10.3	24.9	676.4	0.38
	07-25	104.3	72.2	0.25	11.7	28.8	643.4	0.39
	07-26	93.6	69.4	0.17	3.5	13.5	674.2	0.23
	07-27	100.7	70.0	0	3.2	11.4	684.5	0.26
	07-28	102.9	71.6	0	8.1	24.9	651.6	0.35
	07-29	104.0	74.4	0.35	6.9	20.9	628.9	0.31
	07-30	96.9	74.9	0	5.7	19.1	548.4	0.25
	07-31	99.9	73.2	0	5.4	15.9	495.0	0.22
	08-01	101.0	70.7	0	6.6	25.3	591.9	0.27
	08-02	94.0	71.3	0	6.9	30.7	488.8	0.22
	08-03	100.6	71.6	0	5.4	27.0	575.4	0.23
= 10 12 22 =	08-04	90.1	66.9	0	9.0	27.0	402.1	0.19
5/9/2022	08-05	92.6	55.2	0	4.2	17.1	6680	EIV 0.25
Re	08-06 ceived	99.3	60.8	0	5.6	18.6	616.5	0.283
s	summary	80.3	53.9	14.40	8.4	56.3	454.0	48.57

Stafford Field Office Division of Water Resources

		Air Temp		Precip	Wind	•	Solar Radiation	ETo
		Max °F	Min °F	Total inches	Avg mph	Max mph	Total ly	Grass inches
	08-07	87.9	69.5	1.29	6.7	37.7	129.8	0.12
	08-08	98.7	64.9	0	5.1	18.9	637.2	0.26
	08-09	85.6	65.1	0	8.2	20.2	655.8	0.25
	08-10	87.2	58.6	0	4.2	14.9	595.9	0.21
	08-11	90.0	57.4	0	5.7	16.2	536.0	0.23
	08-12	90.3	64.8	0.01	7.7	24.1	641.3	0.28
	08-13	85.4	57.7	0	6.2	17.7	637.2	0.22
	08-14	75.6	62.2	0.36	5.7	19.4	431.0	0.12
	08-15	93.4	58.7	0	7.1	20.8	585.7	0.23
	08-16	79.7	63.2	0	9.5	23.3	511.5	0.20
	08-17	81.1	52.8	0	3.2	11.7	486.6	0.16
	08-18	86.9	61.2	0	3.8	14.2	451.6	0.16
	08-19	79.8	52.9	0	6.1	16.1	624.8	0.21
	08-20	88.4	49.7	0	2.9	13.2	600.0	0.21
	08-21	92.2	56.4	0	3.5	20.1	600.0	0.23
	08-22	90.3	62.2	0	9.3	25.5	608.4	0.29
	08-23	91.6	69.6	0	11.1	27.3	455.6	0.26
	08-24	81.0	65.4	0.88	9.8	21.4	363.0	0.13
	08-25	78.3	65.3	2.04	5.4	25.3	175.2	0.06
	08-26	86.3	66.5	0	4.0	13.4	515.5	0.16
	08-27	91.2	62.3	0	2.8	11.7	548.4	0.19
	08-28	91.7	63.6	0	3.6	17.1	540.3	0.20
	08-29	94.1	64.6	0	5.1	17.6	525.8	0.22
	08-30	97.3	65.6	0	3.2	14.5	563.0	0.22
	08-31	91.0	61.9	0	4.8	21.6	579.5	0.23
	09-01	93.4	63.7	0	3.6	9.5	544.4	0.20
	09-02	102.2	67.3	0	6.2	18.4	558.7	0.25
	09-03	102.9	70.3	0	7.6	19.7	529.8	0.29
	09-04	97.7	68.9	0.09	6.0	24.9	424.8	0.19
	09-05	88.7	63.7	0	6.2	18.1	536.0	0.21
	09-06	95.2	62.8	0	7.2	27.5	536.0	0.24
	09-07	79.8	55.6	0.30	10.5	33.3	200.0	0.11
	09-08	79.7	49.1	0	5.0	16.2	587.6	0.20
	09-09	78.8	53.9	0	6.0	16.9	581.4	0.20
	09-10	90.3	52.5	0	9.0	24.6	571.1	0.26
	09-11	94.1	61.0	0	13.7	31.7	538.2	0.35
022	09-12	93.7	56.3	0	13.6	50.8		E 0.25.
Red	09-13 ceived	57.3	52.0	0.46	11.6	24.3	96.9	3 0 2021
	summary	80.3	53.9	14.40	8.4	56.3	454.0 ^{JUL}	48.57

Stafford Field Office
Division of Water Resources
of 8

5/9/2022

		Air Temp	erature	Precip	Wind	Speed	Solar Radiation	ETo
		Max °F	Min °F	Total inches	Avg mph	Max mph	Total ly	Grass inches
	09-14	72.5	45.8	0	6.7	18.4	542.2	0.18
	09-15	72.9	48.3	0	4.3	13.9	327.9	0.10
	09-16	78.3	59.8	0	5.0	12.7	412.4	0.13
	09-17	68.4	52.3	0	8.2	23.3	282.6	0.08
	09-18	78.0	43.2	0	6.8	20.4	501.2	0.17
	09-19	91.9	52.0	0	9.2	22.9	495.0	0.24
	09-20	83.2	48.8	0	6.5	15.2	428.9	0.20
	09-21	85.8	53.5	0	6.7	19.2	435.1	0.20
	09-22	73.2	50.6	0	8.0	20.6	445.3	0.19
	09-23	73.6	46.3	0.02	6.8	18.1	455.6	0.17
	09-24	88.9	46.6	0	6.6	18.7	309.3	0.14
	09-25	82.0	55.0	0	5.8	16.7	296.9	0.12
	09-26	74.9	59.3	0.41	7.6	16.9	208.4	0.07
	09-27	73.7	56.5	0	5.0	13.5	193.8	0.06
	09-28	71.8	57.4	0.02	5.0	12.7	148.4	0.04
	09-29	72.8	54.9	0	4.7	17.7	245.3	0.09
	09-30	78.8	49.3	0	3.6	11.4	379.5	0.12
	10-01	70.7	44.8	0.01	9.6	30.0	266.1	0.10
	10-02	74.9	39.0	0	4.6	13.7	416.5	0.13
	10-03	82.4	44.3	0	10.4	29.3	400.0	0.21
	10-04	66.8	48.0	0	12.0	25.1	150.6	0.10
	10-05	54.5	38.7	0	10.6	25.8	280.4	0.10
	10-06	44.0	34.1	0	6.2	21.6	94.7	0.03
	10-07	52.4	25.0	0	5.2	18.4	340.3	80.0
	10-08	70.6	34.1	0	10.5	27.0	404.1	0.16
	10-09	64.2	40.1	0	10.0	29.1	424.8	0.14
	10-10	66.7	30.8	0	5.4	17.4	367.1	0.12
	10-11	82.7	45.9	0	10.4	28.0	379.5	0.17
	10-12	55.6	43.9	0.02	8.4	25.3	72.1	0.04
	10-13	79.5	53.3	0.59	9.2	23.1	179.5	0.06
	10-14	75.0	50.1	0.01	11.2	32.3	338.2	0.15
	10-15	86.0	44.8	0	6.4	17.9	364.9	0.15
	10-16	81.8	50.8	0	5.9	16.7	313.4	0.13
	10-17	69.5	46.9	0	11.8	33.5	160.9	0.14
	10-18	62.8	42.1	0	17.8	43.2	51.6	0.17
022	10-19	66.7	41.1	0	11.7	29.0	113.4 259.9	CEMSED
	10-20	86.0	43.1	0	5.5	17.7		0.10
Receiv	10-21 'ed	86.9	51.1	0	6.8	20.8 56.3	204.1 454.0	30,2021
9	summary	80.3	53.9	14.40	8.4	30.3	434.0	40.07

Stafford Field Office
Division of Water Resources
of 8

5/9/2022

		Air Temp	erature	Precip	Wind:	Speed	Solar Radiation	ЕТо
		Max °F	Min °F	Total inches	Avg mph	Max mph	Total ly	Grass inches
	10-22	73.6	50.7	0	5.7	20.9	82.6	0.04
	10-23	85.5	53.4	0	10.8	23.6	303.1	0.16
	10-24	73.8	59.2	0	10.4	22.9	210.3	0.09
	10-25	61.5	32.4	0.02	17.5	34.0	55.6	0.05
	10-26	44.1	29.7	0	10.8	23.6	92.8	0.05
	10-27	47.8	24.0	0	4.5	13.7	255.6	0.06
	10-28	55.8	28.5	0	7.0	17.7	208.4	0.07
	10-29	67.7	35.0	0	10.6	26.3	123.6	0.11
	10-30	70.6	43.0	0	6.1	16.9	257.8	0.11
	10-31	73.0	32.7	0	4.7	13.4	280.4	0.09
	11-01	77.6	38.5	0	3.9	11.5	257.8	0.09
	11-02	69.8	45.3	0	9.9	24.3	142.2	0.09
	11-03	61.8	35.7	0	7.7	18.6	146.3	0.06
	11-04	68.9	32.9	0	7.3	25.8	150.6	0.10
	11-05	56.1	36.9	0	10.1	28.8	117.4	0.06
	11-06	65.3	32.7	0	8.8	27.5	136.0	0.10
	11-07	62.8	30.0	0	6.9	17.2	125.8	0.08
	11-08	73.1	46.1	0	10.0	25.5	129.8	0.11
	11-09	80.1	41.6	0	9.8	32.3	156.8	0.10
	11-10	73.7	49.9	0.59	22.0	56.3	183.5	0.13
	11-11	49.9	24.4	0	14.6	30.5	270.2	0.05
	11-12	50.0	21.8	0	8.0	22.4	317.7	0.07
	11-13	54.4	28.4	0	7.8	22.4	123.6	0.06
	11-14	53.4	29.7	0	5.2	15.4	68.0	0.04
	11-15	55.9	34.0	0	4.5	13.2	111.5	0.04
	11-16	60.0	28.6	0	5.8	17.4	103.1	0.05
	11-17	61.6	38.2	0	13.5	33.3	76.4	0.10
	11-18	61.4	40.2	0	14.2	30.5	84.5	0.10
	11-19	71.0	35.0	0	4.7	15.4	210.3	0.06
	11-20	69.8	34.1	0	4.6	8.7	146.3	0.06
	11-21	72.7	40.2	0	12.2	32.3	175.2	0.11
	11-22	71.3	39.1	0	12.5	28.5	125.8	0.10
	11-23	42.2	26.9	0	8.8	26.8	164.9	0.05
	11-24	61.9	24.7	0	10.7	28.8	152.5	0.09
	11-25	56.8	28.5	0	9.4	21.4	163.0	80.0
000	11-26	42.5	23.4	0	14.5	32.0	189.7	0.05
022	11-27	45.4	14.0	0	7.8	23.8	237.2	CE6.62ED
Receive	11-28 ed	55.7	21.2	0	5.5	17.4	107.2	0.04
	ummary	80.3	53.9	14.40	8.4	56.3	454.0	L 3 Q _{8.3} 921

Stafford Field Office Division of Water Resources

EQUUS BEDS GMD #2

5/9/2022

	Air Temperature		Precip	Wind	Speed	Solar Radiation	ETo	
	Max °F	Min °F	Total inches	Avg mph	Max mph	Total ly	Grass inches	
11-29	61.1	30.1	0	5.0	14.5	134.1	0.04	
11-30	62.9	25.5	0	5.3	16.7	119.6	0.04	
summary	80.3	53.9	14.40	8.4	56.3	454.0	48.57	

5/9/2022

Received

RECEIVED

JUL 30 2021

EQUUS BEDS GMD #2 Stafford Field Office **Division of Water Resources**



City of Nickerson

P.O. Box 52, Nickerson, KS 67561

June 21, 2021

USD 309 Nickerson/South Hutchinson,

The Nickerson City Council under the advisement of our Kansas Rural Water Association Technical Assistant, Jon Steele, and our Certified Water Operator, Casey Hartman, finds no objections to the USD 309 School District's request of additional water rights at the High School campus located at 305 South Nickerson Street, Nickerson, KS.

A copy of the meeting minutes has been provided for your records.

Sincerely,

Peggy Ruebke, Mayor

April Beshears, City Clerk

RECEIVED

5/9/2022

JUL 30 2021

Received

EQUUS BEDS GMD #2

City Superintendent Stafford Field Office (620) 422-5121

Division of Water Resources

KANSAS DEPARTMENT OF AGRICULTURE

Mike Beam, Secretary of Agriculture

DIVISION OF WATER RESOURCESEarl D. Lewis Jr., Chief Engineer

APPROVAL OF APPLICATION FOR CHANGE IN PLACE OF USE APPROPRIATION OF WATER FILE NO. 44,424

The Chief Engineer, Division of Water Resources, Kansas Department of Agriculture, after due consideration of the written application of Nickerson USD 309 – South Hutchinson, 4501 W 4th Ave, Kansas 67501-9131, in this office on June 22, 2020, for approval of a change in the location of the place of use under the Approval of Application, File No. 44,424 for permit to appropriate water for beneficial use, finds that the change is reasonable and will not impair existing rights, and that the application should be and is hereby approved.

The effective date of the change shall be the date this order is executed by the Chief Engineer, after which the authorized location of the irrigation place of use shall be:

			NE1/4			NW1/4			SW1/4			SE¼				TOTAL			
Sec.	Twp.	Range	NE1/4	NW1/4	SW1/4	SE1/4	TOTAL												
16	22S	7W	24.6																24.6

a total of 24.6 acres in Township 22 South, Range 7 West, Reno County, Kansas.

located substantially as shown on the map accompanying the application to change the place of use.

All 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.

The water right owner shall properly install an acceptable water meter on the diversion works authorized under this water right, prior to the use of water, in strict accordance with the Kansas Administrative Regulations 5-1-4 through 5-1-12 adopted by the Chief Engineer. The water right owner shall notify the Chief Engineer when installation of the water meter has been completed.

The water right owner shall maintain the water meter in an operating condition satisfactory to the Chief Engineer, at all times during diversion of water and shall maintain records from which the total quantity of water diverted may be determined. The water right owner shall also report the reading of said water meter and the total quantity of water diverted annually to the Chief Engineer. Such records shall be furnished to the Chief Engineer by March 1 following the end of each calendar year.

In all other respects, the Approval of Application, File No. 44,424, for permit to appropriate water for beneficial use, is as stated and set forth in the approval dated September 19, 2001.

Ordered this 21 day of April , 20	022, in Manhattan, Riley County, Kansas.
EARLD. LEWIS, JR., P.E. CHIEF ENGINEER EARLO LEWIS CHIEF ENGINEER	Earl D. Lewis Jr., P.E. Chief Engineer Water Appropriation Program Division of Water Resources Kansas Department of Agriculture

State of Kansas)
) SS
County of Riley)

The foregoing instrument was acknowledged before me this 2 day of +pri , 2022, Earl D. Lewis Jr., P.E. Chief Engineer, Water Appropriation Program, Division of Water Resources, Kansas Department of Agriculture.

Notary Public

MELINDA JENNINGS
My Appointment Expires
April 7, 2025

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:

- 1) request an evidentiary hearing before the Chief Engineer, or
- 2) 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 the Kansas Department of Agriculture, Attn: Legal Section, 1320 Research Park Drive, Manhattan, Kansas 66502, or by 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 the Secretary of Agriculture, Attn: Legal Division, Kansas Department of Agriculture, 1320 Research Park Drive, Manhattan, Kansas 66502, or by 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. Any request for hearing or petition for administrative review shall be in writing and shall be submitted to the attention of: Chief Legal Counsel, Kansas Department of Agriculture, 1320 Research Park Drive, Manhattan, Kansas 66502, Fax: (785) 564-6777.

CERTIFICATE OF SERVICE

On this day of , 2022, I hereby certify that the attached Approval of Application for the Change in Place of Use, File No. 44,424, dated, , 2022, was mailed postage prepaid, first class, US mail to the following:

USD 309 NICKERSON SOUTH HUTCHINSON 4501 W 4TH AVE HUTCHINSON, KS 67501-9131

With photocopies to:

Stafford Field Office
Groundwater Management District No. 2

Division of Water Resor	irces	

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

May 4, 2022

NICKERSON USD 309 – SOUTH HUTCHINSON 4501 W 4TH AVE HUTCHINSON KS 67501-9131

RE: Water Right, File No. 44,424

Dear Mr. Schmitt:

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

Your attention is directed to the enclosures and to the terms, conditions, and limitations specified in the approval for change. A condition of the approval is that a water flowmeter meeting K.A.R. 5-1-4 through 5-1-12, must be installed on the diversion works. Please return the required *Notification of Completion of the Diversion Works and/or Installation of the Required Flowmeter*, as soon as these actions are completed. The Notice of Completion form may be found online at www.agriculture.ks.gov, Water Appropriation Forms, there is no fee for the required completion notification.

Any abandoned water wells must be plugged in accordance with the requirements of Article 30 of the Rules and Regulations as adopted by the Kansas Department of Health and Environment.

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

If you have any questions, please contact our staff at the Stafford Field Office, 620-234-5311. If you wish to discuss a specific file, please have the file number ready so that we may help you more efficiently.

Sincerely,

Kristen A. Baum

New Application and Change Unit Supervisor

Water Appropriation Program

Kristen a Baum

KAB:jne

Enclosure

pc: Stafford Field Office

Groundwater Management District No. 2

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:

- 1) request an evidentiary hearing before the Chief Engineer, or
- 2) 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 the Kansas Department of Agriculture, Attn: Legal Section, 1320 Research Park Drive, Manhattan, Kansas 66502, or by 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 the Secretary of Agriculture, Attn: Legal Division, Kansas Department of Agriculture, 1320 Research Park Drive, Manhattan, Kansas 66502, or by 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. Any request for hearing or petition for administrative review shall be in writing and shall be submitted to the attention of: Chief Legal Counsel, Kansas Department of Agriculture, 1320 Research Park Drive, Manhattan, Kansas 66502, Fax: (785) 564-6777.

CERTIFICATE OF SERVICE

On this 4 day of May, 2022, I hereby certify that the attached Approval of Application for the Change in Place of Use, File No. 44,424, dated, 21 April , 2022, was mailed postage prepaid, first class, US mail to the following:

USD 309 NICKERSON SOUTH HUTCHINSON 4501 W 4TH AVE HUTCHINSON, KS 67501-9131

With photocopies to:

Stafford Field Office Groundwater Management District No. 2

Division of Water Resources