COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In	the	Matter	of:
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ELECTRONIC APPLICATION OF KENTUCKY-)	
AMERICAN WATER COMPANY FOR A)	
CERTIFICATE OF PUBLIC))	
CONVENIENCE AND NECESSITY))	CASE NO. 2023-00248
AUTHORIZING THE CONSTRUCTION OF ()	
A WATER TRANSMISSION MAIN TO THE)	
CITY OF MILLERSBURG))	

CITY OF PARIS'S SECOND REQUEST FOR INFORMATION TO KENTUCKY-AMERICAN WATER COMPANY

In accordance with the Public Service Commission's ("Commission") July 21, 2023 Order, the City of Paris ("Paris") propounds the following data requests upon the Applicant Kentucky-American Water Company ("KAWC"). KAWC shall respond to these requests in accordance with the provisions of the Commission's Order, applicable regulations, and the instructions set forth below.

INSTRUCTIONS

- 1. Please provide written responses, together with any and all exhibits pertaining thereto, separately indexed and tabbed by each response.
- 2. The responses provided should restate Paris's request and also identify the witness(es) responsible for supplying the information.
- 3. If any request appears confusing, please request clarification directly from counsel for Paris.

- 4. Please answer each designated part of each information request separately. If you do not have complete information with respect to any item, please so state and give as much information as you do have with respect to the matter inquired about, and identify each person whom you believe may have additional information with respect thereto.
- 5. To the extent that the specific document, workpaper, or information does not exist as requested, but a similar document, workpaper, or information does exist, provide the similar document, workpaper, or information.
- 6. To the extent that any request may be answered by way of a computer printout, please identify each variable contained in the printout which would not be self-evident to a person not familiar with the printout.
- 7. If KAWC objects to any request on any grounds, please notify counsel for Paris as soon as possible.
- 8. For any document withheld on the basis of privilege, state the following: date; author; addressee; blind copies; all persons to whom distributed, shown, or explained; and, the nature and legal basis for the privilege asserted.
- 9. In the event any document called for has been destroyed or transferred beyond the control of the company, state the following: the identity of the person by whom it was destroyed or transferred, and the person authorizing the destruction or transfer; the time, place, and method of destruction or transfer; and, the reason(s) for its destruction or transfer. If destroyed or disposed of by operation of a retention policy, state the retention policy.
- 10. These requests shall be deemed continuing so as to require further and supplemental responses if the company receives or generates additional information within the scope of these requests between the time of the response and the time of any hearing conducted

herein.

Respectfully submitted,

M. Jou Olas

STURGILL, TURNER, BARKER & MOLONEY, PLLC

James W. Gardner M. Todd Osterloh

Andrew D. Moore

333 W. Vine Street, Suite 1500

Lexington, Kentucky 40507

Telephone No.: (859) 255-8581 Facsimile No.: (859) 231-0851 jgardner@sturgillturner.com tosterloh@sturgillturner.com amoore@sturgillturner.com

Requests for Information

- 1. Confirm that KAW will not provide service to City of Paris's customers without the Paris's express consent. If KAW is unwilling to confirm this statement, please provide a detailed explanation of why it is unwilling to confirm this statement.
- 2. Please refer to Response to PSC 1-1, Attachment 2, page 2 of 9. Confirm that KAW acknowledges that Paris has an existing water main along the US-68 Bypass.
- 3. Please refer to KAW's Responses to Paris 1-2, 1-3, and 1-4. In addition, please refer to the Project Profile and preliminary design plan attached hereto as Exhibit A.
 - a. State whether KAW had knowledge of Paris's plan to construct an interceptor sewer around Houston Creek, which would require installation of a force main within the right of way of a portion of the right of way of the US-68 Bypass.
 - b. State whether KAW and its consultant is designing drawings for the installation of its proposed route for the transmission line and considering the anticipated construction of an interceptor sewer around Houston Creek in a portion of the right of way of the US-68 Bypass.
 - c. Confirm that KAW's construction specifications require the following: "Lay water mains at least 10 feet horizontally from any existing or proposed sanitary sewer. Measure the distance from edge to edge. In cases where it is not practical to maintain a 10-foot separation, the applicable State Agency may allow deviation on a case-by-case basis, if supported by data from the Engineer. Such deviation may allow installation of the water main closer to a sanitary sewer, provided that the water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sanitary sewer at such an elevation that the bottom of the water main is at least 18 inches above the top of the sanitary sewer."
 - d. State whether KAW and its consultant believes that its proposed transmission line and the anticipated interceptor sewer line can both be installed within the right of way of the US-68 Bypass by adhering to the guideline that water mains be installed 10 feet horizontally from any proposed sanitary sewer.
 - e. If the response to (d) above is "no," state whether KAW and its consultant believes that the applicable State Agency will allow a deviation for its proposed transmission line and the anticipated interceptor sewer line can both be installed within the right of way of the US-68 Bypass in separate trenches less than 10 feet horizontally from each other.

- 4. Please refer to KAW's Responses to Paris 1-5. Provide the calculation referred to in this request. Separately itemize each cost (power, chemicals, labor, etc.)
- 5. Please refer to KAW's Responses to Paris 1-6. State whether KAW will commit to have a standard interconnection to KAW's proposed transmission line.
- 6. Please refer to KAW's Response to Paris 1-7. Explain whether the 117 MG anticipated annual future demand is the amount of wholesale water that KAW anticipates that it would sell Paris. If yes, explain why it is appropriate to use this amount reflecting 15% of Paris's current demand.
- 7. Please refer to Table 1 on pages 4-5 of 8 of Exhibit 2 to the Application (Stantec Memo regarding Millersburg Water Supply Project– Preliminary Planning Study).
 - a. Explain how KAW determined its proposed future annual volumes sold to Harrison County Water Association (+14 MG) and Nicholas County Water District (+62 MG).
 - b. Explain how KAW determined its proposed future annual volumes sold to Judy Water Association (+30 MG) and Sharpsburg (+25 MG).
 - c. Explain why KAW only anticipates future demand of Judy Water Association to be supplied from KAW's Millersburg's system and no future demand of Judy Water Association to be supplied from KAW's North Middletown system.
 - d. Identify the year on which KAW's future demands are based.
- 8. Please refer to KAW's Response to Paris 1-12(c). Identify the estimated cost for upsizing approximately six miles of existing 8" KAW main between US-68 and Bethlehem Road. Provide all assumptions on which this estimate is based.
- 9. Please refer to KAW's Responses to Paris 1-15 and 1-17.
 - a. Provide a detailed description of the "significant leak" that was repaired in Millersburg in January 2023. Include within your answer the location of the leak, how it was discovered, a description of the water main where there was a leak, the estimated rate of flow for the leak, the estimated duration of the leak, and the cause for the leak if known.
 - b. State whether KAW believes the repair of the leak has resulted in the significantly lower volume of water purchased from Paris from February to July 2023, in comparison to the two prior years, as shown in Response to Paris 1-15.

- 10. Please refer to Response to PSC 1-1, Attachment 2, page 4 of 9. Confirm that KAW acknowledges that there would reduced disturbance within Paris if the alternate for a main south of Paris.
- 11. Please refer to Response to PSC 1-16. State whether KAW anticipates that one or more chlorine boosters will be required for its proposed project, given the amount of time it will take to turn over the amount of water.



Clean Water Project Profile

Legal Applicant: City of Paris

Project Title: City of Paris - Pump Station Elimination and Rehabilitation

Project Number: SX21017019 View Map Submitted By: BGADD
Funding Status: Not Funded Primary County: Bourbon
Project Status: Constructed Planning Unit: Unit 2
Project Schedule: Constructed Multi-County: No

E-Clearinghouse SAI: ECH Status:

Applicant Entity Type: Incorporated City ADD WMC Contact: Karyn Leverenz

Date Approved (AWMPC): 10-18-2013

Project Description:

Eliminating the existing Lexington Road Pump Station by constructing an interceptor sewer around Houston Creek that brings the flow to the Ford's Mill Pump Station. Consolidate the Ford's Mill and Lexington Road Pump Station and conveys the wastewater flow directly to the WWTP. The project also rehabilitates the existing aging Woodmont Pump Station to improve reliability and reduce operation and maintenance cost.

Need for Project:

Briefly describe how this project promotes public health or achieves and/or maintains compliance with the Clean Water Act or Safe Drinking Water Act:

The project provides the following benefits: provides necessary wastewater collection and conveyance capacity for planned development, offers ability to sewer an existing unsewered area by gravity which eliminates two planned pump stations, reduces operation and maintenance cost by eliminating a pump station and two future pump stations, and the interceptor sewer will help alleviate SSOs from the Claysville Trunk Sewer by diverting flow directly to the WWTP.

Project Alternatives:

Alternate A:

Renovate the Lexington Road Pump Station and increase the capacity of the pump station, force main, and receiving sewer to the Elizabeth Street Pump Station. Renovate the Elizabeth Street Pump Station to account for additional flow. Relocate and increase the capacity of the Ford's Mill Pump Station and construct a new force main. Rehabilitate the existing aging Woodmont Pump Station to improve reliability and reduce operation and maintenance cost.

Alternate B

Eliminate the existing Lexington Road, Ford's Mill, and Rio Vista Pump Stations by constructing an interceptor sewer around Houston Creek that brings the flow to the Lilleston Pump Station. Renovate the Lilleston Pump Station to account for additional flow and redirect the force main directly to the WWTP. Rehabilitate the existing aging Woodmont Pump Station to improve reliability and reduce operation and maintenance cost.

Legal Applicant:

Entity Type: Incorporated City PSC Group ID:

Entity Name: City of Paris

Web URL:

Office EMail: ssettles@paris.ky.gov

Office Phone: **859-987-2110** Toll Free: Fax: **859-987-4640**

Mail Address Line 1: **525 High St**Mail Address Line 2:

Mail City, State Zip: **Paris, KY 40361**Phys Address Line 2:

Phys Address Line 2:

Phys Address Line 2:

Phys City, State Zip:

Contact: Stephanie Settles Financial Contact: Auth Official: Michael Thornton

Contact Title: City Clerk Financial Contact Title: Auth Official Title: Mayor

Contact EMail: ssettles@paris.ky.gov Financial Contact EMail: Auth Official EMail: mthornton@paris.ky.gov

Contact Phone: **859-987-2110** Financial Contact Phone: Auth Official Phone: **859-987-2110**

Data Source: Kentucky Department for Local Government Date Last Modified: 02.06.2018



Clean Water Project Profile

SX21017019 - City of Paris City of Paris - Pump Station Elimination and Rehabilitation

Project Administrator (PA) Information

Name: Robert E Casher

Title: Public Administration Specialist
Organization: Bluegrass Area Development District

Address Line 1: 699 Perimeter Drive

Address Line 2:

City: **Lexington** State: **KY** Zip: **40517** Phone: **859-269-8021** Fax: **859-269-7917**

Applicant Contact (AC) Information

Name: Kevin Crump

Title: Water Superintendent

Organization: City of Paris
Address Line 1: 525 High Street

Address Line 2:

City: Paris State: KY Zip: 40361

Phone: **859-987-2118** Fax:

Project Engineer (PE) Information:

☑ This project requires a licensed Professional Engineer.

A Professional Engineer has been procured for this project.

Project Engineer Information:

License No: PE 28373

PE Name: Chase Kendall Wright

Phone: 859-225-8500 Fax:

E-Mail: chase.wright@strand.com

Firm Name:

Addr Line 1: Strand Associates, Inc.
Addr Line 2: 1525 Bull Lea Rd Ste 100

Addr Line 3:

City: Lexington State: KY Zip: 40511

Status: Current Disciplinary Actions: NO

Issued: 12-22-2011 Expires: 06-30-2018

Estimated Budget

Project Cost Categories:		
Cost Category	Cost	
Administrative Expenses:	\$ 25,000	
Legal Expenses:	\$ 25,000	
Land, Appraisals, Easements:	\$ 35,000	
Relocation Expenses & Repayments:		
Planning:	\$ 55,000	
Engineering Fees - Design:	\$ 235,000	
Engineering Fees - Construction:	\$ 100,000	
Engineering Fees - Inspection:	\$ 180,000	
Engineering Fees - Other:	\$ 45,000	
Construction:	\$ 4,800,000	
Equipment:		
Miscellaneous:		
Contingencies:	\$ 1,000,000	
Total Project Cost:	\$ 6,500,000	

Construction Cost Categories:	
Cost Category	Cost
WWTP Secondary Portion:	
WWTP Advanced Portion:	
Inflow & Infiltration (I&I) Correction:	
Major Sewer Rehabilitation:	
Collector Sewers:	
Interceptor Sewers, Including Pump Stations:	\$ 4,800,000
Combined Sewer Overflow Correction:	
NPS Urban:	
Non-Categorized Cost:	
Total ConstructionCost:	\$ 4,800,000

Total Sustainable Infrastructure Costs:

Note: Total Sustainability Infrastructure Costs are included within construction and other costs reported in this section. This breakout is provided for SRF review purposes.



Project Funding Sources: Estimated Project Schedule: Total Project Cost: \$6,500,000

Funding Gap: \$6,500,000 (Not Funded)

Total Committed Funding: \$0

☐ This project will be requesting SRF funding for fiscal year 2019.

Funding Source Loan or Fiscal Amount Status Applie Grant ID Year Da	
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Facility Plan Approval Date:

Est. Environmental Review Submittal Date:

08-01-2017 Estimated Bid Date: Estimated Construction Start Date: 09-01-2017

09-01-2018 Estimated Construction Completion Date:

Funding Source Notes:	



Clean Water Project Profile

SX21017019 - City of Paris
City of Paris - Pump Station Elimination and Rehabilitation

The following systems are beneficiaries of this project:

√ KY0090654 Paris Sewer Department

Note: Check mark indicates primary system for this project.

Project Ranking by AWMPC:	Plans and specs have been sent to DOW.
Regional Ranking(s):	Plans and specs have been reviewed by DOW.
Planning Unit Ranking:	Plans and specs have been sent to PSC.
Total Points:	Plans and specs have been reviewed by PSC.

Economic, Demographic and Geographic Impacts

Economic Impacts	
Jobs Created:	
Jobs Retained:	

*Demographic Impacts (GIS Census Overlay)			
Servceable Demographic	Project Area	Included Systems	Included Utilities
Population:		10,102	10,102
Households:		4,610	4,610
MHI:		\$37,260	*\$37,260
MHI MOE		\$5,600	*\$5,600
MOE as Pct:		15.0%	15.0%
**NSRL:		1	1

Population and household counts are based on 2010 census block values from the SF1 (100%) dataset.

MHI Source is from the American Community Survey 2011-2015 5Yr Estimates (Table B19013) *(for the primary system operated by the above listed beneficiary utilities).

MHI MOE = Med HH Income Margin of Error.

- ** NSRL (Non-Standard Rate Levels):
- 0 = Income above Kentucky MHI (KMHI).
- 1 = Income between 80% KMHI and KMHI. 2 = Income less than or equal to 80% KMHI.
- 2 = Income less than or e - KMHI = \$43,740
- 80% KHMI = \$34,992

New Customers		
New Residential Customers:		
New Commercial Customers:		
New Institutional Customers:		
New Industrial Customers:		

New or Improved Service		
Service Demographic	Survey Based	Census Overlay*
To Unserved Households:		
To Underserved Households:		
To Total Households:		
** Cost Per Household:		

- * GIS Census block overlay figures are estimates of population and households potentially served by systems and projects based on a proximity analysis of relevant service lines to census block boundaries.
- * Cost per household is based on surveyed household counts, not GIS overlay values.

Geographic Impacts For Project Area			
Counties			
Bourbon			
Legis	Legislative Districts		
District Name Legislator			
House 072	Sannie Overly		
Senate 27	Stephen West		
Congressional 6	Andy Barr		
Groundwater Sensitivity Zones			
5			
HUC 10 Watersheds			
HUC Code Watershed Name			

Stoner Creek

0510010202

	raphic Impacts luded System(s)
Counties	
Bourbon	
Legis	lative Districts
District Name	Legislator
House 072	Sannie Overly
Senate 27	Stephen West
Congressional 6	Andy Barr

			SWAPP Areas
PWSID	WWD	Zone	System Name
KY0490096	0256	3	Cynthiana Municipal Water Works

	Potential Imp	paired Watershed I	Designations	
303d	305b	Priority Watershed	Special Use Waters	Exceptional Use Waters
No	Yes	No	No	No

Note: Impaired Watershed Designations only indicate that mapped components for this project lie within a HUC-14 watershed boundary containing impaired waterbody features. An affirmative indication for any designation will require a detailed analysis of the project to determine if any of the proposed project components will actually have a positive impact on the relevant impaired features.

Print Date: 2/6/2018



CW Specific Impacts:

Wastewater Volumes (MGD):

	For this project:
2.700	For included system(s):
	Reduced by this project:

Other CW Specific Impacts:

	This project provides regionalization and/or consolidation of wastewater treatment systems.
	This project will eliminate a package treatment plant that is more than 25 years old.
	This project will eliminate a package treatment plant that has received notices of violations within the last two state fiscal years.
	This project includes an on-site mound, and/or decentralized WW treatment system.
	This project is necessary to achieve full or partial compliance with a court order, agreed order, or a judicial or administrative concent decree.
	Primary system has not received any CWA Notices of Violation within the previous state fiscal year-July through June, i.e. July 2014 – June 2015).
	This project is consistent with the approved facility plan.
	This project will have a positive impact on drinking water sources within a 5 mile radius.
Ρ	lanning Needs:
	Combined Sewer Overflow (CSO) Correction.

Ц	Combined Sewer Overnow (CSO) Correction.
V	Sanitary Sewer Overflow (SSO) Correction.
$\overline{\checkmark}$	Replacement or Rehabilitation of Aging Infrastructure.
	New Treatment Plant.
	New Collector Sewers and Appurtenances.
	Decentralized Wastewater Treatment Systems.
	Upgrade to Advanced Treatment.
	Rehab/Upgrade/Expansion of Existing Treatment Plant

□ New Interceptor Sewers and Appurtenances.

Non-Point Source (NPS) Pollution Control.

Storm Water Control.

Planning. ☐ Other (specify):

Recycled Water Distribution.

Project Inventory (Mapped Features):

			Mapped Point Features				
DOW Permit ID	Count	FeatureType	Purpose	Status	Existing Capacity	Proposed Capacity	Units
KY0090654	1	LIFTSTATION		ELIMINATE	860.00		GPM
KY0090654	1	LIFTSTATION		REHAB	100.00		GPM
KY0090654	1	LIFTSTATION		REHAB	350.00	3,000.00	GPM



			Mapped Line Features			
DOW Permit ID	Line Type	Purpose	Activity	Size (in.)	Material	Length (LF)
KY0090654	FORCE	INTERCEPTOR	REHAB - SSO	18.00	PVC	13,818
KY0090654	GRAVITY	INTERCEPTOR	REHAB - SSO	24.00	PVC	13,337
					Total Length	27,155

				Total Length	27,155
nistrative Component	ts:				
Planning	✓ Design	☑ Construction		Management	
tewater Treatment Pl	ants Eliminated:				
☐ This project includes th	ne elimination of wastewater	r treatment plant(s).			
tary Sewer Compone	ents:				
This project includes a ne	w wastewater treatment pla	ant.			
Proposed design capaci	ity (MGD): 0.000				
☐ This project includes ar	n expansion of an existing w	vastewater treatment plant.			
Current design capac	city (MGD): 0.000				
Current treatment volur	me (MGD): 0.000				
Proposed design capac	city (MGD): 0.000				
This project includes reha	bilitation of an existing wast	tewater treatment plant.			
This project includes upgr	ades to an existing wastew	ater treatment plant.			
This project includes reha	bilitation or replacement of	aging infractructure.			
Total length of replaced	infrastructure (LF): 27,155	5			
This project includes new	collector sewers.				
Total length of replaced	infrastructure (LF): 0				
This project includes new	interceptor sewers.				
Total length of new inte	erceptor sewer (LF): 0				
This project includes elimi	ination of existing sewer sys	stem components.			
Number of failing s	septic systems eliminated:				
Number of non-failing s	septic systems eliminated:				
1	This project includes and Proposed design capace This project includes and Current design capace Current treatment volumed Proposed design capace This project includes and Current treatment volumed Proposed design capace This project includes rehated This project includes upground This project includes rehated Total length of replaced This project includes new Total length of replaced This project includes new Total length of new interest This project includes elimical length of new interest This project includes elimical length of failing seconds.	This project includes the elimination of wastewate tary Sewer Components: This project includes a new wastewater treatment plate Proposed design capacity (MGD): 0.000 This project includes an expansion of an existing wastewater treatment volume (MGD): 0.000 Current design capacity (MGD): 0.000 Proposed design capacity (MGD): 0.000 This project includes rehabilitation of an existing wastewater treatment volume (MGD): 0.000 This project includes rehabilitation of an existing wastewater treatment of the project includes and the project includes rehabilitation or replacement of the project includes new collector sewers. Total length of replaced infrastructure (LF): 0 This project includes new interceptor sewers. Total length of new interceptor sewer (LF): 0	This project includes the elimination of wastewater treatment plant. Proposed design capacity (MGD): 0.000 This project includes an expansion of an existing wastewater treatment plant. Current design capacity (MGD): 0.000 Current treatment volume (MGD): 0.000 Proposed design capacity (MGD): 0.000 This project includes an expansion of an existing wastewater treatment plant. Current design capacity (MGD): 0.000 Proposed design capacity (MGD): 0.000 This project includes rehabilitation of an existing wastewater treatment plant. This project includes rehabilitation or replacement of aging infractructure. Total length of replaced infrastructure (LF): 27,155 This project includes new collector sewers. Total length of replaced infrastructure (LF): 0 This project includes new interceptor sewers. Total length of new interceptor sewers. Total length of new interceptor sewer (LF): 0 This project includes elimination of existing sewer system components. Number of failing septic systems eliminated:	Planning Design Construction Rewater Treatment Plants Eliminated: This project includes the elimination of wastewater treatment plant(s). This project includes a new wastewater treatment plant. Proposed design capacity (MGD): 0.000 This project includes an expansion of an existing wastewater treatment plant. Current design capacity (MGD): 0.000 Current treatment volume (MGD): 0.000 Proposed design capacity (MGD): 0.000 This project includes rehabilitation of an existing wastewater treatment plant. This project includes upgrades to an existing wastewater treatment plant. This project includes rehabilitation or replacement of aging infractructure. Total length of replaced infrastructure (LF): 27,155 This project includes new collector sewers. Total length of replaced infrastructure (LF): 0 This project includes new interceptor sewer system components. Number of failing septic systems eliminated:	histrative Components: Planning ☑ Design ☑ Construction ☐ Management tewater Treatment Plants Eliminated: ☐ This project includes the elimination of wastewater treatment plant(s). tary Sewer Components: This project includes a new wastewater treatment plant. Proposed design capacity (MGD): 0.000 ☐ This project includes an expansion of an existing wastewater treatment plant. Current design capacity (MGD): 0.000 Current treatment volume (MGD): 0.000 Proposed design capacity (MGD): 0.000 This project includes rehabilitation of an existing wastewater treatment plant. This project includes rehabilitation of replacement of aging infractructure. Total length of replaced infrastructure (LF): 27,155 This project includes new collector sewers. Total length of replaced infrastructure (LF): 0 This project includes new interceptor sewers. Total length of new interceptor sewers. Total length of new interceptor sewers (LF): 0 This project includes elimination of existing sewer system components. Number of failing septic systems eliminated:



Sustainable Infrastructure - Green Infrastructure:

Green stormwater infrastructure includes a wide array of practices at multiple scales that manage wet weather and that maintains and restores natural hydrology by infiltrating, evapotranspiring and harvesting and using stormwater. On a regional scale, green infrastructure is the preservation and restoration of natural landscape features, such as forests, floodplains, and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed. On the local scale, green infrastructure consists of site and neighborhood-specific practices, such as:

	Component	COSI
	Implementation of green streets.	
	Wet Weather management systems for parking areas.	
	Implementation of comprehensive urban forestry programs.	
	Stormwater harvesting and reuse.	
	Downspout disconnection.	
	Comprehensive retrofit programs designed to keep wet weather discharges out of sewer systems.	
	Establishment or restoration of riparian buffers, floodplains, wetlands or other natural features.	
	Management of wetlands.	
	Purchase of land or easements on land that has a direct benefit to water quality.	
	Total Green Infrastructure Cost:	\$0
	* Indicates a business case may be required for this item.	
	There are no Green Infrastructure components specified for this project.	
Su	stainable Infrastructure - Water Efficiency:	
	The use of improved technologies and practices to deliver equal or better services with less water. Water efficiency er conservation and reuse efforts, as well as water loss reduction and prevention, to protect water resources for the futurinclude:	
	Component	Cost
	Installing or retrofitting water efficient devices such as plumbing fixtures and appliances (toilets, showerheads, urinals).	
	Installing any type of water meter in previously unmetered areas (can include backflow prevention if in conjunction with meter replacement).	
	Replacing existing broken/malfunctioning water meters with AMR or smart meters, meters with leak detection, backflow prevention.	
	Retrofitting/Adding AMR capabilities or leak equipment to existing meters.	
	Developing water audit and conservation plans, which are reasonably expected to result in a capital project.	
	Recycling and water reuse projects that replace potable sources with non-potable sources (Gray water, condensate, and wastewater effluent reuse systems, extra treatment or distribution costs associated with water reuse).	
	Retrofit or replacement of existing landscape irrigation/agricultural systems to more efficient landscape/agricultural irrigation systems (rain and moisture sensing equipment).	
	Water meter replacement with traditional water meters.*	
	Projects that result from a water audit or water conservation plan.*	
	Storage tank replacement/rehabilitation to reduce water loss.*	
	New water efficient landscape/agricultural irrigation system, where there currently is not one.*	
	Total Water Efficiency Cost:	\$0
	* Indicates a business case may be required for this item	
	There are no Water Efficiency components specified for this project	



Sustainable Infrastructure - Energy Efficiency:

Energy efficiency is the use of improved technologies and practices to reduce the energy consumption of water projects, use energy in a more efficient way, and/or produce/utilize renewable energy. Examples include:

	Component	Cost
	Renewable energy projects such as wind, solar, geothermal, and micro-hydroelectric, and biogas combined heat and power systems that provide power to a POTW.	
	POTW-owned renewable energy projects.	
	Collection system infiltration/inflow (I/I) detection equipment.	
	POTW energy management planning, including energy assessments, energy audits, optimization studies, and sub-metering of individual processes to determine high energy use areas.	
×	Projects that achieve a reduction in energy consumption (pumps, motors).*	\$75,000
	Projects that cost effectively eliminate pumps or pumping stations.*	
	I/I correction projects that save energy from pumping and reduced treatment costs.*	
	I/I correction where excessive groundwater infiltration is contaminating the influent requiring otherwise unnecessary treatment processes.*	
	Replacing old motors with premium energy efficiency motors.*	
	Upgrade of POTW lighting to energy efficient sources.*	
	SCADA systems where substantial energy savings can be demonstrated.*	
	Variable Frequency Drive (VFD) controllers where substantial energy savings can be demonstrated.*	
	Total Energy Efficiency Cost:	\$75,000
	* Indicates a business case may be required for this item.	
	The energy efficiency reduction would be achieved not only through elimination of one pump station, but upgrading two additional pump stations with variable frequency drives to improve pump efficiency. In addition the project alternatives also include elimination of additional pump stations and would eliminate the proof for multiple future planted pump stations.	

eliminate the need for multiple future planned pump stations.



Sustainable Infrastructure - Environmentally Innovative Infrastructure:

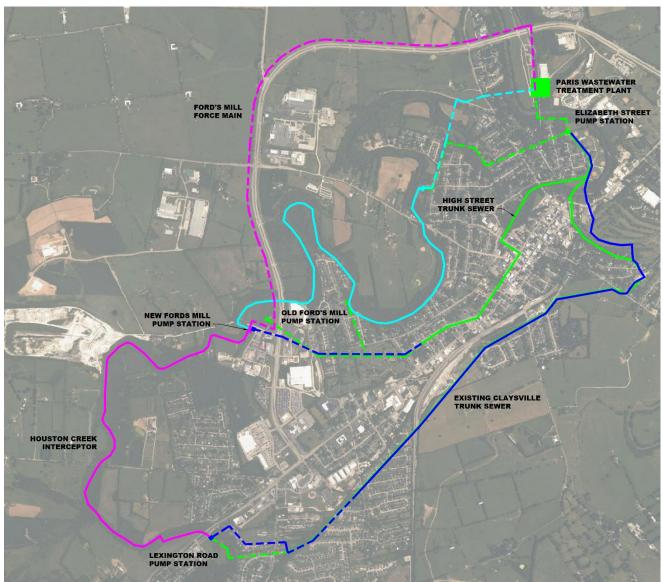
Environmentally innovative projects include those that demonstrate new and/or innovative approaches to delivering services or managing water resources in a more sustainable way. Examples include:

Component

	Total integrated water resources management planning likely to result in a capital project.
	Utility sustainability plan consistent with EPA's sustainability policy.
	Greenhouse gas inventory or mitigation plan and submission of a GHG inventory to a registry as long as it is being done for an SRF eligible facility.
	Planning activities by a POTW to prepare for adaptation to the long-term effects of climate change and/or extreme weather.
	Construction of US Building Council LEED certified buildings, or renovation of an existing building on POTW facilities.
	Decentralized wastewater treatment solutions to existing deficient or failing onsite wastewater systems.
	Constructed wetlands projects used for municipal wastewater treatment, polishing, and/or effluent disposal.*
	Projects that result from total/integrated water resource management planning consistent with the decision criteria for environmentally innovative projects and that are CWSRF eligible.
	Projects that facilitate adaptation of POTWs to climate change identified by a carbon footprint assessment or climate adaption study.*
	POTW upgrades or retrofits that remove phosphorus for beneficial use, such as biofuel production with algae.*
	Projects that significantly reduce or eliminate the use of chemicals in wastewater treatment.*
	Treatment technologies that significantly reduce the volume of residuals, generation of residuals, or lower the amount of chemicals in the residuals.*
	Educational activities and demonstration projects for water or energy efficiency.*
	Projects that achieve the goals/objectives of utility asset management plans.*
	Out and an land and last an extension of attention and attention and attention and an extension and an extension at a second attention and attention and attention at a second attention attention at a second attention at a second attention at a second attention attention attention at a second attention attention at a second attention at a second attention attenti
	Sub-surface land application of effluent and other means for groundwater recharge, such as spray irrigation and overland flow.*
	and overland flow.*
	and overland flow.* Total Environmentally Innovative Cost: \$0
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Cost

Paris South End Service Improvements Provide System Capacity While Off-Loading Known SSO Locations







New Collection System Configuration

