Linton, David

From: Todd Thomas <tthomas@cswrgroup.com>
Sent: Monday, June 10, 2019 2:10 PM
To: Stacy Culleton
Subject: FW: Confluence Rivers - AOC
Attachments: Confluence Rivers Improvments Review 11-08-17 (2).pdf

Importance: High

Todd Thomas
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From: Todd Thomas <tthomas@cswrgroup.com>
Sent: Tuesday, November 14, 2017 12:34 PM
To: Savage-Clarke, Kristi <Kristi.Savage-Clarke@dnr.mo.gov>
Cc: Ben Kuenzel <ben@21designgroup.net>
Subject: Confluence Rivers - AOC
Importance: High

Kristi,

I hope you are well today. I have attached a letter from our engineer that provides a summary of the issues faced and proposed plans to upgrade the systems we will be acquiring as part of Confluence Rivers Utility Operating Company. We would greatly appreciate AOCs that give us the opportunity complete the required upgrades without facing regulatory risk in the process.

Thanks for your assistance. Please feel free to call me if you have any questions.

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Todd Thomas
636 3998283

LPLOA Exhibit No. 306
Date 10-7-19 Reporter LMB
File No. WA-2019-0299

November 8, 2017

Mr. Todd Thomas
Vice President of Central States Water Resources
500 Northwest Plaza Drive, Suite 500
St. Ann, MO 63074

RE: Confluence Rivers Utility Operating Company Inc.

Dear Mr. Thomas:

I have reviewed the Confluence Rivers current utility systems for compliance issues and needed repairs. These improvements will take some time and I will summarize below the main improvements that will be completed for each system. The system and their needs are as follows:

Majestic Lakes Water (MO6031412): Overall, the water system is in reasonable shape. The system has been well maintained. However, the water storage tank does need some leaking panels repaired. We will also be installing a chlorine analyzer and mission monitoring unit to remotely access the condition at the water plant. **Repair timing** is anticipated to be 60 days.

Majestic Lakes Wastewater (MO0130125): While the wastewater plant has been well maintained, the construction of the facility has caused ongoing issues. Earlier this year, CSWR was made aware of the interior plant walls failing and stepped in to install a temporary structural repair to avoid a complete shutdown of the facility. This temporary structural repair is performing as planned but is not a long-term solution. Currently, we plan to redesign a structural system that will be lasting and can serve the customers for years to come. Additionally, various pumps and other components have failed and are in need of being replaced. These items are more maintenance items. We will also be installing a mission monitoring system to remotely access the condition of the wastewater plant. **Repair timing** is anticipated to be 6 months. This is due to the complexity and size of the structural issues the existing plant is exhibiting.

Roy-L Utilities Water (MO6251710): This drinking water has been well maintained. The system appears to be adequate on most parts but will need to have an additional booster pump installed to maintain pressure in the case of the existing booster pump failing. We will also be installing a chlorine analyzer and mission monitoring unit to remotely access the condition at the water plant. **Repair timing** is anticipated to be 60 days.

Roy-L Utilities Wastewater (MO0087211): This wastewater system has been well maintained. The wastewater system has a wastewater compliance schedule that requires the system to meet ammonia limits by August 1, 2020. The current direction of design is to look at the opportunity to install a no discharge system. **Repair timing** is anticipated to take approximately 120 days.

Kuhle H20 (MO3036153): This drinking water has been poorly maintained for a number of years until last year when CSWR assumed operations at the request of the Missouri Public Service Commission. Plans for the system include repairs to the water storage tank, reconstruction of the well house, minor repairs to the distribution system, installation of a chlorine analyzer, installation of a mission monitoring unit, and improved security measures around the well house. **Repair timing** is anticipated to be around 6 months.

Auburn Lake Water (Drinking ID not Issued): This drinking water system was constructed approximately 10 years ago. Minor cosmetic work was completed earlier this year and Missouri DNR performed an inspection on the infrastructure in place. Missouri DNR approved the system for public drinking water and has given approval for sale of water. Currently the system is not listed on DNR's website as a public drinking water system due to not having enough customers to be active as a public drinking water system. Once the system has 15 service connections or 25 people, we understand we will need to contact the St. Louis Regional Office to change the system status. Due to developer interest of the system, we anticipate this customer count to be achieved sometime late next year at the earliest. No other improvements are currently planned for this system.

Auburn Lake Wastewater (MO0129356): This wastewater system was constructed approximately 10 years ago. The system construction was completed, but the operating permit and fee were not submitted. This was due to the economy, and the developer decided to stop development until early this year. Due to the operating permit never being activated, DNR required the system go through the anti-degradation process and re-permit the system. This was completed earlier this year. The system has a new operating permit that was issued on August 1, and is ready for startup when the system has customers.

Evergreen Water (MO6036134): This drinking water has been well maintained. The system appears to be adequate on most parts but will need to have repairs completed on the interior of the well house. Additional measures will include consideration to moving the chlorine liquid to a separate room from the equipment. We will also be installing a chlorine analyzer and mission monitoring unit to remotely access the condition at the water system. **Repair timing** is anticipated to be 90 days.

Villa Ridge Wastewater (MO0038237): This wastewater system has been poorly maintained until recent months. The system currently doesn't have adequate means to receive the inflow and infiltration from the aging wastewater collection system. Repairs to the collection system will be required as a part of this project to extend the life of the proposed plant improvements. The wastewater plant will also see some major improvements which will consist of improved aeration piping and diffusers, new blowers, electrical repairs, clarifier repairs, excessive sludge removal from all components of the plant (sludge digester, clarifier, contact chamber), repairs to the collection system for broken down clay collection system, and improving the system disinfection process. We will also be installing a remote monitoring system that will provide current condition of the wastewater facility. **Repair timing** is anticipated to be 180 days.

Gladio Water (MO3036151): This drinking water has been reasonably maintained. The system appears to be adequate on most parts but will need to have repairs completed on the interior of the well house, repairs to the hydropneumatic tank, installation of a permanent air pressure charging system, and installation of a mission monitoring unit to remotely access the condition of the water system. **Repair timing** is anticipated to be 120 days.

Gladio Wastewater (MO0084191): This wastewater system has been reasonably well maintained. The wastewater system has a wastewater compliance schedule that requires the system to meet ammonia limits by January 1, 2020. The current direction of design consists of installation of a moving bed biological reactor in series with the existing lagoon system. Other improvements will consist of removing vegetation from the berm, installation of an all-weather access road, improving fencing, and installation of a mission monitoring unit for remote monitoring. **Repair timing** is anticipated to be 6 months.

Willows Water (MO5048099): This drinking water has been poorly maintained. The system appears to be adequate on most parts but will need to have repairs completed on the interior of the well house. Additional measures will include consideration to moving the chlorine liquid to a separate room from the equipment. We will also be installing a chlorine analyzer and mission monitoring unit to remotely access the condition at the water system. **Repair timing** is anticipated to be 120 days.

Willows Wastewater (MO0052281): This wastewater system has been poorly. The wastewater system has a wastewater compliance schedule that requires the system to meet ammonia limits by June 1, 2017. The current direction of design consists of replacing interior piping of the plant along with the blowers. Due to the inflow and infiltration at the system, we plan to improve the flow equalization handling by modifying operations or adding additional storage which will be determined in the next few months through operational control. Additionally, we will be installing mission monitoring unit for remote monitoring. **Repair timing** is anticipated to be approximately 6 months depending on actual project.

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Lake Virginia Wastewater (MO0101672): This wastewater system is a poorly maintained lagoon system. The operating permit for the East lagoon has expired, and we believe that additional limits have been imposed that a lagoon system won't meet on a consistent basis. We believe that a second lagoon system is in operation, but the actual permit can't be found. Proposed direction for treatment consists of either a moving bed biological reactor with the existing lagoons or installation of a no discharge system. If a second lagoon system is in operation, we will look to close and combine the systems to have one discharge location or treatment process in place. **Repair timing** is anticipated to take approximately 8 months depending on obtaining additional information from DNR.

Port Perry Water (MO4171716): This drinking water has been reasonably maintained. The system appears to be adequate on most parts but will need to have repairs completed on the interior of the well house. Additional measures will include consideration to moving the chlorine liquid to a separate room from the equipment. We will also be installing a chlorine analyzer and mission monitoring unit to remotely access the condition at the water system. The system does have two wells installed, however, it appears the second well has not been in operation for some time. Plans will include bringing this well online to act as an emergency backup. **Repair timing** is anticipated to be 120 days.

Port Perry Wastewater (MO0116998): This wastewater system has been reasonably maintained. The wastewater system has a no discharge lagoon system currently in operation. However, the lagoon system currently has trees growing in the lagoon system that per DNR verbal discussions, should be removed and will be a part of capital improvements. Additional improvements will consist of installing an all-weather access road, addressing inflow and infiltration concerns, improved security fencing around the lagoon system, installation of a mission monitoring unit, and other miscellaneous cleanup work around the lagoon. **Repair timing** is anticipated to be approximately 6 months depending on actual project.

Please feel free to let me know if you have any questions.

Sincerely,

Benjamin Kuenzel, PE
Principal of 21 Design Group, Inc.
636-432-2144