NOTICE

This scan only represents the application as filed. The information contained herein meets the requirements of K.A.R. 5-3-1 or K.A.R. 5-5-1, and has been found acceptable for filing in the office of the Chief Engineer. The application should not be considered to be a complete application as per K.A.R. 5-3-1b or K.A.R. 5-5-2a.

WATER RESOURCES
RECEIVED
OCT 17 2022
1:18
KS DEPT OF AGRICULTURE

THE STATE OF KANSAS

KANSAS DEPARTMENT OF AGRICULTURE
Mike Beam, Secretary of Agriculture

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

50889

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

APPLICATION FOR PERMIT TO APPROPRIATE WATER FOR BENEFICIAL USE

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

To the Chief Engineer of the Division of Water Resources, Kansas Department of Agriculture, 1320 Research Park Drive, Manhattan, Kansas 66502:

1. Name of Applicant (Please Print): Jerry Klein

   Address: 11777 21st Road

   City: Udall State KS Zip Code 67146

   Telephone Number: (620) 229-3194 - Cell (620) 782-3823 - Home

2. The source of water is: ☐ surface water in _____ (stream)

   OR ☒ groundwater in Arkansas River (drainage basin)

   Certain streams in Kansas have minimum target flows established by law or may be subject to administration when water is released from storage for use by water assurance district members. If your application is subject to these regulations on the date we receive your application, you will be sent the appropriate form to complete and return to the Division of Water Resources.

3. The maximum quantity of water desired is 262.6 acre-feet OR _____ gallons per calendar year, to be diverted at a maximum rate of 800 gallons per minute OR _____ cubic feet per second.

   Once your application has been assigned a priority, the requested maximum rate of diversion and maximum requested quantity of water under that priority number can **NOT** be increased. Please be certain your requested maximum rate of diversion and maximum quantity of water are appropriate and reasonable for your proposed project and are in agreement with the Division of Water Resources' requirements.

4. The water is intended to be appropriated for **(Check use 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	(l) ☐ Fire Protection
(m) ☐ Thermal Exchange	(n) ☐ Contamination Remediation		

YOU **MUST** COMPLETE AND ATTACH ADDITIONAL DIVISION OF WATER RESOURCES FORM(S) PROVIDING INFORMATION TO SUBSTANTIATE YOUR REQUEST FOR THE AMOUNT OF WATER FOR THE INTENDED USE REFERENCED ABOVE.

For Office Use Only:
F.O. 2 *GMD* ____ *Meets K.A.R. 5-3-1 (YES / NO)* ☒ *Use* IRR *Source* ☒ *G / S County* SU *By* ALB *Date* 10/18/22
Code RE2 *Fee $* 300 *TR #* _____ *Receipt Date* 10/17/22 *Check #* 3012

11/2/2022
LMoody

File No. _____

5. The location of the proposed wells, pump sites or other works for diversion of water is:

Note: 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 SE quarter of the SW quarter of Section 26, more particularly described as being near a point 3,761 feet North and 778 feet West of the Southeast corner of said section, in Township 31 South, Range 2 East, Sumner County, Kansas.

(B) One in the _____ quarter of the _____ quarter of the _____ quarter of Section 26, more particularly described as being near a point _____ feet North and _____ feet West of the Southeast corner of said section, in Township 31 South, Range 2 East, Sumner County, Kansas.

(C) One in the _____ quarter of the _____ quarter of the _____ quarter of Section 26, more particularly described as being near a point _____ feet North and _____ feet West of the Southeast corner of said section, in Township 31 South, Range 2 East, Sumner County, Kansas.

(D) One in the _____ quarter of the _____ quarter of the _____ quarter of Section 26, more particularly described as being near a point _____ feet North and _____ feet West of the Southeast corner of said section, in Township 31 South, Range 2 East, Sumner County, Kansas.

If the source of supply is groundwater, a separate application shall be filed for each proposed well or battery of wells, except that a single application may include up to four wells within a circle with a quarter (¼) mile radius in the same local source of supply which do not exceed a maximum diversion rate of 20 gallons per minute per well.

A battery of wells is defined as two or more wells connected to a common pump by a manifold; or not more than four wells in the same local source of supply within a 300 foot radius circle which are being operated by pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which supply water to a common distribution system.

6. The owner of the point of diversion, if other than the applicant is (please print):

_____
(name, address and telephone number)

_____
(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 Oct. 13, 2022 _____
Applicant's Signature

The applicant must provide the required information or signature irrespective of whether they are the landowner. Failure to complete this portion of the application will cause it to be unacceptable for filing and the application will be returned to the applicant.

7. The proposed project for diversion of water will consist of Battery of 4 wells, 1 Pump, 1 Pivot
(number of wells, pumps or dams, etc.)
and will be completed ASAP.
(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 ASAP.
(Mo/Day/Year)

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File No. _____

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. If you are planning to impound water, please contact the Division of Water Resources for assistance, prior to submitting the application. Please attach a reservoir area capacity table and inform us of the total acres of 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 of Water Resources? ☐ Yes ☒ No

- If yes, show the Water Structures permit number here N/A
- If no, explain here why a Water Structures permit is not required N/A

11. The application must be supplemented by a U.S.G.S. topographic map, aerial photograph or a detailed plat showing 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 numbers. 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-South 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 ½ mile of the proposed well or wells. Identify each existing well as to its use and furnish the name and mailing 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 and 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, aerial photograph or plat.

(e) Show the location of the pipelines, canals, reservoirs or other facilities for conveying water from the point of diversion to the place of use.

A 7.5 minute U.S.G.S. topographic map may be obtained by providing the section, township and range 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 diversion points or any of the same place of use described in this application. Also list any other recent modifications made to existing permits or water rights in conjunction with the filing of this application.

File No. _____

13. Furnish the following well information if the proposed appropriation is for the use of groundwater. If the well has not been completed, give information obtained from test holes, if available.

Information below is from: ☒ Test holes ☐ Well as completed ☐ Drillers log attached

Well location as shown in paragraph No.	(A)	(B)	(C)	(D)
Date Drilled	10/25/21			
Total depth of well	35			
Depth to water bearing formation	3			
Depth to static water level	9.10			
Depth to bottom of pump intake pipe	35			

14. The relationship of the applicant to the proposed place where the water will be used is that of

Owner
(owner, tenant, agent or otherwise)

15. The owner(s) of the property where the water is used, if other than the applicant, is (please print):

_____
(name, address and telephone number)

_____
(name, address and telephone number)

16. 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 1 PM, Kansas, this 13 day of Oct. (month), 2022 (year).

Jerry Klein
(Applicant Signature)

By _____
(Agent or Officer Signature)

Jerry Klein
(Please Print)

Assisted by JNE SFFO/ESII (office/title) Date: 08/25/2022

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Household wells in area of Section 25 & 26, T31s, R2E, Sumner County

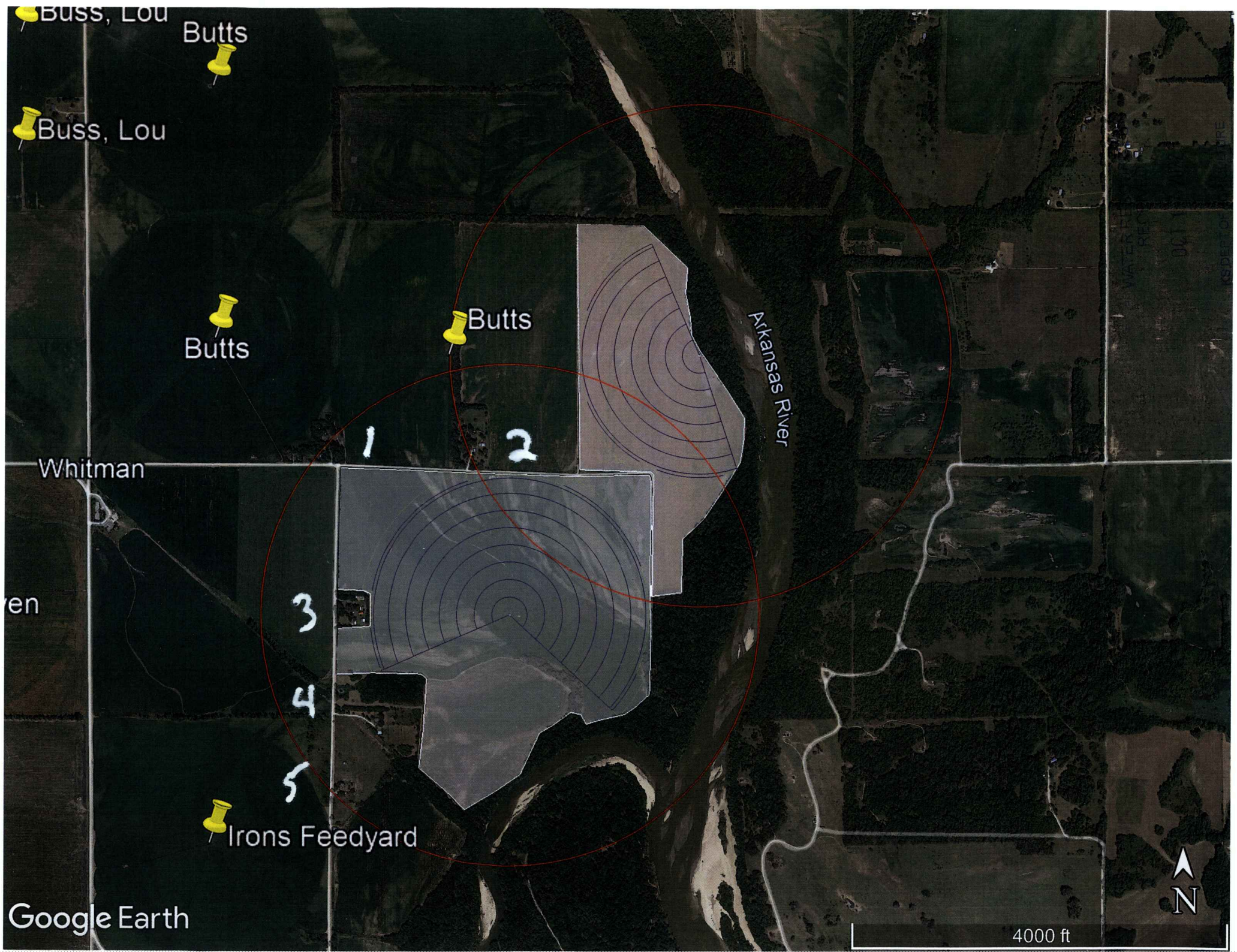
1 Darwin Reuter, 1750 E 50th Ave N, Belle Plaine KS 67013

2 Bevis/ Yeoman, 1774 E50th Ave N, Belle Plaine KS 67013

3 Len Hillier, 466 N Valley Road, Belle Plaine KS 67013

4 Ernest Fincher, 444 N Valley Road, Belle Plaine KS 67013

5 Scott Stewart, 436 N Valley Road, Belle Plaine KS 67013


Buss, Lou
Butts
Buss, Lou
Butts
Butts
Arkansas River
1
2
Whitman
3
4
5
Irons Feedyard
Google Earth
N
4000 ft

FEE SCHEDULE

1. The fee for an application for a permit to appropriate water for beneficial use, except for domestic use, shall be (see paragraph No. 2 below if requesting storage):

ACRE-FEET	FEE
0-100	$200.00
101-320	$300.00
More than 320	$300.00 plus $20.00 for each additional 100 acre-feet or any part thereof.

2. The fee for an application in which storage is requested, except for domestic use, shall be:

ACRE-FEET	FEE
0-250	$200.00
More than 250	$200.00 plus $20.00 for each additional 250 acre-feet of storage or any part thereof.

Note: If an application requests both direct use *and* storage, the fee charged shall be as determined under No. 1 or No. 2 above, whichever is greater, but not both fees.

3. The fee for an application for a permit to appropriate water for water power or dewatering purposes shall be $100.00 plus $200.00 for each 100 cubic feet per second, or part thereof, of the diversion rate requested.

Note: The applicant shall notify the Chief Engineer and pay the statutorily required field inspection fee of $400.00 when construction of the works for diversion has been completed, except that for applications filed on or after July 1, 2009, for works constructed for sediment control use and for evaporation from a groundwater pit for industrial use shall be accompanied by a field inspection fee of $200.00.

MAKE CHECKS PAYABLE TO THE KANSAS DEPARTMENT OF AGRICULTURE

ATTENTION

A Water Conservation Plan may be required per K.S.A. 82a-733. A statement that your application for permit to appropriate water may be subject to the minimum desirable streamflow requirements per K.S.A. 82a-703a, b, and c may also be required from you. After the Division of Water Resources has had the opportunity to review your application, you will be notified whether or not you will need to submit a Water Conservation Plan. You also may be required to install a water flow meter or water stage measuring device on your diversion works prior to diverting water. There may be other special conditions or Groundwater Management District regulations that you will need to comply with if this application is approved.

CONVERSION FACTORS

1 acre-foot equals 325,851 gallons

1 million gallons equal 3.07 acre-feet

IRRIGATION USE
SUPPLEMENTAL SHEET

File No. _____

Name of Applicant (Please Print): Jerry Klein

1. Please supply the name and address of each landowner, the legal description of the lands to be irrigated, and designate the actual number of acres to be irrigated in each forty acre tract or fractional portion thereof:

Landowner of Record NAME: JUL Family Farm LL AG GO

ADDRESS: 11777 21st Rd, Udall, KS 67146

S	T	R	NE¼				NW¼				SW¼				SE¼				TOTAL
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
26	31	2E	37.0	37.0	26.0	38.0									16.5	7.0			161.5
25	31	2E	20		20.5														40.5

Landowner of Record NAME: _____

ADDRESS: _____

S	T	R	NE¼				NW¼				SW¼				SE¼				TOTAL
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

Landowner of Record NAME: _____

ADDRESS: _____

S	T	R	NE¼				NW¼				SW¼				SE¼				TOTAL
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

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2. Please complete the following information for the description of the operation for the irrigation project. Attach supplemental sheets as needed.

a. Indicate the soils in the field(s) and their intake rates:

Soil Name	Percent of field (%)	Intake Rate (in/hr)	Irrigation Design Group
Lesho Clay Loam	55.4	.2 - .6	2182 4
Lincoln Soils	6.4	5.95 - 19.98	60160
Brewer ~~Brewster~~ Silty Clay Loam	27.8	.06 - .2	62220 3
Canadian Sandy Loam	10.4	1.99 - 6.00	62246 9
Total:	100 %		

b. Estimate the average land slope in the field(s): 1 %

Estimate the maximum land slope in the field(s): 2 %

c. Type of irrigation system you propose to use (check one):

X Center pivot ____ Center pivot - LEPA ____ "Big gun" sprinkler

____ Gravity system (furrows) ____ Gravity system (borders) ____ Sideroll sprinkler

Other, please describe: _____

d. System design features:

i. Describe how you will control tailwater: will not have tailwater

ii. For sprinkler systems:

(1) Estimate the operating pressure at the distribution system: 35 psi

(2) What is the sprinkler package design rate? 800 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? 50 feet

(4) Please include a copy of the sprinkler package design information.

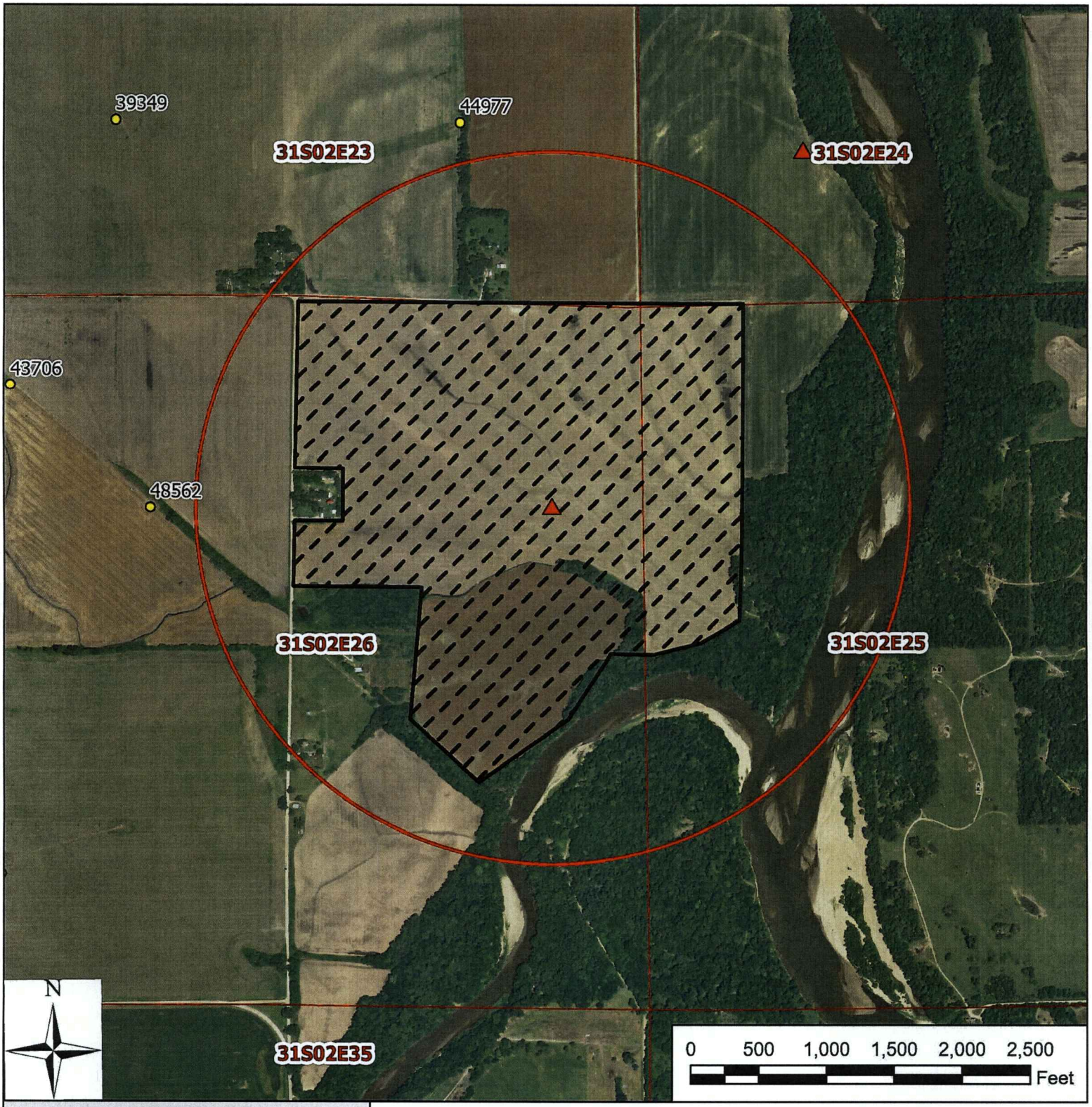
e. Crop(s) you intend to irrigate. Please note any planned crop rotations:

Corn, Beans, Wheat, Cotton

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).

Crop Consultant

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



Legend

- Water Appropriation
- Battery Well
- Proposed Point of Diversion
- Section Corner
- Section Line
- Proposed Place of Use

Application, File No. _____

17-32-3E // Cowley County

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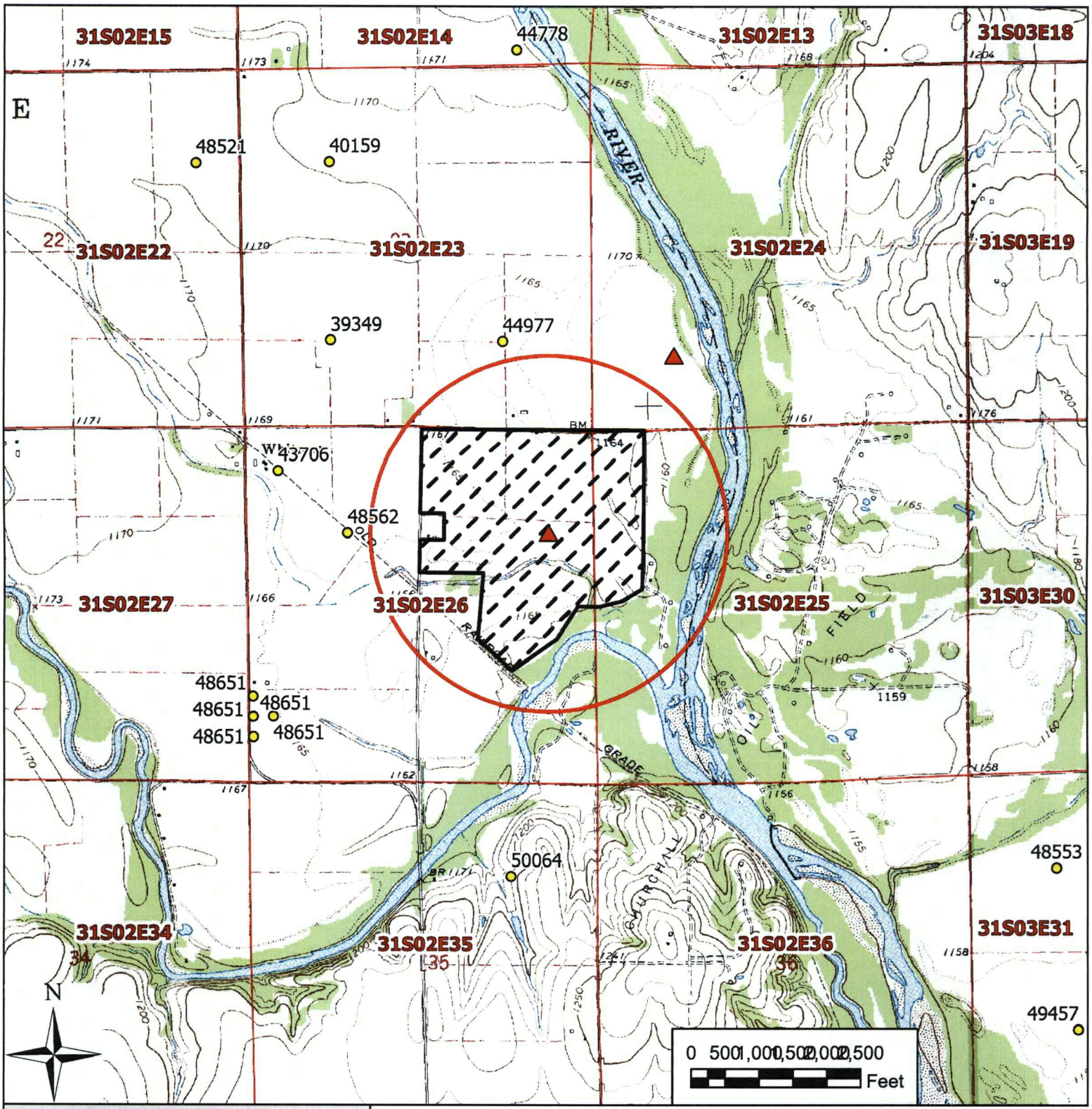
To the best of my knowledge, all points of diversion within one-half mile of the proposed point of diversion have been shown.

Oct. 13 - 2022

Signature / Date

08/25/2022 JNE/SFFO 1:12,000



Legend

- Water Appropriation
- Battery Well
- Proposed Point of Diversion
- Section Corner
- Section Line
- Proposed Place of Use

Application, File No. _____

17-32-3E // Cowley County

WATER RESOURCES
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OCT 17 2022

To the best of my knowledge, all points of diversion within one-half mile of the proposed point of diversion have been shown.

Oct. 13 - 2022

Signature / Date

08/25/2022 JNE/SFFO 1:24,000

CLARKE WELL & EQUIPMENT, INC.

FORMATION TEST HOLE / 2" OB WELL

1124

FORMATION TEST ONLY ☐

PLUGGED ☐

JOB NUMBER 16201

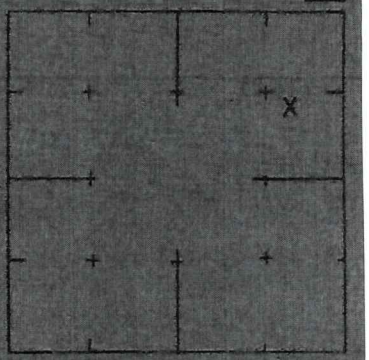
WELL OWNER Jerry Klein WELL NO. TH-1-21

WELL USE Formation Test APPR. NO.

LEGAL NE 1/4 NW 1/4 SE 1/4 NE 1/4 Sect 26 Twp 31 S Rng 2 E Sumner COUNTY KS STATE

____ FSL, ____ FEL

GPS - 661944 E 4132646 N Zone 14 NAD 27



Formation Log SIZE HOLE 5 " DIA. Electric Log ☐ SWL 9.10 FGL SECTION 26

FROM	TO	FEET	FORMATION / COMMENTS	SAMPLES TAKEN
0	3		Topsoil	
3	12		Clay, dark brown, soft	
12	31		Sand, coarse to fine, with fine to medium gravel	
31	35		Shale, gray, green	

(Well Construction on Other Side) DRILLED BY Edward Cass DATE 10-25-2021

WELL CONSTRUCTION

JOB # 16201 WELL OWNER Jerry Klein WELL NO. TH-1-21

HOLE DIA 5 " TD 35 ☐ REAMED OUT FROM ____ " DIA HOLE DRILLING METHOD Mud Rotary

SIZE CASING 2 " DIA .154 WALL; WT. 70 LBS/FT PVC MATERIAL

SIZE SCREEN 2 " DIA .154 WALL; PVC MATERIAL

SCREEN TYPE Mill Slot

CASING AND SCREEN

DESCRIPTION	FROM	TO	FEET	OPENING
PVC Casing	0	21	21	
PVC Screen	21	31	10	.032

Casing left above ground	2
Total Casing and Screen	33

GRAVEL PACK / ANNULAR SEAL

MATERIAL	FROM	TO	FEET	QTY
Bentonite Chips	0	20	20	
Well Pack (Ark River Sand)	20	35	15	

Water Samples

FROM	TO	Cl (ppm)	OTHER TESTS

Development

Method	Hours
Air	1

Disinfected with ____ Quantity ____

What is the nearest source of possible contamination? None Known

Direction from well ____ How many feet ____

Water level measurement tube installed? ☐ Yes ☐ No Locking cap installed? ☐ Yes ☐ No

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NOTE All measurements are from ground level DESIGNED BY ____

WATER WELL RECORD Form WWC-5

☑ Original Record ☐ Correction ☐ Change in Well Use

Division of Water Resources App. No. _____ Well ID TH-1-21

1 LOCATION OF WATER WELL: County: Sumner | Fraction: NE ¼ NW ¼ SE ¼ NE ¼ | Section Number: 26 | Township Number: T 31 S | Range Number: R 2 ☑ E ☐ W

2 WELL OWNER: Last Name: Klein First: Jerry
Business:
Address: 11777 21st Rd.
Address:
City: Udall State: KS ZIP: 67146

Street or Rural Address where well is located (if unknown, distance and direction from nearest town or intersection): If at owner's address, check here: ☐
Approximately 4 miles north of Oxford.

3 LOCATE WELL WITH "X" IN SECTION BOX: N / W / E / S; NW, NE (X), SW, SE; |----------| 1 mile |----------|

4 DEPTH OF COMPLETED WELL: 33 ft.
Depth(s) Groundwater Encountered: 1) 9.1 ft. 2) ..... ft. 3) ..... ft., or 4) ☐ Dry Well
WELL'S STATIC WATER LEVEL: 9.10 ft.
☑ below land surface, measured on (mo-day-yr) 10/25/2021
☐ above land surface, measured on (mo-day-yr) .....
Pump test data: Well water was ..... ft. after ..... hours pumping ..... gpm
Well water was ..... ft. after ..... hours pumping ..... gpm
Estimated Yield: 0 gpm
Bore Hole Diameter: 5 in. to 35 ft. and ..... in. to ..... ft.

5 Latitude: 37.328215 (decimal degrees)
Longitude: -97.172155 (decimal degrees)
Datum: ☐ WGS 84 ☐ NAD 83 ☑ NAD 27
Source for Latitude/Longitude:
☑ GPS (unit make/model: .....) (WAAS enabled? ☑ Yes ☐ No)
☐ Land Survey ☐ Topographic Map
☐ Online Mapper: .....

6 Elevation: ..... ft. ☐ Ground Level ☐ TOC
Source: ☐ Land Survey ☐ GPS ☐ Topographic Map ☐ Other .....

7 WELL WATER TO BE USED AS:
1. Domestic: ☐ Household ☐ Lawn & Garden ☐ Livestock
2. ☐ Irrigation
3. ☐ Feedlot
4. ☐ Industrial
5. ☐ Public Water Supply: well ID .....
6. ☐ Dewatering: how many wells? .....
7. ☐ Aquifer Recharge: well ID .....
8. ☐ Monitoring: well ID .....
9. Environmental Remediation: well ID ..... ☐ Air Sparge ☐ Soil Vapor Extraction ☐ Recovery ☐ Injection
10. ☐ Oil Field Water Supply: lease .....
11. Test Hole: well ID TH-1-21 ☑ Cased ☐ Uncased ☐ Geotechnical
12. Geothermal: how many bores? ..... a) Closed Loop ☐ Horizontal ☐ Vertical b) Open Loop ☐ Surface Discharge ☐ Inj. of Water
13. ☐ Other (specify): .....

Was a chemical/bacteriological sample submitted to KDHE? ☐ Yes ☑ No If yes, date sample was submitted: .....
Water well disinfected? ☐ Yes ☑ No

8 TYPE OF CASING USED: ☐ Steel ☑ PVC ☐ Other ..... CASING JOINTS: ☑ Glued ☐ Clamped ☐ Welded ☐ Threaded
Casing diameter 2 in. to 21 ft., Diameter ..... in. to ..... ft., Diameter ..... in. to ..... ft.
Casing height above land surface 24 in. Weight 70 lbs./ft. Wall thickness or gauge No. 154

TYPE OF SCREEN OR PERFORATION MATERIAL:
☐ Steel ☐ Stainless Steel ☑ PVC ☐ Other (Specify) .....
☐ Brass ☐ Galvanized Steel ☐ None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:
☐ Continuous Slot ☑ Mill Slot ☐ Gauze Wrapped ☐ Torch Cut ☐ Drilled Holes ☐ Other (Specify) .....
☐ Louvered Shutter ☐ Key Punched ☐ Wire Wrapped ☐ Saw Cut ☐ None (Open Hole)

SCREEN-PERFORATED INTERVALS: From 21 ft. to 31 ft., From ..... ft. to ..... ft., From ..... ft. to ..... ft.
GRAVEL PACK INTERVALS: From 20 ft. to 35 ft., From ..... ft. to ..... ft., From ..... ft. to ..... ft.

9 GROUT MATERIAL: ☐ Neat cement ☐ Cement grout ☑ Bentonite ☐ Other .....
Grout Intervals: From 0 ft. to 20 ft., From ..... ft. to ..... ft., From ..... ft. to ..... ft.

Nearest source of possible contamination: ✔ No potential source of contamination within 200 ft.
☐ Septic Tank ☐ Lateral Lines ☐ Pit Privy ☐ Livestock Pens ☐ Insecticide Storage
☐ Sewer Lines ☐ Cess Pool ☐ Sewage Lagoon ☐ Fuel Storage ☐ Abandoned Water Well
☐ Watertight Sewer Lines ☐ Seepage Pit ☐ Feedyard ☐ Fertilizer Storage ☐ Oil Well/Gas Well
☐ Other (Specify) .....
Direction from well? ..... Distance from well? ..... ft.

10 FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	3	Topsoil			
3	12	Clay, dark brown, soft			
12	31	Sand, coarse to fine, with fine			
12	31	to medium gravel			
31	35	Shale, gray, green			

Notes:

11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was ☑ constructed, ☐ reconstructed, or ☐ plugged under my jurisdiction and was completed on (mo-day-year) 10/25/2021 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 185 This Water Well Record was completed on (mo-day-year) 11/1/2021 under the business name of Clarke Well & Equipment, Inc.

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WATER RESOURCES
OCT 17 2022

Send one copy to WATER WELL OWNER and retain one for your records. Fee of $5.00 for each constructed well.
KS Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-3565.
Visit us at http://www.kdheks.gov/waterwell/index.html KSA 82a-1212

INPUTS	
Target Section Definition	
Section	26
Township	31
Range	2
Range Direction	E
Target Point Coordinates (*NAD27* or *NAD83*)	
Target Longitude	-97.172155
Target Latitude	37.328215

Load Data and Compute

Instructions

1. Enter values for section, township, range and range direction.
2. Enter ***NAD27*** or ***NAD83*** longitude and latitude of target point.
3. Click "Load Data and Compute" button.
4. Use feet distances corresponding to datum of target point.

26-31-2E
Klein SHORE

Loaded Section Data From LEOBASE using *NAD83*

Corner	Corner Latitudes	Corner Longitudes
SW	37.31813797	-97.18757523
NW	37.33266481	-97.18765134
NE	37.33229785	-97.16984382
SE	37.31790914	-97.16979771
Degrees Longitude per Foot		3.43888943E-06
Degrees Latitude per Foot		2.74641048E-06

Target Point Distances from Corners using NAD83

Corner	Feet North(+)/South(-)	Feet East(-)/West(+)
SW	3669	-4484
NW	-1620	-4506
NE	-1487	672
SE	3752	685

Loaded Section Data From LEOBASE using *NAD27*

Corner	Corner Latitudes	Corner Longitudes
SW	37.31811500	-97.18725600
NW	37.33264200	-97.18733200
NE	37.33227500	-97.16952500
SE	37.31788600	-97.16947900
Degrees Longitude per Foot		3.43888839E-06
Degrees Latitude per Foot		2.74598553E-06

Target Point Distances from Corners using NAD27

Corner	Feet North(+)/South(-)	Feet East(-)/West(+)
SW	3678	-4391
NW	-1612	-4413
NE	-1479	765
SE	3761	778

Oct 13-2022
(Date)

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

Re: Application
File No. _____

Minimum Desirable Streamflow

Dear Sir:

I understand that a Minimum Desirable Streamflow requirement has been established by the legislature for the source of supply to which the above referenced application applies.

I understand that diversion of water pursuant to this application will be subject to regulation any time Minimum Desirable Streamflow requirements are not being met.

I also understand that if this application is approved, there could be times, as determined by the Division of Water Resources, when I would not be allowed to divert water. I realize that this could affect the economics of my decision to appropriate water.

I am aware of the above factors, and with the knowledge thereof, request that the Division of Water Resources proceed with processing and approval, if possible, of the above referenced application.

Jerry Klein
Signature of Applicant

Jerry Klein
(Print Applicant's Name)

State of Kansas)
) ss
County of Cowley)

I hereby certify that the foregoing instrument was signed in my presence and sworn to before me this 13th day of October, 2022.

JULIE M. VON BON
Notary Public - State of Kansas
My Appt. Expires 11-15-25

Julie M. VonBon
Notary Public

My Commission Expires:

WATER RESOURCES
RECEIVED
OCT 17 2022
KS DEPT OF AGRICULTURE

DWR 1-100.171 (Revised 06/16/2014)

MINIMUM DESIRABLE STREAMFLOW FORM TO BE USED WHEN APPLICABLE WHEN FILING AN APPLICATION FOR PERMIT TO APPROPRIATE WATER FOR BENEFICIAL USE

The Kansas Legislature has established minimum desirable streamflows for the streams listed below. If your proposed diversion of water is going to be from one of these watercourses or adjacent alluvial aquifers, please complete the back side of this page and submit it along with your application for permit to appropriate water.

Arkansas River
Big Blue River
Chapman Creek
Chikaskia River
Cottonwood River
Delaware River
Little Arkansas River
Little Blue River
Marais des Cygnes River
Medicine Lodge River
Mill Creek (Wabaunsee Co. area)
Neosho River
Ninnescah River
North Fork Ninnescah River
Rattlesnake Creek
Republican River
Saline River
Smoky Hill River
Solomon River
South Fork Ninnescah
Spring River
Walnut River
Whitewater River

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Sumner County, Kansas

Kline Shore

September 30, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:7,930 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sumner County, Kansas
Survey Area Data: Version 18, Sep 14, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 4, 2020—Jun 5, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2152	Lesho clay loam, occasionally flooded	113.0	55.4%
6060	Lincoln soils, frequently flooded	13.1	6.4%
6220	Brewer silty clay loam, rarely flooded	56.7	27.8%
6226	Canadian sandy loam, rarely flooded	21.3	10.4%
Totals for Area of Interest		**204.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate

pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Sumner County, Kansas

2152—Lesho clay loam, occasionally flooded

Map Unit Setting

National map unit symbol: 2ywsr
Elevation: 1,660 to 2,610 feet
Mean annual precipitation: 25 to 33 inches
Mean annual air temperature: 55 to 57 degrees F
Frost-free period: 180 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Lesho, occasionally flooded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lesho, Occasionally Flooded

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium over sandy alluvium

Typical profile

Ap - 0 to 14 inches: clay loam
AC - 14 to 32 inches: clay loam
2C - 32 to 79 inches: sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 20 to 39 inches to abrupt textural change
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 3.0
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C
Ecological site: R079XY132KS - Subirrigated
Hydric soil rating: No

Minor Components

Platte, occasionally flooded

Percent of map unit: 4 percent

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R079XY132KS - Subirrigated
Hydric soil rating: No

Canadian

Percent of map unit: 4 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R079XY123KS - Sand Floodplain
Hydric soil rating: No

Dale, rarely flooded

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R080AY050OK - Loamy Bottomland
Hydric soil rating: No

Lincoln

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R079XY123KS - Sand Floodplain
Hydric soil rating: No

Aquolls, occasionally ponded

Percent of map unit: 1 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R079XY132KS - Subirrigated
Hydric soil rating: Yes

Zenda

Percent of map unit: 1 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R079XY132KS - Subirrigated
Hydric soil rating: No

Sweetwater

Percent of map unit: 1 percent
Landform: Flood plains
Ecological site: R072XY102KS - Saline Subirrigated
Hydric soil rating: Yes

6060—Lincoln soils, frequently flooded

Map Unit Setting

National map unit symbol: 1kh80
Elevation: 700 to 2,000 feet
Mean annual precipitation: 24 to 31 inches
Mean annual air temperature: 45 to 70 degrees F
Frost-free period: 205 to 265 days
Farmland classification: Not prime farmland

Map Unit Composition

Lincoln, frequently flooded, and similar soils: 99 percent
Minor components: 1 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lincoln, Frequently Flooded

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A - 0 to 10 inches: loamy fine sand
C - 10 to 60 inches: stratified fine sand to clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 60 to 72 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: A
Ecological site: R080AY068OK - Sandy Bottomland
Hydric soil rating: No

Minor Components

Aquolls, occasionally flooded

Percent of map unit: 1 percent
Landform: Hillslopes, drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

6220—Brewer silty clay loam, rarely flooded

Map Unit Setting

National map unit symbol: 2wtx9
Elevation: 980 to 1,660 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 54 to 57 degrees F
Frost-free period: 175 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Brewer, rarely flooded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Brewer, Rarely Flooded

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

Ap - 0 to 12 inches: silty clay loam
Bt - 12 to 42 inches: silty clay
BC - 42 to 79 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: R076XY113KS - Loamy Lowland
Hydric soil rating: No

Minor Components

Verdigris, occasionally flooded

Percent of map unit: 10 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R076XY113KS - Loamy Lowland
Hydric soil rating: No

Osage, ponded

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R076XY104KS - Clay Lowland
Hydric soil rating: Yes

6226—Canadian sandy loam, rarely flooded

Map Unit Setting

National map unit symbol: 1kh85
Elevation: 800 to 1,300 feet
Mean annual precipitation: 24 to 31 inches
Mean annual air temperature: 45 to 70 degrees F
Frost-free period: 168 to 215 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Canadian, rarely flooded, and similar soils: 99 percent
Minor components: 1 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canadian, Rarely Flooded

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

Ap - 0 to 10 inches: sandy loam

Bw - 10 to 40 inches: fine sandy loam
C - 40 to 60 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: RareNone
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: R080AY050OK - Loamy Bottomland
Hydric soil rating: No

Minor Components

Aquolls, occasionally flooded

Percent of map unit: 1 percent
Landform: Hillslopes, drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

VALLEY | V-CHART

Valley Dealer

INMAN IRRIGATION
892 ARAPAHO ROAD
INMAN, KS 67546-8002
United States

Customer

Jerry Kline
11777 21st rd
Udall, KS 67146-7455
US

Dealer No.

00003440

Field Name

Kline, Jerry Shore Pivot

Parent Order No.
Sprinkler Order No. **Kline Jerry Shore**

Plant **VALLEY SHIPPING**

Dealer PO
Order Date **09/30/2022**
Load Date **10/05/2022**
Method Of Shipment **UPSG**

8 Span Valley Standard Pivot 8000
Machine Flow 800 (GPM)
Pivot Pressure 35 (PSI)

Parent Order No

Dealer **INMAN IRRIGATION**

Sprinkler Order No **Kline Jerry Shore**

Customer **Jerry Kline**

Field Name **Kline, Jerry Shore Pivot**

Valley Standard Pivot 8000 Machine Summary

Span and Overhang

Model	Qty	Length (ft)	Pipe O.D. (in)	Coupler Spacing (in)	D. U. Qty	Profile	Tire
8000	3	184.8	6 5/8	108	21	Standard	11.2 x 38
8000	4	180.0	6 5/8	108	20	Standard	11.2 x 38
8000	1	160.0	6 5/8	108	18	Standard	11.2 x 38
8000	1	36.0	6 5/8	110	6		

Field Area

175.8 (Ac) Total
156.2 (Ac) Pivot 360°
19.6 (Ac) EG on 100%
1471.8 (ft) Machine Length
89.4 (ft) End Gun Radius

Flow

800 (GPM)
4.55 (GPM per Acre)
0.24 (in per day) App Rate
0.161 (in) App Depth @ 100%
91.9 (GPM) End Gun

Messages

Caution:
1. I-Wob, Orbitor, Twister and Nutator sprinklers require at least 24 in (61 cm) of drop hose. Do not use slip weights or rigid drop materials. Do not
2. install integrated weights on drop with double I-Wob or Nutator sprinklers.

Dealer:
None

Pressure

35 (PSI) Pivot Pressure
Inlet Pressure
0.0 (ft) Highest Elevation
0.0 (ft) Lowest Elevation

LRDU Drive Train

34 RPM Center Drive @ **60** Hz freq.
11.2 x 38 Tire
52:1 Wheel GB Ratio, LRDU Dist **1435.6** (ft)
16.0 Hrs/360° @ 100% **9.45** (Ft per Min)
16 Hrs/360° @ 100%

Sprinkler -- Available Outlets

Sprinkler Configuration	Range (ft)
Senninger U-Pipe 6(in) Plastic 3/4 M NPT x 3/4 M Hose	**Outlets 3,21,1**
Blue Premium Hose Drop Variable Length 72(in) Ground Clr	**22,161 163,164**
Valley Regulator PSR-2 10(PSI) 3/4 F NPT	**166,167**
Senninger Magnum-Threaded Integrated Weight 0.85	
Senninger I-Wob2 - UP3 Std Angle 3/4 M NPT	

1402.71 (ft) Total Drop Hose Length

Parent Order No

Dealer **INMAN IRRIGATION**

Sprinkler Order No **Kline Jerry Shore**

Customer **Jerry Kline**

Field Name **Kline, Jerry Shore Pivot**

Valley Standard Pivot 8000 Machine Summary

Pressure Loss

Pipe Length (ft)	Pipe I.D. (in)	Pipe Finish	C-Factor	Loss (PSI)
1453.7	6.42	Galvanized	150	10.5
18.1	3.79	Galvanized	150	0.3
			Total =	10.8

End Gun(s) & Booster Pump Information

Primary End Gun

Nelson SR75 End Gun

0.65 Nozzle

Berkeley 2 HP Booster Pump

Span Flow

Span Number	Irrigated Length (ft)	Area (Ac)	Rqd (GPM)	Act (GPM)	Rqd (GPM per Acre)	Act (GPM per Acre)	% Deviation
1	170.2	2.5	11.0	12.2	4.47	4.92	10.1
2	184.9	7.4	33.2	33.2	4.47	4.47	0.0
3	184.9	12.3	55.2	55.1	4.47	4.47	-0.1
4	180.1	16.8	75.0	75.2	4.47	4.49	0.4
5	180.1	21.4	95.9	95.9	4.47	4.47	0.0
6	180.1	26.1	116.8	116.7	4.47	4.47	-0.1
7	180.1	30.8	137.7	137.5	4.47	4.46	-0.2
8	159.8	31.2	139.7	139.7	4.47	4.47	-0.0
O/H	36.2	7.6	34.9	34.8	4.60	4.59	-0.2
EG	89.4	19.6	89.2	91.9	4.56	4.70	3.1
Totals		175.7		792.2			
	Drain Sprinkler		9.2	8.8			
	Total Machine Flow			801			

Advanced Options

```
Drain Sprinkler = Senninger Directional
Last Sprinkler Coverage = 1 ft
Sprinkler Coverage Length = 1472.8 ft
Use Last Coupler= YES
Minimum Mainline Pressure = 6 PSI
```

Shipping Options

```
Ship Drop Hardware
Ship Endgun Nozzle
Ship Endgun & Hardware
Do not ship Endgun Valve / Nozzle Valve Hardware
Do not ship Boosterpump Hardware
```

Parent Order No

Dealer **INMAN IRRIGATION**

Sprinkler Order No **Kline Jerry Shore**

Customer **Jerry Kline**

Field Name **Kline, Jerry Shore Pivot**

Valley Standard Pivot 8000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
1	5.4			**Gauge**						35.0			
2	14.4			**Plug**									
	Sprinkler : Senninger Iwob2 - Up3												
3	23.4	**1**		**6**	**Gold**	I-Wob2 - UP3	Std Angle Black	95	PSR-2 10A	34.3	11.4	0.3	0.9
4	32.4			**Plug**									
5	41.4	**2**	18.0	**6**	**Gold**	I-Wob2 - UP3	Std Angle Black	105	PSR-2 10A	33.8	11.4	0.5	0.9
6	49.9			**Plug**									
7	58.3	**3**	16.9	**6**	**Gold**	I-Wob2 - UP3	Std Angle Black	112	PSR-2 10A	33.3	11.4	0.6	0.9
8	66.8			**Plug**									
9	75.3	**4**	16.9	**6**	**Gold**	I-Wob2 - UP3	Std Angle Black	117	PSR-2 10A	33.0	11.4	0.9	0.9
10	84.3			**Plug**									
11	93.3	**5**	18.0	**6.5**	**Gold Notched**	I-Wob2 - UP3	Std Angle Black	119	PSR-2 10A	32.7	11.4	1.1	1.0
12	102.3			**Plug**									
13	111.3	**6**	18.0	**7.5**	**Lime Notched**	I-Wob2 - UP3	Std Angle Black	118	PSR-2 10A	32.5	11.4	1.2	1.4
14	119.7			**Plug**									
15	128.1	**7**	16.8	**7.5**	**Lime Notched**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	32.4	11.4	1.4	1.4
16	136.5			**Plug**									
17	145.0	**8**	16.9	**8**	**Lavender**	I-Wob2 - UP3	Std Angle Black	110	PSR-2 10A	32.4	11.4	1.6	1.5
18	154.0			**Plug**									
19	163.0	**9**	18.0	**9**	**Grey**	I-Wob2 - UP3	Std Angle Black	101	PSR-2 10A	32.5	11.4	1.9	1.9
20	172.0			**Plug**									
21	181.0	**10**	18.0	**8**	**Lavender**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	32.7	11.4	1.6	1.5
	185.6		Tower Number : 1	Span Length(ft) : 184.6									
22	190.3	**11**	9.3	**7**	**Lime**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	32.6	11.4	1.1	1.2
23	199.3	**12**	9.0	**7**	**Lime**	I-Wob2 - UP3	Std Angle Black	96	PSR-2 10A	32.3	11.4	1.2	1.2
24	208.3	**13**	9.0	**7**	**Lime**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	31.9	11.4	1.2	1.2
25	217.3	**14**	9.0	**7.5**	**Lime Notched**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	31.7	11.4	1.3	1.4
26	226.3	**15**	9.0	**7**	**Lime**	I-Wob2 - UP3	Std Angle Black	111	PSR-2 10A	31.4	11.4	1.3	1.2
27	234.8	**16**	8.5	**7.5**	**Lime Notched**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	31.2	11.4	1.3	1.4
28	243.2	**17**	8.4	**7.5**	**Lime Notched**	I-Wob2 - UP3	Std Angle Black	117	PSR-2 10A	31.0	11.4	1.3	1.4

Parent Order No

Dealer **INMAN IRRIGATION**

Sprinkler Order No **Kline Jerry Shore**

Customer **Jerry Kline**

Field Name **Kline, Jerry Shore Pivot**

Valley Standard Pivot 8000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
29	251.6	**18**	8.4	**7.5**	**Lime Notched**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	30.8	11.4	1.7	1.4
30	260.1	**19**	8.5	**8**	**Lavender**	I-Wob2 - UP3	Std Angle Black	121	PSR-2 10A	30.7	11.4	1.7	1.5
31	269.1	**20**	9.0	**8**	**Lavender**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	30.5	11.4	1.6	1.5
32	278.1	**21**	9.0	**8**	**Lavender**	I-Wob2 - UP3	Std Angle Black	123	PSR-2 10A	30.4	11.4	1.6	1.5
33	287.1	**22**	9.0	**8.5**	**Lavender Notched**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	30.3	11.4	1.7	1.7
34	296.1	**23**	9.0	**8**	**Lavender**	I-Wob2 - UP3	Std Angle Black	121	PSR-2 10A	30.3	11.4	1.7	1.5
35	304.5	**24**	8.4	**8.5**	**Lavender Notched**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	30.2	11.4	1.7	1.7
36	312.9	**25**	8.4	**8.5**	**Lavender Notched**	I-Wob2 - UP3	Std Angle Black	117	PSR-2 10A	30.2	11.4	1.7	1.7
37	321.4	**26**	8.4	**8.5**	**Lavender Notched**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	30.2	11.4	1.8	1.7
38	329.9	**27**	8.5	**8.5**	**Lavender Notched**	I-Wob2 - UP3	Std Angle Black	111	PSR-2 10A	30.3	11.4	1.9	1.7
39	338.9	**28**	9.0	**9**	**Grey**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	30.3	11.4	2.0	1.9
40	347.9	**29**	9.0	**9.5**	**Grey Notched**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	30.4	11.4	2.0	2.2
41	356.9	**30**	9.0	**9**	**Grey**	I-Wob2 - UP3	Std Angle Black	96	PSR-2 10A	30.5	11.4	2.1	1.9
42	365.9	**31**	9.0	**9.5**	**Grey Notched**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	30.6	11.4	2.2	2.2
	370.5		Tower Number : 2		Span Length(ft) : 184.9								
43	375.2	**32**	9.3	**9.5**	**Grey Notched**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	30.5	11.4	2.2	2.2
44	384.2	**33**	9.0	**10**	**Turquoise**	I-Wob2 - UP3	Std Angle Black	96	PSR-2 10A	30.2	11.4	2.2	2.4
45	393.2	**34**	9.0	**9.5**	**Grey Notched**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	29.9	11.4	2.3	2.2
46	402.2	**35**	9.0	**10**	**Turquoise**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	29.7	11.4	2.3	2.4
47	411.2	**36**	9.0	**10**	**Turquoise**	I-Wob2 - UP3	Std Angle Black	111	PSR-2 10A	29.4	11.4	2.3	2.4
48	419.7	**37**	8.5	**9.5**	**Grey Notched**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	29.2	11.4	2.3	2.2
49	428.1	**38**	8.4	**10**	**Turquoise**	I-Wob2 - UP3	Std Angle Black	117	PSR-2 10A	29.0	11.4	2.3	2.4
50	436.5	**39**	8.4	**10**	**Turquoise**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	28.8	11.4	2.4	2.4
51	445.0	**40**	8.5	**10**	**Turquoise**	I-Wob2 - UP3	Std Angle Black	121	PSR-2 10A	28.7	11.3	2.5	2.4
52	454.0	**41**	9.0	**10.5**	**Turq Notched**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	28.6	11.3	2.6	2.6
53	463.0	**42**	9.0	**10.5**	**Turq Notched**	I-Wob2 - UP3	Std Angle Black	123	PSR-2 10A	28.5	11.3	2.7	2.6
54	472.0	**43**	9.0	**11**	**Yellow**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	28.4	11.3	2.7	2.9
55	481.0	**44**	9.0	**10.5**	**Turq Notched**	I-Wob2 - UP3	Std Angle Black	121	PSR-2 10A	28.3	11.3	2.7	2.6
56	489.4	**45**	8.4	**10.5**	**Turq Notched**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	28.3	11.3	2.7	2.6
57	497.8	**46**	8.4	**10.5**	**Turq Notched**	I-Wob2 - UP3	Std Angle Black	117	PSR-2 10A	28.3	11.3	2.7	2.6
58	506.2	**47**	8.4	**11**	**Yellow**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	28.3	11.3	2.8	2.9
59	514.7	**48**	8.5	**11**	**Yellow**	I-Wob2 - UP3	Std Angle Black	111	PSR-2 10A	28.4	11.3	2.9	2.9
60	523.7	**49**	9.0	**11.5**	**Yellow Notched**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	28.4	11.3	3.0	3.2

Parent Order No

Dealer **INMAN IRRIGATION**

Sprinkler Order No **Kline Jerry Shore**

Customer **Jerry Kline**

Field Name **Kline, Jerry Shore Pivot**

Valley Standard Pivot 8000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
61	532.7	**50**	9.0	**11**	**Yellow**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	28.5	11.3	3.1	2.9
62	541.7	**51**	9.0	**11.5**	**Yellow Notched**	I-Wob2 - UP3	Std Angle Black	96	PSR-2 10A	28.7	11.3	3.1	3.2
63	550.7	**52**	9.0	**11.5**	**Yellow Notched**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	28.8	11.3	3.3	3.2
	555.4		Tower Number : 3		Span Length(ft) : 184.9								
64	560.1	**53**	9.3	**12**	**Red**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	28.7	11.3	3.3	3.4
65	569.1	**54**	9.0	**11.5**	**Yellow Notched**	I-Wob2 - UP3	Std Angle Black	97	PSR-2 10A	28.4	11.3	3.3	3.2
66	578.1	**55**	9.0	**12**	**Red**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	28.1	11.3	3.4	3.4
67	587.1	**56**	9.0	**12**	**Red**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	27.8	11.3	3.4	3.4
68	596.1	**57**	9.0	**12**	**Red**	I-Wob2 - UP3	Std Angle Black	112	PSR-2 10A	27.6	11.3	3.5	3.4
69	605.1	**58**	9.0	**12**	**Red**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	27.4	11.3	3.5	3.4
70	614.1	**59**	9.0	**12.5**	**Red Notched**	I-Wob2 - UP3	Std Angle Black	118	PSR-2 10A	27.2	11.3	3.6	3.7
71	623.1	**60**	9.0	**12**	**Red**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	27.1	11.3	3.6	3.4
72	632.1	**61**	9.0	**12.5**	**Red Notched**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	26.9	11.3	3.7	3.7
73	641.1	**62**	9.0	**12.5**	**Red Notched**	I-Wob2 - UP3	Std Angle Black	123	PSR-2 10A	26.8	11.3	3.7	3.7
74	650.0	**63**	8.9	**12.5**	**Red Notched**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	26.8	11.3	3.8	3.7
75	659.0	**64**	9.0	**12.5**	**Red Notched**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	26.7	11.3	3.8	3.7
76	668.0	**65**	9.0	**13**	**White**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	26.7	11.3	3.9	4.1
77	677.0	**66**	9.0	**12.5**	**Red Notched**	I-Wob2 - UP3	Std Angle Black	118	PSR-2 10A	26.7	11.3	3.9	3.7
78	686.0	**67**	9.0	**13**	**White**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	26.7	11.2	4.0	4.1
79	694.8	**68**	8.9	**13**	**White**	I-Wob2 - UP3	Std Angle Black	112	PSR-2 10A	26.8	11.2	4.0	4.1
80	703.8	**69**	9.0	**13**	**White**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	26.9	11.2	4.1	4.1
81	712.8	**70**	9.0	**13**	**White**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	27.0	11.2	4.1	4.1
82	721.8	**71**	9.0	**13.5**	**White Notched**	I-Wob2 - UP3	Std Angle Black	97	PSR-2 10A	27.1	11.2	4.2	4.4
83	730.8	**72**	9.0	**13.5**	**White Notched**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	27.3	11.2	4.3	4.4
	735.5		Tower Number : 4		Span Length(ft) : 180.1								
84	740.2	**73**	9.3	**13.5**	**White Notched**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	27.2	11.2	4.4	4.4
85	749.2	**74**	9.0	**13.5**	**White Notched**	I-Wob2 - UP3	Std Angle Black	97	PSR-2 10A	26.9	11.2	4.3	4.4
86	758.2	**75**	9.0	**13.5**	**White Notched**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	26.6	11.2	4.4	4.4
87	767.2	**76**	9.0	**13.5**	**White Notched**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	26.4	11.2	4.5	4.4
88	776.2	**77**	9.0	**13.5**	**White Notched**	I-Wob2 - UP3	Std Angle Black	112	PSR-2 10A	26.2	11.2	4.5	4.4
89	785.2	**78**	9.0	**14**	**Blue**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	26.0	11.2	4.6	4.7
90	794.2	**79**	9.0	**14**	**Blue**	I-Wob2 - UP3	Std Angle Black	118	PSR-2 10A	25.8	11.2	4.6	4.7
91	803.2	**80**	9.0	**14**	**Blue**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	25.7	11.2	4.7	4.7

Parent Order No

Dealer **INMAN IRRIGATION**

Sprinkler Order No **Kline Jerry Shore**

Customer **Jerry Kline**

Field Name **Kline, Jerry Shore Pivot**

Valley Standard Pivot 8000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
92	812.2	**81**	9.0	**14**	**Blue**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	25.6	11.2	4.7	4.7
93	821.2	**82**	9.0	**14**	**Blue**	I-Wob2 - UP3	Std Angle Black	123	PSR-2 10A	25.5	11.2	4.7	4.7
94	830.1	**83**	8.9	**14**	**Blue**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	25.4	11.2	4.8	4.7
95	839.1	**84**	9.0	**14.5**	**Blue Notched**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	25.4	11.2	4.9	5.0
96	848.1	**85**	9.0	**14**	**Blue**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	25.4	11.2	4.9	4.7
97	857.1	**86**	9.0	**14.5**	**Blue Notched**	I-Wob2 - UP3	Std Angle Black	118	PSR-2 10A	25.4	11.2	5.0	5.0
98	866.1	**87**	9.0	**14.5**	**Blue Notched**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	25.5	11.2	5.0	5.0
99	875.0	**88**	8.9	**14.5**	**Blue Notched**	I-Wob2 - UP3	Std Angle Black	112	PSR-2 10A	25.5	11.2	5.0	5.0
100	884.0	**89**	9.0	**14.5**	**Blue Notched**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	25.6	11.2	5.1	5.0
101	893.0	**90**	9.0	**15**	**Dark Brown**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	25.8	11.1	5.2	5.4
102	902.0	**91**	9.0	**15**	**Dark Brown**	I-Wob2 - UP3	Std Angle Black	97	PSR-2 10A	25.9	11.1	5.2	5.4
103	911.0	**92**	9.0	**15**	**Dark Brown**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	26.1	11.1	5.4	5.4
	915.6		Tower Number : 5		Span Length(ft) : 180.1								
104	920.3	**93**	9.3	**15**	**Dark Brown**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	26.1	11.1	5.4	5.4
105	929.3	**94**	9.0	**15**	**Dark Brown**	I-Wob2 - UP3	Std Angle Black	97	PSR-2 10A	25.8	11.1	5.4	5.4
106	938.3	**95**	9.0	**15**	**Dark Brown**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	25.5	11.1	5.4	5.4
107	947.3	**96**	9.0	**15**	**Dark Brown**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	25.3	11.1	5.5	5.4
108	956.3	**97**	9.0	**15.5**	**Dark Brn Notched**	I-Wob2 - UP3	Std Angle Black	112	PSR-2 10A	25.1	11.1	5.5	5.7
109	965.3	**98**	9.0	**15.5**	**Dark Brn Notched**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	24.9	11.1	5.6	5.7
110	974.3	**99**	9.0	**15.5**	**Dark Brn Notched**	I-Wob2 - UP3	Std Angle Black	118	PSR-2 10A	24.8	11.1	5.7	5.7
111	983.3	**100**	9.0	**15.5**	**Dark Brn Notched**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	24.7	11.1	5.7	5.7
112	992.3	**101**	9.0	**15.5**	**Dark Brn Notched**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	24.6	11.1	5.8	5.7
113	1001.3	**102**	9.0	**15.5**	**Dark Brn Notched**	I-Wob2 - UP3	Std Angle Black	123	PSR-2 10A	24.5	11.1	5.8	5.7
114	1010.2	**103**	8.9	**15.5**	**Dark Brn Notched**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	24.5	11.1	5.8	5.7
115	1019.2	**104**	9.0	**15.5**	**Dark Brn Notched**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	24.4	11.1	5.9	5.7
116	1028.2	**105**	9.0	**16**	**Orange**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	24.5	11.1	6.0	6.1
117	1037.2	**106**	9.0	**16**	**Orange**	I-Wob2 - UP3	Std Angle Black	118	PSR-2 10A	24.5	11.1	6.0	6.1
118	1046.2	**107**	9.0	**16**	**Orange**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	24.6	11.1	6.0	6.1
119	1055.1	**108**	8.9	**16**	**Orange**	I-Wob2 - UP3	Std Angle Black	112	PSR-2 10A	24.7	11.1	6.1	6.1
120	1064.1	**109**	9.0	**16**	**Orange**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	24.8	11.1	6.2	6.1
121	1073.1	**110**	9.0	**16**	**Orange**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	24.9	11.0	6.2	6.1
122	1082.1	**111**	9.0	**16.5**	**Orange Notched**	I-Wob2 - UP3	Std Angle Black	97	PSR-2 10A	25.1	11.0	6.3	6.5
123	1091.1	**112**	9.0	**16.5**	**Orange Notched**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	25.3	11.0	6.4	6.5

Parent Order No

Dealer **INMAN IRRIGATION**

Sprinkler Order No **Kline Jerry Shore**

Customer **Jerry Kline**

Field Name **Kline, Jerry Shore Pivot**

Valley Standard Pivot 8000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
	1095.7		Tower Number : 6	Span Length(ft) : 180.1									
124	1100.4	**113**	9.3	**16.5**	**Orange Notched**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	25.3	11.0	6.5	6.5
125	1109.4	**114**	9.0	**16.5**	**Orange Notched**	I-Wob2 - UP3	Std Angle Black	97	PSR-2 10A	25.0	11.0	6.4	6.5
126	1118.4	**115**	9.0	**16.5**	**Orange Notched**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	24.8	11.0	6.5	6.5
127	1127.4	**116**	9.0	**16.5**	**Orange Notched**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	24.6	11.0	6.5	6.5
128	1136.4	**117**	9.0	**16.5**	**Orange Notched**	I-Wob2 - UP3	Std Angle Black	112	PSR-2 10A	24.4	11.0	6.6	6.5
129	1145.4	**118**	9.0	**17**	**Dark Green**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	24.2	11.0	6.6	6.8
130	1154.4	**119**	9.0	**16.5**	**Orange Notched**	I-Wob2 - UP3	Std Angle Black	118	PSR-2 10A	24.1	11.0	6.7	6.5
131	1163.4	**120**	9.0	**17**	**Dark Green**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	24.0	11.0	6.8	6.8
132	1172.4	**121**	9.0	**17**	**Dark Green**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	23.9	11.0	6.8	6.8
133	1181.4	**122**	9.0	**17**	**Dark Green**	I-Wob2 - UP3	Std Angle Black	123	PSR-2 10A	23.9	11.0	6.8	6.8
134	1190.3	**123**	8.9	**17**	**Dark Green**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	23.8	11.0	6.9	6.8
135	1199.3	**124**	9.0	**17**	**Dark Green**	I-Wob2 - UP3	Std Angle Black	122	PSR-2 10A	23.9	11.0	7.0	6.8
136	1208.3	**125**	9.0	**17.5**	**Dark Grn Notched**	I-Wob2 - UP3	Std Angle Black	120	PSR-2 10A	23.9	10.9	7.0	7.3
137	1217.3	**126**	9.0	**17**	**Dark Green**	I-Wob2 - UP3	Std Angle Black	118	PSR-2 10A	23.9	11.0	7.1	6.8
138	1226.3	**127**	9.0	**17.5**	**Dark Grn Notched**	I-Wob2 - UP3	Std Angle Black	115	PSR-2 10A	24.0	10.9	7.1	7.3
139	1235.2	**128**	8.9	**17.5**	**Dark Grn Notched**	I-Wob2 - UP3	Std Angle Black	112	PSR-2 10A	24.1	10.9	7.1	7.3
140	1244.2	**129**	9.0	**17.5**	**Dark Grn Notched**	I-Wob2 - UP3	Std Angle Black	107	PSR-2 10A	24.3	10.9	7.2	7.3
141	1253.2	**130**	9.0	**17.5**	**Dark Grn Notched**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	24.4	10.9	7.3	7.3
142	1262.2	**131**	9.0	**17.5**	**Dark Grn Notched**	I-Wob2 - UP3	Std Angle Black	97	PSR-2 10A	24.6	10.9	7.3	7.2
143	1271.2	**132**	9.0	**17.5**	**Dark Grn Notched**	I-Wob2 - UP3	Std Angle Black	90	PSR-2 10A	24.8	10.9	7.5	7.2
	1275.8		Tower Number : 7	Span Length(ft) : 180.1									
144	1280.5	**133**	9.3	**18**	**Purple**	I-Wob2 - UP3	Std Angle Black	89	PSR-2 10A	24.9	10.9	7.6	7.7
145	1289.5	**134**	9.0	**18**	**Purple**	I-Wob2 - UP3	Std Angle Black	94	PSR-2 10A	24.7	10.9	7.5	7.7
146	1298.5	**135**	9.0	**18**	**Purple**	I-Wob2 - UP3	Std Angle Black	99	PSR-2 10A	24.5	10.9	7.5	7.7
147	1307.5	**136**	9.0	**18**	**Purple**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	24.4	10.9	7.6	7.7
148	1316.5	**137**	9.0	**17.5**	**Dark Grn Notched**	I-Wob2 - UP3	Std Angle Black	106	PSR-2 10A	24.2	10.9	7.4	7.2
149	1325.0	**138**	8.5	**17.5**	**Dark Grn Notched**	I-Wob2 - UP3	Std Angle Black	108	PSR-2 10A	24.1	10.9	7.2	7.3
150	1333.4	**139**	8.4	**17.5**	**Dark Grn Notched**	I-Wob2 - UP3	Std Angle Black	110	PSR-2 10A	24.1	10.9	7.2	7.3
151	1341.8	**140**	8.4	**17.5**	**Dark Grn Notched**	I-Wob2 - UP3	Std Angle Black	111	PSR-2 10A	24.0	10.9	7.3	7.3
152	1350.3	**141**	8.5	**18**	**Purple**	I-Wob2 - UP3	Std Angle Black	111	PSR-2 10A	24.0	10.9	7.6	7.7
153	1359.3	**142**	9.0	**18**	**Purple**	I-Wob2 - UP3	Std Angle Black	112	PSR-2 10A	24.0	10.9	7.9	7.7
154	1368.3	**143**	9.0	**18.5**	**Purple Notched**	I-Wob2 - UP3	Std Angle Black	111	PSR-2 10A	24.0	10.8	7.9	8.1

Parent Order No

Dealer **INMAN IRRIGATION**

Sprinkler Order No **Kline Jerry Shore**

Customer **Jerry Kline**

Field Name **Kline, Jerry Shore Pivot**

Valley Standard Pivot 8000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rad (GPM)	Act (GPM)
155	1377.3	**144**	9.0	**18.5**	**Purple Notched**	I-Wob2 - UP3	Std Angle Black	110	PSR-2 10A	24.0	10.8	8.0	8.1
156	1386.3	**145**	9.0	**18.5**	**Purple Notched**	I-Wob2 - UP3	Std Angle Black	108	PSR-2 10A	24.1	10.8	8.0	8.1
157	1395.2	**146**	8.9	**18.5**	**Purple Notched**	I-Wob2 - UP3	Std Angle Black	105	PSR-2 10A	24.2	10.8	8.1	8.1
158	1404.2	**147**	9.0	**18.5**	**Purple Notched**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	24.3	10.8	8.1	8.1
159	1413.2	**148**	9.0	**18.5**	**Purple Notched**	I-Wob2 - UP3	Std Angle Black	99	PSR-2 10A	24.4	10.8	8.2	8.1
160	1422.2	**149**	9.0	**18.5**	**Purple Notched**	I-Wob2 - UP3	Std Angle Black	94	PSR-2 10A	24.5	10.8	8.3	8.1
161	1431.2	**150**	9.0	**18.5**	**Purple Notched**	I-Wob2 - UP3	Std Angle Black	89	PSR-2 10A	24.7	10.8	8.2	8.1
162	1435.0			**B.P.**									
	1435.6		Tower Number : 8		Span Length(ft) : 159.8								
163	1440.0	**151**	8.8	**19**	**Black**	I-Wob2 - UP3	Std Angle Black	89	PSR-2 10A	24.7	10.8	8.3	8.5
164	1449.2	**152**	9.2	**19**	**Black**	I-Wob2 - UP3	Std Angle Black	93	PSR-2 10A	24.6	10.8	8.5	8.5
165	1452.7			**Plug**									
166	1458.1	**153**	8.9	**19**	**Black**	I-Wob2 - UP3	Std Angle Black	97	PSR-2 10A	24.4	10.8	8.5	8.5
167	1467.3	**154**	9.2	**20**	**Dark Turquoise**	I-Wob2 - UP3	Std Angle Black	102	PSR-2 10A	24.2	10.6	9.6	9.3
		Sprinkler : Senninger Spray											
168	1470.8	**155**		**16**	**Orange**	Directional				24.1	24.1	9.2	8.8
	1471.8		Overhang		Span Length(ft) : 36.2								
		Sprinkler : Nelson Endgun											
169	1471.8	**156**		**0.65**		SR75				24.1	55.5	89.2	91.9

Primary Endgun Arc Settings: Forward Angle: **45** Reverse Angle: **80**

801.0

Dealer **INMAN IRRIGATION**
Customer **Jerry Kline**
Field Name **Kline, Jerry Shore Pivot**

VALLEY | V-CHART

Sprinkler Order No **Kline Jerry Shore**

Parent Order No

Valley Standard Pivot 8000 Percent Timer Data

Setup Information - Valley Computer Control Panel Water Application Constants: Minimum Application = 0.161 (in) Hours/360° = 16

Based on IN

IN Per 360 degrees	Pivot % Timer	Hours Per 360 degrees
0.161	100.0	16.0
0.20	80.4	19.9
0.30	53.6	29.9
0.40	40.2	39.8
0.50	32.2	49.7
0.60	26.8	59.7
0.70	23.0	69.6
0.80	20.1	79.6
0.90	17.9	89.4
1.00	16.1	99.4
1.25	12.9	124.0
1.50	10.7	149.5
1.75	9.2	173.9
2.00	8.0	200.0
2.50	6.4	250.0
3.00	5.4	296.3

Based on % Timer

Pivot % Timer	IN Per 360 degrees	Hours Per 360 degrees
100.0	0.161	16.0
90.0	0.18	17.8
80.0	0.20	20.0
70.0	0.23	22.9
60.0	0.27	26.7
50.0	0.32	32.0
45.0	0.36	35.6
40.0	0.40	40.0
35.0	0.46	45.7
30.0	0.54	53.3
25.0	0.64	64.0
20.0	0.80	80.0
17.5	0.92	91.4
15.0	1.07	106.7
12.5	1.29	128.0
10.0	1.61	160.0
7.5	2.15	213.3
5.0	3.22	320.0

Field Area

175.8 (Ac) Total
156.2 (Ac) Pivot 360°
19.6 (Ac) EG on 100%
1471.8 (ft) Machine Length
89.4 (ft) End Gun Radius

Flow

800 (GPM)
4.55 (GPM per Acre)
0.24 (in per day) App Rate
0.161 (in) App Depth @ 100%
91.9 (GPM) End Gun

Pressure

35 (PSI) Pivot Pressure
Inlet Pressure
0.0 (ft) Highest Elevation
0.0 (ft) Lowest Elevation

LRDU Drive Train

34 RPM Center Drive @ **60** Hz freq.
11.2 x 38 Tire
52:1 Wheel GB Ratio, LRDU Dist **1435.6** (ft)
16.0 Hrs/360° @ 100% (**9.45**) (Ft per Min)
16 Hrs/360° @ 100%

Disclaimer
The information presented in the attached Percent Timer Report is based on variables which cannot be totally controlled by Valmont (including, but not limited to; pivot pressure, inside pipeline surface, end gun throw, end gun arc setting, tire slippage, tire pressure, field slopes, soil variations, sprinkler package installation, well capacity, center drive motor voltage, center drive motor frequency, climatic conditions and other elements and circumstances beyond Valmont's reasonable control). Valmont recommends monitoring the machine for at least one pass through field to obtain an accurate rotation time.

DATA ENTRY SYSTEM ID NUMBER SHEET

FILE NUMBER 50889

APPLICANT PERSON ID & SEQ #		PDIV ID		BATTERY ID
68707		89862		

LANDOWNER PERSON ID & SEQ #		PUSE ID	
68708		71084 - SEC 26	
		71085	

WATER USE CORRESPONDENT PERSON ID & SEQ #	
68708	