**KS Dept Of Agriculture** 



### KANSAS DEPARTMENT OF AGRICULTURE

Mike Beam, Secretary of Agriculture

### **DIVISION OF WATER RESOURCES**

Earl D. Lewis Jr., Chief Engineer

51342
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:

	City: Girard			State KS	Zip Code 66743	
	Telephone Number: (620	<u>0) 704-7915</u>				
2.	The source of water is:		vater in <u>Flat</u>	Rock Creek	stream)	
	OR	☐ groundwa	ater in NE	OSHO RIVER BASIN	nage basin)	10/22 KJN
0	Certain streams in Kansa when water is released fro to these regulations on the and return to the Division	om storage for le date we rece of Water Resc	use by wate ive your app ources. Auxili quan	r assurance district memb plication, you will be sent ary Spillway Storage Volume = tity requested is three (3) times	pers. If your application the appropriate form to 11.7 ac-ft. The maximum the auxiliary spillway volum	n is subject o complete ne.
3.	The maximum quantity of to be diverted at a maxim					-
	Once your application ha	s been assigne	ed a priority	the requested maximum	n rate of diversion and	maximum
	Once your application hat requested quantity of water requested maximum rate proposed project and are	ater under tha of diversion an in agreement	t priority nu d maximum with the Divi	Imber can <u>NOT</u> be incr quantity of water are app ision of Water Resources	eased. Please be co propriate and reasonal	ertain your
4.	requested quantity of warequested maximum rate	ater under tha of diversion an in agreement	t priority nu d maximum with the Divi	Imber can <u>NOT</u> be incr quantity of water are app ision of Water Resources	eased. Please be co propriate and reasonal	ertain your
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4.	requested quantity of warequested maximum rate proposed project and are  The water is intended to lace (a) ☐ Artificial Recharge (e) ☐ Industrial	ater under that of diversion and in agreement of the appropriated (b)	t priority nud maximum with the Divided for (Check of ation icipal atering	mber can <u>NOT</u> be incr quantity of water are app ision of Water Resources use intended): (c) ⊠ Recreational (g) □ Stockwatering	eased. Please be co propriate and reasonal or requirements.  (d) □ Water P  (h) □ Sedime	ertain your ole for your lower nt Control

### Water Resources Received

5.	The location of the proposed wells, pump sites or other works for diversion of water is:					
	<b>Note:</b> For the application to be accepted, the point of diversion location must be described to at le acre tract, unless you specifically request a 60 day period of time in which to locate the site specifically described, minimal legal quarter section of land. (A) = Proposed Pump Site (Direct Diversity of the proposed Pump Site	e within a				
	(A) One in the $\underline{NW}$ quarter of the $\underline{SW}$ quarter of the $\underline{NE}$ quarter of Section $\underline{18}$ , more particularly of	described as				
	being near a point 3.846 feet North and 2.138 feet West of the Southeast corner of said	d section, in				
	Township <u>29</u> South, Range <u>21</u> East, <u>Neosho</u> Cour	nty, Kansas.				
	(B) One in the quarter of the quarter of the quarter of Section, more	particularly				
	described as being near a point feet North and feet West of the Southeast co	orner of said				
	section, in Township South, Range , Cour	nty, Kansas.				
	(C) One in the quarter of the quarter of the quarter of Section, more	particularly				
	described as being near a point feet North and feet West of the Southeast co	orner of said				
	section, in Township South, Range , Cour	nty, Kansas.				
	(D) One in the quarter of the quarter of the quarter of Section, more	particularly				
	described as being near a point feet North and feet West of the Southeast co	orner of said				
	section, in Township South, Range ,Cour	nty, 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					
	than four wells in the same local source of supply within a 300 foot radius circle which are being	operated by				
		operated by				
6.	than four wells in the same local source of supply within a 300 foot radius circle which are being pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which supply	operated by				
6.	than four wells in the same local source of supply within a 300 foot radius circle which are being pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which supple common distribution system.	operated by				
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6.	than four wells in the same local source of supply within a 300 foot radius circle which are being pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which supple common distribution system.  The owner of the point of diversion, if other than the applicant is (please print):  (name, address and telephone number)	operated by y water to a				
6.	than four wells in the same local source of supply within a 300 foot radius circle which are being pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which supply common distribution system.  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 landor landowner's authorized representative. Provide a copy of a recorded deed, lease, easened 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 fro landowner or the landowner's authorized representative. I declare under penalty of perjurt the foregoing is true and correct.	operated by y water to a owner or the ent or other				
6.	than four wells in the same local source of supply within a 300 foot radius circle which are being pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which supply common distribution system.  The owner of the point of diversion, if other than the applicant is (please print):  (name, address and telephone number)  You must provide evidence of legal access to, or control of, the point of diversion from the lands landowner's authorized representative. Provide a copy of a recorded deed, lease, easemed 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 fro landowner or the landowner's authorized representative. I declare under penalty of perjunt the foregoing is true and correct.  Executed on 20	operated by y water to a owner or the ent or other				
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<ol> <li>7.</li> </ol>	than four wells in the same local source of supply within a 300 foot radius circle which are being pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which supple common distribution system.  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 landcollandowner's authorized representative. Provide a copy of a recorded deed, lease, easemed 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 landowner or the landowner's authorized representative. I declare under penalty of perjunt the foregoing is true and correct.  Executed on, 20  Applicant's Signature  The applicant must provide the required information or signature irrespective of whether the landowner. Failure to complete this portion of the application will cause it to be unacceptable for fapplication will be returned to the applicant.	operated by y water to a owner or the ent or other m the y that hey are the iling and the				
	than four wells in the same local source of supply within a 300 foot radius circle which are being pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which suppl common distribution system.  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 land landowner's authorized representative. Provide a copy of a recorded deed, lease, easened 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 fro landowner or the landowner's authorized representative. I declare under penalty of perjur the foregoing is true and correct.  Executed on, 20  Applicant's Signature  The applicant must provide the required information or signature irrespective of whether the landowner. Failure to complete this portion of the application will cause it to be unacceptable for fapplication will be returned to the applicant.  The proposed project for diversion of water will consist of one (1) direct diversion pump site (number of wells, pumps or dams, etc.)	operated by y water to a owner or the ent or other m the y that hey are the iling and the				
	than four wells in the same local source of supply within a 300 foot radius circle which are being pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which supple common distribution system.  The owner of the point of diversion, if other than the applicant is (please print):  (name, address and telephone number)  You must provide evidence of legal access to, or control of, the point of diversion from the lands landowner's authorized representative. Provide a copy of a recorded deed, lease, easened 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 fro landowner or the landowner's authorized representative. I declare under penalty of perjur the foregoing is true and correct.  Executed on, 20	operated by y water to a owner or the ent or other m the y that help and the c.)				

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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? $\boxtimes$ Yes $\square$ No
	If yes, show the Water Structures permit number here
	If no, explain here why a Water Structures permit is not required
11.	The application <u>must</u> be supplemented by a U.S.G.S. topographic map, aerial photograph or a detailed 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) $\frac{1}{2}$ mile downstream and $\frac{1}{2}$ 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.
	Storage application for the wetland cell capture of surface runoff from the contributing drainage area.
	The storage application and this direct diversion application are being filed together.

### Water Resources Received

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File No.	
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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	□ We	ll as completed	☐ Drillers I	og attached		
	Well location as shown in p	paragraph	(A)	(B)	(C)	(D)		
	Date Drilled	-		_				
	Total depth of well	-						
	Depth to water bearing formation							
	Depth to static water level							
	Depth to bottom of pump in	ntake pipe						
14.	The relationship of the appli owner / operator (owner, tenant, agent or otherwis		sed place	where the water	will be used is	s that of		
15.	The owner(s) of the propert	y where the wate	r is used,	if other than the a	applicant, is (p	lease print):		
	(name, address and telephone number)							
		(			<b>X</b>			
		(name, addr	ess and le	elephone 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	Kansas	this	day of				
		, , , , , , , , , , , , , , , , ,			(month)	(year)		
	(A		_					
	(Applicant Signatu	re)						
<u>By</u>	(Agent or Officer Sign	ature)	_					
	(Agent of Officer Olgri	aturoj						
	(Agent or Officer - Pleas	se Print)						
Assista	d by <u>Brian Severin,</u> P.E.	_	oceno En	vironmental Grou	p Date: <u>8/</u>	12/2024		
7333316	a by bliait beveill, F.L.	<u>E</u>	OOGHE EII	(office/title)	р Date. <u>0/</u>	1212027		

### **FEE SCHEDULE**

KS Dept Of Agriculture

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

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### **RECREATIONAL USE** SUPPLEMENTAL SHEET

	File No
	Name of Applicant (Please Print):  Cuthbertson Revocable Trust (Scott Cuthbertson)
1.	Please indicate type of recreational use (boating, fishing, swimming, etc.):  Construction of low
	level wetland dike to seasonally impound shallow water for wildlife use.
2.	Please summarize how the water will be used and justify the quantity of water requested:
	Constructed wetland storage at the auxiliary spillway elevation = 11.7 acre-feet
	Proposed Flat Rock Creek direct diversion = 35 acre-feet (3 times the auxiliary
	spillway volume). Water from the creek will be pumped into adjacent wetland cell.
	Excess will be released into the floodplain when lowering or emptying the cell.
3.	Please complete the following table showing estimated future water requirements:
	ESTIMATED FUTURE WATER DIVERTED/STORED

NEXT 5 YEARS	WATER TO BE DIVERTED (ACRE-FEET OR GALLONS)				
Year 1	35 acre-feet				
Year 2	35 acre-feet				
Year 3	35 acre-feet				
Year 4	35 acre-feet				
Year 5	35 acre-feet				

Please attach any additional information, tables, or curves showing past, present and estimated future water requirements to substantiate the amount of water requested.

4.	fractional part of the Section, Township and Range.					
	NE 1/4 Sec 18, T-29S; R-21E (see plan sheets)					

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

	The location of the proposed wells, pump sites or other works for diversion of water is:     The location of the proposed wells, pump sites or other works for diversion found to detection of the described to at least a 10.
	Note: For the application to be accepted, the point or day period of time in which to locate the site within a same tract unless you specifically request a 60 day period of time in which to locate the site within a
	specifically described, microred regularity of described as
	To be an illustrated 21 East Neosho
	more particularly more particularly
	(8) One in the quarter of the quarter of the quarter of the described as being near a point feet North and feet West of the Southeast corner of said County, Kansas.
	described as being near a pointteet rects and
	(C) One in the quarter of the quarter of the quarter of Section more particularly
	the state of the last state of the state of
	section, in Township South, Range
	(D) One in the quarter of the quarter of the quarter of Section, more particularly
	(D) One in the quarter of the quarter of said
	section, in Township South, Range ,
Ü.	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.  The owner of the point of diversion, if other than the applicant is (please print):  Water Resources
	(name, address and telephone number) Received
	And the second of the second o
	(name, address and telephone number)  KS Dept Of Agriculture 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 sworm statement:
	I have legal access to, or control of, the point of diversion described in this application from the landowner's authorized representative. I declare under penalty of perjury that the foregoing is true and correct.  Executed on
	The applicant must provide the required information or signature irrespective of whether they are the indowner. Failure to complete this portion of the application will cause it to be unacceptable for filing and the opplication will be returned to the applicant.
Th	ne proposed project for diversion of water will consist of one (1) direct diversion pump site
מו	d will be completed (by) following approval
	(Month/Day/Year - each was or will be completed)

The first actual application of water for the proposed beneficial use was or is estimated to be following approva
 (MorDay) Year

-	(Agent or Office	er - Please Print)						
							KS Dept Of Agric	cultur
Ву	(Agent or Off	ficer Signature)					Water Resou Received	ces
X	Al Culle	nt Signature)		29			10/22/2024	
	Dated at		, Nanoao,			(month)	(year)	
16.	that this application	tates that the in	formation s good faith.	et forth ab	ove is true t	o the best of	his/her knowledge	and
			me addre	ss and tele	phone numb	er)		-
15					phone numb	- 10-	-	
15.	owner / operator (owner, tenant, ager The owner(s) of the	ne property where	e the water	is used, if o	other than the	applicant, is	(please print):	
14.	The relationship of	of the applicant to	the propos	ed place w	here the water	er will be used	t is that of	
	Depth to bottom	of pump intake p	sipe _		_		-	
	Depth to static		-			_		
		bearing formation	_			_		
	Total depth of v	vell	_			_		
	No. Date Drilled		_		_	_		
		s shown in paragr		(A)	(10)	1.9620		
	Information belo	M la non		244	(B)	(C)	(D)	
	Well has not be		est holes		completed	☐ Drillers 1	og attached	
	3. Furnish the foll	owing well informa en completed, give	tion if the pr	oposed app	propriation is form test holes.	or the use of g if available	roundwater. If the	

File No. \_\_











### **Cuthbertson Revocable Trust** (Flat Rock Bottoms)

### **As Constructed Wetland Development**

August 13, 2024

### Prepared By:

Brian W. Severin, P.E.

**Director of Technical Services** 

bseverin@eocene.com

785.207.0201

10/22/2024

Water Resources Received

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### **Design Report**

### **Project Information**

Name: Cuthbertson Revocable Trust (Flat Rock Bottoms)

• Practice: As Constructed Wetland Development

Legal: NE 1/4 Section 18, Township 29 South; Range 21 East

Location: Neosho County, Kansas

### **Project Description**

The project is located along and within the floodplain of Flat Rock Creek. The wetland development includes one wetland cell with a water control structure. The dike structure was constructed July 2024 (prior to securing permits). The low-level dike will provide additional water storage and create diverse topography within the degraded wetland area. The dike will increase water storage capacity and maintain hydrology at times throughout the year. The project will not hydraulically affect adjacent landowners, as the permanent pools will be confined to the landowner's property.

### Design

The wetland cell has approximately 97 acres of drainage area. The contributing hydrology into the wetland cell is direct rainfall, overland flow runoff, and seasonal flood events. The low-level dike is expected to overtop during flood events. The dikes were constructed with a minimum profile to reduce damage during these events. Average annual rainfall and seasonal flooding is expected to maintain wetland hydrology in the cell at most times throughout the year. However (permit pending), the cell will be supplemented with pumped surface water from Flat Rock Creek.

### **Permitting and Permissions**

The following permits will be required for the as constructed dike and wetland operation activities. Pertinent information for the permits has been supplied on the applications.

- Kansas Department of Agriculture, Division of Water Resources: DWR 1-100 Water Appropriation for Beneficial
   Use (Direct Diversion Pump Site)
- Kansas Department of Agriculture, Division of Water Resources: DWR 1-100 Water Appropriation for Beneficial
   Use (Natural Flow Surface Water Storage)
- Kansas Department of Agriculture, Division of Water Resources: DWR 2-200 Floodplain Fill

KS Dept Of Agriculture

### Survey

The as constructed project was surveyed by Matt Miller, Engineering Technician, Eocene using survey grade GPS equipment. The survey data was post processed using NOAA – Online Positioning User Service (OPUS) and corrected to Kansas State Plane, Zone South. The project is tied to permanent benchmarks labeled and described on the Plan Sheets. LiDAR topographic data was compared to the survey data and elevation corrected for planning and design use.

### **Appendix**

The attached Appendix includes Plan Sheets, KDA-DWR Report, and Permit Documentation.



Project: Cuthbertson Revocable Trust (Flat Rock Bottoms)

Practice: As Constructed Wetland Development

Location: NE 1/4 Sec 18, T-29S; R-21E

Neosho County, Kansas

Index to Drawings

Sheet No. Description

- 1 Cover Sheet
- 2 Location Map and Adjacent Landowners
- 3 Orthographic Plan Map
- 4 Plan View and Storage Table
- 5 Dike 1 Profile
- 6 Dike 1 Cross Sections
- 7 Base Flood Analysis
- 8 Base Flood Analysis

Brian W. Severin, P.E. August 2024

Designed by Date

W. SE

21497

8/3/24

Approved by Date

Before any investigation or construction activity, the excavator is responsible for calling Kansas One—Call at 800—344—7233 (800—DIG—SAFE) or 811

10/22/2024

Water Resources Received

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6) Chambers, Ken A & Kari S 10510 Udall Rd Saint Paul, Kansas 66771 7) Carter Roy Revocable Trust 108 St. Joseph Saint Paul, Kansas 66771

- 8) Pollick Michael William & Johnson Claire White 10260 Udall Rd Saint Paul, Kansas 66771
- 9) Riverlands Investment Property LLC 10900 S Woodland Rd Olathe, Kansas 66061
- 10) Oehlert, Jeremy D 407 Webster Pittsburg, Kansas 66762
- 11) Oplotnik Frank E & Sandra Revocable Trust 1238 W Hwy 47 Girard, Kansas 66743
- 12) Smith Joshua M 808 N Western Ave Girard, Kansas 66743
- 13) Smith Joseph A 19600 Udall Rd Erie, Kansas 66733
- 14) USD #505 430 Elm Chetopa, Kansas 67336

Water Resources Received

10/22/2024

Points of Diversion

A) Pump Site - Direct Diversion

B) Water Control Structure 1 - Storage

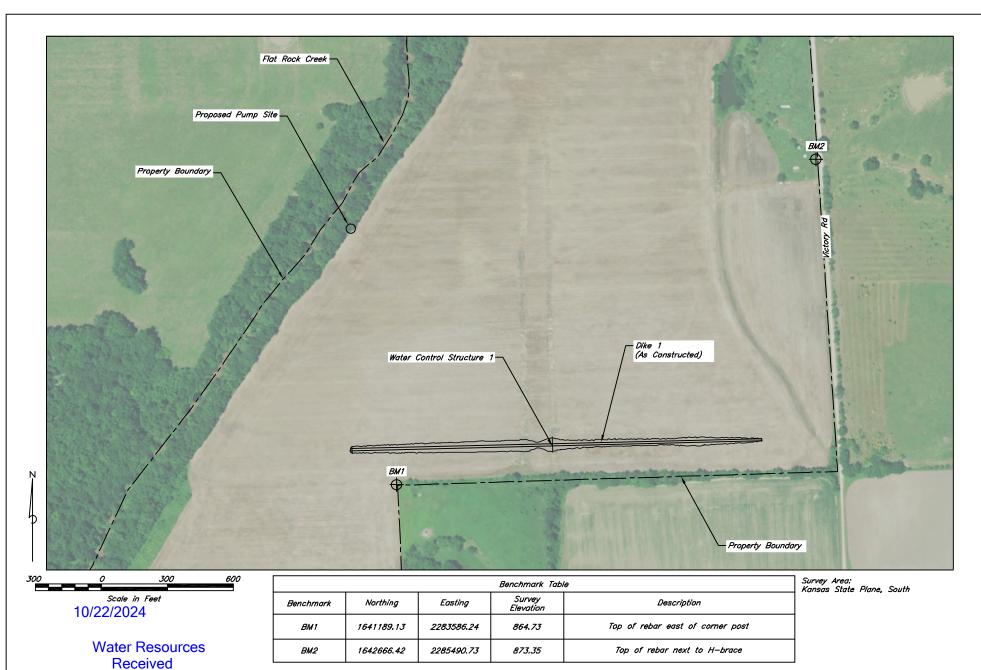
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(2) =110th Rd = Project Storage 1 5 105th Rd 7 10 9 Project Location 8 (11) (13) KS Hwy 47 1000

Scale in Feet

The approximate project location is 1 mile east and 0.5 mile north of Saint Paul, Kansas.

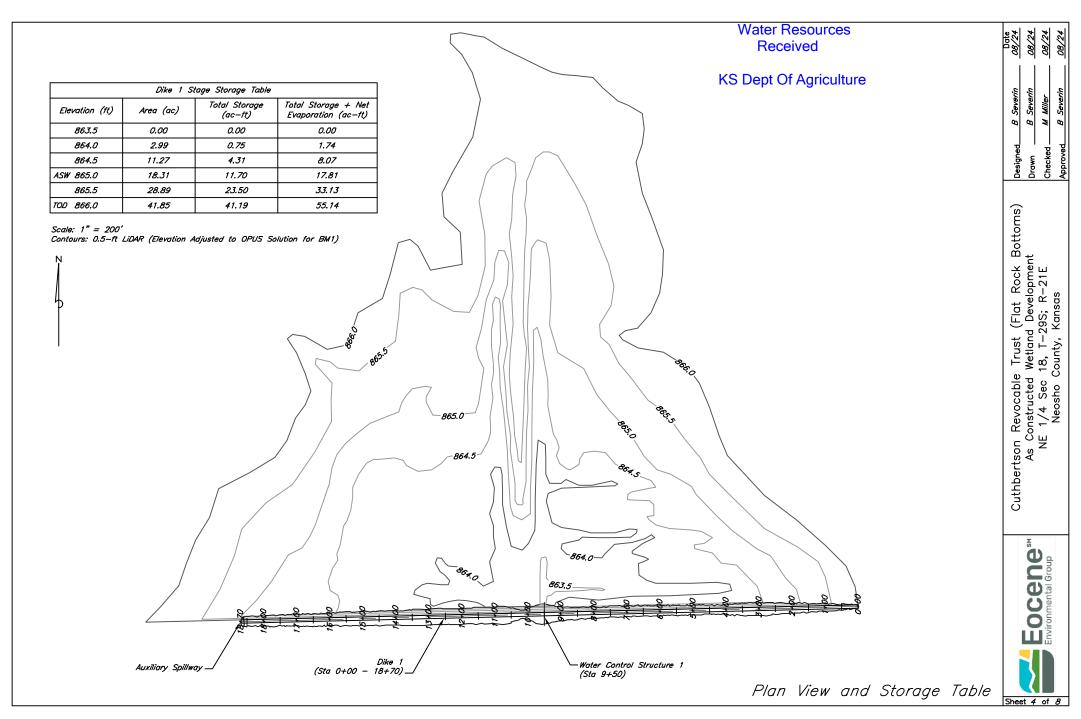
Location Map and Adjacent Landowners

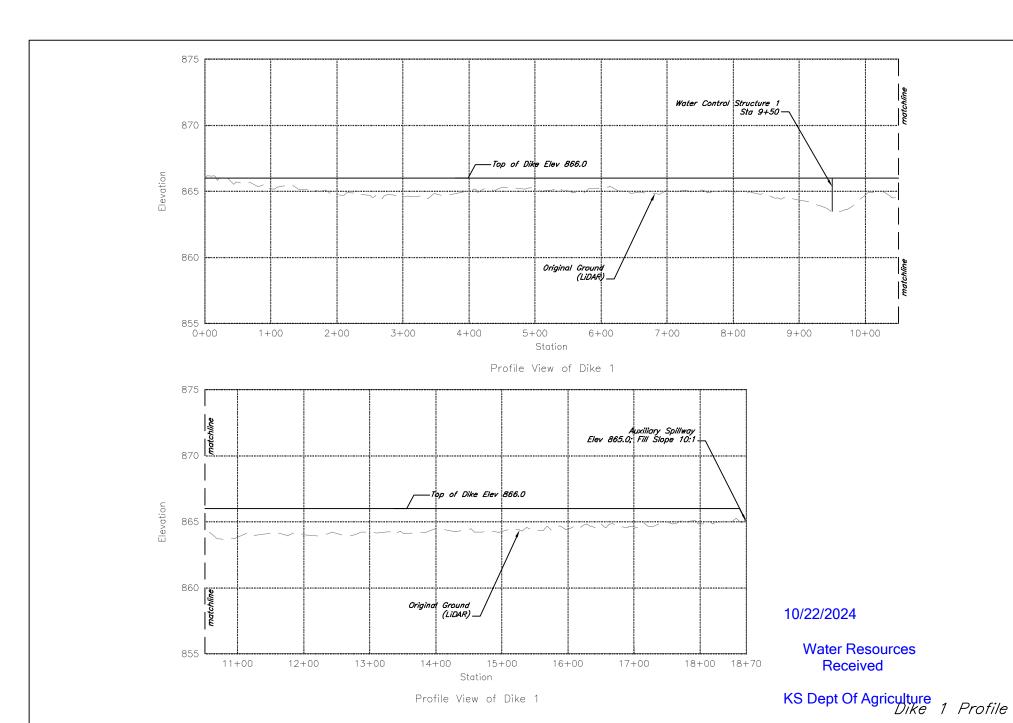


KS Dept Of Agriculture

Cuthbertson Revocable Trust (Flat Rock Bottoms)
As Constructed Wetland Development
NE 1/4 Sec 18, T-29S; R-21E
Neosho County, Kansas OCEDE vironmental Group

Orthographic Plan Map



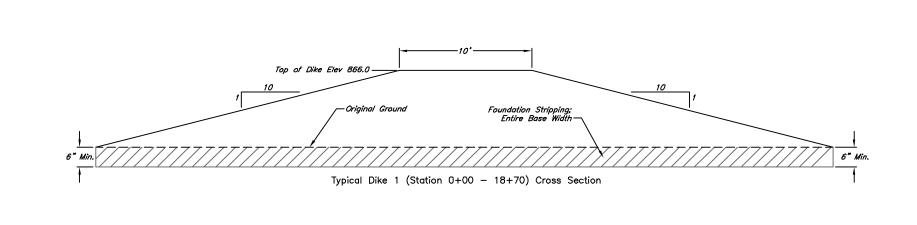


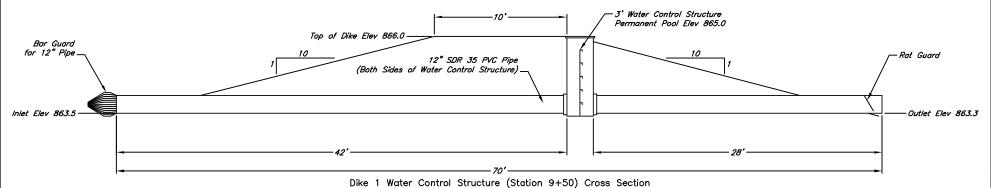
ttoms) besigned *B Severin*Drawn *B Severin*Checked *M Miller* 

Date 08/24 08/24 08/24

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Neosho County, Kansas

Environmental Group





Water Resources Received

**KS Dept Of Agriculture** 

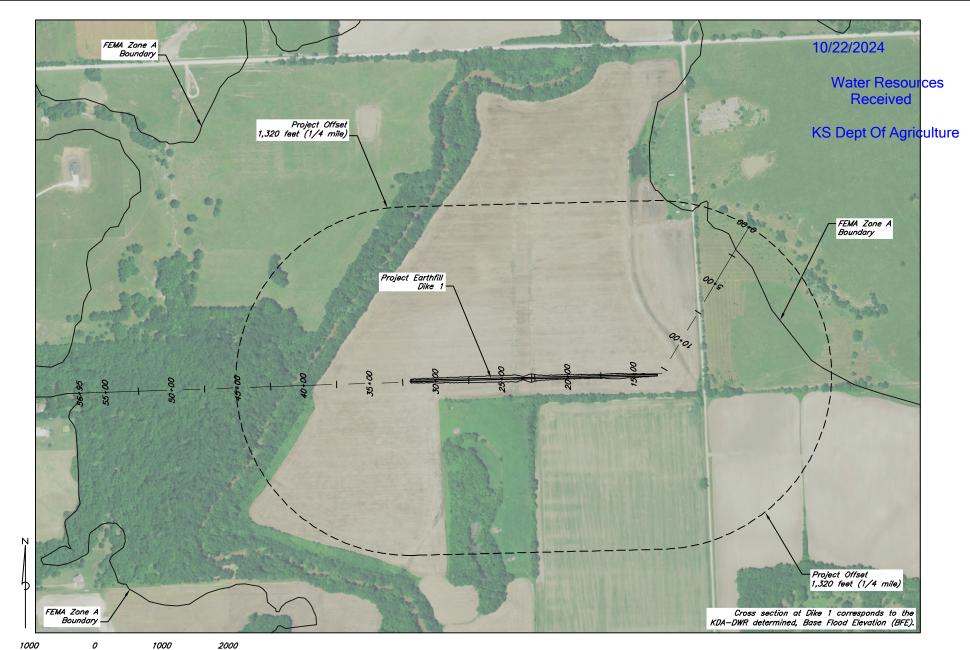
Dike 1 Cross Sections

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As Constructed Wetland Development
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Neosho County, Kansas

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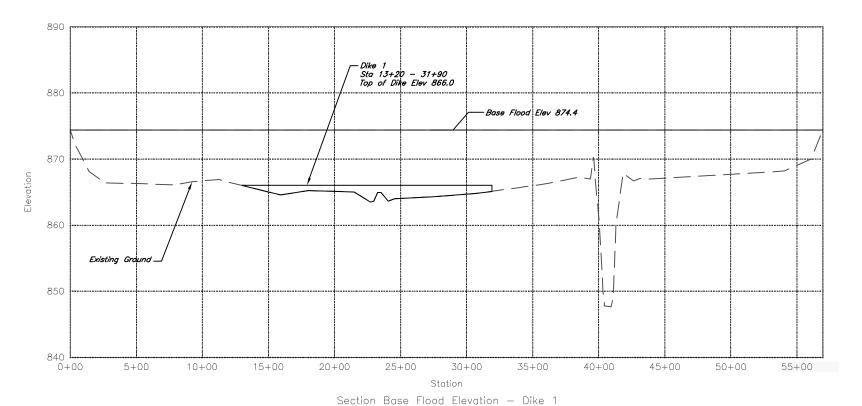
Sheet 6 of 8



Scale in Feet

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Base Flood Analysis



### References:

Existing ground and channels: LiDAR Topographic Data and the U.S. Geological Survey (USGS) 7.5 minute quadrangle map

Base Flood Elevation Determination: Keegan Schwartz, KDA - Division of Water Resources

FEMA Zone A Floodplain: National Flood Insurance Program, Flood Insurance Rate Map (FIRM) Map Number FM20133C0220D, Unincorporated Areas of Neosho County, KS (01/20/2010)

### Note:

1. No DWR permitted floodplain fills are located within 1/4 mile of the dike location. Therefore, a geometric base flood analysis was completed.

Base Flood Calculations:
Base flood elevation = 874.4
Base flood section area = 48,020 sq. ft.
Top width of base flood section = 5,695 ft
Maximum earthfill area below base flood elevation = 2,480 sq. ft.

Earthfill will increase base flood area by 5% Earthfill will increase base flood elevation by 0.44 ft.

Base Flood Analysis Completed By: Brian W Severin Date: 8/12/24

10/22/2024

Water Resources Received

**KS Dept Of Agriculture** 

Base Flood Analysis

Cuthbertson Revocable Trust (Flat Rock Bottoms)
As Constructed Wetland Development
NE 1/4 Sec 18, T-29S; R-21E
Neosho County, Kansas

Date 08/24 08/24 08/24

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Environmental Group

# KDA – Division of Water Resources (DWR) Report

### **Direct Diversion**

the plan sheets, with the water source being Flat Rock Creek. Therefore, a Water Appropriation for Beneficial Use (Direct Diversion) permit will be required. A pumping site is proposed to control and maintain the wetland hydrology. The pumping site will be located as shown on

## Surface Water Storage

the wetland cell is greater than 15 ac-ft. Therefore, a DWR Water Appropriation for Beneficial Use (Storage) permit will be dike to maintain freeboard and manage the water level within the wetland cell. The Total Storage + Net Evaporation for The Potential Net Evaporation (Annual Average Evaporation minus Annual Normal Precipitation) for the project location is required 4 inches. The net storage for Dike 1 was analyzed from the auxiliary spillway. A water control structure is installed in the

Water Resources Received								
866.0 (Top of Dike)	(S Dep 865.5	8§5.0 (Auxiliary Spillway)	ricultui 864.5	e 864.0	863.5	Elevation (ft)		
41.85	28.89	18.31	11.27	2.99	0.00	Area (ac)		
41.19	23.50	11.70	4.31	0.75	0.00	Total Storage (ac-ft)		
55.14	33.13	17.81	8.07	1.74	0.00	Total Storage + Net Evaporation (ac-ft)		

Dike 1 Stage Storage Table

## **Base Flood Analysis**

permitted floodplain fills located within  $\frac{1}{4}$  mile of the dike location. Therefore, a geometric base flood analysis was the FEMA FIRM data (Map Number FM20133C0220D, Unincorporated Areas of Neosho County, KS). There are no DWR determined by Keegan Schwartz, KDA-DWR. The base flood (FEMA Zone A, 100-yr floodplain) was approximated from elevation of the existing ground and channels was approximated from Kansas LiDAR topographic data and the U.S required. A base flood analysis was completed to determine the increase in base flood area and flood elevation. The See Base Flood Analysis plan sheets for further detail. completed. The as constructed dike will increase the base flood area by 5% and the base flood elevation by 0.44 feet Geological Survey (USGS) 7.5-minute quadrangle map. The Base Flood Elevation (BFE) for the project location was The project is located within the FEMA Zone A flood boundary of Flat Rock Creek. Therefore, a floodplain fill permit will be

1320 Research Park Drive Manhattan, KS 66502 785-564-6700 www. agriculture.ks.gov



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

Laura Kelly, Governor

Mike Beam, Secretary

October 28, 2024

CUTHBERTSON REVOCABLE TRUST 649 W 590TH ST GIRARD KS 66743

RE: Application, File No(s). 51342

Dear Sir or Madam

makes every attempt to process them in the order in which they are received. You will be contacted if Please be aware that the Division may have a large number of pending applications on hand at times and water for beneficial use. Your application(s) has been assigned the file number(s) referenced above. additional information is required. The Division of Water Resources (Division) has received your application(s) for a permit to appropriate

prior to approval of the application(s) is unlawful. In accordance with the provisions of the Kansas Water Appropriation Act, the use of water as proposed Please note, this letter only acknowledges receipt of your application(s) and does not guarantee approval

programs/dwr. If you have any other questions, please contact our office at 785-564-6640 or your local Topeka Field Office at 785-296-5733. If you call, please reference the file number so we can help you more efficiently. Additional information about the process may be found on our website at agriculture.ks.gov/divisions-

Sincerely,

Kris Neuhauser
New Applications Lead
Water Appropriation Program