

January 2019 through December 2023

Westside Dairy

Water Conservation Area Executive Summary

WCA Acres: 720 acres

Number of IRR Water Rights: 2

Number of IRR Wells: 2

Number of STK Water Rights: 1

Number of STK Wells: 2

Historical Period: 2003-2012

Prior Conservation:

- Water Right, File No. 11695-D1 has been inactive since 1987 when it was enrolled in CRP.
- Water Right, File Nos. 8209 & 9096 has been enrolled in a WCA from 2016-2018.
- Waste water effluent has been applied to crop land that resulted in less groundwater pumping.

WCA Allocation:

- Total WCA allocation of 4,400 AF (20% conservation factor)

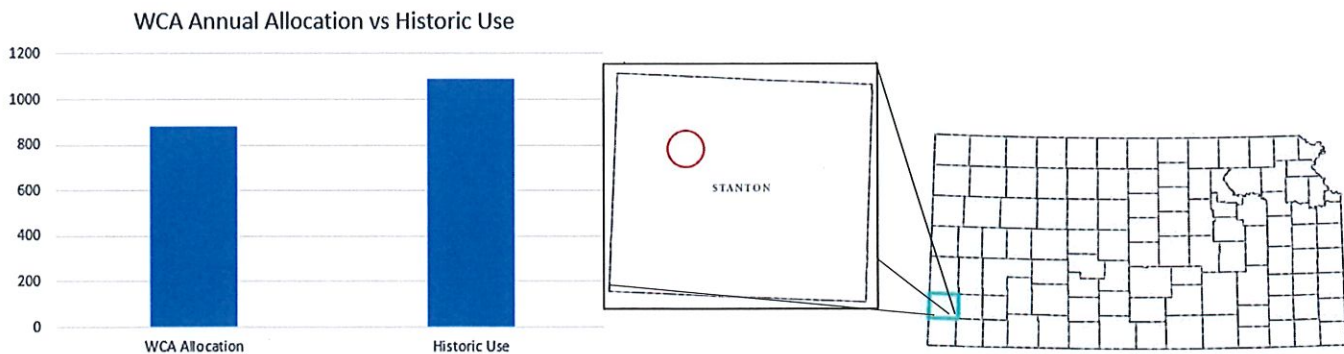
Corrective Controls:

- Two wells under File No. 9096 held to 150% (624AF) of annual authorized quantity per calendar year for irrigation and stock water use
- File No. 8,209 limited to 693 AF per calendar year
- Total stock water use limited to 490 AF per calendar year.
- Term permit to be filed for File No. 9096 authorizing irrigation use.
- Term permit to be filed for File No. 8208 authorizing stockwater use.

Total Water Conserved Over the WCA Period: A total of 1,060 AF over the 5 year period.

WCA Allocation vs. Historical Use Graph

WCA County Map



*NOTE: Provided by KS Dept of Agriculture – Division of Water Resources
Initial consultations with KDA-DWR began in **December 2018***

MANAGEMENT PLAN

For the Designation of a Water Conservation Area (WCA)

Westside Dairy WCA; Stanton County, KS

January 2019 through December 2023

In order to conserve and extend the productive life of the aquifer in our region and increase the value and viability of our water rights and water resources for future generations, we, the undersigned water right owners, propose the following management plan, pursuant to K.S.A. 82a-745 (WCA Law), to form the basis of a Consent Agreement and Order Designating a Water Conservation Area (WCA).

Expression of Conservation Goals

Westside Dairy seeks to sustain its operation by implementing a water conservation plan that provides the flexibilities needed for stockwater use to operate a dairy, limit water use, and more intensively manage irrigated crop production for compliance with nutrient management regulations. A plan that allows alternating wastewater and groundwater irrigation of all fields included in the facility's Nutrient Management Plan will optimize the use of the wastewater and provide opportunities to reduce the use of groundwater for irrigation. Most of the wastewater is derived from stormwater runoff from the dairy facility and therefore provides a supplemental source of water that is not dependent upon groundwater.

Flexibility in well use is needed to supply peak demand within the dairy while also meeting critical irrigation needs during limited periods of time. Relying upon one primary well to supply the dairy allows the other two wells to supply peak stockwater use and critical irrigation needs of limited duration when irrigation is alternated between groundwater and wastewater.

Water Rights Enrolled and Geographic Boundaries

This WCA shall include the water rights listed in the attached document. This list includes details of all points of diversion associated with those water rights; as well as legal descriptions of the locations of the points of diversion and/or identification numbers.

The current total appropriations authorized for all water rights included in this WCA are 1,487 acre-feet (AF) per year, with an average annual use during the period 2003-2012 of 1,092 AF. With an approximate 20% reduction from the historical annual average use, the five-year WCA allocation requested is 4,400 AF (880 AF/year x 5 years).

The geographic boundary for this WCA is shown on the attached map(s) and attached table defined by legal locations. This table includes total acres and legal definitions by section, township, and range of the WCA boundary.

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Findings Regarding Groundwater Conditions

We understand that the WCA Law requires a finding that one of the following circumstances be present within the area geographic boundaries of this WCA; specified in K.S.A. 82a-1036 (a) through (d):

- a) Groundwater levels in the area in question are declining or have declined excessively;
- b) The rate of withdrawal of groundwater in the area equals or exceeds the rate of recharge within such area;
- c) Preventable waste of water is occurring or may occur within the area in question; or
- d) Unreasonable deterioration of the quality of water is occurring or may occur within the area in question

and amendments thereto, exist, or include a finding or findings that the area within the geographic boundaries described in paragraph (1) has been closed to new appropriations by rule, regulation or order of the Chief Engineer.

We have been informed that the following conditions exist:

- Groundwater levels in the area in question are declining or have declined excessively;
- The rate of withdrawal of groundwater in the area equals or exceeds the rate of recharge within such area;

These conditions suggest the advisability of implementing this WCA.

See the attached maps and figures supporting these findings and observations. Such attached documents include:

- Maps with WCA geographic boundaries defined- **Attachment A & B**
- Detailed table with description of WCA geographic boundaries- **Attachment D**
- Summary of water rights with description of legal locations- **Attachment C**
- KGS Observation well map and data- **Attachment E, F, G, & H**
- DWR Theis evaluation – **Attachment I**
- Wastewater Application Summary – **Attachment J**

Per the Corrective Control Provisions and Plan for Conservation Section under this WCA management plan, it has been determined that the proposed provisions listed will not significantly affect nearby points of diversion. This has been determined by a Theis analysis conducted by the Kansas Department of Agriculture. The Theis report(s) for the water rights in question are included in the attached documents.

Due Consideration for Past Conservation

We acknowledge that as described in the law, a water conservation area (WCA) management plan shall give due consideration to water users who have previously implemented reductions in water use resulting from voluntary conservation measures.

We request that consideration be given to past conservation that was achieved under the WCA that was in effect during the period of 2016 through 2018. Also, substantial quantities of dairy wastewater (effluent) have been applied since the dairy was established. This resource, which consists primarily of surface runoff from the pens and associated areas, has reduced the demand for groundwater pumping to some degree. The annual quantity of wastewater application has been documented since 2010 and a summary of recent application quantities is included with this plan. We request that this past water conservation and that achieved through this plan be considered in any LEMA proposed for the area or in a subsequent WCA. Also, WR#11,695-D1 has been in Conservation Reserve Program (CRP) and kept in conservation after the CRP expired to the present time. It is our intent to keep the well inactive during this WCA period unless there is a failure of our other wells and the need to reactivate this well for use for that reason.

Corrective Control Provisions and Plan for Conservation

We acknowledge that the following corrective controls will be in effect within this WCA during the term of the WCA period listed:

1. Water rights, at the discretion of the owners, may be pumped as directed by the owner, provided that:
 - a) Any and all portions of the fields included in the Westside Dairy Nutrient Management Plan, WCA plan and base water rights, may be irrigated in a calendar year. These fields include the NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Section 11, and the NW $\frac{1}{4}$ of Section 14, all in Township 28 South, Range 42 West, Stanton County, Kansas. Also included are fields in the SW $\frac{1}{4}$ and SE $\frac{1}{4}$ of Section 10 Township 28 South, Range 42 West, which will be added to the next update of the Nutrient Management Plan. The total acreage is 720 acres. Average annual wastewater (effluent) irrigation for the period of 2015 through 2018 is 288.22 AF. Applications to change the place of use will be filed and approved prior to irrigating land that may not currently be authorized by the base water rights described within this plan.
 - b) The sum of water use under water right numbers (8,209, 9,096 and 11695-D1) combined shall be limited to no more than 4,400 acre-feet during the five year WCA.
 - c) Term Permit applications will be filed for additional beneficial uses of water under each base water right.
 - d) Stockwater use for livestock consumption and dairy operation will be limited to 490 AF per year based upon the reasonable use limitations set in K.A.R. 5-3-22.
 - e) Water rights may be pumped as directed by the owners subject to the following limitations:
 - File No. 8,209 shall be limited to 693 AF per year, which is the consumptive use limit for this water right, which is less than the authorized annual quantity.
 - f) The total combined use of the two wells under File No. 9,096 shall be held to 150% (624 AF) of annual authorized quantity per calendar year.
 - g) The rate of each point of diversion included in this WCA shall be limited to the current rate authorized by the corresponding base water right.

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2. The corrective control provisions of this WCA cannot conflict with the rules and regulations of the local GMD that result in greater overall conservation of water resources. If a Local Enhanced Management Area (LEMA) plan or an Intensive Groundwater Use Control Area (IGUCA) is formed after the initiation of this WCA, and the WCA is partially or wholly within the LEMA or IGUCA, the corrective control provisions that result in the greater overall conservation of water resources based on inches per acre and not based on percent reduction of average historical use shall prevail. However, any LEMA or IGUCA must give due consideration to the conservation achieved by WCA participants pursuant to 82a-745(a)(6). The Chief Engineer is authorized to amend the provisions of the WCA to conform to any rules, regulations, or requirements that result in greater conservation of the water resource subject to the foregoing due consideration for past and current conservation.

We, the water right owners enrolling in this WCA understand we may gain the following additional incentive(s) in consideration for our WCA participation.

3. Any portion of the five-year WCA allocation of 4,400 AF may be carried over and added to a subsequent WCA period after 2023 if unused during the duration of this WCA period. For the carryover quantity to be included, all owners must enter into an agreement to participate in a subsequent WCA by December 31st of the last year of this WCA period. Upon review, should a subsequent WCA be entered, the potential carryover will not allow any well to exceed the agreed upon corrective controls.

Compliance Monitoring and Enforcement

We, the owners, understand that the following compliance monitoring and enforcement provisions are proposed. This section also includes any specific provisions regarding measuring or reporting water usage.

There are three (3) recognized observation well(s) within one (1) mile of this WCA boundary that have for many years been measured annually by the Kansas Geological Survey (KGS). See attached maps for locations. The well(s) will continue to be measured annually and the data collected will help in evaluating the effectiveness of the WCA. An onsite observation well may be necessary to monitor the local water level more accurately.

We will submit an annual report no later than March 1st and maintain a spreadsheet detailing the following information for each well and all wells combined: beginning and ending meter readings, quantity of water diverted, acres irrigated, the inches per acre, and the quantity of water remaining for the WCA period listed. These records will be available to KDA-DWR upon request.

We will ensure backup measurements will be supported or an alternate measurement device will be available to be put into service in case the water flowmeter record for any given well is questionable or not reliable.

We acknowledge that water flowmeters within the WCA will be sealed to the measurement chamber by KDA-DWR during the duration of this management plan to ensure an accurate water use record. An additional water flowmeter will be installed prior to the dairy water storage tank to account for all water diverted to the dairy for stockwater use.

We, water right owners within this WCA, shall be responsible for ensuring the water flowmeters comply with state and local law(s). Any water right owner or authorized designee who finds a flowmeter that is inoperable or inaccurate shall within 48 hours contact the KDA-DWR concerning the matter. Whenever an inoperable or inaccurate meter is repaired or replaced, the owner or authorized designee shall notify the KDA-DWR within seven (7) days on a form prescribed by the Chief Engineer of the water flowmeter installation and any water flowmeter repair or replacement event.

We acknowledge that failure to abide by the terms of this agreement may result in the termination of the WCA. Failure to abide by the terms, conditions, and limitations of the WCA management plan will be subject to the civil penalties outlined in K.A.R. 5-14-10 and K.A.R. 5-14-12.

Review of Effectiveness

We acknowledge that a review of this WCA shall be completed prior to November 1st of the final year of the WCA period listed to ensure the above terms remain appropriate and are achieving the stated goals of this WCA. Should the Chief Engineer find that the terms are no longer appropriate or that no progress has been made towards the stated goal, the Chief Engineer may refuse to renew a WCA and may suggest new terms and goals. Upon a review and finding by the Chief Engineer that the WCA has achieved or made progress toward attaining its goals, we understand that the Chief Engineer may recommend that the same terms be included in a subsequent WCA. The terms of the WCA may be continued as long as this WCA is in good standing with its most recent WCA period and upon formal approval by the Chief Engineer. The Chief Engineer shall issue findings addressing the terms and goals of the existing management plan prior to any renewal of a subsequent WCA.

We acknowledge that unless terminated under the provisions below (e.g. due to the development of a LEMA), the WCA will be in effect for the listed period with an evaluation at the end of every WCA period. We understand that KDA-DWR will conduct this evaluation to ensure compliance and conservation. The evaluation will determine total water use during the WCA period.

We acknowledge that should an order of designation for a LEMA be implemented prior to end of this WCA period, an evaluation of this WCA will be conducted the year prior to the start of a LEMA. This evaluation may be used to determine an additional allocation amount of water to be carried over into a LEMA; should this be the case.

Member addition, withdrawal, and removal

We acknowledge that water right owners and their associated water right(s) and geographic boundaries may be added to the WCA upon written notification to the Chief Engineer by the owners of each enrolling water right with legal descriptions of the areas to be added. A member may withdraw from the WCA through written notification to the Chief Engineer signed by the owners of the participating water right or rights to be withdrawn from the WCA.

If the addition or withdrawal of water rights requires modification of the water allocation quantities, geographic boundaries, places of use, terms, or conditions of the original WCA, the management plan shall be revised to incorporate such changes and the associated consent agreement shall be reaffirmed by all parties, after opportunity for comment on the proposed revisions by the applicable GMD.

Termination

We acknowledge this WCA agreement may be terminated by written notification, signed by all then-existing members of the WCA, to the Chief Engineer of the intent to terminate.

We also acknowledge that the Chief Engineer may terminate this WCA upon finding that it is not being upheld to its terms. Such termination shall give notice and require a full evaluation of the WCA and associated water rights to identify and ensure follow up actions.

State Law

We acknowledge that this WCA is subject to compliance with all other applicable state laws.

Notification to Nearby Owners

We acknowledge that, by statute, the Chief Engineer is required to provide written notification to all water right owners with a point of diversion within ½ of a mile, or farther if deemed necessary by a rule and regulation of the Chief Engineer, of the geographic boundaries of this WCA.

Assurances

We acknowledge this WCA will not alter the terms, conditions, and limitations of the base water rights.

Review of Other Applicable Requirements

We acknowledge that upon review, this WCA management plan was found to effect equal or greater overall conservation than applicable GMD regulations, LEMA, and IGUCA requirements.

Participant's Agreement

By signing below, we, the water right owners, agree that this management plan is fair and equitable. This management plan, provided to the Chief Engineer and water right owners, is the expressed written intent of the parties and the whole agreement between the parties. We, the water right owners, agree to be bound by all the terms contained in this management plan and understand that the provisions of this agreement shall be construed to give effect to the provisions listed. We, the water right owners, also agree that this management plan is the basis for a consent agreement among the Chief Engineer and the undersigned water right owners and, therefore, any order and consent agreement issued by the Chief Engineer designating this WCA shall be binding upon all parties as the necessary formal implementation of this management plan.

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FOR THE PARTICIPANTS: All participating water right owner(s) signing below affirm their approval of this WCA management plan and, if approved by the Chief Engineer, allow consent to the Chief Engineer to formally approve the designation of this Water Conservation Area, described herein, by means of a Consent Agreement and Order.

[Signature] Date: 04/24/2019

SYRACUSE DAIRY, LLC- Owner (Signature)
Water Right No(s). 8,209, 9,096 and 11,695-D1

751 SE CR 36, SYRACUSE, KS 67878-7822
Full Mailing Address

jay@syracusedairy.com (620) 492-2525
Email Address Phone Number

ACKNOWLEDGMENT OF NOTARY

State of Kansas)
) SS
County of Hamilton)
Acknowledged before me on April 24, 2019
by Diego M. Enriquez
Signature: [Signature]
Notary Public



Diego M. Enriquez
Notary Public
State of Kansas
My Appt. Expires 05/26/2021

My commission expires: 05/26/2021
(Notary Seal)

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04/14/10

1000

1000

My Appl Expires _____
Diana M. Enriquez
Notary Public
State of Kansas



1000

1000

1000

CERTIFICATE OF SERVICE

I hereby certify that on this _____ day of _____, _____ copies of the foregoing were sent via first class, U.S. mail, to the following:

SYRACUSE DAIRY, LLC
JAY HOUTSMA
751 SE CR 36
SYRACUSE, KS 67878-7822

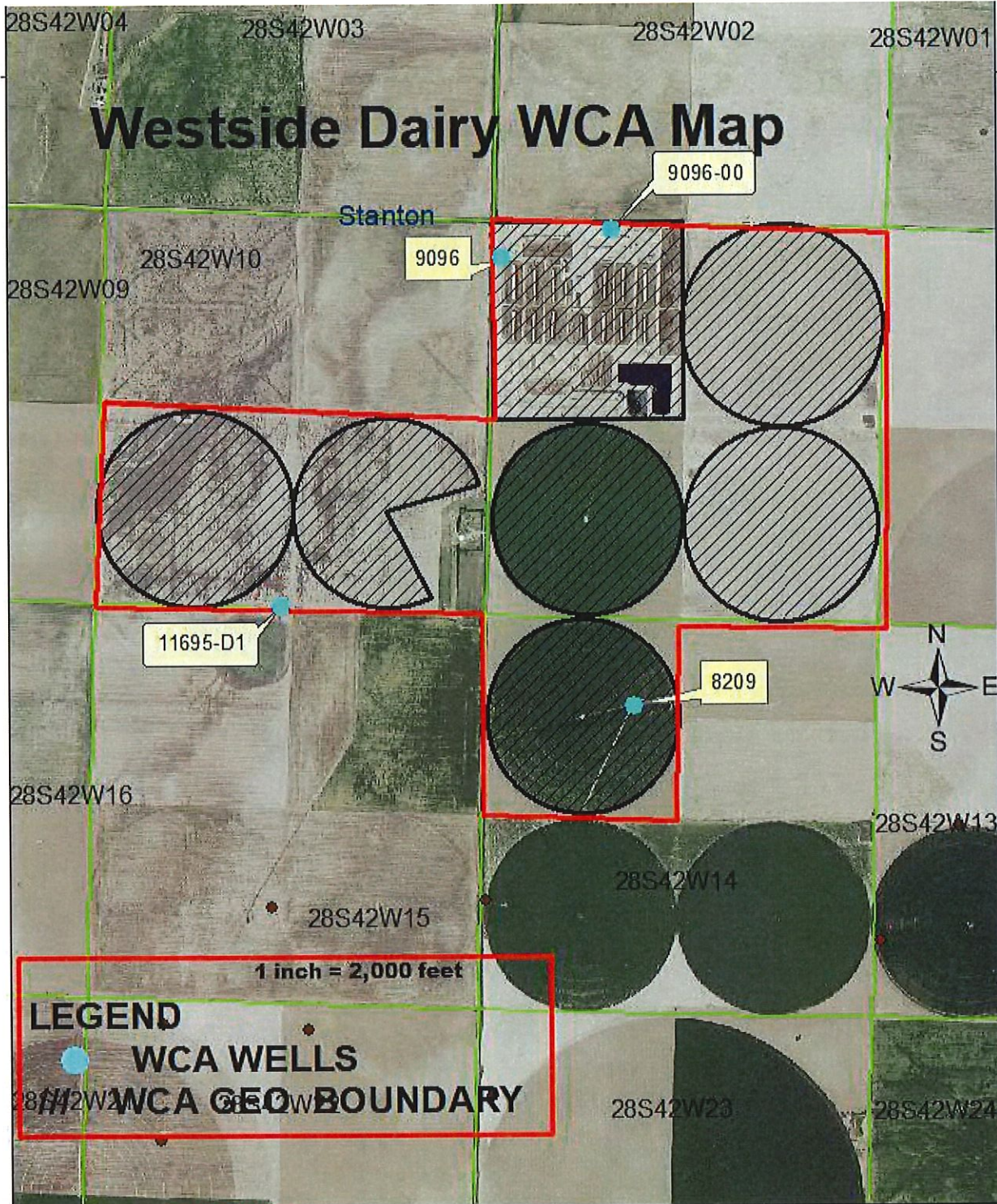
Kansas Department of Agriculture
Staff Person

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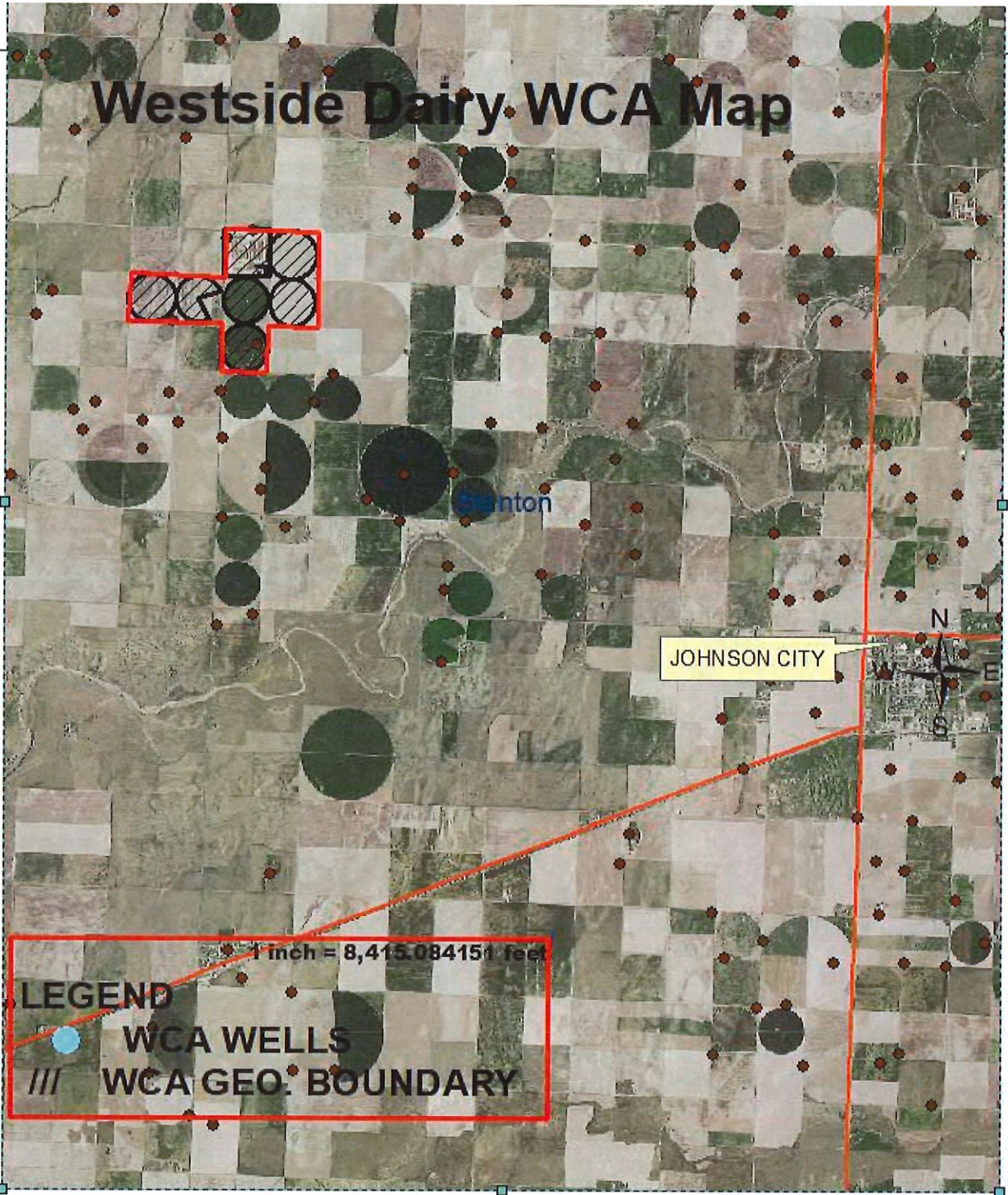
Attachment A- Westside Dairy WCA Map (zoomed in)



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Attachment B- Westside Dairy WCA Map (zoomed out)



Attachment C- Summary of water rights with legal locations

Westside WCA Summary											
"Legal Ave Water Use"- A historical average calculated only using water use reports of equal or less than the annual authorized quantity.											
WR #	use made of water	ID#	PDIV#	Location (Sect, Twn, Range)	Historical Period (20XX-20XX)	2018 Annual Auth Qty (AF)	Legal Ave WU (AF)	Historical Use Summary			
								2018 Annual Auth Qty (AF)	Legal Ave WU (AF)		
8209	IRR	3	84264	14-28S-42W	03-12	800.000	582.000				
9096	STK	1	42204	11-28S-42W	03-12	216.000	341.020	1,487	1,092.000		
9096	STK	2	65050	11-28S-42W	03-12	200.000	168.689				
11695-D1	IRR	1	54789	10-28S-42W	03-12	271.000	0.000				
								Recent Water Use Reports			
								2016 Use	2017 Use	2018	
								719.131	739.000	628.00	
								48%	50%	42%	
								Average Annual WCA Allocation (20% Conservation)			
								Annual WCA Allocation	Reduction from Ave Use	% of Authorized	
								Totals	880.000	-	59%

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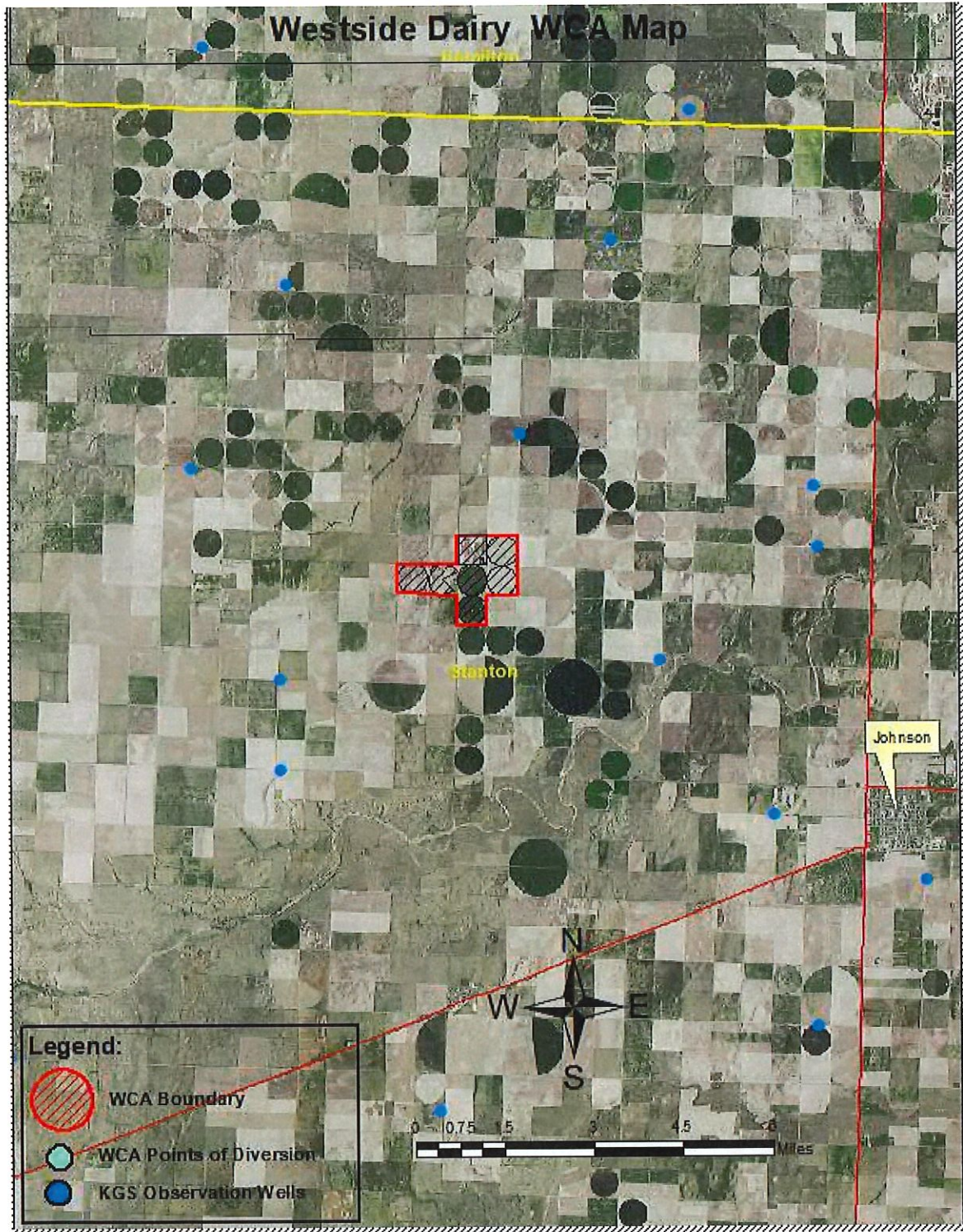
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Attachment D- WCA geographic boundaries with legal descriptions

WCA Boundary																				
Sec	T (S)	R (W)	NE (1/4)				NW (1/4)				SW (1/4)				SE (1/4)				Total Acres	
			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)		
11	28	42	31.25	31.25	31.25	31.25					31.25	31.25	31.25	31.25	31.25	31.25	31.25	31.25	375	
14	28	42					31.25	31.25	31.25	31.25									125	
10	28	42									31.25	31.25	31.25	31.25	24	31	31	9	220	
Additional Boundary Notes:			Stockwater Boundary																Grand Total Acres	720
Legal			NE (1/4)				NW (1/4)				SW (1/4)				SE (1/4)					
11	28S	42W					Dairy (NW)													

Attachment E- KGS Observation Well map (data shown below)



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Attachment F- KGS Observation Well

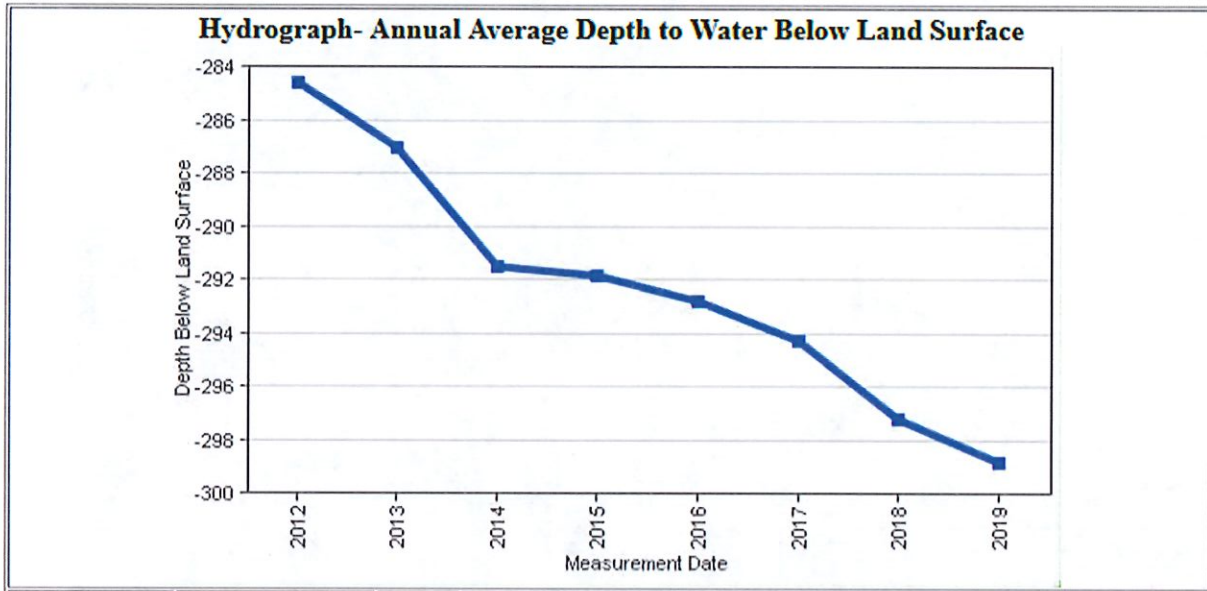
General Well Site Information ?

USGS ID:	373940101521101	KGS Local Well ID:	27S 42W 36BCB 01
County:	Stanton	PLSS Description:	27S 42W 36 NWSWNW
HUC 8 Code:	11040005	GMD:	Southwest Kansas GMD #3
Longitude:	-101.86981	Lat/Long Source:	GPS (within 50 feet)
Latitude:	37.661343	Lat/Long Accuracy:	5 seconds
Surface Elevation (ft):	3428	Depth of Well (ft):	610
Geological Unit Codes:	QU TO	USGS Map Name:	Johnson NE

Water Level Measurements ?

373940101521101

Note that depth to water is feet below land surface and all measurements for the well are included.



Attachment G- KGS Observation Well data and hydrograph

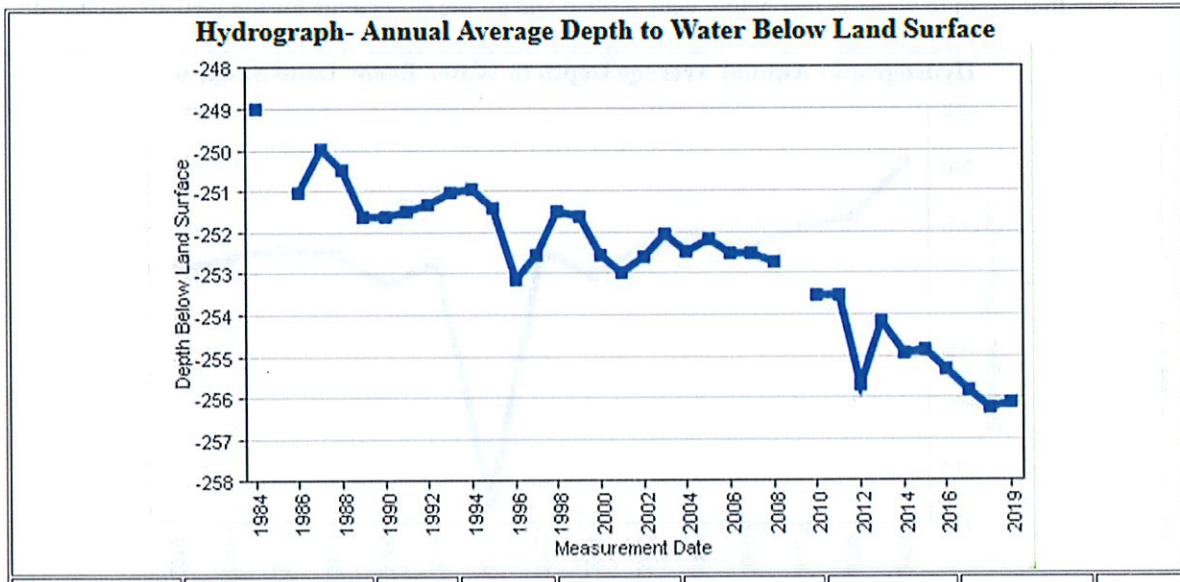
General Well Site Information ?

USGS ID:	373558101563001	KGS Local Well ID:	28S 42W 20BCC 01
County:	Stanton	PLSS Description:	28S 42W 20 SWSWNW
HUC 8 Code:	11040005	GMD:	Southwest Kansas GMD #3
Longitude:	-101.941754	Lat/Long Source:	GPS (within 50 feet)
Latitude:	37.600355	Lat/Long Accuracy:	5 seconds
Surface Elevation (ft):	3553	Depth of Well (ft):	Unknown
Geological Unit Codes:	QU TO	USGS Map Name:	Manter

Water Level Measurements ?

373558101563001

Note that depth to water is feet below land surface and all measurements for the well are included.



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Attachment H- KGS Hydrograph well data and hydrograph

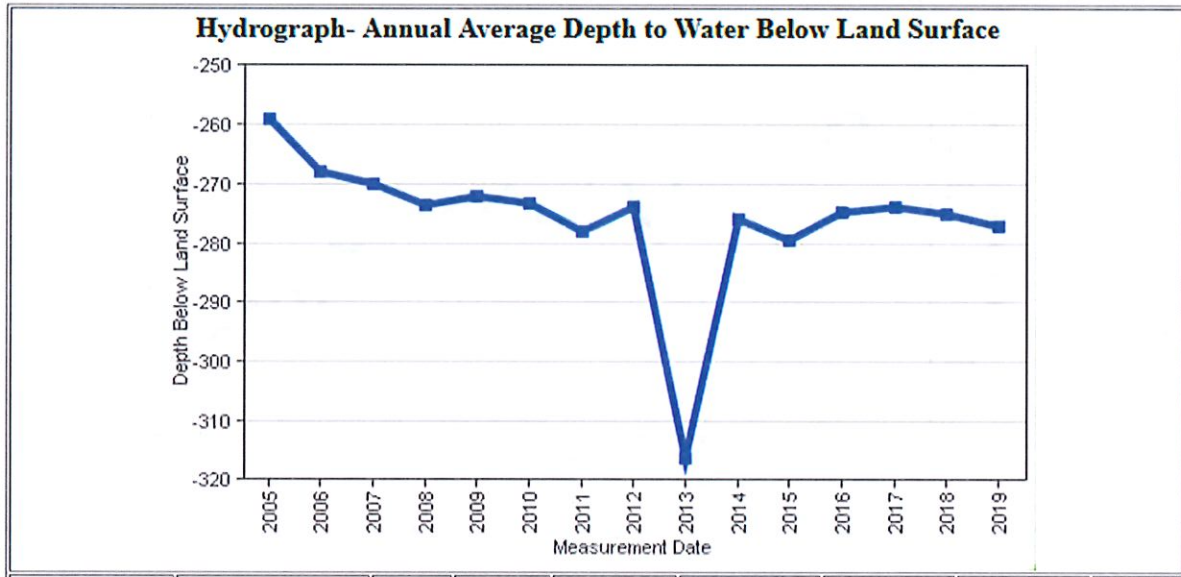
General Well Site Information ?

USGS ID:	373627101492301	KGS Local Well ID:	28S 41W 17CDD 01
County:	Stanton	PLSS Description:	28S 41W 17 SESESW
HUC 8 Code:	11040005	GMD:	Southwest Kansas GMD #3
Longitude:	-101.8256	Lat/Long Source:	GPS (within 50 feet)
Latitude:	37.60738	Lat/Long Accuracy:	5 seconds
Surface Elevation (ft):	3379	Depth of Well (ft):	621
Geological Unit Codes:	QU TO KD	USGS Map Name:	Johnson West

Water Level Measurements ?

373627101492301

Note that depth to water is feet below land surface and all measurements for the well are included.



Attachment I- DWR Theis evaluation (pages 17-22)

Theis analysis of Westside WCA, File No. 9,096
D. Engelhaupt
4/23/2019

The Theis equation was used to evaluate Westside WCA. The WCA proposes allowing the two points of diversion authorized by File No. 9,096 to divert a combined annual quantity of 640 acre-feet per year at presently authorized rate. The Theis equation was used to estimate the increase in drawdown at a domestic well to the south-southwest of the pumping wells. The drawdown after fifty years of pumping cycles was compared to the drawdown after fifty years of pumping under currently authorized conditions.

The 2019 depth to water at the west well (290 ft) was estimated by kriging self-reported depth to water from 15 points of diversion in a five-mile radius along with five monitoring wells from the WIZARD database (Figure 1). The depth to water for the 50-year future (2069, 335 ft) was estimated by fitting a linear depletion rate to WIZARD monitoring well data from 1963 to 2018 (Figure 2). The 50-year saturated thickness (359 feet) was calculated by subtracting the projected depth to water from the depth to the bottom shale layer of the west well.

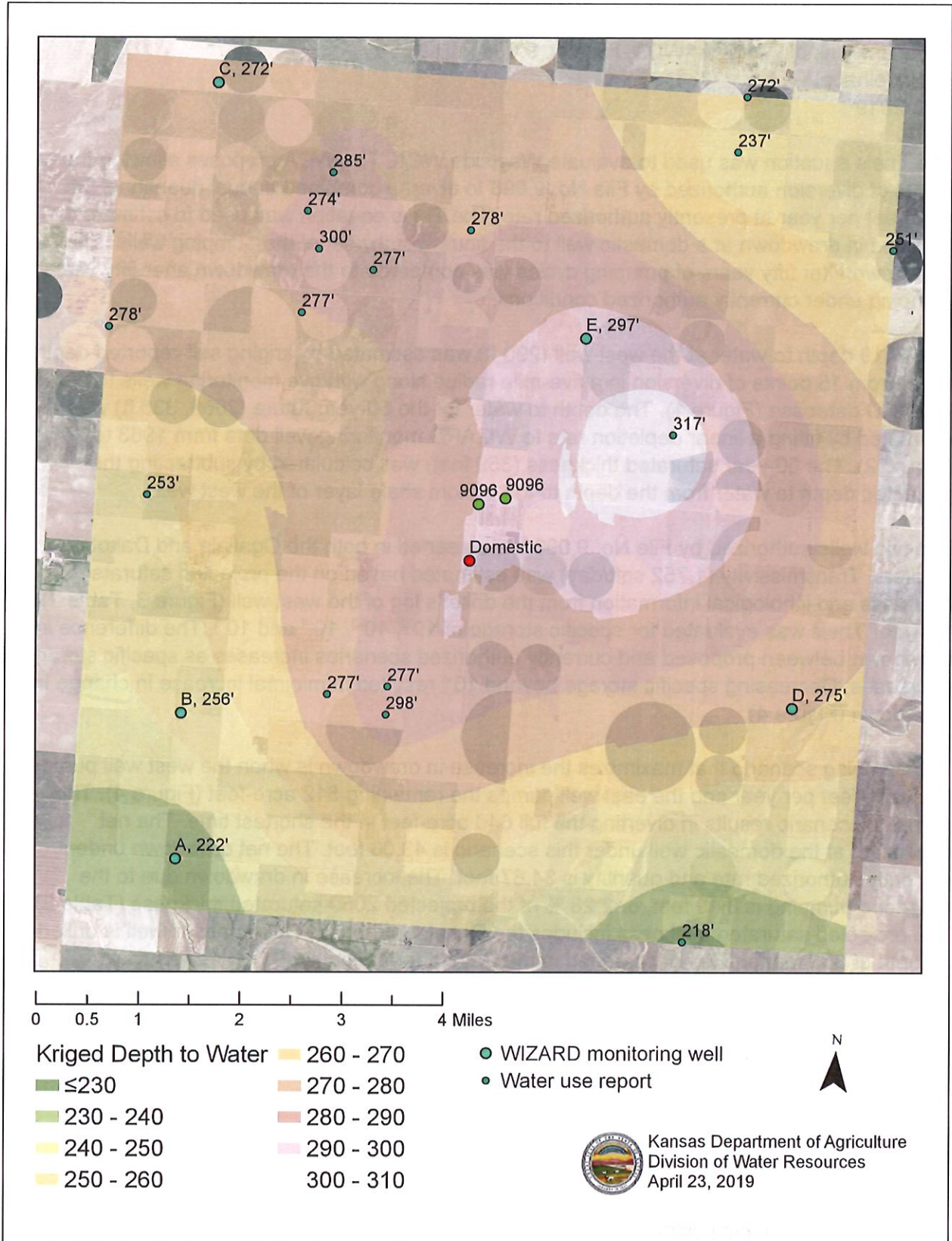
The two wells authorized by File No. 9,096 are screened in both the Ogallala and Dakota aquifers. Transmissivity (1,752 sqft/day) was estimated based on the projected saturated thickness and lithological information from the driller's log of the west well (Figure 3, Table 1). A ten-year Theis was evaluated for specific storage of 10^{-2} , 10^{-3} , 10^{-4} and 10^{-5} . The difference in drawdown between proposed and currently authorized scenarios increases as specific storage decreases. Decreasing specific storage beyond 10^{-4} resulted in minimal increase in change in drawdown (Figure 4).

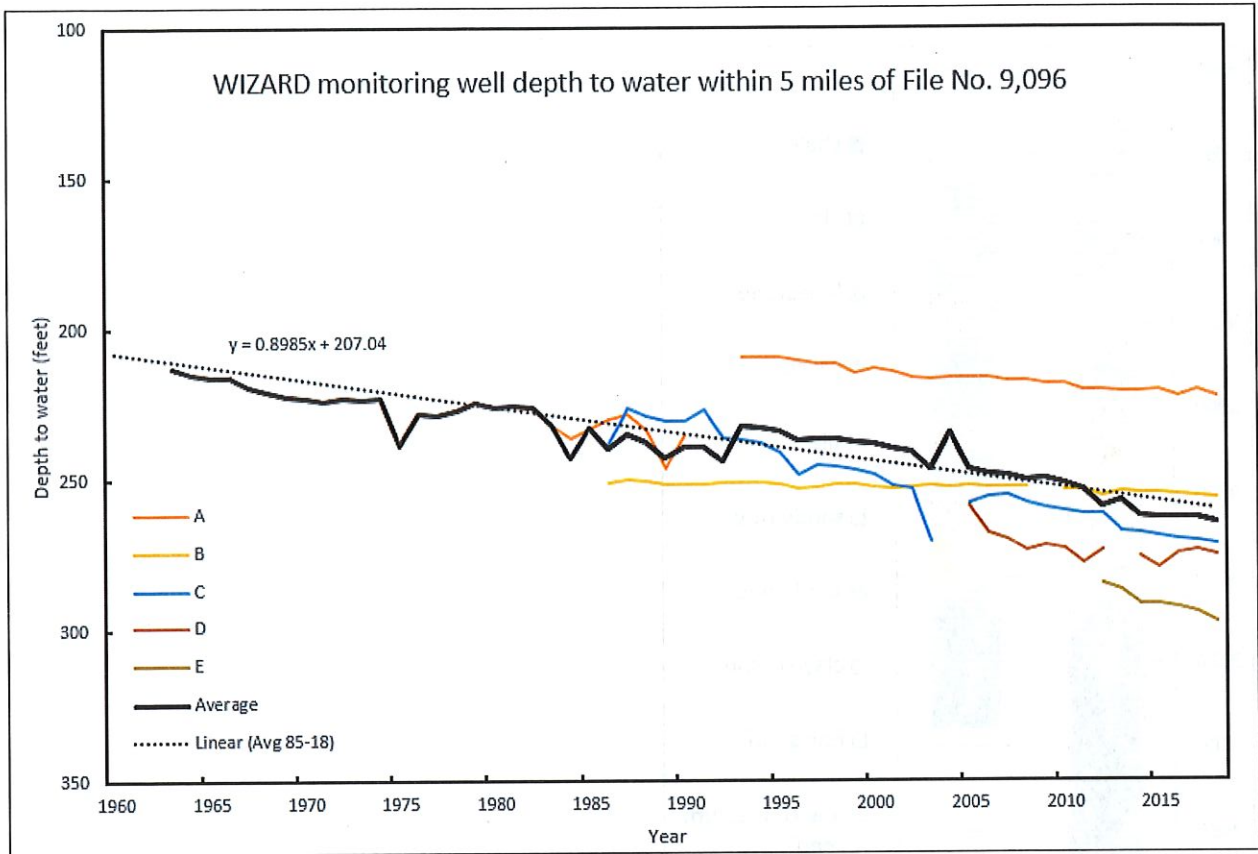
The pumping scenario that maximizes the increase in drawdown is when the west well pumps 128 acre-feet per year and the east well pumps the remaining 512 acre-feet (Figure 4). This pumping scenario results in diverting the full 640 acre-feet in the shortest time. The net drawdown at the domestic well under this scenario is 43.06 feet. The net drawdown under currently authorized rate and quantity is 34.87 feet. The increase in drawdown due to the proposed pumping is 8.19 feet, or 2.28 % of the projected 2069 saturated thickness (Table 2). The projected saturated thickness includes the Dakota formation. The domestic well is drilled to a depth of 380 feet and is not screened in the Dakota formation.

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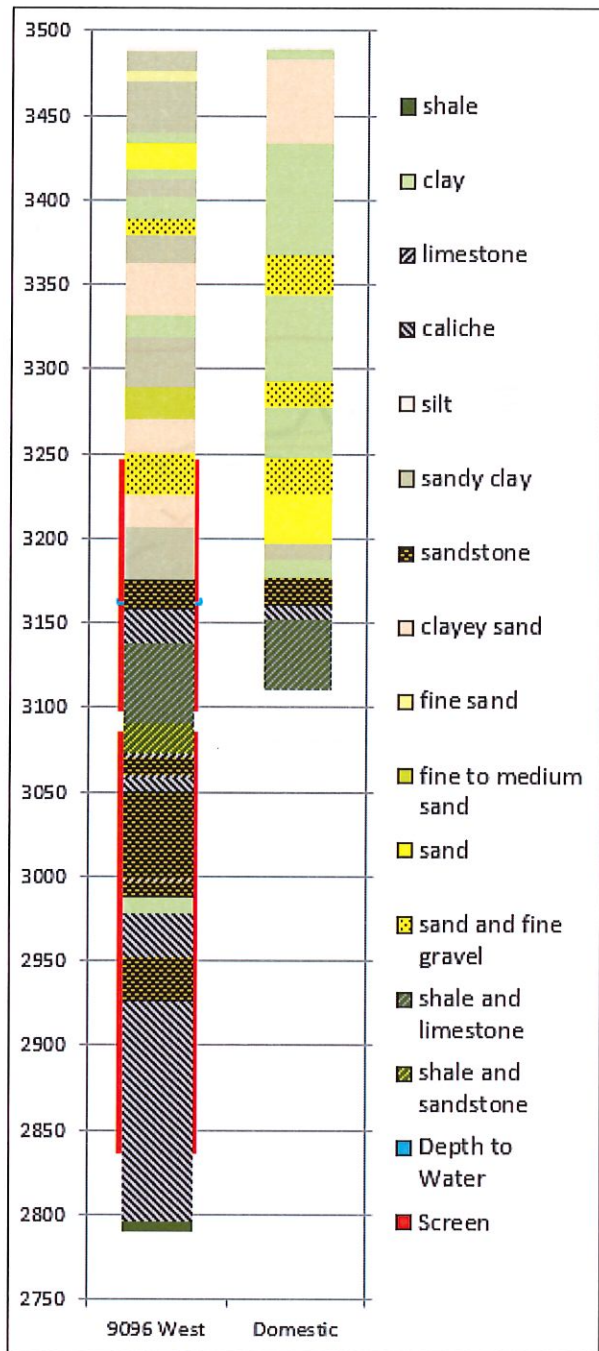


Table 1: Lithological description and estimated transmissivity of west well

Depth	Description	K _x (ft/day)	T (ft ² /day)	
0 - 2	silt	Not Saturated		
2 - 14	sandy clay caliche			
14 - 20	fine sand			
20 - 50	sandy clay caliche sand			
50 - 57	clay caliche sand			
57 - 72	sand			
72 - 78	clay caliche			
78 - 89	sandy clay caliche			
89 - 101	clay			
101 -111	sand fine gravel			
111 - 128	clay sand			
128 - 158	sand clay			
158 - 171	clay limestone			
171 - 180	sandy clay			
180 - 201	sandy clay sand			
201 - 220	fine sand medium sand			
220 - 240	sand clay			
240 - 265	sand fine gravel clay			
265 - 284	sand clay			
284 - 308	sandy clay sand			
308 - 315	sandy clay sand sandstone			
315 - 327	sandstone sandy clay			
327 - 328	sandstone sandy clay		10.5	10
328 - 332	sandstone caliche		8.7	35
332 - 340	caliche		0.0	0
340 - 349	caliche sandstone	5.8	52	
349 - 352	caliche	0.0	0	
352 - 400	shale limestone	0.0	0	
400 - 418	shale sandstone	5.8	104	
418 - 420	limestone	0.0	0	
420 - 430	sandstone shale caliche	7.3	73	
430 - 432	limestone	0.0	0	
432 - 440	caliche sandstone	5.8	46	
440 - 472	sandstone caliche	8.7	278	
472 - 492	sandstone caliche limestone	7.3	145	
492 - 493	limestone	0.0	0	
493 - 503	sandstone caliche	8.7	87	
503 - 512	clay	0.0	0	
512 - 517	caliche sandstone	5.8	29	
517 - 526	caliche limestone sandstone	2.9	26	
526 - 538	caliche sandstone limestone	4.4	52	
538 - 564	sandstone caliche	8.7	226	
564 - 570	caliche sandstone	5.8	35	
570 - 588	caliche sandstone	5.8	104	
588 - 642	caliche sandstone	5.8	313	
642 - 651	caliche sandstone limestone	4.4	39	
651 - 661	caliche sandstone	4.4	44	
661 - 679	caliche limestone sandstone	2.9	52	
679 - 694	caliche limestone shale	0.0	0	
694 - 700	shale	0.0	0	
Net Transmissivity			1,752	

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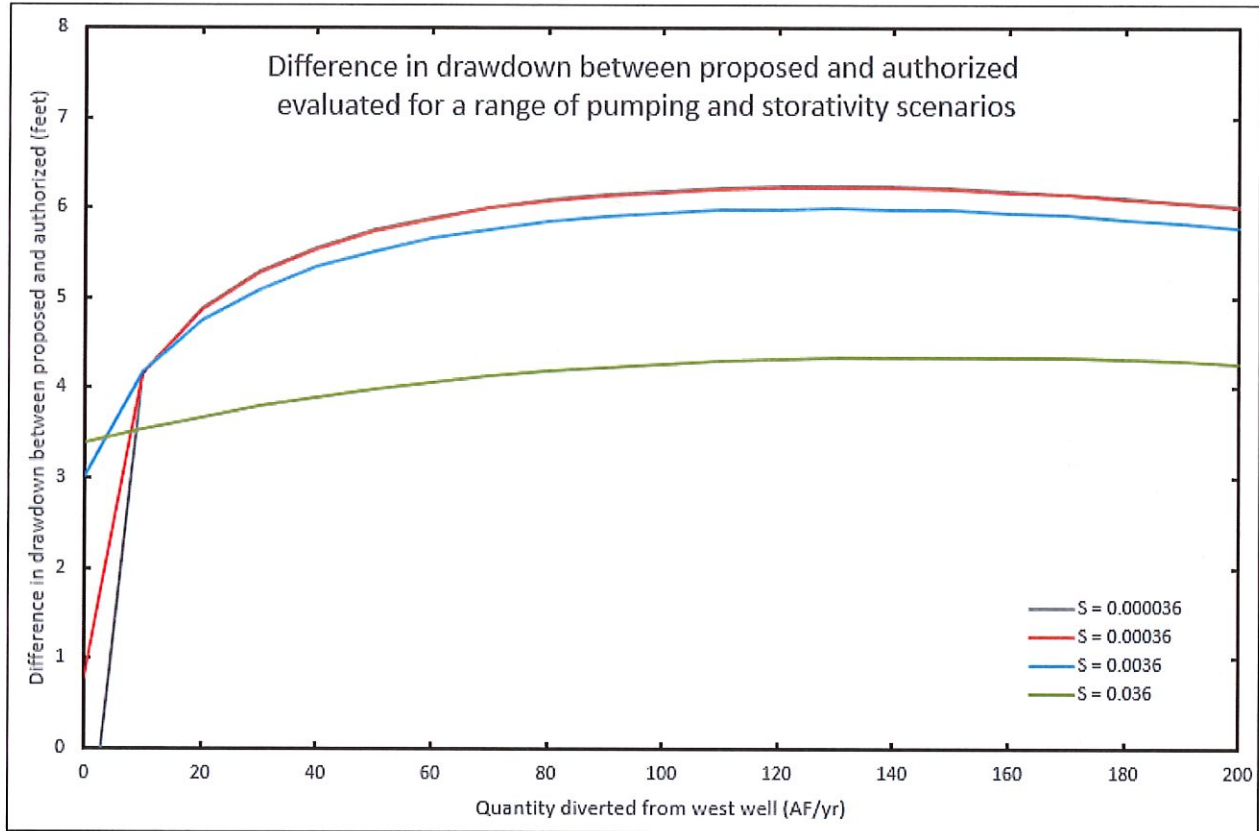


Figure 4: Difference in drawdown after ten years of pumping cycles evaluated over a range of pumping scenarios and storativity values. Total diversion between east and west well is constant at 640 AF/yr.

Table 2: This analysis of drawdown at the domestic well. $T = 1,752 \text{ ft}^2/\text{d}$; $S = 0.00036$

Pumping Well	Rate (gpm)	Volume Pumped (AF)		Distance (ft)	Drawdown (ft)		Change in Drawdown	
		Auth.	Proposed		Auth.	Proposed	Feet	% of ST
East	500	214.8	512.0	3,738	23.95	34.05	10.10	2.81 %
West	125	200.0	128.0	2,975	10.92	9.01	-1.91	-0.53 %
Total:					34.87	43.06	8.19	2.28 %

Attachment J- Wastewater summary

WESTSIDE DAIRY		
SUMMARY OF WASTEWATER APPLICATION FOR WCA PLAN		
YEAR	WASTEWATER APPLICATION	
	GALLONS	ACRE-FEET
2018	91,221,977	279.95
2017	100,429,214	308.21
2016	81,520,469	250.18
2015	102,499,178	314.56
AVERAGE	93,917,710	288.22
AVERAGE WASTEWATER APPLICATION FOR 2016 - 2018 WCA PLAN TERM = 91,057,220 GALLONS		
= 279.44 ACRE-FEET		

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Division of Water Resources

