## Kansas Department of Agriculture Division of Water Resources PERMIT OF NEW APPLICATION WORKSHEET

1. File Number:				Change Date:	3. Field Office:	4. GMD:	
	49284		1/5	12018	02		02
5. Status:	⊠ Approved	☐ Denied by D\	WR/GMD	☐ Dis	miss by Request/Fai	ilure to Return	
6. Enclosures:	⊠ Check Valve	☑ N of C Form	□W	ater Tube	☐ Driller Copy	⊠ Meter	·
7a. Applicant(s New to syst		Person ID 610 Add Seq#	)41	7c. Landown New to sy		Person ID Add Seq#	
HOA MA 900 N TY	ATER HOA NAGEMENT SEI (LER SUITE 7 AKS 67212	RVICES					
7b. Landowner New to syst		Person ID Add Seq#		7d. Misc New to sy	vstem □	Person ID Add Seq#	
7 <b>A</b>							
8. WUR Corre New to syst Overlap File	em 🗌	Person ID Add Seq# Notarized WUC	Form I	9. Use of Wat	ter: Changing? ⊠ Groundwater	☐ Yes ☐ Surface Wa	⊠ No ater
Agree ☐ Y		Notarized VVOC		⊠ IRR	REC	☐ DEW	☐ MUN
7a				□ STK	☐ SED	☐ DOM	☐ CON
				☐ HYD DRG	☐ WTR PWR	☐ ART RECH	IRG
				☐ IND SIC:		OTHER:	
10. Completion I	Date: <b>12/31/2019</b>	11. Perfe	ction Date:	12/31/202	.3 12. Ex	p Date:	
13. Conservation	n Plan Required? ☐ Ye	es ⊠ No Date Requ	ıired:	Date Ap	oproved:	_ Date to Compl	y:
14. Water Level	Measuring Device?	Yes ⊠ No Date	to Comply	:	Date WLMD I	Installed:	
		-			Date Prepared: 1/4/ Date Entered: 1 8/	•	

File No.	49284	ļ		15	5. Forn	nation	Code	e: <b>190</b>	Equu	s	Drain	age B	asin: A	Arkans	sas R	iver	C	ounty	<b>34</b>	56	Sp	ecial U	se:		Strea	ım:		
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18. Storag	ge: Rate					NF		Quai	ntity _					ac/ft	Α	dditior	nal Rat	e				NF	Add	itional Qu	uantity		·	ac/ft
19. Limita	ition:					yr at _					gpm (				cfs) w	hen co	ombine	ed with	file n	umber	(s)							
Limita	ation:				af/	yr at _					gpm (				cfs) w	hen co	ombine	ed with	file n	umber	(s)							
20. Meter	Require	d? <b>∑</b>	] Yes	□ No	)		To b	e inst	alled I	ру		12	2/31/	2019	)		_ D	ate Ac	cepta	ble Me	eter Inst	alled _						
21. Place	e of Use							NE	1/4			NN	V1/4			sv	V1/4			s	E1/4		Total	Owner	CI	hg? NO	Overlap F	iles
MOD DEL ENT F	PUSE	S	т	R	ID	-	NE 1/4	NW 1/4	SW ¼	SE ¼	NE 1⁄4	NW ¼	SW 1/4	SE 1/4	NE ¼	NW 1⁄4	SW 1/4	SE ¼	NE 1⁄4	NW 1/4	SW ¼	SE ¼						
CHK 6		27	<b>26</b> S	1W	8		0.6	5.5	0.8	1.7	0.4												9.0	7a	no	)	49285	
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# KANSAS DEPARTMENT OF AGRICULTURE Division of Water Resources M E M O R A N D U M

TO: Files

**DATE:** January 4, 2018

**FROM:** Kristen Baum **RE:** Applications, File Nos. 49,284 & 49,285

Appropriations of Water, File Nos. 47,456 & 47,457

Edgewater HOA has filed the referenced applications to appropriate 28 acre-feet of groundwater at diversion rates of 75 gallons per minute for irrigation use. The existing points of diversion are single (1) wells located within the city limits of Wichita, in the Northeast Quarter of Section 27, Township 26 South, Range 1 West, Sedgwick County, Kansas. The proposed appropriations are located within the Arkansas River Basin, within the boundaries of Equus Beds GMD No. 2. The 9 acre place of use and points of diversion are all owned by the HOA. The applicant has signed the application form affirming legal access to the points of diversion. The existing wells are currently authorized by Appropriations of Water, File Nos. 47,456 and 47,457. The new applications were filed because additional water is needed for the place of use. If the new applications are approved, the existing appropriations will be dismissed. The applications will completely overlap in place of use. Since each application has requested 28 acre-feet, the junior file will require a limitation of 28 acre-feet total when combined with the senior file on the authorized place of use.

The requested quantity of 28 acre-feet applied to 9 acres will provide 3.1 acre-feet per acre, which exceeds the maximum reasonable quantity for irrigation use in Sedgwick County, per K.A.R. 5-3-24. In an email dated September 2, 2016, the applicant's consultant provided additional information in the form of a water balance based upon historic precipitation and evapotranspiration, taking into consideration the extremely sandy soil types and watering requirements for turf grass. The quantity of water requested is consistent with other turf grass irrigation projects already approved throughout the state. Therefore, the quantity appears to be reasonable. Furthermore, GMD2 recommends a waiver of K.A.R. 5-22-14 to allow the quantity requested.

The existing wells were drilled to a depth of 50 feet and have static water levels at 10 feet below the surface. Well logs for these wells describe medium to coarse sand down to 50 feet, interspersed with a few clay lenses at approximately 10-15 foot intervals. The source of supply for these wells is the Equus Beds.

Public Notice of the pending applications was published in The Wichita Eagle for three consecutive weeks from August 21 through September 4, 2015. No comments were received as a result of the Public Notice. The proposed points of diversion do not meet spacing to a number of domestic wells. The applicant's consultant notified the owners of any potential domestic wells within 660 feet of the points of diversion via certified mail. Eight individuals signed spacing consent forms, and the consultant indicated that no one that was notified had any negative comments or concerns. The proposed points of diversion do not meet spacing to industrial groundwater pits authorized by File Nos. 47,615 and 48,836; however, File No. 47,615 is owned by the same HOA and is a part of the same housing development. File No. 48,836 has not been completed yet and has been placed in partial offset status for a different appropriation. Finally, the proposed points of diversion do not meet spacing to each other, being located approximately 720 feet apart; however, they are intended to operate as system to supply water to a common place of use. In summary, waivers of both domestic and non-domestic well spacing will be necessary, but the wells have already been operating under the existing appropriations with no documented impairment concerns and GMD2 has expressed support for the waivers of spacing.

Copies of the applications were submitted to GMD2 for their review and recommendation. Based on the GMD2 safe yield analysis, the applications meet safe yield criteria. A letter was received from GMD2 on December 15, 2016 recommending approval. Their recommendation of approval was contingent upon the dismissal of File Nos. 47,456 and 47, 457 as well as the elimination any partial overlap in place of use with File Nos. 47,615. File Nos. 47,615 authorizes industrial evaporation from two groundwater pits located in the same subdivision. A change in place of use under File Nos. 47,615 approved on December 16, 2015 authorized a slight expansion of the southernmost pit by about 2.3 acres. This expanded portion has never been opened, and thus appears as a partial overlap in place of use since the pending applications propose the irrigation of areas around the pits. It was decided that since File Nos. 47,615 is still in the perfection period, it's place of use can be reduced during the certification process.

Memorandum File Nos. 49,284 and 49,285 Page 2 of 2

Jeff Lanterman, Water Commissioner for the Stafford Field Office, recommended approval of the referenced applications in an e-mail. Based on the above discussion, it is recommended that the referenced applications be approved with waivers of K.A.R. 5-22-14(a)(1) for the maximum reasonable quantity and K.A.R. 5-22-2(a)(1) & (2) for domestic and non-domestic well spacing, along with the dismissal of the above referenced appropriations.

Kristen A. Baum Environmental Scientist Permits Unit

## KANSAS DEPARTMENT OF AGRICULTURE Jackie McClaskey, Secretary of Agriculture

DIVISION OF WATER RESOURCES

David W. Barfield, Chief Engineer

# APPROVAL OF APPLICATION and PERMIT TO PROCEED

(This Is Not a Certificate of Appropriation)

This is to certify that I have examined Application, File No. 49,284 of the applicant

# EDGEWATER HOA HOA MANAGEMENT SERVICES 900 N TYLER SUITE 7 WICHITA KS 67212

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

- 1. That the priority date assigned to such application is **February 12, 2015**.
- 2. That the water sought to be appropriated shall be used for irrigation use on land described in the application, as follows:

-		NE	1/4			NW1⁄4			SW1/4			SE1/4				TOTAL	
Sec. Twp. Range	NE1/4	NW1⁄4	SW1/4	SE1/4	NE1/4	NW¼	SW1/4	SE1/4	NE1/4	NW1⁄4	SW1/4	SE1/4	NE1/4	NW1⁄4	SW1/4	SE1/4	TOTAL
27 26S 1W	0.6	5.5	0.8	1.7	0.4					,							9.0

- 3. That the authorized source from which the appropriation shall be made is groundwater, to be withdrawn by means of one (1) well located in the Northwest Quarter of the Northwest Quarter of the Northwest Quarter (NW½ NW½ NE½) of Section 27, more particularly described as being near a point 4,629 feet North and 2,085 feet West of the Southeast corner of said section, in Township 26 South, Range 1 West, Sedgwick County, Kansas located substantially as shown on the map accompanying the application.
- 4. That the appropriation sought shall be limited to a maximum diversion rate not in excess of **75** gallons per minute (0.17 c.f.s.) and to a quantity not to exceed **28 acre-feet** of water for any calendar year.
- 5. That installation of works for diversion of water shall be completed on or before **December 31**, **2019** or within any authorized extension thereof. The applicant shall notify the Chief Engineer and pay the statutorily required field inspection fee of \$400.00 when construction of the works has been completed. Failure to timely submit the notice and the fee will result in revocation of the permit. Any request for an extension of time shall be submitted prior to the expiration of the deadline and shall be accompanied by the required statutory fee of \$100.00.

File No. 49,284 Page 2 of 4

6. That the proposed appropriation shall be perfected by the actual application of water to the proposed beneficial use on or before <u>December 31, 2023</u> or any authorized extension thereof. Any request for an extension of time shall be submitted prior to the expiration of the deadline and shall be accompanied by the required statutory fee of \$100.00.

- 7. That the applicant shall not be deemed to have acquired a water appropriation for a quantity in excess of the amount approved herein nor in excess of the amount found by the Chief Engineer to have been actually used for the approved purpose during one calendar year subsequent to approval of the application and within the time specified for perfection or any authorized extension thereof.
- 8. That the use of water herein authorized shall not be made so as to impair any use under existing water rights nor prejudicially and unreasonably affect the public interest.
- 9. That the right of the appropriator shall relate to a specific quantity of water and such right must allow for a reasonable raising or lowering of the static water level and for the reasonable increase or decrease of the streamflow at the appropriator's point of diversion.
- 10. That this permit does not constitute authority under K.S.A. 82a-301 through 305a to construct any dam or other obstruction; nor does it grant any right-of-way, or authorize entry upon or injury to, public or private property.
- 11. That all diversion works constructed under the authority of this permit into which any type of chemical or other foreign substance will be injected into the water pumped from the diversion works shall be equipped with an in-line, automatic quick-closing, check valve capable of preventing pollution of the source of the water supply. The type of valve installed shall meet specifications adopted by the Chief Engineer and shall be maintained in an operating condition satisfactory to the Chief Engineer.
- 12. That an acceptable water flow meter shall be installed and maintained on the diversion works authorized by this permit in accordance with the Kansas Administrative Regulations 5-1-4 through 5-1-12 adopted by the Chief Engineer. This water flow meter shall be used to provide an accurate quantity of water diverted as required for the annual water use report (including the meter reading at the beginning and end of the report year).
- 13. That the applicant shall maintain accurate and complete records from which the quantity of water diverted during each calendar year may be readily determined and the applicant shall file an annual water use report with the Chief Engineer by March 1 following the end of each calendar year. Failure to file the annual water use report by the due date shall cause the applicant to be subject to a civil penalty.
- 14. That no water user shall engage in nor allow the waste of any water diverted under the authority of this permit.
- 15. That failure without cause to comply with provisions of the permit and its terms, conditions and limitations will result in the forfeiture of the priority date, revocation of the permit and dismissal of the application.
- 16. That the right to appropriate water under authority of this permit is subject to any minimum desirable streamflow requirements identified and established pursuant to K.S.A. 82a-703c for the source of supply to which this water right applies.

### 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: Kansas Department of Agriculture, Attn: Legal Section, 1320 Research Park Drive, Manhattan, Kansas 66502, FAX (785) 564-6777.

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

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

Ordered this day of Agriculture Agriculture State of Kansas

Ordered this day of Agriculture Agricultu

The foregoing instrument was acknowledged before me this Saday of Savo 2012 by David W. Barfield, P.E., Chief Engineer, Division of Water Resources, Kansas Department of Agriculture.



Notary Public

### **CERTIFICATE OF SERVICE**

On this t day of Jove Jove Jove Jove Jove Jove Application and Permit to Proceed, File No. 49,284, dated Jove Swas mailed postage prepaid, first class, US mail to the following:

EDGEWATER HOA HOA MANAGEMENT SERVICES 900 N TYLER SUITE 7 WICHITA KS 67212

With photocopies to:

Stafford Field Office

Equus Beds GMD No. 2

Division of Water Resources

# Kansas Department of Agriculture Division of Water Resources WAIVER REQUEST & WAIVER RULE WORKSHEET

File Number:	49284 & 49285	FO: <b>2</b>	GMD: <b>2</b>
		<b>—</b>	

### **WAIVER REQUEST:**

UMW	Date Requested	Rule ID	Applies	Rule Type	Rule Subtype
IRR	5/24/16	20	GMD 2	Well Spacing	Well to well spacing
Rule Number	Date Granted	Date Denied	Justification:	Drawdown calculation using the proposed drawdown at nearby points of diversion w	d rate and quantity indicate that
K.A.R. 5-22-2	1/5/18			drawdown at hearby points of diversion w	ould be less than 0.25 feet.

## WAIVER RULE (complete only if a new rule needs to be created):

Rule ID	Applicability	Туре	Subtype	Rule Number	Date Active	Date Inactive
	,			K.A.R.		

Date Prepared	1/5/18	By <b>KAB</b>
Date Entered	1/8/2018	By UM

# Kansas Department of Agriculture Division of Water Resources WAIVER REQUEST & WAIVER RULE WORKSHEET

File Number: 492	284 <u>&amp; 49285</u>	FO: <b>2</b>	GMD: <b>2</b>
\ <del></del>			<b>—</b>

### **WAIVER REQUEST:**

UMW	Date Requested	Rule ID	Applies	Rule Type	Rule Subtype
IRR	5/24/16	154	GMD 2	MAX REASONABLE QUANTITY	MAXIMUM ALLOWANCES
Rule Number	Date Granted	Date Denied	Justification:	Maximum reasonable quantity for irrigatio	
K.A.R. 5-22-14	115)18			agricultural crops in KS, not turf grass wh requirements.	ich typically has greater irrigation

## WAIVER RULE (complete only if a new rule needs to be created):

Rule ID	Applicability	Туре	Subtype	Rule Number	Date Active	Date Inactive
				K.A.R.		

Date Prepared	1/5/18	By <b>KAB</b>
Date Entered _	118/2018	Ву Ш



### KANSAS DEPARTMENT OF AGRICULTURE

Jackie McClaskey, Secretary of Agriculture

**DIVISION OF WATER RESOURCES**David W. Barfield, Chief Engineer

### **WAIVER OF REGULATION**

K.A.R. 5-22-14

Maximum Reasonable Quantity for Beneficial Use

Date: Jan 5,2018

Re: Pending Applicantions, File Nos. 49,284 and 49,285

- 1. That K.A.R. 5-22-14(a)(1) states in part, that the maximum annual quantity of water deemed reasonable for irrigation use shall be the following: 1.3 acre-feet per acre in Harvey, McPherson, and Sedgwick counties....
- 2. That the applicant is requesting 28 acre-feet of water for a 9 acre place of use, which is equivalent to 3.1 acre-feet per acre.
- 2. That the maximum annual quantity of water reasonable for irrigation is based upon common agricultural crops grown in Kansas as opposed to turf grasses or other specialty crops which typically have greater irrigation requirements.
- 3. That the applicant's consultant found that historical precipitation and ET data indicate that fescue turf grass at the application site requires approximately 36.5 in. (3.0 acre-feet per acre) of irrigation based on 75% sprinkler efficiency during the turf grass growing season.
- 4. That the Board of Directors has previously reviewed similar applications that did not meet maximum water to land ratio and recommended exemptions to the Maximum Reasonable Quantity for Beneficial Use.
- 5. That Equus Beds Groundwater Management District No. 2, recommended the application be approved with a waiver of the Maximum Reasonable Quantity for Beneficial Use criteria in K.A.R. 5-22-14(a)(1).
- 6. That a waiver of K.A.R. 5-22-14 will not prejudicially or unreasonably affect the public interest and will not impair any existing water rights.

Comments:

David W. Barfield, P

Chief Engineer

Division of Water Resources Kansas Department of Agriculture



### KANSAS DEPARTMENT OF AGRICULTURE

Jackie McClaskey, Secretary of Agriculture

#### **DIVISION OF WATER RESOURCES**

David W. Barfield, Chief Engineer

# WAIVER OF REGULATION K.A.R. 5-22-2. Well Spacing Requirements

Date: Jan 5, 2018

RE: Pending Applications, File Nos. 49,284 and 49,285

- 1. That the existing wells under the above-referenced application are located less than the required spacing distance of 1,320 feet from two groundwater pits and they are less than 1,320 feet apart. They are also located less than the required spacing distance of 660 feet from numerous domestic wells.
- 2. That the existing wells under the above-referenced applications have operated since 2009 under existing appropriations with no apparent impairment or detrimental effect to nearby wells.
- 3. That Equus Beds Groundwater Management District No. 2 drawdown calculation using the proposed quantity & rate indicate that drawdown at nearby domestic and non-domestic points of diversion would be less than 0.25 feet.
- 4. That all owners with domestic wells located within 660 feet were notified of the applications by the applicant's consultant via certified mail. Eight spacing consent forms were submitted and no negative comments were received.
- 5. That the two groundwater pits and numerous domestic wells that do not meet spacing requirements are all located within and are a part of the same Edgewater housing development that is to be served by the pending applications.
- 6. That Equus Beds Groundwater Management District No. 2 reviewed the application, and has recommended the application be approved with a waiver of well spacing criteria.
- 7. That a waiver of K.A.R. 5-22-2 will not prejudicially or unreasonably affect the public interest.

Comments:

David W. Barfield, P.E.

Chief Engineer

Division of Water Resources

Kansas Department of Agriculture

### KANSAS DEPARTMENT OF AGRICULTURE

Dale A. Rodman, Secretary of Agriculture

### **DIVISION OF WATER RESOURCES**

David W. Barfield, Chief Engineer

APPLICATION COMPLETE

10 131 117

Reviewer VAB

File Number 700 This item to be completed by the Division of Water Resources.

WATER RESOURCES RECEIVED

APPLICATION FOR PERMIT TO
APPROPRIATE WATER FOR BENEFICIAL USE

FEB 1 2 2015

Filing Fee Must Accompany the Application (Please refer to Fee Schedule attached to this application form.)

3:37
KS DEPT OF AGRICULTURE

SCANNED

To the Chief Engineer of the Division of Water Resources, Kansas Department of Agriculture, 109 SW 9<sup>th</sup> Street, Second Floor, Topeka, KS 66612-1283:

1.	Name of Applicant (Please F	Print): Edgewater HOA		*
	Address: HON	172337	900NT4/A	SUITE (
	City: Wilhite		State	Zip Code <u>67205</u> x
	Telephone Number: (			67212
2.	The source of water is:	☐ surface water in	(stream	XST/DWR
	OR	☑ groundwater in <u>Arkar</u>	isas River Basin - Equus Bec (drainage b	2-CX71
	when water is released from	m storage for use by water e date we receive your app	vs established by law or may assurance district members. lication, you will be sent the a	If your application is subject
3.	The maximum quantity of	water desired is 28.00	acre-feet OR	_ gallons per calendar year,
	to be diverted at a maximu	um rate of <u>75</u> ga	allons per minute OR	cubic feet per second.
	requested quantity of water maximum rate of diversion	r under that priority number n and maximum quantity of	the requested maximum rate can <u>NOT</u> be increased. Plea water are appropriate and re ter Resources' requirements.	se be certain your requested easonable for your proposed
4.	The water is intended to be	e appropriated for (Check us	se intended):	
	(a) ☐ Artificial Recharge	(b) ⊠ Irrigation	(c) ☐ Recreational	(d) ☐ Water Power
	(e) ☐ Industrial	(f) 🗆 Municipal	(g) ☐ Stockwatering	(h) ☐ Sediment Control
	(i) Domestic	(j) Dewatering	(k) ☐ Hydraulic Dredging	(I) ☐ Fire Protection
	(m) ☐ Thermal Exchange	(n) ☐ Contamination Re	emediation	
	YOU <u>MUST</u> COMPLETE AND A SUBSTANTIATE YOUR REQUES	TTACH ADDITIONAL DIVISION ST FOR THE AMOUNT OF WAT	OF WATER RESOURCES FORM(S ER FOR THE INTENDED USE REF	S) PROVIDING INFORMATION TO ERENCED ABOVE.
<i>ق</i> _ F.O.	ce Use Only:  Compared to the	5-3-1 (VES) NO) Use [ RR	Source G/S County SC	By AG Date 212-IS

Э.	rne	e location of the proposed wells, pump sites or other works for diversion of water is:							
	Not	e: For the application to be accepted, the point of diversion location must be described to at least a 10 acre tract, unless you specifically request a 60 day period of time in which to locate the site within a specifically described, minimal legal quarter section of land.							
	(A)	One in the NW quarter of the NW quarter of the NE quarter of Section 27, more particularly described as							
		being near a point 4669 feet North and 2050 feet West of the Southeast corner of said section, in Township							
		26 South, Range 1 East/West circle one), Sedgwick County, Kansas.							
	(B)	One in the quarter of the quarter of the quarter of Section, more particularly							
	•	described as being near a point feet North and feet West of the Southeast corner of said							
		section, in Township South, Range East/West (circle one), County, Kansas.							
	(C)	One in the quarter of the quarter of the quarter of Section, more particularly							
	(-)	described as being near a point feet North and feet West of the Southeast corner of said							
		section, in Township South, Range East/West (circle one), County, Kansas.							
	(D)	One in the quarter of the quarter of the quarter of Section, more particularly							
	(D)	described as being near a point feet North and feet West of the Southeast corner of said							
		section, in Township South, Range East/West (circle one), County, Kansas.							
		Section, in Township South, Nange Last/ Vest (circle one), Southy, Nansas.							
	four not t distr	attery of wells is defined as two or more wells connected to a common pump by a manifold; or not more than wells in the same local source of supply within a 300 foot radius circle which are being operated by pumps to exceed a total maximum diversion rate of 800 gallons per minute and which supply water to a common ribution system.							
6.	The	eowner of the point of diversion, if other than the applicant is (please print):							
		(name, address and telephone number)							
		(name address and talashare number)							
	Vou	(name, address and telephone number)							
	You must provide evidence of legal access to, or control of, the point of diversion from the landowner or the landowner's authorized representative. Provide a copy of a recorded deed, lease, easement or other document with this application. In lieu thereof, you may sign the following sworn statement:								
		I have legal access to, or control of, the point of diversion described in this application from the landowner or the landowner's authorized representative. I declare under penalty of perjury that the foregoing is true and correct.							
		Executed on February 45, 2015. Applicant's Signature							
7.	The	proposed project for diversion of water will consist of One well (number of wells, pumps or dams, etc.)							
	and	(was)(will be) completed (by) 02/13/2009 (Month/Day/Year - each was or will be completed)							
8.	The	first actual application of water for the proposed beneficial use was or is estimated to be 03/01/2015.  WATER RESOURCES RECEIVED.							

FEB 1 2 2015 SCANNED KS DEPT OF A GRICULTURE

File No.	49,294.

9.	Will pesticide, fertilizer, or other foreign substance be injected into the water pumped from the diversion works  ☐ Yes ☑ No   If "yes", a check valve shall be required.
	All chemigation safety requirements must be met including a chemigation permit and reporting requirements
10.	f you are planning to impound water, please contact the Division of Water Resources for assistance, prior submitting the application. Please attach a reservoir area capacity table and inform us of the total acres surface drainage area above the reservoir.
	Have you also made an application for a permit for construction of this dam and reservoir with the Division Water Resources? ☐ Yes ☐ No
	If yes, show the Water Structures permit number here
	If no, explain here why a Water Structures permit is not required
11.	The application <u>must</u> be supplemented by a U.S.G.S. topographic map, aerial photograph or a detailed plandwing the following information. On the topographic map, aerial photograph, or plat, identify the center of the section, the section lines or the section corners and show the appropriate section, township and range number Also, please show the following information:
	a) The location of the proposed point(s) of diversion (wells, stream-bank installations, dams, or other diversion works) should be plotted as described in Paragraph No. 5 of the application, showing the North-Sou distance and the East-West distance from a section line or southeast corner of section.
	b) If the application is for groundwater, please show the location of any existing water wells of any kind within mile of the proposed well or wells. Identify each existing well as to its use and furnish the name and mailir address of the property owner or owners. If there are no wells within ½ mile, please advise us.
	c) If the application is for surface water, the names and addresses of the landowner(s) ½ mile downstream ar ½ mile upstream from your property lines must be shown.
	d) The location of the proposed place of use should be shown by crosshatching on the topographic map, aeri photograph or plat.
	<ul> <li>Show the location of the pipelines, canals, reservoirs or other facilities for conveying water from the point diversion to the place of use.</li> </ul>
	A 7.5 minute U.S.G.S. topographic map may be obtained by providing the section, township and rang numbers to: Kansas Geological Survey, 1930 Constant, Campus West, University of Kansas, Lawrence Kansas 66047.
12.	List any application, appropriation of water, water right, or vested right file number that covers the same diversic points or any of the same place of use described in this application. Also list any other recent modifications made o existing permits or water rights in conjunction with the filing of this application.
	Nell and place of use is currently used for #47457, but it is requested that when this application is approved
	4ศ4ฮ <b>์1</b> that #47457 be abandoned. Request to combine place of use for #47456 and # <del>4645</del> 7 to a net of 9.0 Acres
	Quantity will be limited to 28 acre feet when combined with another application at #47456 well location
	WATER RESOURCES
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File No.	49,284	
_		

13.	has not been completed, gi					unuwater. II tii	e weii					
	Information below is from:	☐ Test holes	⊠ Well a	as completed	□ Drillers	log attached						
	Well location as shown in p	aragraph No.	(A)	(B)	(C)	(D)						
	Date Drilled	_	02/13/09									
	Total depth of well	_	50									
	Depth to water bearing form	nation _	10									
	Depth to static water level	_	10	-								
	Depth to bottom of pump in	take pipe _	25									
14.	The relationship of the a	pplicant to the	proposed p	lace where th	e water will	be used is th	at of					
	Agent (owner, tenant, agent or otherwise	<u>e)</u> .										
15.	The owner(s) of the propert	y where the wate	r is used, if	other than the a	applicant, is (p	lease print):						
	(name, address and telephone number)											
		(nama addr	oss and told	nhono numbor	<u> </u>							
16.	(name, address and telephone number)  The undersigned states that the information set forth above is true to the best of his/her knowledge and that this application is submitted in good faith.											
	Dated at	, Kansas	s, this	day of	(month)	,	··					
					(monut)	(your						
	(Applicant Signatu	re)			S) SOCIAL SECU ATION NUMBER		-					
By	Tolke		_ 2	6-2515			-					
	(Agent or Officer Sigh	ature)		APPLICANT(S)	and/or TAXPAYER I.D.	NO.(S)						
7	Agent or Officer - Please	se Print)		·								
Assiste	d by		/	ffice/title)	Date:							
			(0	mice/title)								

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# IRRIGATION USE SUPPLEMENTAL SHEET

File No.

DWR 1-100.23 (7-7-00)

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Page 1 of 2

2.	Plea sup	ase complete the following information for the description of the operation for the irrigation project. Attach plemental sheets as needed.
	a.	Indicate the soils in the field(s) and their intake rates:
		Soil Percent Intake Irrigation Name of field Rate Design (%) (in/hr) Group  Realt LFS  SO% 6-20  A)/A
		Corwile FSL 30%
		Total: 100 %
	b.	Estimate the average land slope in the field(s): $1-2$ %
		Estimate the maximum land slope in the field(s):
	c.	Type of irrigation system you propose to use (check one):
		Center pivot Center pivot - LEPA "Big gun" sprinkler
		Gravity system (furrows) Gravity system (borders) Sideroll sprinkler
		Other, please describe: Zonea is aution system
	d.	System design features:
		i. Describe how you will control tailwater:
		N/A
		ii. For sprinkler systems:
		(1) Estimate the operating pressure at the distribution system: psi
		(2) What is the sprinkler package design rate? gpm
		(3) What is the wetted diameter (twice the distance the sprinkler throws water) of a sprinkler on the
		outer 100 feet of the system? feet
		(4) Please include a copy of the sprinkler package design information.
	e.	Crop(s) you intend to irrigate. Please note any planned crop rotations:
		Irrigation of text grass + common areas
	f.	Please describe how you will determine when to irrigate and how much water to apply (particularly important if you do not plan a full irrigation).
		schedule according to rain + ET

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

13: 6 1 11:

### Baum, Kristen [KDA]

From:

Lanterman, Jeff

Sent:

Tuesday, October 31, 2017 2:33 PM

To: Cc: Baum, Kristen Conant, Cameron

Subject:

FW: File Nos. 49284 & 49285 - Edgewater HOA

**Attachments:** 

49284\_85 Memo To File.docx

WOW This has been a long time coming.

I remember the justification from Daniel on the turf grass. I kind of think could be a model for this kind of justification.

I recommend approval.

Jeff

From: Conant, Cameron

**Sent:** Tuesday, October 31, 2017 1:06 PM **To:** Lanterman, Jeff <Jeff.Lanterman@ks.gov>

Subject: FW: File Nos. 49284 & 49285 - Edgewater HOA

Jeff, these have been in the hopper for a long time. GMD#2 spent considerable time polishing these up and working with the HOA and the consultant (B&M) to get everything in line. New applications originally came up and were deemed necessary due to continual (4 straight years) over pumping of the existing senior files which will be voluntarily dismissed if the 2 new apps are approved. The original apps were just filed for 1.3AF/acre which was just not enough in this case.

There are multiple waivers to get this done, but all seem appropriate and justified. A summary of the waivers is below.

Spacing to each other: I have no issue, these wells operate for the benefit of the HOA and have been in use for years together

Spacing to nearby homeowners: (consent forms received-no negative comments)-no complaints from nearby well owners and no negative comments

Spacing to pit owned by the HOA: I have no issue, HOA wells and HOA pit will always be included together in the same development

Spacing to a pit not owned by the HOA: I have no issue, this pit is not being developed and has been placed in a partial offset status for a different development

Quantity per acre is at 3.1 AF/acre: I have no issue, the consultant provide more than adequate justification based on turf grass needs and past use

Please note the new files will create an partial incomplete overlap with an existing GW pit owned by the HOA...we have both discussed this with Kristen and I believe we all agree that at this point, this issue can be cleaned up during the certification process for the existing GW pit. The partial overlap came after a 2015 p/u change on the pit showed an ~2 acre expansion in size which has not yet, and will likely not even happen, the additional ~2 acres of expansion are acres that are listed as irrigated green space around the pit hence the incomplete overlap.

GMD recommended approval for all the waivers, but they did want the incomplete overlap cleaned up...which we will just take care of during certification of the existing GW pit authorized by 47,615.

I think both of these apps can be recommended for approval with the waivers and the 2 existing files can be voluntarily dismissed.

### Please pass on to Kristen if you agree.

### Cameron

From: Baum, Kristen

Sent: Tuesday, October 17, 2017 3:21 PM
To: Lanterman, Jeff < Jeff.Lanterman@ks.gov >
Cc: Conant, Cameron < Cameron.Conant@ks.gov >
Subject: RE: File Nos. 49284 & 49285 - Edgewater HOA

Jeff,

Attached is a memo for the above-referenced new applications. Edgewater HOA needs additional water from two existing wells in order to maintain the commons areas turf. They are voluntarily dismissing the existing irrigation rights if these apps are approved. These will include waivers of spacing and maximum reasonable quantity as per GMD2 recommendation.

Please provide your recommendation.

Thanks,

Kristen A. Baum
Division of Water Resources – Water Appropriations
Kansas Department of Agriculture
1320 Research Park Drive
Manhattan KS 66502
(785) 564-6627

My email address has changed: kristen.baum@ks.gov

From: Conant, Cameron

**Sent:** Friday, October 13, 2017 9:28 AM **To:** Baum, Kristen < <u>Kristen.Baum@ks.gov</u>>

Subject: FW: File Nos. 49284 & 49285 - Edgewater HOA

From: Lanterman, Jeff

Sent: Friday, April 7, 2017 5:03 PM

**To:** Conant, Cameron < <u>Cameron.Conant@ks.gov</u>> **Subject:** FW: File Nos. 49284 & 49285 - Edgewater HOA

From: Baum, Kristen

**Sent:** Friday, April 7, 2017 4:05 PM

### **Turney, Brent**

From:

Clement, Daniel W < dwclement@burnsmcd.com>

Sent:

Monday, March 20, 2017 5:36 PM

To: Cc: Turney, Brent

Subject:

j@jrussellco.com

Attachments:

Edgewater HOA Place of Use Clarification

Edgewater Partial Overlap Clarification.pdf

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Brent,

To clarify the potential overlap in place illustrated during the GMD2 review please see the attached letter.

There is no current is or anticipated physical overlap in place of use, and the precise description for both the final groundwater pit acres and the irrigated acres will occur during certification further insulating from any water rights with partial overlap.

It looks like to me that this issue might be from trying to apply exact precision in the original place of use drawing map made in 2010. The total authorized acres and location of those acres has not substantially changed (quarter calls, land ownership, project intent, geocenter, etc...) to warrant a voluntary reduction or change application especially during the perfection period.

If you have any questions please feel free to give me a call,

### Daniel Clement \ Burns & McDonnell

Staff Hydrogeologist \ Water
o 316-616-0522 \ M 316-518-0893 \ F 316-941-4730
dwclement@burnsmcd.com \ burnsmcd.com
800 E. 1st Street North, Suite 400 \ Wichita , KS 67202

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March 20th 2017

Brent Turney Kansas Department of Agriculture Division of Water Resources 1320 Research Park Drive Manhattan, Kansas 66502 WATER RESOURCES RECEIVED

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Re: Applications 49284 and 49285 potential overlap in place of use with 47615

Dear Mr. Turney:

During the review of applications 49284 and 49285, Groundwater Management District No. 2 (GMD2) and the Division of Water Resources (DWR) identified a possible place of use overlap between the proposed place of use for the two Edgewater HOA irrigation wells and the authorized place of use described by 47615.

Applications 49284 and 49285 will irrigate a total of nine acres based on the currently proposed place of use, however there is clearly no intention by the Edgewater HOA to irrigate any acreage that has or will be exposed to groundwater. To further specify the intent of both the irrigation and groundwater pit projects, we would like to submit the following statements of clarification:

- Applications 49284 and 49285 are fully anticipated to irrigate a complete total of nine acres based on the currently submitted and illustrated place of use within the applications.
- The identified potential place of use overlap with 47615 has not yet been excavated for groundwater exposure, thus no current physical overlap in place of use exists.
- The potential place of use overlap illustration provided during the review appears to be an artifact from a reasonable representation and description of the anticipated bounds of the groundwater pit project at the time of filing in October of 2010.
- Additional refinement of the precise bounds and exact legal description of the place of use for both the irrigation rights and adjacent groundwater pits will occur during the normal water rights certification process generated and determined by DWR and GMD2, further eliminating any possibility of partial overlap in place of use.

Thank you for your review and consideration of applications 49284 and 49285, please let us know if we can provide any additional clarifications

Sincerely,

Hydrogeologist DWC/DWC

cc: Edgewater HOA

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



DIRECTORS:
DAVID BOGNER
ALAN BURGHART
JOE PAJOR
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

December 15, 2016

Chief Engineer, Division of Water Resources Attn: Erin McGrogan 1320 Research Park Dr. Manhattan, KS 66502

Re: Application No. 49284 - Edgewater HOA

Dear Ms. McGrogan:

The referenced application was reviewed by the Equus Beds Groundwater Management District No. 2, Board of Directors at the December 13, 2016 meeting. District staff and the applicant's consultant presented information regarding the application. A copy of the District's Application Review Information report is enclosed for your information.

Upon review of the information presented and discussed at the meeting, and based on findings that:

- 1. Application No. 49284 requests 28 acre-feet for irrigating 9 acres of turf grass and common areas at the Edgewater housing addition.
- 2. The application does not comply with Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), as the application requests 3.1 acre feet per acre for irrigation use, which exceeds the maximum allowable 1.3 acre per acre irrigation limit in Sedgwick County.
- 3. The application does not comply with the Non-Domestic Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(1), as the proposed point of diversion does not meet spacing to a non-domestic well and two groundwater pits.
- 4. The application does not comply with the Domestic Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(2), as the proposed point of diversion does not meet spacing to numerous domestic wells.
- 5. All nearby property owners with domestic wells within approximately 660 feet of the proposed well were notified via certified mail of the application by the applicant's consultant and asked to sign spacing consent forms.
- 6. Eight spacing consent forms were submitted from domestic well owners within approximately 660 feet of the proposed well. No negative comments were received from those domestic well owners that did not sign spacing consent forms.
- 7. The domestic wells to which the proposed point of diversion does not meet spacing requirements to are part of the Edgewater housing development;
- 8. The application and senior existing non-domestic points of diversion are all located within and part of the Edgewater housing development or owned by the Edgewater developer;



- Drawdown calculation using the proposed quantity and rate of 28 AF and 75 GPM indicates that drawdown at the nearest domestic well and non-domestic point of diversion (groundwater pit edge) will be less than 0.25 feet based on continuous pumping until the entire quantity has been pumped;
- 10. The minimal drawdown created by pumping of the proposed well will not impair existing senior domestic and non-domestic points of diversion.
- 11. The Applicant desires to maintain turf grass on loamy fine sand with intake rate of up to 6 to 20 inches per hour.
- 12. Precipitation and ET data submitted by the applicant's consultant indicates that fescue turf grass on the type of soil at the application site requires approximately 36.5 inches of irrigation based on a 75% sprinkler efficiency during an average rainfall growing season.

It was the decision of the Board of Directors to recommend to the Chief Engineer that Application No. 49284 is granted exceptions to the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), and the Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(1) & (2), and the application be recommended for approval, subject to:

- 1. Water Permit Nos. 47456 & 47457 are voluntarily dismissed as proposed by the applicant; and
- 2. The possible partial place of use overlap with Water Permit No. 47615 is determined and removed by either modifying the proposed place of use or modifying Water Permit No. 47615 authorized place of use.

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,

Tim Boese, Manager Equus Beds Groundwater Management District No. 2

TDB/rsw

**Enclosure** 

pc: Edgewater HOA, Applicant
Daniel Clement, Burns & McDonnell
Jeff Lanterman, Division of Water Resources, Stafford

### **APPLICATION REVIEW INFORMATION**

NAME Edgewater HOA	APPLICATION NO. 49284
ADDRESS 900 N Tyler Suite 7	APPL. X
Wichita, KS	COUNTY Sedgwick TRACT NW-NW-NE
	WELL LOCATION S 27 T26S R1W
	QUANT <u>28 AF/Y RATE 75</u> GPM
	WELL SPACING D<660', ND<1320'

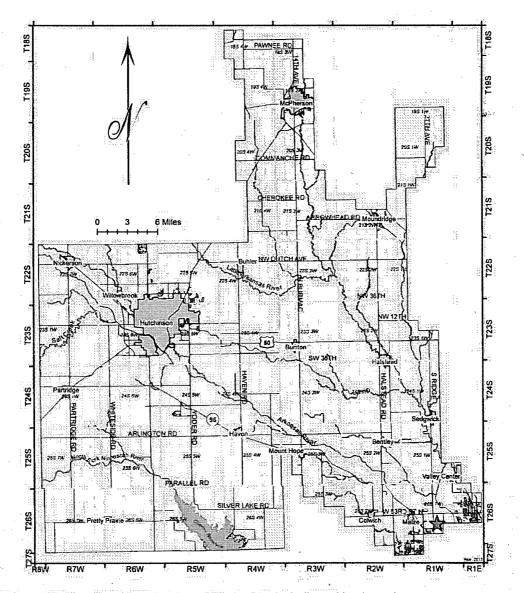


Figure 1. General location of application within the District indicated by the red star.

#### ISSUE:

The new application does not comply with the Domestic Spacing Rule and Regulation K.A.R. 5-22-2(a)(2), Non-Domestic Spacing Rule and Regulation K.A.R. 5-22-2(a)(1), Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), and has a partial place of use overlap with an existing permit.

### TIMELINE OF EVENTS:

Feb 12, 2015 – Applicant filed a new Application No. 49284 which requests 28 acre-feet on 9 acres for irrigation use.

May 16, 2016 - District staff sent a recommendation for denial to DWR and the applicant because:

- 1) The application does not meet the spacing regulation to domestic and non-domestic points of diversion and;
- 2) The application does not comply with maximum reasonable quantity for beneficial use rule and regulation and;
- 3) The proposed place of use partially overlaps place of use with an existing permit.

<u>June 10, 2016</u> — The applicant appealed the Districts recommendation for denial (Attachment A)

<u>June 30, 2016</u> — The applicant and the applicants consultant were notified that the appeal will be reviewed at the August 23, 2016 Board Meeting.

<u>August 16, 2016</u> – The applicant and the consultant were notified again that the appeal will be reviewed at the August 23, 2016 Board Meeting.

August 23, 2016 – The appeal was heard by the District Board of Directors. It was the decision of the Board of Directors to table making a recommendation on the application to allow the applicant time to justify and/or modify the quantity of water requested and also allow time for the applicant to contact nearby domestic well owners in an attempt to obtain signed domestic well spacing consent forms for domestic wells located within 660 feet of the proposed points of diversion.

<u>December 6, 2016</u> – The applicant and the consultant were notified that the appeal will be reviewed at the December 13, 2016, Board Meeting.

#### SUMMARY OF APPLICATION REVIEW:

Surrounding well owners were notified via public notice in the Wichita Eagle. The Division of Water Resources (DWR) did not receive any calls or letters from nearby well owners.

Application No. 49284 proposes 28 acre-feet at 75 gallons per minute from a proposed well located 4669'N & 2050'W of the Southeast Corner of Section 27, Township 26 South, Range 1 West, Sedgwick County (Figure 1).

PRESONROSE CETERS APPERIAMANTERS MOSE, ENGLANDS DESTRA

The 9 acre place of use proposed by No. 49284 includes the 3.2 acres authorized by No. 47457 and the 5.8 acres authorized by No. 47456. Application No. 49285 proposes to replace No. 47456 and proposes the same 9 acre use as No. 49284 (Figure 3).

The application complies with the Safe Yield Regulation 5-22-7(a). The existing and proposed consumptive appropriations total 2338.04 AF/Y in the application's area of consideration (Figure 2 and Table 1). The maximum allowable appropriation for the area of consideration is 2625.5 AF/Y.

# Equus Beds Groundwater Management District No. 2 SAFEYIELD EVALUATION #49284 NWNWNE (4669'N & 2050'W) 27-26S-01W, Sedgwick County

Prepared By: Stephen Flaherty Date: 8/17/2016

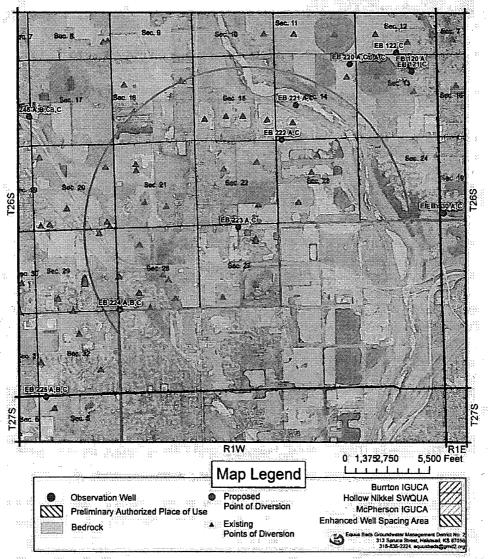


Figure 2. Safe yield map. Proposed Application #49284 will replace existing Permit #47457 if approved.

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### SAFEYIELD EVALUATION #49284

### LOCATION: NWNWNE (4669'N & 2050'W) 27-265-01W, Sedgwick County SPECIAL USE AREA: None

FILE_ID	WELL ID	Area in 3 inch di TOWNSHIP	RANGE	SECTION	QUALIFIER	USE	AUTHQUANTITY
A00552400	307	265	01W	15	13864620	REC	67
A01527300	962	265	01W	22	39601320	IRR	158
A026130D1IN	3736	265	01W	21	35903885	IND	63.33
A026130D1IR	3735	265	01W	21	39603921	IRR	41.75
A026130D2	1323	265	01W	21	39603921	IRR	46.55
A04082600	1215	265	01W	15	13200550	IND	150.06
A04083000	1219	26S	01W	27	14001600	REC	99
A040946D1	1094	265	01W	15	16073226	IND	48.5
A040946D2	4882	26S	01W	15	16042134	IND	48.5
A04098100	471	26S	01W	21	12951980	REC	70
A04108400	594	265	01W	16	7923828	REC	55
A04120900	45	26S	01W	14	11004200	IND	100
A04240000	2581	26S	01W	20	1880375	IND	15
		26S	01W	23	31893085	REC	97
A04365700	2660	26S	01W	22	35293479	REC	20
A04423900	2773			28	41503800	IND	78.3
A04480800	2898	265	01W	28		REC	18.33
A04504300	2975	26\$	01W		6751595	Market Committee	
A04515600	2958	26S	01W	28	10443946	REC	26
A04571900	3124	265	01W	29	49511104	REC	0.5
A046003D1	3202	26S	01W	23	13203960	IND	384
A046003D2	4876	265	01W	23	13203960	IND	216
A04616200	3257	265	01W	28	21952353	REC	4,33
A04616300	3258	265	01W	28	18591996	REC	2.48
A04640900	3344	265	01W	20	4800552	IND	14.69
A04645300	3356	26S	01W	28	953228	IRR	7.74
A04645400	3358	26S	01W	28	21905180	IRR	11.17
A04681000	3459	26S	01W	21	16233397	REC	9.4
A04745600	3636	265	01W	27	41491564	IRR	7.54
A04745700	3637	265	01W	27	46692050	IRR	4.16
A047518IR	3656	265	01W	23	43002640	IRR	13
A047518RE	3657	265	01W	23	43002640	REC	70
A04761500	3708	265	01W	27	43301540	IND	19.9
A04883600	4156	265	01W	22	12201270	IND	- 150
A04928400P	4869	265	01W	27	46692050	IRR	28
A04928500P	4870	265	01W	27	41491564	IRR	11 0 C
A04948400P	4874	265	01W	27	6303756	IRR	0
A04948400P	4875	265	01W,	27	6303756	REC	0
A04993700P	4860	265	01W	20	39550597	IRR	0
A20019068	2929	265	01W	28	41503800	HYD	345
A20109084	3704	26S	01W	23	13203960	HYD	2386
A20109138	3752	26S	01W	14	11004200	IND	552
A20149062	4858	265	01W	22	12201270	HYD	1066
A20159048	4881	26S	01W	21	35903885	HYD	371.2
A92911000	718	265	01W	15	13200550	HYD	309
Illowable Appro		2,625.50	2		ng Appropriatio		7,174.43
mail User Quant		0			mptive Appropi		5,029.20
lemaining SUQ		45			ve Appropriatio		2,338.04
lote- Values are	in acre-feet				ppropriations		287.46

Table 1. Safe yield table.

The proposed point of diversion does not meet spacing to nearby domestic wells, non-domestic groundwater pits authorized by No. 47165 and No. 48836, and an existing non-domestic well authorized by No. 47456 and proposed by No. 49285 (Figure 3).

AGESTO ATEM TE

## Equus Beds Groundwater Management District No. 2

Spacing Evaluation #49284 NWNWNE (4669'N & 2050'W) 27-26S-01W, Sedgwick County

Prepared By: Stephen Flaherty Date: 8/18/2016

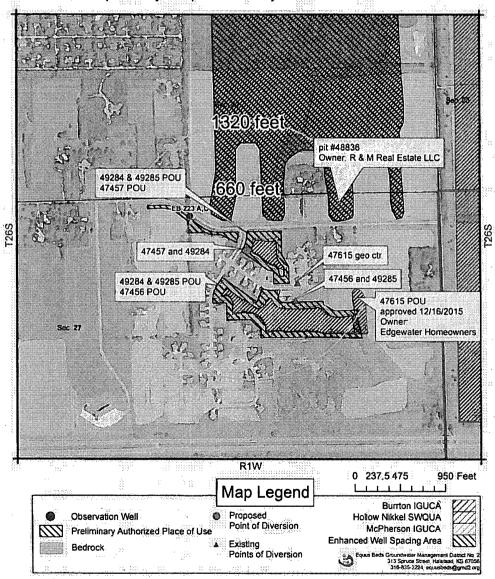


Figure 3. Spacing evaluation showing the proximity to all points of diversion and the place of use distribution.

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The applicant's consultant sent letters to property owners in the Edgewater addition asking domestic well owners to sign spacing consent forms. The owners of 8 of the approximately 27 domestic wells within approximately 660 feet of the proposed well signed and returned the spacing consent forms (Figure 4). The applicant's consultant advised that none of the property owners responded negatively to the requests; rather they just did not return the spacing consent forms.

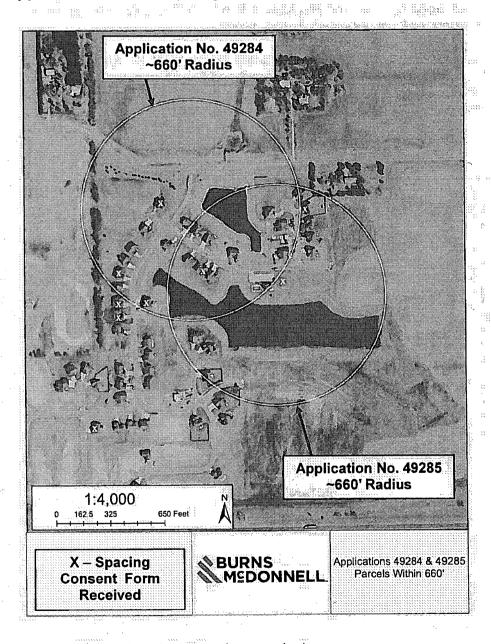


Figure 4. Domestic well spacing consent forms received.

The applicant previously submitted a letter requesting an exception to submitting individual well spacing consent forms for each domestic well (Attachment B).

Historically, an exception to the Non-Domestic Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(1) was granted for No. 47457 to a senior groundwater pit and well because they were part of the Edgewater development. Permit No. 47457 received well spacing consent forms for nearby domestic wells at occupied homes. An exception to the Domestic Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(2) was granted for No. 47457 to domestic wells at unoccupied spec. homes.

Drawdown calculation using the proposed quantity and rate of 28 AF and 75 GPM indicates that drawdown at the nearest domestic well and non-domestic point of diversion (groundwater pit edge) will be less than 0.25 feet based on continuous pumping until the entire quantity has been pumped (Figure 5).

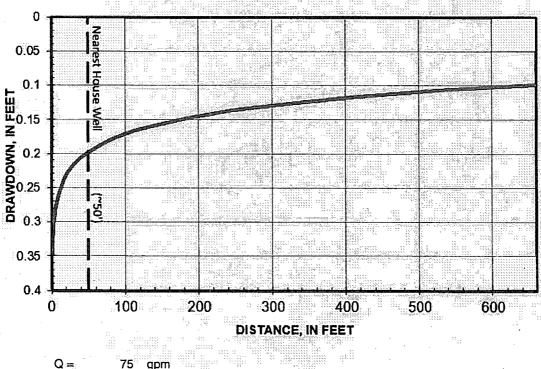


Figure 5 - Drawdown

S = 0.15  $T = 60000 \text{ ft}^2/\text{d}$ Time = 0.23145 years The application proposes the use of 28 acre feet on 9 acres which is a water to land ratio of 3.1 acre-feet/acre for irrigation of turf grass and common areas. The maximum allowable land to water ratio is 1.3 acre-feet/ acre as described in K.A.R. 5-22-14(a)(1). An analysis of water use history from the existing permits is presented in Tables 2A-C.

Application No. 49284 proposes to replace Permit No. 47457 and is proposed at the same well location at Permit No. 47457. Permit No. 47457 is authorized for 4.16 acre feet on 3.2 acres. See figure 3 for place of use. In 2014 Permit No. 47457 used 4.35 acre feet per acre. 2013, 2014, and 2015 water use reports are in excess of the authorized quantity (Table 1a). A notice of non-compliance was issued by the Division of Water Resources for 2013 overpumping.

13	. 1 1	***************************************	
property special	Year	AF Used	Water to Land Ratio
Same Services	2012	0.00	0 AF/A
Section of the second	2013	9.41	2.94 AF/A
	2014	13.93	4.35 AF/A
Salar Contra	2015	10.22	3.19 AF/A

Table 2A. Water use history from permit no 47457.

Permit no. 47456 is authorized for 7.54 acre feet on 5.8 acres. See figure 3 for place of use. In 2014 Permit No. 47456 used 1.91 acre feet per acre. 2013, 2014, and 2015 water use reports are in excess of the authorized quantity (Table 1B). A notice of non-compliance was sent by the Division of Water Resources for 2013 overpumping.

Year	AF Used	Water to Land Ratio
2012	0.00	0 AF/A
2013	9.18	1.58 AF/A
2014	11.07	1.91 AF/A
2015	9.65	1.66 AF/A

Table 2B. Water use history from permit no 47456.

Combined water to land ratio from permits 47456 and 47457. See figure 3 for place of use.

Year	AF Used	Water to Land Ratio
2012	0.00	0 AF/A
2013	18.59	2.06 AF/A
2014	25	2.8 AF/A
2015	19.87	2.21 AF/A

Table 2C. Water use history combined from permits 47456 and 47457

1. The currently authorized points of diversion are authorized for 1.3 acre feet per acre and this is not sufficient to maintain soil moisture within the rooting zone for turf grass because of the steep slopes and sandy soils.

- 2. Sandy soils indicate that a significant portion of applied water is returning to the aquifer.
- 3. The existing wells have operated historically without affecting each other.
- 4. The proposed irrigation wells that do not meet spacing are owned by the same entity.
- 5. The applicant requests a spacing waiver as granted for 47456 and 47457.
- Obtaining individual domestic consent forms would take a significant amount of time.
- 7. The 28 acre feet requested is reasonable.

On September 2, 2016, the applicant's consultant provided information and data regarding irrigation of turf grass (fescue) based on the soil type at the application site, maximum rooting depth of 12 inches and a growing season from April 11 – October 25. The six month growing season is longer than traditional irrigated crops such as corn and soybeans. A summary of irrigation requirements using 1998-2015 historical precipitation and ET data for the growing season from the District's Sedgwick County weather station yields the following:

Year	Precipitation (In)	ET Grass (In)	Imigation Required	Sprinkler Effectency 75%
1998	16.57	34.611	27.05	36.07
1999	24.32	33.741	23.17	30.89
2000	17.24	36.949	27.81	37:08
2001	16.6	37. <u>16</u> 9	27.40	36.53
2002	22.22	36.764	28.86	38.48
2003	19.1	36.761	27.34	36.46
2004	21.37	37.322	27.76	37:01
2005	27.18	39.108	28.19	37.58
2006	19.68	42.114	28.79	38.39
2010	20.54	41.36	30.54	40.7.2
2011	9.82	43.86	36.72	48.96
2012	11.13	45.59	36.55	48.73
2013	28.25	41.58	28.86	38.48
2014	16.11	41.17	31.81	42.41
2015	27.25	40.76	27.76	37.01

	Irrigation Avg Req. (In)	Effeciency 75% (In)	
Normal Year Avg Irr.	27.26	36.3.5	
Dry Year Avg Irr.	29.40	39.2-0	escope.
Drought Year Avg Irr.	35.03	46.70	0.00
		CA (200.000) 2 Samuella and a comment	

### HYDROGEOLOGIC REVIEW:

Hydrologic data indicates that depth to bedrock is approximately 95 feet below land surface at the proposed well site.

The nearest water level monitoring site to the application, EB223, is located approximately 695 ft northwest of the proposed well and has been recording water-level data since 1988. Depth to static water currently ranges from 10 to 15 feet below land surface (Figure 6).

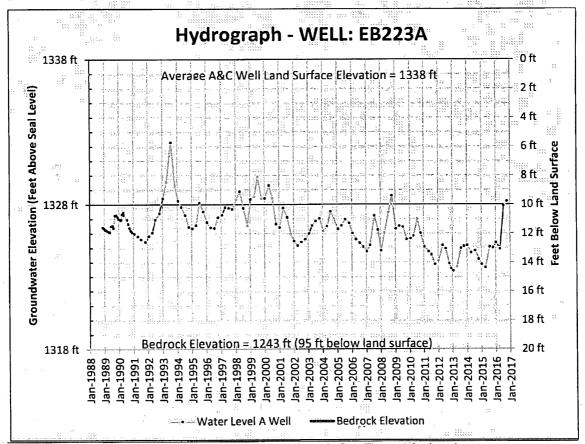


Figure 6 - Hydrograph from nearby monitoring well EB223A. See Figure 3 for location.

Soils in this area have a high infiltration rate of up to 6 to 20 inches per hour. Additional extracted water that is not lost to evaporation will likely return to the aguifer faster than less-sandy materials.

Most of the place of use is located on steep banks of the groundwater pits (Figure 7). Waters that do not infiltrate into the ground or evaporate will largely wash out into the groundwater pits.

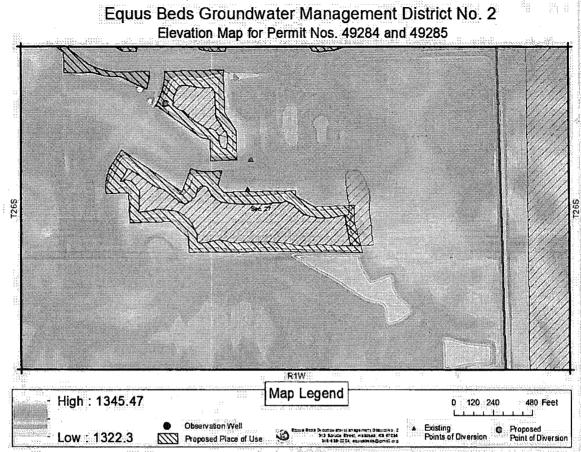


Figure 7. Elevation survey of the area around applications 49284 and 49285. Water applied on the proposed place of use will generally runoff into the groundwater pits.

### STAFF RECOMMENDATIONS:

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

- 1. Application No. 49284 requests 28 acre-feet for irrigating 9 acres of turf grass and common areas at the Edgewater housing addition.
- 2. The application does not comply with Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), as the application requests 3.1 acre feet per acre for irrigation use, which exceeds the maximum allowable 1.3 acre per acre irrigation limit in Sedgwick County.
- 3. The application does not comply with the Non-Domestic Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(1), as the proposed point of diversion does not meet spacing to a non-domestic well and two groundwater pits.
- 4. The application does not comply with the Domestic Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(2), as the proposed point of diversion does not meet spacing to numerous domestic wells.
- 5. All nearby property owners with domestic wells within approximately 660 feet of the proposed well were notified via certified mail of the application by the applicant's consultant and asked to sign spacing consent forms.

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- 6. Eight spacing consent forms were submitted from domestic well owners within approximately 660 feet of the proposed well. No negative comments were received from those domestic well owners that did not sign spacing consent forms.
- 7. The domestic wells to which the proposed point of diversion does not meet spacing requirements to are part of the Edgewater housing development;
- 8. The application and senior existing non-domestic points of diversion are all located within and part of the Edgewater housing development or owned by the Edgewater developer;
- 9. Drawdown calculation using the proposed quantity and rate of 28 AF and 75 GPM indicates that drawdown at the nearest domestic well and non-domestic point of diversion (groundwater pit edge) will be less than 0.25 feet based on continuous pumping until the entire quantity has been pumped;
- 10. The minimal drawdown created by pumping of the proposed well will not impair existing senior domestic and non-domestic points of diversion.
- 11. The Applicant desires to maintain turf grass on loamy fine sand with intake rate of up to 6 to 20 inches per hour.
- 12. Precipitation and ET data submitted by the applicant's consultant indicates that fescue turf grass on the type of soil at the application site requires approximately 36.5 inches of irrigation based on a 75% sprinkler efficiency during an average rainfall growing season.

### Staff Recommends:

That exceptions to the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), and the Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(1) & (2), be granted and the application be recommended for approval, subject to:

- 1. Water Permit Nos. 47456 & 47457 are voluntarily dismissed as proposed by the applicant; and
- 2. The possible partial place of use overlap with Water Permit No. 47615 is determined and removed by either modifying the proposed place of use or modifying Water Permit No. 47615 authorized place of use.

ASSNOW, NEW TH

### Attachment A. Applicants appeal letter.



May 24, 2016

Tim Boese Manager Groundwater Management District No. 2 313 Spruce Street Halstead, KS 67056-1925

Re: Appeal Petition - Application Nos. 49284 and 49285

Dear Mr. Roese

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JUN 14 2016

Equus Beds Groundwater Management District No. 2

We are in receipt of your letters dated May 16th 2016 regarding the recommendation of denial by the Equus Beds Groundwater Management District. During the review of the applications the District found that the applications do not comply with one or more Groundwater Management District Rules and Regulations Including:

- The applications do not comply with non-domestic spacing regulation 5-22-2(a)(1) as the proposed wells are closer than 1,320 feet to the edge of groundwater pit permitted by 47615 and 48836
- 2. The applications do not comply with non-domestic spacing regulation 5-22-2(a)(1) as the proposed wells are closer than 1,320 feet to one another.
- 3. The application does not comply with domestic well spacing regulation 5-22-2(a)(2) as the proposed wells are closer than 660 feet to multiple nearby domestic wells in the area.
- 4. The proposed place of use appears to overlap the current place of use for the groundwater pit authorized by Water Permit 47615.
- The application does not comply with the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), as the proposed water to land ratio exceeds the maximum allowable of 1.3 acre-feet per acre for Sedgwick County.

The Edgewater HOA covers a small residential development located in Maize, KS. There are two existing water rights that the HOA utilizes to irrigate community open spaces within the subdivision (Water Permit Nos. 47456 and 47457). Water appropriation #47456 has an annual appropriation of 7.54 acre-feet and an approved place of use of 5.8 acres, and #47457 has an annual appropriation of 4.16 acrefeet and an approved place of use of 3.2 acres.

Because of the sandy soils at this location, the HOA has not been successful at maintaining the quality turf that is desired in this subdivision under the existing allowable appropriations. Therefore, the HOA is submitting new applications that will increase the amount of water available to the HOA's two existing irrigation wells. The proposed wells will remain identical to those currently in use and it is requested that upon approval of the enclosed applications that Water Permit Nos. 47456 and 47457 be dismissed. The applications request a net appropriation total of 28 acre-feet when combined, and the place of use for each application when combined will result in a total irrigated area of 9 acres.

9400 Ward Parkway \ Kansas City, MO 64114 © 816-333-9400 \ F 816-333-3690 \ burnsmod.com

AGENDA ITEM TA



### RECEIVED

Tim Boese 2 May 24, 2016 Page 2

JUN 1 4 2016

Equus Beds Groundwater Management District No. 2

We recognize that the requested quantities exceed the typical allotment of water per acre for the area, however as previously noted, this site has extremely sandy soils and steep slopes requiring additional and frequent irrigation to maintain soil moisture within the rooting zone. The sandy soils at this site also indicate that a significant portion of the water applied during irrigation is returning to the aquifer as infiltration.

K.A.R 5-3-20(c) indicates that a quantity above the established maximum reasonable annual amount can be exceeded if the applicant can demonstrate that an increased demand is needed for a specialty crop (in this case turf and not traditional large scale row crops). The quantities requested reflect the historic required amount of water pumped during a single year for turf maintenance. We feel that the amount requested is not wasteful and will not otherwise prejudicially or unreasonably affect the public interest based on the relatively low quantity and pumping rate. The HOA understands that the aquifer is a precious resource, and the utilization of the aquifer for the economic benefits of maintaining the Edgewater Development's aesthetics is a privilege.

On behalf of the Edgewater Homeowners Association we would like to request an appeal of the District's decision to recommend Application 49284 and 49285 based on the following:

- 1. The applications do not comply with non-domestic spacing regulation 5-22-2(a)(1) as the proposes wells are closer than 1,320 feet to the edge of groundwater pit permitted by 47615 and 48836.
  - Groundwater Pits 47615 and 48836 are currently owned by the developer of the Edgewater Housing Development (R&R Realty) and the dredged place of use for both of these groundwater pits and the associated water rights will eventually be relinquished to the Edgewater HOA.
  - A letter of support will be provided by the current owner (R&R Realty) of 47615 and 48836 for the proposed irrigation wells.
  - The wells have operated historically without prejudicially affecting the nearby groundwater pits, domestic wells, or other aquifer users.
  - Based on these items Edgewater HOA would like to request the District Board of Directors recommend a waiver of the non-domestic well to groundwater pit spacing regulations, as was previously granted for permits 47456 and 47457.
- 2. The applications do not comply with non-domestic spacing regulation 5-22-2(a)(1) as the proposed wells are closer than 1,320 feet to one another.
  - The proposed irrigation wells have operated historically at the proposed rates and quantities without impairing one another.
  - The proposed irrigation wells that do not meet spacing are owned by the same entity (Edgewater HOA).



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Tim Boese 2 May 24, 2016 Page 3 JUN 14 2016

Equus Beds Groundwater Management District No. 2

- The District Board of Directors has previously granted a waiver for non-domestic well spacing based on the specific limited risk of impairment under Water Permits 47456 and 47457.
- Based on these items Edgewater HOA would like to request the District Board of Directors recommend a waiver of the non-domestic well spacing regulation, as was previously granted for permits 47456 and 47457.
- 3. The application does not comply with domestic well spacing regulation 5-22-2(a)(2) as the proposed wells are closer than 660 feet to multiple nearby domestic wells in the area.
  - The HOA collectively represents the interests of homeowners within the Edgewater development for management and maintenance of common areas, and as such provided a letter supporting the applications to the Division of Water Resources and the Groundwater Management District.
    - Obtaining spacing consent forms from individual homeowners within 660 feet surrounding the HOA's wells would take a significant amount of time based on the number of existing private irrigation wells;
    - The existing irrigation wells have operated historically without any complaints of drawdown or impairment;
    - Approval of the applications will not affect any individual homeowner's right to file an impairment complaint with the Chief Engineer, Division of Water Resources:
    - Homes in the Edgewater development are on municipal water supply, the surrounding private domestic wells are for irrigation of private landscaping only;
  - The District Board of Directors has previously granted a waiver for domestic well spacing based on the specific limited risk of impairment under Water Permits 47456 and 47457, the rates and quantities of 49284 and 49285.
- 4. The proposed place of use appears to overlap the current place of use for the groundwater pit authorized by Water Permit 47615.
  - According to the application documents the place of use includes
    - The community owned areas immediately surrounding the currently exposed groundwater pit located north of Driftwood Street and south of 49th Street N.
    - ii. The community owned areas immediately surrounding the currently exposed groundwater pit located south of Driftweood street and north of Kallmeyer Street
    - An small strip of community owned area south and adjacent to 49th Street North and west of N. Cimmaron Street.
  - None of the currently proposed place of use for 49284 or 49285 is intended to include the exposed groundwater surface permitted by 47615, please advise if this area needs clarification
  - The currently calculated place of use based on best match of property parcels and right of way analysis appears to be 9.0 acres.



Tim Boese 2 May 24, 2016 Page 4

- The application does not comply with the Maximum Reasonable Quantity for Beneficial Use Rule
  and Regulation K.A.R. 5-22-14(a)(1), as the proposed water to land ratio exceeds the maximum
  allowable of 1.3 acre-feet per acre for Sedgwick County.
  - The applications request a net appropriation total of 28 acre-feet when combined, and the
    place of use for each application when combined will result in a total irrigated area of 9
    acres.
  - The 28 acre-feet requested represents a reasonable maximum amount of water based on historic use of the Edgewater HOA irrigation system, and will be required to go through the water right perfection process to establish a maximum reasonable need for:
    - Extremely sandy soils at this location, the HOA has not been successful at maintaining the quality turf that is required in this subdivision under the existing allowed appropriation to land ratio.
    - The sandy soils at this site also indicate that a significant portion of the water applied during irrigation is returning to the aquifer through infiltration.
  - Pumping water in excess of the minimum required amount for irrigation is not in the interest of the HOA as electricity costs go up and the groundwater quality is such that iron staining of infrastructure occurs.
  - The HOA will remain committed to managing irrigation scheduling to eliminate runoff and manage water resources responsibly.

Sincerely,

Daniel Clement Staff Hydrogeologist

DWC/dwc

cc: Erin McGrogan - Division of Water Resources
Jeff Lanterman - Division of Water Resources

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JUN 1 4 2016

Equus Beds Groundwater Management District No. 2 mannamananist com ma mamanista is in cam suma monthis

### Attachment B. Applicants support letter.

February 12, 2016

Erin McGrogan **Environmental Scientist** Division of Water Resources Kansas Department of Agriculture 1320 Research Park Drive Manhattan, Kansas 66502

Re: Waiver of Domestic Well Spacing - Applications 49284 & 49285

Dear Ms. McGrogan:

At the February 11th meeting the Edgewater Homeowners Associations (HOA) reviewed the status of New Appropriation Application Nos. 49284 and 49285. The purpose of the new applications is to allow for the additional quantity of water required to maintain grass and vegetation in our sandy soils.

It is our understanding that under existing well spacing regulations, domestic water well owners within 660 feet of the irrigation wells are typically required to sign a water well spacing consent form.

Based on the HOA's review and findings that:

- The HOA collectively represents the interests of homeowners within the Edgewater development for management and maintenance of common areas;
- The additional quantity of water is being requested to maintain grass, shrubs, and trees common to the entire Edgewater development;
- Without the authorization of an additional quantity of water significant and costly changes would be required to existing landscaping;
- Obtaining spacing consent forms from individual homeowners within 660 feet surrounding the HOA's wells would take a significant amount of time based on the number of existing private irrigation wells;
- The existing irrigation wells have operated historically without any complaints of drawdown or impairment;
- Approval of the applications will not affect any individual homeowner's right to file an impairment complaint with the Chief Engineer, Division of Water Resources;
- Homes in the Edgewater development are on municipal water supply, the surrounding private domestic wells are for irrigation of landscaping only;

It was the decision of the Edgewater HOA to recommend that the Kansas Division of Water Resources and the Equus Beds Groundwater Management District No. 2 grant an exception to the requirement for obtaining water well spacing consent forms, and Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(2). Muie Frager Well Sp. 1 Edgewater HOA President 02/15/16

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



DIRECTORS:
DAVID BOGNER
ALAN BURGHART
JOE PAJOR
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

December 15, 2016

Edgewater HOA 900 N. Tyler, Suite 7 Wichita, KS 67212

Re: Appropriation Application No. 49284

Dear Sir or Madam:

The Equus Beds Groundwater Management District No. 2 made a recommendation to the Division of Water Resources that Appropriation Application No. 49284 be approved. Pursuant to K.A.R. 5-22-4a, the well described in the application must be equipped with a District approved water flowmeter. The well is located in the Northwest Quarter of the Northwest Quarter of Section 27, Township 26 South, Range 1 West, Sedgwick County.

The well must be properly equipped with an approved meter within 30 days after the approved well battery is operational and prior to its operation. If more time is needed to install the meter or modify an existing meter installation, you may request an extension of time. The request must be made to the District before the end of the 30-day period.

Enclosed is a Flow Meter Installation form to be completed and returned to this office after completion of the meter installation or modifications. A copy of the Division of Water Resources' meter installation notification form (Notice and Proof of Completion of Works) may be substituted for the District form. Upon receiving the completed form, the District will inspect the installation.

Also enclosed is a copy of water meter and installation specifications. Water meter must meet these specifications and the list of certified water meters provided under K.A.R. 5-1-12, for District approval. The list of certified water meters can be obtained by contacting the District or at following link: <a href="http://agriculture.ks.gov/divisions-programs/dwr/water-appropriation/water-flowmeters">http://agriculture.ks.gov/divisions-programs/dwr/water-appropriation/water-flowmeters</a>. If you have any questions about the District's metering program or the enclosed material, please contact the District for assistance.

Sincerely, EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NO. 2

Tim Boese Manager TDB/db

**Enclosures** 

pc: Jeff Lanterman, Division of Water Resources, Stafford



### Lanterman, Jeff

From:

Lanterman, Jeff

Sent:

Wednesday, December 7, 2016 10:50 AM

To:

McGrogan, Erin; Tietsort, Katie; Stewart, Kelly; Meyer, Mike; Conant, Cameron; Turney,

Brent

Cc:

Fitch, Elizabeth

Subject:

FW: Edgewater HOA Irrigation Quantities

**Attachments:** 

EBW KSURE SedawickPre2007.xlsx

This is some of the best justification I have ever seen to be filed with an app. Edgewater is a compliance problem fixing with these apps. Overpumping existing reasonable quantity apps.

This is justification for a reasonable quantity by Burns and Mac on an Housing Development on turf grass. They are trying to justify 36" irrigation quantity. Also they need waivers of spacing to surrounding well owners. I just had a CC with Daniel with B&M.

- 1. They are using site specific soil data and managing to 50% available soil water capacity or the wilting point for grass.
- 2. Using that information they used past daily data from GMD #2 weather stations to determine site specific water needs. GMD #2 stations give a grass ET for a growing grass. Data back to 1996.
- 3. Using that past data any time the ET was > 0.15" he irrigated taking out any precipitation from the weather station (not irrigating in a precipie event). Again shooting for more than 50% AWC.
- 4. Using this methodology he came up with an average of about 36" of irrigation needed. (2011 and 2012 it was up to mid 40's)

They have an actual pump test on site and using the requested flow rate and quantity 24x7 they had no impact to surrounding wells they don't meet spacing to.

This would shoot by me in a heartbeat. Maybe a model for future turf grass justifications if we have this kind of data? But this kind of work is expensive im sure.

Jeff

From: Clement, Daniel W [mailto:dwclement@burnsmcd.com]

Sent: Wednesday, December 7, 2016 10:23 AM

To: Lanterman, Jeff < Jeff. Lanterman@ks.gov>; Conant, Cameron < Cameron. Conant@ks.gov>

Cc: McGrogan, Erin < Erin. McGrogan@ks.gov>
Subject: FW: Edgewater HOA Irrigation Quantities

From: Clement, Daniel W

Sent: Friday, September 02, 2016 11:41 AM

To: tboese@gmd2.org

Cc: Steve Flahtery (sflaherty@gmd2.org) <sflaherty@gmd2.org>; Meier, Brian <br/>
smeier@burnsmcd.com>

Subject: Edgewater HOA Irrigation Quantities

Tim & Steve

After some research on the available calculators and methodologies out there for quantifying annual irrigation demand for fescue at the Edgewater HOA, the most scientific approach I could find relates back to simply creating a water budget for the rooting zone of the plants you are trying to support, in our case fescue with a likely max rooting depth of 12 inches.

Easiest way to think of it is just like balancing the water budget in a sponge, too much irrigation and both precipitation and irrigation can run off or saturate the soil and force percolation past the root zone. If the soil gets too dry and the roots don't have enough contact with surrounding moisture we run into the wilting point. So to balance the budget in the rooting zone daily, weekly, etc, first we have to figure out how much water is theoretically available in the top 12 inches of soil, and then manage irrigation to maintain our soil water budget between saturation and the wilting point. Since your also looking at other applications that may not be apples to apples to our case thought I would include everything used in the calculations.

Las Vegas Valley, Nevada (certainly a water conscious area) recommends the following approach through their extension program:

- 1. Find your soil texture (jar testing) We have this from NRCS data for our soil profile by %Sand/Silt/Clay
  - a. Pratt Loamy Fine Sand 82.3/11.3/6.3
  - b. Carwile Fine Sandy Loam 67.5/21.0/11.5
- 2. Calculate AWC based on NRCS data in our case
  - a. Pratt Loamy Fine Sand 0.12cm/cm = 1.44in/foot
  - b. Carwile Fine Sandy Loam 0.16cm/cm = 1.92in/foot
  - c. Average of Pratt & Carwile = 0.14cm/cm = 1.68in/foot
  - d. Table 2 Method = 1.00 to 1.80
- 3. Define Maintenance Factor based on percent depletion of water budget
  - a. Golf Courses often utilize 40%, high maintenance
  - b. Other resources recommend 50% for residential/commercial
  - c. Our case utilizes a maintenance factor of 50%
- 4. Define Grass Rooting Depth
  - a. KSRE suggests 12 inches, we utilized this as a reasonable max depth rooting zone for fescue in our soil
- 5. Calculate Water Available to Grass
  - a. (Available Water Capacity)x(Maintenance Factor)x(Rooting Zone)
  - b. (1.68in/ft)x(0.50)x(1.0 feet) = 0.84 inches

#### Resources

http://websoilsurvey.nrcs.usda.gov/

https://www.unce.unr.edu/publications/files/ho/2001/fs0104.pdf

For our approach I used a spreadsheet to maintain a water budget between >=0 and 0.84 inches daily based on historical precipitation and the ET of grass from the Sedgwick weather station owned/maintained by GMD2. When the spreadsheet sees a negative water balance (including daily precip) it applies only the amount of irrigation necessary to restore the soil moisture budget to the full 0.84 inches. This is about as close as we can get to simulating consistent with watering a lawn "deeply and infrequently" as to mitigate shallow root zones, waste/runoff. We utilized a growing season April 11th through October 25th based on average frost, and when ET values begin to show up in the 0.17 range. This is extremely similar to the approach used by higher end irrigation controllers for commercial/residential irrigation, also some golf course controllers have real time data from soil moisture probes or pole data directly from onsite and offsite weather stations (toro/hunter/rainbird/etc).

The results of the soil moisture balance approach are given below:

Year	Precipitation (In)	ET Grass (In)	Irrigation Required	Sprinkler Effeciency 75%
1998	16.57	34.611	27.05	36.07
1999	24.32	33.741	23.17	30.89
2000	17.24	36.949	27.81	37.08
2001	16.6	37.169	27.40	36.53
2002	22.22	36.764	28.86	38,48
2003	19.1	36.761	27.34	36.46
2004	21.37	37,322	27.76	37.01
2005	27.18	39.108	28.19	37.58
2006	19.68	42.114	28.79	38.39
2010	20.54	41.36	30.54	40.72
2011	9,82	43.86	36.72	48.96
2012	11.13	45.59	36.55	48.73
2013	28.25	41.58	28.86	38.48
2014	16.11	41.17	31.81	42.41
2015	27,25	40.76	27.76	37.01
21712			irrigation Avg Req. (in)	Effeciency 75% (In)
		Normal Year Avg Irr.	27.26	35.35
eus (300)	:-::::::::::::::::::::::::::::::::::::	Dry Year Ave Irr.	29.40	39.70

As a qa/qc both the quantity and frequency of irrigation matched the general rules of thumb published by Kansas State Research & Extension, Sedgwick County. The efficiency factor is how effective sprinklers are at delivering water to the soil (wind transport, evaporation, interception), I placed a value of 75% based on a conglomerate of information from sprinkler head manufacturers.

I would be happy to discuss the results and approach with you guys at your convenience, and to help out with any other applications you guys have that might get some clarification from this approach.

If possible let's try to discuss this by the 16th of September to give us enough time to do follow up figures.

Sending out domestic well waiver requests via certified mail next week.

The place of use issue will be resolved by voluntary reduction or change in place of use in 47615 or these applications.

Thanks and enjoy the holiday weekend.

Daniel Clement \ Burns & McDonnell Staff Hydrogeologist \ Water o 316-616-0522 \ M 316-518-0893 \ F 316-941-4730 dwclement@burnsmcd.com \ burnsmcd.com 800 E. 1st Street North, Suite 400 \ Wichita , KS 67202

Drought Year Avg Irr

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



DIRECTORS:
DAVID BOGNER
ALAN BURGHART
JOE PAJOR
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

December 6, 2016

Daniel Clement Burns & McDonnell 800 E. 1<sup>st</sup> Street North, Suite 400 Wichita. KS 67202 WATER RESOURCES RECEIVED

DEC 0 7 2016

KS DEPT OF AGRICULTURE

Re: Appropriation Application Nos. 49284 & 49285 - Edgewater HOA

Dear Mr. Clement:

The purpose of this correspondence is to advise you that the referenced water appropriation applications are scheduled for review at the December 13, 2016, Board of Directors meeting of the Equus Beds Groundwater Management District.

Please find enclosed a copy of the meeting agenda. The public meeting begins at 1:00 p.m. and will be held in the Equus Beds Groundwater Management District's conference room at 313 Spruce Street, Halstead, Kansas.

Please contact the District if you have any questions or need additional information.

Sincerely, EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NO. 2

Tim Boese Manager

□ TDB/db

Enclosure: Agenda

Pc: Edgewater HOA, with copy of agenda

Erin McGrogan, Division of Water Resources, Manhattan Jeff Lanterman, Division of Water Resources, Stafford

### PROPOSED AGENDA BOARD OF DIRECTORS MEETING

### EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NO. 2

Tuesday, December 13, 2016 1:00 p.m.

#### Conference room

313 Spruce Street • Halstead, KS 67056-1925 Phone: (316) 835-2224 • Fax: (316) 835-2225 E-mail: equusbeds@gmd2.org • Website: www.gmd2.org

1.APPROVAL OF MINUTES

2.APPROVAL OF AGENDA

3.FINANCIAL REPORT

**4.APPROVAL OF EXPENDITURES** 

**5.PUBLIC FORUM** – Persons may present written or verbal comments concerning non-agenda business. Please state your name and address. Presentations are limited to five minutes.

#### **6.APPEAL REVIEW**

a) Haven Public Schools USD 312, Application No. 49637, NE 05-25S-4W, Reno Co.

#### 7.OLD BUSINESS

- a) Edgewater HOA, Application No. 49284, NE 27-26S-1W, Sedgwick Co.
- b) Edgewater HOA, Application No. 49285, NE 27-26S-1W, Sedgwick Co.
- c) GMD Assessment Cap Review

#### **8.NEW BUSINESS**

- a) New Copier/Printer Option Quote
- b) Review of November 21, 2016 Joint GMD / KDA-DWR Meeting
- c) District Lobbyist Options
- d) City of Wichita ASR Project Drought Pumping Modeling Results

#### 9.AGENCY & COMMITTEE REPORTS

- a) Division of Water Resources
- b) Kansas Water Authority
- c) Equus Walnut Regional Advisory Committee

#### 10. MANAGER'S REPORT

- a) ASR Project Report
- b) Administrative and Field Tasks
- c) Monthly Information and Service Report

#### 11. ADDITIONS TO THE AGENDA

- 12. BOARD ROUND TABLE DISCUSSION Fred Seiler, President
- 13. EXECUTIVE SESSION Annual Staff Performance Reviews

**NOTICE:** A Board of Directors meeting and any portion thereof is open to the public, except for closed or executive meetings, as prescribed by K.S.A. 75-4319.

Please complete a meeting notice form if you wish to be notified of Board of Directors meetings, hearings, work sessions or other business meetings. Notice forms may be obtained by contacting the Equus Beds Groundwater Management District No. 2.

"HIMSOFFICE/LETTERS/AGENDA/AGNDDEC\_2016.docx

K.A.R. 5-22-2

I, Anthony & Susan Esposito, whose address is, 4419 N Cimarron St, Wichita KS 67205, am the owner of a domestic well located within 660 feet of the two irrigation wells owned and utilized by the Edgewater HOA to maintain landscaping in common areas throughout the housing development.

I understand and acknowledge that Edgewater HOA has filed new applications #49284 & 49285 for a water permit to withdraw or appropriate groundwater for non-domestic beneficial use by means of two already existing irrigation wells:

One in the SE quarter of the NW quarter of the NE quarter of Section 27, more particularly described as being near a point 4149 feet North and 1564 feet West of the Southeast corner of said section in Township 26 South, Range 1 West, Sedgwick County, Kansas, at a proposed rate of 75 GPM and an annual quantity not to exceed 28 acre-feet.

One in the NW quarter of the NW quarter of the NE quarter of Section 27, more particularly described as being near a point 4669 feet North and 2050 feet West of the Southeast corner of said section in Township 26 South, Range 1 West, Sedgwick County, Kansas, at a proposed rate of 75 GPM and an annual quantity not to exceed 28 acre-feet.

The applicant has informed me that the proposed wells are within the minimum required spacing interval of 660 feet of my domestic water well.

Having full knowledge of the above and without waiving any right to file an Impairment complaint with the Chief Engineer, Division of Water Resources, I grant my permission to locate said irrigation wells less than the minimum required spacing interval from my domestic well.

Dated at Wichita, Kansas, this 3/3 day of OCFOSE 20/6

City Signed by: Day Month Year

Domestic Well Owner

WATER RESOURCES RECEIVED

DEC 0 2 2016

KS DEPT OF AGRICULTURE

K.A.R. 5-22-2

I, Reichenberger Rv Family TR, whose address is, 6210 W Kollmeyer Ct, Wichita KS 67205, am the owner of a domestic well located within 660 feet of the two irrigation wells owned and utilized by the Edgewater HOA to maintain landscaping in common areas throughout the housing development.

I understand and acknowledge that Edgewater HOA has filed new applications #49284 & 49285 for a water permit to withdraw or appropriate groundwater for non-domestic beneficial use by means of two already existing irrigation wells:

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The applicant has informed me that the proposed wells are within the minimum required spacing interval of 660 feet of my domestic water well.

Having full knowledge of the above and without waiving any right to file an Impairment complaint with the Chief Engineer, Division of Water Resources, I grant my permission to locate said irrigation wells less than the minimum required spacing interval from my domestic well.

Dated at	Wiehita	, Kansas, this	lot	_day of _	Novemb	ur	20	16
	City	Signed by:	Day	Mary &	Reiche	nockque		. Year
				~ J	Domestic Well			

STATISTICS OF STRAWN

K.A.R. 5-22-2

I, Jane Paladino, whose address is, 4403 N Cimarron St, Wichita KS 67205, am the owner of a domestic well located within 660 feet of the two irrigation wells owned and utilized by the Edgewater HOA to maintain landscaping in common areas throughout the housing development.

I understand and acknowledge that Edgewater HOA has filed new applications #49284 & 49285 for a water permit to withdraw or appropriate groundwater for non-domestic beneficial use by means of two already existing irrigation wells:

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The applicant has informed me that the proposed wells are within the minimum required spacing interval of 660 feet of my domestic water well.

Having full knowledge of the above and without waiving any right to file an Impairment complaint with the Chief Engineer, Division of Water Resources, I grant my permission to locate said irrigation wells less than the minimum required spacing interval from my domestic well.

Dated at With Kansas, this 27 day of October 20 16

Signed by: Day Flaculous

Domestic Well Owner

WATER RESOURCES RECEIVED

DEC 02 2016

K.A.R. 5-22-2

I, Brenda Martin & Wayne Robert, whose address is, 4410 N Cimarron St, Wichita KS 67205, am the owner of a domestic well located within 660 feet of the two irrigation wells owned and utilized by the Edgewater HOA to maintain landscaping in common areas throughout the housing development.

I understand and acknowledge that Edgewater HOA has filed new applications #49284 & 49285 for a water permit to withdraw or appropriate groundwater for non-domestic beneficial use by means of two already existing irrigation wells:

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The applicant has informed me that the proposed wells are within the minimum required spacing interval of 660 feet of my domestic water well.

Having full knowledge of the above and without waiving any right to file an Impairment complaint with the Chief Engineer, Division of Water Resources, I grant my permission to locate said irrigation wells less than the minimum required spacing interval from my domestic well.

Dated at White , Kansas, this 2 day of 0 day of 20 0/6

Signed by: Day North Month Year

Domestic Well Owner

PACHEDAIN HAND

K.A.R. 5-22-2

I, Brian Cluck & Nickailar Sandate, whose address is, 6006 W Driftwood Ct, Wichita KS 67205, am the owner of a domestic well located within 660 feet of the two irrigation wells owned and utilized by the Edgewater HOA to maintain landscaping in common areas throughout the housing development.

I understand and acknowledge that Edgewater HOA has filed new applications #49284 & 49285 for a water permit to withdraw or appropriate groundwater for non-domestic beneficial use by means of two already existing irrigation wells:

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Dated at Wich: ta\_\_\_\_, Kansas, this 30<sup>TH</sup> day of October 2016

Signed by: Day Class RESOURCES

RECEIVED

DEC 0 2 2016

KS DEPT OF AGRICULTURE

I, Randall Belles, whose address is, 6207 W Driftwood St, Wichita KS 67205, am the owner of a domestic well located within 660 feet of the two irrigation wells owned and utilized by the Edgewater HOA to maintain landscaping in common areas throughout the housing development.

I understand and acknowledge that Edgewater HOA has filed new applications #49284 & 49285 for a water permit to withdraw or appropriate groundwater for non-domestic beneficial use by means of two already existing irrigation wells:

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Dated at Wichita	_, Kansas, this _	29 th day of _	October	20 16
City	Signed by:_	Day Verslevill		Year
NEW PROPERTY OF THE PROPERTY O			Domestic Well Owner	

ANTILEKTOREDA FO PERCESA

K.A.R. 5-22-2

I, Adan Rodriguez, whose address is, 1543 N Sheridan, Wichita KS 67203, am the owner of a domestic well located within 660 feet of the two irrigation wells owned and utilized by the Edgewater HOA to maintain landscaping in common areas throughout the housing development.

I understand and acknowledge that Edgewater HOA has filed new applications #49284 & 49285 for a water permit to withdraw or appropriate groundwater for non-domestic beneficial use by means of two already existing irrigation wells:

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The applicant has informed me that the proposed wells are within the minimum required spacing interval of 660 feet of my domestic water well.

Having full knowledge of the above and without waiving any right to file an Impairment complaint with the Chief Engineer, Division of Water Resources, I grant my permission to locate said irrigation wells less than the minimum required spacing interval from my domestic well.

Dated at Wich. 14 , Kansas, this 27 day of October 20 16
Signed by: Domestic Well Owner

Domestic Well Owner

WATER RESOURCES

DEC 0 2 2016

KS DEPT OF AGRICULTURE

#### K.A.R. 5-22-2

I, Steven & Peggy Schremmer, whose address is, 4407 N Cimarron St, Wichita KS 67205, am the owner of a domestic well located within 660 feet of the two irrigation wells owned and utilized by the Edgewater HOA to maintain landscaping in common areas throughout the housing development.

I understand and acknowledge that Edgewater HOA has filed new applications #49284 & 49285 for a water permit to withdraw or appropriate groundwater for non-domestic beneficial use by means of two already existing irrigation wells:

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The applicant has informed me that the proposed wells are within the minimum required spacing interval of 660 feet of my domestic water well.

Having full knowledge of the above and without waiving any right to file an Impairment complaint with the Chief Engineer, Division of Water Resources, I grant my permission to locate said irrigation wells less than the minimum required spacing interval from my domestic well.

Dated at	Wichita.	, Kansas, this	30 day of	November	20_	16	
	City		Day D4	) Month	 	Year	
		Signed by:_	Leven	Schremme			
		• • • •		Domestic Well Owne	 		_





Paladino 4403 NC marron Withit Ki 61205

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Daniel W. Clement C/O Burns McDonnell 800 E. First St. Ste 400 Wichita, KS 67202

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Daniel W. Clement C/O Burns McDonnell 800 E. First St. Ste 400 Wichita, KS 67202

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BRIAN CLUCK 6006 W. DRIPTOWN CT. Wait, TA, 165 67205;

WICHITA KS 670 38 OCT 2015 PM 3 1

> Daniel W. Clement C/O Burns McDonnell 800 E. First St. Ste 400 Wichita, KS 67202

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Daniel W. Clement C/O Burns McDonnell 800 E. First St. Ste 400 Wichita, KS 67202

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Randall Belles 6207 W Driftwood St Wichita, KS 67205 31 OCT 2016, PM 1 L



Daniel W. Clement C/O Burns McDonneil 800 E. First St. Ste 400 Wichita, KS 67202

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Mary Reichenberger 6210 W Kollmeyer Ct. Wichita, KS 67205



Daniel W. Clement C/O Burns McDonnell 800 E. First St. Ste 400 Wichita, KS 67202

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WATER RESOURCES RECEIVED

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KS DEPT OF AGRICULTURE

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



DIRECTORS:
DAVID BOGNER
ALAN BURGHART
JOE PAJOR
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

August 25, 2016

Chief Engineer, Division of Water Resources Attn: Erin McGrogan 1320 Research Park Dr. Manhattan, KS 66502 WATER RESOURCES
RECEIVED

AUG 2 9 2016

KS DEPT OF AGRICULTURE

Re: Appropriation Application Nos. 49284 & 49285 - Edgewater HOA

Dear Ms. McGrogan:

The referenced applications were reviewed by the Equus Beds Groundwater Management District No. 2 Board of Directors at the August 23, 2016, meeting. District staff and the applicant's consultant presented information regarding the applications.

It was the decision of the Board of Directors to table making a recommendation on the applications to allow the applicant time to justify and/or modify the quantity of water requested and also allow time for the applicant to contact nearby domestic well owners in an attempt to obtain signed domestic well spacing consent forms for domestic wells located within 660 feet of the proposed points of diversion.

Sincerely,

EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NO. 2

- Boese

Tim Boese Manager

TDB/db

pc: Edgewater HOA, Applicant and Landowner

Daniel Clement, Burns & McDonnell

Jeff Lanterman, Division of Water Resources, Stafford

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



DIRECTORS:
DAVID BOGNER
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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

August 16, 2016

Daniel Clement Burns & McDonnell 800 E. 1<sup>st</sup> Street North, Suite 400 Wichita, KS 67202

Re: Appropriation Application Nos. 49284 & 49285 - Edgewater HOA

Dear Mr. Clement:

The purpose of this correspondence is to advise you that the referenced water appropriation applications are scheduled for review at the August 23, 2016, Board of Directors meeting of the Equus Beds Groundwater Management District.

Please find enclosed a copy of the meeting agenda. The public meeting begins at 1:00 p.m. and will be held in the Equus Beds Groundwater Management District's conference room at 313 Spruce Street, Halstead, Kansas.

Please contact the District if you have any questions or need additional information.

Sincerely,

EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NO. 2

Tim Boese Manager

TDB/db

Enclosure: Agenda

Pc: Edgewater HOA, with copy of agenda

Erin McGrogan, Division of Water Resources, Manhattan Jeff Lanterman, Division of Water Resources, Stafford

WATER RESOURCES RECEIVED

AUG 1 6 2016

KS DEPT OF AGRICULTURE



### PROPOSED AGENDA BOARD OF DIRECTORS MEETING

### **EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NO. 2**

Tuesday, August 23, 2016 1:00 p.m. Conference room

313 Spruce Street • Halstead, KS 67056-1925

Phone: (316) 835-2224 • Fax: (316) 835-2225 • E-mail: equusbeds@gmd2.org
Website: www.gmd2.org

#### 1.APPROVAL OF MINUTES

- a) July 12, 2016 Meeting
- b) July 12, 2016 Budget Hearing

### 2.APPROVAL OF AGENDA

- 3.FINANCIAL REPORT
- **4.APPROVAL OF EXPENDITURES**
- **5.PUBLIC FORUM** Persons may present written or verbal comments concerning non-agenda business. Please state your name and address. Presentations are limited to five minutes.

#### **6.APPEAL REVIEW**

- a) Edgewater HOA, Application No. 49284, NE 27-26S-1W, Sedgwick Co.
- b) Edgewater HOA, Application No. 49285, NE 27-26S-1W, Sedgwick Co.

### 7.OLD BUSINESS - None Pending

#### **8.NEW BUSINESS**

- a) GMD's GIS Mobile Software Application Proposal
- b) Certification of 2015 Land and water Assessments to County Clerks

#### 9.AGENCY & COMMITTEE REPORTS

- a) Division of Water Resources
- b) Kansas Water Authority
- c) Equus Walnut Regional Advisory Committee

### 10. MANAGER'S REPORT

- a) ASR Project Report
- b) Administrative and Field Tasks
- c) Monthly Information and Service Report

#### 11. ADDITIONS TO THE AGENDA

### 23/212/BOARD ROUND TABLE DISCUSSION - Fred Seiler, President

**NOTICE:** A Board of Directors meeting and any portion thereof is open to the public, except for closed or executive meetings, as prescribed by K.S.A. 75-4319.

Please complete a meeting notice form if you wish to be notified of Board of Directors meetings, hearings, work sessions or other business meetings. Notice forms may be obtained by contacting the Equus Beds Groundwater Management District #2.

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



DIRECTORS:
DAVID BOGNER
ALAN BURGHART
JOE PAJOR
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

June 30, 2016

Daniel Clement Burns & McDonnell 800 E. 1<sup>st</sup> Street North, Suite 400 Wichita, KS 67202

Re: Appropriation Application Nos. 49284 & 49285 - Edgewater HOA

Dear Mr. Clement:

The Equus Beds Groundwater Management District No. 2 received via email from Burns & McDonnell, on behalf of the Edgewater HOA, a Petition of Appeal on June 10, 2016 (original received by mail on June 14, 2016), in the matter of the District's May 16, 2016, recommendations of the above referenced applications. The petition was found to be in proper form and that, pursuant to K.A.R 5-22-12(b)(4), Burn & McDonnell, acting on behalf of the Edgewater HOA, is a valid petitioner.

The District Board of Directors will tentatively hear the appeal on Tuesday, August 23, 2016, in the conference room of the Equus Beds Groundwater Management District office, 313 Spruce Street, Halstead, Kansas. The meeting is tentatively planned to begin at 1:00 P.M. A copy of the meeting agenda will forwarded to you once the agenda is set.

At the appeal hearing, the Board will permit the petitioner to present briefs and may afford any interested party the opportunity to present oral or written arguments, if appropriate.

Please contact the District if you have any questions or need additional information.

Sincerely,

EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NO. 2

Tim Boese Manager

TDB/db

Pc: Edgewater HOA

Erin McGrogan, Division of Water Resources, Manhattan Jeff Lanterman, Division of Water Resources, Stafford WATER RESOURCES RECEIVED

AUG 0 9 2016

KS DEPT OF AGRICULTURE

Recycled Paper



May 24, 2016

Tim Boese Manager Groundwater Management District No. 2 313 Spruce Street Halstead, KS 67056-1925

Re: Appeal Petition - Application Nos. 49284 and 49285

Dear Mr. Boese:

We are in receipt of your letters dated May 16<sup>th</sup> 2016 regarding the recommendation of denial by the Equus Beds Groundwater Management District. During the review of the applications the District found that the applications do not comply with one or more Groundwater Management District Rules and Regulations Including:

- 1. The applications do not comply with non-domestic spacing regulation 5-22-2(a)(1), as the proposed wells are closer than 1,320 feet to the edge of groundwater pit permitted by 47615 and 48836.
- 2. The applications do not comply with non-domestic spacing regulation 5-22-2(a)(1), as the proposed wells are closer than 1,320 feet to one another.
- 3. The application does not comply with domestic well spacing regulation 5-22-2(a)(2), as the proposed wells are closer than 660 feet to multiple nearby domestic wells in the area.
- 4. The proposed place of use appears to overlap the current place of use for the groundwater pit authorized by Water Permit 47615.
- 5. The application does not comply with the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), as the proposed water to land ratio exceeds the maximum allowable of 1.3 acre-feet per acre for Sedgwick County.

The Edgewater HOA covers a small residential development located in Maize, KS. There are two existing water rights that the HOA utilizes to irrigate community open spaces within the subdivision (Water Permit Nos. 47456 and 47457). Water appropriation #47456 has an annual appropriation of 7.54 acre-feet and an approved place of use of 5.8 acres, and #47457 has an annual appropriation of 4.16 acrefeet and an approved place of use of 3.2 acres.

Because of the sandy soils at this location, the HOA has not been successful at maintaining the quality turf that is desired in this subdivision under the existing allowable appropriations. Therefore, the HOA is submitting new applications that will increase the amount of water available to the HOA's two existing irrigation wells. The proposed wells will remain identical to those currently in use and it is requested that upon approval of the enclosed applications that Water Permit Nos. 47456 and 47457 be dismissed. The applications request a net appropriation total of 28 acre-feet when combined, and the place of use for each application when combined will result in a total irrigated area of 9 acres.

WATER RESOURCES RECEIVED

MAY 2 6 2016



Tim Boese RE: Appeal Petition Application Nos. 49284 and 49285 May 24, 2016 Page 2

We recognize that the requested quantities exceed the typical allotment of water per acre for the area, however as previously noted, this site has extremely sandy soils and steep slopes requiring additional and frequent irrigation to maintain soil moisture within the rooting zone. The sandy soils at this site also indicate that a significant portion of the water applied during irrigation is returning to the aquifer as infiltration.

K.A.R 5-3-20(c) indicates that a quantity above the established maximum reasonable annual amount can be exceeded if the applicant can demonstrate that an increased demand is needed for a specialty crop (in this case turf and not traditional large scale row crops). The quantities requested reflect the historic required amount of water pumped during a single year for turf maintenance. We feel that the amount requested is not wasteful and will not otherwise prejudicially or unreasonably affect the public interest based on the relatively low quantity and pumping rate. The HOA understands that the aquifer is a precious resource, and the utilization of the aquifer for the economic benefits of maintaining the Edgewater Development's aesthetics is a privilege.

On behalf of the Edgewater Homeowners Association we would like to request an appeal of the District's decision to recommend Applications 49284 and 49285 for denial based on the following:

- 1. The applications do not comply with non-domestic spacing regulation 5-22-2(a)(1) as the proposes wells are closer than 1,320 feet to the edge of groundwater pit permitted by 47615 and 48836.
  - Groundwater Pits 47615 and 48836 are currently owned by the developer of the Edgewater Housing Development (R&R Realty) and the dredged place of use for both of these groundwater pits and the associated water rights will eventually be relinquished to the Edgewater HOA.
  - A letter of support will be provided by the current owner (R&R Realty) of 47615 and 48836 for the proposed irrigation wells.
  - The wells have operated historically without prejudicially affecting the nearby groundwater pits, domestic wells, or other aquifer users.
  - Based on these items Edgewater HOA would like to request the District Board of Directors recommend a waiver of the non-domestic well to groundwater pit spacing regulations, as was previously granted for permits 47456 and 47457.
- 2. The applications do not comply with non-domestic spacing regulation 5-22-2(a)(1) as the proposed wells are closer than 1,320 feet to one another.
  - The proposed irrigation wells have operated historically at the proposed rates and quantities without impairing one another.
  - The proposed irrigation wells that do not meet spacing are owned by the same entity (Edgewater HOA).

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MAY **2 6** 2016



Tim Boese

RE: Appeal Petition Application Nos. 49284 and 49285

May 24, 2016

Page 3

- The District Board of Directors has previously granted a waiver for non-domestic well spacing based on the specific limited risk of impairment under Water Permits 47456 and 47457.
- Based on these items Edgewater HOA would like to request the District Board of Directors recommend a waiver of the non-domestic well spacing regulation, as was previously granted for permits 47456 and 47457.
- 3. The application does not comply with domestic well spacing regulation 5-22-2(a)(2) as the proposed wells are closer than 660 feet to multiple nearby domestic wells in the area.
  - The HOA collectively represents the interests of homeowners within the Edgewater development for management and maintenance of common areas, and as such provided a letter supporting the applications to the Division of Water Resources and the Groundwater Management District.
    - i. Obtaining spacing consent forms from individual homeowners within 660 feet surrounding the HOA's wells would take a significant amount of time based on the number of existing private irrigation wells;
    - ii. The existing irrigation wells have operated historically without any complaints of drawdown or impairment;
    - iii. Approval of the applications will not affect any individual homeowner's right to file an impairment complaint with the Chief Engineer, Division of Water Resources;
    - iv. Homes in the Edgewater development are on municipal water supply, the surrounding private domestic wells are for irrigation of private landscaping only;
  - The District Board of Directors has previously granted a waiver for domestic well spacing based on the specific limited risk of impairment under Water Permits 47456 and 47457, the rates and quantities of 49284 and 49285.
- 4. The proposed place of use appears to overlap the current place of use for the groundwater pit authorized by Water Permit 47615.
  - According to the application documents, the place of use includes:
    - i. The community owned areas immediately surrounding the currently exposed groundwater pit located north of Driftwood Street and south of  $49^{th}$  Street N.
    - ii. The community owned areas immediately surrounding the currently exposed groundwater pit located south of Driftweood street and north of Kallmeyer Street
    - iii. An small strip of community owned area south and adjacent to 49<sup>th</sup> Street North and west of N. Cimmaron Street.
  - None of the currently proposed place of use for 49284 or 49285 is intended to include the exposed groundwater surface permitted by 47615, please advise if this area needs clarification.
  - The currently calculated place of use based on best match of property parcels and right of way analysis appears to be 9.0 acres.

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Tim Boese

RE: Appeal Petition Application Nos. 49284 and 49285

May 24, 2016

Page 4

- 5. The application does not comply with the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), as the proposed water to land ratio exceeds the maximum allowable of 1.3 acre-feet per acre for Sedgwick County.
  - The applications request a net appropriation total of 28 acre-feet when combined, and the place of use for each application when combined will result in a total irrigated area of 9 acres.
  - The 28 acre-feet requested represents a reasonable maximum amount of water based on historic use of the Edgewater HOA irrigation system, and will be required to go through the water right perfection process to establish a maximum reasonable need for:
    - i. Extremely sandy soils at this location, the HOA has not been successful at maintaining the quality turf that is required in this subdivision under the existing allowed appropriation to land ratio.
    - ii. The sandy soils at this site also indicate that a significant portion of the water applied during irrigation is returning to the aquifer through infiltration.
  - Pumping water in excess of the minimum required amount for irrigation is not in the interest of the HOA as electricity costs go up and the groundwater quality is such that iron staining of infrastructure occurs.
  - The HOA will remain committed to managing irrigation scheduling to eliminate runoff and manage water resources responsibly.

Sincerely,

Daniel Clement

Staff Hydrogeologist

DWC/dwc

cc: Edgewater HOA – c/o Baughman Company PA & R&R Realty

Erin McGrogan – Environmental Scientist, Division of Water Resources

Jeff Lanterman - Water Commissioner, Stafford F.O., Division of Water Resources

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MAY 2 6 2016

1320 Research Park Drive Manhattan, Kansas 66502 (785) 564-6700



900 SW Jackson, Room 456 Topeka, Kansas 66612 (785) 296-3556

Jackie McClaskey, Secretary

Governor Sam Brownback

May 23, 2016

EDGEWATER HOA ATTN JAY RUSSELL 900 N TYLER SUITE 7 WICHITA KS 67212

FILE COPY

Re:

New Application,

File Nos. 49,284 and 49,285

Dear Mr. Russell:

As you are aware, the above applications have been reviewed by the Equus Beds Groundwater Management District No.2, and on May 16, 2016 the Division of Water Resources received a recommendation that the referenced Applications for Permit to Appropriate Water for Beneficial Use be denied. Specifically, these applications do not comply with the Well Spacing Rule and Regulation K.A.R. 5-22-2 (a) (1) (2) for nearby non-domestics, domestic wells, and a proposed groundwater pit. The applications do not comply with the Maximum Reasonable Quantity for Beneficial use Rule and Regulation K.A.R. 5-22-(a) (1), and it appears that the place of use for both applications partially overlaps with a nearby groundwater pit.

We are advising you of this action in order to allow you an opportunity to consult with the District regarding their recommendation if you have not already done so. If you have already contacted the District, then we are allowing you this opportunity to discuss with the Board of Directors their recommendation and decision regarding the file. This office will consider any additional information you wish to have presented to the Chief Engineer.

We will delay any further action on the referenced applications until June 15, 2016, or any extension of time. If no additional information is supplied, the referenced applications will be submitted to the Chief Engineer for a final decision based on the information provided above. If you have any questions, please contact me at (785) 594-6640. If you wish to discuss a specific file, please have the file number ready so that I may help you more efficiently.

Sincerely,

Ein McLogaen

Erin McGrogan **Environmental Scientist** Water Appropriation Program

SCANNED

pc:

Stafford Field Office

Groundwater Management District No. 2

Burns and McDonnell Attn: Daniel Clement 800 E. First St. Suite 400 Wichita KS 67202

FRED SEILER, PRESIDENT VIN. KISSICK; VICE PRESIDENT JEFF WINTER, SECRETARY MIKE MCGINN, TREASURER TIM BOESE, MANAGER THOMAS A. ADRIAN, ATTORNEY



DIRECTORS:
DAVID BOGNER
ALAN BURGHART
JOE PAJOR
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 16, 2016

Chief Engineer, Division of Water Resources Attn: Erin McGrogan 1320 Research Park Dr. Manhattan, KS 66502

Re: Application 49284 - Edgewater HOA

Dear Ms. McGrogan:

The Equus Beds Groundwater Management District reviewed the referenced application on May 16, 2016, 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 Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(1), as the proposed point of diversion is located less than the required minimum spacing distance of 1,320 feet to the edge of the groundwater pits authorized by Water Permit Nos. 47615 and 48836, and 1,320 feet to the well authorized by Water Permit No. 47456. The application also does not comply with the Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(2), as the proposed point of diversion is located less than the required minimum spacing distance of 660 feet to numerous domestic wells.

The District's review also found that the application does not comply with the Maximum Reasonable Quantity for Beneficial Use Rule and Regulation K.A.R. 5-22-14(a)(1), as the proposed water to land ratio of approximately 3.11 acre-feet per acre exceeds the maximum allowable of 1.3 acre-feet per acre for Sedgwick County.

Additionally, it appears that the proposed place of use partially overlaps with the place of use (groundwater pit) authorized by Water Permit No. 47615.

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 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

Tim Boese Manager

TDB/STF

Enclosures

pc:

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MAY 1 9 2016

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recommendation
by the Equus Beds
Groundwater
Management
District and not a
dismissal of an
application or
water permit

Edgewater HOA, Applicant and Landowner, with copy of K.A.R. 5-22-12

Daniel Clement, Burns & McDonnell, Consultant Jeff Lanterman, Division of Water Resources, Stafford

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

1) 2) 3) 4) 5)	Application No. <u>49284</u> Proposed maximum quantity: Proposed Use: <u>Irrigation</u> P/D location: <u>NWNWNE</u> Number and type of points of divers	28 acre-feet/yea 27-26S-1W sion listed on the	Geo Center:	February 12 75 GPM North 4669 ft, Wes 1 Well	
6) 7) 8)	Is the well location on the app the s Meter required K.A.R. 5-22-4a or K Meets change app requirements K	.A.R. 5-22-8?	uation sheet?	⊠Yes □No ⊠Yes □No □Yes □No	o, <b>Wh</b> y
9)	Meets Safe Yield K.A.R. 5-22-7?  9(b) Safe yield total allowable approprious 9(a) Safe yield analysis total existing a 9(c) Total appropriations for small use 9(d) Total appropriations for non-consing 9(e) Total appropriations for consumpting (total existing appropriations) – (non-consing) (f) exempt from regulation?	appropriations: $\frac{7336}{0}$ af/ umptive use: $\frac{5029}{2308}$	. <u>.2</u> af/yr <u>3.84</u> af/yr s)	⊠Yes ⊡No	o ∏N/A
10)	Meets Well Spacing K.A.R. 5-22-2' 10(a) POD in enhanced well spacing a 10(b) Domestic well spacing interval: 10(c) Non-Domestic well spacing inter	area?	<u>)</u> ft	∐Yes ⊠No	o □N/A
11)	Meets Max Reasonable Quantity K  11(a) Irrigation max quantity:	a (acre-feet) / propos  (acre-feet) / propos  (acre-feet) / propos  (b)  (c)  (c)  (d)  (d)  (e)  (e)  (e)  (e)  (f)  (f)  (f)  (f	GPD uni Acre GCD a per Day (GCD) (GCD) over 200,000 gallons per year		o □N/A
,	Reasonable rate for intended use?	vation well: <u>EB2</u>	223C	∐Yes ⊠No	o ∏N/A
15)	Date reviewed: <u>5/16/16</u> Reviewed by: <u>S. Flaherty</u> T District recommendation:	itle: <u>Hydrogeold</u> ☐Approve		Resiew 5	
Re 47- Ite	Comments and Calculations: view completed for a new application submitted to the submitted of the submitted	e for Nos. 47457 & 474 er pits authorized by No	156		3
Re Do	m #11(a) – 28 acre-feet / 9 acres = 3.1 acre-feet / commend denial, does not comply with domestic es not comply with max reasonable use of 1.3 ac plication proposes a partial place of use overlap	and nondomestic well re-feet /acre		b) <b>WA</b> IE	R RESOURCES RECEIVED

1320 Research Park Drive Manhattan, Kansas 66502 (785) 564-6700



900 SW Jackson, Room 456 Topeka, Kansas 66612 (785) 296-3556

Jackie McClaskey, Secretary

Governor Sam Brownback

FILE COPY

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

March 15, 2016

Re: Pending Application, File Nos. 49,284 &

49,285

Dear Mr. Boese:

We are enclosing a copy of the applications referred to above which appear to be in proper form. Please note the enclosed request for waiver of well spacing on the existing wells from the HOA dated February 12, 2016.

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) 564-6640. If you wish to discuss a specific file, please have the file number ready so that I may help you more efficiently.

Sincerely,

Ein Michogan

Erin McGrogan
Environmental Scientist
Water Appropriation Program

Enclosure

pc: Stafford Field Office

February 12, 2016

Erin McGrogan **Environmental Scientist** Division of Water Resources Kansas Department of Agriculture 1320 Research Park Drive Manhattan, Kansas 66502

Waiver of Domestic Well Spacing - Applications 49284 & 49285

Dear Ms. McGrogan:

At the February 11th meeting the Edgewater Homeowners Associations (HOA) reviewed the status of New Appropriation Application Nos. 49284and 49285. The purpose of the new applications is to allow for the additional quantity of water required to maintain grass and vegetation in our sandy soils.

It is our understanding that under existing well spacing regulations, domestic water well owners within 660 feet of the irrigation wells are typically required to sign a water well spacing consent form.

Based on the HOA's review and findings that:

- The HOA collectively represents the interests of homeowners within the Edgewater development for management and maintenance of common areas;
- The additional quantity of water is being requested to maintain grass, shrubs, and trees common to the entire Edgewater development;
- Without the authorization of an additional quantity of water significant and costly changes would be required to existing landscaping:
- Obtaining spacing consent forms from individual homeowners within 660 feet surrounding the HOA's wells would take a significant amount of time based on the number of existing private irrigation wells;
- The existing irrigation wells have operated historically without any complaints of drawdown or impairment;
- Approval of the applications will not affect any individual homeowner's right to file an impairment complaint with the Chief Engineer, Division of Water Resources;
- Homes in the Edgewater development are on municipal water supply, the surrounding private domestic wells are for irrigation of landscaping only;

It was the decision of the Edgewater HOA to recommend that the Kansas Division of Water Resources and the Equus Beds Groundwater Management District No. 2 grant an exception to the requirement for obtaining water well spacing consent forms, and Well Spacing Rule and Regulation K.A.R. 5-22-2(a)(2). Mulie Frazier
VEdgewater HOA President
02/15/16

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FFB 16 2016

#### WATER RESOURCES RECEIVED

### The Wichita Cagle Kansas@com



NOV 8 0 2015

### LEGAL PROOF OF PUBLICATION

Account #	Ad Number	Identification	PO	Amount	Cols	Lines
454118		PUBLIC NOTICE File Nos. 49,284 and 49,2		\$880.50	1	50

### Attention:

HOA MANAGEMENT SERVICES 900 N TYLER STE 7 **WICHITA, KS 67212** 

PUBLIC NOTICE

File Nos. 49,284 and 49,285 Page 2

Edgewater Homeowner's Association of Wichita, Kansas has filed with the Division of Water Resources, Kansas Department of Agriculture, two applications for a permit to appropriate aroundwater for beneficial use, identified as File No. 49,284 and 49,285. The following is a description of each of the applications:

File No. 49,284: One (1) well located in the Northwest Quarter of the Northwest Quarter of the Northeast Quarter and,

File No. 49,285: One (1) well located in the Southeast Quarter of the Northwest Quarter of the Northeast Quarter, both located in Sec-tion 27, Township 26 South, Range 1 West, Sedgwick County, Kansas,

The water will be used for irrigation on 9 acres of landscaping areas within the subdivision for the proposed quantity of 28 acre-feet per year. The landscaping areas are located in the Northeast Quarter and Northwest Quarter of Section 27, Township 26 South, Range 1 West, Sedgwick County, Kansas. These are existing wells within the subdivision which is located at the corner of West 45th St. North and North Hoover Road in Wichita, Kansas.

Any interested party is invited to submit to this office on or before September 21, 2015 writ-

comments as to whether Application File Nos. 49,284 and 49,285 should be approved or not approved. Persons submitting comments should specially indicate their interest in the applications in a clear and concise manner.

Application File Nos. 49,284 and 49,285 are on file and available for public inspection in the office of the Chief Engineer, Division of Water Resources, Kansas Department of Agri-culture 1320 Research Park Drive, Manhat-tan, Kansas 66502.

In The STATE OF KANSAS In and for the County of Sedgwick AFFIDAVIT OF PUBLICATION

3 Insertions

Beginning issue of: 08/21/2015

Ending issue of:

09/04/2015

STATE OF KANSAS)

.ss

County of Sedgwick)

Mark Fletchall, of lawful age, being first duly sworn, deposeth and saith: That he is Record Clerk of The Wichita Eagle, a daily newspaper published in the City of Wichita, County of Sedgwick, State of Kansas, and having a general paid circulation on a daily basis in said County, which said newspaper has been continuously and uninterruptedly published in said County for more than one year prior to the first publication of the notice hereinafter mentioned, and which said newspaper has been entered as second class mail matter at the United States Post Office in Wichita, Kansas, and which said newspaper is not a trade, religious or fraternal publication and that a notice of a true copy is hereto attached was published in the regular and entire Morning issue of said The Wichita Eagle from 8/21/2015 to 09/04/2015.

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

(Signature of Printipal Clerk

DATED: 9/29/2015

Notary Public Sedgwick County, Kansas

RACHEL M. WILSON MY COMMISSION EXPIRES June 15, 2016



1320 Research Park Drive Manhattan, Kansas 66502 (785) 564-6700

Jackie McClaskey, Secretary

900 SW Jackson, Room 456 Topeka, Kansas 66612 (785) 296-3556

Governor Sam Brownback

FILE COPY

August 6, 2015

BURNS AND MCDONNELL ATTN DANIEL CLEMENT 800 E FIRST SUITE 400 WICHITA KS 67202

Re: Application File Nos. 49,284 and 49,285

Dear Mr. Clement:

Upon reviewing the referenced applications for permit to appropriate groundwater for irrigation use, it was determined that notification of potential nearby well owners would be best accomplished by publication of a public notice.

Enclosed is a copy of a notice to be published in a local newspaper once per week for three consecutive weeks at the applicant's expense. Copies of the notice as published are to be submitted within two weeks of the final publication date, or you may arrange for the newspaper to provide an affidavit of publication, which should be forwarded to us.

If the date given in the notice does not allow at least 15 days for public comment following the final publication date, this office should be contacted for permission to revise the date in the notice to allow adequate time for comments.

Should you have any questions regarding your applications, please feel free to contact me at (785) 564-6639.

Sincerely

lim Mchogan

Erin McGrogan Environmental Scientist Water Appropriation Program

Enc: EMC

PC: Edgewater HOA 900 N Tyler Suite 7 Wichita KS 67212

Stafford Field Office

GMD No. 2

FILE COPY

PUBLIC NOTICE File Nos. 49,284 and 49,285 Page 2

Edgewater Homeowner's Association of Wichita, Kansas has filed with the Division of Water Resources, Kansas Department of Agriculture, two applications for a permit to appropriate groundwater for beneficial use, identified as File No. 49,284 and 49,285. The following is a description of each of the applications:

File No. 49,284: One (1) well located in the Northwest Quarter of the Northwest Quarter of the Northwest Quarter and,

File No. 49,285: One (1) well located in the Southeast Quarter of the Northwest Quarter of the Northeast Quarter, both located in Section 27, Township 26 South, Range 1 West, Sedgwick County, Kansas,

The water will be used for irrigation on 9 acres of landscaping areas within the subdivision for the proposed quantity of 28 acre-feet per year. The landscaping areas are located in the Northeast Quarter and Northwest Quarter of Section 27, Township 26 South, Range 1 West, Sedgwick County, Kansas. These are existing wells within the subdivision which is located at the corner of West 45<sup>th</sup> St. North and North Hoover Road in Wichita, Kansas.

Any interested party is invited to submit to this office on or before <u>September 21, 2015</u> written comments as to whether Application File Nos. 49,284 and 49,285 should be approved or not approved. Persons submitting comments should specially indicate their interest in the applications in a clear and concise manner.

Application File Nos. 49,284 and 49,285 are on file and available for public inspection in the office of the Chief Engineer, Division of Water Resources, Kansas Department of Agriculture 1320 Research Park Drive, Manhattan, Kansas 66502.

WATER WELL RECORD Form WWC-5 KSA 82a-1212 LOCATION OF WATER WELL FRACTION TOWNSHIP NUMBER RANGE NUMBER Sedgwick NE 1/4 NW NE 26 R IW EΛV 1/4 istance and direction from nearest fown or city street address of wall if located within CM/ 300' South of 45th N., 40 feet East of Cimarron Wichita, Kansas RUSSELL, J. DEVELOPMENT & MANAGEMENT, INC. WATER WELL OWNER: Board of Agnoutture, Division of Water Resource RR#.ST ADDRESS.BOX #: P.O. Box 75337 Wichita, Kansas CITY, STATE: ZIP CODE: Application Number LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX ξij. 4 DEPTH OF COMPLETED WELL **ELEVATION** Depth of groundwater Encountered WELL'S STATIC WATER LEVEL 10 FT. BELOW LAND SURFACE MEASURED ON morday/yr 2/13/09 Pumo test data Well water was ft after hours of pumping @ NW NE **Est Vield** Well water was ft after hours of pumping & com Ξ 12 to 50 Born Hole Dismeter WELL WATER TO BE USED AS 11. Injection well 9. Dewatering QU. SF 3. Feedlot 5. Public water supply 7. Lawn and garden only Of Other (Specify below) 10 Monitoring well test well 4. Industrial 6. Oil field water supply 8. Air conditioning ; If yes, what moldaylyr was sample Was a chemical/bactenological sample submitted to Department? (NO) (YES) submitted Was Water Well Disinfected? NO TYPE OF CASING USED CASING JOINTS Glued 5 9. Other (Specify below) 5. Wrought Iron 7. Fiberolass 1 Steel 3 RPM (SR) Welded Clamped SDR-26 8. Concrete tile 6 Asbestos-Cement 2 PVC 4 ABS Blank casing diameter 30 Wall thickness or gauge No Casino height above land surface Weight lbs. / ft 214 TYPE OF SCREEN OR PERFORATION MATERIAL: 7. PVC 3. Stainless Steel 9 ABS 11. Other (specify) Steel 8 RMP (SR) 10. Asbestos-Cement 12 None used (open hole) 2 Brass 4 Galvanized 6. Concrete Tite SCREEN OR PERFORATION OPENINGS ARE 7 Torch cut 9 Drilled holes 1 Continuous slot 3 Mill slot 5. Gauzed wrapped 11 None ( open hole) 8. Saw cut 2 Louvered shutter 6. Wire wrapped 10. Other (specify) 4. Key punched SCREEN - PERFORATION INTERVAL 30 Ħ From From From 50 24 **GRAVEL PACK INTERVALS** From to From From ft to ft From 6 GROUT MATERIALS 3 Bentonite bentonite hole plug 1 Nest cement 2. Cement Grout Grout Intervals From ft.. From What is the nearest source of possible contamination 10. Livestock pens 13. Insecticide storage 15 Oil well/Gas well 1. Septic tank 4 Lateral lines 16. Other (specify below) 11. Fuel storage 8 Sewage lagoon 14 Abandon water well 2. Sewer lines 5 Cass Pool Waterlight sewer line 6 West 12. Fertilizer storage 9 Feed yard 6. Seepage pit How many feet? 10 ft. plus Direction from well? LITHOLOGIC LOG LITHOLOGIC LOG From To From To sandy soil 10 ciay medium sand 10 20 day 73 34 coarse sand day 34 35 medium coarse sand

Contractor's or Landowner's Certification This water well was 1 constructed 2 reconstructed or 3 plugged under my surisdiction and 2/13/2009. was completed on (mo/day/year) and this record is true to the best of my knowledge and belief Kansas Water Well Contractor's License No. 236 This water well record was completed on (mo/day/year)

under the business name of Harp Well and Pump Service

by (signature)

Todd S. Harp



December 19, 2014

David Barfield Chief Engineer Kansas Department of Agriculture – Division of Water Resources 1320 Research Park Drive Manhattan, Kansas 66502

WATER RESOURCES RECEIVED

FEB 1 2 2015

Re: New Appropriation Applications – Edgewater HOA

KS DEPT OF AGRICULTURE

Dear Mr. Barfield:

Attached are two applications for irrigation use for the Edgewater HOA. The Edgewater HOA covers a small residential development located in Maize, KS. There are two existing water rights that the HOA utilizes to irrigate community open spaces within the subdivision (Water Permit Nos. 47656 and 47657). Water appropriation #47656 has an annual appropriation of 7.54 acre-feet and an approved place of use of 5.8 acres, and #46557 has an annual appropriation of 4.16 acre-feet and an approved place of use of 3.2 acres. Because of the extremely sandy soils at this location, the HOA has not been successful at maintaining the quality turf that is required in this subdivision under the existing appropriations. Therefore, the HOA is submitting new applications that will increase the amount of water available under new appropriations. The proposed wells will remain identical to those currently in use and it is requested that upon approval of the enclosed applications that Water Permit Nos. 47656 and 47657 be dismissed. The attached applications request a net appropriation total of 28 acre-feet when combined, and the place of use for each application will combined and identical. The combined place of use will result in a total irrigated area of 9 acres.

We recognize that the requested quantities exceed the typical allotment per acre for the area, however as previously noted, this site has extremely sandy soils requiring additional irrigation to maintain soil moisture within the rooting zone. The sandy soils at this site also indicate that a significant portion of the water applied during irrigation is returning to the aquifer as infiltration.

K.A.R 5-3-20(c) indicates that a quantity above the established maximum reasonable annual amount can be exceeded if the applicant can demonstrate that an increased demand is needed for a specialty crop (in this case turf and not traditional large scale row crops). The quantities requested reflect the historic required amount of water pumped during a single year for turf maintenance. We feel that the amount requested is not wasteful and will not otherwise prejudicially and unreasonably affect the public interest based on the relatively low quantity and pumping rate.

Please feel free to contact our office directly with any questions,

Daniel Clement DWC/dwc

**Enclosures** 

SCANNED

Phone: (785) 564-6700 Fax: (785) 564-6777 Email: ksag@kda.ks.gov www.agriculture.ks.gov

Sam Brownback, Governor

Jackie McClaskey, Secretary

February 16, 2015

**EDGEWATER HOA** PO BOX 75337 WICHITA KS 67205

> RE: Application File No. 49284

Dear Sir or Madam:

Your application for permit to appropriate water in 27-26-1-W in Sedgwick County, was received and has been assigned the file number noted above.

As a matter of record, the Division of Water Resources has on hand a large number of applications awaiting processing. Therefore to be fair to all concerned, and so that we can process those applications on hand in the order they were received, we intend to concentrate on the backlog of applications until the issue is resolved. Once review of your application has begun, we will contact you, if additional information is required.

In accordance with the provisions of the Kansas Water Appropriation Act, a portion of which is included below, the use of water as proposed prior to approval of the application is unlawful. Once approved, compliance with the terms, conditions and limitations of the permit is necessary. Conservation of the water resources of Kansas is required.

Section 82a-728 of the Kansas Water Appropriation Act, provides (a) except for the appropriation of water for the purpose of domestic use, ... it shall be unlawful for any person to appropriate or threaten to appropriate water from any source without first applying for and obtaining a permit to appropriate water in accordance with the provisions of the Water Appropriation Act or for any person to violate any condition of a vested right, appropriation right or an approved application for a permit to appropriate water for beneficial use.

(b) (1) The violation of any provision of this section by any person is a class C misdemeanor . . .

A class C misdemeanor is punishable by a fine not to exceed \$500 and/or a term of confinement not to exceed one month in the county jail. Each day that the violation occurs constitutes a separate offense.

If you have any questions, please contact me at (785) 564-6643. If you wish to discuss a specific file, please have the file number ready so that we may help you more efficiently.

Sincerely,

Brent Turney, L.G.

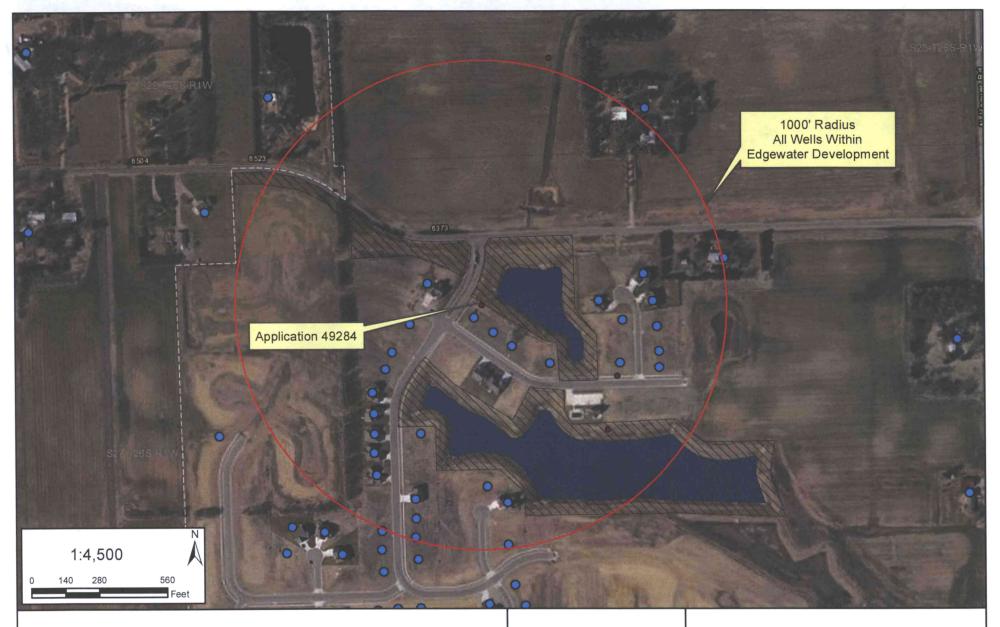
Grand A. Juney

Change Application Unit Supervisor

Water Appropriation Program

BAT: dlw

STAFFORD Field Office pc:





PLSS Sections

**Domestic Wells** 

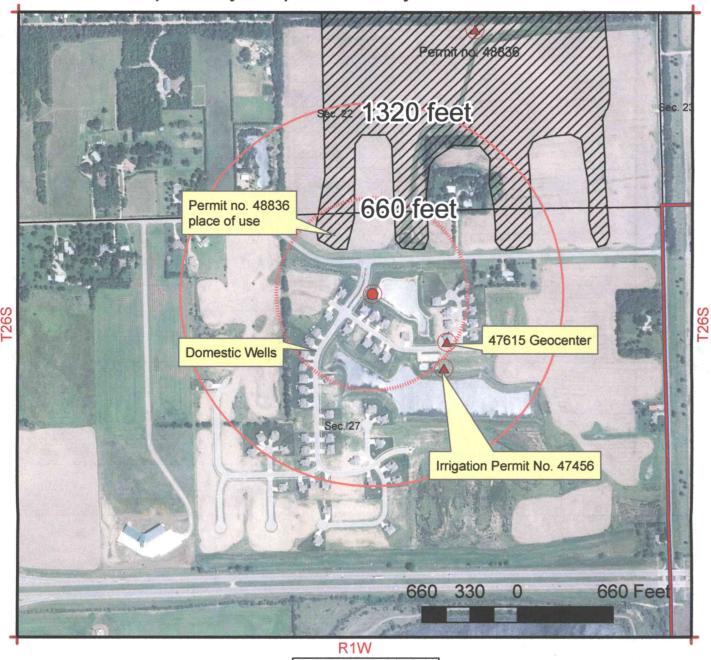


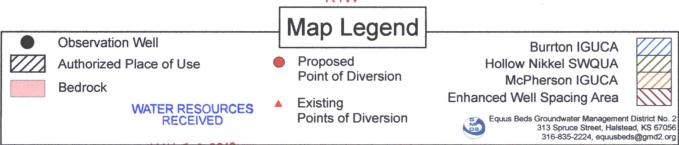
Application 49284 Domestic Wells Within 1000 Feet

### Equus Beds Groundwater Management District No. 2

Spacing Evaluation #49284 Edgewater NWNWNE (4669'N & 2050'W) 27-26S-01W, Sedgwick County

Prepared By: Stephen Flaherty Date: 5/16/2016

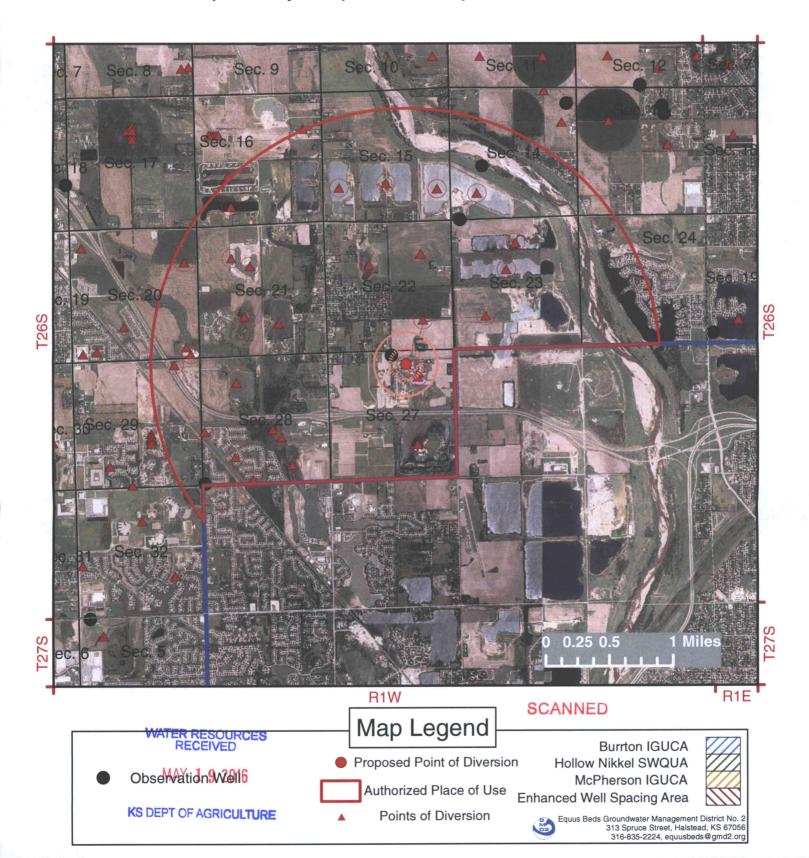




### Equus Beds Groundwater Management District No. 2

Safe Yield Evaluation #49284 Edgewater NWNWNE (4669'N & 2050'W) 27-26S-01W, Sedgwick County

Prepared By: Stephen Flaherty Date: 4/20/2016



### **SAFEYIELD EVALUATION #49284 Edgewater**

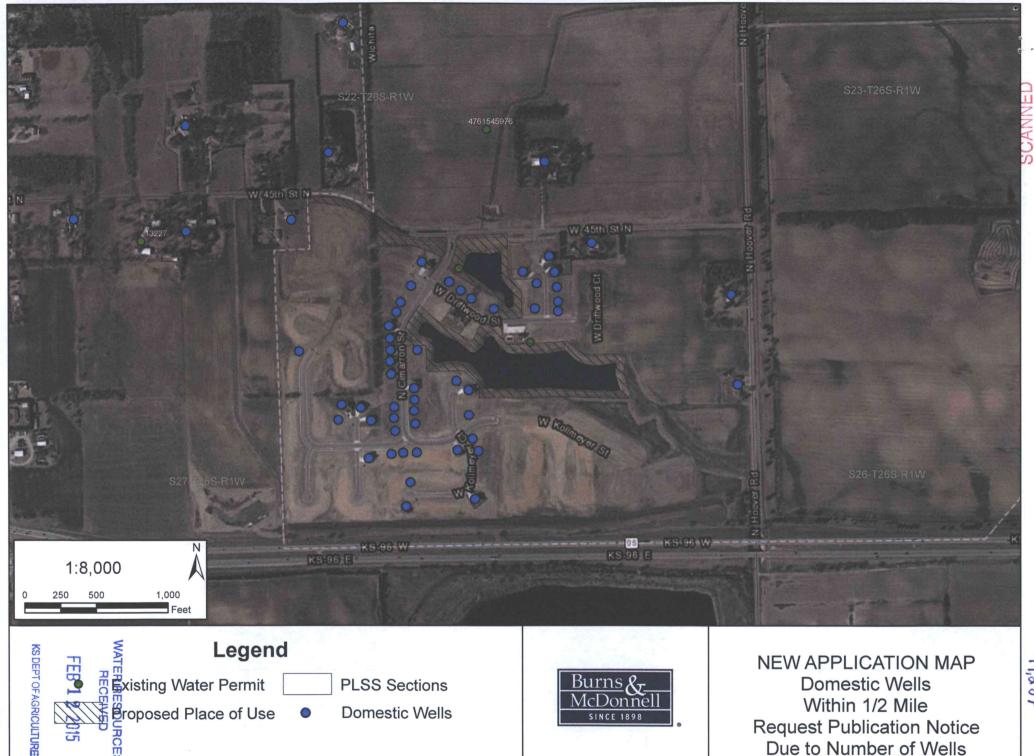
### LOCATION: NWNWNE (4669'N & 2050'W) 27-26S-01W, Sedgwick County

### SPECIAL USE AREA: None

EVALUATION DATE:- 4/20/2016

Total Areas: 5 251 acres	· Area in 3 inch discharge zone: (	0 acres: Area in 6 inch discharge zone: 5.251 acres
TOTAL MIERS: 3.231 acres	i. Area ili 3 ilicii discharge zone. I	U acres. Area ili U ilicii uisciiai ee zuile. 3.231 acres

FILE_ID	WELL_ID	TOWNSHIP	_	SECTION	QUALIFIER	USE	AUTHQUANTITY
A04240000	2581	265	01W	20	1880375	IND	15
A04571900	3124	26S	01W	29	49511104	REC	0.5
A04423900	2773	265	01W	22	35293479	REC	20
A04098100	471	26S	01W	21	12951980	REC	70
A04504300	2975	26S	01W	28	6751595	REC	18.33
A04365700	2660	26S	01W	23	31893085	REC	97
A04565700 A01527300	962	26S	01W	22	39601320	IRR	158
A01327300 A047518IR	3656	26S	01W	23	43002640	IRR	13
A047518RE	3657	26S	01W	23	43002640	REC	70
A047318RE A04681000	3459	26S	01W	21	16233397	REC	9.4
A04681000 A04745700	3637	26S	01W	27	46692050	IRR	4.16
A04745700 A04616200	3257	26S	01W	28	21952353	REC	4.33
						REC	2.48
A04616300	3258	26S	01W	28	18591996 11004200	IND	552
A20109138	3752	26S	01W	14			
A026130D1IR	3735	26S	01W	21	39603921	IRR	69.82 46.67
A026130D1IN	3736	26S	01W	21	37003100	IRR	
A04645300	3356	26S	01W	28	953228	IRR	7.74
A04645400	3358	265	01W	28	21905180	IRR	11.17
A04480800	2898	26S	01W	28	41503800	IND	78.3
A92911000	718	26S	01W	15	13200550	HYD	309
A04745600	3636	268	01W	27	41491564	IRR	7.54
A20149062	4858	26S	01W	22	12201270	HYD	1066
A026130D2	1323	26S	01W	21	39603921	IRR	46.55
A00552400	307	26S	01W	15	13864620	REC	67
A04082600	1215	26S	01W	15	13200550	IND	150.06
A04083000	1219	26S	01W	27	14001600	REC	99
A04120900	45	26S	01W	14	11004200	IND	100
A20109084	3704	26S	01W	23	13203960	HYD	2386
A04761500	3708	26S	01W	27	43301540	IND	19.9
A20109067	3671	26S	01W	21	37003100	HYD	371.2
A04108400	594	26S	01W	16	7923828	REC	55
A04094600	1094	26S	01W	15	16062674	IND	97
A04600300	3202	26S	01W	23	13203960	IND	600
A20019068	2929	26S	01W	28	41503800	HYD	345
A04515600	2958	26S	01W	28	10443946	REC	26
A04993700P	4860	26S	01W	20	39550597	IRR	109.2
A04928400P	4869	26S	01W	27	46692050	IRR	28
A04640900	3344	26S	01W	20	4800552	IND	29.69
A04883600	4156	26S	01W	22	12201270	IND	150
A04928500P	4870	26S	01W	27	41491564	IRR	28
Allowable Appro	-	2,625.50			ing Appropriati		7,338.04
Small User Quar	ntity	0			ımptive Approp		5,029.20
Remaining SUQ		45			ive Appropriati	ons	2,308.84
Note- Values are	e in acre-feet	WATER RES		Available /	Appropriations		316.66







**NEW APPLICATION MAP Domestic Wells** Within 1/2 Mile Request Publication Notice Due to Number of Wells

SINCE 1898

Proposed Place of Use

**DIVERSION & PLACE OF USE**