



CONFLUENCE RIVERS

Utility Operating Company

A CSWR Managed Utility

2025 Asset Management and Capital Improvement Plan

January 30, 2025

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INTRODUCTION

This report was prepared in compliance with the Confluence Rivers Utility Operating Company, Inc. (“Confluence Rivers” or the “Company”) commitment in Missouri Public Service Commission (“MPSC”) Docket Nos. WR-2023-0006 and SR-2023-0007. In the Unanimous Partial Stipulation and Agreement, filed August 29, 2023, Confluence Rivers made the following commitment:

Capital Improvement Plan. Confluence shall develop a 5-year Capital Improvement Plan (“CIP”) in Excel format that is filed in EFIS by January 30 of each year. The 5-year CIP will provide budgetary (forecasted) costs for planned capital improvements on a yearly basis for years 1 through 5 for systems owned by Confluence as of September 30 of the previous year. For each water system, each yearly plan will be divided between plant and transmission systems. For each sewer system, each yearly plan will be divided between treatment plant and collection system. The CIP is a working document that is reviewed and updated not less than annually to reflect the addition of systems, changing customer needs, priorities, and associated funding opportunities to ensure that the infrastructure exists to provide safe and reliable water and sewer service. While not binding on Confluence, the CIP will also be generally used as a timeline for design, procurement, and construction. The CIP will be filed as a confidential document in EFIS within this docket, in Excel format, beginning on March 31, 2024, and updated annually thereafter in EFIS until the conclusion of the next Confluence rate case.

Central States Water Resources, LLC’s (“CSWR”) mission, and that of its state utility operating companies including Confluence Rivers, is “to bring safe, reliable and environmentally responsible water resources to every community in the U.S.” Consistent with this mission, Confluence Rivers has historically responded to requests from economic¹ and environmental² regulators to acquire distressed water and wastewater systems. Partially as a result of these state agency requests, the systems owned and operated by Confluence Rivers have increased dramatically since the Company’s inception. More important to this document, however, the priority of the operational issues to be addressed by Confluence Rivers must be flexible as the Company considers evolving system needs, customer demands, technology, supply chain issues, and the economic landscape. Therefore, this report is a snapshot in time and contains the Company’s capital improvement plan based upon the systems that it owns and operates, and the operational and technical issues that it must address, as of September 30, 2024.

¹ Some of the regulated systems acquired at the request of the MPSC Staff include: Missouri Utilities, Lake Virginia, Village Ridge, Mill Creek, Osage Utilities, Smithview, Willows, and Fawn Lake.

² For instance, some of the systems acquired at the request of the Missouri Department of Natural Resources include: Hillcrest Utilities, Twin Oaks, Rainbow Acres, Majestic Lakes, Freeman Hills, DeGuire, Terre du Lac, Stone Ridge, and Oasis Mobile Home Park.

WORK COMPLETED SINCE LAST FILING

In 2024, Confluence Rivers completed a series of impactful capital projects to improve service reliability, enhance operational efficiency, and maintain sustainable water and wastewater systems for our communities. These upgrades address critical needs in infrastructure, ensuring we continue to provide high-quality and dependable service to our customers.

Auburn Lakes WWTF

The replacement of two blowers and motors significantly improves energy efficiency and enhances the wastewater treatment process. These upgrades ensure that the facility operates reliably, meeting environmental standards and supporting long-term community needs.

Cedar Green Water

A new well pump was installed to strengthen the water supply system, safeguarding consistent access to clean and reliable drinking water for residents.

Johnson Bay Subdivision PWS

Remote monitoring technology was introduced to improve system oversight, allowing for real-time data tracking and faster response times to operational issues. This advancement supports a more proactive approach to system management.

Lake Virginia

This system saw comprehensive improvements, including lagoon berm reinforcement, replacement of a deteriorated manhole before the lagoon outfall, vegetation removal, and collection system upgrades. Additionally, two lift station pumps were replaced to maintain the efficient flow of wastewater. These efforts address both current and future infrastructure needs to ensure dependable service.

Lost Valley WWTF

Extensive vegetation removal was completed to maintain the integrity of the facility and support efficient wastewater operations. This work is vital for keeping the system in compliance and functioning optimally.

Quail Run MHP PWS

With the installation of remote monitoring and repairs to the well house, this system now benefits from improved oversight and operational reliability, helping to ensure a steady and safe water

supply. Additionally, several key upgrades were made, including the installation of a new secure access door on the back of the building, restricting access to authorized personnel only. A room was also constructed to house the new Cl₂ double-wall tank and pump, with proper ventilation added for safety. HVAC was installed to control the temperature, and a new Cl₂ pump, along with a rerouted Cl₂ injection line, was put in place to avoid short cycling and provide more contact time for disinfection. To improve accessibility, a new sidewalk was installed to the well house. Both wells have been tested, and the valving was repaired to ensure both wells are fully operational. Vegetation around the standpipe was cleared, and the broken ladder lockout was replaced and re-secured to prevent unauthorized access to the standpipe. These improvements work together to enhance both the safety and efficiency of the system.

Quail Run Mobile Home WWTF

Remote monitoring was installed to improve system oversight, while several key repairs and improvements were made to enhance system performance and prevent environmental risks. The entire fence line was cleared of brush and vegetation, and the fence itself was completely repaired and relocated to allow better access for chemical deliveries. A large washout, 6 feet deep and 30 feet long, was repaired at the back of the lagoon to prevent potential failure and further damage. Trees along the rear berm of the lagoon were cleared, mitigating the risk of future lagoon breaches due to root intrusion. Erosion and muskrat damage around the entire lagoon were addressed, and the area was rippedraped with 4-inch rock for added protection. Additionally, baffle curtains were reattached with new anchors to maintain proper lagoon operation.

The lagoon had been flooding with stormwater during rain events, nearly breaching the banks. To resolve this, the area around the lagoon was ditched and cleared to allow stormwater to flow around and down to the creek. Infiltration and inflow (I&I) caused by creek water flowing along the influent pipe ditch were fixed with clay and bentonite. A small bridge was constructed to give operators safe access to the manhole needed for influent sampling. The chlorine contact chamber was vacuumed and power washed, and new chemical feed lines for Chlorine and DeChlor were installed. These improvements significantly enhance the system's performance, stability, and safety.

Roy L

A new master meter and service pump were installed at the well head, improving water metering accuracy and pumping efficiency. These updates support better system management and resource allocation.

Spring Branch

A new well was installed to increase system capacity and resilience, ensuring the community has access to a stable and reliable water supply now and in the future.

Terre Du Lac

The system received multiple upgrades, including a new building for Well 3, the installation of master meters at well heads for more accurate monitoring, and the rehabilitation of the South Lagoon lift station. These improvements enhance both water and wastewater operations, supporting long-term service sustainability.

2024 Completed

Lake Virginia	Reinforce Lagoon Berm, Replace Manhole before lagoon outfall, Tree Cleanup
Deer Run Estates	Replace lines addressing I&I
Missouri Utilities	Install meter pits, setters, and meters at non-metered customers
Chelsea Rose	Install New Master Meter at Well Head, Security Fencing
Quail Run MHP PWS	Cleared, repaired, and repositioned fence line for chemical delivery access. Repaired 6' deep, 30' long washout at lagoon rear, preventing failure. Cleared trees from rear berm to prevent root intrusion and breaches. Repaired erosion and muskrat damage around lagoon; riprapped with 4" rock. Reattached baffle curtains with new anchors. Created ditches to redirect stormwater and prevent flooding. Fixed I&I from creek water along influent pipe ditch using clay and bentonite. Constructed bridge for safe operator access to influent sample manhole. Vacuumed and power washed chlorine contact chamber. Installed new chemical feed lines for Chlorine and DeChlor.
Quail Run Mobile Home WWTF	Installed secure access door to restrict well house entry. Built room for new Cl2 tank and pump with ventilation. Added HVAC to control room temperature. Re-routed Cl2 pump and injection line for better disinfection. Installed new sidewalk for wellhouse access.

Tested both wells.

Repaired valving to ensure well operation.

Cleared vegetation around standpipe.

Replaced and resecured ladder lockout on standpipe.

Incomplete 2024 Plans that have been moved to 2025

Cedar Glen Condominiums	Install New Master Meter at Well Head
Cedar Green	Replace Master Meter and Pressure Transducer, Ground Storage Tank Rehab
Cimarron Bay	Replace Well House Building, New Master Meter at Well Head Install Security Fencing, Remove Old Recirculating Sand Filter
Eagle Woods / Rte. KK	Install New Master Meter at Well Head
Eugene	Install New Master Meter at Well Heads
Evergreen	Install New Master Meter at Well Head
Fawn Lake	Install New Master Meter at Well Head, Rehab Well House, Replace HPT
Gladlo	Install New Master Meter at Well Head
Hillcrest	Install VFD's on Boosters/or replace pumps with VFD compatible pumps
Indian Hills	Install New Master Meter at Well Heads,
Missouri Utilities	Install New Master Meter at Well Head Reroute Water main around new storage units (acquire necessary easements),
Prairie Field	Make necessary modifications to bar screen to return to service
Prairie Heights	Install New Master Meter at Well Head
Roy L	Install New Master Meter at Well Head, New Booster Pump
Smithview	Install New Master Meter at Well Head
Sweet Pea/Hwy KK	Install master meters at 5 - 7 locations in order to meter usage purchased from Margaritaville, Install meters (394) at active connections
The Willows	Install New Master Meter at Well Head Replacement of fully depreciated Meters/Installation of Meters on Unmetered customers
Cedar Green	Conversion of Tablet Disinfection to Liquid

These strategic improvements demonstrate Confluence Rivers’ commitment to maintaining and upgrading critical infrastructure, ensuring safe, reliable, and high-quality service for the communities we serve.

CONFLUENCE RIVERS SYSTEMS

The following table provides details for the Confluence Rivers water and wastewater systems.

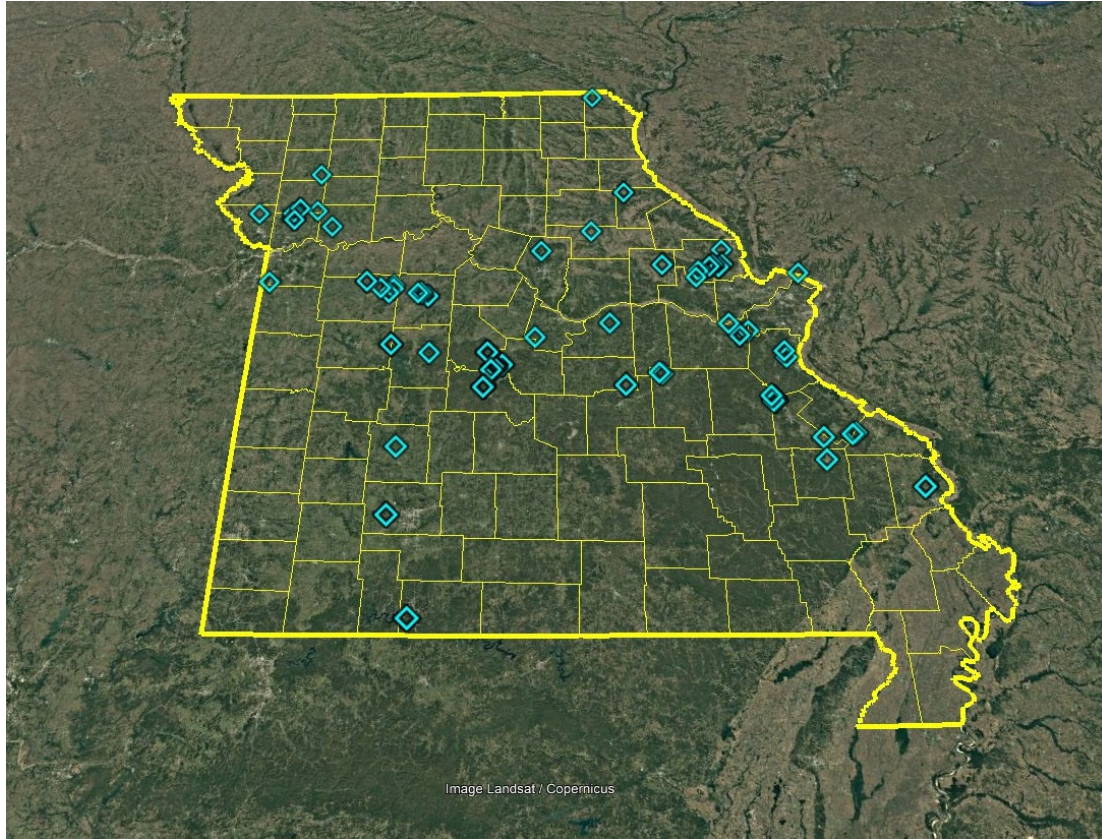
System	Type	County	Plant Detail
Hillcrest	wastewater	Cape Girardeau	Aerated Lagoon (w/ MBBR)
Village of Whiteman WWTF	wastewater	Johnson	Aerated Lagoon (w/ MBBR)
Hunter's Ridge	wastewater	Pettis	Extended Aeration
South Walnut Hills	wastewater	Pettis	Extended Aeration
Missouri Utilities	wastewater	Pettis	Aerated Lagoon (w/ MBBR)
State Park Village	wastewater	Johnson	Extended Aeration (w/ IFAS)
Rainbow Acres Subdivision WWTF	wastewater	Johnson	Aerated Lagoon (w/ MBBR)
Twin Oaks Estates	wastewater	Johnson	Recirculating Sand Filter (w/ MBBR)
Gladlo WWTF	wastewater	Phelps	Facultative Lagoon (w/ MBBR)
Calvey Brook	wastewater	Franklin	Recirculating Media Filter
Willows Utility Co. WWTF	wastewater	Greene	Extended Aeration
Villa Ridge	wastewater	Franklin	Extended Aeration
Castlereagh	wastewater	St. Louis	Extended Aeration
Roy L	wastewater	Montgomery	Facultative Lagoon (w/ MBBR)
Majestic Lakes	wastewater	Lincoln	SBR - Extended Aeration
Auburn Lakes WWTF	wastewater	Lincoln	Extended Aeration
Lake Virginia	wastewater	Jefferson	Facultative Lagoon (w/ MBBR)
Chelsea Rose	wastewater	Camden	Extended Aeration
Cedar Glen	wastewater	Camden	Recirculating Sand Filter
Cimarron Bay	wastewater	Camden	Recirculating Sand Filter
Eagle Woods / Rte. KK	wastewater	Camden	Recirculating Sand Filter
Berkshire Glenn	wastewater	Clay	Recirculating Sand Filter
Country Hill Estates	wastewater	Clinton	Recirculating Sand Filter
Countryside Meadows	wastewater	Ray	Recirculating Sand Filter
Fox Run	wastewater	Clay	Recirculating Sand Filter
Park Estates WWTF	wastewater	Clay	Recirculating Sand Filter
Private Gardens	wastewater	Clay	Recirculating Sand Filter
Wilmar Estates WWTF	wastewater	Clay	Recirculating Sand Filter
Port Perry	wastewater	Perry	Non-Discharging Wastewater - Facultative Lagoon
Branson Cedars Resort	wastewater	Taney	Recirculating Sand Filter

Freeman Hills	wastewater	Audrain	Facultative Lagoon
Deguire Subdivision	wastewater	Madison	Facultative Lagoon
Terre Du Lac - North Lagoon	wastewater	St. Francois	Aerated Lagoon
Terre Du Lac - South Lagoon	wastewater	St. Francois	Facultative Lagoon
Terre Du Lac - Oxidation Ditch	wastewater	St. Francois	Oxidation Ditch
Clemstone WWTF	wastewater	Platte	Extended Aeration
Missing Well WWTF	wastewater	Benton	Facultative Lagoon
Prairie Heights (Sullivan)	wastewater	Pettis	Recirculating Sand Filter
Cedar Green WWTF	wastewater	Camden	Extended Aeration
Prairie Field WWTF	wastewater	Clay	Extended Aeration
Deer Run Estates	wastewater	Madison	Aerated Lagoon
Glen Meadows WWTP	wastewater	Lincoln	Extended Aeration
Stone Ridge Meadows Subdivision WWTF	wastewater	St. Charles	Extended Aeration
Oasis Mobile Home Park	wastewater	Cass	Extended Aeration
M&M Mobile Home Park WWTP	wastewater	Johnson	Extended Aeration
Lost Valley	wastewater	Ralls	Facultative Lagoon
Village of Luray	wastewater	Clark	Aerated Lagoon
Quail Run	wastewater	Lincoln	Aerated Lagoon
Brussels Valley	wastewater	Lincoln	Extended Aeration
Mapaville Meadows	wastewater	Jefferson	Extended Aeration
North Oak Sewer	wastewater	Warren	Extended Aeration
Johnson Bay	wastewater	Morgan	Recirculating Sand Filter
Hillcrest	water	Cape Girardeau	Groundwater
Indian Hills	water	Crawford	Groundwater
Missouri Utilities	water	Pettis	Groundwater
Gladlo	water	Phelps	Groundwater
Calvey Brook	water	Franklin	Groundwater
The Willows	water	Greene	Groundwater
Evergreen	water	Franklin	Groundwater
Smithview	water	Boone	Groundwater
Roy L	water	Montgomery	Groundwater
Eugene	water	Cole	Groundwater
Majestic Lakes	water	Lincoln	Groundwater
Auburn Lakes	water	Lincoln	Groundwater
Cedar Glen Condominiums	water	Camden	Groundwater
Chelsea Rose	water	Camden	Groundwater
Cimarron Bay	water	Camden	Groundwater
Eagle Woods / Rte. KK	water	Camden	Groundwater
Port Perry	water	Perry	Groundwater

Branson Cedars Resort	water	Taney	Groundwater
Prairie Heights	water	Polk	Groundwater
Terre Du Lac	water	St. Francois	Groundwater
Fawn Lake	water	Lincoln/Warren	Groundwater
Spring Branch	water	Benton	Groundwater
The Missing Well	water	Benton	Groundwater
Cedar Green	water	Camden	Groundwater
Glen Meadows	water	Lincoln	Groundwater
Stone Ridge Meadows	water	St. Charles	Groundwater
Tan Tar A/Hwy KK	water	Camden	Purchased Water
M&M Mobile Home Park WTP	water	Johnson	Groundwater
Quail Run	water	Lincoln	Groundwater
Johnson Bay	water	Morgan	Groundwater

CONFLUENCE RIVERS SYSTEM MAP

The following map shows the location of the systems referenced in the table.



The previous information is valuable for several reasons. ***First***, the table shows, especially for the wastewater systems, the technologically diverse nature of the Confluence Rivers systems. While Confluence Rivers has some non-discharging systems, the other wastewater systems rely on processes involving aerated and facultative lagoons, recirculating sand filters, oxidation ditch, moving bed biofilm reactor, integrated fixed film activated sludge, and sequencing batch reactors. ***Second***, the table shows the size of the service areas with customer counts ranging from 7 customers (Countryside Meadows) to 1,403 customers (Terre du Lac). This is important as technology must necessarily change to meet the size of the service areas. Wastewater solutions that can fit the number of customers and the amount of wastewater flow will not necessarily scale to fit a larger system, and vice versa. Therefore, the extremely small systems will present challenges that are radically different from the challenges faced at larger systems. ***Third***, the map shows the geographically dispersed nature of the Confluence Rivers systems. This presents unique challenges in that engineers / construction contractors used for some systems are not available at

other systems. Similarly, supply chain challenges that have been overcome at one set of systems may still exist for other systems.

GENERAL CAPITAL PROJECT BREAKDOWN

As part of our ongoing commitment to provide safe, reliable, and environmentally responsible water and sewer services, Confluence Rivers has identified several key areas for investment through general capital projects. These projects are essential components of our five-year Capital Improvement Plan, aimed at enhancing the infrastructure's integrity, efficiency, and compliance with regulatory standards.

Meter Testing and Replacement Project

As part of Docket WR-2023-0006, Confluence Rivers has committed to a meter testing and replacement initiative. Annually, we will test 10% of our water meters to ensure their accuracy and reliability. Meters found to be deficient in accuracy or operational efficiency will be replaced. This systematic approach not only ensures the integrity of our metering system but also reinforces our commitment to fair billing practices and the prudent management of water resources. For purposes of capital planning, Confluence Rivers has assumed the maximum number of meters will need to be replaced due to the age of meters upon acquisition and the general lack of information provided by prior owners.

Water Mains/Distribution System Replacement

Recognizing the challenges posed by aging infrastructure, Confluence Rivers has allocated resources for the annual replacement of 1% of our water mains and distribution systems, measured in linear feet. This strategy is designed to address vulnerabilities, reduce water loss, and enhance service reliability. While individual projects are planned for sections most in need of replacement, this line item provides a general budgetary plan for Confluence to address situations as they arise. Confluence River's strategy for prioritization leverages detailed data on main breaks and leaks, enabling us to target areas most in need of urgent attention. While specific systems like Spring Branch have been individually addressed in the report, others including Indian Hills, Terre Du Lac, Smithview, Auburn Lakes, Eagle Woods, and M&M Mobile Home Park will be among the primary beneficiaries of this initiative based on the aforementioned data.

Sewer Mains/Collection System Replacement

Like our water distribution system, Confluence Rivers has identified the need for systematic investment in our sewer mains and collection system. Each year, we plan to replace 1% of our sewer mains and collection infrastructure. This represents a pro-active strategy to prevent system failures, environmental contamination, and service interruptions. While individual projects are planned for sections most in need of replacement, this line item provides a general budgetary plan for Confluence to address situations as they arise.

Manhole Rehabilitation/Replacement

Manholes are a critical component of systems, providing access for maintenance, inspection, and emergency interventions. Given their importance and the wear they endure over time, Confluence Rivers will engage in a comprehensive manhole rehabilitation and replacement program. This project aims to address structural deficiencies, prevent inflow and infiltration, and ensure the safety of both the public and our maintenance crews. Rehabilitation efforts will be prioritized based on condition assessments to maximize impact and resource allocation.

Asset Replacement

In recognition of the evolving nature of our industry and the increasing demands placed upon our services, Confluence Rivers has allocated general capital for System Upgrades, Asset Replacement, and Plant Upgrades. This broad category is intended to address not only the replacement and upgrading of physical assets but also to ensure our capital plans remain agile and capable of meeting future challenges, including but not limited to additional permit limits, failed assets, and increased treatment standards. While the body of this report outlines individual projects and initiatives, this general category acknowledges the necessity for a flexible approach to capital improvement planning. It is designed to allocate resources for unforeseen requirements, technological advancements, regulatory changes, and the need for increased capacity or enhanced treatment processes. This approach allows us to adapt to new standards, optimize our operations for environmental compliance, and ensure the continued provision of high-quality water and sewer services.

CONCLUSION

Confluence Rivers hopes the above summary highlights a dedication to providing safe and reliable services while also showing a proactive approach to addressing the evolving needs of our systems and communities. Through targeted investments, technological innovation, and strategic planning, we aim not only to sustain but to enhance the quality of our services. Confluence Rivers is not just a utility provider; we are a partner in public health, environmental protection, and community development. The accompanying 5-year Capital Improvement Plan was designed consistent with our mission to bring safe, environmentally responsible water resources to every community in the U.S. for generations to come.