

Build Kansas Fund | Fiscal Year 2024 Application Package | Memo



To: Senator Ty Masterson, Chair, Build Kansas Advisory Committee
Murl Riedel, Kansas Legislative Research Department
Shauna Wake, Office of the Kansas State Treasurer

From: Matthew A. Volz, PE, Executive Director, Kansas Infrastructure Hub

RE: Build Kansas Fund Application #2024-049-SEKRPC

Date: May 20, 2024

Attached, please find an application made to the Build Kansas Fund by the City of Girard. The application packet includes the following items:

- Coversheet – provides a high-level overview of the application including a unique identification number, page 1 of 28 of the Build Kansas Fund Application Package.
- Build Kansas Fund Application – includes information submitted with the Build Kansas Fund Application, pages 2-7. Page 7 provides the table of funding sources.
- Attachments – executive summary and draft application, pages 8-28.

Project Overview

Under the WaterSMART Planning and Project Design Program, the U.S. Department of Interior will provide funding to water managers to help conserve and use water more efficiently, implement renewable energy projects, investigate, and develop water marketing strategies, and mitigate conflict risk in areas at a high risk of future water conflict. The Reuse of Lagoon System Effluent for Irrigation Project focuses on using lagoon effluent to irrigate the municipal golf course would allow the City to provide more potable water to outside entities such as Bone Creek and other water districts and utilities in the region. As droughts conditions continue to affect SE Kansas, increasing water supply and availability, and creating redundancies in the regional systems will mitigate risks associated with persistent drought.

This opportunity is a discretionary BIL program with a local match requirement of 25% of the total project cost. The entity is requesting \$91,626.00 from the Build Kansas Fund. This request has the potential to unlock \$274,878 in federal funds.

The federal deadline was May 21, 2024, and this Build Kansas Fund application was received on April 17, 2024.

Build Kansas Fund Steering Committee Recommendation

The Build Kansas Fund Steering Committee reviewed this application on May 15, 2024, following a successful completeness check. The Steering Committee **RECOMMENDS APPROVAL** of Build Kansas Funding to the Build Kansas Advisory Committee for final advice.

Build Kansas Fund | Fiscal Year 2024 Application Package | Coversheet



Build Kansas Fund Application Number	2024-049-SEKRPC
Project Name	City of Girard – Reuse of lagoon System effluent for irrigation
Entity Type	Local Government
Economic Development District (EDD) Planning Commission	SEKRPC – Southeast Kansas Regional Planning Commission
Infrastructure Sector(s)	Water
BIL Program	WaterSMART Planning and Project Design
BIL Program Type	Discretionary
BIL Application Deadline	5/21/2024
Build Kansas Fund Request	\$91,626.00
Technical Assistance Received	General Yes
	BIL Application No
	Build Kansas Fund Application Yes
	Other (Brief Description): Provide general and application support to applicant
Application Notes	Build Kansas Fund contribution of \$91,626 will unlock \$274,878 in federal BIL funding.

Steering Committee Funding Recommendation	5/15/2024 Recommend
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Advisory Committee Target Review	DATE Recommend or Decline
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Advisory Committee Funding Recommendation	DATE Approve or Decline
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Completeness Review Data

Date Build Kansas Application Received:	4/17/2024
Date Of Completeness Check:	4/18/2024, 5/8/2024
Date Forwarded to Steering Committee:	5/13/2024

Title **City of Girard** 04/17/2024
 by **Johanna O'Brien** in **Build Kansas Fund Fiscal Year 2024 Application** id. 46265917
 johanna.o@girardkansas.gov

Original Submission 04/17/2024

Score n/a
 Part 1: Applicant Information

The name of the entity applying for the Build Kansas Fund: City of Girard

Project Name: Reuse of lagoon system effluent for irrigation

Entity type: Local Government

Applicant Contact Name: Johanna O'Brien

Applicant Contact Position/Title: City Administrator

Applicant Contact Telephone Number: +16202382655

Applicant Contact Email Address: johanna.o@girardkansas.gov

Applicant Contact Address: 120 N Ozark

Applicant Contact Address Line 2 (optional):

Applicant Contact City: Girard

Applicant Contact State: Kansas

Applicant Contact Zip Code: 66743

Is the Project Contact the same as the Applicant Contact? Yes

Part 2: Build Kansas Fund - Eligibility Criteria

Certify that you are pursuing a viable Bipartisan Infrastructure Law (BIL) funding opportunity for which your entity is eligible: Yes

Certify that the Bipartisan Infrastructure Law (BIL) funding opportunity you are pursuing has a required non-federal match component: Yes

What is the primary county that the project will occur in? Crawford County

The Build Kansas Fund is intended to support Kansas-based infrastructure projects. Please provide a list of all the zip codes this project will be located in, along with an estimated percent [%] of the project located in that zip code. For example, if seeking funding for road infrastructure, provide a rough percent of the roads expected in each zip code:

[Zip Code Percentage.xlsx](#)

Part 3: Bipartisan Infrastructure Law (BIL) - Grant Application Information
Please Note: This information is related to the federal Bipartisan Infrastructure Law (BIL) funding opportunity to which you will apply. This is NOT information for the Build Kansas Match Fund.

Please enter the Bipartisan Infrastructure Law (BIL) funding opportunity title that the entity is applying for: WaterSMART Planning and Project Design Grants For FY 2023 and FY 2024

What is the funding agency for this Bipartisan Infrastructure Law (BIL) funding opportunity? U.S. Department of Interior

What is the Assistance Listing Number (ALN) for this Bipartisan Infrastructure Law (BIL) funding opportunity? 15.507

What is the application due date for this Bipartisan Infrastructure Law (BIL) funding opportunity? 5/21/2024

What is the federal fiscal year for this Bipartisan Infrastructure Law (BIL) funding opportunity? 2024

Enter the amount of funding being applied for, from the Bipartisan Infrastructure Law (BIL) funding opportunity: \$274,878.00

Enter the required non-federal match percentage: 25.0

Part 4: Build Kansas Fund - Match Application Information

Enter the non-federal match amount being requested from the Build Kansas Fund: \$91,626.00

Is the project able to move forward with a lesser match amount than requested? No

If you are awarded less match than the amount requested, at what amount would your project NOT be able to move forward? \$85,626.00

Expected breakdown of funding sources to support the project: Enter the funding source and projected amount from each source to support this project:

[Kansas+DOT+table.xlsx](#)

Part 5: Build Kansas Fund - Means Test

Confirm that there are no available funding sources currently planned to go unused by your entity that could be leveraged for this project: Yes

Confirm there are no available American Rescue Plan Act (ARPA) or Coronavirus State & Local Fiscal Recovery Fund monies that could be used for this match: Yes

Confirm that you have explored other readily available funding sources (federal or non-federal) to be used for this match: Yes

Briefly describe your efforts to find other available funding sources for this project: City ARPA funds were 100% expended on a critical sewer project to repair and replace lift stations. The City also request ARPA funds for the County in order to complete the sewer project and was appropriated \$509,000. The County has appropriated all ARPA funds. This will deplete sewer reserve funds.

Part 6: Additional Information

Please upload a copy of the Bipartisan Infrastructure Law (BIL) program application associated with this request OR a 2-page executive summary providing an overview of the project:

[WaterSMART_grant_application.docx](#)

Provide any additional information about this project (optional):

Part 7: Terms and Conditions

Understanding of Fund Release Requirements: checked

Understanding of Use of Funds: checked

Understanding of Reporting Requirements: checked

Authority to Make Grant Application: checked

Persons and Titles: Johanna O'Brien
The following persons are responsible for making this Build Kansas Fund application.

Position/Title: City Administrator

Additional:

Position/Title:

Additional:

Position/Title:

Additional:

Position/Title:

Internal Form

Score n/a

Pre-Award Information:

Post-Award Information:

Deviation Report:

Source	Amount	Zip Code	% of project in zip code
BIL Federal Funds (applied for)	\$ 274,878.00	66743	100
Build Kansas Funds (non-federal match)	\$ 91,626.00		
Additional Project Contribution (if applicable)			
TOTAL PROJECT COST	\$ 366,504.00		

WaterSMART Planning and Project Design for FY24

Reuse of lagoon system effluent as an alternative method of City Golf Course irrigation

March 26, 2024

PROJECT NARRATIVE

Evaluation Criterion A. Project Benefits

The City of Girard operates an electric utility, water utility and wastewater utility. In addition, the City operates a municipal golf course and other recreational facilities that keep our residents active, enhance quality of life, and draw customers from the region to contribute to our local economy. These municipal recreational facilities are subsidized by municipal utilities.

In 2022, Crawford Hills Golf Course (a municipal course) consumed 6,763,000 gallons of potable water for irrigation purposes. Total water consumption for the entire municipal water utility was 77,251,000 gallons. Golf Course irrigation accounted for 9% of total water usage. The Golf Course is one of 1,225 meters in the City.

For economic, environmental and conservation purposes, the City should utilize the discharge from the lagoons as the source to irrigate the grass at the Crawford Hills Municipal Golf Course. The City is currently using potable water to irrigate the golf course. This water will, of course, need to be treated first and subject to regulations. By using discharged water, the City could pursue a couple of options: (1) cut back or potentially eliminate the need to produce or purchase any water for the course, (2) sell excess potable water to other utilities/water districts that do not have redundancy and/or capacity.

Girard's water infrastructure consists of two supply points: Girard Water Treatment Plant located at 725 South 180th Rd, Pittsburg, Kansas, and Public Wholesale Water Supply District #11 (Bone Creek). Bone Creek is a 540-acre reservoir located just off U.S. 69 between Fort Scott and Pittsburg and is stocked with Largemouth Bass, Catfish, Bluegill, Saugeye and Crappie. Bone Creek lake is a body of water established in 1996 by flooding the Bone Creek Valley. It was intended from the start to be a water supply for residents of surrounding counties. Bone Creek Reservoir supplies water to over 17,000 residents in Crawford and Cherokee counties to Girard, Mulberry, Weir, West Mineral, Arcadia, Arma, Cherokee, Chicopee, Columbus, Cherokee County Water District #3, Crawford County Water District #6, Crawford County Water District #2, and Consolidated Water District #1.

According to National Integrated Drought Information System (NIDIS) data ([Historical Data and Conditions | Drought.gov](#)), in the past year, Crawford County has ranged from 96.59% of the County experiencing exceptional drought to 78.5% abnormally dry, 19.2% moderate drought and 0.1% severe drought. NIDIS provides the following explanations for designations: Extreme Drought entails major crop/pasture losses and widespread water shortages or restrictions; Severe Drought entails likely crop or pasture losses, water shortages common, and water restrictions imposed; Moderate Drought entails some damage to crops, pastures, streams, reservoirs, or

requested; and Abnormally Dry entails going into drought, short-term dryness slowing planting, growth of crops or pastures, coming out of drought, some lingering water deficits and pastures or crops not fully recovered.

According to an assessment by MidWest Engineering Group, LLC, Bone Creek is unable to supply the maximum contractual amounts to its 13 entities and struggles to meet demand when there is a higher usage of water, leaks in the system or abnormal operational issues. During these times, Bone Creek will operate on a 24-hour schedule, and call upon supplemental suppliers in the district (PWWS#19, Girard, Columbus, Arcadia, Arma, Weir) to assist in meeting demand. In the reference table below, it is clear that in order to independently meet max contract requirements, Bone Creek needs to produce 3.41 MGD when operating on a 16-hr day, and 2.33 MGD when operating a 24-hour day. The current WTP is only able to produce 1.3 MGD.

Customer	Minimum Contract							Maximum Contract						
	Monthly Usage (Gallons)	24 Hours/Day			16 Hours/Day			Monthly Usage (Gallons)	24 Hours/Day			16 Hours/Day		
		AADC gpm	MDC gpm	PHC gpm	AADC gpm	MDC gpm	PHC gpm		AADC gpm	MDC gpm	PHC gpm	AADC gpm	MDC gpm	PHC gpm
Arcadia	470,000	10.7	19.3	30.9	16.1	29.0	46.4	940,000	21.5	38.6	61.8	32.2	57.9	92.7
Arma	2,000,000	45.7	82.2	131.5	68.5	123.3	197.3	4,000,000	91.3	164.4	263.0	137.0	246.6	394.5
Cherokee	800,000	18.3	32.9	52.6	27.4	49.3	78.9	1,600,000	36.5	65.8	105.2	54.8	98.6	157.8
CK #3	600,000	13.7	24.7	39.5	20.5	37.0	59.2	1,200,000	27.4	49.3	78.9	41.1	74.0	118.4
Chicopee	700,000	16.0	28.8	46.0	24.0	43.2	69.0	1,400,000	32.0	57.5	92.1	47.9	86.3	138.1
Columbus	4,000,000	91.3	164.4	263.0	137.0	246.6	394.5	8,000,000	182.6	328.8	526.0	274.0	493.2	789.0
CR #6	2,100,000	47.9	86.3	138.1	71.9	129.5	207.1	4,200,000	95.9	172.6	276.2	143.8	258.9	414.2
CR #2	300,000	6.8	12.3	19.7	10.3	18.5	29.6	600,000	13.7	24.7	39.5	20.5	37.0	59.2
Cons. #1	1,000,000	22.8	41.1	65.8	34.2	61.6	98.6	2,000,000	45.7	82.2	131.5	68.5	123.3	197.3
Girard	4,000,000	91.3	164.4	263.0	137.0	246.6	394.5	8,000,000	182.6	328.8	526.0	274.0	493.2	789.0
Mulberry	900,000	20.5	37.0	59.2	30.8	55.5	88.8	1,800,000	41.1	74.0	118.4	61.6	111.0	177.5
Weir	800,000	18.3	32.9	52.6	27.4	49.3	78.9	1,600,000	36.5	65.8	105.2	54.8	98.6	157.8
W. Mineral	200,000	4.6	8.2	13.2	6.8	12.3	19.7	400,000	9.1	16.4	26.3	13.7	24.7	39.5
Total	17,870,000	408	734	1,175	612	1,102	1,763	35,740,000	816	1,469	2,350	1,224	2,203	3,525
Demand Multiplier		1.8	1.6		1.8	1.6				1.8	1.6		1.8	1.6
Contract Capacity MGD	0.59	1.06	1.69	0.88	1.59	2.54			1.18	2.12	3.38	1.76	3.17	5.08
Process Water 3%	0.02	0.03	0.05	0.03	0.05	0.08			0.04	0.06	0.10	0.05	0.10	0.15
Distribution Los 25%	0.15	0.15	0.15	0.15	0.15	0.15			0.15	0.15	0.15	0.15	0.15	0.15
Plant Capacity MGD	0.75	1.24	1.89	1.05	1.78	2.76			1.36	2.33	3.63	1.96	3.41	5.38
Plant Capacity GPM	522	940	1,504	732	1,318	2,109			942	1,696	2,714	1,363	2,453	3,925

During times of peak flows, Bone Creek has a difficult time supplying the southern entities with the required amount of water. When Girard’s BPS kicks on, the City pulls all the water that can be supplied and leads to low pressure issues in the system. Although population has been in decline for both counties served by Bone Creek, the demand for water has increased, resulting in a 0.5% growth per year.

Due to age and mechanical failure, in 2021 both high service pumps expired at the Girard WTP, leaving no way to pump water to town. This unfortunate circumstance left water service in Girard crippled and unable to produce adequate quantities of water to meet the needs of the community. Since the occurrence in 2021, the Girard Water Treatment Plant saw both wells suffer mechanical failure simultaneously, leaving the plant unable to produce water for a second time in two years.

Each time the Girard Water Treatment Plant was shut down, and with a conservation order, it was observed that Public Wholesale #11 had difficulty meeting Girard's water needs, was forced to run 24 hours and had to cease distribution to other entities. This observation demonstrated two key facts to be considered for the future.

Fact # 1: Girard needed to move forward to secure a new Water Treatment Plant, and Fact #2: Public Wholesale #11's demonstrated inability to meet demand for Girard and other surrounding communities could threaten meeting future water needs. After these issues came to light, the City and Bone Creek both contracted the services of MidWest Engineering Group, LLC, to perform preliminary engineering reports. Subsequently, the City was approved for a USDA funding package to replace aging water lines and construct a 1 MGD water treatment plant. This project will involve the City issuing approximately \$13,000,000 in debt. This indicates that the City has taken a proactive approach to provide a stabilized, higher quality water source.

With the news of a 1 MGD WTP project in Girard, the board members of Bone Creek asked for assistance in meeting the demands of the overburdened plant located at Bone Creek Lake. With assistance from MidWest, Bone Creek was presented with a proposed project to increase the size of Girard's treatment plant to a 2 MGD regional water treatment plant (RWTP). The proposed RWTP would have served as a secondary supply to Bone Creek, which has proven to be under-designed and has had difficulty meeting contractual obligations to supply water.

In 2022, the City of Girard approved a Letter of Conditions with USDA to construct a 1 MGD water treatment plant. During this time, MidWest presented the board of Bone Creek multiple alternatives to correct these issues and even sought funding through USDA to partner with the City to increase the size of the water treatment plant to 2 MGD. USDA approved a funding package for this project. However, the Bone Creek board declined this alternative. At this time, there is not a clear plan for Bone Creek to correct the aforementioned issues.

The expansion of the new 1 MGD Water Treatment Plant to a 2 MGD WTP would have provided Public Wholesale #11 with a secondary supply to help resolve supply issues to Girard, Mulberry, Weir, West Mineral, Arcadia, Arma, Cherokee, Chicopee, Columbus, Cherokee County Water District #3, Crawford County Water District #6, Crawford County Water District #2, and Consolidated Water District #1. Through a regionalized approach the City of Girard and Public Wholesale 11 could have achieved redundancies that would have mitigated risk to water availability and supply. Since this proposal did not pass, the City is willing to sell water to Bone creek and other entities looking to achieve redundancies and a stable water supply.

Preliminary, discussions have been had with a couple of water districts – including Bone Creek - to purchase water from Girard once the 1 MGD plant is constructed. Girard is open to these discussions. If Bone Creek could purchase water as needed from Girard this would reduce potential conflicts over water. For example, if a water district/utility was down and in need of pulling maximum contractual amounts from Bone Creek, Girard could be a secondary/redundant source.

Using lagoon effluent to irrigate the municipal golf course would allow the City to provide more water to outside entities such as Bone Creek and other water districts and utilities in the region. As drought continues to affect the area of southeast Kansas, increasing water supply and availability, and creating redundancies in the regional systems will mitigate risks associated with persistent drought. Additionally, creating redundancies for Bone Creek could give the water district more discretion in water supply utilization when Bone Creek levels are negatively impacted by drought and decreasing water levels which could impact fish populations.

According to the Kansas Department of Wildlife and Parks (KDWP), in order “to bolster the current population and recruitment of Largemouth Bass at Bone Creek, KDWP fisheries biologist has increased stocking efforts of Largemouth Bass. In 2019, 218, 377 (fry) were stocked when a hatchery surplus was available. In 2021, 13,500 phase II advanced fingerling Largemouth Bass were stocked. In April 2022, 260,000 (fry) were stocked when a hatchery surplus was available. In June 2022, 25,000 advanced fingerling Largemouth Bass were stocked. In June 2023, 25,000 advanced fingerling Largemouth Bass were stocked. In total, 542,774 largemouth bass have been stocked since 2018.

“The KDWP fisheries biologist plans to request 25,000 phase II advanced fingerling Largemouth Bass for the next three years to help bolster year classes and recruitment of Largemouth Bass. In addition to, it was proposed and passed to move from a 13-18" slot length limit to an 18" minimum length limit to protect the stocked fingerlings and naturally spawned Largemouth Bass to preferred lengths for bass anglers. This went into effect on January 1, 2022.”

By utilizing effluent from the lagoons, the City would not have to use groundwater sources to irrigate. Secondly, a dedicated line from the lagoons for irrigation would eliminate the chance for cross connection contamination. Thirdly, it would also result in the extra provision of storage by eliminating the draw from the mains to irrigate, especially during the late hours. The re-use of water that would otherwise be outsourced to another receiving stream to be used by another entity downstream, is protecting the most valuable natural resource we have, water. Providing water to grasses and trees that provide habitat for many creatures has a significant and positive impact on nature.

The golf course is a recreational facility that is reliant upon its natural characteristics to appeal to customers. It is also a section of a larger plot of land donated to the City. Just to the east of the golf course is a wooded area with a stream running through it and farther east of that is the Crawford County fairgrounds – which is also owned by the City. The Natural Resources Conservation Services of USDA designate the following areas as critical habitat for Gray Myotis: All suitable woodlands and water bodies within that portion of Crawford County encircled by a line beginning at the Kansas/Missouri border in (NE/4 Sec. 24-T29S-R25E), then extending due west to the NW corner (Sec. 19-T29S-R24E), then due south to the SW corner

(Sec. 18-T31S-R24E), then due east to the Kansas-Missouri border at (SE/4 Sec. 13-T31S-R25E), then due north along the Kansas-Missouri border to the point of origin.

In 2022, the Golf Course spent approximately \$75,000 on potable water for irrigation. The Golf Course relies on a transfer from the electric department of approximately \$110,000. This transfer could be reduced by an estimated \$65,000 to \$75,000 a year by utilizing lagoon effluent. The City has been actively seeking funding opportunities to construct a 2 MW solar farm. If these funds could stay in the Electric Department, they could be utilized for environmentally responsible infrastructure upgrades.

The City is a disadvantaged community per the Justice 40 Initiative due to expected population loss rates, proximity to risk management plan facilities, and low-income rates. Additionally, the City was very close to the 90th percentile threshold for energy costs rates at the 85th percentile and close to the 10% percentile threshold for people 25 years or older with less than a high school diploma at the 7th percentile. For expected building loss rate the City was at the 80th percentile and the threshold was the 90th percentile.

Evaluation Criterion B2: Project Design

In 2021, the MidWest Engineering completed a preliminary engineering report for sanitary sewer system improvements for the City of Girard. Six priorities were identified:

Priority – sanitary sewer operations (\$1.5M, In Progress)

Priority – Lagoon updates (\$300,000, In Progress)

Priority – Sewer lining (\$2.9M)

Priority – Lagoon sludge removal (\$3.9M estimated)

Priority – Sewer lining phase 2 (\$2.9 estimated)

Priority – Reuse of lagoon effluent for golf course irrigation (\$4.8M estimated)

The City has a Water Conservation Plan that is codified in City ordinances. In this plan, potable water for the golf course is considered a Class 1 water use. Upon the declaration of a water watch or water warning, Class 1 water uses are the first to be restricted to enact water conservation measures. The Golf Course is an attraction for non-local commerce in the rural community. Furthermore, the Golf Course landscaping/terrain is managed through a very specific fertilizing, irrigating and mowing regimen. Abutting the Golf Course to the West is a wooded area that the City leaves in its natural state. Abutting this natural area to the West is the Crawford County Fairgrounds. The Water Conservation Plan was officially approved and adopted by the Girard City Council and was discussed at public meetings.

Sub-criterion B2: Task B – Project Design

The City has already held meetings with the Golf Committee. The Golf Committee is comprised of members from the public at-large. The Golf Committee has submitted a letter of support for this application. The City has also discussed these efforts with Bone Creek board members and members of the City Council at publicly held meetings. Though there has been no outright

opposition, there have been expressed concerns about potential odor. The City of Girard Governing Body has also submitted a Letter of Support (included in the Appendix).

The Golf Committee, Bone Creek and the Governing Body will be an integral part of this project. If this project moves toward construction phase, the City will have increased capacity to be utilized as a source of redundancy for a Bone Creek member utility. The Golf Committee meets regularly at public meetings and discusses any items of interest pertaining to the Golf Course conditions and finances. The Governing Body meets regularly at public meetings and discusses any items of interest pertaining to City utilities, finances and amenities. These three resources will be utilized during all stages of this project.

Evaluation Criterion C – Ability to Meet Program Requirements

The City will develop design criteria and standards in partnership with a consultant with Rain Bird Irrigation Systems. Additionally, the engineering firm that completed the PER has already been in contact with the Kansas Department of Health and Environment concerning this project. The City will rely on an engineering firm and the experts at Rain Bird to ensure compliance with KDHE standards. The City will make decisions based on the following: Economic benefit, financial capability, water conservation, environmental impact, and stakeholder input. All decisions will be made by majority vote of the City Council which is a five-member elected body. Feedback from the community and the Golf Committee will be considered.

Since the PER is complete, some of the items in this section have already been completed such as site selection and evaluation, researching environmental compliance, easements, etc. The City already owns the municipal golf course. Items such as surveying are included in the preliminary cost estimate. As far as financial planning, the Kansas Infrastructure Hub is currently offering to provide the match requirement. City staff have evaluated the costs of irrigating the Golf Course with potable water and the number of gallons utilized. City staff and engineers have also spoken with neighboring water utilities/districts to discuss redundancy needs.

The City has completed several infrastructure projects that were funded through state or federal agencies/departments. In order to be proactive, the City hires engineering firms to complete PERs for future projects to be prepared when funding becomes available. If awarded, the City will begin the process of securing an engineering firm to design the project.

Items to be Completed	Deadline Completion Date	Responsible Person(s)
Award Announcement	October 1, 2024	Bureau of Reclamation
Consultant Design Contract Executed	January 1, 2025	City Admin, PW Director, Mayor
Pre-Design Field Check	March 1, 2025	Engineer Firm, City Admin, PW Dir
Stakeholder/Engineer Initial Meeting	April 1, 2025	City officials/employees, stakeholders
Land Acquisition	Complete	N/A
Environmental Assessment	May 1, 2025	Engineer Firm

Archeological Study	May 1, 2025	Engineer Firm
Easements/ROW	June 1, 2025	City Admin, City Attorney
KDHE permitting/Regulatory Review	September 1, 2025	Engineer Firm
Preliminary Design Complete	January 1, 2026	Engineer Firm

This project will include re-use transmission line and re-use irrigation system. Transmission will incorporate a booster pump station, chlorination and de-chlorination treatment process and telemetry. The PER includes a detailed estimate of costs.

Golf Course Re-Use Transmission Line Girard, KS Estimate of Probable Cost					
No.	Item	Est. QTY	Unit	Unit Price	Cost
1	Mobilization	1	LS	\$ 205,000	\$ 205,000
2	8" PVC Pipe, DR 21 (Purple)	15300	LF	\$ 40	\$ 612,000
3	Tracer Wire w/ Anodes	15750	LF	\$ 0.55	\$ 8,663
4	6" Gate Valve & Box	3	EA	\$ 3,000	\$ 9,000
5	2-Way Hydrant	2	EA	\$ 5,500	\$ 11,000
6	800gpm @ 165psi Booster Pump Station	1	LS	\$ 750,000	\$ 750,000
7	Chlorination Treatment Process	1	LS	\$ 350,000	\$ 350,000
8	De-Chlorination Treatment Process	1	LS	\$ 150,000	\$ 150,000
9	Telemetry	2	LS	\$ 20,000	\$ 40,000
10	6" Driveway Uncased Crossing (Open Cut)	16	EA	\$ 1,000	\$ 16,000
11	6" Driveway Uncased Crossing (Bore)	5	EA	\$ 2,500	\$ 12,500
12	6" County Road Cased Crossing (Bore)	6	EA	\$ 10,000	\$ 60,000
13	6" State Federal Hwy Cased Crossing (Bore)	1	EA	\$ 35,000	\$ 35,000
14	6" Railroad Cased Crossing (Bore)	1	EA	\$ 75,000	\$ 75,000
Subtotal					\$ 2,334,163
Contingency				10%	\$ 233,416
Total Construction Cost					\$ 2,567,579

Additional Project Costs				Cost \$
1	Legal Services/Bond Counsel	LS	3%	\$ 77,027
2	Easement Costs	LS		\$ 10,000
3	Title Certificates for Easements	EA	\$350 each (x Total)	\$ 8,050
4	Acquisition of Easements	Hrly	\$500 Each (x Total)	\$ 11,500
5	Environmental Assessment	Hrly		\$ 10,000
6	Archeological Study	LS		\$ 10,000
7	Property Damage Payments	LS		\$ 15,000
8	Bonding and Interest (Interim)	LS	6%	\$ 154,055
Subtotal				\$ 295,632

Basic Engineering Services				Cost \$
1	Design Phase	LS	10%	\$ 256,758
2	Construction Administration	LS	2.50%	\$ 64,189
3	Construction Observation (1 persons, 8 hrs per day at \$95/HR)	Hrly	6 months @ 40 hrs/wk	\$ 98,800
4	Reimbursable Expenses	RMB		\$ 25,400
Subtotal				\$ 445,147

Additional Engineering Services				Cost \$
1	Hourly Services	Hrly	1%	\$ 25,676
2	Legal Survey	Hrly		\$ 20,000
3	Construction Staking	Hrly		\$ 10,000
4	SWPPP	LS		\$ 3,500
7	Environmental Mitigation	LS		\$ 5,000
8	Meetings	LS		\$ 10,000
9	KDHE Permitting	Hrly		\$ 15,000
10	Reimbursable Expenses	RMB		\$ 1,500
Subtotal				\$ 90,676

Total Professional Fees	\$ 831,455
Total Project Costs	\$ 3,399,034

Golf Course Re-Use Water Irrigation System Girard, KS Estimate of Probable Cost					
No.	Item	Est. QTY	Unit	Unit Price	Cost
1	Mobilization	1	LS	\$ 30,000	\$ 30,000
2	6" PVC Pipe, DR21 (Purple)	5300	LF	\$ 25	\$ 132,500
3	Tracer Wire w/ Anodes	5300	LF	\$ 0.55	\$ 2,915
4	6" Gate Valve & Box	6	EA	\$ 3,000	\$ 18,000
5	3" Gate Valve & Box	14	EA	\$ 1,750	\$ 24,500
6	2" Gate Valve & Box	10	EA	\$ 1,500	\$ 15,000
7	Fairway Sprinkler System	9500	LF	\$ 45	\$ 427,500
8	Miscellaneous Signage	1	LS	\$ 10,000	\$ 10,000
9	Surface Restoration (Covered Under Potable Water)	1	LS	\$ -	\$ -
Subtotal					\$ 660,415
Contingency				10%	\$ 66,042
Total Construction Cost					\$ 726,457

Additional Project Costs				Cost \$
1	Legal Services Bond Counsel	LS	3%	\$ 21,794
2	Easement Costs	LS		\$ -
3	Title Certificates for Easements	EA		\$ -
4	Acquisition of Easements	Hrly		\$ -
5	Environmental Assessment	Hrly		\$ 10,000
6	Archeological Study	LS		\$ -
7	Property Damage Payments	LS		\$ -
8	Bonding and Interest (Interim)	LS	6%	\$ 43,587
Subtotal				\$ 75,381

Basic Engineering Services				Cost \$
1	Design Phase	LS	10%	\$ 72,646
2	Construction Administration	LS	2.50%	\$ 18,161
3	Construction Observation (1 persons, 8 hrs per day at \$95/HR)	Hrly	3 months @ 40 hrs/wk	\$ 45,600
4	Reimbursable Expenses	RMB		\$ 11,700
Subtotal				\$ 148,107

Additional Engineering Services				Cost \$
1	Hourly Services	Hrly	1%	\$ 7,265
2	Legal Survey	Hrly		\$ -
3	Construction Staking	Hrly		\$ -
4	SWPPP	LS		\$ -
7	Environmental Mitigation	LS		\$ -
8	Meetings	LS		\$ -
9	BABAA Certification Tracking	Hrly		\$ -
10	Reimbursable Expenses	RMB		\$ 1,500
Subtotal				\$ 8,765

Total Professional Fees	\$ 232,253
Total Project Costs	\$ 958,709

The City has evaluated current potable water costs and usage at the Golf Course and water usage and redundancies for Bone Creek members. The City currently has a signed Letter of Conditions with USDA to build a new water treatment facility and replace all non-PVC lines. While preparing for the USDA project, the City and Bone Creek member utilities extensively discussed water shortages and the importance of redundancies. The City submitted a formal letter to the Bone Creek board indicating that provisions of such redundancy could be contractually made once the project is completed. Utilizing recycled water for irrigation purposes would increase the amount of potable water available to contractually obligate as a redundancy to other utilities to be used in the case of drought or other emergencies.

The City employs Mid-West Engineering firm as the consultant for the USDA project. Mid-West also completed the sanitary sewer PER and was the consultant for the nearly complete lift stations project. The Public Works Director has a Class I Wastewater certification through

KDHE and he is testing for a Class III Water certification. The City just hired an individual with a Class II Wastewater certification. The City Administrator and City Clerk have worked with numerous grants including CDBG and various Kansas Department of Transportation grants. The City consults with a Golf Course Superintendent from the City of Osawatomie to assist with grounds management and fertilizer application and to offer training to permanent staff.

Evaluation Criteria D – Presidential and Department of the Interior Priorities

In addition to conserving scarce water resources by replacing the usage of potable water for irrigation with recycled water, positive environmental effects include the potential reduction of reliance/usage on commercial fertilizer due to the nutrient content of wastewater effluent and utilization of effluent for irrigation rather than discharging into more sensitive areas or water supplies. Utilizing effluent at the golf course will increase the potable water capacity in the region.

The Oswego Golf Course is also a 9-hole course located in Southeast Kansas. Oswego Golf Course has been utilizing reclaimed water for irrigation since 1999. Oswego, Kansas Water Reuse Case Study: Oswego, Kansas (EPA.gov, 2023), states that, “The City of Oswego, Kansas reclaims treated municipal wastewater from a lagoon treatment system, a low-input treatment technology to irrigate a local golf course during the warm months of the year. This helps to reduce potable water demands and save costs for both the city and the Oswego Golf Association. Water reuse also ensures a reliable water supply to keep the golf course green and operational during periods of drought.”

The Oswego project has lowered the amount of costly potable water needed for golf course irrigation. Additionally, Southeast Kansas has experienced more severe and prolonged droughts. “For example, during the summer of 2022, the [Oswego] holding pond was 2 feet (0.6 meters) shallower than average, due to lower rainfall in the area. The reclaimed water provided a reliable water supply for the Oswego Golf Course irrigation needs. Oswego has a population that is 50% smaller than Girard and their holding pond stores about three weeks’ worth of water for the irrigation needs. Therefore, irrigation could continue regularly for almost a month, even if the City of Oswego stopped pumping water to the holding pond due to low water levels in the lagoon treatment system caused by prolonged drought,” (EPA.gov, 2023).

According to the Kansas Geological Survey THE SOUTHEAST KANSAS OZARK AQUIFER WATER SUPPLY PROGRAM PHASE 2 PROJECT RESULTS (MacFarlane, 2007), “Concerns have been raised in the Tri-state region that the available supply from the Ozark Plateaus aquifer system may become inadequate, rendered unusable, or require additional water treatment in the near future because of: 1. Recent and projected population growth that will create increased demand for water by public supplies and some industries; 2. Potential upward vertical or eastward migration of saline water into public supply wells due to pumping, if pumping rates or wellfield size are increased to keep up with demand; and 3. Possible contamination of ground-water supplies by downward moving leachate derived from mine tailings piles and the mine water contained in the abandoned open shafts.”

In 2014, a study initiated by the U.S. Geological Survey indicated that, “the implications and potential effects of increased pumping and long-term climate change on the Ozark Plateaus hydrologic system and groundwater availability are a concern for communities and resource managers in the area. Pumping varies from year to year, but is generally expected to moderately increase with population, industrial, and agricultural needs. Most climate models predict warmer minimum and maximum air temperatures by midcentury in the Ozark Plateaus area, especially from midspring through early fall. Three scenarios were developed to simulate possible future conditions from 2016 to 2060 and assess the potential effects on the hydrologic system and availability of water resources. For each scenario, changes in water levels and hydrologic budget components were evaluated from predevelopment (1900) to present (2016) and 45 years into the future (2060). The baseline scenario represents an extension of the average (1996 to 2016) seasonal pumping and recharge values. The pumping scenario is an extension of the average (1996 to 2016) seasonal recharge values with increases in pumping following the historical trend for the period 2016–2060 of up to 120 percent of the 1996 to 2016 average seasonal pumping values. The general circulation model (GCM) scenario is an extension of the average (1996 to 2016) seasonal pumping values and variable recharge based on seasonal averages of soil water storage from a water-balance model using temperature and precipitation from multiple GCMs. The general patterns of water-level decline are similar for each scenario.”

This project will increase resilience to climate change – specifically drought and alternatives to potable water usage to prioritize human consumption.

Sub-criterion No. D2. Disadvantaged or Underserved Communities

The City is a disadvantaged community per the Justice 40 Initiative due to expected population loss rates, proximity to risk management plan facilities, and low-income rates. Additionally, the City was very close to the 90th percentile for energy costs rates at the 85th percentile and close to the 10% percentile threshold for people 25 years or older with less than a high school diploma at the 7th percentile. For expected building loss rate the City was at the 80th percentile and the threshold was the 90th percentile.

This project will benefit disadvantaged or underserved communities identified using the tool by increasing the reliability of water supplies. Additionally, the Golf Course is subsidized on a yearly basis by the Electric Department. By reducing costs to irrigate the Golf Course, that subsidy could potentially be reduced. These savings could benefit the disadvantaged or underserved communities in a couple of different ways. The savings could be used to expand renewable energy generation, could reduce the need to increase rates, or could be transferred to another purpose such as public safety or parks and recreation.

Sub-criterion No. D3. Tribal Benefits

This project does not directly serve and/or benefit a Tribe.

Evaluation Criterion E – Nexus to Reclamation

This project is located in the Missouri Basin and Arkansas-Rio Grande-Texas Gulf Regions. This project would reduce the amount of water taken from the Ozark Aquifer Roubidoux Formation and treated for the purpose of Golf Course irrigation.

CITATIONS:

U.S. Environmental Protection Agency. 2023. Water Reuse Case Study: Oswego, Kansas

Harivandi, A. 2007. Environmental Institute for Golf. Using Recycled Water On Golf Courses

MacFarlane, P. 2007. Kansas Geological Survey. THE SOUTHEAST KANSAS OZARK
AQUIFER WATER SUPPLY PROGRAM PHASE 2 PROJECT RESULTS

Clark, B.R.; Duncan, Leslie; Knierim, Katherine. 2014. U.S. Geological Survey. Groundwater
Availability in the Ozark Plateaus Aquifer System

APPENDIX:

February 22, 2024

Ms. Nichole McCann
Water Resources and Planning Office
Bureau of Reclamation, Denver CO

RE: City of Girard WaterSmart Project Design Grant Application

Dear Ms. Nickie Mcann,

As members of the Crawford Hills Golf Course Committee please accept this letter in support of the City of Girard's application for a project design grant award. In 2022, the Golf Course utilized nearly 7,000,000 gallons of potable water which is close to 9% of the total consumption of water produced or purchased wholesale by the City of Girard Water Utility. This volume of water cost the course approximately \$75,000 which is around 27% of the Course's entire annual budget. It is our understanding that the City would like to be able to sell water to neighboring entities in need of more water and/or redundant supply.

Using effluent for irrigation will increase the volume of potable water available for other uses by the City of Girard Water Utility and will save the Golf Course a significant portion of their budget for other purposes. The golf course is an amenity for Girard's resident's and is an attraction to pull in customers from the region to contribute to the local economy. Additionally, the Course is a portion of a larger parcel of land owned by the City that includes the Golf Course, Disc Golf Course, Fairgrounds and – in the center – undeveloped land. If the City's application for funding is awarded, design engineering for this project will be completed and the City will apply for funding for construction in the future.

Respectfully,

Not in attendance*

Bill Huston
Committee Chair



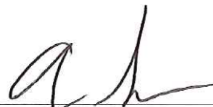
Debbie Smith
Committee Member



Bob Mitchell
Committee Member

Not in attendance

Crystal Arnold
Committee Member



Andy Smith
Committee Member



Chris Leritz
Committee Member

*** signed letter of support from Governing Body**



Ms. Nichole McCann
Water Resources and Planning Office
Bureau of Reclamation, Denver CO

RE: WaterSmart Project Design Grant Application

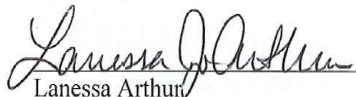
Dear Ms. Nickie Mcann,

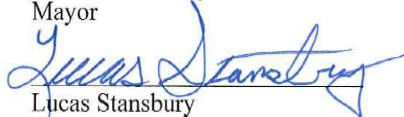
Please accept this letter from the duly elected Governing Body in support of the City of Girard’s application for a project design grant award. In 2020, the City Council approved an appropriation to MidWest Engineering to complete a preliminary engineering report for the sanitary sewer system. Six priorities emerged from this process. One of the priorities was to utilize sewer effluent to irrigate the golf course. This would benefit the City in a number of ways.

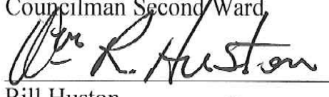
Using effluent for irrigation will increase the volume of potable water available for other uses by the City of Girard or other entities, it will give the City more discretion in utilizing ‘excess’ water during times of drought, it will greatly reduce the subsidizing transfer from the Electric Department to the Golf Course, and will increase the amount of funds form the Electric Department that can be utilized for other purposes – such as community solar. If the City’s application for funding is awarded, design engineering for this project will be completed and the City will apply for funding for construction in the future.

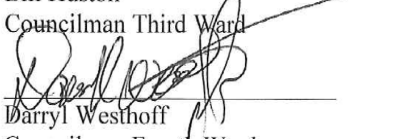
Respectfully,


Mickey Pyle
Mayor


Lanessa Arthur
Councilwoman First Ward


Lucas Stansbury
Councilman Second Ward


Bill Huston
Councilman Third Ward


Darryl Westhoff
Councilman Fourth Ward

address: 120 N. Ozark • Girard, KS • 66743
phone: 620.724.8918
fax: 620.724.8060
web: girardkansas.gov

BUDGET NARRATIVE

Personnel:

The City will not be requesting direct costs for personnel as in-kind match. The City Administrator will be responsible for ensuring compliance and securing contractual design engineering services, the City Clerk will handle payables and record-keeping, and the Public Works Director will supervise and provide insights to engineer(s) performing design engineering. Since this grant is for project design, the City Administrator will be responsible for securing design engineering services with approval from the Governing Body.

Since this is a project design grant it is estimated that the number of hours City personnel will contribute to the project will be negligible compared to the contractual costs of design engineering. Due to this, the City will not claim any personnel in-kind match. However, the data requested is included in this narrative sans hourly project contribution per employee.

Position/title	Name	Hourly Rate	Annual Salary
City Administrator	Johanna O'Brien	\$46.87	\$87,740.64
City Clerk	Karen Buck	\$32.18	\$60,240.96
Public Works Director	Jackie Messer	\$28.32	\$53,015.04

Fringe Benefits:

The City provides fringe benefits. Fringe benefits costs are estimated at FICA (7.65%), unemployment insurance (1%), workers compensation (1%), KPERS retirement (9.78%), and medical dental at an average of (35.02%) for the three employees involved in the project. Specific percentages are included in the chart below.

Position/title	Name	Hourly Rate	Annual Salary	Fringe Benefits
City Administrator	Johanna O'Brien	\$46.87	\$87,740.64	34.48%
City Clerk	Karen Buck	\$32.18	\$60,240.96	35.93%
Public Works Director	Jackie Messer	\$28.32	\$53,015.04	37.65%

The City participates in the Kansas Public Employees Retirement System (KPERS) which provides disability and death benefits to protect employees while they are still working and guarantees them a lifetime benefit when they retire. The City also offers medical and dental insurance and pays 80% of each individual employee's costs if they elect to participate. Employees can choose between comprehensive coverage or catastrophic coverage with a Health Savings Account. Fringe Benefits percentages are set at the same percentage for every non-essential employee (excluding Police and Fire) except for medical/dental coverage. The Medical/dental fringe benefits as a percentage of annual salary for the listed personnel are:

Position/title	Name	Medical/Dental Annual	% of Annual Salary
City Administrator	Johanna O'Brien	\$11,975.52	13.65%
City Clerk	Karen Buck	\$9,093.96	15.10%
Public Works Director	Jackie Messer	\$8,917.80	16.82%

Travel:

Employees will not be expected to travel outside of the City limits for this project.

Equipment:

The City is not projected to procure any equipment associated with this project.

Supplies:

The City is not projected to procure any supplies associated with this project.

Contractual:

The entirety of the project costs for design of the reuse of lagoon system effluent for golf course irrigation will be comprised of engineering costs. The engineering costs will be procured and outlined through a contractual agreement utilizing a qualifications-based selection process as outlined in the Code of Federal Regulations. The City has utilized QBS procedures outlined by Kansas Department of Transportation processes.

CITY OF GIRARD			
Reuse of lagoon system effluent for irrigation			
	Estimated Project Design Cost		
	Engineer Design	Reimbursable Engineer Expenses	Total/activity
PROJECT ACTIVITY			
Re-use Irrigation System	\$72,646.00	\$11,700.00	\$84,346.00
Re-use Transmission Line	\$256,758.00	\$25,400.00	\$282,158.00
		PROJECT TOTAL	\$366,504.00

The City procured the services of Midwest Engineering to complete a preliminary engineering report relating to the City's sanitary sewer system. One of the priorities was to be able to recycle lagoon effluent and decrease reliance on potable water. Projected costs (design and construction) are estimated as follows. Design engineering costs as related to this application for funding are highlighted. Page 3 includes cost estimates for the re-use transmission line. Page 4 is an estimate of costs for the re-use irrigation system. Page 5 is a map of the proposed improvements.

Golf Course Re-Use Transmission Line Girard, KS Estimate of Probable Cost						
No.	Item	Est. QTY	Unit	Unit Price	Cost	
1	Mobilization	1	LS	\$ 205,000	\$ 205,000	
2	8" PVC Pipe, DR 21 (Purple)	15300	LF	\$ 40	\$ 612,000	
3	Tracer Wire w/ Anodes	15750	LF	\$ 0.55	\$ 8,663	
4	6" Gate Valve & Box	3	EA	\$ 3,000	\$ 9,000	
5	J-Way Hydrant	2	EA	\$ 5,500	\$ 11,000	
6	800gpm @ 165psi Booster Pump Station	1	LS	\$ 750,000	\$ 750,000	
7	Chlorination Treatment Process	1	LS	\$ 350,000	\$ 350,000	
8	De-Chlorination Treatment Process	1	LS	\$ 150,000	\$ 150,000	
9	Telemetry	2	LS	\$ 20,000	\$ 40,000	
10	6" Driveway Uncased Crossing (Open Cut)	16	EA	\$ 1,000	\$ 16,000	
11	6" Driveway Uncased Crossing (Bore)	5	EA	\$ 2,500	\$ 12,500	
12	6" County Road Cased Crossing (Bore)	6	EA	\$ 10,000	\$ 60,000	
13	6" State/Federal Hwy Cased Crossing (Bore)	1	EA	\$ 35,000	\$ 35,000	
14	6" Railroad Cased Crossing (Bore)	1	EA	\$ 75,000	\$ 75,000	
					Subtotal	\$ 2,334,163
					Contingency 10%	\$ 233,416
					Total Construction Cost	\$ 2,567,579

Additional Project Costs				Cost \$
1	Legal Services/Bond Counsel	LS	3%	\$ 77,027
2	Easement Costs	LS		\$ 10,000
3	Title Certificates for Easements	EA	\$350 each (x Total)	\$ 8,050
4	Acquisition of Easements	Hrly	\$500 Each (x Total)	\$ 11,500
5	Environmental Assessment	Hrly		\$ 10,000
6	Archeological Study	LS		\$ 10,000
7	Property Damage Payments	LS		\$ 15,000
8	Bonding and Interest (Interim)	LS	6%	\$ 154,055
				Subtotal \$ 295,632

Basic Engineering Services				Cost \$
1	Design Phase	LS	10%	\$ 256,758
2	Construction Administration	LS	2.50%	\$ 64,189
3	Construction Observation (1 persons, 8 hrs per day at \$95/HR)	Hrly	6 months @ 40 hrs/wk	\$ 98,800
4	Reimbursable Expenses	RMB		\$ 25,400
				Subtotal \$ 445,147

Additional Engineering Services				Cost \$
1	Hourly Services	Hrly	1%	\$ 25,676
2	Legal Survey	Hrly		\$ 20,000
3	Construction Staking	Hrly		\$ 10,000
4	SWPPP	LS		\$ 3,500
7	Environmental Mitigation	LS		\$ 5,000
8	Meetings	LS		\$ 10,000
9	KDHE Permitting	Hrly		\$ 15,000
10	Reimbursable Expenses	RMB		\$ 1,500
				Subtotal \$ 90,676

Total Professional Fees	\$ 831,455
Total Project Costs	\$ 3,399,034

Excluded Engineering Services				Cost \$
1	Geotechnical	LS		\$ -
2	Engineering Report	LS		\$ -
3	Environmental Review	LS		\$ -
4	Grant Administration	LS		\$ -
4	Waste Stream Summary	LS		\$ -
4	Anti-Degradation Report	LS		\$ -
5	Reimbursable Expenses	Hrly		\$ -
				Subtotal \$ -



Golf Course Re-Use Water Irrigation System Girard, KS Estimate of Probable Cost					
No.	Item	Est. QTY	Unit	Unit Price	Cost
1	Mobilization	1	LS	\$ 30,000	\$ 30,000
2	6" PVC Pipe, DR21 (Purple)	5300	LF	\$ 25	\$ 132,500
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8	Miscellaneous Signage	1	LS	\$ 10,000	\$ 10,000
9	Surface Restoration (Covered Under Potable Water)	1	LS	\$ -	\$ -
Subtotal					\$ 660,415
Contingency 10%					\$ 66,042
Total Construction Cost					\$ 726,457

Additional Project Costs				Cost \$
1	Legal Services/Bond Counsel	LS	3%	\$ 21,794
2	Easement Costs	LS		\$ -
3	Title Certificates for Easements	EA		\$ -
4	Acquisition of Easements	Hrly		\$ -
5	Environmental Assessment	Hrly		\$ 10,000
6	Archeological Study	LS		\$ -
7	Property Damage Payments	LS		\$ -
8	Bonding and Interest (Interim)	LS	6%	\$ 43,587
Subtotal				\$ 75,381

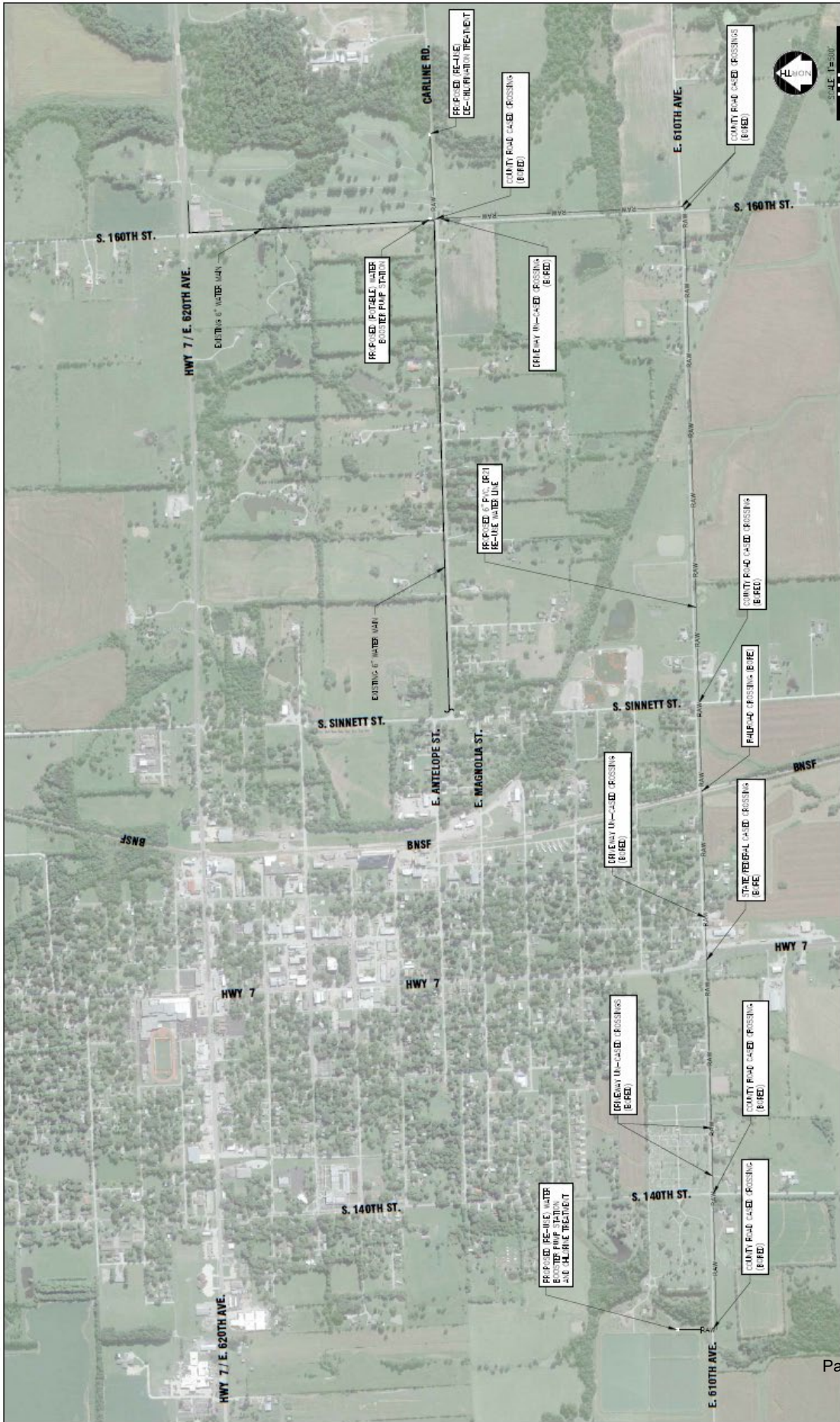
Basic Engineering Services				Cost \$
1	Design Phase	LS	10%	\$ 72,646
2	Construction Administration	LS	2.50%	\$ 18,161
3	Construction Observation (1 persons, 8 hrs per day at \$95/HR)	Hrly	3 months @ 40 hrs/wk	\$ 45,600
4	Reimbursable Expenses	RMB		\$ 11,700
Subtotal				\$ 148,107


Additional Engineering Services				Cost \$
1	Hourly Services	Hrly	1%	\$ 7,265
2	Legal Survey	Hrly		\$ -
3	Construction Staking	Hrly		\$ -
4	SWPPP	LS		\$ -
7	Environmental Mitigation	LS		\$ -
8	Meetings	LS		\$ -
9	BABAA Certification Tracking	Hrly		\$ -
10	Reimbursable Expenses	RMB		\$ 1,500
Subtotal				\$ 8,765

Total Professional Fees	\$ 232,253
Total Project Costs	\$ 958,709

Excluded Engineering Services				Cost \$
1	Geotechnical	LS		\$ -
2	Engineering Report	LS		\$ -
3	Environmental Review	LS		\$ -
4	Grant Administration	LS		\$ -
4	Waste Stream Summary	LS		\$ -
4	Anti-Degradation Report	LS		\$ -
5	Reimbursable Expenses	Hrly		\$ -
Subtotal				\$ -





PROJECT NO. 2020-0044-03-001	SHEET NO. EXHIBIT NO. 1												
NOTES: GOLF COURSE IRRIGATION SYSTEM IMPROVEMENTS CITY OF GIRARD, KANSAS PROPOSED RE-USE WATER IRRIGATION SYSTEM RE-USE TRANSMISSION LINE													
 254 N. MAIN STREET GARDNER, KS 74801 WWW.MIDWESTENGINEERING.COM													
<table border="1"> <tr> <th>REV.</th> <th>DATE</th> <th>REVISIONS</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	REV.	DATE	REVISIONS										PREPARED BY: _____ DRAWN BY: _____ CHECKED BY: _____ DATE: _____
REV.	DATE	REVISIONS											
CERTIFICATE OF AUTHORITY: KS-E-2900 EXPIRES: 12/31/2024 COPYRIGHT © 2024 - MIDWEST ENGINEERING GROUP, LLC													

Construction:

Construction costs are estimated in the previous section. However, the City is not requesting funding for construction with this project. If this project is awarded, the City plans to apply for construction funding through the Drought Resiliency Project funding opportunity.

Other:

N/A

Indirect Costs:

The City does not have a Federal indirect cost rate agreement. And the total costs will be comprised of procuring design engineering services.

Project Design Est. Cost	\$366,504
WaterSmart Cost Share Requirement	25%
WaterSmart Request	\$274,878
Build Kansas Fund Request*	\$91,626

*Build Kansas Fund fulfills matching requirements for BIL programs