CONFLUENCE RIVERS
Utility Operating Company
A CSWR Managed Utility

2024 Asset Management and Capital Improvement Plan

March 31, 2024

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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 economic[1] and environmental[2] 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 the needs of newly acquired systems, 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, 2023.

[1] Some of the regulated systems acquired at the request of the MPSC Staff include Missouri Utilities, Lake Virginia, Villa 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.

SUCCESS STORIES

Confluence Rivers takes immense pride in its achievements over the recent years, particularly in transforming 29 individual facilities across Missouri from states of non-compliance to full environmental compliance. This milestone is not just a testament to the Company's commitment to its mission of delivering safe, reliable, and environmentally responsible water resources, but also an illustration of the Company's unwavering dedication to public health, environmental stewardship, and regulatory standards.

Furthermore, this achievement underscores Confluence Rivers' ability to effectively manage and execute complex capital improvement projects, even in the face of operational and technical challenges. It reflects the Company's commitment to continuous improvement, innovation, and sustainability, which are integral to its long-term vision of enhancing community well-being and environmental health. Below are some examples of systems that benefitted from Confluence River's technical, managerial, and financial capabilities.

Indian Hills

The Indian Hills community, located in Crawford County, has existed for more than 50 years. But prior to Confluence Rivers' 2016 acquisition, the previous owners failed to upgrade and expand the water system to keep up with community growth and generally neglected system maintenance, thereby endangering the health of the community's approximately 2,500 residents. For example, both well houses were in such a state of disrepair as to pose hazards to anyone required to enter them. They were infested with mold and mildew and lacked adequate ventilation. In fact, Well House 2 was in such bad shape that independent technicians engaged to assess the facilities declared the structure inoperable. And the electrical system in Well House 1 – which housed the community's primary water source – was so deteriorated and neglected that anyone entering the structure risked electrocution. The drinking water systems at times had seventy percent water loss and based on the Company's observations at the time of closing, most likely did not provide the Missouri Department of Natural Resources ("MDNR") minimum pressure to parts of the community for decades thereby putting residents at risk for pathogen exposure. The water meters were failed and built inside cardboard meter pits. The water taps were made out of flexible rubber pipes that were essentially glorified garden hoses. These and similar, substandard conditions caused MDNR to issue twenty-seven citations for violations of applicable safe drinking water laws.

Upon acquisition, Confluence Rivers initiated a $1.84 million upgrade of the Indian Hills water system. Among the improvements that were made were: (1) existing well houses were demolished and replaced with separate rooms for disinfection equipment; (2) piping was run from the well through the main well house where a magnetic meter and testing tap were installed; (3) piping was then run into a separate disinfection room where chlorine is added via redundant pumping; (4) piping then fed into a new 270,000 ground storage tank that allows for mandatory chlorine contact time; (5) piping then was run from the ground storage tank into the main building where a chlorine analyzer provided constant reading of residual disinfection; (6) water is then fed through dual

variable frequency drive booster stations and forced into the water distribution system; (7) a backup generator was installed to meet MDNR requirements for system stability; (8) remote equipment monitoring for well production; chlorine addition and residuals; well pumping and status of the backup generator were installed; (9) the old non-functioning well was plugged to MDNR specifications; (10) a new 500 foot water well was drilled to MDNR requirements for source redundancy; and (11) 725 drinking water grade HDPE meter pits were installed with new remote electronic meters.

Elm Hills

In 2018, Confluence Rivers purchased the Elm Hills water and wastewater systems. Prior to that point in time, the State Park Village and Shriners Golf Course residential communities suffered from failing utility service. The Shriners system was served by Missouri Utilities, a previously Commission regulated company that had been in state appointed receivership for twelve years. For instance, the State Park Village wastewater system was discharging harmful contaminants including BOD5, TSS, ammonia and fecal coliform into an adjoining Missouri state park creek tributary that was a headwater to a public access stream where Missouri State Park visitors could come into direct contact with human waste pathogens. At the Shriners community, raw sewage continually spilled on to the golf course. Additionally, rainwater collecting in the Shriner's sewage system caused basements to flood with untreated sewage. Similarly, the Shriners drinking water system had failed causing a communitywide water outage that the residents had to proverbially "pass the hat around" to collect money to fix a well pump. This system had six inches of rust sludge inside the pressure tank and an exposed wellhead which means residents were ingesting rust sediment, and potential pathogens had the ability to enter the drinking water system exposing residents to human health risks.

Upon acquisition, Confluence Rivers initiated a $1 million upgrade of these systems including converting the State Park Village wastewater plant to a state-of-the-art fixed film media plant with full ultraviolet disinfection system protecting state park visitors. At the Shiners Golf Community CSWR used a biological process to remove sludge from the lagoons thereby restoring the system's full capacity and preventing overflows as well as installing a new bioreactor and ultraviolet sanitation technology to remove *E.coli*. On the Shriners drinking water side, Confluence Rivers did a full tank rehabilitation process, well remediation, and ran a water main to Sedalia to provide an emergency backup water source which ensured safe and reliable service.

The extent of Confluence Rivers' rehabilitation efforts can be viewed in the following video:

Elm Hills UOC: Before and After on Vimeo

As a result of Confluence Rivers' rehabilitation efforts, the MDNR has recently issued a letter applauding these efforts. One portion of that June 22, 2023 letter stated:

> When systems are unable to resolve their technical, managerial, or financial problems, one reliable solution is selling the system to a higher-performing utility operating company. In Missouri, Confluence Rivers Utility Operating Company, Inc. (CRUOC) is one of the few utility operating companies who is willing to acquire some of the most difficult failing systems. CRUOC has consistently taken swift actions after taking control of these systems to bring them into compliance by employing qualified operators, effectively administering and managing the systems, and investing in repairs and upgrades.
>
> CRUOC's willingness to acquire systems with long-standing compliance issues have proven to be beneficial to human health and the environment by brining many of these systems into compliance with environmental laws. The Department looks forward to continuing to work with CRUOC as it continues to acquire wastewater and public water systems in Missouri, in furtherance of the Department's initiative to encourage regionalization and consolidation of the many private systems in Missouri that are struggling to achieve compliance with laws for the protection of public health and the environment.

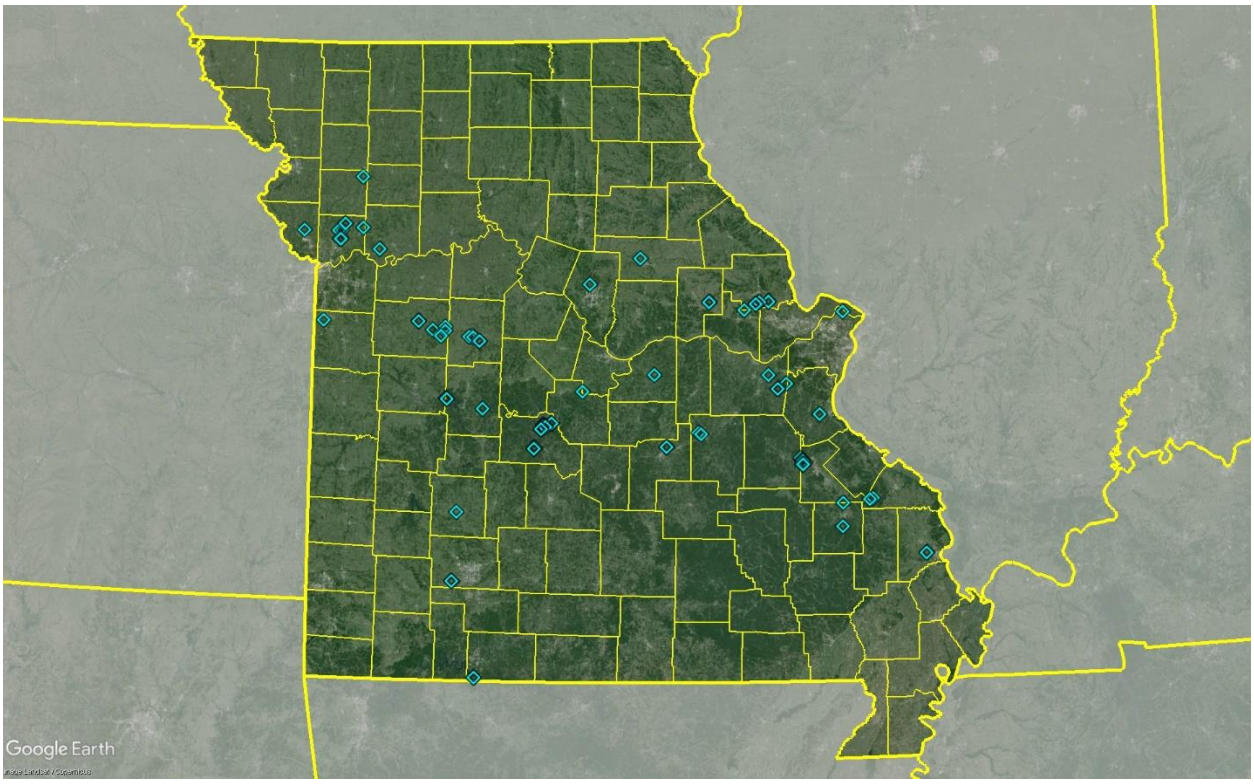
CONFLUENCE RIVERS SYSTEMS

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

System	Type	County	Plant Detail
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
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

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 a non-discharging system, 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 systems listed in the table reflect a range 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 serve a small number of customers and the amount of wastewater generated by that small number of customers 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 by 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.

CAPITAL PROJECT BREAKDOWN

In the attached highly confidential document, Confluence Rivers has provided a 5-year Capital Improvement Plan in Excel format. Consistent with its rate case commitment, that plan separates water system improvements between plant and transmission systems. Similarly, for each sewer system, each yearly plan is divided between treatment plant and collection system.

In addition to these specific improvement projects, Confluence Rivers has also identified several key areas for investment through general capital projects. These projects are essential components of Confluence Rivers' five-year Capital Improvement Plan, aimed at enhancing the infrastructure's integrity, efficiency, and compliance with regulatory standards. Those projects are:

Meter Testing and Replacement Project

As part of Docket WR-2023-0006, Confluence Rivers committed to a meter testing and replacement initiative. Annually, Confluence Rivers will test 10% of its 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 the metering system but also reinforces the Company's 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 2% of 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 Rivers to address situations as they arise. Confluence River's strategy for prioritization leverages detailed data on main breaks and leaks, enabling it 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 its water distribution system, Confluence Rivers has identified the need for systematic investment in its sewer mains and collection system. Each year, the Company intends to replace 2% of 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 Rivers 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 endured 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 the Company's 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 the water / wastewater industry and the increasing demands placed upon these 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 that 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 the Company to adapt to new standards, optimize 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 its systems and communities. Through targeted investments, technological innovation, and strategic planning, Confluence Rivers aims not only to sustain but to enhance the quality of its services. Confluence Rivers is not just a utility provider; it is also a partner in public health, environmental protection, and community development. The accompanying 5-year Capital Improvement Plan was designed consistent with the Company's mission to bring safe, reliable and environmentally responsible water resources to its communities in Missouri for generations to come.