#### Kansas Department of Agriculture Division of Water Resources

#### PERMIT OF NEW APPLICATION WORKSHEET

1. File Number:	50,627		2. Status 6/14/2	Change Date:	3. Field Office: <b>03</b>					
5. Status:		☐ Denied by D	WR/GMD	☐ Dis	miss by Reques	t/Failure to R	eturn			
6. Enclosures:	⊠ Check Valve	⊠ N of C Form	□ W	ater Tube	☐ Driller Copy	⊠ Me	ter			
7a. Applicant(s) New to syste		Person ID 678 Add Seq#	389	7c. Landowne New to sy			erson IDdd Seq#			
915 RIFL	CROSSON E RD POLIS, KS 67467	,		7a						
7b. Landowner( New to syste		Person ID 679 Add Seq#	900	7d. Misc New to sy	rstem □	-	erson ID			
1807 UTE	E WAWORTH & E RD S, KS 67436	JERI J LEPP	PING							
8. WUR Corres New to syste Overlap File Agree Ye 7a	em 🗌 (s) WUC	Person ID Add Seq# Notarized WUC	Form	9. Use of Wat  IRR  STK  HYD DRG  IND SIC:	Groundwater REC SED WTR PWF	☐ Sui ☐ DE ☐ DO R ☐ AR	rface Water W			
10. Completion D	Pate: 12/31/2023	11. Perfe	ction Date:	12/31/202	<b>7</b> 12	. Exp Date: _				
13. Conservation Plan Required? ☐ Yes ☒ No Date Required: Date Approved: Date to Comply: 14. Water Level Measuring Device? ☒ Yes ☐ No Date to Comply: Date WLMD Installed:										
			<b>.</b>	0///2022	Date Prepared: Date Entered:	<b>3/22/22</b> 6/16/2022 LMoody	ву: <b>ВММ</b> Ву:			

File No.	50627	,		15. Fo	rmatio	n Code: 330 Drainage Basin: Solomon River 2									er <b>2</b> 3	County: OT Special Use:							Stream:				
T B		rsior	7 ID #2	305	,						s ba ved.	sed	on			17. Rate and Quantity  Authorized				Additional							
DEL ENT	PDIV		Qualifie	er	S	-	Γ	R		ID	D 'N 289			'W <b>99</b>			ate pm		Quantity af		Rate gpm			Overlap PD Files			
СНК			SE NE	sw	18	3 9	S	2W		1	1609	) (	2914	(GE	O)	8	00		ı	156.6		80	00	169	9— NA		
ENT	8962	6	NE SE	SW	18	3 9	S	2W	1		1297	7	289	9										156.6			
ENT	8962		SE NE		18	9	S	2W	1		1447	i	289	9													
ENT	8962	8	SE NE		18		S	2W		1747 28			289	9													
ENT	8962	29	SE NE	SW	18	9	98	2W			189	7	289	9													
18. Stora	18. Storage: RateNF Quantityac/ft Additional RateNF Additional Quantityac/ft																										
19. Limit					af/yr at					gpm (				cfs) w	hen co	ombine	ed with	n file n	umber	(s)							
Limit	ation:				af/yr at					gpm (				cfs) w	hen co	ombine	ed with	n file n	umber	(s)							_
20. Mete	r Required	d? [	⊠ Yes □	No		То	be inst	talled b	ру		12	2/31/	2023	3		_ D	ate Ac	cepta	ble Me	ter Inst	alled _						
21. Plac	e of Use					NE1/4				NW1/4					SV	SW1/4				SE1/4			Owner	Chg?	NO	Overlap Files	
MOD DEL ENT	PUSE	S	T R	ID	,	NE 1⁄4	NW 1⁄4	SW 1/4	SE 1⁄4	NE 1⁄4	NW 1⁄4	SW 1/4	SE 1/4	NE 1⁄4	NW 1⁄4	SW 1/4	SE 1/4	NE 1⁄4	NW 1/4	SW 1/4	SE 1/4						,
			9S 2W											19	32.5	19.5	34					105	7a,76		N	NA	
СНК	70521	18	9S 2W	3												15.5						15.5	7a,7b		N	NA	
Commer	nts:				•								•			•		•	•		-						

### KANSAS DEPARTMENT OF AGRICULTURE Division of Water Resources

#### <u>MEMORANDUM</u>

TO: Files DATE: March 22, 2022

**FROM:** Brandon Milner **RE:** Application, File Nos. 50,627

Dylan Crosson has filed the above referenced application (50,627) proposing to appropriate 156.6 acrefeet of groundwater per calendar year at a maximum rate of 800 gallons per minute for irrigation use. The applicant is proposing to install a battery of four (4) wells for this application. The applicant has signed the agreement verifying that they have access to the point of diversion.

As mentioned above, the point of diversion will be a battery of (four) wells with the geographical center located in the Southwest Quarter of Section 18, Township 9 South, Range 2 West in Ottawa County. Two notification letters were sent to nearby domestic well owners and no comments were received.

Based off the well log submitted with the application and conferring with the Stockton Field Office, the source of water is the unconfined Dakota aquifer. The initial review of the well log by the Stockton Field office was unclear as to whether the Dakota aquifer was confined or unconfined, so a further review was done by John Munson of technical services. His report will be attached to this memo for further review. The report identified quaternary deposits that overlay the Dakota aquifer in this region which could allow for higher recharge values in this area. The proposed point of diversion is also located near Pipe Creek which may explain the high static water level seen with the test log. The entire circle or 8042 acres will be considered for safe-yield review.

Based on a potential recharge of 2.6 inches, with 75% available for appropriation, safe yield was determined to be 1306.90 acre-feet. Prior appropriations within the 2-mile radius is 108 acre-feet which would leave 1198.9 acre-feet for appropriation for which application # 50,627 complies with safe yield.

The proposed place of use consists of 120.5 acres that will be irrigated by 156.6 Acre-Feet. This is the maximum allowable of 1.3 acre-feet of water per acre in Ottawa County.

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

The priority date for application no.50,627 received in Manhattan Headquarters is August 8, 2021. The application was sent to the Stockton Field Office for recommendation on March 22, 2022. Kelly Stewart recommended approval on April 5, 2022.

Based on all information listed above, this area meets safe-yield, will not affect nearby wells and it is recommended that the referenced application be approved.

Brandon Milner Environmental Scientist Permits Unit From: Stewart, Kelly [KDA]

Sent: Tue 4/5/2022 3:51 PM

To: Milner, Brandon [KDA]

Subject: FW: 50627 Memo

**Attachments:** Source of Supply and Safe Yield Application 50627 040522.pdf

Brandon,

I assume you haven't seen this yet. Even though we need to have that internal Dakota meeting that Kristen requested, I'm thinking we can go ahead and get this one in final form for approval and treat it like an unconfined Dakota application.

From: Munson, John [KDA] < John. Munson@ks.gov>

Sent: Tuesday, April 5, 2022 3:47 PM

**To:** Stewart, Kelly [KDA] <Kelly.Stewart@ks.gov>

Subject: FW: 50627 Memo

Kelly,

I just noticed that Figure 5 of the report I previously just sent about File No. 50,627 was missing the legend so I revised the report and attached it to this note. I did not rename the file so you probably cannot open it without closing or deleting the other file. Sorry for the confusion but if you are looking at it closely you might want the legend.

John

From: Munson, John [KDA]

Sent: Tuesday, April 5, 2022 3:23 PM

To: Stewart, Kelly [KDA] < <a href="mailto:Kelly.Stewart@ks.gov">Kelly.Stewart@ks.gov</a>>

Subject: RE: 50627 Memo

Yes, attached is the report that I sent to Chris.

From: Stewart, Kelly [KDA] < <a href="mailto:Kelly.Stewart@ks.gov">Kelly.Stewart@ks.gov</a>>

Sent: Tuesday, April 5, 2022 3:22 PM

To: Munson, John [KDA] < <a href="mailto:John.Munson@ks.gov">John.Munson@ks.gov</a>>

Subject: RE: 50627 Memo

Thanks for looking at this John. Do you have a report for it?

From: Munson, John [KDA] < John. Munson@ks.gov>

Sent: Tuesday, April 5, 2022 3:17 PM

To: Stewart, Kelly [KDA] < <a href="mailto:Kelly.Stewart@ks.gov">Kelly.Stewart@ks.gov</a>>

Subject: RE: 50627 Memo

Hi Kelly,

I reviewed File No. 50,627 with Brandon's information. I sent a copy of it to Chris for review with the proposed Dakota aquifer review procedure to be determined by technical services.

I reviewed this application with the same process as I have been doing with others by reviewing area well driller logs to help determine the source of supply. This one was different than other recent applications in that the battery of wells are proposed in an area overlain by Quaternary deposits along streams. While most well logs in the area show confining layers, even some along the streams, the safe yield in my review was on the area overlain by the

Quaternary deposits and I am calling that area unconfined but not the area outside the Quaternary deposits. Basically, I used the same process of looking at the entire 2-mile circle first to make sure the application passes that test considering both groundwater and any surface water in the entire 2-mile circle, then the second step is to analyze the portion of the 2-mile circle only overlain by Quaternary deposits where this application is proposed.

Hopefully, this can all be resolved soon so applications can be reviewed more consistently in this important area.

Thanks, John

**From:** Stewart, Kelly [KDA] < <a href="mailto:Kelly.Stewart@ks.gov">Kelly.Stewart@ks.gov</a>>

Sent: Tuesday, March 22, 2022 2:59 PM

To: Munson, John [KDA] < John. Munson@ks.gov>

Subject: RE: 50627 Memo

Thanks John,

I totally agree the Dakota can be difficult and that's definitely why I'm asking you for your review. You may already know this, but keep in mind the definition of confined Dakota in the regulations.

(r) "Confined Dakota aquifer system" means that portion of the Dakota aquifer system overlain by a confining layer resulting in the aquifer normally being under greater than atmospheric pressure.

From: Munson, John [KDA] < John. Munson@ks.gov>

Sent: Tuesday, March 22, 2022 2:54 PM

To: Stewart, Kelly [KDA] < <a href="mailto:Kelly.Stewart@ks.gov">Kelly.Stewart@ks.gov</a>>

Subject: RE: 50627 Memo

Hi Kelly,

I will take a look at this 50627 after I finish with 50670 that I am working on now.

These are really interesting in that the area well logs seem to usually differ from site to site but it is usually difficult to not treat them as a confined aquifer since the Dakota is a rather consolidated sediment usually overlaid by clays or shales.

John

From: Stewart, Kelly [KDA] < <a href="mailto:Kelly.Stewart@ks.gov">Kelly.Stewart@ks.gov</a>>

Sent: Tuesday, March 22, 2022 2:43 PM

To: Munson, John [KDA] < John. Munson@ks.gov>

Subject: FW: 50627 Memo

John,

Brandon is proposing to process this as an unconfined Dakota. I'm not so sure about that. What do you think of this one and others in the immediate vicinity?

From: Milner, Brandon [KDA] < Brandon.M.Milner@ks.gov>

Sent: Tuesday, March 22, 2022 12:33 PM

To: Stewart, Kelly [KDA] <Kelly.Stewart@ks.gov>

Cc: Billinger, Mark [KDA] < <a href="mailto:Mark.Billinger@ks.gov">Mark.Billinger@ks.gov">Mark.Billinger@ks.gov</a>; Hageman, Nancy [KDA] < <a href="mailto:Nancy.Hageman@ks.gov">Nancy.Hageman@ks.gov</a>>

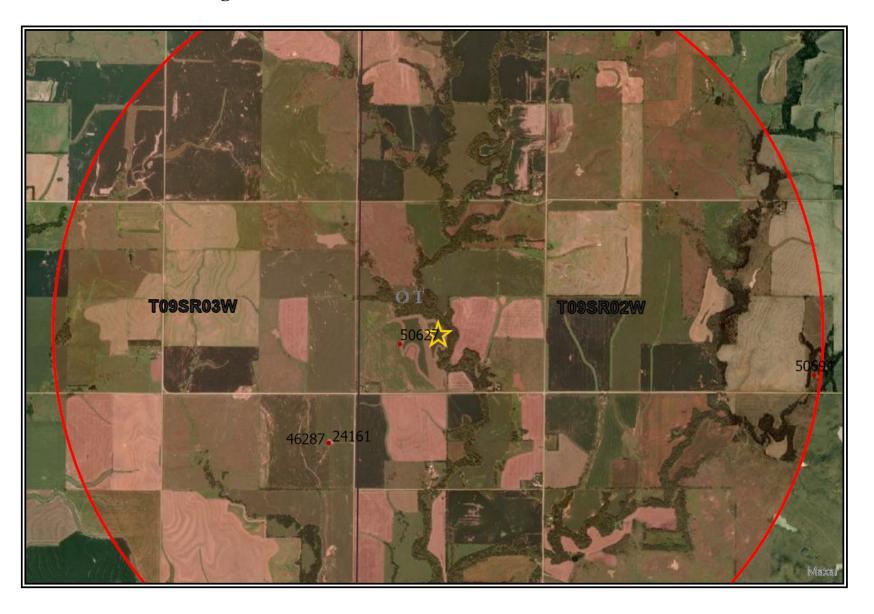
Subject: 50627 Memo

#### Good afternoon,

Could you please provide a recommendation for application no. 50,627? Mark has helped me look over this application since the source is Dakota.

Brandon Milner Environmental Scientist Water Appropriation Program

# Safe Yield Report Sheet Water Right- Proposed Point of Diversion Point of Diversion in 18-09S-02W Footages from SE corner- 1,609 feet North 2,914 feet West



#### **Analysis Results**

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

The safe yield based on the variables listed below is 1,306.90 AF.

Total prior appropriations in the circle is 494.60 AF.-156.6-230=108 AF

Total quantity of water available for appropriation is 812.30 AF. 1198.9 AF

#### Safe Yield Variables

The area used for the analysis is set at 8,042 acres.

The potential annual recharge at the circle center is estimated to be 2.6 inches.

The percent of recharge available for appropriation is 75%.

Authorized Quantity values are as of 03-MAR-2022 and are based on Appropriated and Vested ground water right and possible stream nodes for GMD #2. Domestic, Term and Temporary water rights have been excluded.

There are 4 water rights and 3 points of diversion within the circle.

File	Number	Use	ST	SR	Q4	Q3	Q2	Q1	FeetN	FeetW	Sec	Twp R	ng	ID	Qind	Auth Quant	Add Quant	Tot Acres	Net Acres
A	24161 00	IRR	NK	G		NC	E2	NE	3885	674	24	09 03	W	4	WR	108.00	108.00	132.00	132.00
A	46287 00	IRR	NK	G		NC	E2	NE	3885	674	24	09 03	W	4	WR	65.00	0.00	132.00	0.00
A	50627 00	IRR	AY	G				SW	1320	3960	18	09 02	W	1	WR	156.60	156.60	120.50	120.50
A	50694 00	IRR	AY	G		SE	SE	SW	502	3153	16	09 02	W	6	WR	230.00	230.00	177.00	177.00

#### Limitations

File Number	Seq Num Limitations
A 46287 00	2 108AF/YR @ 510GPM COM/W #24161

## Technical Report of Source of Supply for Application 50,627 and Safe Yield

Prepared by: John Munson, Groundwater Impairment Investigator Water Management Services, Technical Services Kansas Department of Agriculture, Division of Water Resources April 5, 2022

#### Summary

- Dylan Crosson filed application File No. 50,627 on August 5, 2021, for irrigation use at a maximum diversion rate of 800 gallons per minute to an extent of 156.6 acre-feet per year from a battery of four wells to be located in the Southwest Quarter of Section 18, Township 9 South, Range 2 West in Ottawa County, Kansas. On December 28, 2021, Brandon Milner of the Water Appropriation Program amended the proposed location to be more specifically described as 1,609 feet north and 2,914 feet west of the southeast corner of Section 18 to correspond with the location of the driller's test hole log. This location appears to be approximately 300 feet from Middle Pipe Creek. General geologic maps show that this location is overlain by Quaternary system deposits so the well is not only proposing to pump from the Dakota aquifer but it is interconnected to Quaternary deposits along Middle Pipe Creek. The well driller described 5 feet of black dirt underlying the top soil and the water level is 5 feet below ground level and about 2 feet above a 16 feet thick tan clay layer. This water level may be at or near the water level in the Middle Pipe Creek streambed.
- There is presently only one well authorized in the 2-mile circle of the proposed location of the battery of wells for File No. 50,627. That well is authorized by File Nos. 24,161 and 46,287 and is located a little over ¾ of a mile to the southwest and it is outside of Quaternary deposits associated with Middle Pipe Creek as shown on geologic mapping. The next nearest appropriation of water is File No. 12,057 and it is located in an area overlain by Quaternary deposits along Middle Pipe Creek downstream but it is over 2 miles away. There is presently another pending application File No. 50,694 proposed to pump from the Dakota aquifer in the area overlain by Quaternary deposits about 2 miles to the east but there is no prior appropriation of water in the area of consideration overlying Quaternary deposits. According to general geologic mapping from ArcGIS Pro normally used for review of appropriation of water, the safe yield for the entire 2-mile circle is 1,306.9 acre-feet and there is only 108 acer-feet of water authorized

in the entire area. Safe yield for the area overlain by Quaternary deposits along Middle Pipe Creek and East Pipe Creek in the 2-mile circle is 340 acrefeet so water is available for File No. 50,627. There are no other prior appropriations in this area of consideration so one-half mile well spacing is met to non-domestic wells and there are no domestic wells with 1,320 feet so well spacing is met in this unconfined aquifer area.

#### Discussion of Source of Supply

The proposed point of diversion is for a battery of four wells to be authorized for 156.6 acrefeet per year at 800 gallons per minute for irrigation use. The well driller's test hole log appears to be located about 300 feet from Middle Pipe Creek. The water level at 5 feet depth from land surface in what is described as black dirt below topsoil overlying tan clay may correlate with the water level in the streambed of Middle Pipe Creek. **Figure 1.** 

```
Geological Log
                       Dylan Crosson
              Test hole #3 - October 20, 2021
           NE1/4 of SW1/4 of Sec 18 - T9S - R2W
                         39.26749*
                        -.097.58486*
                       Static Level - 5'
         Top Soil
0-2
         Black Dirt
2-7
         Tan Clay
7-23
         Gray Clay
23-45
         Sand Rock
45-48
          Gray Clay
48-50
          Pyrite
50-53
          Sandstone
53-67
          Gray Clay
67-77
          Brown and Gray Clay
77-83
          Sandstone
83-140
140-143 Very hard layer
 * Assisted by Scott Ross
Water Rights Davestigative Services
        Phone: 785-543-8254
```

Figure 1. Water well driller's test hole log for File No. 50,627 along Middle Pipe Creek.

Lithologic logs were made from area well driller logs for wells in the 2-mile circle area of consideration and some outside the area. Locations of the logs to the north of the proposed

point of diversion across the 2-mile area were plotted on a topographic map from left to right and connected by a black line. Locations from west to east that include the proposed point of diversion were connected by a red line. Locations to the south mainly along Middle Pipe Creek and East Pipe Creek were connected by a blue line. **Figure 2.** 

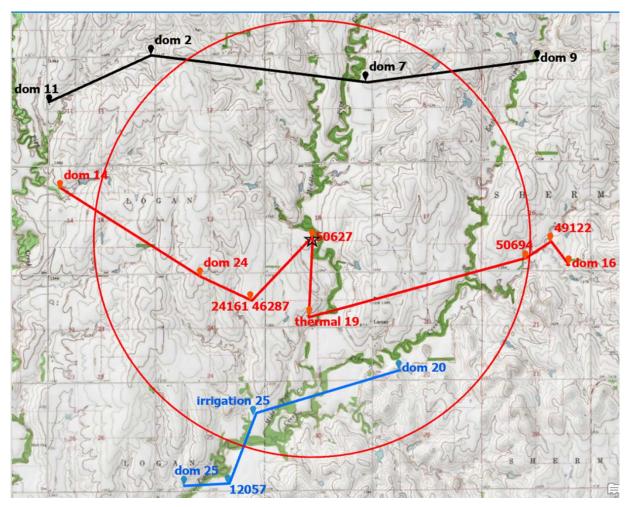


Figure 2. Topographic map showing locations of well driller's logs. The only point of diversion located in the 2-mile circle is authorized by File Nos. 24,161 and 46,287. It is located about ¾ of a mile southwest of the proposed File No. 50,627. File No. 12,057 is outside the 2-mile circle along Middle Pipe Creek and File No. 50,694 about 2 miles to the east is a junior pending application. The black line across the northern part of the 2-mile circle connects the locations of well driller's logs for domestic wells. The red line connects locations of logs from west to east and the proposed point of diversion. The blue line connects the logs to the south.

Kansas Department of Agriculture, Division of Water Resources, defines both the confined Dakota aquifer system and the unconfined Dakota aquifer system in Kansas Administrative Regulations. K.A.R. 5-1-1 (r) "Confined Dakota aquifer system" means that portion of the Dakota aquifer system overlain by a confining layer resulting in the aquifer normally being under greater than atmospheric pressure. K.A.R. 5-1-1 (kkkk) "Unconfined Dakota aquifer system" means that a portion of the Dakota aquifer system not overlain by a confining layer in which the aquifer is in equilibrium with atmospheric pressure. Lithologic log plots of well driller's logs may show whether an aquifer is overlain by a confining layer.

Well driller's logs were plotted in lithologic log charts. Lithologic log plots of wells to the north of the proposed file are connected by a black line in **Figure 2**. The water level in the first log to the far left is in a confining clay. The second log from the left shows the water level in a confining shale. The third log labeled dom 7 is a domestic well along Middle Pipe Creek and shows the water level in a sandstone overlain by clay, then sandstone then an unsaturated clayey sand. The fourth log labeled dom 9 is for a domestic well along East Pipe Creek and the water level appears to be in the top sandstone but water is pumped from deeper sandstone overlain by a confining clay. **Figure 3**.

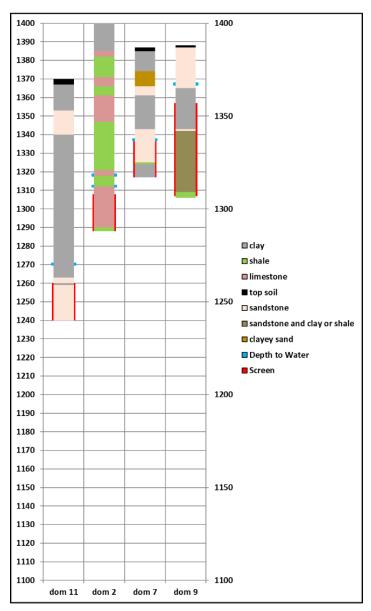


Figure 3. Lithologic log plots of well driller logs across the north part of the 2-mile circle of the proposed point of diversion File No. 50,627. Well sites from left to right are connected by a black line from west to east in Figure 2.

The lithologic log plots to the west, to the east and nearer to the proposed point of diversion are connected by a red line in **Figure 2**. The first log to the far left shows the water level in

a sandstone in the bottom of the well and the sandstone is overlain by confining clay. The second well water level is in a confining clay and the third well for File Nos. 24,161 and 46,287 appears to be in a confining sandy clay. The proposed well File No. 50,627 shows the water level 5 feet from land surface in topsoil or what the driller called dirt. The well log for a thermal exchange well about one mile directly south of the proposed well appears to have the lowest water level than all the others in a deep sandstone overlain by clay. The next two logs for pending junior File No. 50,694 and existing senior File No. 49,122 outside of the 2-mile circle both along a tributary to East Pipe Creek show a shallow water level about the same elevation but the wells pump from deeper sandstones that appear to be confined by clays or shale. The last log to the far right appears to pump from a deep sandstone confined by shale but the water level is about the same elevation as the nearby irrigation well File No. 49,122.

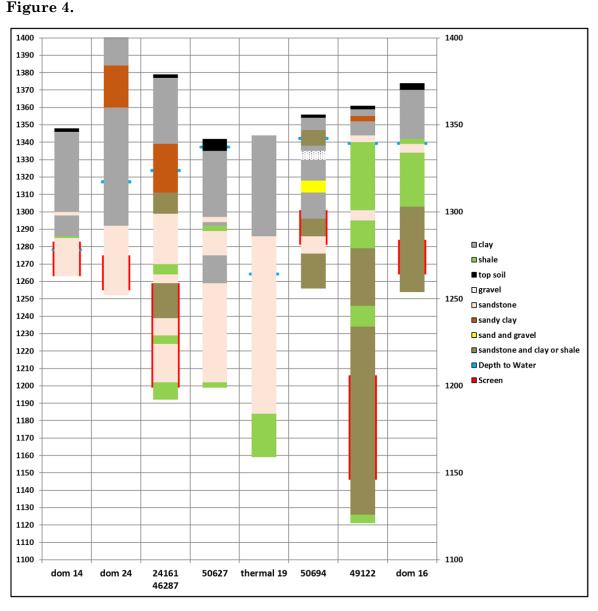


Figure 4. Lithologic log plots of well driller logs to the west, east and near the proposed point of diversion File No. 50,627. Well sites from left to right are connected by a red line from west to east in Figure 2.

Lithologic log plots to the south of the proposed point of diversion connected by a blue line in **Figure 2** are near Middle Pipe Creek and East Pipe Creek. The first log labeled dom 25 is a domestic well pumping from a deep sandstone with clay overlain by an extensive clay confining layer. The second log from the left is for File No. 12,057 for a well screened all in sandstone overlain by gravel and sand and gravel with a shallow depth to water of 13 feet in and extensive clay along Middle Pipe Creek. The next log is for an irrigation well in the northeast of Section 25 along Middle Pipe Creek and is screened in sandstone and shale layers overlain by sand and gravel but the water level deep and appears to be confined by a clay layer. The well log to the far right shows screen in a deep sandstone confined by a clay with the water level in an extensive sandstone between two clay layers. **Figure 5.** 

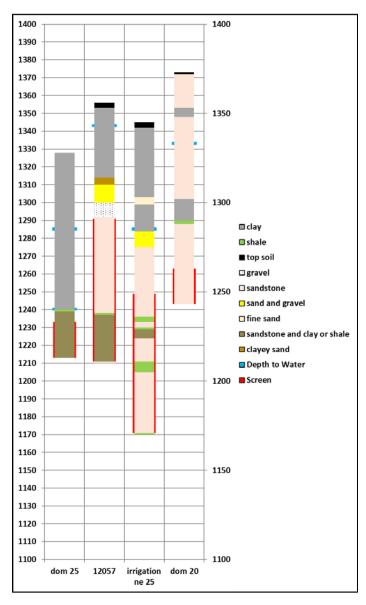


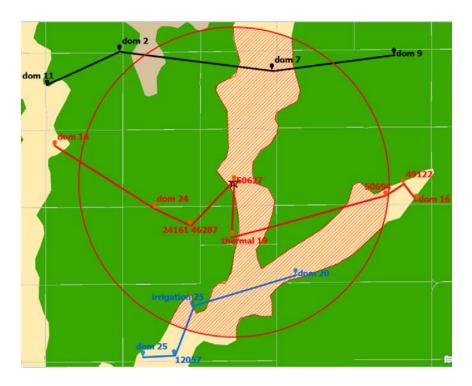
Figure 5. Lithologic log plots of well driller logs to the south of the proposed point of diversion File No. 50,627. Well sites from left to right are connected by a blue line from southwest to northeast along Middle Pipe Creek and East Pipe Creek in Figure 2.

The Kansas Geological Survey Dakota Aquifer Program shows this area as being in part of Suitability Area III where unconfined Dakota in central Kansas recharges at a rate of 0.2 to 0.3 inches per year and is interconnected with area streams. USGS, WRIR 87-4230 shows this as part of the Great Plains aquifer system and may recharge at a rate of 2 to 3 inches per year. This area is also shown as unconfined Dakota in general geologic maps associated with ArcGIS Pro used for processing applications at the Division of Water Resources and different from regionally confined Dakota farther to the west. Approval of applications in unconfined aquifers at this location are based on 75% of 2.6 inches per year recharge in a 2-mile circle area. In a confined aquifer safe yield would be limited to 40% of the amount approvable groundwater on average to an area where not overlain by alluvial or Quaternary deposits.

#### Conclusions from Well Driller's Logs and other Data Sources

Assuming all 8,042 acres in the 2-mile circle is recharged at 2.6 inches per year and 75% of that is for appropriation of water, there could be as much as 1,306 acre-feet appropriated in the 2-mile circle to meet safe yield. At the present time there is only one well authorized for a total of 108 acre-feet appropriated for File Nos. 24,161 and 46,287. General geologic mapping in ArcGIS Pro used for appropriation suggests the 2-mile circle area is underlain by unconfined Dakota aquifer but about 2,096 acres of the area is overlain by Quaternary deposits along Middle Pipe Creek and East Pipe Creek. While proposed File No. 50,627 proposes to pump from the Dakota aguifer it is in this area where Quaternary deposits interconnect with those creeks. Appropriating 75 % of 2.6 inches in the 2,096 acres of the area overlain by Quaternary deposits would be a safe yield of 340 acre-feet and File No. 50,627 is requesting 156.6 acre-feet. Since there are no other prior appropriations of water in the portion of the 2-mile circle overlain by Quaternary deposits, then water is available for appropriation of water for File No. 50,627. While File No. 12,057 is a senior appropriation of water in the Quaternary deposit area it is outside of the 2-mile area of consideration. File Nos. 50,694 and 49,122 located to the east about 2 miles are in the area overlain by Quaternary deposits but File No. 50,694 is a junior unapproved pending application and senior water right File No. 49,122 is outside of the 2-mile area of consideration.

Well driller's logs from the portion of the 2-mile circle not overlain by alluvial or Quaternary deposits indicate that many of the wells pump from confined Dakota aquifer overlain by confining shale or clay. In areas of confined Dakota aquifer 40% of the standard recharge on average can be appropriated. In this area there are 5,946 acres of Dakota aquifer not overlain by alluvial or Quaternary deposits in the 2-mile circle. At 40% of the standard recharge of 75% of 2.6 inches per year within the 5,946 acre the safe yield in the confined Dakota aquifer would be 386 acre-feet. There is presently 108 acre-feet of water appropriated to the well in the confined Dakota area leaving some water still available for appropriation. **Figure 6.** 



#### **Analysis Results**

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

The safe yield based on the variables listed below is 340.56 AF.

Total prior appropriations in the circle 0.00 AF.

Total quantity of water available for appropriation is 340.56 AF.

#### Safe Yield Variables

The area used for the analysis is set at 2,096 acres.

The potential annual recharge at the circle center is estimated to be 2.6 inches.

The percent of recharge available for appropriation is 75%.

Figure 6. Map showing 2,096 acres overlying Quaternary deposits cross-hatched in the 2-mile circle area of consideration. ArcGIS Pro maps and other information suggest the 2-mile area is unconfined Dakota but review of well driller's logs indicate it is mostly confined Dakota aquifer shown in green. The area overlain by Quaternary deposits is considered unconfined and cross-hatched by red lines. Analysis results based on the safe yield variables show water is available for File No. 50,627.

#### Discussion of Impairment of Existing Rights

Kansas Department of Agriculture, Division of Water Resources, defines well spacing between non-domestic wells and between a non-domestic well and a domestic well for both the confined Dakota aquifer system and the unconfined Dakota aquifer system in Kansas Administrative Regulations. K.A.R. 5-4-4 (1) The minimum distance from the well which is the subject of the application to all other senior authorized non-domestic and non-temporary wells in the same aquifer or a hydraulically connected aquifer shall be: (A) four miles between

wells whose common source of supply is the confined Dakota aquifer system, (B) one-half mile between wells whose common source of supply is the unconfined Dakota aquifer system. (2) In addition to meeting the minimum spacing requirements of paragraph (1) above, the minimum distance from the well which is the subject of the application to all domestic wells, except where the domestic well owner has given the applicant written permission to reduce the spacing interval, shall be: (A) one-half mile for wells whose common source of supply is the confined Dakota aquifer system; (B) 1320 feet for wells whose common source of supply is the unconfined Dakota aquifer system.

The battery of wells propose to pump from the Dakota aquifer but the location is overlain by Quaternary deposits along Middle Pipe Creek and East Pipe Creek in the 2-mile circle so the proposed appropriation is considered to be from an unconfined Dakota aquifer. There are no other prior appropriations in this area overlain by Quaternary deposits so one-half mile well spacing between wells whose common source of supply is the same unconfined Dakota aquifer is met. There is an existing well File Nos. 24,161 and 46,287 about ¾ of a mile away in the other area of the Dakota aquifer considered to be confined in the 2-mile circle and four-mile well spacing is not met. While there may be well to well interaction due to both wells pumping from the Dakota aquifer, less drawdown is expected due to additional recharge in the area overlain by Quaternary deposits.

#### Conclusion to Impairment of Existing Rights

There are no other wells in this area where the Dakota aquifer is overlain by Quaternary deposits so one-half well spacing to non-domestic wells is met and there are no domestic wells within 1,320 feet.

#### KANSAS DEPARTMENT OF AGRICULTURE

Mike Beam, Secretary of Agriculture

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

# APPROVAL OF APPLICATION and PERMIT TO PROCEED

(This Is Not a Certificate of Appropriation)

This is to certify that I have examined Application, File No. 50,627 of the applicant

#### DYLAN CROSSON 915 RIFLE RD MINNEAPOLIS, KS 67467

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 August 5, 2021.

				NE	=1/4			NV	11/4			SW	11/4			TOTAL			
Sec.	Twp.	Range	NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE¼	NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4		TOTAL
18	98	2W									19	32.5	35	34					120.5

- 2. That the authorized source from which the appropriation shall be made is groundwater, to be withdrawn by means a battery of four (4) wells with a geo-center located in the Southeast Quarter of the Northeast Quarter of the Southwest Quarter (SE½,NE½,SW½) of Section 18, more particularly described as being near a point 1,597 feet North and 2,899 feet West of the Southeast corner of said section, in Township 9 South, Range 2 West, Ottawa County, Kansas, located substantially as shown on the map accompanying the application.
- 3. That the appropriation sought shall be limited to a maximum diversion rate not in excess of **800 gallons per minute** (1.78 c.f.s.) and to a quantity not to exceed **156.6 acre-feet** of water for any calendar year.
- 4. That installation of works for diversion of water shall be completed on or before <u>December 31, 2023</u>, or within any authorized extension thereof. The applicant shall notify the Chief Engineer and pay the statutorily required field inspection fee, which is currently \$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 accompanied by the required statutory fee, which is currently \$100.00.

File 50,627 Page 2

5. That the proposed appropriation shall be perfected by the actual application of water to the proposed beneficial use on or before <u>December 31, 2027</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, which is currently \$100.00.

- 6. 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.
- 7. 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.
- 8. 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.
- 9. 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.
- 19. 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.
- 11. That the well drilled under the authority of this permit shall have a tube or other device installed in a manner acceptable to, and in accordance with specifications adopted by, the Chief Engineer. This tube or device shall be suitable for making water level measurements and shall be maintained in a 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 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. 82a703c for the source of supply to which this water right applies.

Ordered this 14 day of June

, 2022 , in Manhattan, Riley County, Kansas.

Lane P. Letourneau, P.G.

Program Manager

Water Appropriation Program
Division of Water Resources

Kansas Department of Agriculture

State of Kansas)

) SS

County of Riley )

The foregoing instrument was acknowledged before me this  $^{12}$  day of  $^{12}$ , 2022, by Lane P. Letourneau, P.G., Program Manager, Division of Water Resources, Kansas Department of Agriculture.

Notary Public

ASHLEE FREEMAN My Appointment Expires April 21, 2024 1320 Research Park Drive Manhattan, KS 66502 785-564-6700 www. agriculture.ks.gov



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

Mike Beam, Secretary

Laura Kelly, Governor

DYLAN CROSSON 915 RIFLE RD MINNEAPOLIS, KS 67467

June 23, 2022

RE: Appropriation of Water, File No. 50,627

Dear Sir or Madam:

Enclosed is a permit authorizing you to proceed with construction of the proposed diversion works and to appropriate water for beneficial use as set forth in the permit. Your attention is directed to the enclosures and to the terms, conditions, limitations, and requirements specified in this permit.

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

An acceptable water flowmeter must be installed on the diversion works authorized by this permit prior to using water. An annual water use report must be filed with the Chief Engineer by March 1, following the end of each calendar year. If a complete annual water use report is not received by the deadline, then a fine may be assessed, and all water use under such permit or right may be suspended. Reports submitted in paper form will be assessed a \$20 per file number paper filing fee. In order to avoid this filing fee, you may submit your report online at www.kswaterusereport.org.

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

Enclosed is an informational sheet that sets forth the procedure to obtain a Certificate of Appropriation which will establish the extent of your perfected water right. Additional information and applicable forms may be found on our website at <u>agriculture.ks.gov/divisions-programs/dwr</u>. If you have any questions or need assistance with any of these requirements, please contact our office at 785-564-6640 or your local Stockton Field Office at 785-425-6787. If you call, please reference the file number so we can help you more efficiently.

Sincerely,

Kristen A. Baum

New and Change Applications Unit Supervisor

Division of Water Resources

KAB:bmm Enclosure(s)

pc: Stockton Field Office

WALTER E WAWORTH & JERI J LEPPING

#### RIGHT TO A HEARING AND TO ADMINISTRATIVE REVIEW

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

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

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

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

#### CERTIFICATE OF SERVICE

On this 23 day of June , 2022 , I hereby certify that the foregoing Approval of Application, File No. April 12, 2022, dated 14 June , 2022, was mailed postage prepaid, first class, US mail to the following:

DYLAN CROSSON 915 RIFLE RD MINNEAPOLIS, KS 67467

With photocopies to:

WALTER E WAWORTH & JERI J LEPPING 1807 UTE RD DELPHOS, KS 67436

Stockton Field Office

Division of Water Resources