STATE OF TENNESSEE
BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION

24-00044

IN RE:

LIMESTONE WATER UTILITY OPERATING COMPANY

DIRECT TESTIMONY

OF

TODD THOMAS

ON

OPERATION AND MAINTENANCE EXPENSE; TENNESSEE O&M PARTNER AND STATE MANAGER; SYSTEM IMPROVEMENTS MADE BY OPERATIONS TEAM, RECOVERY OF ACQUISITION ADJUSTMENTS

SPONSORING PETITIONER'S EXHIBITS:

PETITIONER'S EXHIBIT TT-1: MAP OF LIMESTONE WATER SERVICE AREAS
PETITIONER'S EXHIBIT TT-2: LIMESTONE WATER O&M RFQ
PETITIONER'S EXHIBIT TT-3: LIMESTONE WATER O&M RFP
PETITIONER'S EXHIBIT TT-4: MISSOURI DNR LETTER
PETITIONER'S EXHIBIT TT-5: MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY LETTER
PETITIONER'S EXHIBIT TT-6: LOUISIANA DEPARTMENT OF HEALTH WATER GRADES

FILED: July 16, 2024

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Todd Thomas. My business address is 1630 Des Peres Road, Suite 140, St. Louis, Missouri 63131.

Q. PLEASE DESCRIBE CSWR, LLC AND LIMESTONE WATER UTILITY OPERATING COMPANY, LLC.

A. CSWR, LLC ("CSWR") is a holding company that, as of March 31, 2024, operated utility operating companies in 11 states. Limestone Water Utility Operating Company, LLC ("Limestone Water" or "Company") is the CSWR utility operating company in the State of Tennessee.

Q. WHAT IS YOUR POSITION WITH CSWR?

A. I am Senior Vice President of CSWR, the affiliated company that has operational/managerial oversight over the CSWR operating companies including Limestone Water. At CSWR, my responsibilities include the acquisition and operation of CSWR-affiliated utilities. Among other duties, and relevant to this testimony, I am responsible for engaging and overseeing operations and maintenance ("O&M") service providers including those contractors responsible for day-to-day operations of CSWR operating affiliates like Limestone Water. In addition, I am responsible for overseeing CSWR/Limestone Water's customer service function. At the present time, I oversee such

activities for affiliated operating companies providing water or wastewater utility services to over 167,000 connections in Kentucky, Missouri, Arkansas, Tennessee, Louisiana, Texas, Mississippi, North Carolina, South Carolina, Arizona, and Florida.

Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.

A. My education includes a Bachelor of Science in Civil Engineering from the Missouri University of Science and Technology, and a Master of Business Administration from Washington University in St. Louis.

Prior to joining CSWR in January of 2017, I was President of Brotcke Well and Pump (the second largest well driller and service provider in the Midwest); Vice President of Operations and Business Development of the Midwest for American Water Contract Operations; and General Manager of Midwest Operations for Environmental Management Corporation. I currently serve on the East Central Missouri Board of Directors and am an Advisory Board member for the Public Water Supply District 2 of St. Charles County, Missouri, which is the largest water and sewer district in the State of Missouri, serving approximately 60,000 connections.

Brotcke Well and Pump serves municipal potable, regulated potable, and industrial ground water suppliers in Missouri, Illinois, Kansas, Tennessee, and Arkansas. Its total number of clients exceeds 200, and the systems they serve range in size from the City of Bloomington, Illinois, with 31,000 water customers, to 230 customers in the City of Eminence, Missouri. Brotcke Well and Pump drills, cleans, treats and tests wells for regulatory compliance, installs, services and rebuilds pumps, and installs and services well controls. As President of Brotcke Well and Pump, I was involved in the design,

maintenance, and repair of all clients' well systems. Therefore, I have firsthand experience with how much damage can be done by lack of maintenance on a well system and how much money and effort is required to restore a well system after neglect.

As Vice President of Operations and Business Development of the Midwest for American Water Contract Operations, I was responsible for the water and wastewater operations and maintenance contracts for municipal and industrial clients. At one time, I had responsibility for operating water and wastewater systems serving approximately 64,000 residential connections. My responsibilities included the direction and management of annual budgeting for each plant's operations and maintenance, design and planning of plant upgrades and maintenance projects, regulatory reporting, plant operations, and regulatory compliance of these systems.

My position as General Manager of Midwest Operations for Environmental Management Corporation was similar to my position with American Water Contract Operations with regard to the size and scope of the systems the company managed.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE STATE UTILITY COMMISSIONS?

A. Yes. I have testified before the Missouri, Mississippi, Texas, Kentucky, Tennessee, and Louisiana state utility commissions.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION ("TPUC" OR "COMMISSION")?

A. The purpose of my testimony is:

► To explain the process CSWR uses to identify and engage qualified third-party contractors to provide day-to-day O&M functions for its operating companies like Limestone Water, and why using third parties to perform these functions is in the best interests of both Limestone Water and its customers.

► To discuss the O&M contractors that Limestone Water currently engages for its Tennessee systems, as well as the roles and responsibilities of Limestone Water's Tennessee Regional Manager. I will further describe some of the measures that Limestone Water has implemented in order to improve the effectiveness of its O&M partners and the ability to provide safe and adequate service.

► To explain the condition of the systems that Limestone Water currently owns, as well as the improvements that the Limestone Water operations team has made at those systems to ensure safe and reliable water services. These operational improvements differ from those supervised by the compliance team under Limestone Water witness Mr. Duncan's supervision as well as the capital improvements made by the engineering team under Mr. Freeman's supervision.

► While Limestone Water witness Mr. Thies will handle the quantification of the acquisition adjustments associated with Limestone Water's purchase of its various Tennessee systems and the requested recovery of those acquisition adjustments, I will provide operational support for that request as provided by Tenn. Comp. R. & Regs. 1220-04-14-.04.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes, as introduced later in this testimony, I am sponsoring:

Petitioner's Exhibit TT-1 - a map of the Limestone Water water/wastewater systems;

Petitioner's Exhibit TT-2 – a copy of the Limestone Water RFQ to identify qualified O&M partners;

Petitioner's Exhibit TT-3 – a copy of a typical RFP package;

Petitioner's Exhibit TT-4 – a copy of a letter from the Missouri Department of Natural Resources discussing the success that CSWR has had in rehabilitating distressed systems in Missouri;

Petitioner's Exhibit TT-5 – a copy of a letter from the Mississippi Department of Environmental Quality addressing similar issues in Mississippi; and

Petitioner's Exhibit TT-6 – a recent survey conducted by the Louisiana Department of Health grading the performance of public water/wastewater systems in Louisiana including those operated by the CSWR affiliate in Louisiana.

Q. WERE THESE EXHIBITS PREPARED BY YOU OR PREPARED UNDER YOUR SUPERVISION?

A. Yes.

II. OPERATIONS AND MAINTENANCE FUNCTIONS

Q. WHY DOES LIMESTONE WATER USE THIRD-PARTY CONTRACTORS TO PERFORM O&M FUNCTIONS INSTEAD OF HIRING EMPLOYEES TO PERFORM THOSE FUNCTIONS?

A. As with all water/wastewater systems, there is a need for licensed, experienced operators in Tennessee. In my experience, where systems and connections are concentrated in a

relatively small area, utilities may be able to cost-effectively employ such operators as part of their own workforce. As an example, as reflected in its recent rate case filing, Tennessee American Water Company ("Tennessee American") provides water service to approximately 87,000 connections (roughly 420,000 people) served by four separate public community water systems in 14 Tennessee communities.[1] As reflected on the map attached to Mr. Stout's testimony in Tennessee American's pending rate case, these systems are located within approximately 30 miles of each other in southeast Tennessee.[2] Further demonstrating the size of its largest service area, the Tennessee American water treatment plant in Chattanooga has the capacity to treat 65.0 million gallons per day.[3] Given the concentrated nature of its operations, Tennessee American has internalized the field operations for these service areas.[4]

In contrast, Limestone Water's 10 water and wastewater systems in Tennessee are geographically dispersed across the state. A map showing the location of the systems that Limestone Water serves in Tennessee is attached to my testimony as **Petitioner's Exhibit TT-1**. Further showing the difference between the nature of the operations of Limestone Water and Tennessee American, Limestone Water provides service to approximately 573 water and 1,914 wastewater customers. Limestone Water's largest water producing system

[1] *See* Direct Testimony of Grant Evitts, Docket No. 24-00032, at 1.
[2] *See* Direct Testimony of Grady Stout, Docket No. 24-00032, Exhibit GS-1.
[3] *Id.* at page 5.
[4] *Id.* at pages 5-6 ("Field Operations is responsible for operating and maintaining transmission and distribution assets, utility service lines, fire services, and metering assets. In addition, Field Operations provides field-level service to customers, including meter reading, service requests, and field-related leak repairs. Finally, Field Operations works with the Engineering Department and new customers to provide new and replacement services and to coordinate the construction of certain new and replacement or rehabilitated distribution assets. . . To operate and maintain the distribution systems, the Company employs a management team, technical staff, and skilled workforce, which works around the clock every day of the year. No matter the time of day, the day of the week, or the weather conditions, Tennessee-American Water employees are working to maintain safe and reliable water service to its customers."

(Candlewood Lakes)[5] serves approximately 105 connections through a well capable of producing 88 gallons/minute (126,000 gallons per day). Similarly, Limestone Water's largest wastewater system (Cartwright Creek – Grassland) provides service to approximately 553 connections. Given this geographical dispersion and the limited number of connections served in Tennessee, it would be almost impossible for Limestone Water to cost-effectively employ an in-house workforce of sufficient size to perform all required O&M functions necessary to fulfill the objective of providing customers safe, reliable, and timely utility service at reasonable rates. Given the dispersed nature of its operations, as well as the fact that it serves a much lower number of customers, Limestone Water has employed an operations model based around contract operations.

Q. IS WORKFORCE SIZE THE ONLY CONSIDERATION WHEN DECIDING TO EMPLOY THIRD-PARTY CONTRACTORS?

A. No. Operators of our facilities - those performing the O&M functions that are necessary for Limestone Water - must be highly trained, experienced, and have all state licenses required to operate water and wastewater systems and do so in a manner that complies with federal, state, and local laws and regulations. CSWR believes that, given the internal cost of hiring, training, and retaining qualified employees, it is more economical to retain third-party contractors who already have experienced operators and required state licenses.

Q. DO CSWR-AFFILIATED COMPANIES USE THIRD PARTIES IN OTHER STATES TO PERFORM O&M AND CUSTOMER SERVICE FUNCTIONS?

A. Yes. Using third-party contractors is the method all CSWR utility affiliates use to perform O&M functions. CSWR has learned through its experience in Tennessee and other states

[5] The Aqua Utilities system north of Nixon serves more customers (approximately 419) but does not produce its own water. Instead, this system relies entirely upon a water purchase arrangement with the city of Savannah, Tennessee.

that using third-party contractors is a more cost-effective option for fulfilling these O&M responsibilities.

Q. PLEASE DESCRIBE THE PROCESS CSWR USES TO IDENTIFY AND ENGAGE THIRD-PARTY O&M CONTRACTORS IN TENNESSEE.

A. The process CSWR uses has two distinct parts: identifying qualified contractors and then, after soliciting and evaluating competitive bids, then engaging one or more contractors to provide the required O&M services. In addition, CSWR must conduct regular management and oversight of the O&M contractors it engages to ensure that they are doing the work necessary to provide safe, continuous, and adequate service.

Q. HOW DOES CSWR IDENTIFY QUALIFIED CONTRACTORS TO PERFORM THE O&M FUNCTIONS THAT LIMESTONE WATER REQUIRES?

A. CSWR's contractor identification process begins with the evaluation of the qualifications of prospective contractors. CSWR initiates the process with a written "Request for Qualification" ("RFQ"). CSWR disseminates information about contracting opportunities (including information about how to obtain an RFQ) as broadly as possible throughout the region or state with the goal of identifying as many potential contractors as possible to bid on available work. CSWR utilizes several avenues to identify potential contractors. These include, but are not limited to, web searches, contacting local water associations, word-of-mouth, and through local contacts in the area. A copy of the RFQ form that CSWR uses for Limestone Water is attached to my testimony as **Petitioner's Exhibit TT-2**.

The RFQ requires that contractors be highly trained, experienced, and have all state licenses required to operate the relevant water and wastewater systems. CSWR also requires that its contractors commit themselves to respond to customer service emergencies

within a specified time period – usually within two hours of a request for assistance – regardless of when those emergencies arise. CSWR also requires contractors to provide their own insurance – this helps insulate the Company and its customers from liability for acts that result in damage to others.

Q. HOW DOES CSWR EVALUATE RFQ RESPONSES IN THE O&M CONTRACTOR SELECTION PROCESS?

A. The goal of evaluating the RFQ responses is to determine which respondents are qualified to go to the next step in the process. The RFQ process provides CSWR the opportunity to determine which potential contractors actually satisfy all the qualifications and requirements stated in the RFQ. Pre-qualifying prospective contractors based on their RFQ responses is critical because it saves time by eliminating unqualified bidders.

Q. WHAT HAPPENS AFTER CSWR HAS EVALUATED THE RFQ RESPONSES AND IDENTIFIED QUALIFIED CONTRACTORS?

A. The next step is to send a formal "Request for Proposal" ("RFP") to qualified contractors. Generally, the RFP includes a proposal letter specifically identifying the contractor's tasks, duties, and responsibilities (sometimes referred to as a "Statement of Work"); a list of all facilities for which Limestone Water is seeking proposals; the permit numbers of those facilities; a draft of the contract the successful bidder would be required to sign (which includes the Statement of Work); and the date the RFP response is due. Also included in the package is a bid response page, which requires the contractor to provide key cost information about its bid. CSWR considers all of these documents to be a critical part of the response in that it allows CSWR to compare the RFP responses on a consistent basis relative to both cost and service levels.

I have included a typical RFP package as **Petitioner's Exhibit TT-3** to my direct testimony. These RFPs contain multiple service areas or projects to best utilize economies of scale and yield cost-savings for customers. For the purpose of soliciting bids, CSWR will divide up projects regionally in order to lower operational costs and to make the projects more manageable for CSWR and the selected contractor. Another benefit to the regionalization of its contractor network is that it gives opportunities to local operations firms who are typically more familiar with local conditions and often have prior direct experience with the actual facilities CSWR is seeking support to operate.

Q. HOW DOES CSWR COMPARE RFP RESPONSES AND SELECT A WINNING BID?

A. After identifying which bidders demonstrate adequate capability to provide services, CSWR determines the "lowest and best qualified bid," which considers price in context of the overall quality of the bidder's proposal. Once CSWR has made a preliminary choice of a winning bidder, it schedules a follow-up meeting to confirm the accuracy of the bid documents and to make sure that the contractor understands all requirements and appreciates their importance. Following that meeting, the winning bidder is confirmed and is asked to enter into a signed agreement.

Q. HAS THE RFP PROCESS HELPED TO MANAGE THE COST OF O&M SERVICES IN TENNESSEE?

A. Yes. Limestone Water has recently completed an RFP for O&M services in Tennessee. During a period when inflation has typically been 3-4%, the monthly charge as a result of that RFP only increased by 0.95%. Further, while the three-year O&M contract includes

automatic annual escalators, those escalators are only 3%, which is also below the current annual rate of inflation.

III. TENNESSEE O&M PARTNER AND STATE MANAGER

Q. WHICH O&M CONTRACTORS DOES LIMESTONE WATER CURRENTLY USE TO OPERATE AND MAINTAIN ITS TENNESSEE WASTEWATER SYSTEMS?

A. Limestone Water currently uses Clearwater Solutions, LLC ("Clearwater") to operate and maintain the Company's water and wastewater systems in Tennessee. Clearwater provides a highly experienced, dedicated, professional team of onsite and bench strength resources for expert, compliant operations of water/wastewater systems. Clearwater's dedicated operations team brings decades of experience in the utility industry managing clients' utility operations and offers expertise and best practices for effective, efficient, and compliant operations and maintenance.

Q. WHAT IS THE CURRENT STATUS OF THE O&M CONTRACT THAT LIMESTONE WATER HAS IN PLACE WITH CLEARWATER IN TENNESSEE?

A. Limestone Water has a single, unified contract with Clearwater. That contract resulted from an RFP that was awarded on March 8, 2024. The 3-year contract was executed with an effective date of April 1, 2024 and an expiration date of March 31, 2027.

Q. DOES CSWR UTILIZE ANY TECHNOLOGIES TO ASSIST ITS CONTRACTORS IN THE PROVISION OF SAFE AND ADEQUATE SERVICE?

A. CSWR utilizes several off-the-shelf technologies to: (1) cost-effectively enhance work performed by its O&M contractors, (2) help minimize costs, and (3) improve the quality of service provided to Limestone Water's customers. For example, CSWR has

implemented a computerized maintenance management system called Utility Cloud to benefit its affiliated utility operating companies. Utility Cloud is a work order-based system used to: (1) catalog all equipment employed in each Limestone Water system; (2) host distribution and collection system mapping; (3) automatically schedule preventive maintenance; (4) schedule necessary repairs; and (5) schedule and record responses to customer complaints and service calls. The Utility Cloud system operates via smartphones and handheld devices, so it is easily utilized by all CSWR O&M contractors. Utility Cloud ensures that Limestone Water systems are well-maintained; property, plant, and equipment records are maintained; and customer service needs are systematically and expeditiously addressed with appropriate recordkeeping of customer service needs.

Q. DOES UTILITY CLOUD PROVIDE OTHER BENEFITS TO CUSTOMERS?

A. Yes. For instance, since Utility Cloud can provide a degree of geofencing, it assures CSWR that the third-party operator actually inspects the systems and when those inspections occur. Thus, the software allows CSWR to monitor its Tennessee O&M contractor to ensure that the contractor is doing the work for which it was hired on a timely and competent basis and is meeting the needs of the Company and its customers, which ensures that services are being provided effectively and efficiently.

Q. DOES CSWR UTILIZE ANY OTHER TECHNOLOGIES TO MAKE OPERATIONS MORE EFFICIENT AND EFFECTIVE IN TENNESSEE?

A. Yes. Another cost-effective technology CSWR employs in many states is a remote monitoring platform. The remote monitoring sensors on each system are set to provide ongoing utility system operational performance monitoring and early warnings to Limestone Water and its O&M contractor in the event there are operational issues. In most

cases, those warnings are broadcast before the issue adversely affects customers' water or wastewater service. Examples of the types of problems the remote monitoring system is designed to detect include power outages at water wells and sewage lift stations, chlorine residual readings on water distribution systems, low pressure issues on water distribution systems, high level alarms on sewage system lift stations, and low levels in water storage tanks. When these alarms activate, the remote monitoring system immediately sends information to CSWR and its O&M contractor, which allows the Company and its contractor to react before customers are even aware of the problem and before the problem can affect customer service.

Q. DOES THE DEPLOYMENT OF THIS TECHNOLOGY HELP THE COMPANY TO OPERATE AND MAINTAIN LIMESTONE WATER'S SYSTEMS IN A COST-EFFECTIVE WAY?

A. Yes. For example, I mentioned in my previous answer that the remote monitoring system is programmed to monitor high level alarms at sewage lift stations. Absent remote monitoring, prudent operation (and Tennessee requirements) requires contractors to check levels in sewage lift stations daily, which would require the O&M contractor to dispatch an employee each day to check lift station levels. These daily visits are costly and would lead to higher rates. While operators are always on hand to respond to issues that are detected, the remote monitoring system mitigates the need for daily visits unless the system detects a problem. The remote monitoring system also archives these daily readings so that they can be accessed in case the systems are subjected to a compliance audit or subsequently develop operational problems. This data allows CSWR to determine the start and duration of the problem, which aids in prompt resolution.

Q. WHAT IS THE STATUS OF LIMESTONE WATER' DEPLOYMENT OF REMOTE MONITORING?

A. The deployment of remote monitoring at specific systems is discussed later in my testimony when I discuss these individual locations. That said, as of June 30, 2024, Limestone Water has deployed 56 remote monitoring modules in Tennessee with plans to install an additional 19 terminals in the very near future.

Q. WHAT OTHER PLATFORMS DOES CSWR USE FOR LIMESTONE WATER SYSTEMS TO COST EFFECTIVELY OPERATE THOSE SYSTEMS?

A. The last tool, SAMS, is an Environmental Management Information System ("EMIS") for systematically obtaining, processing, and making available relevant environmental information. SAMS is a platform that helps manage the entire compliance and data needs of a water/wastewater utility in a single unified architecture. This platform allows automated reporting to simplify customer confidence reports, discharge monitoring reports, and monthly operations reports. This platform is integrated with the Safe Drinking Water Information System and the EPA's central data exchange. SAMS allows CSWR to monitor results automatically for all of its states and should increase compliance with environmental regulations.

Q. WHAT TASKS DOES CSWR STATE MANAGER PERFORM TO ENSURE LIMESTONE WATER'S CUSTOMERS RECEIVE CONTINUOUS AND ADEQUATE SERVICE.

A. While the Company is dedicated to streamlining its operations and personnel as much as possible to make service affordable and reliable, due to the size and geographical dispersion of its operations in Tennessee, CSWR has a Regional Manager, Brad Thibault,

who is responsible for overseeing and assisting in all third-party O&M functions in Tennessee. Having an employee responsible for these Tennessee-specific duties helps CSWR to ensure that Limestone Water is fulfilling its commitment to providing safe and reliable water and wastewater service to its customers. In this role, Mr. Thibault oversees the operations of Limestone Water's third-party O&M contractors to ensure:

- each of Limestone Water's systems complies with all federal, state, and local public health and environmental regulations;
- the Company's third-party O&M contractors operate consistent with all federal, state, and local safety regulations;
- Limestone Water's third-party O&M contractors fulfill all contractual obligations; and
- all necessary preventive and corrective maintenance is timely and competently performed on the Limestone Water systems to keep them functioning and to avoid outages that adversely affect customers.

In addition, Mr. Thibault serves as Limestone Water's primary in-person customer representative, which ensures that when customers require direct communication with a local representative, Mr. Thibault can ensure that the customer's concerns are addressed. While customers are encouraged to bring issues to the customer experience department, Mr. Thibault fulfills this responsibility to the extent the matters require an in-person visit from a Limestone Water representative.

Finally, I personally hold monthly reviews with each Regional Manager to review: (1) dashboards and metrics for timeliness of completing customer servicer emergency work orders, (2) the status of remote monitoring, (3) the frequency of site visits, (4) compliance

exceedances causes and corrections, (5) required data entry into SAMS, (6) budget to actual for operations and maintenance expense, and (7) to confirm that the project oversight tracker has been built and maintained for newly acquired systems.

Q. DO YOU BELIEVE THAT THE USE OF THIRD-PARTY O&M PARTNERS HAS LED TO SAFE AND RELIABLE SERVICE FOR CUSTOMERS?

A. Yes. Feedback from environmental regulators in several of the CSWR states indicate that customers are receiving and experiencing an improved level of service from that previously provided. For instance, in the context of Confluence Rivers Utility Operating Company's recent Missouri rate case, the Missouri Department of Natural Resources provided a letter indicating its appreciation for the actions taken by CSWR in acquiring and rehabilitating distressed water and wastewater systems.

> 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 has proven to be beneficial to human health and the environment by bringing 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.[6]

In a similar fashion, the Mississippi Department of Environmental Quality submitted a similar letter to the Mississippi Public Service Commission in support of Great River Utility Operating Company's rate case in that state.

> As you may be aware, Great River Utility Company has recently acquired several drinking water systems across the state. Great River Utility has

[6] Petitioner's Exhibit TT-4.

> worked closely with the Bureau's compliance and field staff to maintain compliance with the various rules and regulations of the Safe Drinking Water Act. A viable entity such as Great River Utility desiring to help problematic drinking water systems by investing in them for improved services to citizens is very appreciated and supported by the Bureau. We believe the Bureau's coordination with the PSC to identify problematic drinking water systems and to identify long-term solutions, such as those offered by entities like Great River, is very beneficial to our shared goals and objectives.[7]

Finally, the Louisiana Department of Health has recently issued its 2023 grades of the community public water systems in that state. Under state statute, the Department of Health is required to evaluate the drinking water systems in the state. Of the 64 water systems owned and operated by CSWR's affiliate (Magnolia Water), Magnolia Water received 63 A's and 1 B.[8]

While I believe, based upon my personal experience and observation, that Limestone Water's use of third-party O&M contractors is leading to safe and adequate service in Tennessee, these representative examples from Missouri, Mississippi and Louisiana all provide objective opinions reaching the same conclusion for other CSWR affiliates that are using a similar third-party approach to operations.

IV. SYSTEM IMPROVEMENTS MADE BY OPERATIONS TEAM

Q. PLEASE DESCRIBE HOW THIS SECTION OF YOUR TESTIMONY IS ARRANGED.

A. Prior to acquiring a system, Limestone Water will routinely undertake certain due diligence including the preparation of a third-party engineering memorandum. This memorandum will seek to assess the condition of the system, the condition of any equipment including

[7] Petitioner's Exhibit TT-5.
[8] Petitioner's Exhibit TT-6.

the absence of necessary equipment, and necessary operational changes that will need to be made. Where the operational changes involve engineering changes or issues that will need to be permitted, those improvements will flow through the Company's engineering department. Those changes are described in the testimony of Mr. Freeman. That said, however, many improvements and upgrades only become known once Limestone Water has had the opportunity to operate the system for a period of time. Where improvements are made by the operational team that do not fall within the purview of Mr. Freeman's engineering department, those changes will be made by my operational team under my supervision.

By definition, operational improvements and upgrades can only be made to systems that Limestone Water already owns and operates. Therefore, while necessary engineering improvements may already be known and scheduled for systems yet to close, operational improvements can only be made once a system is owned. Therefore, this section discusses the operational improvements and upgrades that have been made to each of Limestone Water's eight wastewater systems and two drinking water systems. Those systems, the applicable acquisition, Tennessee docket number, and closing date are as follows:

Acquired Company	System	System Type	Docket Number	Closing Date
Aqua Utilities		Wastewater	19-00062	3/18/21
Cartwright Creek	Arrington Retreat	Wastewater	21-00053	12/21/21
	Grassland	Wastewater	21-00053	12/21/21
	Hardeman Springs	Wastewater	21-00053	12/21/21
	Hideaway	Wastewater	21-00053	12/21/21
Chapel Woods		Wastewater	21-00060	10/12/22
Shiloh Falls		Wastewater	21-00055	2/22/23
DSH	Lakeside Estates	Wastewater	23-00016	1/23/24
Aqua Utilities		Drinking Water	19-00062	3/18/21
Candlewood Lakes		Drinking Water	21-00059	5/11/23

A. Aqua Utilities Wastewater

Q. PLEASE DESCRIBE THE AQUA UTILITIES ("AQUA") WASTEWATER SYSTEM.

A. The Aqua Utilities wastewater treatment system operates as a non-discharging wastewater system and consists of a single cell aerated lagoon call, with ultraviolet disinfection prior to be applied to a 32-acre spray irrigation field. The facility relies on evaporation and spray irrigation to dispose of water, but at the time of acquisition, only occasionally needed to discharge to the spray field. The facility is located near Savannah, TN in Hardin County and serves 378 connections. The facility was acquired by Limestone Water in March 2021.

Q. WHAT WAS THE GENERAL CONDITION OF THE AQUA WASTEWATER SYSTEM AT THE TIME THAT IT WAS ACQUIRED?

In addition to the previously described functional assets, at the time that it was acquired, the facility also had a sand filter which had been bypassed (no longer in use) due to its poor condition. As will be discussed, while the lagoon itself was in adequate condition, other aspects of the system needed immediate repairs. For instance, the aeration system, building structures, ultraviolet disinfection system, effluent pumping and spray field, and electrical/control systems were all in need of routine maintenance and operational adjustments. Most importantly, the collection system, including the lift stations, were in dire need of system upgrades.

1. Lagoon System

Q. PLEASE DISCUSS THE CONDITION OF THE AQUA LAGOON.

A. At the time of acquisition, the lagoon was in adequate condition and included a polymer liner which had prevented berm deterioration caused by nuisance vegetation, erosion, and varmint burrowing.

2. Aeration System

Q. PLEASE DESCRIBE THE CONDITION OF THE AQUA AERATION SYSTEM AT THE TIME OF ACQUISITION.

A. While the Aqua aeration system appeared to be functioning properly, it appeared to have been frequently left turned off and not operating by previous ownership, presumably to save money on power expenditures. This conclusion is based upon reviewing historic aerial photography and noting that signs of a functional aeration system apparent in only one of seven satellite photos since 1997. As a result, a primary component of the treatment process (aeration) was effectively not functional. Therefore, wastewater treatment was compromised.

Q. WHAT IMPROVEMENTS HAVE BEEN MADE TO THE AQUA AERATION SYSTEM SINCE THE ACQUISITION?

A. The most immediate improvement to the aeration system was to simply operate the system consistently as designed. In operating the system, however, an air-line leak was identified which reduced the air supplied to the lagoon and decreased the efficacy of system treatment. The air leak was repaired, and full functionality of the system was restored.

In addition, the blower had maintenance issues with the belt connecting the motor to the blower breaking shortly after acquisition. Limestone Water quickly replaced the damaged belt and serviced the blower and blower motor to ensure proper function and to extend the useful life of the blower motor.

Q. WHAT ARE THE OPERATIONAL BENEFITS OF REPAIRING THE AERATION SYSTEM AND RUNNING IT AS DESIGNED?

A. By not only repairing the air leaks and completing deferred maintenance on the blower and blower motor, but also ensuring the aeration system was operated as originally designed, Limestone Water has dramatically increased the efficacy of the treatment at the facility. A fully functional aeration system results in cleaner effluent distributed to the spray irrigation field resulting in improved environmental health and a reduction of health hazards. The increased aeration also aids in the long-term breakdown of sludge in the lagoon cell, reducing the frequency of sludge hauling, and reducing operating costs for the facility.

Q. DO YOU HAVE PHOTOS WHICH SHOW THE IMPROVEMENTS MADE TO THE AQUA AERATION SYSTEM?

A. Yes. The following pictures show the lagoon condition at the time of acquisition given the lack of aeration (left) and the condition after the aeration system was restored following acquisition (right).

3. Facility Structures

Q. PLEASE DESCRIBE THE AQUA FACILITY STRUCTURES AND THE CONDITION OF THOSE STRUCTURES AT THE TIME OF ACQUISITION.

A. The primary structure at the Aqua lagoon site contains the blower, disinfection equipment, and the nonfunctional sand filter. Some other smaller structures exist throughout the site

to support power, remote monitoring, and control equipment as well as a small stone retaining wall.

At the time of acquisition, all of the structures needed some level of repair. These repairs ranged from simple painting for the purpose of preserving useful life, to greater activities to restore life due to damage caused by fallen tree limbs.

Q. WHAT IMPROVEMENTS WERE MADE TO THE AQUA FACILITY STRUCTURES BY LIMESTONE WATER?

A. Limestone Water has replaced the storage shed, including the construction of an additional awning and pipe storage rack to protect equipment. The blower building has experienced significant improvements, including the installation of new siding and roof to protect the equipment inside and restore the useful life of the structure.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THESE IMPROVEMENTS?

A. Yes. The following photos show the improvements made to the Aqua facility structures.

Blower building at acquisition with deteriorating roof and siding; new aluminum siding on blower building.


Piles of trash, pipes, and other materials at closing (left) new storage shed with awning and pipe racks (right).

4. Disinfection System

Q. PLEASE DESCRIBE THE AQUA FACILITY DISINFECTION SYSTEM AND THE CONDITION OF THAT SYSTEM AT THE TIME OF ACQUISITION.

A. As mentioned, the Aqua wastewater system utilized an ultraviolet disinfection system. While the system was functional at the time of acquisition, several issues were identified with the system. For instance, it was realized that the lift station that moved water from the lagoon through the disinfection system to the spray field was pumping at a rate that exceeded the designed flow rate and overwhelmed the capability of the disinfection system. Furthermore, the ultraviolet disinfection system was also determined to be well overdue for required maintenance to ensure the system was properly functioning.

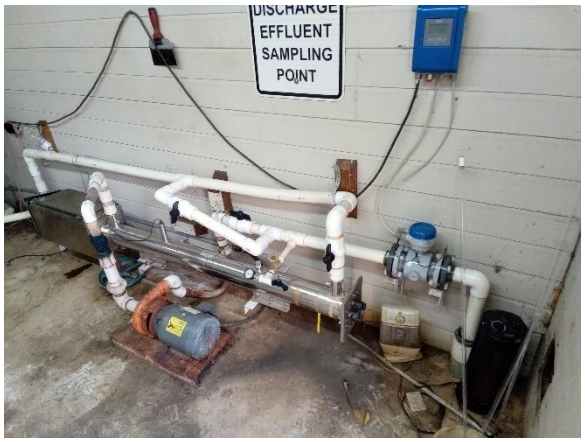
Q. WHAT IMPROVEMENTS WERE MADE TO THE AQUA DISINFECTION SYSTEM BY LIMESTONE WATER?

A. Initially, the ongoing costs of operating and maintaining the disinfection system, as well as the operational modifications needed to ensure the flow rate of the disinfection system was not exceeded, led Limestone Water to consider alternatives to repairing the ultraviolet ("UV") system and modifying the effluent disposal system. It was then determined that

by simply upgrading the fencing at the spray field, to be discussed later in my testimony, and preventing public access to any of the spray area, the Tennessee Department of Environment and Conservation ("TDEC") operating permit could be modified to eliminate the need for disinfection. This allowed for the removal of the disinfection system and the reduction of the associated operating and maintenance costs while preventing public access to the discharge area and increasing public safety.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THE REMOVAL OF THE DISINFECTION SYSTEM?

A. Yes. The following photos depict the disinfection system at the time of acquisition (left) and the removal of that system (right). Note, the second photo shows the existence of a backup effluent pump which will be discussed later as well.



5. Effluent Pumping and Spray Field

Q. PLEASE DESCRIBE THE AQUA EFFLUENT PUMPING AND SPRAY FIELD EQUIPMENT AT THE TIME OF ACQUISITION.

A. While functioning, there were several issues with the Aqua effluent pumping and spray field system at the time of acquisition. Specifically, the spray field system was infrequently utilized under previous ownership, typically only discharging from the lagoon once or

twice per year. As a result, significant amounts of sludge had accumulated in the lift station used for pumping wastewater through the disinfection system and to the spray field. Additionally, as previously described, the lift station's pump rate exceeded the design flow rate for the disinfection system.

Q. WHAT IMPROVEMENTS DID LIMESTONE WATER MAKE TO CORRECT THESE SHORTCOMINGS?

A. First, upon acquiring the Aqua system, the sludge was removed from the lift station. Moreover, as described in the immediately previous section, the disinfection system was decommissioned, and permit requirements were revised to remove the need for *E. coli* sampling and analysis. This necessitated fencing installation and repair around the spray field to prevent public access to the area in which the *E. coli* parameters had been removed from the state permit. The pump rate at the discharging lift station was also reduced to minimize the solids pushed to the spray fields. Process control changes to turn off aeration prior to pumping to the spray field were also implemented. This aided in reducing the frequency of spray nozzle fouling and has been a very effective change to the system operation. In addition, a preventative maintenance measure was established in Utility Cloud to clean the nozzles based on a set frequency

As previously described, the sand filter system had been removed from service at some point under previous ownership. The elimination of the sand filter system made it essential that the pumping system was configured and operated in a manner that would minimize the number of solids pushed to the discharge system as this can lead to blocked pipes and spray heads in the spray irrigation system. Additionally, upon acquisition there was a single effluent pump present in the effluent disposal system. Proper operational

procedure calls for the existence of a backup pump to ensure that the disposal system is functional in the event of a pump failure. Limestone Water installed a backup pump for use in the event of a pump failure.

Finally, the spray field was found to have several areas where valving had failed and some areas of the spray field had dead spots due to broken distribution lines. Furthermore, some portions of the spray field were found to have exposed distribution lines, putting them at risk of freezing and being damaged. Limestone Water immediately repaired these issues to restore proper function to the spray field. The utilization of the entire spray field helps to ensure against unauthorized discharges due to overloaded portions of the spray field running off. Such an unauthorized discharge can cause negative public and environmental health impacts.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THESE IMPROVEMENTS?

A. Yes. The following photos represent the problems with the effluent pumping and spray field at the time that the Aqua system was acquired as well as the improvements made by Limestone Water.

Single effluent pump present at acquisition (left), new backup effluent pump (in blue) now on site (right).

Exposed spray field distribution lines which have since been buried.

6. Electrical and Control Systems

Q. PLEASE DESCRIBE THE AQUA ELECTRICAL SYSTEMS AT THE TIME THAT THE SYSTEM WAS ACQUIRED AND THE IMPROVEMENTS THAT WERE MADE TO RESOLVE THESE PROBLEMS.

A. A number of electrical and control systems at the Aqua treatment plant needed repairs or improvements. This included panels and power supply boxes for the blowers, effluent pumping, and disinfection systems. Ensuring these systems are properly maintained is necessary to provide consistent and reliable treatment and ensure proper function of all facility systems. Improvements were also made to facilitate remote monitoring equipment, which will be discussed further in a later section.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THE IMPROVED POWER AND CONTROL SYSTEMS AT THE AQUA SYSTEM?

A. Yes. The following photo shows the upgraded power and control system in the blower/disinfection shed.

7. Sand Filter

Q. PLEASE DESCRIBE THE CONDITION OF THE SAND FILTER AT THE AQUA SYSTEM AT THE TIME OF ACQUISITION.

A. As previously indicated, the Aqua wastewater treatment plant was originally equipped with a sand filter through which the lagoon effluent was pumped prior to disinfection and discharge across the spray field. At some point well prior to acquisition, however, the sand filter was removed from service and the equipment was allowed to fall into disrepair. This removal was done without a permit modification or informing TDEC that the treatment process had been bypassed. Upon acquiring the system, the Company determined that the system was capable of meeting suspended solids permit limits without the sand filter. Therefore, after consulting with TDEC, it was determined that the sand filter could be permanently removed from the treatment process. Given this, Limestone Water has properly removed the sand filter from the site. This determination avoided unnecessary capital investments and rate increases associated with restoring or replacing the sand filter system.

Q. DO YOU HAVE A PHOTO DEPICTING THE ABANDONED SAND FILTER?

A. Yes. The following photo shows the sand filter that was simply retired in place by prior ownership and allowed to fall into disrepair.

8. General Site Condition

Q. PLEASE DESCRIBE THE GENERAL SITE CONDITION OF THE AQUA SYSTEM AT THE TIME OF ACQUISITION.

A. In addition to the previously discussed specific system problems, many more general site upkeep issues were identified at the Aqua treatment plant site. First, trash and debris were left in piles in some areas around the site. Second, many areas of fencing were damaged. The damage was primarily the result of tree and vegetation overgrowth around the fence line. Third, there was no proper access road to reach the spray field area and some portions of the access road to the treatment facility needed repairs.

Q. WHAT IMPROVEMENTS DID LIMESTONE WATER MAKE TO THE GENERAL SITE CONDITION?

A. First, Limestone Water immediately set out to remove all of the unnecessary trash and debris allowed to accumulate at the Aqua system. Next, the nuisance vegetation and trees were cleared, and fence damage was repaired to restore site security, prevent trespassing

on the site, and prevent animals from entering the lagoon area and causing damage to berms. With the fencing repair, facility signage was also installed, and other nuisance vegetation was removed throughout the treatment site. Additionally, an access road was installed to reach the spray field and the damaged portions of the facility access were restored. Adequate access is essential to ensure that operations staff can reach the facility in any weather condition. Beyond this work some miscellaneous site improvements were also completed, including removing trees from the spray field area, grading improvements in uneven areas around the site, and gate tensioning.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THESE IMPROVEMENTS?

A. The following photos show many of these improvements.

Trash piles allowed to accumulate throughout the Aqua facility.

Examples of fencing damage at the Aqua facility.

Repaired fence line.

9. Collection System

Q. PLEASE DESCRIBE THE CONDITION OF THE COLLECTION SYSTEM AT THE AQUA SYSTEM AT THE TIME OF ACQUISITION AND THE RESPONSE MADE BY THE COMPANY.

A. Since acquisition, a number of significant issues with the Aqua collection system have been identified. A number of collection system leaks have been investigated and identified and numerous repairs made to collection system lines. These repairs are important to prevent release of untreated waste into the environment which could harm customers or impact environmental health. Such repairs also serve to reduce inflow and infiltration ("I&I") of groundwater into the collection system, which can increase flows to the treatment plant leading to increased treatment costs and potentially overwhelming the plant.

Q. PLEASE DESCRIBE THE CONDITION OF THE COLLECTION SYSTEM LIFT STATIONS AT THE AQUA SYSTEM AT THE TIME OF ACQUISITION.

A. The Aqua wastewater system has 43 lift stations scattered throughout the collection system. Following acquisition, it became clear that poor operations and maintenance practices had previously been in place, which severely affected the functioning of the lift stations. Proper

lift stations should have: (1) a reliable control system, (2) proper valving to allow for bypass pumping in the event of a power outage, (3) redundant pumps with proper rails installed to provide pump redundancy and the ability to maintain pumps, and (4) either fencing or a locking lid to prevent tampering and to protect the public from exposure to wastewater and pumping equipment. Despite this, it was observed that many of the Aqua wastewater lift stations lacked such necessary equipment.

Before any of these issues could be addressed, however, many lift stations were found to be full of solids that needed to be pumped out so that evaluation, repairs, and maintenance could take place. The presence of accumulated solids in a lift station indicates poor operational practices that reduce the storage capacity of lift stations making them more prone to overflow or backup during high use periods or power outages, and potentially causing damage to pump equipment.

Most disconcerting, however, was the fact that, during a site visit prior to acquisition, it was observed that one lift station discharged directly to a creek rather than routing wastewater to the treatment facility.

Q. WHAT IMPROVEMENTS AND UPGRADES HAVE BEEN MADE BY LIMESTONE WATER TO THE AQUA LIFT STATIONS?

A. Of utmost concern, Limestone Water immediately addressed the lift station that was discharging directly into the creek. More generally, in all cases, Limestone Water immediately set out to pump all excess solids from the lift stations. Once this was completed, the Company could inventory the assets in each lift station and assess the condition of each individual lift station. In the vast majority of lift stations, only one functional pump existed at the time of acquisition. This was likely the result of a failure

to invest in new pumps and instead the cannibalizing of redundant pumps at lift stations as pumps failed at other lift stations. Without redundant pumps, there is a greater risk of service interruptions, lift station overflows (which constitute an unauthorized sanitary sewage overflow ("SSO")) as well as backups into customer homes. For this reason, redundant pumps are required by TDEC. To resolve these problems, Limestone Water installed redundant pumps wherever lift stations were found to only have one working pump. Additionally, lift station pumps that had reached the end of their useful lives were replaced.

Also, most lift stations did not have proper rails or chains for pump service, likely indicating that regular pump inspection and maintenance was not occurring, contributing to the pump failures and intensifying the need to relocate redundant pumps when problems did occur. In all cases where they had failed, proper rail systems were installed. Proper rails make regular maintenance of pumps possible moving forward, potentially extending the useful life of pumps moving forward.

Moreover, many lift stations were found to have missing, or damaged lids, or lids that were not capable of locking. Where these issues were identified, new lids were installed to prevent tampering and protect the public from exposure to wastewater and pumping equipment. Furthermore, many lift stations were found to have floats that control the on/off cycle of the lift station pumps that were in poor condition, as well as power and control lines that were of a compromising function. Where these issues were identified floats were replaced and power and control lines rehabilitated or replaced.

Finally, the power supply systems used to operate the lift stations often showed exposed wiring, rusted electrical panels, or equipment that reached the end of its useful

life. In these cases, power systems were repaired or replaced as appropriate to ensure reliable operation. Please note that the rehabilitation of the Aqua Utilities lift stations is part of the Company's 2024 capital budget.

Q. DO YOU HAVE A PHOTO THAT ACCURATELY DEPICTS THE CONDITION OF THE 43 AQUA LIFT STATIONS?

A. Yes, while a single lift station, this photo illustrates the condition of each of the 43 Aqua lift stations. Here the lift station is filled with sludge and the float that controls the on/off functioning of the pump is in poor condition. Furthermore, the wiring, power, rails and pumps are clearly approaching the end of their useful lives.

10. Status of Remote Monitoring Installation

Q. WHAT IS THE STATUS REGARDING LIMESTONE WATER'S INSTALLATION OF REMOTE MONITORING FOR EACH OF THE PIECES OF EQUIPMENT AT THE AQUA SYSTEM.

A. Limestone Water routinely installs remote monitoring equipment on all lift stations and treatment plants it acquires. Remote monitoring equipment allows operations staff to remotely track the status of wastewater equipment and provides operations staff immediate notification in the event of any abnormal operating condition. Effectively, the remote monitoring equipment acts as an eye on the status of the system on a 24/7 basis even when

the operator is not at the site. Remote monitoring tracking includes live and continuously recorded data on the runtime and operational performance of various system components, allowing for exceptional awareness of the state of repair of equipment over time and allowing equipment to be efficiently maintained or replaced rather than running until breakdown. This sort of predictive maintenance, which is not possible without accurate equipment data, provides the following benefits: (1) prevents service interruptions, (2) allows maintenance and equipment replacement to be handled in a non-emergency manner thereby reducing maintenance costs by lowering the cost of labor and the cost of the immediate procurement of parts and equipment components, and (3) over time will provide a greater understanding of the performance and breakdown modes of specific equipment. All of these traits and benefits enhance the Company's ability to efficiently and cost effectively operate and maintain water and wastewater systems.

Beyond the advantages for system operations and maintenance, receiving immediate notification of any abnormal operating condition enables operators to quickly respond to emergencies, often intervening before incidents can result in greater impacts. Without immediate notification, some equipment malfunctions or system failures can go unnoticed until the operator's next scheduled visit to the site or inspection of a specific piece of equipment, or until a customer calls to report an issue. Allowed to continue unaddressed, these types of failures can result in damage to the environment and hazards to community health through SSOs.

Limestone Water is currently in the process of installing remote monitoring equipment at all 43 lift stations. To date, Limestone Water has installed 36 such remote terminals. Please note that this project is part of the Company's 2024 capital budget.

B. Cartwright Creek – Arrington Retreat Wastewater System

Q. PLEASE DESCRIBE THE CARTWRIGHT CREEK – ARRINGTON RETREAT WASTEWATER SYSTEM.

A. The Arrington Retreat wastewater treatment system consists of a two-cell aerated lagoon treatment plant with two land application spray areas (a primary 20-acre spray field and a secondary 10–15-acre spray field). The facility is located near Nolensville, TN in Williamson County and serves 221 connections.

Both of the Arrington Retreat wastewater lagoons are lined with a 40 mm thick high-density polyethylene (a/k/a polymer) liner. Influent from a low-pressure collection system flows into lagoon #1 and then gravity flows into lagoon #2. Effluent from lagoon #2 then gravity flows into a pump station. The effluent pump station flow is discharged for field application via a 25 hp pump that is controlled by a variable frequency drive ("VFD").[9] The flow rate to the fields must be set manually at the site based on pressure. The field application sites have numerous zones with valving and various orifices.

The system is not currently designed to recirculate treated effluent from lagoon #2 to influent of lagoon #1, though this could offer some treatment advantages. The blowers for lagoon aeration are located north of the lagoons with a grid of ten diffusers located in lagoon #1 and two diffusers in lagoon #2. A nonfunctional blower check valve led to the conclusion that previous ownership was not properly maintaining the aeration system. While the system had a magnetic flow meter installed prior to the Company closing on the system, it was not functional during the site visits prior to acquisition.

[9] A variable frequency drive is a piece of equipment used to properly throttle equipment for more precise control and reduced power consumption.

The land application site had been adequately maintained. Operations staff regularly mowed the 20-acre land application area, as well as an additional area of approximately 10 to 15 acres, which is owned by the homeowner's association. Perimeter fencing was in adequate condition at acquisition, but some nuisance vegetation was noted along fence lines which will inevitably cause fence damage and undermine system security. An equipment building was located on the site that included an isolated chlorine disinfection room. During observation, the system was not actually utilizing the disinfection equipment at the time that it was acquired. Similar to the Aqua wastewater system, the fencing around the application area meant that disinfection is not required by the permit.

To date, Limestone Water has made various repairs and improvements to the system, with work being performed on the electrical system, lagoon structure, the land application area and effluent pumping system. Repairs were made to the fencing and the equipment building, and work was performed on customer's service lines, septic tanks, and grinder pump systems. Limestone Water has also installed remote monitoring equipment at the treatment plant.

Aerial view of Arrington Retreat wastewater facility (lagoon #2 – right; lagoon #1 left).

Blower building and lagoon #2.

1. Electrical Systems

Q. PLEASE DESCRIBE THE CONDITION OF THE ARRINGTON RETREAT ELECTRICAL SYSTEMS AT THE TIME THAT IT WAS ACQUIRED AND THE REPAIRS/UPGRADES THAT WERE MADE BY COMPANY.

A. The electrical systems at the Arrington Retreat facility were in adequate condition. That said, however, several concerns with the electrical systems were identified at the time of acquisition that mandated repairs or improvements. This included replacement of various wiring, transducers, switches, alarms, and conduits. In addition to these general repairs, the previously described nonfunctional flow meter was repaired so that accurate flow monitoring could occur. Flow monitoring is important as it: (1) ensures that accurate reporting can occur and (2) allows operations staff to more precisely evaluate facility performance and address any abnormal flow patterns.[10]

In addition, the Company had deduced that the VFD on the effluent pump had been damaged some time prior to acquisition and needed to be replaced to ensure proper control of equipment. Finally, the Company installed testing equipment necessary for permit

[10] The system permit requires reporting of "average daily flows" for each calendar month. Thus, the repaired flow meter allows for permit compliance.

compliance. Further, some of the testing equipment in place at the time of acquisition was not working and required replacement.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THE IMPROVEMENTS MADE TO THE ARRINGTON RETREAT ELECTRICAL SYSTEM?

A. Yes, the following two pictures show the repaired/replaced flow meter and power control systems.

Repaired flow meter

Repaired power and control systems.

2. Lagoon Structures

Q. PLEASE DESCRIBE THE CONDITION OF THE LAGOON STRUCTURES AT ARRINGTON RETREAT AT THE TIME OF ACQUISITION AND WHAT REPAIRS HAVE BEEN COMPLETED.

A. The lagoons are generally in adequate condition. This is largely a result of the existence of the polymer liner, which helps to preserve berm integrity by preventing erosion, damage caused by nuisance vegetation, and varmint damage.

While the liner generally did a good job maintaining the integrity of the berm, a portion of the liner had become unsecured from the berm, which allowed some berm erosion. To address this situation, the area with erosion was compacted and refilled with soil by the Company. The liner was then re-secured to repair the berm damage and prevent any further erosion. Additionally, a portion of the polymer liner has been identified as damaged by animals and was slated for patching and repair to prevent erosion and berm damage.

Q. DO YOU HAVE ANY PICTURES THAT DEPICT THE DAMAGE THAT HAD BEEN DONE TO THE POLYMER LINER AND THE REPAIRS MADE BY THE COMPANY?

A. Yes. The first picture shows the damage that was made to the liner by animals, and the second picture shows the repaired liner with it resecured to the berm to prevent any future erosion.

Section of lagoon liner damaged by animals (left) and repairs completed and liner re-tensioned (right).

3. Land Application Area and Effluent Pumping System

Q. PLEASE DESCRIBE THE CONDITION OF THE LAND APPLICATION AREA AND EFFLUENT PUMPING SYSTEM AT ACQUISITION AND WHAT REPAIRS HAVE BEEN COMPLETED.

A. While the system was functional, issues with the condition of the land application area for the Arrington Retreat facility were identified at the time of acquisition. The drain field system had several valves that were frozen in place from the failure of previous operators to exercise those valves. The failed valves had to be replaced to restore full functionality to the drain field. Moreover, some areas of the drain field had leaking lines, which prevented proper distribution of effluent in the spray field and caused ponding. Left unaddressed, ponding of effluent in the spray field will eventually result in a SSO and could result in public exposure to wastewater. These leaking lines were repaired to prevent ponding in and erosion to the drain field.

The effluent pumping system at Arrington Retreat also showed lack of maintenance at the time that it was acquired. First, a large number of solids were observed in the wet well for the pumping station at the time of acquisition. To address this problem, the solids

were pumped out to restore wet well capacity and eliminate issues, which would impact the useful life of the pumping equipment. Both effluent pumps have also required repairs to ensure proper functioning of the effluent distribution system. The effluent pump control systems also required repairs and improvements to ensure that the land application areas could be utilized properly.

Q. DO YOU HAVE ANY PHOTOS THAT DEMONSTRATE THE PROBLEMS AT THE LAND APPLICATION AREA AT ARRINGTON RETREAT AS WELL AS TO THE EFFLUENT PUMPING SYSTEM?

A. Yes. The first group of pictures show the damaged valving and distribution lines at the Arrington Retreat land application area that caused ponding and runoff.

The next photos show repaired valving and spray head assemblies at the land application field.

Finally, this picture show the upgraded effluent pump control system.

4. General Site Condition

Q. PLEASE DESCRIBE THE GENERAL CONDITION OF THE TREATMENT FACILITY SITE AT THE TIME OF ACQUISITION, INCLUDING THE FENCING AND EQUIPMENT BUILDING PROBLEMS THAT YOU REFERENCE, AS WLL AS THE REPAIRS THAT HAVE BEEN COMPLETED.

A. As mentioned, at the time of acquisition, the Arrington Retreat facility site was in adequate condition. That said, however, some repairs were necessary. Following a storm, the roof of the onsite structure had been damaged. The Company repaired the roof to protect the enclosed equipment. In addition, some areas of fencing were damaged and were repaired to restore reliable security and safety at the site.

Q. DO YOU HAVE ANY PICTURES THAT SHOW THESE PROBLEMS AND THE STEPS TAKEN BY THE COMPANY?

A. Yes, the following before and after pictures show the improvements made to the Arrington Retreat fencing.


5. Service Lines, Septic Tanks, and Grinder Pumps

Q. PLEASE DESCRIBE THE CONDITION OF THE SERVICE LINES, SEPTIC TANKS, AND GRINDER PUMP SYSTEMS AT THE TIME OF ACQUISITION AND THE REPAIRS THAT HAVE BEEN MADE BY THE COMPANY.

A. Since acquisition, a number of significant issues have been identified with customer grinder pumps, septic tanks, and service lines. These systems must be properly maintained to prevent damage to the collection system, backups into customer homes, and excessive solids flowing into the treatment plant. To date, most of the work to address this problem has been focused on pumping out solids from septic tanks and completing deferred grinder pump maintenance. Interestingly, while previous ownership billed customers for such routine maintenance, the Company found that the adopted tariff did not provide it with the authority to bill customers for this work. Nevertheless, in order to maintain TDEC compliance, such work had to be completed to prevent damage to the treatment system.

6. Status of Remote Monitoring Installation

Q. PLEASE DISCUSS THE INSTALLATION OF REMOTE MONITORING EQUIPMENT AT THE ARRINGTON RETREAT SYSTEM.

A. As previously mentioned, Limestone Water installs remote monitoring equipment on all lift stations and treatment plants it acquires. A full discussion of the benefits of remote monitoring and the rationale underlying the installation of that equipment is contained in the section discussing the Aqua wastewater facility. As of June 30, 2024, Limestone Water has installed a remote monitoring terminal at the Arrington Retreat wastewater plant.

Q. PLEASE DESCRIBE ANY REMAINING PROJECTS OR REPAIR WORK THAT LIMESTONE WATER HAS PLANNED AT THE ARRINGTON RETREAT SITE.

A. As discussed above, issues were identified with the drain field that will require further line and valve repairs to prevent ponding and runoff of discharged effluent. Additionally, one of the facility blowers recently failed and is slated for repair to ensure full function of the aeration treatment.

Q. DO YOU HAVE A PHOTO OF THE FAILED BLOWER?

A. Yes, the following picture is of the failed aeration blower at Arrington Retreat.

C. Cartwright Creek – Grassland Wastewater System

Q. PLEASE DESCRIBE THE CARTWRIGHT CREEK – GRASSLAND WASTEWATER SYSTEM.

A. The Grassland wastewater treatment system is an extended aeration mechanical treatment facility consisting of a gravity collection system with lift stations, flowing to an influent lift station that conveys wastewater through a comminutor to an aeration treatment basin. Flow from the aeration treatment basin then flows to a clarifier that removes solids that are either returned to the aeration basin or wasted to a sludge holding tank. The clarified wastewater flows to a disinfection system prior to discharge. The facility serves approximately 563 connections in Williamson County.

The facility was constructed in the mid 1970's, which means that much of the infrastructure is approaching 50 years old and various plant components are approaching, or have passed, the end of their useful lives. The aged nature of these plant components inevitably causes adverse effects on treatment effectiveness.

Q. WOULD YOU DESCRIBE THE CONDITION OF THE GRASSLAND WASTEWATER SYSTEM AT THE TIME THAT IT WAS ACQUIRED?

A. The most notable issues at the Grassland facility relate to corrosion and deterioration of steel infrastructure at the facility. Specifically, corrosion and deterioration are notable in the condition of the tanks, aeration piping, air drops, and diffusers. These problems reduce treatment efficacy due to reduced and improper aeration distribution in the treatment basin. Further, while a comminutor was present at the facility, there was no bar screen present at the time of acquisition to aid in the removal of nuisance solids prior to treatment. With a bar screen present to ensure it is operating properly, the comminutor will not only reduce

the size of solids entering the facility, it should also eliminate nuisance solids and trash that negatively affect treatment.

At the time of acquisition, some treatment processes were no longer functioning properly, but Limestone Water has taken steps to improve the system's treatment efficacy. The clearest examples of the non-functioning equipment inherited by Limestone Water are the digester and filtration systems. Relative to the digester, the walls separating the digester from the aeration basin have deteriorated, allowing waste sludge to leak back into the aeration basin. As a result, the digester was no longer functional. To ensure that treatment was occurring, Limestone Water installed a temporary polymer sludge holding tank that is being utilized for waste sludge. As pertains to the filtration system, the system had been poorly maintained and initially was simply removed from service by the previous owner. Later, however, the previous owner converted the filtration system to function as additional tankage for chlorine contact time.

The generally poor condition of the treatment processes resulted in the facility struggling to meet permitted limits, including violations of biochemical oxygen demand ("BOD"), ammonia, total nitrogen, dissolved oxygen, suspended solids, total residual chlorine, and *E coli* limits within the 12 quarters of discharge monitoring report testing immediately prior to acquisition by Limestone Water.

More generally, the asphalt access road to the facility was severely degrading with cracks, chipping, and large potholes in many locations.

Q. DO YOU HAVE ANY INSIGHTS ABOUT THE WASTEWATER FLOWS THAT CHALLENGE THE GRASSLAND SYSTEM?

A. While the condition of the treatment plant represents significant challenges for the Grassland facility, the chief issue confronting the Grassland facility relates to the age and condition of the collection system and the ability of the collection system to adequately handle current flows. The treatment facility was designed to handle flows of 250,000 GPD. At over 50 years of age, however, the collection system is now plagued by extensive I&I issues, which considerably swells the flow coming to the facility. This additional flow is over and above what is coming to the facility from customers. The I&I issues have resulted in average daily flows in excess of 350,000 GPD, with peak flows reaching 1.66 MGD - more than 6 times the design flow for the facility.

The I&I issue is further pronounced when one considers the size of population served by the facility and the expected flows to the facility. With approximately 1,665 persons served by the treatment facility; anticipated flows are approximately 166,000 GPD. Prior to acquisition by Limestone Water, the previous ownership began a collection system repair project that limited flows to the facility during summer months to an average of 250,000 GPD. While an improvement, the system still routinely sees peak flows exceeding 1,000,000 GPD. This indicates that ongoing I&I will require further repairs or facility expansion.

Repair work to address I&I in the collection system at this facility is more difficult than at a typical collection system as, in some areas, the piping is buried exceptionally deep to account for the topography in the area. In fact, in some areas the collection system piping is more than 50 feet deep.

Q. WHAT IMMEDIATE SHORT-TERM EFFORTS HAS THE COMPANY TAKEN TO IMPROVE PERFORMANCE AT THE GRASSLAND FACILITY?

A. Since acquisition, the operation and maintenance teams have made various repairs and improvements to ensure the facility can continue operating until more significant improvement projects can be undertaken. The extent of these efforts has been significant and include the following areas: (1) maintenance work to aeration equipment; (2) solids removal from the plant and lift stations; (3) the introduction of chemically enhanced secondary treatment to aid in keeping the plant in compliance during high flow or upset conditions; (4) electrical repairs at the treatment facility; (5) repairs to facility piping; (6) general site cleanup, including repairs and replacement of damaged catwalk and stair structures; repairs to the blower building; improvements to the access road, signage, and structure; and general housekeeping measures; (7) repairs to the collection system, including work on mains, lift stations, and service lines; (8) repairs and improvements to the lab/blower building and the equipment contained therein: and (9) installation of remote monitoring at lift stations and the treatment plant.

While these repairs have improved plant operations and performance, they cannot remedy the issues that arise from the age of the plant and the serious state of system disrepair and deterioration. As a result, more significant improvements to the facility are being designed. These engineering improvements will be discussed in Mr. Freeman's testimony and will ultimately include the construction of a new facility that can handle the high levels of I&I flows as well as additional connections to the system.

Q. DO YOU HAVE ANY PHOTOS THAT SHOW THE GRASSLAND FACILITY AS WELL AS THE CONDITION OF VARIOUS SYSTEM COMPONENTS AT THE TIME THAT IT WAS ACQUIRED?

A. Yes.

Aerial view of Grassland wastewater treatment facility.

Grassland package plant tank – notice plants that had attached to debris.

Rusting tanks, sludge accumulation, filter tanks(left).

Interior and exterior blower building.

1. Aeration System

Q. PLEASE DESCRIBE THE CONDITION OF THE GRASSLAND AERATION SYSTEM AT THE TIME OF ACQUISITION.

A. The aeration system is the primary process for the treatment of wastewater at the facility and provides air for microbes to break down wastewater in the treatment plant. At the time of acquisition, the Grassland aeration system had numerous issues that needed to be addressed to ensure the facility could continue to be operated. One of the blowers operating the aeration system was not functional at the time of acquisition. Lacking this blower, the aeration system could not operate at full capacity and any redundancy in the blower system was eliminated. As a result, any additional failure would result in compromised treatment or complete outages in treatment.

In addition, numerous leaks were identified in air headers, drop pipes, and other air lines throughout the facility. Air leaks reduce pressure in the aeration system and therefore reduce the level of treatment occurring in the treatment plant. Furthermore, even if the air leaks occur below the water level, the failure of air to flow through a proper diffuser will result in a poor diffusion pattern and reduce oxygen transfer to wastewater.

Ideally, the aeration system will result in numerous small bubbles diffusing through the wastewater. These smaller bubbles take longer to float to the surface and result in a greater total surface area for oxygen to dissolve into the wastewater. In contrast, as a result

of the numerous leaks at Grassland, large bubbles are formed that immediately float to the surface and dissipate. This all has the ultimate effect of reducing treatment effectiveness.

Finally, it was determined that the main sludge return line was blocked due to corrosion in the pipe causing sludge to accumulate and block the line. This caused sludge to back up and accumulate in the clarifier. As a result, solids removal is compromised and total suspended solids exceedances become prevalent.

Q. WHAT REPAIRS AND IMPROVEMENTS WERE MADE TO THE GRASSLAND AERATION SYSTEM BY THE COMPANY?

A. Investigation showed that the blower motor had failed and required replacement and rewiring to operate again. Additionally, damaged wiring was identified in the blower control panel. The failed motor and damaged wiring were ultimately replaced to ensure proper blower function.

Where leaks have been identified in air headers, drop pipes, and other air lines, repairs to or replacement of the lines were completed to improve the level of treatment in the facility. Beyond simple leaks, some diffusers were determined to not be functioning properly. In some cases this was resolved with thorough removal of sludge from the aeration basin, however in other cases the diffusers were found to be damaged. Therefore the damaged diffusers were replaced to ensure a better diffusion of oxygen in the basin.

Finally, the main sludge return line was cleared and repaired to restore clarifier function. These measures have brought the aeration system into a more consistent operational condition.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THE PROBLEMS THAT YOU DISCUSSED WITH THE GRASSLAND AERATION SYSTEM?

A. Yes. See the following:

Failed blower at acquisition (left) and after motor replacement (right).

Blocked sludge return line.

Leaking aeration lines, consisting of narrow PVC piping, throughout site.

2. Solids Removal

Q. PLEASE DESCRIBE THE PROBLEM WITH SLUDGE ACCUMULATION AT THE GRASSLAND SITE.

A. At the time of acquisition, it was observed that large amounts of sludge had accumulated throughout the plant. For instance, sludge had accumulated in the bottom of the primary treatment basin, which reduced treatment volume and treatment effectiveness. Additionally, as previously discussed and shown in photos, floating mats of sludge had formed that allowed vegetation to grow in the treatment plant. Again, this adversely affects treatment and ultimately makes conditions less sanitary for operations staff. The impacted sludge also has the effect, as discussed immediately above, of disrupting plant operation by interfering with proper diffuser function.

Sludge had also accumulated in portions of the clarifier, chlorine contact chamber, and filtration system tanks (converted for use as additional contact chamber tankage). This sort of accumulated sludge once again reduces treatment volume, reducing the effectiveness of solids removal and disinfection commensurately.

Q. WHAT EFFORTS HAS THE COMPANY TAKEN TO ADDRESS SLUDGE ACCUMULATION?

A. As previously discussed, sludge has been removed in the aeration system, and the sludge return has been repaired. In addition, solids have also been hauled from other system components and from lift stations to restore wet well volume. As volume is reduced due to the accumulation of sludge, pumping systems can be affected, and storage capacity reduced, which could lead to backups or overflows from lift stations.

In addition to the issues related to accumulation of sludge, I have previously referenced the accumulation of nuisance solids primarily in the form of rags and hygiene products at this plant. These types of solids do not break down over time like natural wastewater solids. As such, these nuisance solids accumulate in ways that can cause blockages in pipes or floating masses that will accumulate sludge and vegetation and can become entangled with and damage treatment equipment. When the sludge was removed, these nuisance solids were also removed. To prevent further issues with these types of solids, a new bar screen was installed at the plant headworks to catch larger solids where they can be removed and thrown away instead of flowing into the treatment plant.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THE PROBLEM WITH THE ACCUMULATION OF SLUDGE AND NUISANCE SOLIDS AT THE GRASSLAND FACILITY?

A. Yes.

Floating sludge in aeration basins before (left) and after (right) clearing.

New bar screen for catching nuisance solids installed ahead of comminutor.

3. Chemically Enhanced Secondary Treatment

Q. PLEASE DISCUSS THE CHEMICALLY ENHANCED SECONDARY TREATMENT MEASURES TAKEN BY THE COMPANY AT GRASSLAND.

A. As mentioned, the Grassland facility has problems with I&I. To aid in this problem while a replacement plant is being permitted and constructed, Limestone Water has introduced two measures of chemically enhanced secondary treatment to assist in treatment: (1) flocculation and (2) bulking control.

Q. PLEASE DESCRIBE THE FLOCCULATION EFFORTS UNDERTAKEN BY THE COMPANY.

A. Flocculation is a water treatment process where solids form larger clusters, or flocs, to be removed from water. This process can happen spontaneously, or with the help of chemical agents. To assist in flocculation, the Company is now adding polymers at Grassland to improve the settling of solids in the final clarifier to aid with keeping the plant in compliance during heavy flows.

Q. PLEASE DESCRIBE THE BULKING CONTROL EFFORTS AT GRASSLAND.

A. At wastewater treatment plants, if the activated sludge develops poor settling characteristics, chemicals can be used to promote better floc formation to keep the sludge

blankets compact and aid with keeping the plant in compliance during upset conditions and/or high flows. Given the I&I flows that are prevalent at the Grassland facility, Limestone Water has been adding bulking control chemicals to promote better floc formation.

4. Electrical Systems

Q. PLEASE DESCRIBE THE CONDITION OF THE ELECTRICAL SYSTEMS AT THE GRASSLAND FACILITY AT THE TIME IT WAS ACQUIRED.

A. As with the piping and aeration system, many issues were identified with the electrical system that have arisen primarily due to the age of the system and lack of reinvestment by the previous ownership. Various components of the facility electrical systems were found to be in poor condition, with water infiltration in conduit and loose wiring causing damage to systems and potential hazards to operations staff.

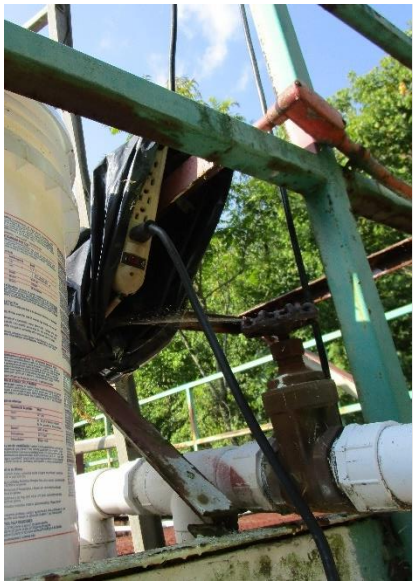
Q. WHAT IMPROVEMENTS HAS THE COMPANY MADE TO THE GRASSLAND ELECTRICAL SYSTEMS?

A. The Company has replaced various pieces of electrical wiring, connections, controllers, and components. Additionally, some of the electrical components needed to complete required testing were found to be nonfunctional. Therefore, the nonfunctional electrical components were replaced. This included repairs to the blower control panel, a component essential to the operation of the aeration system. Other portions of the plant had daisy-chained power strips and extension cords over treatment basins to provide power rather than proper wiring in conduit. This represents a significant hazard to operations staff and a potential fire hazard. Where these issues were identified, proper wiring and outlets have been installed.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THE ELECTRICAL PROBLEMS AT GRASSLAND?

A. Yes.

Loose wiring over treatment basins.



Improper power supply vulnerable to water infiltration from treatment processes and weather events.

Example of new conduit installed across clarifier basin (narrow white piping above steel pipe).

5. Facility Piping

Q. PLEASE DESCRIBE THE CONDITION OF FACILITY PIPING AT THE GRASSLAND SYSTEM AT THE TIME THAT IT WAS ACQUIRED AS WELL AS SOME OF THE REPAIRS THAT HAVE BEEN MADE BY THE COMPANY.

A. As mentioned above, the Grassland facility is largely in poor condition due to the age of the system, and the failure of the previous owner to reinvest in the system. This problem extended to the facility piping. Some minor repairs have been completed to date in order to maintain the functionality of the facility. Several broken lines have been repaired to ensure proper flow through the facility. These primarily consisted of leaks in wastewater pipes that transferred flow from one treatment process to another. Leaks are an issue as they: (1) can disrupt the process flow of the treatment plant; (2) can leak wastewater onto the ground; (3) represent a bypass that must be reported to the state environmental regulator; and/or (4) can compromise effluent quality.

Where leaks have been identified, repairs are completed where possible, or replacements are completed. Replacements to date have mainly consisted of the temporary replacement of leaky pipes with PVC. While ductile iron or steel piping is a better alternative, it would not be cost effective as it is more expensive than PVC and a long-term

solution must necessarily come in the form of a large-scale plant improvement project. Additionally, given that much of the facility piping was blocked by accumulated solids or nuisance materials, pipes were jetted to restore proper flow.

6. General Site Cleanup and Improvements

Q. PLEASE DESCRIBE GENERAL SITE CONDITION AT THE TIME THAT IT WAS ACQUIRED.

A. Various more general issues with the Grassland site were identified that do not relate directly to treatment equipment. For instance, the facility access road was in poor condition. This included both portions of the dirt road at the treatment plant and the asphalt road leading to the plant. Without an adequate access road, it can be difficult for operations staff to reach the treatment facility, especially in inclement weather conditions, to complete maintenance and operations activities.

In addition, the building housing the blowers, testing equipment, and various materials and supplies was in poor condition with flaking paint, broken windows, and not enough space to organize the equipment and materials within.

Another major structural issue at the facility was the ubiquitous presence of corroding and damaged stairs and catwalks throughout the facilities. These structures are essential to maintain to ensure operator safety at the treatment facility.

Beyond the improvements to the facility access, the repairs to the existing blower building, including the installation of the new storage shed, various site cleanup activities have also been completed. Nuisance vegetation had grown on the fence line and throughout the site, indicating a degree of operational neglect. Left unaddressed, this

would cause damage to the fence, compromising site security and potentially impede operations activities.

Q. WHAT IMPROVEMENTS HAVE BEEN MADE AT THE GRASSLAND FACILITY TO ADDRESS THESE ISSUES?

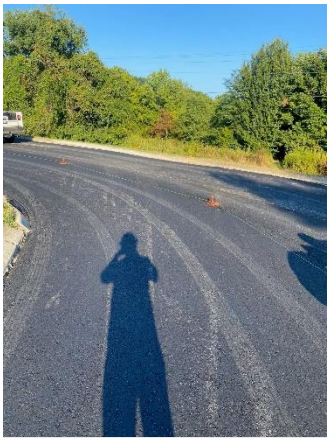
A. To address the issue with system access, a new driveway has been completed. Additionally, required signage was also installed on the facility gate. Various repairs have been made to the existing building, including replacing windows and the door, as well as pressure washing and repainting the structure. An additional storage building has also been installed to declutter the building and remove impediments that were preventing/impeding regular operations and maintenance activities. Furthermore, to ensure the facility is safe to operate, in those areas in which operators had to access that were unsafe, the grating has been replaced, new stairs were installed at the chlorine contact chamber to replace a severely corroded set of stairs, and all catwalks and stairs were painted with high visibility paint. Moreover, the nuisance vegetation has been removed. Finally, recognizing that the tanks throughout the site were covered in dirt and sludge that can accelerate the deterioration of steel structures, the tanks were pressure washed and repainted.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THE GENERAL SITE IMPROVEMENTS MADE AT GRASSLAND BY THE COMPANY?

A. Yes.


Before and after access road installation.


Damage on asphalt road before repairs.

Asphalt road after repairs.

Existing blower and equipment building before and after improvements including new storage shed.

Additional shot of new shed and building improvements on existing building (left), shed interior (right).

Stairs before and after replacement.

High visibility paint on all walking surfaces and stairs throughout facility.

Vegetation growth around Grassland tanks.

Nuisance vegetation removed around tanks.

Vegetation cleared from fencing.

7. Collection Systems

Q. PLEASE DESCRIBE THE CONDITION OF THE COLLECTION SYSTEM AT THE TIME OF ACQUISITION AND THE REPAIRS THAT HAVE BEEN COMPLETED.

A. Many issues have been identified with the Grassland collection system both before and after acquisition. As noted above, there is a significant amount of I&I at the system that must be addressed. While this will primarily be tackled in the future with a major plant overhaul/replacement as well as aggressive I&I identification measures, damaged lines and structures (both in sewer mains and in service lines) have already been repaired as they are identified. In addition to issues with lines, several lift stations have had issues that required a response. Since acquisition, the primary lift station experienced a pump failure that required repair. Additionally, that lift station has experienced, on two separate occasions, clogged pipes due to the accumulation of nuisance solids. Portions of the fencing around the Natchez lift station were damaged due to vandalism, which required that some sections of the fence be replaced, and others repaired. Also, the access ring and the lid to the Natchez lift station were damaged and required repairs.

Q. DO YOU HAVE A PHOTO THAT SHOWS ANY OF THESE IMPROVEMENTS?

A. Yes. The attached photo shows the repair made to the outside of the lift station ring at the Natchez lift station.

8. Lab/Blower Building

Q. PLEASE DESCRIBE THE CONDITION OF THE BLOWER/LAB BUILDING AT THE TIME THAT IT WAS ACQUIRED.

A. The Grassland facility site includes a large building which houses the blowers, many of the power and control systems, and lab equipment related to sampling and testing of influent and effluent. The permit for the Grassland facility includes specific requirements for on-site testing equipment and procedures that must be adhered to. Upon closing on the system, many issues were identified with the building and the equipment in the building that required repairs, replacements and improvements to ensure permit compliance and proper operation. Climate control is important for the structure, both to maintain a proper environment for storing and testing samples, and to prevent the blowers from overheating in summer, or being too cold to start up in winter. Despite the importance of climate control, the HVAC system was found to have several problems, including in the duct work.

Q. WHAT REPAIRS HAVE BEEN MADE TO THE BLOWER/LAB BUILDING?

A. As previously described, significant repairs were made to the exterior of the building to extend useful life and to protect the equipment inside. Since closing, Limestone Water has had to purchase a new influent sampler refrigerator, an incubator for testing, and various glassware for testing procedures to ensure appropriate equipment is present to run tests. The HVAC system has been repaired, including the replacement of duct work with new insulated ducts, and associated repairs to the ceiling. Furthermore, the windows were replaced to facilitate climate control, as they were old and not airtight leading to higher heating and cooling costs and a strain on the HVAC systems. Finally, the structure was poorly lit at acquisition. To facilitate a good environment for the completion of sampling and testing, new lighting was installed in the structure. A separate portion of the structure now includes the gas cylinders and chemical feed equipment for the chlorination and dechlorination chemicals. New chemical leak detection equipment was installed in this area to ensure immediate alert to any leak of chlorine or sulfur dioxide gas to ensure operator safety and quick response in the event of a cylinder leak.

Q. DO YOU HAVE ANY PICTURES THAT DEPICT THE IMPROVEMENTS?

A. Yes. The attached photos show the new HVAC duct work, the new sample refrigerator for the influent autosampler, and the chlorination/dechlorination leak detection.

9. Status of Remote Monitoring Installation

Q. PLEASE DISCUSS THE INSTALLATION OF REMOTE MONITORING EQUIPMENT AT THE LIFT STATIONS AND TREATMENT PLANT.

A. As previously mentioned, Limestone Water installs remote monitoring equipment on all lift stations and treatment plants it acquires. A full discussion of the benefits of remote monitoring and the rationale underlying the installation of that equipment is contained in the section discussing the Aqua wastewater facility. As of June 30, 2024, Limestone Water has installed a total of four remote monitoring terminals at the Grassland system (1 at the wastewater treatment plant and three at lift stations).

New remote monitoring unit at Grassland.

Q. PLEASE DESCRIBE ANY REMAINING PROJECTS OR REPAIR WORK THAT LIMESTONE WATER HAS PLANNED AT THE GRASSLAND WASTEWATER SITE.

A. As discussed above, given the age of the facility and the lack of reinvestment by previous owners, there are more significant issues than can be addressed with simple repairs. The facility tanks are in poor condition and even if the tanks were in better condition the facility has struggled to meet its permitted limits and is routinely overwhelmed by excessive I&I

flows. Tank repairs on donut style package facilities like Grassland are nearly impossible to complete without taking the facility completely offline. Recognizing that sewer service cannot be interrupted, this is not an option. Furthermore, since the existing treatment processes are inadequate, additional treatment will be required to maintain compliance. As a result, a new treatment plant must be installed before any significant tank repairs can be completed at the facility. Mr. Freeman will discuss the planned plant replacement more thoroughly in his testimony. The engineering design work for this replacement wastewater treatment plant was included in the Company's 2024 capital plan.

D. Cartwright Creek – Hardeman Springs Wastewater System

Q. PLEASE DISCUSS THE CARTWRIGHT CREEK – HARDEMAN SPRINGS SYSTEM AND DESCRIBE THE CONDITION OF THAT SYSTEM AT THE TIME IT WAS ACQUIRED.

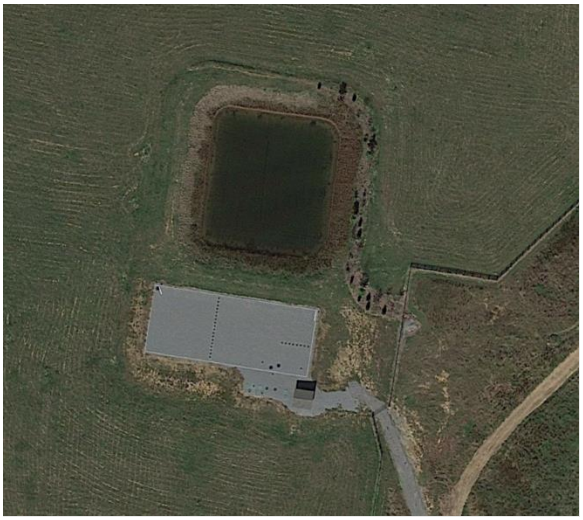
A. The Hardeman Springs wastewater treatment system is a non-discharging recirculating sand filter treatment system discharging to a drip irrigation system. The facility is located near Arrington, TN and serves 90 homes in the Hardeman Springs subdivision.[11] The Hardeman Springs system consists of a low-pressure collection system (via grinder pumps and septic tanks at each residence), a recirculating sand filter, duplex disc filters, a UV disinfection unit, a fenced drip irrigation system, an emergency storage pond, and a concrete-block operations building. Overall, the treatment facility and collection system are in adequate condition. That said, however, after taking over operations of the facility, Limestone Water identified a number of issues that required repairs or improvements to

[11] While currently serving 90 homes in the subdivision, the facility is designed to treat the full buildout of the subdivision, which would include 120 homes.

ensure the facility could provide safe and reliable service. These improvements focused on the UV disinfection system, the drain field, collection system (including repairs to mains, service lines, septic tanks, and grinder pumps), and general site conditions. Limestone Water has also installed remote monitoring equipment at the treatment plant.

Q. DO YOU HAVE ANY GENERAL PICTURES OF THE HARDEMAN SPRINGS SYSTEM?

A. Yes.



Aerial view of Hardeman Springs wastewater treatment facility.

Sand filter and emergency storage pond.

Drain Field.

1. Disinfection System

Q. PLEASE DESCRIBE THE CONDITION OF THE DINSINFECTION SYSTEM AT THE TIME THAT IT WAS ACQUIRED AND ANY REPAIRS THAT HAVE BEEN COMPLETED.

A. The ultraviolet disinfection system was in generally adequate condition at the time of acquisition. Upon closing on the system, however, it was noted that the quartz sleeves for the disinfection system were damaged and more opaque than they were designed to be. The opaqueness reduces the effectiveness of the disinfection system by hindering the passage of the UV light from the bulbs through the effluent. Additionally, one of the UV emitting bulbs was non-functional, further reducing the efficacy of the system beyond the opaqueness of the quartz sleeves. To correct these problems, the quartz sleeves were replaced, and a new UV emitting bulb was installed to restore proper function to the disinfection system.

Q. DO YOU HAVE A PICTURE THAT SHOWS THE UV DISINFECTION SYSTEM?

A. Yes.

Ultraviolet disinfection system.

2. Drain Field

Q. PLEASE DESCRIBE THE CONDITION OF THE HARDEMAN SPRINGS DRAIN FIELD SYSTEM AT THE TIME THAT IT WAS ACQUIRED.

A. The Hardeman Springs drain field system was in adequate condition when Limestone Water acquired the system. This said, however, several issues requiring repairs have been identified. First, several leaks in the distribution lines were identified. As discussed before, leaks can cause improper distribution of treated wastewater through the drain field area, causing areas to become overloaded and potentially leading to ponding or runoff of wastewater in an unpermitted discharge. To correct this problem, these leaks have been repaired to ensure proper function.

When distribution pumps for the drain field turn on, air is pressurized in the line. This prevents treated wastewater from flowing down the line. A failure in this regard can affect the distribution of water in the drain field and potentially lead to ponding and runoff from these areas. Upon acquiring the facility and first operating the systems, it was noticed that an air release valve was damaged in the distribution system. This can cause an "air lock" condition in a line. To correct this problem, the air release valve was replaced to ensure proper function.

Finally, upon closing, there were frequent alarms from the effluent pumping system that distributes treated wastewater to the drain field. Work was conducted to diagnose the issue, and the Company discovered that incorrect amperage was being supplied to the pumps, causing the alarm in the system. The issue with the incorrect electrical current was resolved, and the false alarms were corrected.

Q. DO YOU HAVE ANY PICTURES OF THE HARDEMAN SPRINGS DRAIN FIELD COMPONENTS?

A. Yes.

Pumping system for drain field.

Drain field.

3. Collection System

Q. PLEASE DESCRIBE THE CONDITION OF THE HARDEMAN SPRINGS COLLECTION SYSTEM AT THE TIME THAT IT WAS ACQUIRED.

A. Since acquisition, several issues have been identified and addressed in the Hardeman Springs collection system. ***First***, a main break was identified. Left unaddressed, main breaks can lead to backups, release of wastewater into the environment, and damage to property due to erosion. The main break was repaired. ***Second***, several damaged service lines were identified and repaired. These sorts of repairs are essential in low pressure collection systems where breaks result in untreated wastewater being pumped into the ground, or in some cases, into locations where untreated wastewater reaches the surface. These sorts of releases pose a significant threat to public health and the environment. ***Third***, some grinder pumps and septic tanks were not operating properly and required repairs. In most cases, these problems related to repairs to grinder pumps, pump control systems, pump alarms, and grinder station valving. ***Fourth***, several new septic tanks were installed that required inspections, and in some cases assistance with the installation (where customer's contractors incorrectly installed or configured pumping systems) to provide service to the new customers.

Q. DO YOU HAVE A PICTURE OF A GRINDER STATION AT HARDEMAN SPRINGS?

A. Yes.

4. Status of Remote Monitoring Installation

Q. PLEASE DISCUSS THE INSTALLATION OF REMOTE MONITORING EQUIPMENT AT HARDEMAN SPRINGS.

A. As previously mentioned, Limestone Water installs remote monitoring equipment on all lift stations and treatment plants it acquires. A full discussion of the benefits of remote monitoring and the rationale underlying the installation of that equipment is contained in the section discussing the Aqua wastewater facility. As of June 30, 2024, Limestone Water has installed a lift station remote terminal at Hardeman Springs.

"High Tide" remote monitoring unit installed at Hardeman Springs.

Q. PLEASE DESCRIBE ANY REMAINING PROJECTS OR REPAIR WORK THAT LIMESTONE WATER HAS PLANNED AT THE HARDEMAN SPRINGS LOCATION.

A. No additional work is planned currently. Limestone Water will continue to operate the system and will address operational issues as they are identified.

E. Cartwright Creek – Hideaway Wastewater System

Q. PLEASE DESCRIBE THE CARTWRIGHT CREEK - HIDEAWAY SEWER SYSTEM.

A. The Hideaway wastewater treatment system is a non-discharging treatment plant with aerated lagoon cells that discharge to a fenced drip irrigation system. The facility is located near Murfreesboro, TN and serves approximately 135 homes.

The facility originally was designed to handle wastewater flow from 203 homes with a pre-mix anoxic tank, aerobic treatment deep cell lagoon system with diffused air, intermediate pump station, secondary clarifier with Return Activated Sludge ("RAS") line, short- and long-term storage basins, filter pump station, turbo disc filters, UV disinfection, filter backwash tank, irrigation booster pump, drip irrigation fields, and plant drain pump station to the anoxic tank or aerobic treatment deep cell lagoon.

At the time of acquisition, a system expansion was underway that would allow Hideaway to handle up to 391 homes. The system expansion included a new attached growth trickling filter system, including one anoxic tank and two aerobic tanks (Cambrian BioViper system), new blowers and aeration system, influent screening, sludge holding tank, sludge dewatering box, filters, and UV disinfection. While the overall facility was

in adequate condition, the expansion nonetheless led to issues during startup. Specifically, with the plant now being oversized, it is difficult to maintain the biology required for the wastewater treatment process with flow and loading well below design.

Despite the recent nature of the plant expansion, many of the systems nonetheless required repairs and improvements to ensure proper operation, as well as significant issues related to the plant expansion that required troubleshooting, reconfiguration, and modification to function properly. The areas requiring work included: (1) portions of the plant improvement project (including influent screening, piping, aeration system, polymer feed system, clarifier, and control and monitoring and control configuration); (2) disinfection system; (3) drain field; (4) collection system; (5) general site improvements and (6) monitoring, power, and control systems.

Q. DO YOU HAVE A PICTURE OF THE HIDEAWAY SYSTEM?

A. Yes, the attached picture shows the lagoon for the original Hideaway system.

1. Plant Improvement Systems

Q. PLEASE DESCRIBE GENERALLY THE ISSUES RELATED TO THE HIDEAWAY PLANT IMPROVEMENT PROJECT AT THE TIME THAT IT WAS ACQUIRED.

A. As described above, the Hideaway facility was in the process of undergoing a large facility expansion at the time that it was acquired by Limestone Water. While this means much of the facility was essentially new at the time of acquisition,[12] many issues were identified that necessitated changes in order to allow the facility to function properly. The new treatment processes installed by the developers were extremely sophisticated and, as previously described, oversized relative to the amount of flow currently received at the facility. This level of treatment sophistication and oversized nature has led to many issues arising with the configuration of the control, dosing, aeration and feed systems. To further complicate these issues, the developer had removed much of the automation originally designed into the plant and, instead, planned on utilizing two full time operators to run the facility manually. Such an assumption is not cost effective. As a result, the Company has had to modify and improve the configuration of some treatment processes, add controls, and improve monitoring equipment.

Q. PLEASE DESCRIBE WITH MORE SPECIFICITY SOME OF THE ISSUES WITH THE PLANT EXPANSION SYSTEMS.

A. ***First***, immediately upon startup, the bar screen compactor system jammed and was found to be poorly configured. Left unresolved, this could lead to nuisance solids entering the facility, creating issues with the Cambrian BioViper system or other processes by causing

[12] The Hideaway expansion was not only funded by developer contributions, it was also designed by developers.

blockages or damaging equipment. ***Second***, issues existed with the new solids handling systems. This included issues with the quills in the polymer injection system. The polymer injection system aids in coagulation of waste activated sludge, allowing for a more effective solids handling process and providing a higher capture rate across the solids dewatering box during sludge removal operations. Given the problems with the bar screen compactor system, however, many of the quills had been damaged by nuisance solids. ***Third***, issues arose associated with the feed pump for the clarifier system. The pump system is responsible for dosing flow into the clarifier and recirculating flow into the towers.

Fourth, beyond issues with solids handling, the new project required many other modifications during startup, including problems associated with the aeration system power and control systems. One of the blower's VFDs was found to be nonfunctional. The VFDs allow the blowers to be precisely controlled, which is essential for the proper function of the treatment plant.

Fifth, the influent lift station required additional modifications to ensure proper operation. ***Sixth***, modifications were required to the power, monitoring, and control systems, both to address issues identified during start-up and to restore some of the automation in the facility that had been removed by the developer to save capital. Restoring that functionality was essential to prevent astronomical operating costs, as the developer had planned on employing two full-time operators to manually operate all functions of the facility.

Q. WHAT REPAIRS AND IMPROVEMENTS WERE MADE TO ADDRESS THESE ISSUES WITH THE HIDEAWAY PROJECT EXPANSION?

A. Given the extensive problems with the system expansion project, a number of improvements and upgrades had to be made. ***First***, changes were made to prevent nuisance solids from entering the facility. ***Second***, the nonfunctional quills that had been damaged by the previous influx of nuisance solids were replaced to ensure proper function. ***Third***, the clarifier feed pump was replaced to ensure proper function. ***Fourth***, the VFD for the aeration blower was replaced to ensure proper control. ***Fifth***, modifications were made to the influent lift station. This included making new penetrations on the wet well and installing additional pumps to allow for proper dosing to different portions of the treatment processes. This also required modification to the piping and valving systems used to distribute flow throughout the facility. ***Sixth***, constant monitoring equipment was installed to compensate for the elimination of automation previously made by the developer. This included installation of pH, dissolved oxygen ("DO") and flow monitoring equipment, replacement of radio/cell receivers and transmitters for the pumping systems for influent, recirculation, and drain field systems, reconfiguration of the power system to replace a transformer without interrupting service, installation of equipment for remote monitoring, control, and telemetry between different flow meters throughout the plant, and installation of remote monitoring equipment that can report data from different sensors throughout the treatment process and equipment status.

Seventh, some modifications were required in the start-up of the new turbo-disk filter system included in the filter project. This disc filter system removes the finest wastewater solids from effluent. This will greatly extend the life of the drain field system by essentially eliminating all solids from the drain system.

Q. DO YOU HAVE ANY PICTURES OF THE IMPROVEMENTS AND REPAIRS THAT HAVE BEEN MADE AT HIDEAWAY?

A. Yes. See the following:


New aerobic and anaerobic Cambrian towers and part of the blower system with replaced VFD.

Screening system and compactor.

Polymer feed system.

Turbo-disk filter system.

2. Disinfection System

Q. PLEASE DESCRIBE THE CONDITION OF THE DISINFECTON SYSTEM AT THE TIME OF ACQUISITION AND THE REPAIR THAT WAS MADE TO THAT SYSTEM.

A. Upon acquisition, the new UV disinfection system required initiation/startup. Shortly thereafter both units stopped working. An issue was identified with the power and control systems for the units, which had caused them to stop working. The power and control systems were repaired and reconfigured to restore functionality and to prevent further issues. The system also required that the UV bulbs be replaced to ensure proper function.

Q. DO YOU HAVE A PICTURE OF THE REPAIRED UV SYSTEMS?

A. Yes.

UV disinfection systems.

3. Drain Field

Q. PLEASE DESCRIBE THE CONDITION OF THE DRAIN FIELD SYSTEM AT ACQUISITION AND WHAT REPAIRS HAVE BEEN COMPLETED.

A. As with the disinfection system, the Hideaway drain field system was also being expanded as part of the facility expansion project underway at the time that the Company acquired Hideaway. Given this, the initial work on the system revolved around the startup of the expanded drain field system. Most significantly, this included the decommissioning of the existing pumping system and the installation of a new larger capacity pump system. Associated with this was the modification of the power and control components for the drain field systems.

Following the startup of the improved drain field system, however, other issues came to light that necessitated repairs. For instance, several of the distribution lines in the drain field system were leaking. As previously described with the Arrington system, leaks in drain field components can cause improper distribution of treated wastewater through the drain field area, resulting in some areas becoming overloaded which eventually results

in ponding and potentially an unpermitted discharge. To prevent such problems, the leaks have been repaired.

Furthermore, a damaged valve box in the drain field was identified. The drain valves contained in the box allow sections of the system to be isolated in order to redirect flow to other portions of the drain field or simply to complete maintenance work. The valve boxes protect and provide access to the valves inside. The broken valve box was replaced to protect the valves and to ensure operational access.

Finally, a pressure relief valve was damaged in the distribution system. As at Hardeman Springs, a nonfunctional pressure relief valve can cause an "air lock" condition in a line. The pressure relief valve was replaced to ensure proper function.

Q. DO YOU HAVE A PICTURE OF THE HIDEAWAY DRAIN FIELD?

A. Yes.

Drain field area.

4. Collection System

Q. PLEASE DESCRIBE THE CONDITION OF THE COLLECTION SYSTEM AT HIDEAWAY AT THE TIME OF ACQUISITION.

A. Since acquisition, several issues have been identified and addressed in the Hideaway collection system. A main break was identified and repaired. Additionally, several

damaged service lines were identified. Repairs of service lines low pressure collection systems (as compared to gravity systems) are critical, as untreated wastewater can otherwise be pumped into the ground and will eventually result in untreated wastewater reaching the surface. These service lines are being repaired as they are identified. Furthermore, issues with grinder pumps have been identified and rectified. Finally, some septic tanks required repairs.

5. General Site Improvements

Q. PLEASE DESCRIBE THE GENERAL SITE IMPROVEMENTS THAT HAVE BEEN MADE AT HIDEAWAY.

A. At the time of acquisition, there were aspects of the Hideaway treatment plant that needed improvements to facilitate testing, ensure proper site upkeep, maintain site security, and ensure operator safety. First, to ensure operator safety and compliance with safety regulations, new lock-out tag-out equipment was installed for new equipment on the site, fire extinguishers were placed where appropriate, and hose reels were hung to eliminate tripping hazards. Second, the building containing the lab, blower equipment, chemical feeds, and disinfection equipment had its floor leveled, the building repainted, HVAC system repaired, locks replaced, and appropriate safety signage installed. Third, grading was modified on the site to redirect storm water away from the access road and gravel was added to the road where it had previously washed out. Fourth, gravel was installed on all areas around the site where access is required for operational purposes and to prevent growth of nuisance vegetation. Fifth, vegetation control equipment (brush hog and mowers) was acquired to ensure proper site upkeep and vegetation control. Sixth, new

locks were installed on all gates and structures following the completion of the construction project to ensure proper site security.

Q. DO YOU HAVE ANY PICTURES THAT DEPICT THE GENERAL SITE IMPROVEMENTS?

A. Yes.

Gravel installed throughout site.

Signage installed.

Site access road improvements.

6. Status of Remote Monitoring Installation

Q. PLEASE DISCUSS THE INSTALLATION OF REMOTE MONITORING EQUIPMENT AT HIDEAWAY.

A. As previously mentioned, Limestone Water installs remote monitoring equipment on all lift stations and treatment plants it acquires. A full discussion of the benefits of remote monitoring and the rationale underlying the installation of that equipment is contained in the section discussing the Aqua wastewater facility. As of June 30, 2024, Limestone Water has installed 1 remote terminal at Hideaway with plans to install another in the near future.

Q. PLEASE DESCRIBE ANY REMAINING PROJECTS OR REPAIR WORK PLANNED FOR THE HIDEAWAY SYSTEM.

A. No additional work is currently planned. Limestone Water will continue to operate the system, and address issues as they are identified.

F. Chapel Woods Wastewater System

Q. PLEASE DESCRIBE THE CHAPEL WOODS WASTEWATER SEWER.

A. The Chapel Woods wastewater treatment system is a mechanical treatment facility consisting of a collection system (part gravity/part low-pressure), flowing to an anaerobic reactor, nitrification tower, and including ultraviolet disinfection. The facility serves approximately 145 customers in Marshall County.

The Chapel Woods wastewater treatment system is unique in that it is a mechanical facility that does not rely on mechanical aeration for primary treatment. In fact, the only significant electrical system at the facility is the pumping system for the influent lift station with additional electrical systems for a recirculation pump, disinfection systems, and effluent pumping. The influent lift station delivers wastewater to the anaerobic upflow reactor in which the influent wastewater passes vertically through a submerged medium under anaerobic conditions. While the original design included three chambers divided by baffle walls, poor maintenance had allowed many portions of the baffle walls to rust thereby causing the system to function like one large anaerobic basin. In fact, large amounts of rust were noted on the steel tank and baffle walls, and significant sludge had accumulated in the basin.

Q. PLEASE DESCRIBE THE FUNCTIONING OF THE ANAEROBIC REACTOR.

A. The anaerobic reactor serves initially to remove soluble and suspended organic matter from the wastewater. As wastewater moves vertically upward, sludge settles to the bottom and is pumped out of the reactor via a sludge pumping valve(s). Originally, designed with a single, center-mounted valve, two additional valves were added to allow for more sludge removal.

As wastewater moves up through the fixed media in the anaerobic reactor, it invigorates the anaerobic biological activity. The treatment in this basin was hindered by high pH levels in influent. The pH issues have since been resolved.

Q. PLEASE DESCRIBE THE OPERATION OF THE NITRIFICATION TOWER.

A. As wastewater reaches the top of the anaerobic digester, it flows via gravity from the top of the anaerobic reactor to the top of the nitrification tower. The tower is a contained system in which wastewater flows over a plastic media filter system. The plastic media filter system allows for formation of biofilm for dense biological treatment. The wastewater is distributed across the top of the filter media and allowed to trickle down across the surface of the filter. At the time that it was acquired, the media showed areas of damage.

There are elements of operational control in the nitrification tower as valving and piping allow for the distribution of flow over the nitrification media. That said, however, the valves were in poor condition with several frozen in place and nonfunctional. This inability to control flow across the nitrification media reduced treatment efficacy. Furthermore, higher flows in some other areas caused splattering of wastewater, resulting from overloaded portions of the nitrification media. Aerobic microbial processes that occur on the filter media further remove soluble organic matter from the wastewater. Sludge and some flow from this process is recirculated to the anaerobic reactor via the recirculation pump.

Q. PLEASE DESCRIBE THE DISINFECTION PROCESS.

A. Treated effluent flows from the nitrification tower to the disinfection process. The disinfection system consists of both ultraviolet and chlorination/dechlorination

disinfection.[13] The secondary chlorination disinfection stage was added at the request of TDEC when cloudy effluent led to the conclusion that the ultraviolet disinfection system was failing to effectively disinfect. Once the upper portions of the upflow anaerobic reactor were painted and rust was contained, the cloudy effluent cleared, and the secondary disinfection allowed consistent compliance with bacteriological limits. That said, however, there have been issues in which high flows caused overflows at the disinfection basin. Given this, at the time of acquisition, the facility has struggled to meet some permitted limits.

Q. DO YOU HAVE ANY PICTURES THAT DEPICT THE CHAPEL WOODS WASTEWATER SYSTEM?

A. Yes.

Aerial view of the Chapel Woods wastewater treatment facility.

[13] Dechlorination is a necessary component of any chlorination disinfection system as residual chlorine can be an environmental hazard and is regulated under the NPDES permit.

Anaerobic reactor (left) and nitrification tower (right).

Nitrification media.

Ultraviolet disinfection (left) and secondary chlorination/dechlorination (right) disinfection systems.

Q. WHAT ISSUES HAS THE COMPANY HAD TO REMEDIATE AT THE CHAPEL WOODS WASTEWATER SYSTEM?

A. To date, Limestone Water has made various repairs and improvements to the system with work primarily focused on: (1) solids removal; (2) improved pumping systems; (3) upgraded facility piping and valving; (4) enhanced disinfection systems; (5) general site improvements; and (6) the installation of new monitoring and control equipment.

1. Solids Removal

Q. PLEASE DESCRIBE THE SOLIDS REMOVAL ACTIVITIES LIMESTONE WATER HAS COMPLETED AT THE CHAPEL WOODS SITE.

A. At the time of acquisition, it was noted that while sludge had been regularly removed from the facility, the anaerobic reactor had large amounts of impacted sludge in corners of the basin that were reducing the treatment volume and hindering flow through the basin. Additionally, sludge was identified further downstream and was blocking portions of the nitrification media. The Company worked diligently to flush out the nitrification filter and pump excessive sludge from the reactor. This has restored proper functioning of the nitrification media, eliminated overflows and blockages from the media, and restored treatment capacity. Similarly, the removal of impacted sludge from the upflow anaerobic reactor restored the total treatment capacity of the anerobic phase. This cleanup has resulted in significantly improved effluent quality.

2. Pumping Systems

Q. PLEASE DESCRIBE THE CONDITION OF THE PUMPING SYSTEMS AT CHAPEL WOODS AT THE TIME OF ACQUISITION.

A. As mentioned above, the Chapel Woods treatment system is unique amongst mechanical treatment facilities in that the only powered treatment components in the facility are the influent lift station, the recirculation pump, the ultraviolet and chlorination disinfection system, and the effluent pumping system. As a result, it is essential that the pumping systems function properly.

The lift station pumps, controlled by check valves, are responsible for maintaining the hydraulic level of the anaerobic reactor. Similarly, the effluent pumping and recirculation pumping systems are essential to keeping flow moving through the facility and preventing backups and overflows.

Upon acquisition, one of the lift station pump motors was found to be in poor condition, and all pumps were found to need maintenance. The faulty motor was repaired to ensure proper treatment could occur and to prevent backups from the lift station either into the collection system or a system bypass. Furthermore, flow meters were serviced and calibrated to ensure that proper control of flow through the facility could be maintained by operations staff.

Q. DO YOU HAVE ANY PICTURES DEPICTING THE PUMPING SYSTEMS AT CHAPEL WOODS WASTEWATER FACILITY?

A. Yes, the following pictures show the Chapel Woods influent lift station and recirculating pumping systems.


3. Facility Piping and Valves

Q. PLEASE DESCRIBE THE CONDITION OF THE FACILITY PIPING AND VALVES AT CHAPEL WOODS AT THE TIME OF ACQUISITION.

A. Throughout the site, a number of issues were identified relating to piping and valving including: (1) in the influent lift station; (2) on the anaerobic upflow reactor, including those that convey wastewater from the anaerobic reactor to the nitrification tower; (3) that distribute wastewater over the media in the nitrification tower; (4) in the recirculation system; (5) and conveying wastewater through the disinfection system. As valving is compromised, essential operational control is compromised.

Q. WHAT REPAIRS HAVE BEEN MADE TO THE FACILITY PIPING AND VALVES AT CHAPEL WOODS?

A. As identified, damaged valves are repaired, processes restored, and operational flexibility reestablished. Some potions of piping were found to be damaged and leaking. This reduces the efficiency of the facility and results in potential releases of partially treated sewage. Leaks have been identified and repaired. A sludge removal valve on the anaerobic

upflow reactor failed shortly after Limestone Water acquired the system and was replaced shortly thereafter.

Finally, as previously mentioned, the distribution orifices over the media in the nitrification tower were found to not evenly distribute wastewater over the media. This caused water to splatter off of the media with some portions being overloaded and other portions receiving little or no flow. Repairs to the distribution orifices were made as necessary.

Q. DO YOU HAVE ANY PHOTOS DEPICTING THE UPGRADED SYSTEM PIPING AND VALVING AT CHAPEL WOODS?

A. Yes. The first picture shows the piping that conveys wastewater from the anaerobic reactor to the nitrification tower. The second photo shows the sludge removal piping off of the anaerobic reaction which needed repair. Finally, the third photo shows the recently installed piping.



Additionally, the fourth photo shows the nonfunctional sludge removal valve. The fifth photo shows the resulting sludge overflow. The sixth photo shows the newly installed sludge removal valve.



Finally, this photo shows portion of the nitrification media that had become overloaded due to lack of valving control over the nitrification media caused by faulty valving.

4. Disinfection System

Q. PLEASE DESCRIBE THE CONDITION OF THE DISINFECTION SYSTEM AT ACQUISITION AND WHAT REPAIRS HAVE BEEN COMPLETED.

A. Several issues with the facility disinfection systems were identified at the time of acquisition. In addition, the reporting history of the system also indicated issues with

disinfection as TDEC had previously required a redundant chlorination/dechlorination system be installed because the UV system was not achieving effective disinfection.

First, upon acquiring the system, Limestone Water found that the UV disinfection system was not operating properly as: (1) some of the UV bulbs in the UV disinfection system were burned out and (2) some of the quartz sleeves through which water flowed were permanently stained. With less bulbs functioning than the system was designed for, the system was not functioning at optimal efficiency. Furthermore, the reduced intensity of the quartz sleeves reduced the efficacy as less UV light passed through the wastewater.

Second, in addition to the problems with the UV disinfection system, the chlorination/dechlorination disinfection system was also found to have several issues. The chlorine contact chamber was found to have a significant accumulation of sloughings and solids from the Nitrification Tower. Sloughings and solids can reduce the volume of the contact chamber and decreases the contact time for chlorine to effectively disinfect effluent. Furthermore, sloughings and solids can harbor higher levels of colonies of bacteria, overwhelming the disinfection capacity of the system. Additionally, the sodium hypochlorite pump was also found to be damaged and in need of rebuilding. Furthermore, the feed line for the sodium hypochlorite solution was found to be damaged, which reduced the flow of chlorine solution into the contact chamber. The reduced dosage of chlorine to the chamber, as well as the reduced contact time in the chamber, significantly reduced the efficacy of the disinfection process.

Third, the feeder for the dechlorination tablets was damaged. While it had not reached a point of non-functionality, it was reaching the point at which dechlorination was not effectively occurring. This would result in elevated levels of chlorine in the discharge,

potentially harming natural life in the receiving stream. Also, the existing chlorimeter, used to monitor chlorine dosage for proper disinfection, had failed.

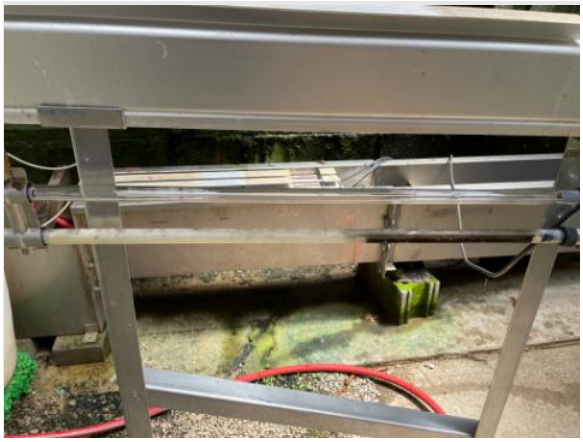
Fourth, the grating over the disinfection equipment was severely compromised, creating a potentially unsafe condition for operators, and a situation where if grating failed while an operator walked over equipment, disinfection equipment could be damaged.

Q. WHAT IMPROVEMENTS AND UPGRADES HAS LIMESTONE WATER MADE TO THE DISINFECTION SYSTEMS AT CHAPEL WOODS?

A. In the same order as they were addressed above, all burnt out UV bulbs were replaced, backup UV bulbs are now stored on site, and stained quartz sleeves were replaced with a regular cleaning schedule implemented to prevent future staining. Second, the sloughings and solids in the contact chamber were cleared to remove additional loading and the chlorine feed pump and feed lines repaired to ensure proper chlorine dosage. Both of these have the effect of restoring the chlorination disinfection system. Third, the dechlorination tablet feeder was replaced by a liquid dechlorination chemical tank and feed pump to ensure proper dechlorination. Additionally, the chlorimeter was replaced to ensure proper operational control over the disinfection process. Fourth, the grating over the disinfection system was replaced to protect the equipment and ensure operator safety. Combined, these improvements to the disinfection systems ensure proper disinfection can occur, thereby protecting the public and environment from the release of wastewater pathogens into the environment.

Q. DO YOU HAVE ANY PICTURES SHOWING THE CHAPEL WOODS DISINFECTION SYSTEMS?

A. The first photos show the Chapel Woods UV disinfection system. The first photo shows the replaced bulbs and quartz sleeves. The second photo shows the quartz sleeves as they are being replaced with the new sleeve on the top and the stained sleeve below.

The following pictures are before and after pictures of the replacement of the rusted grating over the chloring contact chamber.


5. General Site Improvements

Q. PLEASE DISCUSS THE GENERAL SITE IMPROVEMENTS MADE BY LIMESTONE WATER AT THE CHAPEL WOODS FACILITY.

A. In addition to those improvements previously discussed, Limestone Water has made several improvements to the general plant site. These types of improvements are generally

aimed at facility access and security, as well as measures focused on cleanliness, drainage, and safety. At Chapel Woods, this primarily consisted of removing trash and debris from the site, removing nuisance vegetation from the fence line and completing fence repairs, and establishing a regular pest control process. It is important to prevent trash and debris from accumulating at utility sites to protect operator safety and health. When allowed to accumulate, the presence of trash can encourage dumping at the site.

Given this, all trash was removed and improved housekeeping implemented at the site. Upon closing, Limestone Water identified nuisance vegetation growing on the fence line. This can cause damage to the fence over time, compromise site security, and allow leaves and vegetation debris to fall into the site and the system processes. This vegetation was therefore removed and controlled moving forward.

Q. DO YOU HAVE ANY PHOTOS THAT SHOW THE IMPROVEMENTS IN GENERAL SITE CONDITIONS MADE AT CHAPEL WOODS?

A. Yes.

Nuisance vegetation throughout site and along fence line.

Fence lines cleared of vegetation.

Trash left at the site including several broken pumps.

6. Status of Remote Monitoring Installation

Q. PLEASE DISCUSS THE INSTALLATION OF REMOTE MONITORING EQUIPMENT AT CHAPEL WOODS.

A. As previously mentioned, Limestone Water installs remote monitoring equipment on all lift stations and treatment plants it acquires. A full discussion of the benefits of remote monitoring and the rationale underlying the installation of that equipment is contained in the section discussing the Aqua wastewater facility. As of June 30, 2024, Limestone Water

has installed two remote terminals at Chapel Woods (1 at the wastewater treatment plant and 1 at a lift station).

Newly installed remote monitoring equipment at Chapel Woods.

Recalibrated flow meter and UV intensity meter.

Q. PLEASE DESCRIBE ANY REMAINING PROJECTS OR REPAIR WORK THAT LIMESTONE WATER HAS PLANNED AT THE CHAPEL WOODS WASTEWATER SITE AT THIS TIME.

A. The facility has achieved compliance with permit limits in recent testing. The only remaining items to be addressed are some general site cleanup measures, and some structural repairs to the nitrification tower.

G. Shiloh Falls Wastewater System

Q. PLEASE DESCRIBE THE SHILOH FALLS WASTEWATER SYSTEM.

A. The Shiloh Falls wastewater treatment facility is a non-discharging three cell facultative lagoon wastewater treatment plant discharging to a spray field irrigation system. The facility is located near Counce, TN in Hardin County and serves approximately 327 residential customers. The system consists of a low-pressure collection system with 13 lift stations throughout the collection system conveying wastewater to the three-cell lagoon with a smaller fourth holding cell intended to hold water during high flows for a controlled dosing rate to the spray field.

At the time of acquisition, wastewater flowing out of the three-cell lagoon entered a wet well and was pumped through a strainer to a UV disinfection system. The flow then entered a second pumping system to a spray field irrigation disposal system. In this way, the wastewater bypassed a sand filter unit that, while on-site, had not been maintained by previous ownership.

Q. DO YOU HAVE ANY PICTURES THAT DEPICT THE SHILOH FALLS SYSTEM?

A. Yes.

Aerial view of the Shiloh Falls wastewater treatment facility including 3-cell lagoon.

Shiloh Falls lagoon cells.

Q. WHAT IMPROVEMENTS AND REPAIRS HAS LIMESTONE WATER MADE TO THE SHILOH FALLS SYSTEM?

A. Many issues existed with the facility at the time of acquisition that led to extensive repair, replacement, and improvement work being undertaken by Limestone Water. To date, the repairs and improvements made at Shiloh Falls have focused on: (1) the collection system; (2) the disinfection system; (3) the spray field; (4) the sand filter; (5) the pumping and straining system; (6) power and control systems; (7) general site conditions; and (8) remote monitoring.

While these measures have improved the functioning of the treatment plant, a more critical issue exists. The facility historically discharged by sending treated wastewater for

reuse as irrigation at a nearby golf course. At some point prior to acquisition, however, the golf course elected to no longer accept flow from the treatment plant. Rather than securing a new area of adequate size and receptive soil condition on which to spray treated wastewater, the previous ownership simply began spraying the treated wastewater over a small area immediately adjacent to the lagoon. As a result, the facility will require a new spray field. Mr. Freeman will further discuss this issue in his testimony.

Q. DO YOU HAVE ANY PICTURES THAT DEPICT THE PROBLEMS WITH THE UNDERSIZED SPRAY FIELD?

A. Yes, the following pictures show the problems associated with the undersized and overloaded Shiloh Falls spray field.

Overloaded spray field area due to inadequate size (left); runoff from spray field due to overloading (right).

1. Collection System

Q. PLEASE DESCRIBE THE CONDITION OF THE SHILOH FALLS COLLECTION SYSTEM AT THE TIME OF ACQUISITION.

A. Since acquisition, Limestone Water has encountered many issues related to the collection system that have required repairs or improvements. These issues have primarily focused on the low-pressure service lines and the lift stations in use at Shiloh Falls. First, a number of leaks have been identified in the low-pressure collection system. As was discussed with

regards to Hardeman Springs, in a low-pressure collection system, a break in the low-pressure service lines results in wastewater being pumped into the ground due to the pressure in the lines. This can lead to unauthorized releases of wastewater, which could cause damage to the environment or result in public exposure to pathogens and pollutants present in wastewater.

Second, numerous issues have been identified and addressed at the lift stations in the system. Many of the lift stations were found to have only one pump installed at the time of acquisition. Lift stations should always include two pumps. In the event of a blockage or other issue with the primary pump, the backup pump can still operate the lift station. Without this, an issue with a lift station pump can lead to backups into residences and overflows of wastewater that can damage property or the environment.

Third, many lift stations were found to have significant amounts of impacted sludge and grease accumulation in the wet wells. The accumulation of sludge and grease reduces lift station volume and can lead to overflows during high flow periods with the reduced volume. Furthermore, the solids and grease can obscure equipment in the lift station, creating an obstacle for inspection, preventative maintenance, and other operational activities. Furthermore, several of the lift stations were found to have damaged, nonfunctional vents, which can lead to conditions where a pump locks up.

The final work that has been regularly performed on the collection system is the completion of new taps for customers connecting to the system. After it was discovered that plumbing contractors were unfamiliar with tapping into a low-pressure sewer system, the Company became more involved in this process rather than to continue to allow third-party plumbing contractors to cause leaks during taps.

Q. WOULD YOU DESCRIBE THE UPGRADES AND IMPROVEMENTS MADE TO THE SHILOH FALLS COLLECTION SYSTEM?

A. First, Limestone Water quickly repaired any leaks identified in the collection system. As the system is a low-pressure system, backflow prevention devices (check valves) have been installed throughout the system to prevent backups into customers' septic tanks or situations in which system backpressure prevents customer-side pumps from discharging into the system. Several damaged backflow prevention devices were identified and repaired to stop these issues.

Second, backup pumps are being installed at all lift stations that lacked this redundancy. In addition to missing pumps, some lift station pumps were found to be damaged or inoperable. These pumps were repaired or replaced as appropriate to ensure proper lift station function. To further facilitate these pump modifications and installations, as well as to allow for the installation of remote monitoring equipment, power and control system modifications were undertaken at several of the lift stations.

Third, grease and solids were removed from all wet wells and damaged vents were replaced. Additionally, beyond these more common issues, various repairs were completed at many lift stations, including replacing gaskets, regrading around lift stations to prevent rainwater infiltration, repairs to lids, repairs to pump rails, floats, and other miscellaneous items.

Q. DO YOU HAVE ANY PHOTOS THAT SHOW THE PROBLEMS WITH THE SHILOH FALLS COLLECTION SYSTEM AND THE IMPROVEMENTS THAT WERE MADE?

Typical lift station at Shiloh Falls.

2. Disinfection System

Q. PLEASE DESCRIBE THE CONDITION OF THE SHILOH FALLS DISINFECTION SYSTEM AT THE TIME OF ACQUISITION.

A. Since acquisition, Limestone Water has identified a number of issues with the Shiloh Falls disinfection system. First, the system had significant and recurring accumulation of solids on UV bulbs. This resulted in less effective disinfection as less of the UV light can penetrate the flowing wastewater. Both the ballasts and the bulbs of the disinfection system were found to have reached the end of useful life. This caused some of the units to not function, providing no effective disinfection or to simply function at a lesser efficiency. Finally, the display for the UV control system had failed prior to acquisition.

Q. WHAT REPAIRS AND IMPROVEMENTS HAVE BEEN MADE TO THE SHILOH FALLS DISINFECTION SYSTEM?

A. First, the bulbs and ballasts have been replaced to ensure proper UV light functioning. Additionally, in order to avoid the problem with the fouling of bulbs, the bulbs and trough

are now cleaned on a regular basis.[14] Second, UV control system display was repaired to allow for proper operations.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THE SHILOH FALLS DISINFECTION SYSTEM?

A. Yes.

Shiloh Falls disinfection system before (left) and after improvements (right). Note, pump house interior renovation, discussed infra.

3. Spray Field

Q. PLEASE DESCRIBE THE CONDITION OF THE SPRAY FIELD SYSTEM AT ACQUISITION AND WHAT REPAIRS HAVE BEEN COMPLETED.

A. As discussed previously, the spray field at Shiloh Falls is not adequately sized and will require total replacement with a properly sized spray field. While this is the case, the property acquisition, design, permitting, and construction of the new spray field will take time and the existing spray field must continue to function in the meantime. That said, various issues have been identified with the spray field that required repairs and improvements.

[14] As discussed *infra*, these problems eventually necessitated the repair and restoration of the sand filter in the treatment process to greatly reduce the quantity of solids in the lagoon effluent.

First, leaks and line breaks were identified in several areas of the spray field. While the system will continue to be overloaded in the short-term due to its inadequate size, leaks can cause improper distribution of treated wastewater through the drain field area, causing areas to become further overloaded and leading to ponding and runoff of wastewater. ***Second***, some pressure relief valves in the spray distribution system were damaged. As at Hardeman Springs and Hideaway, this can cause an "air lock" condition in a line preventing the treated wastewater from flowing down the line. ***Third***, several spray heads in the spray field system were found to be damaged. Damaged sprayers can result in uneven distribution of treated wastewater, again resulting in more severe ponding and runoff from the site. ***Fourth***, the spray field area is forested and some of the trees and brush growing in the area were hampering operational activities and may have actually caused some of the line breaks and leaks. ***Fifth***, a portion of the spray field area had damaged and missing sections of fencing. This is detrimental to site security, allowing trespassers to enter the site and potentially leading to damaged equipment. ***Sixth***, some lines showed signs of line blockage and indications of wastewater solids in the lines and spray field area. This indicates higher than acceptable levels of solids in lagoon effluent.

Q. WHAT REPAIRS AND IMPROVEMENTS HAS LIMESTONE WATER MADE TO THE SHILOH FALLS DRAIN FIELD?

A. First, the leaks and line breaks in the drain field were repaired. Second, the damaged air relief valves have been replaced to ensure proper function. Third, the damaged spray heads have been replaced. Fourth, the overgrowth of vegetation in the area was removed to prevent further issues and ensure proper operation.

Q. DO YOU HAVE ANY PICTURES THAT SHOW THE PROBLEMS IN THE SHILOH FALLS SPRAY FIELD SITE?

A. Yes.

Runoff from spray field site.

Example of spray field head.

4. Sand Filter

Q. PLEASE DISCUSS LIMESTONE WATER'S REHABILITATION OF THE SHILOH FALLS SAND FILTER AND WHAT NECESSITATED BRINGING THE SYSTEM BACK INTO SERVICE.

A. As previously described, the Shiloh Falls facility included a sand filter system that had been bypassed and was out of service at the time of closing. All indications were that the system had not been used for an extended period. This bypass was enacted without a

permit modification or notification of TDEC. While the exact reason for bypassing the sand filter is unknown, it was likely a result of the increased operational time and effort necessary to operate that system. Specifically, operation and maintenance of that system includes backwashing, maintenance of the sand media, and the utilization of more powerful and expensive pumps to convey water through the filter and disinfection system. That said, upon closing, Limestone Water immediately observed issues that showed that the system should be operational.

First, significant and rapidly accumulating solids were coating the bulbs and trough of the UV disinfection system. As discussed above, this reduces the effectiveness of the disinfection process and indicates higher than acceptable levels of suspended solids leaving the lagoon. Second, accumulation of solids in the distribution piping of the spray field and in the areas where water was discharged also indicated higher than acceptable levels of solids. Third, customers near the facility submitted complaints of foul odor from the facility. This is indicative of poor disinfection and significant nutrients existing in discharged solids.

To address all of these issues and to improve effluent quality released in the spray field, Limestone Water rehabilitated the sand filter system and returned it to service. This involved both making repairs to the filter itself, including cleaning the filter media and making piping modifications to facilitate backwashing the filter for media maintenance. Furthermore, as discussed in the following section, this will also necessitate modifications to the pumping system.

Q. DO YOU HAVE A PICTURE OF THE REHABILITATED SAND FILTER?

A. Yes.

5. Pumping and Straining System

Q. PLEASE DESCRIBE THE CONDITION OF THE SHILOH FALLS PUMPING AND STRAINING SYSTEM AT THE TIME OF ACQUISITION.

A. The pumping and straining system consists of three components: (1) the lagoon pumping system; (2) the strainer; and (3) the discharge pump system used to operate the spray field. The lagoon pumping system at the Shiloh Falls treatment plant is responsible for conveying wastewater from the second lagoon, through a strainer, the sand filter, the ultraviolet disinfection system, and then to the small polishing basin, which then flows to the third lagoon. At this point the discharge pump pressurizes the drain field.

The first problem that was identified was the undersized nature of the lagoon pump. Because the sand filter had initially been removed from service, there was less system resistance, and a smaller pump could be used to convey water from the lagoon and through the strainer. With the restoration of the sand filter system, however, the existing pump was inadequate to maintain an appropriate flow rate through the filter.

The second problem involved the strainer system. The strainer is a series of pipes and cleanouts designed to capture larger and heavier solids pumped from the lagoon before they can enter the sand filter. This reduces the accumulation of solids in the filter, diminishes the frequency of filter backwashing and media replacement, and reduces the operational cost and complexity of the sand filter system. At the time that Shiloh Falls was acquired, the strainer system was found to be impacted with solids, indicating that it had not been emptied in some time (probably since the time that the sand filter was removed from service). This likely worsened the problems related to solids in the disinfection and spray field system.

The final part of the pumping system is the discharge pump system used to operate the spray field. This included another albeit less-sophisticated strainer (which also was impacted with solids), the discharge pump, and a flow meter monitoring wastewater flow to the spray field. At the time of acquisition, the discharge pump, motor, and flow meter were found to be in poor condition and lacking basic maintenance.

Q. WHAT STEPS DID THE COMPANY TAKE TO REHABILITATE THE PUMPING AND STRAINING SYSTEM?

A. With the sand filter returned to service, a new pump and motor of sufficient size was installed to pump wastewater from the lagoon and through the strainer and sand filter system. This necessitated the replacement of portions of the wiring and electrical system powering the pump unit at the lagoon, as well as replacement of some damaged pipes between the pump and the strainer. Next, the strainer was cleaned out and regular cleanouts were scheduled as part of facility maintenance to ensure proper function. Moreover, finally, the discharge pump was replaced with a larger pump to ensure proper functioning

and the motor was repaired. The flow meter and support structure were replaced with a meter that could communicate through the Company's remote monitoring mechanisms.

Q. DO YOU HAVE ANY PICTURES OF THE SHILOH FALLS PUMPING AND STRAINING SYSTEMS?

A. Yes.

Strainer intended to capture larger solids before flow enters the sand filter before (left) and during replacement (right).

Discharge pump and motor before (left) and after (right) repair.

6. Power and Control Systems

Q. PLEASE DESCRIBE THE CONDITION OF THE SHILOH FALLS POWER AND CONTROL SYSTEMS AT THE TIME OF ACQUISITION.

A. At the time of acquisition, the Shiloh Falls power and control systems had many issues that compromised the functionality of treatment components. First, much of the wiring

throughout the facility was weathered and in poor condition. The deteriorated wiring increases the risk of loss of power to critical equipment, as well as electrical hazards to operations staff. A significant amount of damaged wiring was identified and replaced.

Second, some electrical panels and control systems were in poor condition or were poorly mounted. This also poses a risk of power loss and electrical hazard. As with damaged wiring, these panels were repaired, replaced, and remounted as appropriate.

Third, as discussed in the pumping and straining section above, a new flow meter will be installed at the spray field pump to replace the damaged meter and allow for proper telemetry. Fourth, some electrical systems required substantial modification to support replacement equipment or new remote monitoring equipment. Fifth, with the improvements to the disinfection building described below, new lighting was installed in the disinfection and filtration building to improve operational safety of the equipment inside.

Q. DO YOU HAVE ANY PHOTOS SHOWING THE PROBLEMS WITH THE SHILOH FALLS POWER AND CONTROL SYSTEMS?

A. Yes.

Poorly mounted power and control systems (left), remounted with rehabilitation of filter/disinfection shed (right).

7. General Site Conditions

Q. PLEASE DESCRIBE GENERAL SITE CONDITION AT THE SHILOH FALLS FACILITY AT THE TIME OF ACQUISITION.

A. There were numerous problems at the Shiloh Falls system that do not directly relate to treatment equipment. First, the facility access road was damaged due to a failed culvert, which had allowed a portion of the road to be washed out. All weather access is essential to proper facility operations, as operational issues are more likely to arise during inclement weather conditions. In addition to the access road, the driving paths around the lagoon were dirt roads that largely became unusable during inclement weather.

Second, many portions of the facility fencing were damaged due to vegetation overgrowth, falling trees, and general neglect. Fencing is important to protect equipment from damage by trespassers, as well as varmint damage caused to lagoon berms. Repairing damaged sections of fencing was just part of the problem. Absent an aggressive vegetation and pest management approach, additional damage was inevitable.

Third, various structures and buildings at the facility were found to be in extremely poor condition at the time of acquisition. This included degraded and sinking catwalks, which extended into the lagoon cells, and a severely deteriorated filter and disinfection building.

Fourth, since the sand filter had been removed from service, previous ownership failed to identify the broken water service lines that prevented the backwash of the sand filter.

Q. WHAT IMPROVEMENTS HAS THE COMPANY MADE TO IMPROVE GENERAL SITE CONDITIONS AT SHILOH FALLS?

A. First, the culvert under the access road was replaced, and the access road was improved. Additionally, gravel was spread on all paths to ensure operational access. Second, damaged portions of fencing were repaired or replaced as appropriate to restore proper site security. With the fencing installation, new signage was installed to discourage trespassing. Safety signage warning of operational hazards of various equipment was also installed throughout the facility where appropriate. Third, the Company has begun efforts to clear vegetation from around the fence line to prevent further issues. Also, with the improvements to the fence, pest control measures were implemented as part of regular maintenance to further prevent damage to lagoon berms and other equipment due to pests entering the facility. Fourth, catwalks were replaced to ensure operator safety.[15] Fifth, the filter and disinfection building were replaced. Sixth, in order to facilitate the restoration of the sand filter system, the water service to the site will also be repaired. Seventh, to ensure proper site security, new locks were installed on the fence gate and all lift station

[15] The installation of the new catwalk was part of the Company's 2024 capital plan.

lids throughout the collection system. Eighth, for operator safety, life rings with ropes were installed around the lagoon in the event of rescue.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THESE IMPROVEMENTS?

A. Yes.

Typical lagoon driving paths before (left) and after gravel application (right).

Example of damaged fencing before repairs.

Severely deteriorated interior of filter and disinfection building.

Filter and disinfection building interior after replacement.

New filter and disinfection building exterior.

Failing catwalk structure before replacement (left) and after replacement (right).

Life rings installed around the lagoon for emergency rescue.

8. Status of Remote Monitoring Installation

Q. PLEASE DISCUSS THE INSTALLATION OF REMOTE MONITORING EQUIPMENT AT SHILOH FALLS.

A. As previously mentioned, Limestone Water installs remote monitoring equipment on all lift stations and treatment plants it acquires. A full discussion of the benefits of remote monitoring and the rationale underlying the installation of that equipment is contained in the section discussing the Aqua wastewater facility. As of June 30, 2024, Limestone Water has installed 11 remote terminals at Shiloh Falls (all at lift stations) with plans to install another at the wastewater treatment plant in the near future. The installation of these remote terminals was part of the Company's 2024 capital plan.

Q. PLEASE DESCRIBE ANY REMAINING PROJECTS OR REPAIR WORK THAT LIMESTONE WATER HAS PLANNED AT THE SHILOH FALLS WASTEWATER SITE.

A. As previously discussed, a major project to replace the spray field is in process. Mr. Freeman will discuss this further in his testimony.

H. DSH – Lakeside Estates Wastewater System

Q. PLEASE DESCRIBE THE LAKESIDE ESTATES SEWER SYSTEM.

A. The Lakeside Estates wastewater treatment system is a non-discharging recirculating media filter system discharging to a drip irrigation system. The facility is located near LaFollette, TN in Campbell County and serves approximately 55 residential customers. The Lakeside Estates system is the Company's most recent acquisition, having been acquired on January 23, 2024.

The system consists of a collection system consisting of septic tanks/septic tank effluent pumping ("STEP") with grinder pumps at each home. This pumps into a low-pressure collection system, an anoxic septic tank at the treatment facility which then gravity flows into a recirculation tank with pumps to convey water through the media filter that divides flow between the recirculation tank and disinfection, UV disinfection, effluent pumping system and 17.2-acre drip irrigation area. While the system was in adequate condition at the time of acquisition, there were areas identified that required repairs and improvements. These improvements have focused on the collection system, the facility pumping system, the drain field, and general site improvements. Limestone Water will also install remote monitoring equipment at the treatment plant during the week of July 8th.

Q. DO YOU HAVE ANY PICTURES OF THE LAKESIDE ESTATES SYSTEM?

A. Yes.

Aerial view of Lakeside Estates wastewater treatment facility.

Recirculating media filter.

Drain Field.

1. Collection System

Q. PLEASE DESCRIBE THE CONDITION OF THE COLLECTION SYSTEM AT THE TIME OF ACQUISITION AND THE IMPROVEMENTS THAT HAVE BEEN COMPLETED.

A. While the collection system was in adequate condition, several issues have arisen related to the grinder stations at customers' homes. On several instances, pumps have stopped working either partially or completely, causing alarms to go off on the pump stations. The failure of a grinder station can cause the septic tank to quickly fill resulting in backups into customers' homes or an overflow of sewage. Limestone Water operations personnel have frequently responded to these instances and made repairs and reconfigurations to power, pumping, and control systems where appropriate.

2. Facility Pumping System

Q. PLEASE DESCRIBE THE CONDITION OF THE LAKESIDE ESTATES FACILITY PUMPING SYSTEM AT THE TIME OF ACQUISITION.

A. The pumping systems at the treatment plant are responsible for circulating flow through the media filters and for pumping treated wastewater to the drain field system. The pumps have a precisely controlled dosing rate over each section of the media filter, which is essential to ensuring that proper treatment occurs without any section of the filter becoming overloaded.

Upon closing on the system, however, it was found that the dosing pump system and some of the piping responsible for conveying wastewater through the system was damaged. To address this problem, damaged lines were replaced, one pump was replaced, and others repaired. This restored optimal functionality and control to the media filter.

Similarly, the discharge pump and line were also damaged. The pump and line were repaired to ensure proper function.

Septic tanks and part of the pumping system.

3. Drain Field

Q. PLEASE DESCRIBE THE CONDITION OF THE LAKESIDE ESTATES DRAIN FIELD SYSTEM AT THE TIME OF ACQUISITION.

A. The Lakeside Estates drain field was in adequate condition when it was acquired. After operating the system for a period of time, however, a few issues requiring repairs were identified. First, a clogged drain line was identified in the drain field system. Blockages reduce flow to a portion of the drain field area, potentially causing other areas to become overloaded with flow exceeding the design loading. The blocked line has been cleared to restore proper function. Second, the fencing around the drain field area was incomplete and consisted only of posts with rope strung between the posts. Limestone Water has engaged a contractor to install proper fencing around the drain field. Signage will be installed on the new fence to discourage trespassing in the area. Third, vegetation was overgrown throughout the drain field area. Vegetation can cause damage to drain lines, can reduce the ability of operators to access lines or valve boxes, and can attract pests and

wildlife which can damage equipment or complicate operations. The excess vegetation has been removed and processes put in place to manage vegetation moving forward.

Example of inadequate fencing around drain field.

Restored drain field area.

4. General Site Conditions

Q. PLEASE DESCRIBE THE GENERAL SITE IMPROVEMENTS UNDERTAKEN AT THE LAKESIDE ESTATES FACILITY.

A. Various site improvements at the Lakeside Estates facility have been made primarily related to site security and site maintenance. First, locks have been added to the facility lift stations, power and control systems, and other equipment. This protects equipment from unauthorized access and protects the public from potential exposure to wastewater or electrical equipment. As with the drain field, the only fencing present at the treatment

facility were wood posts with ropes strung between them. This offers no actual security for the site. As with the drain field, a contractor has been retained to install fencing around the treatment plant with a gate, which will have a lock on it to bar public access to the facility. Finally, vegetation overgrowth was an issue throughout the site, reducing operational access to equipment and treatment components, and potentially causing damage to equipment. The vegetation has been cleared and processes put in place to control the vegetation growth on the site moving forward.[16]

Vegetation blocking access to power and control panels.

Inadequate fencing at treatment plant.

[16] Vegetation removal at the second drip field has not yet been completed.

5. Status of Remote Monitoring Installation

Q. PLEASE DISCUSS THE INSTALLATION OF REMOTE MONITORING EQUIPMENT AT LAKESIDE ESTATES.

A. As previously mentioned, Limestone Water installs remote monitoring equipment on all lift stations and treatment plants it acquires. A full discussion of the benefits of remote monitoring and the rationale underlying the installation of that equipment is contained in the section discussing the Aqua wastewater facility. Given the recent acquisition of Lakeside Estates, Limestone Water has not yet installed remote monitoring at this system. That said, Limestone Water intends to install remote monitoring at three Lakeside Estates lift stations in the near future.

Q. PLEASE DESCRIBE ANY REMAINING PROJECTS OR REPAIR WORK THAT LIMESTONE WATER HAS PLANNED AT LAKESIDE ESTATES.

A. No additional work is currently planned. Limestone Water will continue to operate the system and address issues as they are identified.

I. Aqua Utilities Drinking Water System

Q. PLEASE DESCRIBE THE AQUA UTILITIES DRINKING WATER SYSTEM.

A. The Aqua Utilities drinking water system is a purchased water drinking water system. The facility is located near Savannah, TN in Hardin County and serves approximately 452 customers. The facility was acquired by Limestone Water in March 2021.

The facility consists of: (1) a master meter connection to the Savannah Utility Department Drinking water system, which provides wholesale treated drinking water (groundwater sources); (2) distribution system for delivering water to customers; and (3) various isolation valves, flushing hydrants, fire hydrants, and sample points. The master

meter is located in a small cinder block building with a tin roof containing valving and the master meter. The system has no recent health-based violations and meets minimum requirements for drinking water systems in the State of Tennessee.

Q. WHAT WAS THE GENERAL CONDITION OF THE AQUA UTILITIES DRINKING WATER SYSTEM?

A. As the system purchases rather than produces its own water, the assets and issues encountered with the facility are relatively simple as compared to a drinking water system with its own water production. That said, however, Limestone Water has encountered issues that have required repairs throughout the distribution system. These generally fall into three categories: (1) water line repairs, (2) hydrant repairs, and (3) isolation valve repairs. Additionally, a storm caused a limb to fall on the master meter building and severely damaged the roof, which required repairs.

1. Water Line Repairs

Q. PLEASE DISCUSS THE WATER LINE REPAIRS WORK PERFORMED AT THE AQUA DRINKING WATER SYSTEM.

A. While the Aqua drinking water distribution system was in adequate condition, Limestone Water identified many areas in which line repairs were necessary. These not only consisted of full main breaks, but line leaks as well. Such events not only interrupt water service to customers behind the main break but can also create a condition where contamination of water and/or debris entering the distribution system can occur. Furthermore, the water exiting from main breaks can also cause massive water loss, as well as erosion and damage to property.

Limestone Water has worked quickly to address breaks and leaks, restore water service to customers, to prevent the contamination of drinking water, and to avoid the resulting erosion and property damage. This type of work can be expensive, and typically requires excavation, sometimes through driveways or street surfaces. As such, these repairs usually require earth work and pavement repair to restore conditions at the site.

2. Hydrant Repairs

Q. PLEASE DESCRIBE THE REPAIRS THAT HAVE BEEN MADE TO HYDRANTS AT THE AQUA DRINKING WATER SYSTEM.

A. The Aqua drinking water system includes flushing hydrants to flush water through mains in order to periodically clear accumulated sediment or to flush water following potential contamination events. Throughout the Aqua system, examples of damage were identified on the flushing hydrant equipment. Where identified, repairs have been completed.

3. Isolation Valves

Q. PLEASE DESCRIBE THE CONDITION OF THE ISOLATION VALVES AT THE AQUA DRINKING WATER SYSTEM.

A. Isolation valves allow operations staff to isolate sections of pipe to minimize the number of customers affected by line breaks, line leaks, and maintenance work. The isolation valves enable operators to isolate pressure losses or prevent contamination from going beyond a sectioned portion of the distribution system.

It is not uncommon for such valves to become lost over time due to vegetation overgrowth or after being covered by pavement. Therefore, shortly after acquisition, work was performed to identify and locate each of the isolation valves in the system. Moreover, it is important to periodically exercise – opening and closing – such valves. This is an

important maintenance activity, as it prevents a valve from becoming "frozen" in place due to lack of use. Several damaged valves were identified in this process and were either repaired at the time or slated for repair during the next scheduled maintenance or emergency maintenance event. This serves to minimize the number of customer-impacting events.

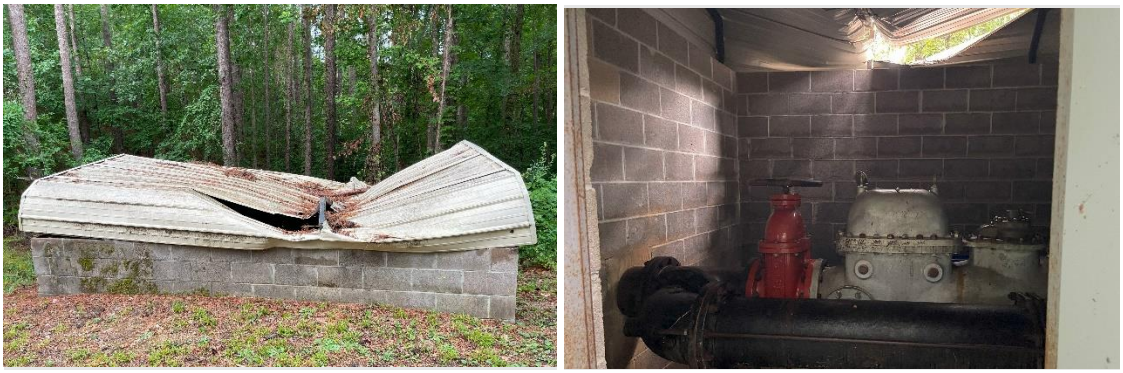
4. Master Meter Structure

Q. PLEASE DESCRIBE THE WORK LIMESTONE WATER HAS PERFORMED TO THE MASTER METER STRUCTURE.

A. As described above, while in adequate condition at the time of acquisition, the master meter vault structure's roof was severely damaged in a storm event. The structure not only protects the valve and meter equipment inside from damage due to exposure to weather and sunlight, it also dramatically extends the useful life of those assets. With the roof damaged, water could flow into the structure. Limestone Water has made roof repairs to restore the protective nature of the structure.

Q. DO YOU HAVE ANY PICTURES OF THE MASTER METER STRUCTURE?

A. Yes.



View of roof damage from the exterior (left) and interior (right).

Roof following completion of repairs.

Q. PLEASE DESCRIBE ANY REMAINING PROJECTS OR REPAIR WORK THAT LIMESTONE WATER HAS PLANNED AT THE AQUA WATER SITE.

A. Limestone Water intends to install a High Tide remove monitoring unit on the water tower, as well as on the master meter. This should be completed in 2024.

J. Candlewood Lakes Drinking Water System

Q. PLEASE DESCRIBE THE CANDLEWOOD LAKES DRINKING WATER SYSTEM.

A. The Candlewood Lakes drinking water system is a groundwater drinking water system. The facility is located near Saulsbury, TN in Hardeman County and serves approximately 121 customers. The facility was acquired by Limestone Water in May 2023.

The system consists of: (1) one active well with associated power and control systems, (2) sodium hypochlorite disinfection system, (3) a 65,000-gallon standpipe storage tank, and (4) distribution system.

Q. WHAT WAS THE CONDITION OF THE CANDLEWOOD LAKES SYSTEM AT THE TIME OF ACQUISITION.

A. Limestone Water discovered many areas of the Candlewood Lakes system that required repairs or improvements to ensure the system can provide safe, reliable, and

environmentally compliant service to customers. Repairs and improvements have been completed to: (1) the well, (2) the disinfection system, (3) the storage tank, (4) the distribution system, (5) the electrical system, and (6) the general utility site. Limestone Water has also installed remote monitoring equipment at the disinfection structure.

While these improvements have generally resolved many of the issues encountered at the site, the facility was issued a Notice of Violation ("NOV") shortly prior to acquisition for failing to provide a secondary water source.[17] For this reason, Limestone Water must drill a secondary well for the system. Mr. Freeman will discuss this further in his testimony.

Q. DO YOU HAVE ANY PHOTOS OF THE CANDLEWOOD LAKES SYSTEM?

A. Yes.

Disinfection structure (left) and well housing (right) at the time of acquisition.

[17] Tennessee regulations mandate a redundant drinking water source for systems with more than 50 service connections.

1. Groundwater Well

Q. PLEASE DESCRIBE THE CONDITION OF THE CANDLEWOOD LAKES GROUNDWATER WELL AT THE TIME OF ACQUISITION.

A. The existing groundwater well at the Candlewood lakes system was in adequate condition at the time of acquisition. Limestone Water did, however, identify one issue requiring repair. The housing protecting the well head had deteriorated and was no longer providing adequate protection for the equipment. A new protective housing was installed in place of the old cover. As mentioned above, Mr. Freeman will also discuss the need to install a secondary well to comply with an NOV issued prior to Limestone Water's ownership of the system.

Q. DO YOU HAVE ANY PHOTOS OF THE EXISTING WELL AT CANDLEWOOD LAKES?

A. Yes.

Old deteriorating well housing (left) and new well housing (right).

2. Disinfection System

Q. PLEASE DESCRIBE THE CONDITION OF THE DISINFECTION SYSTEM AT THE TIME OF ACQUISITION.

A. At the time of acquisition, Limestone Water identified a number of issues with the disinfection system that required repairs and improvements. First, the disinfection pump was found to be damaged, leaking, and not functioning properly. Absent proper functioning, the disinfection pump could improperly dose sodium hypochlorite with either too much chlorine dispensed (causing bad odor and potential bleaching in drinking water) or too little dispensed (resulting in inadequate chlorine residual in the system to ensure protection from bacteriological growth in the drinking water). Limestone Water quickly repaired the pump to ensure proper disinfection.

Next, the feed line for the disinfection system was found to be damaged, resulting in a leak of the sodium hypochlorite solution. This could result in inadequate chlorine levels entering the system, again risking bacteriological growth in drinking water, and could cause damage to equipment in the disinfection structure due to the leaking chemical. Limestone Water replaced the damaged section of feed line.

Additionally, in addition to issues with the feed line, the insertion port through which the sodium hypochlorite solution was pumped into the raw water was corroded and had begun to leak. Again, this could lead to a partial or complete blockage of chlorine flow into the water, compromising the disinfection process. Limestone Water also replaced the insertion port.

Finally, the chlorine residual testing equipment was found to be in poor condition. The ability to accurately measure chlorine levels in water is essential to ensuring that the

disinfection system is functioning properly and that dosage rates are correct. New testing equipment was ordered to ensure accurate testing.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THE IMPROVEMENTS MADE TO THE CANDLEWOOD LAKES DISINFECTION SYSTEM?

A. Yes.

Chemical feed pumps and lines.

New chlorine injection port piping.

3. Water Storage System

Q. PLEASE DESCRIBE THE CONDITION OF THE CANDLEWOOD LAKES WATER STORAGE SYSTEM AT THE TIME OF ACQUISITION.

A. The Candlewood Lakes standpipe water storage tank was in adequate condition at the time of acquisition. That said, however, several issues were identified which required repairs or improvements. First, the flap on the overfill drain line for the tank was found to be

jammed open. This can cause issues as bugs and other varmint can enter the water tower through the drain line, causing contamination of water. Additionally, nuisance vegetation had been allowed to grow unchecked around the drain line outlet. To address this situation, vegetation was removed, and a new flap installed to prevent these sources of contamination.

Second, the level sensors that triggered the well to start and fill the tank were not functioning. This meant that the tank was filled only by manually activating the well pump. Therefore, if an operator was not at the site, the tank could drain, resulting in service interruptions and/or drops in pressure. To address this problem, the sensors were repaired to ensure the automatic filling could resume.

Finally, the water storage tank was found to be due for cleaning due to age. Some sediment had accumulated on the interior and exterior of the tank. Regular cleanings are necessary to extend the useful life of the tank coating and to maintain water quality.

Q. DO YOU HAVE ANY PICTURES OF THE CANDLEWOOD LAKES WATER STORAGE TANK?

A. Yes.

Vegetation cleared and new flap installed on drain line.

Sediment and rust staining on inside of tank prior to cleaning.

4. Distribution System

Q. PLEASE DESCRIBE THE CONDITION OF THE CANDLEWOOD LAKES DISTRIBUTION SYSTEM AT THE TIME OF ACQUISITION.

A. At the time of acquisition, many issues were identified with the Candlewood Lakes drinking water distribution system. As with the Aqua Utilities drinking water system, Limestone Water identified a number of areas where main breaks or line leaks had occurred and needed repairs. Recognizing that such events interrupt service and can result in contamination of water, they must be repaired immediately.

Similarly, as with the Aqua Utilities system, the Candlewood Lakes drinking water system relies upon isolation valves throughout the system to isolate sections of the system in order to minimize the effects of leaks and maintenance work. Shortly after acquisition, an effort was made to identify all such valves, as it is not uncommon for valves to become lost due to vegetation overgrowth or after being covered by pavement. Additionally, Limestone Water tries to routinely exercise such isolation valves to prevent a valve from becoming "frozen" in place due to lack of use.

Next, Limestone Water worked to implement a flushing program for the system, as customers reported discoloration in drinking water and records showed that no regular flushing had been done by previous ownership. Flushing is important to clear the sediment that accumulates in distribution systems over time. Without a periodic flushing program, sediment can be delivered, causing discoloration and staining. In the process of implementing the flushing program, Limestone Water identified several damaged air release valves in flushing hydrants. Air release valves are important to remove air from the lines following flushing procedures and prevent damage to pipes resulting from "water hammer" due to air infiltration. In all cases, the damaged air release valves were replaced.

5. Electrical System

Q. PLEASE DESCRIBE THE CONDITION OF THE CANDLEWOOD LAKES ELECTRICAL SYSTEM AT THE TIME OF ACQUISITION.

A. The electrical system at the Candlewood Lakes facility was in adequate condition. The only damaged component was a faulty outlet in the disinfection building. Though the systems were in adequate condition, the system lacked a backup generator or any means to

connect a generator to the system. With the number of customers served, a permanent backup generator is needed to prevent service interruption in the event of a power failure.

Modifications were also made to the electrical system in order to install an automatic transfer switch that can automatically switch to and from generator power in the event of a power interruption. Limestone Water has begun searching for a reasonably priced generator to install at the site. This will increase the resiliency of the system and reduce service interruptions to customers. The installation of a backup generator with the necessary electrical upgrades is part of the Company's 2024 capital plan.

Q. DO YOU HAVE ANY PICTURES OF THE ELECTRICAL SYSTEM IMPROVEMENTS?

A. Yes.

Concrete pad to the left of the power panels for future backup generator installation.

6. General System Condition

Q. PLEASE DESCRIBE THE GENERAL CONDITION OF CANDLEWOOD LAKES WATER SYSTEM AT THE TIME OF ACQUISITION.

A. A number of issues that were not directly related to water production, treatment, storage, or distribution were identified. First, portions of the facility's fencing were found to be damaged and, in some areas, the barbed wire strands were not properly supported at the

top of the fencing. The fencing was repaired, and appropriate signage installed to discourage trespassing on the site. Also, locks were also installed on the gate and on power panels to further prevent unauthorized access.

Next, it was noted that there was no personal protective equipment present in the disinfection building where chemical supplies are housed. It is mandatory that adequate protective gear be provided for individuals involved in chemical handling. Given this, the Company purchased new gloves, face shields, and an eye wash station to ensure operator safety.

Finally, the overflow line for the tank ran offsite and discharged to a wooded area adjacent to the site. This area was heavily overgrown. As shown in the section discussing the storage tank improvements, this area was cleared of brush to facilitate the replacement of the overflow flap on the overflow line and to ensure future operational access.

Q. DO YOU HAVE ANY PHOTOS THAT DEPICT THESE SITE IMPROVEMENTS?

A. Yes.

New signage.

7. Status of Remote Monitoring Installation

Q. PLEASE DISCUSS THE INSTALLATION OF REMOTE MONITORING EQUIPMENT AT CANDLEWOOD LAKES.

A. As previously mentioned, Limestone Water installs remote monitoring equipment on all lift stations and treatment plants it acquires. A full discussion of the benefits of remote monitoring and the rationale underlying the installation of that equipment is contained in the section discussing the Aqua wastewater facility. While it has not yet installed remote monitoring at Candlewood Lakes, Limestone Water intends to install a remote terminal at the water treatment facility in the near future.

Q. PLEASE DESCRIBE ANY REMAINING PROJECTS OR REPAIR WORK THAT LIMESTONE WATER HAS PLANNED AT THE CANDLEWOOD LAKES WATER SITE.

A. As discussed above, the system will require an additional well in order to meet minimum state standards for a redundant water source for systems with more than 50 service connections and to respond to an NOV issued by TDEC shortly before acquisition. Mr. Freeman will discuss this more thoroughly in his testimony.

V. ACQUISITION ADJUSTMENT RECOVERY

Q. WHAT IS AN ACQUISITION ADJUSTMENT?

A. As described in more detail in Mr. Thies' testimony, an acquisition adjustment is an amount paid for the acquisition of an asset that exceeds the net book value of that asset.

Q. DOES THE COMMISSION ALLOW FOR THE RECOVERY OF ACQUISITION ADJUSTMENTS?

A. Again, I'll defer to Mr. Thies regarding the accounting and specifics of the recovery of acquisition adjustments. That said, however, it is my understanding that the Commission has promulgated a rule (Section 1220-04-14.04) that allows for the recovery of an acquisition adjustment and includes a list of factors that the Commission "may consider" in its determination of "whether any acquisition adjustment should be incorporated into the acquired rate base."

Q. IS LIMESTONE WATER SEEKING THE RECOVERY OF ANY ACQUISITION ADJUSTMENTS?

A. It is my understanding that Limestone Water is seeking to recover acquisition adjustments associated with the acquisition of the Aqua Utilities, Cartwright Creek, Candlewood Lakes, and Shiloh Falls acquisitions.

Q. WHICH OF THE ENUMERATED FACTORS WILL YOU DISCUSS?

A. In addition to factors discussed by Messrs. Thies, Duncan, Silas and Freeman, I will discuss:

►(a) Cost savings or increases resulting from consolidation of the selling utility's system into the acquiring utility's operations; and

►(b) Improvements in public utilities services resulting from the acquisition; and

Q. PLEASE DISCUSS ANY COST SAVINGS OR INCREASES RESULTING FROM CONSOLIDATION OF THE VARIOUS LIMESTONE WATER SYSTEMS.

A. As indicated in Mr. Duncan's testimony, it costs more to professionally operate a system than it does to operate a failing, non-compliant system. As he indicates, power, labor and chemical costs for a professionally operated system will necessarily be more than for a system in which components have failed and are not using electricity, a disinfection system

is broken and not using any chemicals, or professional, trained labor is not visiting a system on a regular schedule. Furthermore, a system in which capital has not been invested as needed will also have a lower cost for ratemaking purposes. Therefore, it is difficult, if not impossible, to make an apples-to-apples cost comparison between a system that has failed and that same system once it has been rehabilitated. Any expectation of a "cost savings" in that scenario is not realistic.

That said, however, it is my opinion that Limestone Water has been able to bring professional operations to these systems, and run these systems at an optimal level, while limiting cost increases. The best example of this is that, through the economies of scale that result from acquiring and consolidating multiple systems, Limestone Water was able to limit O&M costs associated with third-party professional operators. As indicated previously, Limestone Water recently completed an RFP for O&M services in Tennessee. During a period when inflation has typically been 3-4%, the monthly charge as a result of that RFP only increased by 0.95%. Further, while the three-year O&M contract includes automatic annual escalators, those escalators are only 3%, which is also below the current annual rate of inflation.

To support my opinion that Limestone Water has run these systems at an optimal level while limiting cost increases, I note my previous testimony regarding Limestone Water's reliance on automation. Specifically, my testimony discusses the Company's utilization of remote monitoring equipment. Such equipment effectively allows the Company to monitor the operations of a system on a 24/7 basis even when operators are not at the facility. By monitoring equipment, the Company can detect problems prior to a piece of equipment failing. As such, predictive maintenance activities can avoid the need

for expensive capital repairs. I would also point to Limestone Water's implementation of automation at the Hideaway facility. The developer designed and funded expansion at Hideaway assumed full-time operations instead of less-expensive automation. Upon acquisition, Limestone Water reversed course and implemented the automation that had been previously eliminated. As such, the Company was able to effectuate a cost reduction.

It is my professional opinion, given my operational experience at CSWR, as well as my previous experience as Vice President of Operations and Business Development of the Midwest for American Water Contract Operations, that none of the systems acquired by Limestone Water would have been able to procure professional operations services at a similar cost to those attained by Limestone Water through its state-wide RFP process. Therefore, I believe that there have been cost savings resulting from consolidation of each of these systems by Limestone Water.

Q. PLEASE DISCUSS "IMPROVEMENTS IN PUBLIC UTILITIES SERVICES" RESULTING FROM THE VARIOUS ACQUISITIONS.

A. My previous testimony documents in great detail the "improvements in public utilities services" that result from the acquisition of each of these systems by Limestone Water. Here, however, I will provide a general discussion relevant to each system for which Limestone Water is seeking recovery of an acquisition adjustment.

• Aqua Utilities: Relevant to the Aqua Utilities transaction, for which Limestone Water is seeking recovery of an acquisition adjustment, I document numerous improvements made to the wastewater system at pages 19 to 35. In general terms, however, Limestone Water has made improvements to the: (1) aeration system – where the aeration blower was repaired, air leaks were fixed, and the aeration system returned to service; (2)

building structures – where buildings were painted, roofs repaired, and service life restored; (3) ultraviolet disinfection system – where a TDEC permit modification was received to allow removal of the problematic disinfection system; (4) effluent pumping and spray field – where pumping was restored, accumulated sludge removed from the lift station, and spray field valving repaired to allow proper utilization of the spray field; (5) electrical/control systems – where deteriorated power supply panels were replaced and remote monitoring installed to reduce operational costs and detect necessary maintenance activities prior to expensive capital replacements; and (6) lift stations – which were found to be impacted by accumulated sludge, lacked redundant pumping or bypass capability, and suffered from deteriorated power controls. As a result of all these "improvements in public utilities services" made by Limestone Water, the Aqua Utilities wastewater system is better able to be operated as designed and consistent with state and federal regulations. Moreover, especially as a result of the improvements in the lift stations, the possibility of a SSO, or a backup of sewage into residences, has been minimized.

Relevant to the Aqua Utilities water system, I document several areas of improvement on pages 129 to 133. In general terms, however, Limestone Water has made improvements to: (1) water lines – where repairs have been made to both simple line leaks to full main breaks; (2) hydrants – where damaged flushing hydrants have been both repaired or replaced; and (3) isolation valves – where valves have been identified, exposed, exercised, and replaced. The work performed by Limestone Water has led directly to "improvements in utilities services." Specifically, the repairs to water lines have reduced service interruptions, but have also minimized events of system contamination. Meanwhile, the repairs to isolation valves allow Limestone Water to minimize the area

affected by maintenance or emergency events. Finally, the improvements in hydrants allow Limestone Water to more quickly recover from service interruptions by increasing its ability to flush the affected portion of the system to remove either contaminants or sediment. As a result, the Aqua Utilities water system is better able to be operated as designed and permitted by the State.

• Cartwright Creek: Relevant to the Cartwright Creek acquisition, I document extensive repairs, upgrades and improvements to each of the four Cartwright Creek wastewater systems.

Arrington Retreat: For instance, while in generally adequate condition, the Arrington Retreat system required improvements and repairs to its: (1) aeration system - which had not been well maintained and where a flow meter was not functional and the variable frequency drive on the effluent pump had been damaged; (2) lagoon liner – that had been damaged by animals and unsecured from the berm, leading to berm erosion; and (3) land application area which was plagued by damaged valves and leaky lines. Again, as a result of the operational activities of Limestone Water, this system is now fully functional, and customers are benefitting from "improvements in utilities services."

Grassland: The situation at the Cartwright Creek Grassland facility was much more dire. The Grassland facility was over 50 years and had reached the end of its useful lift. Steel infrastructure had been allowed to deteriorate to the point that tanks (the digester versus the aeration basin) did not properly maintain separation of wastewater at various stages in the treatment process. Deterioration was also prevalent in the aeration piping, air drops, and diffusers. Moreover, the system was plagued by heavy inflows and infiltration which peak flow in excess of six times the design flow. As a result, the

Grassland facility struggled to meet permitted limits for BOD, total nitrogen, dissolved oxygen, suspended solids, total residual chlorine and *E. coli*.

While a long-term solution is in the permitting stage,[18] Limestone Water has taken short-term measures at the system which are already providing "improvements in utilities services." For instance, since it was acquired, the Company has: (1) made numerous repairs to the aeration system including the replacement of a failed blower and the repair of leaks in air headers, drop pipes, and air lines; (2) pumped significant volumes of sludge from the primary treatment basin, clarifier, chlorine contact chamber, sludge return, and filtration tanks; (3) commenced chemically enhanced secondary treatment efforts to improve the settling of solids and to promote better floc formation; (4) upgraded and improved various components to the electrical system including wiring, connections, controllers, and components; and (5) replaced many portions of broken and deteriorated wastewater piping with PVC as a short-term fix until a replacement plant is completed.

Hardeman Springs: The Hardeman Springs system also required several repairs. These repairs primarily focused on the: (1) UV disinfection system where quartz sleeves and UV bulbs required replacement; (2) drain field where a damaged air release valve prevent wastewater flow to the drain field; (3) electrical repairs to the effluent pumping system; and (4) collection system main breaks, damaged service lines, grinder pumps and septic tanks.

Hideaway: The Hideaway system in many ways is the opposite end of the spectrum of the Grassland systems. Specifically, as a result of a developer designed and funded expansion project, much of the Hideaway system is fairly new. That said, however,

[18] As previously indicated, the efforts to replace the Grassland wastewater facility are discussed in the testimony of Mr. Freeman.

despite the age of the system, the expansion presented numerous operational problems that would have been very difficult for any owner to address that lacked professional operational, managerial and technical experience. As I explained earlier, the expansion was overly sophisticated, over-sized, and was victimized by a prior decision to eliminate automation and, instead, relied upon expensive full-time operators. Additionally, reflecting prior operator's inability to properly operate and maintain the expansion, upon acquisition Limestone Water had to: (1) make modifications to prevent nuisance solids from entering the system; (2) repair a broken polymer injection system; (3) upgrade the feed pump for clarifier system; (4) repair the VFD on the system blower; (5) modify the influent lift station; and (6) upgrade power monitoring and control systems.

Problems at Hideaway were not limited to the system expansion. The original portion of the Hideaway system required upgrades to the power and control systems for the disinfection system; increased capacity pumping systems and power and control components for the drain field; repairs to leaky drain field distribution lines and damaged valve boxes; and attention to main breaks, damaged service lines and issues with grinder pumps. Clearly then, Limestone Water was able to bring a level of professional management and technical attention that was lacking at Hideaway prior to acquisition.

• Candlewood Lake: Relevant to the Candlewood Lake acquisition, Limestone Water made a number of system improvements that reflect an "improvement in utilities services." First, the Company repaired the well housing to prevent premature deterioration of the well. Next, Limestone Water made a number of repairs to the disinfection system including the disinfection pump, feed line, port, and chlorine residual monitor. Third, the Company made improvements to the storage tank overfill drain line and level sensors.

Furthermore, the Company cleaned the interior of the storage tank to remove sediment and preserve useful life. Finally, Limestone Water made repairs to the distribution system including isolation valves and flushing hydrants. These repairs allow the Company to minimize the impact of service disruptions as well as the ability to flush the system to eliminate sediment or other contaminants. Again, based upon my experience, Limestone Water has brought "improvements in utilities services" to the Candlewood Lake drinking water system.

• Shiloh Falls: Relevant to the Shiloh Falls acquisition, Limestone Water made a number of "improvements to utilities services" that now allow this system to operate at its optimum.[19] Specifically, the Company made numerous improvements to the Shiloh Falls collection system including repairs to broken service lines, replacement of missing pumps in lift stations, pumping of impacted sludge in lift stations and installation of backflow devices to prevent reverse flow into customer septic tanks. In addition, the Company replaced faulty bulbs and ballasts in the UV disinfection system. While the spray field will need expansion/replacement, Limestone Water made improvements to utilize the undersized drain field in an optimal manner. This included the repair of broken distribution lines, replacement of faulty pressure relief valves to relieve air lock conditions, repair and replacement of spray heads, and elimination of excess vegetation from the spray field. Finally, the Company returned the sand filter to service, removed sludge from the strainers, and increased the lagoon pump to facilitate flow through the strainers and disinfection system. All of these repairs were obviously known to previous ownership, but given the

[19] As indicated, the Shiloh Falls drain field is undersized and will require replacement/expansion. Mr. Freeman discusses this capital project.

existence of such problems, it is apparent that they went unaddressed. Limestone Water's acquisition then provided improvements in utilities services to customers.

While Messrs. Duncan, Silas, Freeman, and Thies provide examples of other utility service improvements, it is my opinion that, only through the acquisition by Limestone Water and the provision of professional managerial, technical, and financial services were these operational improvements made available to customers of these systems.

• DSH – Lakeside Estates: While owned by Limestone Water for a short period of time, the Company has already made upgrades to the system that provide "improvements in public utilities services" for customers. Of utmost importance, Limestone Water has noticed that a number of the STEP systems were installed incorrectly. As a result, these facilities at the customer premises, when malfunctioning, can cause backups into the customer's home or overflows into the yard. In less than a year, Limestone Water has made numerous repairs and reconfigurations to grinder station power, pumping, and control systems.

Related to system treatment, the Company has also made a number of improvements. Specifically, the Company has made repairs to the dosing system that pumps wastewater through the media filters and to the drain field. Previous ownership had allowed pumps and pipes to fall into a state of disrepair. As a result, wastewater was not distributed properly through portions of the media filter and to the discharge field. Limestone Water immediately made repairs and improvements to these failed systems.

Given these corrections, the Company believes that the system is running at its optimal level and that failings that, left unattended, could turn into significant problems, have been remedied. As a result, customers have not only seen "improvements in public

utilities services", but given that they are now avoiding long-term expensive repairs, have also realized cost savings.

VI. CONCLUDING OBSERVATIONS

Q. IN LIGHT OF YOUR TESTIMONY, DO YOU HAVE ANY OVERALL CONCLUDING OBSERVATIONS?

A. Yes. As outlined in detail in my testimony, Limestone Water has done and is continuing to do what it represented to the customers and to the Commission it would do when it sought to undertake the responsibility of acquiring these systems and serving the public interest. Limestone Water said at the outset that it was committed to investing in and improving these small, troubled or failing systems in the State of Tennessee. My testimony evidences that Limestone Water is upholding its commitment. The consequences of poor management, lack of technical knowledge and extensive experience, financial ability, and neglect are very real in the utility industry. In the water and wastewater field, the consequences of the foregoing can certainly be inconvenient to customers and communities alike. More importantly, however, struggling and challenged systems can compromise customer and community health and well-being and lead to environmental exposure and hazards. Neither of these costly risks should be taken lightly. National and state reports and studies, including here in Tennessee, have identified these issues and highlighted the substantial investments that must be made in water and wastewater infrastructure in the years ahead. Limestone Water desires to be a part of the solution to our customers and to the communities we serve.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

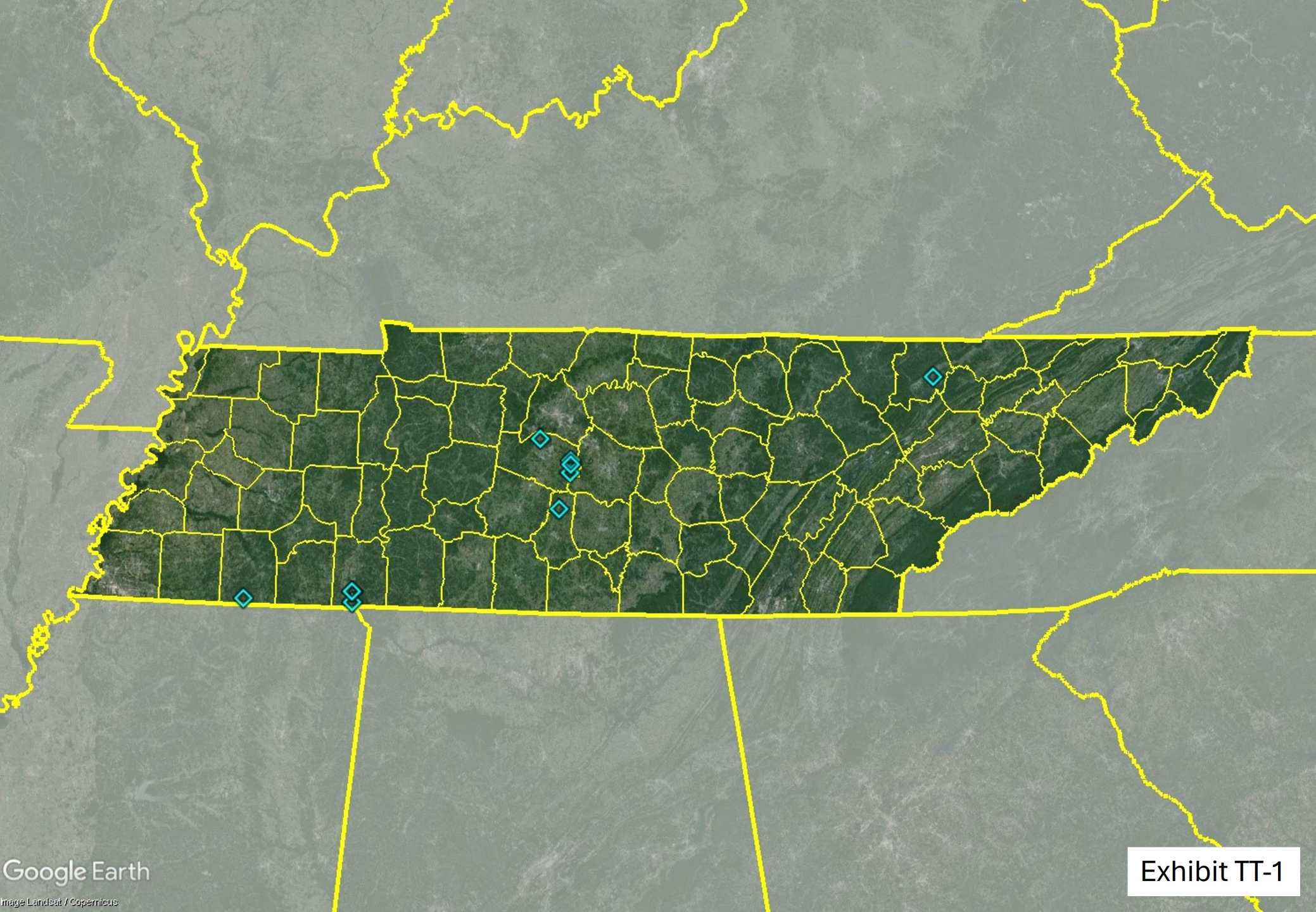


Exhibit TT-1

We Need You

Central States Water Resources, LLC (CSWR), and its affiliates, are looking to work with qualified and experienced water and wastewater operations and management (O&M) firms to bring safe, reliable and environmentally responsible water resources to every community in the U.S.

CSWR, Inc. owns and operates several private, regulated water and wastewater utility companies across the nation. We provide professional and managerial services to make sure the communities we serve have access to clean, safe and reliable water resources, 24/7. We work with outside firms like yours to make sure our utility operating companies have professional operation, maintenance and construction services. Our goal at CSWR, Inc. is to transform local water and wastewater treatment facilities across the United States, improving both the quality of water and the quality of life for our customers.

Benefits of Working with Us

CSWR is transforming how water utilities work by using technology and innovation to quickly assess and invest in reliable infrastructure that meets or exceeds stringent state and federal safety standards, while protecting the aquifers, lakes, rivers and streams that are essential to our world.

Our O&M partners get the benefits of access to working with industry-leading technology, a growing network of water and wastewater professionals and the opportunity to grow your business.

CSWR also provides:

- Training vouchers pending state approval
- Opportunity to learn how to use a computer-based training monitoring system (CMMS)
- Professional, 24/7 customer service

We Need You

We're building our database for all current and future projects for construction and water and wastewater O&M. This Qualification Application is solely a request for information. It does not represent an offer, nor does it confer any rights on any respondent. CSWR is not responsible under any circumstances for any costs incurred by responding to this Qualification Application.

Questions? Please contact us at operations@cswrgroup.com.

QUALIFICATION APPLICATION

Please fill out the information below to be notified of any current or future CSWR projects.

Firm Name:	

1. Address:
2. Company Headquarters (if different from above):

Number of years in business under current business name:	

List all other business names firm has operated under and the time frames for each:

List any Disadvantaged Business Enterprise (DBE) certifications:

Please mark which types of projects you are interested in:

	Water	Wastewater
Operation & Maintenance		
Construction		

If firm is a corporation, LLC or partnership, provide the following information:

Type of organization:	
State of incorporation:	
Date of Incorporation:	
Name of President:	
Name of Vice President:	
Name of Secretary:	
Name of Treasurer:	

SERVICES PROVIDED

Please mark each box for services that your firm provides. Do not include services which are subcontracted to other firms.

Operations & Maintenance (O&M)

Service	Water	Wastewater
System O&M		
Engineering		
Laboratory Testing		
Grounds Maintenance/Landscaping		
Discharge Reporting		
Permitting		
Other (specify):		
Other (specify):		

Construction

Service	Water	Wastewater
General Contracting		
Engineering/Design		
Structural		
Plumbing/Piping		
Electrical		
Cement/Foundations		
Other (specify):		
Other (specify):		

PERSONNEL

Management Personnel

Please list all personnel that may have management responsibilities on potential projects, along with their title, years of experience, years with the firm, a brief description of their potential project role and any certifications or licenses they may have. Use additional sheets if necessary. Please include a management organization chart and resumes of management personnel.

Name	Title	Years of Experience	Years with Firm	Project Role	Certifications/ Licenses

Operating Personnel

Please list all personnel that may have operation & maintenance responsibilities on potential projects, along with their certification and/or licenses (please include the state of licensure), years of experience, years with the firm, and all the types of systems and/or processes they have experience operating and maintaining. Use additional sheets if necessary.

Name	Certification/ License	Years of Experience	Years with Firm	Types of Systems

PROJECT EXPERIENCE

Please list similar projects your firm has operated or managed in the past five (5) years. For each project, include the type of system operated and maintained, location, designed flow capacity, length on contract, scope of work and the total number of permit violations. A narrative must be attached to explain any permit violations and should describe the violation, why it occurred, the resulting penalty and the corrective action taken.

System Type	Location	Designed Flow	Length of Contract	Scope of Work	# of Permit Violations

INSURANCE REQUIREMENTS

For all of our O&M projects, we require the insurance coverage listed below. The following Certificates of Insurance ("COI"), as outlined here, must be furnished to CSWR **upon receipt of approval of the award of the contract**. COI shall provide a minimum of a thirty (30) day notice of cancellation to CCPS and shall name CSWR as an additional insured as follows:

Comprehensive General Liability Insurance

Comprehensive General liability insurance on an "occurrence basis," in the amount of at least $1,000,000.00 per occurrence, with at least a $2,000,000.00 annual aggregate limit, including broad form property damage, blanket contractual and personal injuries (including death resulting therefrom) coverage.

Automobile Liability Insurance

Automobile Liability insurance in the amount of $500,000.00 per person and $1,000,000.00 per occurrence for bodily injury and $500,000.00 per occurrence for property damage or $1,000,000.00 combined single limit. Coverage should extend to any auto or owned, hired or non-owned autos.

Worker's Compensation and Employers Liability Insurance

Worker's Compensation and Employers Liability in the amount required by law.

Commercial Umbrella Coverage

Commercial Umbrella Coverage on all of the foregoing coverage in the amount of $5,000,000.00 per occurrence and $5,000,000.00 aggregate.

Pollution Legal Liability

Operator shall maintain in force Pollution Legal Liability policy with limits of $1,000,000.00 per occurrence and $2,000,000.00 aggregate. In the event that Pollution Liability Coverage is discontinued for any reason by Operator after the termination of this Agreement, Operator agrees to procure tail coverage in force continuously without interruption for a period of three (3) years from the date of the termination of this Agreement.

Professional Liability Error and Omissions

Professional Liability Error and Omissions coverage of not less than $1,000,000.00 per occurrence and $2,000,000.00 aggregate. In the event that Professional Liability Errors and Omissions coverage is discontinued for any reason after the termination of this Agreement, Operator agrees to procure tail coverage in force continuously without interruption for a period of three (3) years from the date of the termination of this Agreement.

Duration of Insurance Policies

Except as otherwise expressly required, all insurance policies herein specified shall be in force for the term of the contract and contain a Rider that the insurance policies cannot be cancelled without a thirty (30) day prior written notice to the parties insured.

SAFETY RECORD

Please provide your firm's Workers' Compensation Experience Modifier and OSHA Recordable Rate for the past three years.

Please provide your Days Away, Restricted, or Transferred (DART) Incident Rate calculated from OSHA's Form 300 and Experience Modifier Rate (EMR) for the last three years in the table below.

Year	DART	EMR

Please provide a copy of any Drug and Alcohol policies including testing programs. Also, provide a brief narrative summarizing any health and safety programs and/or processes

References

Provide three trade references below include name of reference, current contact person, telephone number and address:

1.
2.
3.

Provide two bank references below, include name of reference, current contact person, telephone number and address:

1.
2.

The person undersigned affirms that all information contained within this Qualifications Application is true and accurate. Providing false or misleading or omitting relevant information may result in the Respondent's firm being disqualified for any current or future work for Central States Water Resources.

Affirmed by (signature): _____

Name: _____

Title: _____

Date: _____

Your firm is invited to submit a proposal on project outlined below related to community water and wastewater treatment plants.

Limestone UOC

Is made up of facilities known as:

#	Facility Name	Type	Permit #/AI
1	Aqua Utilities	NPDES	SOP-92082
2	Aqua Utilities	PWS	TN0000948
3	Arrington Retreat	NPDES	SOP-04019
4	Hideaway	NPDES	SOP-07090
5	Grassland	NPDES	TN0027278
6	Hardeman Springs	NPDES	SOP-17002
7	Chapel Woods	NPDES	TN0062073
8	Shiloh Falls	NPDES	SOP-94011
9	Candlewood Lakes	PWS	TN0000797
10	Riverstone Estates WWTP	NPDES	TN0078379
11	Lakeside Estates WWTP	NPDES	SOP-07073

Additional information is available upon request.

Sincerely,

Todd Thomas

Enclosure

INTRODUCTION & BACKGROUND

Central States Water Resources ("CSWR,LLC") owns and provides professional and managerial services to several private, regulated water and wastewater utility companies that the services of one or more outside firms capable of providing operation and maintenance services and or managing construction projects related to the company's water and wastewater treatment plants. Therefore, CSWR is accepting proposals in response to this Request for Proposal ("RFP") in order to find firms willing and qualified to provide these services. Our goal with operating and maintaining water and wastewater treatment facilities is to serve local communities with modern, EPA-compliant water and wastewater treatment facilities that ensure our customers receive reliable and safe service.

The objective of this RFP is to identify one or more firms that will provide the best overall value to CSWR. While price is a significant factor, other criteria will form the basis of our award decision, as more fully described in the Evaluation Factors section of this RFP below.

SUBMISSION GUIDELINES & REQUIREMENTS

The following submission guidelines and requirements apply to this RFP:

- First and foremost, only qualified individuals or firms with prior experience on projects such as this should submit proposals in response to this RFP.
- Bidders may complete a "Company Narrative", providing up to a 4-page narrative listing their companies experience with similar projects, expertise, and why they should be selected by CSWR. Please include references for each example provided. This narrative is optional.
- Bidders must complete the "RFP Response Page" at the end of this RFP that outline the require submittal documents and pricing.
- Proposals must be signed by a representative that is authorized to commit bidder's company.
- **Proposals must be received prior to date outlined in the RFP timeline.**
- Proposals must remain valid for a period of 60 days.
- CSWR anticipates selecting at least two individuals or firms to have more in-depth discussions with and will make an award to one of these "down-selected" individuals or firms.
- Each bidder must read the "Agreement Regarding Operation of Utility Treatment Facilities Water/Wastewater" presented in Attachment A.
- Each bidder must provide proof of insurance coverage, including all inclusions and exclusions to the policy. For information regarding insurance requirements, please refer to Insurance Requirements below.
- Each bidder must provide a staffing plan for each of the facilities and include the key personnel's biography, resume and certifications.

PROJECT DESCRIPTION

CSWR seeks to transform local water and wastewater treatment facilities across the central United States to improve the quality of water and therefore the quality of life in the region.

Project Purpose

To transform how water utilities, work by using technology and innovation to quickly assess and invest in reliable infrastructure that meets or exceeds stringent state and federal safety standards. By restoring communities water infrastructure to applicable regulatory standards, we ensure all CSWR's serviced communities have access to safe, clean, and reliable water resources while protecting the aquifers, lakes, rivers, and streams that are essential to our world. In addition, restoring water infrastructure to applicable regulatory standards will foster new investment into the communities leading to community revitalization in desperate regions.

Project Description

CSWR is looking to procure a qualified group to operate and maintain CSWR's water and wastewater treatment facilities across the United States. This includes all maintenance and construction projects needed to guarantee the highest quality product to CSWR's serviced communities while maintaining safe policies and best practices to comply with regulatory standards.

SITE VISIT (OPTIONAL)

CSWR will conduct an optional site visit at for prospective bidder**, upon request**, to examine the system. The site visit[s] will be schedule for the date[s] and time[s] below:

Site	Date	Time
Site 1		
Site 2		

PROJECT SCOPE

Provided below is CSWR's Project Scope focused on administrative duties and field operations which are comprised of both operator services for the water treatment facilities and wastewater treatment facilities. In addition to the scope of the above noted duties, requirements are provided for each.

Scope and Requirements:

Bidder shall provide a monthly fee in its response to this RFP to maintain the system(s), as described below. No additional charges will be allowed for the routine testing, reporting, operations and maintenance of the Facilities. All costs including, but not limited to, routine labor, materials, profit,

meter reading and travel shall be included in the monthly fee. Costs for items such as equipment replacement, emergencies, or other non-routine repairs are not included in this scope item.

Administrative

The successful bidder shall maintain all required certificates, licenses and approvals required by the governing authorities to operate the Facilities and provide copies of such to the Owner. Each bidder must provide a staffing plan for each of the facilities and include the key personnel's biography, resume and certifications.

The successful bidder shall maintain insurance meeting or exceeding the requirements listed below. Certificates of insurance showing that the Bidder meets the minimum requirements must be provided with the Bidder's response to this Request for Proposal (RFP). Failure to include the necessary certificates will result in the Bidder's proposal being disqualified from consideration.

Customer Service Requirement

The successful bidder shall be responsible for the accurate and timely reading of customer meters, including rereads at CSWR's request. Each bidder must identify a single point of contact who will be responsible for communications between CSWR Customer Service Staff and the bidder's field staff.

Insurance Requirement

Certificates of Insurance ("COI"), as outlined herein, shall be furnished to CSWR upon receipt of approval of the award of the contract. COI shall provide a minimum of a thirty (30) day notice of cancellation to CCPS and shall name CSWR as an additional insured as follows:

Comprehensive General Liability Insurance

Comprehensive General liability insurance on an "occurrence basis," in the amount of at least $1,000,000.00 per occurrence, with at least a $2,000,000.00 annual aggregate limit, including broad form property damage, blanket contractual and personal injuries (including death resulting therefrom) coverage.

Automobile Liability Insurance

Automobile Liability insurance in the amount of $500,000.00 per person and $1,000,000.00 per occurrence for bodily injury and $500,000.00 per occurrence for property damage or $1,000,000.00 combined single limit. Coverage should extend to any auto or owned, hired or non-owned autos.

Worker's Compensation and Employers Liability Insurance

Worker's Compensation and Employers Liability in the amount required by law.

Commercial Umbrella Coverage

Commercial Umbrella Coverage on all of the foregoing coverage in the amount of $5,000,000.00 per occurrence and $5,000,000.00 aggregate.

Pollution Legal Liability

Operator shall maintain in force Pollution Legal Liability policy with limits of $1,000,000.00 per occurrence and $2,000,000.00 aggregate. In the event that Pollution Liability Coverage is discontinued for any reason by Operator after the termination of this Agreement, Operator agrees to procure tail coverage in force continuously without interruption for a period of three (3) years from the date of the termination of this Agreement.

Professional Liability Error and Omissions

Professional Liability Error and Omissions coverage of not less than $1,000,000.00 per occurrence and $2,000,000.00 aggregate. In the event that Professional Liability Errors and Omissions coverage is discontinued for any reason after the termination of this Agreement, Operator agrees to procure tail coverage in force continuously without interruption for a period of three (3) years from the date of the termination of this Agreement.

Duration of Insurance Policies

All insurance policies herein specified shall be in force for the term of the contract and contain a Rider that the insurance policies cannot be cancelled without a thirty (30) day prior written notice to the parties insured.

Insurance Policy Review

Insurance policies may be submitted for review to CSWR. Said policies shall be in form and content satisfactory to CSWR's said representatives. Said policies shall also name CSWR as an additional insured party where specified herein.

Wastewater Field Operations – Included in Monthly Fee

Tasks listed below are routine tasks expected for the operation of a wastewater facility and shall be included in the monthly fee. The monthly fee shall include all labor, materials, and costs to complete the following tasks.

- Make minimum of 3 (for mechanical plants) or 1 (for lagoons) weekly visits to the treatment facility to monitor the operation of the Facilities in order to assure the Facilities are in compliance with all required standards of the governing authorities and those set forth in this Agreement or any attachments hereto.
- Perform weekly inspections of the Facilities' components as described in the CMMS (computerized maintenance management system) or as needed to meet manufacturers' specifications and recommendations.
- Perform monthly, quarterly, semiannual, annual duties of the Facilities' components as described in the CMMS (computerized maintenance management system) or as needed to meet manufacturers' specifications and recommendations.
- Create and perform all routine scheduled work orders generated through CMMS.
- Prepare and file the necessary reports to government regulators to maintain regulatory compliance and provide copy of same to Owner.

- Utilize owner provided regulatory results database. Maintain/upload certified test results into the database by the last business day of each month.
- Obtain the sampling requirements for testing by the government regulators and/or the Owner and perform the necessary sampling.
- Maintain all facility records included in CMMS.
- Contact appropriate laboratories to provide adequate testing and reporting services for Owner.
- Provide all test results to the Owner as early as possible.
- Notify the Owner immediately via Email and Phone of any test results that are outside of regulatory or permit limits, represent a potential for a Notice of Violation, could result in a fine from a Regulatory agency, or could cause a negative impact on the public. Any fee or fines resulting from a delay in notifying the Owner will be the responsibility of the successful Bidder.
- Contact and direct appropriate contractors to make repairs to the system as needed for operation.
- Monitor all of the Facilities' system alarms and remote controls and contact Owner in the event of an alarm.
- Maintain a 24-Hour 7 day per week maintenance and emergency service phone line for customer utility service disruption events.
- Must respond to all customer calls and notifications within a 2-hr period of receiving call or notification.
- Provide a 24-Hour on-call emergency utility service response for operations.
- Perform Utility Locates.

Wastewater Field Operations – Additional Work

Tasks listed below are non-routine tasks expected for the operation of a wastewater facility and shall be billed in addition to the monthly fee. The Bidder shall provide a list of labor rates and cost markup that will be charged.

- Sewer main, or manhole repair and maintenance
- Service and utility construction inspections
- Sewer main flushing, rodding, or jetting
- Lift station maintenance and repair
- Cleaning and vacuuming of manholes
- Lagoon repair/maintenance requiring excavating equipment (e.g. backhoe, loader, etc.)
- Mowing and trimming of plant, lagoon and right of way areas
- Chemical application to lagoon cells
- Fence repair & upkeep
- Sewer main video inspection and recording
- Sewer main repair and/or replacement
- Customer service issues requiring action on behalf of the utility
- Pavement repairs

- Items identified during start-up by Operator as inoperable or concerning conditions of the facility that would affect treatment performance. Owner to review items and grant approval prior to repair work beginning.
- Electrical Repair Services
- Tree trimming/brush removal services
- Mechanical repair services

- Structural repair services

Water Field Operations – Included in Monthly Fee

Tasks listed below are routine tasks expected for the operation of a water facility and shall be included in the monthly fee. The monthly fee shall include all labor, materials and costs to complete the following tasks.

- Make weekly or more frequent visits, as required by regulatory requirements, to the treatment facility to monitor the operation of the Facilities in order to assure the Facilities are in compliance with all required standards of the governing authorities and those set forth in this Agreement or any attachments hereto;
- Perform weekly inspections of the Facilities' components as described in the CMMS (computerized maintenance management system) or as needed to meet manufacturers' specifications and recommendations.
- Perform monthly, quarterly, semiannual, annual duties of the Facilities' components as described in the CMMS (computerized maintenance management system) or as needed to meet manufacturers' specifications and recommendations.
- Maintain all facility records included in CMMS.
- Create and perform all routine scheduled work orders generated through CMMS.
- Prepare and file the necessary reports to government regulators to maintain regulatory compliance and provide copy of same to Owner.
- Utilize owner provided regulatory results database. Maintain/upload certified test results into the database by the last business day of each month.
- Obtain the sampling requirements for testing by the government regulators and/or the Owner and perform the necessary sampling.
- Contact appropriate laboratories to provide adequate testing and reporting services for Owner.
- Provide all test results to the Owner as early as possible.
- Notify the Owner immediately via Email and Phone of any test results that are outside of regulatory or permit limits, represent a potential for a Notice of Violation, could result in a fine from a Regulatory agency, or could cause a negative impact on the public. Any fee or fines resulting from a delay in notifying the Owner will be the responsibility of the successful Bidder.
- Additionally, provide the Owner immediate notification of any situation or activity that would require a precautionary boil order or other interruption to normal service to customers.

- Contact and direct appropriate contractors to make repairs to the system as needed for operation.
- Provide monthly water bac-T results.
- Provide all test results to the Owner as early as possible.
- Notify the Owner immediately via Email and Phone of any test results that are outside of regulatory or permit limits, represent a potential for a Notice of Violation, could result in a fine from a Regulatory agency, or could cause a negative impact on the public.
- Additionally, provide the Owner immediate notification of any situation or activity that would require a precautionary boil order or other interruption to normal service to customers.
- Meter readings.
- Monitor all of the Facilities' system alarms and remote controls and contact Owner in the event of an alarm.
- Maintain a 24-Hour 7 day per week maintenance and emergency service phone line for customer utility service disruption events.
- Must respond to all customer calls and notifications within a 2-hr period of receiving call or notification.
- Provide a 24-Hour on-call emergency utility service response for operations including 2-Hour emergency service per month.
- Perform Utility Locates.

Water Field Operations – Additional Work

Tasks listed below are non-routine tasks expected for the operation of a wastewater facility and shall be billed in addition to the monthly fee. The Bidder shall provide a list of labor rates and cost markup that will be charged.

- Water main repair and maintenance
- Service and utility construction inspections
- Water main flushing
- Booster station maintenance and repair
- Mowing and trimming of plant and right of way areas
- Fence repair & upkeep
- Customer service issues requiring action on behalf of the utility
- Pavement repairs

RFP & PROJECT TIMELINES

The estimated RFP timeline is as follows

RFP Issuance	12/15/2023
RFP Close	01/31/2024

Selection of Top Bidders/Notification to Unsuccessful Bidder	02/05/2024
Contract Award/Notification to Unsuccessful Bidder	02/28/2024

EVALUATION FACTORS

CSWR will rate proposals based on the following factors, with cost being the most important factor:

1. Responsiveness to the requirements set forth in this RFP.
2. Relevant past performance/experience.
3. Samples of work.
4. Cost, including an assessment of total cost of ownership
5. Technical expertise/experience of bidder and bidder's staff.
6. Response to CSWR's "RFP Response Page."

CSWR reserves the right to award to the bidder that presents the best value to CSWR as determined solely by CSWR in its absolute discretion.

RFP RESPONSE SHEET

Please complete each part of the Central States Water Resources RFP Response Sheet presented below by _____ no later than 11:59 PM CST.

Please complete each part in its entirety either electronically or with an ink pen with the exception of the affirmed by portion at the bottom of the sheet. The RFP Response sheet affirmed by portion must be signed by an ink.

Firm Name:		Firm Address	
Contact Phone:		Contact Email:	

Monthly Cost

Standard operations include all basic maintenance needed to operate and maintain the facility including all scheduled and/or annual repairs and replacement of consumables (i.e. lightbulbs, air filters, flex couplings, and other ancillary components that assist with safe and compliant operations) and minor products necessary for proper operation of equipment. Basic maintenance also includes any maintenance recommended by the manufacturer, general housekeeping, and administrative work.

Monthly Cost – Wastewater Field Operations (Total)	$
Monthly Cost – Water Field Operations (Total)	$

#	Facility Name	Type	Monthly Operational Fee
1	Aqua Utilities	NPDES	
2	Aqua Utilities	PWS	
3	Arrington Retreat	NPDES	
4	Hideaway	NPDES	
5	Grassland	NPDES	
6	Hardeman Springs	NPDES	
7	Chapel Woods	NPDES	
8	Shiloh Falls	NPDES	
9	Candlewood Lakes	PWS	
10	Riverstone Estates WWTP	NPDES	
11	Lakeside Estates WWTP	NPDES	

Additional and Emergency Services

Additional services include all major repairs, replacements, and failures that are unanticipated and unscheduled. Emergency services will be for major materials that need repair or replacement due to a potential threat to public/worker safety, health, and welfare. The labor rate should include all ancillary tools and materials necessary to perform the emergency service. This cost should account for any perceived or expected overtime that may be required due to required emergency services.

Additional Services – Hourly Rate	$
Emergency Services – Hourly Rate	$
Cost Markup	%

Company Narrative (Optional)

Respondent must attach Company Narrative here. Please discuss the firm's experience with similar projects, expertise, and why they should be selected by CSWR. Must include references for each example provided. The company narrative may be up to 4 pages in length.

Staffing Plan

Respondent must provide a staffing plan for each of the facilities and include the key personnel's biography, resume and certifications.

Insurance

Respondent much attach a copy of the Certificate of Insurance showing evidence of meeting the required insurance limits.

Affirmation

The person undersigned affirms that all information contained within this Statement of Qualifications is true and accurate. Providing false or misleading or omitting relevant information may result in the Respondent's firm being disqualified for any current or future work for Central States Water Resources.

Affirmed by (signature):_____

Name: _____

Title: _____

Date: _____

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Michael L. Parson
Governor

Dru Buntin
Director

June 22, 2023

OFFICIAL COPY VIA EMAIL

Josiah Cox
Confluence Rivers Utility Operating Company, Inc.
1650 Des Peres Road, Suite 303
Des Peres, MO 63131

RE: Confluence Rivers Utility Operating Company

Dear Josiah Cox:

The Missouri Department of Natural Resources regulates approximately 5,000 domestic wastewater treatment systems and approximately 2,700 public water systems in the State that are subject to the Missouri Clean Water Law and the Missouri Safe Drinking Water Law, respectively. The Department's primary goal as the regulatory authority in administering these state laws is to ensure environmental protection and human health and safety against pollution and health risks that may be caused by failing or improperly operating wastewater treatment systems and public water systems. The Department promotes compliance through compliance assistance, education, and, when necessary, enforcement actions. When systems end up in enforcement, it is often a result of limited resources and available solutions, which can sometimes draw cases out over a period of years.

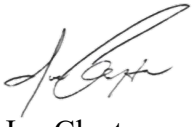
When systems are unable to resolve their technical, managerial, or financial problems, one reliable solution is selling the system to a higher-performing utility operating company. In Missouri, Confluence Rivers Utility Operating Company, Inc. (CRUOC) is one of the few utility operating companies who 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 has proven to be beneficial to human health and the environment by bringing 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.

If you have any questions regarding this correspondence, you may contact Joe Clayton at Department of Natural Resources, Water Protection Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102-0176; by phone at 573-522-1120; or by email at cwenf@dnr.mo.gov. Thank you for your cooperation in this matter.

Sincerely,

WATER PROTECTION PROGRAM



Joe Clayton
Compliance and Enforcement Section Chief

JC/ehh

c: Lance Dorsey, Chief, PDWB, Compliance and Enforcement

STATE OF MISSISSIPPI
TATE REEVES
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHRIS WELLS, EXECUTIVE DIRECTOR

February 27, 2023

Commissioner Brent Bailey
MPSC-Central District
Woolfolk Building
501 North West Street
Suite 201A
Jackson, MS 39201P.O. Box

Dear Commissioner Bailey:

The Mississippi Department of Environmental Quality (MDEQ) shares a common desire with you and other members of the Mississippi Public Service Commission (PSC) to provide our citizens with reliable, affordable, and safe utilities statewide. While our role as the State's environmental regulatory agency may differ slightly from the role of the PSC, we appreciate the partnership we have with your organization in accomplishing these shared goals.

As you are aware, our two organizations have worked closely together through the years specifically on wastewater utilities as MDEQ has environmental regulatory oversight for most of these operations. Furthermore, our organizations continue to see a limited number of wastewater utilities around the state dissolve and/or systems abandoned where citizens serviced by those utilities are left with failing, non-compliant systems. Recently, MDEQ and PSC has worked even more closely to find solutions to known problematic systems that were creating imminent environmental impacts and/or potential health impacts to citizens in the vicinity of these failing systems.

A specific example of our successful partnership has been working with Great River Utility in their recent acquisition of several failing/abandoned wastewater utilities across the state. Great River Utility has worked closely with MDEQ technical staff and made binding commitments to bring these systems back into compliance. A viable entity seeking out troubled utilities/wastewater systems and returning reliable, compliant services to citizens is a welcomed concept by MDEQ. We believe our partnership with the PSC to identify problematic systems and finding long term solutions, as in the case of Great River, reflects very clearly shared goals and objectives.

Petitioners Exhibit TT-5

We appreciate Great River Utilities' commitment to regulatory compliance, and MDEQ remains committed to our partnership with PSC to find sensible solutions to shared problems. If we may be of additional service to the PSC, please do not hesitate to contact us.

Sincerely,

Chris Sanders

Chris Sanders, P.E., BCEE
Director, Office of Pollution Control

State of Louisiana

Louisiana Department of Health

Engineering Services

2023 Community Public Water System Grades

	Parish	PWSID	Public Water System Name	Score	Grade
1	ACADIA	LA1001007	CITY OF RAYNE WATER SYSTEM	84	B
2	ACADIA	LA1001002	CROWLEY WATER SYSTEM (LAWCO)	92	A
3	ACADIA	LA1001025	EGAN WATER CORPORATION	81	B
4	ACADIA	LA1001026	EGAN WATER CORPORATION NO 2	83	B
5	ACADIA	LA1001024	MIRE BRANCH WATER CORPORATION	102	A
6	ACADIA	LA1001023	NORTH OF CROWLEY WATER CORPORATION	98	A
7	ACADIA	LA1001022	SOUTH RAYNE WATER CORPORATION	96	A
8	ACADIA	LA1001001	TOWN OF CHURCH POINT WATER SYSTEM	100	A
9	ACADIA	LA1001004	TOWN OF IOTA WATER SYSTEM	92	A
10	ACADIA	LA1001003	VILLAGE OF ESTHERWOOD WATER SYSTEM	98	A
11	ACADIA	LA1001005	VILLAGE OF MERMENTAU WATER SYSTEM	103	A
12	ACADIA	LA1001006	VILLAGE OF MORSE WATER SYSTEM	88	B
13	ALLEN	LA1003001	ALLEN PARISH WW DISTRICT NO 1	105	A
14	ALLEN	LA1003006	CITY OF OAKDALE WATER SYSTEM	75	C
15	ALLEN	LA1003011	EAST ALLEN PARISH WATER WORKS	100	A
16	ALLEN	LA1003003	NORTHWEST ALLEN PARISH WW DISTRICT	90	A
17	ALLEN	LA1003008	SOUTH OAKDALE WATER SYSTEM	103	A
18	ALLEN	LA1003009	SOUTHWEST ALLEN WW DISTRICT NO 2	99	A
19	ALLEN	LA1003002	TOWN OF ELIZABETH WATER SYSTEM	95	A
20	ALLEN	LA1003005	TOWN OF KINDER WATER SYSTEM	95	A
21	ALLEN	LA1003007	TOWN OF OBERLIN WATER SYSTEM	98	A
22	ALLEN	LA1003010	WEST ALLEN PARISH WATER SYSTEM	99	A
23	ASCENSION	LA1005045	ASCENSION CONSOLIDATED UTILITY DIST 1	105	A
24	ASCENSION	LA1005001	ASCENSION PARISH WATER WORKS DISTRICT	107	A

	Parish	PWSID	Public Water System Name	Score	Grade
25	ASCENSION	LA1005030	CITY OF GONZALES WATER SYSTEM	90	A
26	ASCENSION	LA1005119	CYPRESS TRACE MANUFACTURED HOUSING	100	A
27	ASCENSION	LA1005005	DIVERSION WATER - BAYOU ESTATES	95	A
28	ASCENSION	LA1005208	DIVERSION WATER - CYPRESS LAKES	95	A
29	ASCENSION	LA1005206	DIVERSION WATER - RIVER RUN ESTATES	95	A
30	ASCENSION	LA1005118	FAMILY COURT MOBILE HOME PARK	60	D
31	ASCENSION	LA1005046	JIMMY BABIN APARTMENTS	80	B
32	ASCENSION	LA1005171	OAK VILLAGE MOBILE HOME PARK WS	85	B
33	ASCENSION	LA1005035	PARISH UTILITIES OF ASCENSION	104	A
34	ASCENSION	LA1005152	PINE TRAILER PARK	70	C
35	ASCENSION	LA1005148	PLANTATION MOBILE HOME VILLAGE	75	C
36	ASCENSION	LA1005085	RIVERLANDS APARTMENTS	75	C
37	ASCENSION	LA1005112	RODDY ROAD VILLAGE ASCENSION, LLC	75	C
38	ASCENSION	LA1005114	SHADY OAKS MOBILE HOME PARK WATER SY	80	B
39	ASCENSION	LA1005210	ST AMANT TRAILER PARK	75	C
40	ASCENSION	LA1005175	TREYVILLE COURTS TRAILER PARK	75	C
41	ASCENSION	LA1005147	WHITE OAKS MANUFACTURED HOUSING CO	95	A
42	ASSUMPTION	LA1007001	ASSUMPTION PARISH WW DISTRICT 1	103	A
43	AVOYELLES	LA1009002	AVOYELLES PARISH WATERWORKS DISTRICT	100	A
44	AVOYELLES	LA1009017	AVOYELLES WARD 3 WATERWORKS DISTRICT	92	A
45	AVOYELLES	LA1009016	AVOYELLES WARD ONE WATER SYSTEM INC	100	A
46	AVOYELLES	LA1009021	AVOYELLES WATER COMMISSION	100	A
47	AVOYELLES	LA1009003	BROUILLETTE WATER SYSTEM INC	93	A
48	AVOYELLES	LA1009011	CITY OF MARKSVILLE WATER SYSTEM	82	B
49	AVOYELLES	LA1009007	FIFTH WARD WATER SYSTEM	95	A
50	AVOYELLES	LA1009010	LAWCO MANSURA	107	A
51	AVOYELLES	LA1009015	SOUTHWEST AVOYELLES WATER DISTRICT	67	D
52	AVOYELLES	LA1009020	SPRING BAYOU WATER WORKS DISTRICT	89	B
53	AVOYELLES	LA1009004	TOWN OF BUNKIE WATER SYSTEM	100	A
54	AVOYELLES	LA1009005	TOWN OF COTTONPORT WATER SYSTEM	90	A
55	AVOYELLES	LA1009006	TOWN OF EVERGREEN WATER SYSTEM	95	A
56	AVOYELLES	LA1009013	TOWN OF PLAUCHEVILLE WATER SYSTM	92	A
57	AVOYELLES	LA1009014	TOWN OF SIMMESPORT WATER SYSTEM	89	B

	Parish	PWSID	Public Water System Name	Score	Grade
58	AVOYELLES	LA1009008	VILLAGE OF HESSMER WATER SYSTEM	96	A
59	AVOYELLES	LA1009012	VILLAGE OF MOREAUVILLE WATER SYSTEM	93	A
60	BEAUREGARD	LA1011012	BEAUREGARD DISTRICT NO 2 WARD NO 5	99	A
61	BEAUREGARD	LA1011009	BEAUREGARD WATER DISTRICT #5	103	A
62	BEAUREGARD	LA1011008	BEAUREGARD WATER WORKS DIST #3	98	A
63	BEAUREGARD	LA1011013	BEAUREGARD WATERWORKS DISTRICT NO. 6	94	A
64	BEAUREGARD	LA1011001	CITY OF DERIDDER WATER SYSTEM	97	A
65	BEAUREGARD	LA1011004	GREEN ACRES SUBDIVISION WATER SYSTEM	96	A
66	BEAUREGARD	LA1011007	TOWN OF MERRYVILLE WATER SYSTEM	91	A
67	BIENVILLE	LA1013001	ALABAMA WATER SYSTEM	99	A
68	BIENVILLE	LA1013002	ALBERTA WATER SYSTEM	58	F
69	BIENVILLE	LA1013003	ARCADIA WATER SYSTEM	89	B
70	BIENVILLE	LA1013004	BIENVILLE WATER SYSTEM	84	B
71	BIENVILLE	LA1013005	BRYCELAND WATER SYSTEM	73	C
72	BIENVILLE	LA1013006	CASTOR WATER SYSTEM	97	A
73	BIENVILLE	LA1013019	CYPRESS WATER SYSTEM	75	C
74	BIENVILLE	LA1013010	EDWARDS MILLCREEK WATER SYSTEM	70	C
75	BIENVILLE	LA1013007	FRIENDSHIP WATER SYSTEM	70	C
76	BIENVILLE	LA1013008	GIBSLAND WATER SYSTEM	43	F
77	BIENVILLE	LA1013022	JAMESTOWN FRYEBURG WATER SYSTEM	100	A
78	BIENVILLE	LA1013009	LUCKY WATERWORKS	60	D
79	BIENVILLE	LA1013021	MILLCREEK WATER SYSTEM	85	B
80	BIENVILLE	LA1013018	MOUNT CALM WATER SYSTEM	79	C
81	BIENVILLE	LA1013011	MT LEBANON WATER SYSTEM	89	B
82	BIENVILLE	LA1013012	MT OLIVE WATER SYSTEM	75	C
83	BIENVILLE	LA1013020	OLD SALINE COMMUNITY WATER SYSTEM	90	A
84	BIENVILLE	LA1013013	RINGGOLD WATER SYSTEM	70	C
85	BIENVILLE	LA1013014	SALINE WATER SYSTEM	49	F
86	BIENVILLE	LA1013016	SHILOH WATERWORKS DISTRICT	78	C
87	BIENVILLE	LA1013017	SOUTHEAST BIENVILLE WATER SYSTEM	76	C
88	BIENVILLE	LA1013023	SPRINGHILL COMMUNITY WATER SYSTEM	89	B
89	BIENVILLE	LA1013015	TAYLOR WATER SYSTEM	95	A
90	BOSSIER	LA1015022	BARKSDALE AFB WATER SYSTEM	100	A

	Parish	PWSID	Public Water System Name	Score	Grade
91	BOSSIER	LA1015041	BELLEVUE WATER SYSTEM	83	B
92	BOSSIER	LA1015021	BODCAU WATER WORKS	38	F
93	BOSSIER	LA2015021	CASH POINT LANDING	73	C
94	BOSSIER	LA1015004	CITY OF BOSSIER CITY WATER SYSTEM	100	A
95	BOSSIER	LA1015026	CONSOLIDATED WWKS DISTRICT 1 OF BOSSI	92	A
96	BOSSIER	LA1015005	COUNTRY PLACE SUBD WATER SYSTEM	95	A
97	BOSSIER	LA1015040	CYPRESS BLACK BAYOU WATER SYSTEM	97	A
98	BOSSIER	LA1015050	DOGWOOD SOUTH WATER SYSTEM	94	A
99	BOSSIER	LA1015039	EAST CENTRAL BOSSIER WATER SYSTEM	80	B
100	BOSSIER	LA1015009	EVANGELINE OAKS WATER SYSTEM	107	A
101	BOSSIER	LA1015047	HIGHLAND WATER WORKS	100	A
102	BOSSIER	LA1015036	PEACEFUL PINES MHP WATER SYSTEM	85	B
103	BOSSIER	LA1015006	PLANTATION TRACE MOBILE HOME PARK	75	C
104	BOSSIER	LA1015030	RIVER POINT WATER SYSTEM	26	F
105	BOSSIER	LA1015044	SLIGO WATER SYSTEM INCORPORATED	90	A
106	BOSSIER	LA1015029	SOUTH BOSSIER WATER SYSTEM	84	B
107	BOSSIER	LA1015024	SOUTHGATE MHP WATER SYSTEM	31	F
108	BOSSIER	LA1015023	ST MARYS WATER SYSTEM	56	F
109	BOSSIER	LA1015002	TOWN OF BENTON WATER SYSTEM	91	A
110	BOSSIER	LA1015011	TOWN OF HAUGHTON WATER SYSTEM	65	D
111	BOSSIER	LA1015016	TOWN OF PLAIN DEALING WATER SYSTEM	93	A
112	BOSSIER	LA1015018	VILLAGE WATER SYSTEM	65	D
113	BOSSIER	LA1015048	WEST CENTRAL BOSSIER WATER SYSTEM	95	A
114	CADDO	LA1017002	AUTUMN ACRES MHP WATER SYSTEM	79	C
115	CADDO	LA1017082	BARRON BAYOU ESTATES	80	B
116	CADDO	LA1017072	BARRON RIDGE SUBDIVISION WATER SYSTE	94	A
117	CADDO	LA1017005	BELLA VISTA MHP WATER SYSTEM	95	A
118	CADDO	LA1017081	BIG OAKS WATER SYSTEM	93	A
119	CADDO	LA1017006	BLANCHARD WATER SYSTEM	85	B
120	CADDO	LA1017090	BRADY MOBILE HOME PARK	85	B
121	CADDO	LA1017073	COLWORTH PLACE WATER SUPPLY	92	A
122	CADDO	LA1017058	DEEPWOODS UTILITIES INC	89	B
123	CADDO	LA1017009	DENNY DRIVE WATER SYSTEM	90	A

	Parish	PWSID	Public Water System Name	Score	Grade
124	CADDO	LA1017087	DIXIE GARDEN - KINGS HWY WATER SYSTEM	110	A
125	CADDO	LA1017075	DIXIE GARDEN WATER SUPPLY	110	A
126	CADDO	LA1017012	EAGLE WATER SYSTEM	88	B
127	CADDO	LA1017051	EVERGREEN ESTATES WATER SYSTEM	80	B
128	CADDO	LA1017062	FOUR FORKS WATER SYSTEM	80	B
129	CADDO	LA1017089	GLEN LEAF MOBILE HOME COMMUNITY	80	B
130	CADDO	LA1017015	HILLSIDE MOBILE HOME PARK	95	A
131	CADDO	LA1017084	HUNTINGTON MOBILE HOME PARK WATER S	100	A
132	CADDO	LA1017017	IDA WATER SYSTEM	95	A
133	CADDO	LA1017029	JONES ROLLING RIDGE WATER COMPANY	109	A
134	CADDO	LA1017083	LAKE SHREVE ESTATES WATER SYSTEM	65	D
135	CADDO	LA1017019	LAKEVIEW WATER SYSTEM	73	C
136	CADDO	LA1017018	LINDA LANE WATER SYSTEM	94	A
137	CADDO	LA1017063	MEADOWWOOD ESTATES WATER SYSTEM	95	A
138	CADDO	LA1017023	MOORINGSPORT WATER SYSTEM	94	A
139	CADDO	LA1017094	NORTHWEST WATERWORKS LAKEWOOD VIL	95	A
140	CADDO	LA1017093	NORTHWEST WATERWORKS LIN PARK	95	A
141	CADDO	LA1017026	OIL CITY WATER WORKS	94	A
142	CADDO	LA1017092	PINECREST MOBILE HOME VILLAGE	80	B
143	CADDO	LA1017027	PINEHILL WATERWORKS DISTRICT	71	C
144	CADDO	LA1017028	RODESSA WATER SYSTEM	80	B
145	CADDO	LA1017076	SETTLED INN VILLAGE WATER SYSTEM	65	D
146	CADDO	LA1017066	SHERWOOD APARTMENTS WATER SYSTEM	94	A
147	CADDO	LA1017031	SHREVEPORT WATER SYSTEM	57	F
148	CADDO	LA1017086	SIMPSON ACRES WATER SYSTEM	89	B
149	CADDO	LA1017080	SOUTH SHREVEPORT MOBILE VILLA	49	F
150	CADDO	LA1017033	SPRINGLAKE MHP WATER SYSTEM	90	A
151	CADDO	LA1017091	STONEGATE MANUFACTURED HOME COMM	79	C
152	CADDO	LA1017014	TOWN OF GREENWOOD WATER SYSTEM	76	C
153	CADDO	LA1017016	VILLAGE OF HOSSTON WATER SYSTEM	92	A
154	CADDO	LA1017037	VIVIAN WATER SYSTEM	81	B
155	CADDO	LA1017052	WATERWORKS DISTRICT 7	80	B
156	CADDO	LA1017042	WILDWOOD SOUTH WATER SYSTEM	109	A

	Parish	PWSID	Public Water System Name	Score	Grade
157	CALCASIEU	LA1019001	BRIGAS ESTATES WATER SYSTEM	80	B
158	CALCASIEU	LA1019059	C K B TRAILER PARK WATER SYSTEM	72	C
159	CALCASIEU	LA1019126	CALCASIEU PARISH WW 12 WARD 3	104	A
160	CALCASIEU	LA1019116	CALCASIEU PARISH WW DIST 9 CARLYSS	86	B
161	CALCASIEU	LA1019114	CALCASIEU PARISH WW DISTRICT 7	98	A
162	CALCASIEU	LA1019118	CALCASIEU PARISH WW DISTRICT 8	94	A
163	CALCASIEU	LA1019051	CALCASIEU PARISH WW DISTRICT NO 1	100	A
164	CALCASIEU	LA1019053	CALCASIEU PARISH WW DISTRICT NO 4	90	A
165	CALCASIEU	LA1019084	CALCASIEU PARISH WW DISTRICT NO 5	78	C
166	CALCASIEU	LA1019042	CALCASIEU WW #14 WARD 5	95	A
167	CALCASIEU	LA1019029	CITY OF LAKE CHARLES WATER SYSTEM	87	B
168	CALCASIEU	LA1019122	CLEARVIEW MOBILE HOME PARK	85	B
169	CALCASIEU	LA1019124	CORBINA TRAILER PARK WATER SYSTEM	85	B
170	CALCASIEU	LA1019102	COUNTRY LIVING TRAILER PARK WATER SYS	85	B
171	CALCASIEU	LA1019083	COUNTRY PINES NORTH SUBDIVISION WS	85	B
172	CALCASIEU	LA1019129	COUNTRY PINES SOUTH SUBDIVISION WS	88	B
173	CALCASIEU	LA1019008	DEQUINCY WATER SYSTEM (LAWCO)	97	A
174	CALCASIEU	LA1019079	EAST PARK SUBDIVISION WATER SYSTEM	89	B
175	CALCASIEU	LA1019080	FAIRVIEW MOBILE ESTATES NORTH WS	64	D
176	CALCASIEU	LA1019096	FAIRVIEW MOBILE ESTATES SOUTH WS	68	D
177	CALCASIEU	LA1019018	GARDEN HEIGHTS WATER SYSTEM	85	B
178	CALCASIEU	LA1019123	GULF STREAM MANOR WATER SYSTEM	57	F
179	CALCASIEU	LA1019119	HOUSTON RIVER WATERWORKS DISTRICT 11	88	B
180	CALCASIEU	LA1019028	JESSE DUB JAMES T P WATER SYSTEM	87	B
181	CALCASIEU	LA1019127	K & P MH & RV PARK WATER SYSTEM	74	C
182	CALCASIEU	LA1019091	LAKE STREET WATER SYSTEM	96	A
183	CALCASIEU	LA2019167	MAPLEWOOD PLACE PARK WATER SYSTEM	78	C
184	CALCASIEU	LA1019052	MOSSVILLE WW DISTRICT NO 2	100	A
185	CALCASIEU	LA1019076	OAK MEADOWS SUBDIVISION WATER SYSTE	86	B
186	CALCASIEU	LA1019112	OAK PINE MOBILE HOME PARK WATER SYST	80	B
187	CALCASIEU	LA1019101	PHAROS MOBILE HOME COMMUNITY NORTH	88	B
188	CALCASIEU	LA1019115	PHAROS MOBILE HOME COMMUNITY SOUTH	85	B
189	CALCASIEU	LA1019109	PHOENIX MHP WATER SYSTEM	75	C

	Parish	PWSID	Public Water System Name	Score	Grade
190	CALCASIEU	LA1019105	QUAIL RIDGE ESTATES WATER SYSTEM	80	B
191	CALCASIEU	LA1019085	SMITH MOBILE HOME VILLAGE WATER SYST	75	C
192	CALCASIEU	LA1019098	SOUTH CALCASIEU ESTATES SUBDIVISION W	93	A
193	CALCASIEU	LA1019131	SUGARCANE TOWNES WATER SYSTEM	93	A
194	CALCASIEU	LA1019044	SULPHUR CITY OF WATER SYSTEM	90	A
195	CALCASIEU	LA1019039	THE CHARLESTON MHC	95	A
196	CALCASIEU	LA1019026	TOWN OF IOWA WATER SYSTEM	96	A
197	CALCASIEU	LA1019048	TOWN OF VINTON WATER SYSTEM	102	A
198	CALCASIEU	LA1019024	UTILITY SERVICE OF LAKE CHARLES W S	93	A
199	CALCASIEU	LA1019128	WATERWORKS DIST. NO. 10 OF WARD 7	100	A
200	CALCASIEU	LA1019054	WESTLAKE CITY OF WATER SYSTEM	60	D
201	CALDWELL	LA1021001	CLARKS WATER SYSTEM	80	B
202	CALDWELL	LA1021003	COLUMBIA HEIGHTS WATER DISTRICT	96	A
203	CALDWELL	LA1021002	COLUMBIA WATER SYSTEM	75	C
204	CALDWELL	LA1021009	COTTON PLANT WATER SYSTEM	69	D
205	CALDWELL	LA1021004	EAST COLUMBIA WATER SYSTEM	85	B
206	CALDWELL	LA1021005	GRAYSON WATER SYSTEM	75	C
207	CALDWELL	LA1021006	HEBERT WATER SYSTEM	103	A
208	CALDWELL	LA1021007	HOLUM WATER SYSTEM	79	C
209	CALDWELL	LA1021008	KELLY WATER DISTRICT	80	B
210	CALDWELL	LA1021011	VIXEN WATER SYSTEM	49	F
211	CALDWELL	LA1021010	WARDS 4 & 5 WATER SYSTEM	94	A
212	CAMERON	LA1023001	CAMERON PARISH WATER AND WW DISTRICT	72	C
213	CAMERON	LA1023005	CAMERON PARISH WW DISTRICT 10	100	A
214	CAMERON	LA1023013	CAMERON PARISH WW DISTRICT 11 - BIG LAK	97	A
215	CAMERON	LA1023011	CAMERON PARISH WW DISTRICT 11-SWEET L	99	A
216	CAMERON	LA1023002	CAMERON PARISH WW DISTRICT 2	103	A
217	CAMERON	LA1023003	CAMERON PARISH WW DISTRICT 7	68	D
218	CAMERON	LA1023012	CAMERON PARISH WW DISTRICT 9	73	C
219	CATAHOULA	LA1025002	BLACK RIVER WATER SYSTEM	85	B
220	CATAHOULA	LA1025003	ENTERPRISE WATER SYSTEM	33	F
221	CATAHOULA	LA1025007	LELAND WATER SYSTEM INC	85	B
222	CATAHOULA	LA1025011	MAITLAND WATER WORKS DISTRICT	75	C

	Parish	PWSID	Public Water System Name	Score	Grade
223	CATAHOULA	LA1025008	SANDY LAKE WATER SUPPLY	100	A
224	CATAHOULA	LA1025006	TOWN OF JONESVILLE WATER SYSTEM	90	A
225	CATAHOULA	LA1025004	VILLAGE OF HARRISONBURG WATER SYSTEM	97	A
226	CATAHOULA	LA1025009	VILLAGE OF SICILY ISLAND	71	C
227	CLAIBORNE	LA1027001	ATHENS WATER SYSTEM	94	A
228	CLAIBORNE	LA1027009	CENTRAL CLAIBORNE WATER SYSTEM	90	A
229	CLAIBORNE	LA1027008	DAVID WADE CORRECTIONAL CENTER WS	89	B
230	CLAIBORNE	LA1027002	HAYNESVILLE WATER SYSTEM	88	B
231	CLAIBORNE	LA1027003	HOMER WATER SYSTEM	74	C
232	CLAIBORNE	LA1027014	LEATHERMAN CREEK WATER SYSTEM	96	A
233	CLAIBORNE	LA1027005	LISBON WATER SYSTEM	85	B
234	CLAIBORNE	LA1027012	MIDDLE FORK WATER SYSTEM	99	A
235	CLAIBORNE	LA1027010	NORTON SHOP WATER SYSTEM	94	A
236	CLAIBORNE	LA1027007	PINE HILL WATER SYSTEM	83	B
237	CLAIBORNE	LA1027006	SOUTH CLAIBORNE WATER SYSTEM	89	B
238	CLAIBORNE	LA1027011	SUMMERFIELD WATER SYSTEM	95	A
239	CLAIBORNE	LA1027013	WARD NINE WATER SYSTEM	94	A
240	CONCORDIA	LA1029011	CITY OF VIDALIA WATER SYSTEM	102	A
241	CONCORDIA	LA1029003	CONCORDIA WATERWORKS DISTRICT 1	90	A
242	CONCORDIA	LA1029006	LAKE ST JOHN WATERWORKS DISTRICT 1	70	C
243	CONCORDIA	LA1029007	MONTEREY RURAL WATER SYSTEM INC	99	A
244	CONCORDIA	LA1029002	TOWN OF CLAYTON WATER SYSTEM	43	F
245	CONCORDIA	LA1029005	TOWN OF FERRIDAY WATER SYSTEM	37	F
246	CONCORDIA	LA1029009	VILLAGE OF RIDGECREST WATER SUPPLY	51	F
247	DE SOTO	LA1031030	DESOTO PARISH WATER WORKS DISTRICT 1	79	C
248	DE SOTO	LA1031005	EAST DESOTO WATER SYSTEM	74	C
249	DE SOTO	LA1031006	GRAND CANE WATER SYSTEM	80	B
250	DE SOTO	LA1031028	HIGHWAY 513 WATER SUPPLY	73	C
251	DE SOTO	LA1031007	KEATCHIE WATER SYSTEM	38	F
252	DE SOTO	LA1031008	LOGANSPORT WATER SYSTEM	93	A
253	DE SOTO	LA1031009	MANSFIELD WATER SYSTEM	53	F
254	DE SOTO	LA1031011	NORTH DESOTO WATER SYSTEM	97	A
255	DE SOTO	LA1031012	RAMBIN-WALLACE WATER SYSTEM	99	A

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256	DE SOTO	LA1031029	SOUTH DESOTO WATER SYSTEM	75	C
257	DE SOTO	LA1031014	SOUTH MANSFIELD WATER SYSTEM	59	F
258	EAST BATON ROUGE	LA1033133	AUDUBON PARK APARTMENTS WATER SYSTE	80	B
259	EAST BATON ROUGE	LA1033005	BATON ROUGE WATER COMPANY	92	A
260	EAST BATON ROUGE	LA1033003	CITY OF BAKER WATER SYSTEM	89	B
261	EAST BATON ROUGE	LA1033132	J E S T C	100	A
262	EAST BATON ROUGE	LA1033030	ZACHARY WATER SYSTEM	90	A
263	EAST CARROLL	LA1035006	EAST CARROLL WS NORTH	77	C
264	EAST CARROLL	LA1035007	EAST CARROLL WS SOUTH	76	C
265	EAST CARROLL	LA1035002	LAKE PROVIDENCE WATER SYSTEM	57	F
266	EAST CARROLL	LA1035004	MONTICELLO WATER SYSTEM	90	A
267	EAST FELICIANA	LA1037002	DIXON CORRECTIONAL INSTITUTE	100	A
268	EAST FELICIANA	LA1037004	EAST FELICIANA RURAL GURLEY RD WS	100	A
269	EAST FELICIANA	LA1037014	EAST FELICIANA WWKS DISTRICT 7	100	A
270	EAST FELICIANA	LA1037005	EASTERN LOUISIANA MENTAL HEALTH SYST	100	A
271	EAST FELICIANA	LA1037012	LOUISIANA WAR VETERANS	100	A
272	EAST FELICIANA	LA1037006	TOWN OF JACKSON WATER SYSTEM	99	A
273	EAST FELICIANA	LA1037008	TOWN OF SLAUGHTER WATER SYSTEM	94	A
274	EAST FELICIANA	LA1037009	VILLA FELICIANA MEDICAL COMPLEX	90	A
275	EAST FELICIANA	LA1037007	VILLAGE OF NORWOOD WATER SYSTEM	104	A
276	EAST FELICIANA	LA1037010	VILLAGE OF WILSON WATER SYSTEM	96	A
277	EVANGELINE	LA1039016	BAYOU DES CANNES WATER SYSTEM	100	A
278	EVANGELINE	LA1039002	CHATAIGNIER WATER SYSTEM	92	A
279	EVANGELINE	LA1039010	CITY OF VILLE PLATTE WATER SYSTEM	80	B
280	EVANGELINE	LA1039003	EAST SIDE WATER SYSTEM	80	B
281	EVANGELINE	LA1039004	EVANGELINE WW DISTRICT 1 - PINE PRAIRIE	92	A
282	EVANGELINE	LA1039018	PINE PRAIRIE CORRECTIONAL FACILITY	80	B
283	EVANGELINE	LA1039006	POINT BLUE WATER SYSTEM INC	98	A
284	EVANGELINE	LA1039007	REDDELL VIDRINE WATER DISTRICT	59	F
285	EVANGELINE	LA1039009	TE MAMOU WATER DISTRICT	94	A
286	EVANGELINE	LA1039001	TOWN OF BASILE WATER SYSTEM	96	A
287	EVANGELINE	LA1039005	TOWN OF MAMOU WATER SYSTEM	85	B
288	EVANGELINE	LA1039013	VILLAGE OF TURKEY CREEK WATER SYSTEM	89	B

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289	EVANGELINE	LA1039017	WARD 5 WATERWORKS DISTRICT 1 - LONE PI	100	A
290	EVANGELINE	LA1039015	WARD IV WATER DISTRICT	80	B
291	FRANKLIN	LA1041002	GILBERT WATER SYSTEM	85	B
292	FRANKLIN	LA1041010	LIDDIEVILLE WATER SYSTEM	100	A
293	FRANKLIN	LA1041003	NORTH FRANKLIN WATER WORKS	86	B
294	FRANKLIN	LA1041012	TURKEY CREEK WATER SYSTEM	66	D
295	FRANKLIN	LA1041009	WEST WINNSBORO WATER SYSTEM	94	A
296	FRANKLIN	LA1041006	WINNSBORO WATER SYSTEM	81	B
297	FRANKLIN	LA1041007	WISNER WATER SYSTEM	79	C
298	GRANT	LA1043016	BOB COMMUNITY WATERWORKS	95	A
299	GRANT	LA1043013	CENTRAL GRANT WATER SYSTEM	77	C
300	GRANT	LA1043017	POLLOCK AREA WATER SYSTEM INC	80	B
301	GRANT	LA1043018	RED HILL WATERWORKS INC.	60	D
302	GRANT	LA1043008	SOUTH GRANT WATER CORPORATION	94	A
303	GRANT	LA1043015	SOUTHEAST GRANT WATER SYSTEM	89	B
304	GRANT	LA1043002	TOWN OF COLFAX	54	F
305	GRANT	LA1043005	TOWN OF MONTGOMERY WATER SYSTEM	86	B
306	GRANT	LA1043007	TOWN OF POLLOCK WATER SYSTEM	105	A
307	GRANT	LA1043003	VILLAGE OF DRY PRONG WATER SYSTEM	80	B
308	GRANT	LA1043004	VILLAGE OF GEORGETOWN WATER SUPPLY	58	F
309	GRANT	LA1043014	WEST GRANT WATER ASSOCIATION	77	C
310	GRANT	LA1043001	ZONE 2 WATER SYSTEM INC.	76	C
311	IBERIA	LA1045042	BADGER TRAIL WATER SYSTEM	51	F
312	IBERIA	LA1045004	CITY OF JEANERETTE WATER SYSTEM	75	C
313	IBERIA	LA1045002	IBERIA WATER WORKS DISTRICT 3 - COTEAU	75	C
314	IBERIA	LA1045027	LELEUX TRAILER PARK WATER SYSTEM	40	F
315	IBERIA	LA1045040	MJS ESTATES WATER SYSTEM	78	C
316	IBERIA	LA1045009	NEW IBERIA WATER SYSTEM (LAWCO)	95	A
317	IBERIA	LA1045037	PORT EAST WATER SYSTEM	100	A
318	IBERIA	LA1045041	R & D PROPERTIES MOBILE HOME PARK	89	B
319	IBERVILLE	LA1047005	CITY OF PLAQUEMINE WATER SYSTEM	83	B
320	IBERVILLE	LA1047007	EAST IBERVILLE WATER SYSTEM	105	A
321	IBERVILLE	LA1047008	GILLIS LONG CENTER	100	A

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322	IBERVILLE	LA1047026	HIGHWAY 1148 WATER SYSTEM	102	A
323	IBERVILLE	LA1047030	INTRACOASTAL WATER SYSTEM EAST	103	A
324	IBERVILLE	LA1047002	INTRACOASTAL WATER SYSTEM WEST	77	C
325	IBERVILLE	LA1047024	NORTH IBERVILLE WATER SYSTEM	97	A
326	IBERVILLE	LA1047028	PLANTATION GARDENS	108	A
327	IBERVILLE	LA1047003	TOWN OF MARINGOUIN	98	A
328	IBERVILLE	LA1047009	TOWN OF WHITE CASTLE WATER SYSTEM	77	C
329	IBERVILLE	LA1047001	VILLAGE OF GROSSE TETE WATER SYSTEM	100	A
330	IBERVILLE	LA1047006	VILLAGE OF ROSEDALE WATER SYSTEM	92	A
331	JACKSON	LA1049001	BEAR CREEK WATER SYSTEM	90	A
332	JACKSON	LA1049004	CHATHAM WATER SYSTEM	79	C
333	JACKSON	LA1049006	EAST HODGE WATER SYSTEM	60	D
334	JACKSON	LA1049026	EBENEZER WATER SYSTEM	95	A
335	JACKSON	LA1049022	EROS COMMUNITY WATER SYSTEM	74	C
336	JACKSON	LA1049007	EROS WATER SYSTEM	57	F
337	JACKSON	LA1049008	HODGE WATER SYSTEM	95	A
338	JACKSON	LA1049010	JONESBORO WATER SYSTEM	52	F
339	JACKSON	LA1049011	MCDONALD WATER SYSTEM	100	A
340	JACKSON	LA1049036	MT MORIAH WATER SYSTEM	100	A
341	JACKSON	LA1049012	NORTH HODGE WATER SYSTEM	95	A
342	JACKSON	LA1049032	PARADISE POINT WATER SYSTEM	84	B
343	JACKSON	LA1049013	PUNKIN CENTER HILLTOP WS	95	A
344	JACKSON	LA1049014	QUITMAN WATER SYSTEM	94	A
345	JACKSON	LA1049016	SHADY GROVE WATER SYSTEM	94	A
346	JACKSON	LA1049017	SOUTHEAST HODGE WATER SYSTEM	71	C
347	JACKSON	LA1049030	SPILLWAY ESTATES WATER SYSTEM	67	D
348	JACKSON	LA1049028	SPRING CREEK SUBDIVISION WATER SYSTEM	90	A
349	JACKSON	LA1049023	WALKER COMMUNITY SYSTEM	94	A
350	JACKSON	LA1049019	WESTON WATER SYSTEM	99	A
351	JEFFERSON	LA1051001	E JEFFERSON WW DISTRICT 1	88	B
352	JEFFERSON	LA1051003	GRETNA WATERWORKS	85	B
353	JEFFERSON	LA1051004	W JEFFERSON WW DISTRICT 2	82	B
354	JEFFERSON	LA1051005	WESTWEGO WATERWORKS	76	C

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355	JEFFERSON DAVIS	LA1053003	CITY OF JENNINGS WATER SYSTEM	86	B
356	JEFFERSON DAVIS	LA1053012	JEFF DAVIS CENTRAL WATERWORKS DISTRIC	90	A
357	JEFFERSON DAVIS	LA1053014	JEFF DAVIS WATER AND SEWER COMMISSION	95	A
358	JEFFERSON DAVIS	LA1053013	JEFF DAVIS WATER DISTRICT 4	95	A
359	JEFFERSON DAVIS	LA1053001	TOWN OF ELTON WATER SYSTEM	98	A
360	JEFFERSON DAVIS	LA1053005	TOWN OF LAKE ARTHUR WATER SYSTEM	84	B
361	JEFFERSON DAVIS	LA1053006	TOWN OF WELSH WATER SYSTEM	93	A
362	JEFFERSON DAVIS	LA1053007	VILLAGE OF FENTON WATER SYSTEM	79	C
363	LA SALLE	LA1059001	BELAH FELLOWSHIP WATER SYSTEM	95	A
364	LA SALLE	LA1059017	EAST JENA WATER SYSTEM INC.	90	A
365	LA SALLE	LA1059002	LASALLE WATERWORKS DISTRICT 1	86	B
366	LA SALLE	LA1059014	MANIFEST RHINEHART WATER SYSTEM	65	D
367	LA SALLE	LA1059005	NEBO WATER SYSTEM INC	86	B
368	LA SALLE	LA1059006	PLEASANT RIDGE WATER SYSTEM	80	B
369	LA SALLE	LA1059013	ROGERS COMMUNITY WATER SYSTEM INC	103	A
370	LA SALLE	LA1059009	SUMMERVILLE WATER SYSTEM	90	A
371	LA SALLE	LA1059003	TOWN OF JENA WATER SYSTEM	99	A
372	LA SALLE	LA1059004	TOWN OF OLLA WATER SYSTEM	95	A
373	LA SALLE	LA1059010	TOWN OF TULLOS WATER SYSTEM	64	D
374	LA SALLE	LA1059011	TOWN OF URANIA WATER SYSTEM	98	A
375	LA SALLE	LA1059012	WHITEHALL WATER SYSTEM INC	75	C
376	LAFAYETTE	LA1055164	BEAU PARTERRE WATER SYSTEM	108	A
377	LAFAYETTE	LA1055082	BELLE PLACE TRAILER PARK WATER SYSTEM	85	B
378	LAFAYETTE	LA1055094	BELLEVILLE SUBDIVISION WATER SYSTEM	108	A
379	LAFAYETTE	LA1055166	BROOKHOLLOW SUBDIVISION WATER SYSTE	110	A
380	LAFAYETTE	LA1055121	CAJUN MOBILE HOME PARK WATER SYSTEM	72	C
381	LAFAYETTE	LA1055088	CARENCRO VILLAGE WATER SYSTEM	110	A
382	LAFAYETTE	LA1055173	CHARTRES PLACE SUBDIVISION WATER SYST	109	A
383	LAFAYETTE	LA1055194	CITY OF BROUSSARD HWY 90 WATER SYSTEM	80	B
384	LAFAYETTE	LA1055003	CITY OF BROUSSARD WATER SYSTEM	76	C
385	LAFAYETTE	LA1055005	CITY OF CARENCRO WATER SYSTEM	85	B
386	LAFAYETTE	LA1055026	CITY OF SCOTT WATER SYSTEM	82	B
387	LAFAYETTE	LA1055195	CITY OF YOUNGSVILLE PURCHASE WS	90	A

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388	LAFAYETTE	LA1055035	CITY OF YOUNGSVILLE WATER SYSTEM	92	A
389	LAFAYETTE	LA1055144	COACH HOUSE MANOR WATER SYSTEM	107	A
390	LAFAYETTE	LA1055131	COTTAGES OF ACADIANA WATER SYSTEM	110	A
391	LAFAYETTE	LA1055040	COUNTRY PINES WATER SYSTEM	110	A
392	LAFAYETTE	LA1055043	FOX RUN WATER SYSTEM	110	A
393	LAFAYETTE	LA1055014	G & J MOBILE HOME ESTATES WATER SYSTE	75	C
394	LAFAYETTE	LA1055013	G & R MOBILE HOME PARK WATER SYSTEM	87	B
395	LAFAYETTE	LA1055138	GARDEN HEIGHTS SUBDIVISION WATER SYS	98	A
396	LAFAYETTE	LA1055116	GRANDE STAKES WATER SYSTEM	110	A
397	LAFAYETTE	LA1055174	HABERSHAM SUBDIVISION WATER SYSTEM	109	A
398	LAFAYETTE	LA1055201	ILE DES CANNES WATER SYSTEM	88	B
399	LAFAYETTE	LA1055101	JACKSON SQUARE WATER SYSTEM	98	A
400	LAFAYETTE	LA1055132	KINGS COURT MHP WATER SYSTEM	76	C
401	LAFAYETTE	LA1055015	LAFAYETTE MHP LLC	80	B
402	LAFAYETTE	LA1055017	LAFAYETTE UTILITIES WATER SYSTEM	100	A
403	LAFAYETTE	LA1055067	LAKEVIEW TRAILER PARK WATER SYSTEM	29	F
404	LAFAYETTE	LA1055162	LE TRIOMPHE SUBDIVISION WATER SYSTEM	102	A
405	LAFAYETTE	LA1055147	LEXINGTON HEIGHTS WATER SYSTEM	110	A
406	LAFAYETTE	LA1055171	LPWD NORTH PRODUCTION FACILITY	90	A
407	LAFAYETTE	LA1055156	LPWD SOUTH	85	B
408	LAFAYETTE	LA1055198	LPWDN CARMEL DRIVE	103	A
409	LAFAYETTE	LA1055181	LPWDN FAIRWAY VILLAGE WS	103	A
410	LAFAYETTE	LA1055202	LPWDN GUILLOT VILLAGE	104	A
411	LAFAYETTE	LA1055179	LPWDN HOLIDAY MOBILE ESTATES WS	103	A
412	LAFAYETTE	LA1055186	LPWDN LA NEUVILLE HOLIDAY SUBDIVISIO	104	A
413	LAFAYETTE	LA1055191	LPWDN NORTH REGION	95	A
414	LAFAYETTE	LA1055172	LPWDN PURCHASE WEST SCOTT	101	A
415	LAFAYETTE	LA1055200	LPWDN SOUTH PARK	102	A
416	LAFAYETTE	LA1055192	LPWDN SOUTH REGION	95	A
417	LAFAYETTE	LA1055180	LPWDN TOWNSHIP WS	105	A
418	LAFAYETTE	LA1055199	LPWDN WILDERNESS TRAIL	104	A
419	LAFAYETTE	LA1055137	MARKRIDGE PARK SUBDIVISION WATER SYS	101	A
420	LAFAYETTE	LA1055196	MILTON PURCHASE WATER SYSTEM	100	A

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421	LAFAYETTE	LA1055046	MILTON WATER SYSTEM	100	A
422	LAFAYETTE	LA1055140	OSSUN HEIGHTS WATER SYSTEM	109	A
423	LAFAYETTE	LA1055048	PARKLAND TRAILER PARK WATER SYSTEM	90	A
424	LAFAYETTE	LA1055175	PINNACLE PLACE SUBDIVISION WATER SYST	110	A
425	LAFAYETTE	LA1055074	ROYAL MOBILE ESTATES WATER SYSTEM	73	C
426	LAFAYETTE	LA1055155	SHENANDOAH ESTATES WATER SYSTEM	109	A
427	LAFAYETTE	LA1055128	SOUTHFIELD SQUARE WATER SYSTEM	107	A
428	LAFAYETTE	LA1055011	TOWN OF DUSON WATER SYSTEM	96	A
429	LAFAYETTE	LA1055148	TREWHILL WATER SYSTEM	110	A
430	LAFAYETTE	LA1055070	VILLAGE QUEST SUBDIVISION WATER SYSTE	101	A
431	LAFAYETTE	LA1055149	WEST GATE TRAILER PARK WATER SYSTEM	74	C
432	LAFAYETTE	LA1055169	WINDY MEADOWS WATER SYSTEM	95	A
433	LAFAYETTE	LA1055123	YOUNGS COMMUNITY LLC. WATER SYSTEM	69	D
434	LAFOURCHE	LA1057001	LAFOURCHE WATER DISTRICT 1	100	A
435	LAFOURCHE	LA1057003	THIBODAUX WATERWORKS	94	A
436	LINCOLN	LA1061002	CHOUDRANT WATER SYSTEM	95	A
437	LINCOLN	LA1061024	CULBERTSON WATER SYSTEM	103	A
438	LINCOLN	LA1061003	DUBACH WATER SYSTEM	65	D
439	LINCOLN	LA1061004	FELLOWSHIP WATER SYSTEM	90	A
440	LINCOLN	LA1061005	GRAMBLING STATE UNIVERSITY WS	90	A
441	LINCOLN	LA1061006	GRAMBLING WATER SYSTEM	73	C
442	LINCOLN	LA1061007	GREATER WARD 1 WATERWORKS DISTRICT	99	A
443	LINCOLN	LA1061008	HICO WATER SYSTEM	61	D
444	LINCOLN	LA1061027	HILLY-GREENWOOD WATER SYSTEM	90	A
445	LINCOLN	LA1061009	LINCOLN PARISH WATERWORKS DISTRICT #1	95	A
446	LINCOLN	LA1061029	LINCOLN PARISH WATERWORKS DISTRICT #2	87	B
447	LINCOLN	LA1061010	LINCOLN PARISH WATERWORKS DISTRICT #3	94	A
448	LINCOLN	LA1061013	MINERAL SPRINGS WATER SYSTEM	100	A
449	LINCOLN	LA1061014	MT OLIVE WATERWORKS DISTRICT	84	B
450	LINCOLN	LA1061015	MT ZION WATER SYSTEM	93	A
451	LINCOLN	LA1061021	RISER ROAD WATER SYSTEM	100	A
452	LINCOLN	LA1061017	RUSTON WATER SYSTEM	77	C
453	LINCOLN	LA1061018	SIMSBORO WATER SYSTEM	82	B

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454	LINCOLN	LA1061031	TREMONT WATER DISTRICT	99	A
455	LINCOLN	LA1061020	WESLEY CHAPEL WATER SYSTEM	100	A
456	LIVINGSTON	LA1063119	CARTER PLANTATION	89	B
457	LIVINGSTON	LA1063004	CITY OF DENHAM SPRINGS WATER SYSTEM	95	A
458	LIVINGSTON	LA1063003	COLYELL COMMUNITY WATER	89	B
459	LIVINGSTON	LA1063114	DIVERSION WATER - CHINQUAPIN	99	A
460	LIVINGSTON	LA1063118	DIVERSION WATER - CYPRESS POINT	99	A
461	LIVINGSTON	LA1063103	DIVERSION WATER - MONTROSE SUBDIVISIO	100	A
462	LIVINGSTON	LA1063115	DIVERSION WATER - OLD MILL SETTLEMENT	95	A
463	LIVINGSTON	LA1063123	DIVERSION WATER - STONEHILL	100	A
464	LIVINGSTON	LA1063036	DIVERSION WATER - TERRY HARBOR CAMPSI	97	A
465	LIVINGSTON	LA1063029	DIVERSION WATER- OLIVIA ROSE	100	A
466	LIVINGSTON	LA1063109	DIVERSION WATER RIVER HIGHLANDS	93	A
467	LIVINGSTON	LA1063104	DIVERSION WATER- WATER FRONT WEST	94	A
468	LIVINGSTON	LA1063005	FOURTH WARD WATER WORKS	91	A
469	LIVINGSTON	LA1063019	FSWC - FRENCH SETTLEMENT	83	B
470	LIVINGSTON	LA1063058	FSWC - OAKRIDGE	100	A
471	LIVINGSTON	LA1063089	FSWC- PINE HEAVEN	94	A
472	LIVINGSTON	LA1063024	FSWC- SPRINGFIELD AREA	97	A
473	LIVINGSTON	LA1063028	FSWC- WHITEHALL/ HEAD OF ISLAND	85	B
474	LIVINGSTON	LA1063076	JIMS TRAILER PARK	85	B
475	LIVINGSTON	LA1063030	KILLIAN WATER SYSTEM	69	D
476	LIVINGSTON	LA1063098	MAGNOLIA WATER UTILITIES - LAKESIDE EA	110	A
477	LIVINGSTON	LA1063087	MAGNOLIA WATER UTILITY - HIGHLAND RID	98	A
478	LIVINGSTON	LA1063106	MAGNOLIA WATER UTL-RIVERSCAPE @ CLIO	110	A
479	LIVINGSTON	LA1063018	RIVER PINES PLANTATION UTILITIES	82	B
480	LIVINGSTON	LA1063035	SPRINGFIELD MOBILE HOME PARK	37	F
481	LIVINGSTON	LA1063022	TOWN OF ALBANY WATER SYSTEM	96	A
482	LIVINGSTON	LA1063013	TOWN OF LIVINGSTON WATER SYSTEM	91	A
483	LIVINGSTON	LA1063017	WALKER WATER SYSTEM	90	A
484	LIVINGSTON	LA1063039	WARD II WATER DISTRICT	85	B
485	MADISON	LA1065005	BAYOU MACON WATER SYSTEM	95	A
486	MADISON	LA1065001	DELTA WATER SYSTEM	80	B

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487	MADISON	LA1065003	TALLULAH WATER SYSTEM	37	F
488	MADISON	LA1065004	WALNUT BAYOU WATER ASSOCIATION	89	B
489	MOREHOUSE	LA1067003	BASTROP WATER SYSTEM	103	A
490	MOREHOUSE	LA1067002	BAYOU BONNE IDEE WS	95	A
491	MOREHOUSE	LA1067018	BEEKMAN WATER SYSTEM	53	F
492	MOREHOUSE	LA1067004	BONITA WATER SYSTEM	42	F
493	MOREHOUSE	LA1067005	COLLINSTON WATER SYSTEM	60	D
494	MOREHOUSE	LA1067012	CONSOLIDATED WATERWORKS DISTRICT 2	98	A
495	MOREHOUSE	LA1067017	JONES MCGINTY WATER SYSTEM	50	F
496	MOREHOUSE	LA1067007	LAKEVIEW ESTATES SUBD WS	100	A
497	MOREHOUSE	LA1067009	MER ROUGE WATER SYSTEM	89	B
498	MOREHOUSE	LA1067010	MOREHOUSE CENTRAL WS	89	B
499	MOREHOUSE	LA1067014	OAK RIDGE WATER SYSTEM	94	A
500	MOREHOUSE	LA1067020	SOUTH BONNE IDEE WATER SYSTEM	88	B
501	MOREHOUSE	LA1067022	SPICEWOOD MOBILE HOME PARK WATER SY	90	A
502	MOREHOUSE	LA1067016	WARD 3 WATER ASSOCIATION	58	F
503	MOREHOUSE	LA1067011	WATERWORKS 1 OF MOREHOUSE, INC	88	B
504	NATCHITOCHES	LA1069014	BELLWOOD WATER SYSTEM	64	D
505	NATCHITOCHES	LA1069001	CAMPTI WATER SYSTEM	67	D
506	NATCHITOCHES	LA1069011	CHEE CHEE BAY WATER SYSTEM	103	A
507	NATCHITOCHES	LA1069012	CHESTNUT-READHIMER WATER SYSTEM	78	C
508	NATCHITOCHES	LA1069002	CLARENCE WATER SYSTEM	75	C
509	NATCHITOCHES	LA1069003	CRESTON WATER SYSTEM	82	B
510	NATCHITOCHES	LA1069004	GOLDONNA WATER SYSTEM	104	A
511	NATCHITOCHES	LA1069005	HAGEWOOD WATER SYSTEM	93	A
512	NATCHITOCHES	LA1069006	NATCHITOCHES PARISH WWKS DISTRICT 2	79	C
513	NATCHITOCHES	LA1069007	NATCHITOCHES WATER SYSTEM	64	D
514	NATCHITOCHES	LA1069008	POWHATAN WATER SYSTEM	69	D
515	NATCHITOCHES	LA1069009	PROVENCAL WATER SYSTEM	61	D
516	NATCHITOCHES	LA1069013	SANDY POINT 480 WATER SYSTEM	100	A
517	ORLEANS	LA1071009	NEW ORLEANS CARROLLTON WW	64	D
518	ORLEANS	LA1071001	NEW ORLEANS ALGIERS WATER WORKS	85	B
519	OUACHITA	LA1073003	BETTER WATERWORKS WATER SYSTEM	90	A

	Parish	PWSID	Public Water System Name	Score	Grade
520	OUACHITA	LA1073004	BROWNVILLE WATER SYSTEM	103	A
521	OUACHITA	LA1073060	CADEVILLE WATER DISTRICT	83	B
522	OUACHITA	LA1073006	CALHOUN WATER SYSTEM	64	D
523	OUACHITA	LA1073100	CHENIERE DREW NORTH WATER SYSTEM	100	A
524	OUACHITA	LA1073099	CHENIERE DREW SOUTH WATER SYSTEM	105	A
525	OUACHITA	LA1073014	FROST TOWN WATER SYSTEM	105	A
526	OUACHITA	LA1073121	GOWC EAST WATER SYSTEM	109	A
527	OUACHITA	LA1073120	GOWC NORTH WATER SYSTEM	106	A
528	OUACHITA	LA1073061	HIDDEN OAKS SUBDIVISION WS	105	A
529	OUACHITA	LA1073058	INDIAN VILLAGE WATER SYSTEM	80	B
530	OUACHITA	LA1073020	KIROLI DARBONNE WS	103	A
531	OUACHITA	LA1073011	L&R NORTH WATER SYSTEM	105	A
532	OUACHITA	LA1073090	LINCOLN HILLS SUBDIVISION WS	90	A
533	OUACHITA	LA1073028	MCCLENDON COMMUNITY WATER WELL	89	B
534	OUACHITA	LA1073031	MONROE WATER SYSTEM	101	A
535	OUACHITA	LA1073063	PECAN LAKE SUBDIVISION WS	105	A
536	OUACHITA	LA1073040	PRAIRIE ROAD WATER DISTRICT	48	F
537	OUACHITA	LA1073025	RAMSEY WATER SYSTEM	105	A
538	OUACHITA	LA1073046	SOUTH MONROE WS GOWC	105	A
539	OUACHITA	LA1073047	SOUTHWEST OUACHITA WATERWORKS, INC	94	A
540	OUACHITA	LA1073054	TOWN & COUNTRY SERVICE	104	A
541	OUACHITA	LA1073055	WEST HWY 80 ARK ROAD WS	105	A
542	OUACHITA	LA1073056	WEST MONROE WATER SYSTEM	92	A
543	OUACHITA	LA1073097	WESTERN UTILITIES, INC	90	A
544	OUACHITA	LA1073110	WILDWOOD MHP WS	105	A
545	PLAQUEMINES	LA1075001	BELLE CHASSE WATER DISTRICT	54	F
546	PLAQUEMINES	LA1075004	DALCOUR WATERWORKS DISTRICT	75	C
547	PLAQUEMINES	LA1075005	POINTE A LA HACHE WATER SYSTEM	69	D
548	PLAQUEMINES	LA1075006	PORT SULPHUR WATER DISTRICT	26	F
549	POINTE COUPEE	LA1077048	ALMA PLANTATION LTD	90	A
550	POINTE COUPEE	LA1077041	FALSE RIVER WATER COMPANY	90	A
551	POINTE COUPEE	LA1077009	FORDOCHE, TOWN OF	95	A
552	POINTE COUPEE	LA1077013	INNIS WATER CORPORATION INC	94	A

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553	POINTE COUPEE	LA1077022	LIVONIA WATER SYSTEM	105	A
554	POINTE COUPEE	LA1077025	MORGANZA WATER SYSTEM	105	A
555	POINTE COUPEE	LA1077026	NEW ROADS WATER SYSTEM	80	B
556	POINTE COUPEE	LA1077046	POINTE COUPEE DETENTION CENTER	67	D
557	POINTE COUPEE	LA1077043	POINTE COUPEE WATER WORKS DISTRICT 1	86	B
558	POINTE COUPEE	LA1077047	POINTE COUPEE WWKS DISTRICT 2 - HWY 10	90	A
559	POINTE COUPEE	LA1077045	POINTE COUPEE WWKS DISTRICT 2- BATCHE	90	A
560	POINTE COUPEE	LA1077037	TORBERT- FRISCO WATER WORKS	80	B
561	RAPIDES	LA1079004	BUCKEYE WATER DISTRICT 50	90	A
562	RAPIDES	LA1079001	CITY OF ALEXANDRIA WATER SYSTEM	100	A
563	RAPIDES	LA1079016	CITY OF PINEVILLE WATER SYSTEM	75	C
564	RAPIDES	LA1079006	EMC WATER SYSTEM INC	86	B
565	RAPIDES	LA1079009	FOREST HILL UTILITIES	90	A
566	RAPIDES	LA1079010	GARDNER COMMUNITY WATER SYSTEM	99	A
567	RAPIDES	LA1079030	HAMMOCK WATER SUPPLY	83	B
568	RAPIDES	LA1079012	HINESTON WATER SYSTEM, INC	99	A
569	RAPIDES	LA1079023	KOLIN RUBY WISE WATERWORK DISTRICT 11	83	B
570	RAPIDES	LA1079013	LATANIER WATER ASSOCIATION	92	A
571	RAPIDES	LA1079019	LENA WATER SYSTEM INC	92	A
572	RAPIDES	LA1079025	POLAND WATER ASSOCIATION	90	A
573	RAPIDES	LA1079020	RAPIDES ISLAND WATER ASSOCIATION INC	90	A
574	RAPIDES	LA1079017	RAPIDES PARISH WATERWORKS DISTRICT 3	94	A
575	RAPIDES	LA1079003	TOWN OF BOYCE WATER SYSTEM	100	A
576	RAPIDES	LA1079005	TOWN OF CHENEYVILLE WATER SYSTEM	73	C
577	RAPIDES	LA1079011	TOWN OF GLENMORA WATER SYSTEM	80	B
578	RAPIDES	LA1079014	TOWN OF LECOMPTE (LAWCO)	110	A
579	RAPIDES	LA1079027	TOWN OF WOODWORTH WATER SYSTEM	89	B
580	RAPIDES	LA1079028	VETERANS ADMINISTRATION	85	B
581	RAPIDES	LA1079015	VILLAGE OF MCNARY WATER SYSTEM	93	A
582	RAPIDES	LA1079037	WARD 6 WATER ASSOCIATION OF RAPIDES	88	B
583	RED RIVER	LA1081008	BAYOU PIERRE WATER SYSTEM	69	D
584	RED RIVER	LA1081001	COUSHATTA WATER SYSTEM	75	C
585	RED RIVER	LA1081002	EAST CROSS WATER SYSTEM	71	C

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586	RED RIVER	LA1081003	EDGEFIELD WATER SYSTEM	89	B
587	RED RIVER	LA1081012	FAIRVIEW UNION WATER SYSTEM	70	C
588	RED RIVER	LA1081005	HALFWAY-CARROLL WATER SYSTEM	100	A
589	RED RIVER	LA1081004	HALL SUMMIT WATER SYSTEM	100	A
590	RED RIVER	LA1081010	HICKORY GROVE WATER SYSTEM	77	C
591	RED RIVER	LA1081006	MARTIN WATER SYSTEM	81	B
592	RED RIVER	LA1081009	SOCIAL SPRINGS WATER SYSTEM NORTH	94	A
593	RED RIVER	LA1081011	SOCIAL SPRINGS WATER SYSTEM SOUTH	99	A
594	RICHLAND	LA1083012	ARCHIBALD WATER SYSTEM	108	A
595	RICHLAND	LA1083016	BCC DETENTION CENTER WS	60	D
596	RICHLAND	LA1083002	DELHI WATER SUPPLY	92	A
597	RICHLAND	LA1083003	EAST RICHLAND WW DISTRICT	100	A
598	RICHLAND	LA1083005	MANGHAM WATER SYSTEM	85	B
599	RICHLAND	LA1083017	PALMETTO ADDICTION RECOVERY	29	F
600	RICHLAND	LA1083006	RAYVILLE WATER SYSTEM	90	A
601	RICHLAND	LA1083015	RICHLAND HEIGHTS SUBD WATER SYSTEM	98	A
602	RICHLAND	LA1083008	RIVER ROAD WATER SYSTEM	58	F
603	RICHLAND	LA1083007	START WATER SYSTEM	105	A
604	SABINE	LA1085053	BELMONT WATERWORKS INC	50	F
605	SABINE	LA1085016	CITY OF MANY WATER SYSTEM	83	B
606	SABINE	LA1085007	CONVERSE WATER SYSTEM	75	C
607	SABINE	LA1085059	EBARB WWKS DIST # 1 - AIMWELL AREA	91	A
608	SABINE	LA1085058	EBARB WWKS DIST # 1 - N EBARB/BELMONT	70	C
609	SABINE	LA1085041	EBARB WWKS DIST #1 - MARSH	95	A
610	SABINE	LA1085043	EBARB WWKS DIST #1 - NORTH EBARB	62	D
611	SABINE	LA1085009	FISHER WATER SYSTEM	95	A
612	SABINE	LA1085011	FLORIEN WATER SYSTEM	93	A
613	SABINE	LA1085017	NOBLE WATER SYSTEM	59	F
614	SABINE	LA1085018	PEG LEG COVE WATER SYSTEM	99	A
615	SABINE	LA1085046	PENDLETON WATER ASSOCIATION	65	D
616	SABINE	LA1085021	PLEASANT HILL WATER SYSTEM, TOWN OF	77	C
617	SABINE	LA1085036	SABINE PARISH WATER DISTRICT 1	98	A
618	SABINE	LA1085055	SOUTH TOLEDO BEND WATER DISTRICT	50	F

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619	SABINE	LA1085032	TOWN OF ZWOLLE WATER SYSTEM	82	B
620	SABINE	LA1085044	UNION SPRINGS WATER SYSTEM	63	D
621	ST BERNARD	LA1087001	ST BERNARD PARISH WATERWORKS	87	B
622	ST CHARLES	LA1089001	ST CHARLES PARISH DEPT OF WATERWORKS	85	B
623	ST HELENA	LA1091004	GREENSBURG WATER SYSTEM	71	C
624	ST HELENA	LA1091006	MONTPELIER WATER SUPPLY	80	B
625	ST HELENA	LA1091007	WWKS DISTRICT 2 OF ST HELENA	100	A
626	ST JAMES	LA1093002	GRAMERCY WATERWORKS	85	B
627	ST JAMES	LA1093003	LUTCHER WATERWORKS	74	C
628	ST JAMES	LA1093004	ST JAMES WATER DISTRICT 1	93	A
629	ST JAMES	LA1093005	ST JAMES WATER DISTRICT 2	96	A
630	ST JOHN THE BAPTIST	LA1095006	PLEASURE BEND WATER SUPPLY	90	A
631	ST JOHN THE BAPTIST	LA1095003	ST JOHN WATER DISTRICT 1	100	A
632	ST JOHN THE BAPTIST	LA1095002	ST JOHN WATER DISTRICT 2	100	A
633	ST JOHN THE BAPTIST	LA1095007	ST JOHN WATER DISTRICT 3	94	A
634	ST LANDRY	LA1097031	CANE VIEW MOBILE HOME VILLAGE	79	C
635	ST LANDRY	LA1097010	CITY OF OPELOUSAS WATER SYSTEM	62	D
636	ST LANDRY	LA1097022	EUNICE WATER SYSTEM (LAWCO)	104	A
637	ST LANDRY	LA1097032	GREENBRIAR PRAIRIE BASSE WATER SYSTEM	84	B
638	ST LANDRY	LA1097026	HIDDEN HILLS SUBDIVISION WATER SYSTEM	82	B
639	ST LANDRY	LA1097004	LAWTELL WATER WORKS DISTRICT NO 1	87	B
640	ST LANDRY	LA1097006	LEWISBURG BELLEVUE WATER SYSTEM	100	A
641	ST LANDRY	LA1097018	MAMOU ROAD WATER DISTRICT, INC	95	A
642	ST LANDRY	LA1097008	MIDWAY WATER SYSTEM INC	37	F
643	ST LANDRY	LA1097009	MORROW WATER SYSTEM INC	90	A
644	ST LANDRY	LA1097012	PLAISANCE WATER SYSTEM	89	B
645	ST LANDRY	LA1097014	PRAIRIE RONDE WATER SYSTEM INC	96	A
646	ST LANDRY	LA1097024	SAVOY SWORDS WATER SYSTEM INC	96	A
647	ST LANDRY	LA1097033	ST LANDRY WATER WORKS DISTRICT 2 RURA	95	A
648	ST LANDRY	LA1097034	ST LANDRY WWD 3 PORT BARRE AREA A	99	A
649	ST LANDRY	LA1097035	ST LANDRY WWD 3 PORT BARRE AREA B	91	A
650	ST LANDRY	LA1097036	ST LANDRY WWD 3 PORT BARRE AREA C	100	A
651	ST LANDRY	LA1097037	ST LANDRY WWD 3 PORT BARRE AREA D	95	A

	Parish	PWSID	Public Water System Name	Score	Grade
652	ST LANDRY	LA1097039	ST. LANDRY WATERWORKS DISTRICT NO. 5	93	A
653	ST LANDRY	LA1097001	TOWN OF GRAND COTEAU WATER SYSTEM	64	D
654	ST LANDRY	LA1097003	TOWN OF KROTZ SPRINGS WATER SYSTEM	88	B
655	ST LANDRY	LA1097005	TOWN OF LEONVILLE WATER SYSTEM	94	A
656	ST LANDRY	LA1097007	TOWN OF MELVILLE WATER SYSTEM	66	D
657	ST LANDRY	LA1097013	TOWN OF PORT BARRE WATER SYSTEM	88	B
658	ST LANDRY	LA1097015	TOWN OF SUNSET WATER SYSTEM	78	C
659	ST LANDRY	LA1097016	TOWN OF WASHINGTON WATER SYSTEM	97	A
660	ST LANDRY	LA1097025	VILLAGE OF CANKTON WATER SYSTEM	92	A
661	ST LANDRY	LA1097011	VILLAGE OF PALMETTO WATER SYSTEM	70	C
662	ST MARTIN	LA1099013	ATCHAFALAYA ACRES WATER SYSTEM	80	B
663	ST MARTIN	LA1099002	BAYOU TECHE WATER WORKS	89	B
664	ST MARTIN	LA1099005	CECILIA WATER CORPORATION	95	A
665	ST MARTIN	LA1099003	CITY OF BREAUX BRIDGE WATER SYSTEM	86	B
666	ST MARTIN	LA1099007	CITY OF ST MARTINVILLE WATER SYSTEM	74	C
667	ST MARTIN	LA1099024	ELM POINT ESTATES WATER SYSTEM	58	F
668	ST MARTIN	LA1099006	HENDERSON NINA WATER SYSTEM INC	99	A
669	ST MARTIN	LA1099025	MY PLACE MOBILE HOME PARK WATER SYST	42	F
670	ST MARTIN	LA1099023	RIVER RIDGE ESTATES WATER SYSTEM	51	F
671	ST MARTIN	LA1099029	ST MARTIN INDUSTRIAL PARK WATER SYSTE	84	B
672	ST MARTIN	LA1099010	ST MARTIN WATER AND SEWER COMMISSION	91	A
673	ST MARTIN	LA1099004	ST MARTIN WATER DISTRICT 4 - CATAHOULA	83	B
674	ST MARTIN	LA1099028	ST MARTIN WATER WORKS DISTRICT 3 - CADE	80	B
675	ST MARTIN	LA1099001	TOWN OF ARNAUDVILLE WATER SYSTEM	95	A
676	ST MARTIN	LA1099009	UNITED WATER SYSTEM	64	D
677	ST MARTIN	LA1099008	VILLAGE OF PARKS WATER SYSTEM	70	C
678	ST MARY	LA1101002	BERWICK BAYOU VISTA WW COMMISSION	85	B
679	ST MARY	LA1101003	FRANKLIN WATER SUPPLY	70	C
680	ST MARY	LA1101004	GLENCOE COMMUNITY WATER SYSTEM	79	C
681	ST MARY	LA1101005	MORGAN CITY WATER SYSTEM	91	A
682	ST MARY	LA1101006	PATTERSON WATER SYSTEM	88	B
683	ST MARY	LA1101013	PORT OF WEST ST MARY	80	B
684	ST MARY	LA1101012	ST MARY PAR JT WATER SEWER COMMISSION	87	B

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685	ST MARY	LA1101015	ST MARY PARISH W&S #2 BAYOU VISTA	103	A
686	ST MARY	LA1101009	ST MARY PARISH WATER SEWERAGE COMM 1	100	A
687	ST MARY	LA1101010	ST MARY WATER & SEWER COMM #3	80	B
688	ST MARY	LA1101014	TOWN OF BERWICK	97	A
689	ST MARY	LA1101011	WATER & SEWER COMMISSION 4 OF ST MARY	96	A
690	ST TAMMANY	LA1103002	ABITA SPRINGS WATER SYSTEM	89	B
691	ST TAMMANY	LA1103196	ALEXANDER MILNE HOME FOR WOMEN	94	A
692	ST TAMMANY	LA1103004	AZALEA LANE TRAILER PARK	76	C
693	ST TAMMANY	LA1103005	BAYOU LIBERTY WATER ASSOCIATION	100	A
694	ST TAMMANY	LA1103006	BEAU CHENE WATER SYSTEM	80	B
695	ST TAMMANY	LA1103182	BIG BRANCH TRAILER PARK	90	A
696	ST TAMMANY	LA1103141	BRIER LAKE UTILITIES INC	90	A
697	ST TAMMANY	LA1103088	CENTRAL PARK SUBDIVISION	74	C
698	ST TAMMANY	LA1103125	CHAHTA MOBILE HOME PARK	93	A
699	ST TAMMANY	LA1103150	CHAPMAN APARTMENTS	75	C
700	ST TAMMANY	LA1103011	COVINGTON WATER SUPPLY	85	B
701	ST TAMMANY	LA1103110	EAGLE LAKE MOBILE HOME PARK	78	C
702	ST TAMMANY	LA1103014	FOLSOM WATER SUPPLY	95	A
703	ST TAMMANY	LA1103137	FOREST GLEN SD	87	B
704	ST TAMMANY	LA1103062	GIVING HOPE RETREAT	79	C
705	ST TAMMANY	LA1103160	HILLCREST / SNEAD APARTMENTS	95	A
706	ST TAMMANY	LA1103143	INDIAN HILLS TRAILER PARK	79	C
707	ST TAMMANY	LA1103018	LACOMBE NURSING CENTRE	100	A
708	ST TAMMANY	LA1103139	LAKE RAMSEY	95	A
709	ST TAMMANY	LA1103171	LAKESHORE ESTATES	80	B
710	ST TAMMANY	LA1103095	LAZY WHEELS TRAILER PARK	80	B
711	ST TAMMANY	LA1103020	LEE ROAD WATER CORPORATION	98	A
712	ST TAMMANY	LA1103156	LEWISBURG ESTATES	89	B
713	ST TAMMANY	LA1103176	MADISONVILLE ON THE LAKE	65	D
714	ST TAMMANY	LA1103022	MADISONVILLE WATER SUPPLY	98	A
715	ST TAMMANY	LA1103046	MAGNOLIA WATER UTIL -RESOLVE WHISPER	99	A
716	ST TAMMANY	LA1103122	MAGNOLIA WATER UTILIT - RIGOLETS ESTAT	102	A
717	ST TAMMANY	LA1103129	MAGNOLIA WATER UTILITES - CHERRYWOO	104	A

	Parish	PWSID	Public Water System Name	Score	Grade
718	ST TAMMANY	LA1103190	MAGNOLIA WATER UTILITIES - AUTUMN HAV	109	A
719	ST TAMMANY	LA1103134	MAGNOLIA WATER UTILITIES - BEAU PRE	109	A
720	ST TAMMANY	LA1103013	MAGNOLIA WATER UTILITIES - EDEN ISLES	105	A
721	ST TAMMANY	LA1103142	MAGNOLIA WATER UTILITIES - GRANDE PAL	105	A
722	ST TAMMANY	LA1103118	MAGNOLIA WATER UTILITIES - GREENLEAVE	100	A
723	ST TAMMANY	LA1103189	MAGNOLIA WATER UTILITIES - GUSTE ISLAN	110	A
724	ST TAMMANY	LA1103179	MAGNOLIA WATER UTILITIES - I59 MHP	110	A
725	ST TAMMANY	LA1103148	MAGNOLIA WATER UTILITIES - MONTEREY S	108	A
726	ST TAMMANY	LA1103193	MAGNOLIA WATER UTILITIES - PILOT STREET	108	A
727	ST TAMMANY	LA1103197	MAGNOLIA WATER UTILITIES - PRUDEN CRE	107	A
728	ST TAMMANY	LA1103198	MAGNOLIA WATER UTILITIES - RIVER PARK	105	A
729	ST TAMMANY	LA1103106	MAGNOLIA WATER UTILITIES - THE MEADO	102	A
730	ST TAMMANY	LA1103144	MAGNOLIA WATER UTILITIES RIGOLETS HAR	109	A
731	ST TAMMANY	LA1103178	MAGNOLIA WATER UTILITIES-BEVERLY HEIG	109	A
732	ST TAMMANY	LA1103072	MAGNOLIA WATER UTILITIES-HOMELAND H	109	A
733	ST TAMMANY	LA1103132	MAGNOLIA WATER UTL - BLEU LAKE HILLS	104	A
734	ST TAMMANY	LA1103164	MAGNOLIA WATER UTL - MONEY HILLS ESTA	95	A
735	ST TAMMANY	LA1103185	MAGNOLIA WATER UTL - PENN MILL LAKES	108	A
736	ST TAMMANY	LA1103200	MAGNOLIA WATER UTL - PENN MILL PLACE	110	A
737	ST TAMMANY	LA1103165	MAGNOLIA WATER UTL - WHIPPOORWILL GR	105	A
738	ST TAMMANY	LA1103023	MANDEVILLE WATER SUPPLY	95	A
739	ST TAMMANY	LA1103071	MANGANOS MOBILE HOME PARK	95	A
740	ST TAMMANY	LA1103123	MARINA DEL RAY WATER SYSTEM	89	B
741	ST TAMMANY	LA1103159	OAK RIVER ESTATES	80	B
742	ST TAMMANY	LA1103152	OAK VILLA MH COMMUNITY	99	A
743	ST TAMMANY	LA1103201	OAKLAWN TRACE	80	B
744	ST TAMMANY	LA1103069	OZONE PINE SUBDIVISION	51	F
745	ST TAMMANY	LA1103131	PEARL PLANTATION TOWNHSE	94	A
746	ST TAMMANY	LA1103078	PINE CREST TRAILER PARK	88	B
747	ST TAMMANY	LA1103077	PONDEROSA RANCHES SUBDIVISION	85	B
748	ST TAMMANY	LA1103153	PORT LOUIS TOWNHOMES	110	A
749	ST TAMMANY	LA1103175	S AND J RV PARK	51	F
750	ST TAMMANY	LA1103174	SALT BAYOU KAMPGROUND - VISTA SITES	85	B

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751	ST TAMMANY	LA1103041	SLIDELL WATER SUPPLY	92	A
752	ST TAMMANY	LA1103111	SOUTHERN MANOR M H P	80	B
753	ST TAMMANY	LA1103032	ST JOSEPH ABBEY	95	A
754	ST TAMMANY	LA1103039	ST TAM PARISH - NORTHLAKE BEHAVIORAL	103	A
755	ST TAMMANY	LA1103154	ST TAM PARISH - ST GERTRUDE	105	A
756	ST TAMMANY	LA1103173	ST TAM PARISH - ABITA LAKES	99	A
757	ST TAMMANY	LA1103145	ST TAM PARISH - ALTON	101	A
758	ST TAMMANY	LA1103079	ST TAM PARISH - BRIARWOOD TERRACE	103	A
759	ST TAMMANY	LA1103053	ST TAM PARISH - CROSS GATES SD	104	A
760	ST TAMMANY	LA1103128	ST TAM PARISH - LAKE HILLS VILLAGE	104	A
761	ST TAMMANY	LA1103146	ST TAM PARISH - MEADOWLAKE SUBDIVISIO	103	A
762	ST TAMMANY	LA1103180	ST TAM PARISH - RIVER OAKS	104	A
763	ST TAMMANY	LA1103199	ST TAM PARISH - TAMANEND	105	A
764	ST TAMMANY	LA1103191	ST TAM PARISH- BEDICO CREEK	105	A
765	ST TAMMANY	LA1103105	ST TAM PARISH- BEN THOMAS RD	101	A
766	ST TAMMANY	LA1103181	ST TAM PARISH -NORTHRIDGE ESTATES	103	A
767	ST TAMMANY	LA1103093	ST TAM PARISH PINELAND PARK SUBD	100	A
768	ST TAMMANY	LA1103184	ST TAM PARISH SALVATION MANOR ST JOE	105	A
769	ST TAMMANY	LA1103149	ST TAM PARISH-FAUBOURG-COQUILLE	89	B
770	ST TAMMANY	LA1103147	ST TAM PARISH-MADISONVILLE WOODS	100	A
771	ST TAMMANY	LA1103033	ST TAMMANY WATER DIST 2	99	A
772	ST TAMMANY	LA1103056	ST TAMMANY WATER DISTRICT 3	80	B
773	ST TAMMANY	LA1103038	SUN WATER SUPPLY	80	B
774	ST TAMMANY	LA1103042	TAMMANY MOBILE HOME PARK	69	D
775	ST TAMMANY	LA1103043	TCHEFUNCTA CLUB ESTATES	101	A
776	ST TAMMANY	LA1103194	TIMBERLAND MOBILE HOME PARK	89	B
777	ST TAMMANY	LA1103157	TOWN OF PEARL RIVER	80	B
778	ST TAMMANY	LA1103113	UTILITIES INC - BEAU VILLAGE	100	A
779	ST TAMMANY	LA1103130	UTILITIES INC - GREEN BRIER WATER SUPPLY	99	A
780	ST TAMMANY	LA1103073	UTILITIES INC - HUNTWYCK VILLAGE	99	A
781	ST TAMMANY	LA1103055	UTILITIES INC - KINGSPOINT SUBDIVISION	97	A
782	ST TAMMANY	LA1103064	UTILITIES INC - LAKE VILLAGE SD	99	A
783	ST TAMMANY	LA1103054	UTILITIES INC - MAGNOLIA FOREST SUBD	100	A

	Parish	PWSID	Public Water System Name	Score	Grade
784	ST TAMMANY	LA1103124	UTILITIES INC - NORTH PARK WATER SUPPLY	97	A
785	ST TAMMANY	LA1103108	UTILITIES INC - OAKMONT SUBD	100	A
786	ST TAMMANY	LA1103074	UTILITIES INC - QUAIL RIDGE SUBDIVISION	100	A
787	ST TAMMANY	LA1103075	UTILITIES INC - WOODRIDGE SUBDIVISION	98	A
788	ST TAMMANY	LA1103066	VILLAGE GUTHRIE SUBDIVISION	88	B
789	ST TAMMANY	LA1103195	VILLAGES OF BOCAGE- MADISONVILLE	102	A
790	TANGIPAHOA	LA1105045	BAYWOOD ESTATES SUBD	66	D
791	TANGIPAHOA	LA1105088	BLUE CRYSTAL MHP	80	B
792	TANGIPAHOA	LA1105009	CITY OF HAMMOND WATER SYSTEM	101	A
793	TANGIPAHOA	LA1105003	EASTERN HEIGHTS WATER WORKS	79	C
794	TANGIPAHOA	LA1105081	FLORIDA PAR JUV DETENTION CENTER	85	B
795	TANGIPAHOA	LA1105005	FLUKER CHAPEL WATER WORKS	105	A
796	TANGIPAHOA	LA1105010	FSWC - HAMMOND HEIGHTS	81	B
797	TANGIPAHOA	LA1105078	FSWC- VELMA	90	A
798	TANGIPAHOA	LA1105036	FSWC-BANKSTON	92	A
799	TANGIPAHOA	LA1105012	INDEPENDENCE WATER SYSTEM	95	A
800	TANGIPAHOA	LA1105014	KENTWOOD WATER SYSTEM	85	B
801	TANGIPAHOA	LA1105042	LA CASA LLC	74	C
802	TANGIPAHOA	LA1105019	PONTCHATOULA WATER SYSTEM	88	B
803	TANGIPAHOA	LA1105022	ROSELAND WATER SYSTEM	80	B
804	TANGIPAHOA	LA1105067	ST CHARLES MOBILE HOME PARK	94	A
805	TANGIPAHOA	LA2105049	TANGI PINES FAMILY CAMPGROUND	51	F
806	TANGIPAHOA	LA1105077	TANGIPAHOA (SECOND WARD) WATER DISTR	98	A
807	TANGIPAHOA	LA1105008	TANGIPAHOA PARISH WATER DISTRICT	95	A
808	TANGIPAHOA	LA1105027	TICKFAW WATER SYSTEM	99	A
809	TANGIPAHOA	LA1105001	TOWN OF AMITE WATER SYSTEM	99	A
810	TANGIPAHOA	LA1105026	VILLAGE OF TANGIPAHOA WATER SYSTEM	92	A
811	TANGIPAHOA	LA1105028	WESTVIEW WATER WORKS	87	B
812	TANGIPAHOA	LA1105090	WOODSIDE MHP	82	B
813	TENSAS	LA1107001	LAKE BRUIN WATER DISTRICT #1	89	B
814	TENSAS	LA1107003	NEWELLTON WATER SYSTEM	34	F
815	TENSAS	LA1107004	ST JOSEPH WATER SYSTEM	78	C
816	TENSAS	LA1107009	TENSAS WATER DISTRICT ASSOCIATION	90	A

Parish	PWSID	Public Water System Name	Score	Grade
817 TENSAS	LA1107005	WATERPROOF WATER SYSTEM	73	C
818 TERREBONNE	LA1109001	HOUMA WATER TREATMENT SERVICE AREA	101	A
819 TERREBONNE	LA1109002	SCHRIEVER WATER TREATMENT SERVICE AR	95	A
820 UNION	LA1111001	BERNICE WATER SYSTEM	62	D
821 UNION	LA1111022	CONCORD WATER SYSTEM	48	F
822 UNION	LA1111002	CORNEY WATER SYSTEM	80	B
823 UNION	LA1111024	DARBONNE WS NORTH	70	C
824 UNION	LA1111023	DARBONNE WS SOUTH	79	C
825 UNION	LA1111004	DOWNSVILLE WATER SYSTEM	64	D
826 UNION	LA1111005	FARMERVILLE WATER SYSTEM	37	F
827 UNION	LA1111008	HOLMESVILLE WATER SYSTEM	95	A
828 UNION	LA1111009	JUNCTION CITY WATER SYSTEM	95	A
829 UNION	LA1111010	LINVILLE-HAILE WATER SYSTEM	72	C
830 UNION	LA1111025	LITROE WATER SYSTEM	30	F
831 UNION	LA1111011	MARION WATER SYSTEM	59	F
832 UNION	LA1111012	POINT WILHITE WS	72	C
833 UNION	LA1111018	RANDOLPH WATER SYSTEM	80	B
834 UNION	LA1111013	ROCKY BRANCH WATER SYSTEM	100	A
835 UNION	LA1111014	SALEM WATER SYSTEM	36	F
836 UNION	LA1111021	SARDIS WATER SYSTEM	33	F
837 UNION	LA1111020	TRI-WATER SYSTEM	69	D
838 UNION	LA1111015	UNION PARISH WATERWORKS DISTRICT 1	57	F
839 UNION	LA1111016	WARDS CHAPEL WATER SYSTEM	44	F
840 UNION	LA1111017	WEST STERLINGTON WATER SYSTEM	60	D
841 VERMILION	LA1113001	CITY OF ABBEVILLE WATER SYSTEM	95	A
842 VERMILION	LA1113009	CITY OF KAPLAN WATER SYSTEM	99	A
843 VERMILION	LA1113032	MAGNOLIA PLANTATION WATER SYSTEM IN	97	A
844 VERMILION	LA1113029	PECAN ISLAND WW DISTRICT NO 3	89	B
845 VERMILION	LA1113031	SOUTHEAST WATERWORKS DISTRICT 2	100	A
846 VERMILION	LA1113004	TOWN OF DELCAMBRE WATER SYSTEM	80	B
847 VERMILION	LA1113005	TOWN OF ERATH WATER SYSTEM	94	A
848 VERMILION	LA1113006	TOWN OF GUEYDAN WATER SYSTEM	97	A
849 VERMILION	LA1113034	VERMILION WATERWORKS DISTRICT 1	86	B

	Parish	PWSID	Public Water System Name	Score	Grade
850	VERMILION	LA1113019	VILLAGE OF MAURICE WATER SYSTEM	80	B
851	VERNON	LA1115019	CITY OF LEESVILLE WATER SYSTEM	89	B
852	VERNON	LA1115117	EAST CENTRAL VERNON WATER SYSTEM	87	B
853	VERNON	LA1115047	EMPIRE POINT COMMUNITY WATER SYSTEM	83	B
854	VERNON	LA1115087	FORT JOHNSON NORTH HOUSING WATER SY	85	B
855	VERNON	LA1115064	FORT JOHNSON NORTH WATER SYSTEM	85	B
856	VERNON	LA1115065	FORT JOHNSON SOUTH WATER SYSTEM	85	B
857	VERNON	LA1115022	NEW LLANO WATER DEPARTMENT	99	A
858	VERNON	LA1115026	PITKIN WATER SYSTEM	85	B
859	VERNON	LA1115090	SANDY HILL WATER & SEWER	52	F
860	VERNON	LA1115118	SOUTH VERNON PARISH WATERWORKS DIST	85	B
861	VERNON	LA1115016	TOWN OF HORNBECK WATER SYSTEM	105	A
862	VERNON	LA1115028	TOWN OF ROSEPINE WATER SYSTEM	90	A
863	VERNON	LA1115071	VERNON PARISH WATER AND SEWER COMMI	96	A
864	VERNON	LA1115001	VILLAGE OF ANACOCO	100	A
865	VERNON	LA1115032	VILLAGE OF SIMPSON WATER SYSTEM	99	A
866	VERNON	LA1115121	WEST VERNON PARISH WATERWORKS DISTRI	85	B
867	WASHINGTON	LA1117023	29 PALMS TRAILER PARK	35	F
868	WASHINGTON	LA1117008	ANGIE WATER SUPPLY	86	B
869	WASHINGTON	LA1117009	BOGUE-LUSA WATER WORKS DISTRICT	83	B
870	WASHINGTON	LA1117001	CITY OF BOGALUSA WATER SYSTEM	80	B
871	WASHINGTON	LA1117024	HAPPY ACRES MOBILE HOME PARK	96	A
872	WASHINGTON	LA1117021	MOUNT HERMAN WATER DISTRICT	90	A
873	WASHINGTON	LA1117022	RON SON BEAR	80	B
874	WASHINGTON	LA1117003	RURAL FRANKLINTON WATER	100	A
875	WASHINGTON	LA1117127	SANDSTONE LAKE WATER SUPPLY	75	C
876	WASHINGTON	LA1117002	TOWN OF FRANKLINTON WATER SYSTEM	105	A
877	WASHINGTON	LA1117026	UTILITIES INC - NORTH FOLSOM HILLS	100	A
878	WASHINGTON	LA1117006	VARNADO WATER WORKS	87	B
879	WASHINGTON	LA1117025	VARNADO WATER WORKS - PINE	94	A
880	WASHINGTON	LA1117019	WILLA VILLA MOBILE HOME	89	B
881	WEBSTER	LA1119001	BISTINEAU WATER SYSTEM	92	A
882	WEBSTER	LA1119002	BLOCKER WATER SYSTEM	70	C

	Parish	PWSID	Public Water System Name	Score	Grade
883	WEBSTER	LA1119003	CENTRAL WATER SYSTEM	79	C
884	WEBSTER	LA1119004	COTTON VALLEY WATER SYSTEM	102	A
885	WEBSTER	LA1119005	CULLEN WATER SYSTEM	75	C
886	WEBSTER	LA1119006	DIXIE INN WATER SYSTEM	99	A
887	WEBSTER	LA1119007	DIXIE OVERLAND WATER SYSTEM	102	A
888	WEBSTER	LA1119032	DORCHEAT ACRES WATER SYSTEM	95	A
889	WEBSTER	LA1119008	DOYLINE WATERWORKS DISTRICT 1	75	C
890	WEBSTER	LA1119009	DUBBERLY WATER SYSTEM	99	A
891	WEBSTER	LA1119011	GERMANTOWN WATER SYSTEM	100	A
892	WEBSTER	LA1119012	GILARK WATER SYSTEM	84	B
893	WEBSTER	LA1119034	GIL-GAL WATER SYSTEM	80	B
894	WEBSTER	LA1119013	HEFLIN WATER SYSTEM	104	A
895	WEBSTER	LA1119015	HORSE SHOE ROAD WATER SYSTEM	79	C
896	WEBSTER	LA1119016	JENKINS COMMUNITY WATER SYSTEM	95	A
897	WEBSTER	LA1119017	LETON WATER SYSTEM	103	A
898	WEBSTER	LA1119019	MCINTYRE WATER SYSTEM	79	C
899	WEBSTER	LA1119020	MIDWAY WATER SYSTEM	80	B
900	WEBSTER	LA1119021	MINDEN WATER SYSTEM	90	A
901	WEBSTER	LA1119022	PALMETTO WATER WORKS INC	75	C
902	WEBSTER	LA1119023	PLEASANT VALLEY WATER SYSTEM	89	B
903	WEBSTER	LA1119024	SALT WORKS WATER SYSTEM	94	A
904	WEBSTER	LA1119025	SAREPTA WATER WORKS DISTRICT	90	A
905	WEBSTER	LA1119026	SHONGALOO WATER SYSTEM	100	A
906	WEBSTER	LA1119027	SIBLEY WATER SYSTEM	87	B
907	WEBSTER	LA1119028	SPRINGHILL WATER SYSTEM	85	B
908	WEBSTER	LA1119035	ST JAMES WATER SYSTEM	90	A
909	WEBSTER	LA1119029	STATE LINE WATER SYSTEM	95	A
910	WEBSTER	LA1119018	STATE OF LA MILITARY DEPT - CAMP MINDE	89	B
911	WEBSTER	LA1119030	THOMASVILLE WATER SYSTEM	100	A
912	WEBSTER	LA1119031	UNION GROVE WATER SYSTEM	90	A
913	WEST BATON ROUGE	LA1121014	PORT ALLEN WATER SYSTEM	93	A
914	WEST BATON ROUGE	LA1121026	WBR DISTRICT 4 - ARBROTH	96	A
915	WEST BATON ROUGE	LA1121027	WBR DISTRICT 4 -SECTION ROAD WINTERVIL	93	A

	Parish	PWSID	Public Water System Name	Score	Grade
916	WEST BATON ROUGE	LA1121008	WBR PUBLIC UTILITIES	93	A
917	WEST BATON ROUGE	LA1121018	WEST BATON ROUGE WATER WORKS DISTRI	90	A
918	WEST CARROLL	LA1123001	EPPS WATER SYSTEM	76	C
919	WEST CARROLL	LA1123002	FISKE UNION WATER SYSTEM	84	B
920	WEST CARROLL	LA1123004	GOODWILL WATER SYSTEM	80	B
921	WEST CARROLL	LA1123005	NEW CARROLL WATER SYSTEM	97	A
922	WEST CARROLL	LA1123006	OAK GROVE WATER SYSTEM	90	A
923	WEST CARROLL	LA1123007	PIONEER DARNELL WATER SYSTEM	90	A
924	WEST CARROLL	LA1123003	VILLAGE OF FOREST WATER SYSTEM	85	B
925	WEST FELICIANA	LA1125005	LOUISIANA STATE PENITENTIARY	99	A
926	WEST FELICIANA	LA1125006	TOWN OF ST FRANCISVILLE WATER SYSTEM	85	B
927	WEST FELICIANA	LA1125011	TUNICA WATER SYSTEM	91	A
928	WEST FELICIANA	LA1125010	WEST FELICIANA CONSOL WWKS DISTRICT 13	96	A
929	WINN	LA1127001	ATLANTA WATER SUPPLY	95	A
930	WINN	LA1127022	BACKWOOD VILLAGE WATER SYSTEM	46	F
931	WINN	LA1127012	CITY OF WINNFIELD WATER SYSTEM	73	C
932	WINN	LA1127015	HUDSON GAARS MILL WATER SYSTEM	96	A
933	WINN	LA1127008	JOYCE WATER SUPPLY	99	A
934	WINN	LA1127023	PLEASANT HILLS-CROSSROADS WATER SYSTE	44	F
935	WINN	LA1127017	TANNEHILL WATER SYSTEM	61	D
936	WINN	LA1127002	VILLAGE OF CALVIN WATER SYSTEM	57	F
937	WINN	LA1127005	VILLAGE OF DODSON WATER SYSTEM	92	A
938	WINN	LA1127010	VILLAGE OF SIKES WATER SYSTEM	42	F
939	WINN	LA1127011	WEST WINN WATER SYSTEM INC	42	F
940	WINN	LA1127019	WHEELING WATER SYSTEM INC	80	B

Type of System	System Name	PWSID	LDH Final Score 5.1.23	LDH Final Score 5.1.24
Drinking Water - Groundwater	Green Acres Subdivision	LA1011004	A	A
Drinking Water - Groundwater	Evangeline	LA1015009	A	A
Drinking Water - Groundwater	Jones Rolling Ridge	LA1017029	A	A
Drinking Water - Purchased (Surface Water)	Wildwood South Subdivision	LA1017042	A	A
Drinking Water - Purchased (Surface Water)	Dixie Garden	LA1017075	A	A
Drinking Water - Purchased (Surface Water)	Kings Hwy	LA1017087	A	A
Drinking Water - Groundwater	Brigas Acres	LA1019001	A	B
Drinking Water - Groundwater	Hunter Grove (Utility Service of Lake Charles)	LA1019024	A	A
Drinking Water - Groundwater	TESI - Lake Street	LA1019091	B	A
Drinking Water - Groundwater	TESI - Port East	LA1045037	A	A
Drinking Water - Purchased (Groundwater)	TESI - Plantation Gardens	LA1047028	A	A
Drinking Water - Groundwater	Spring Creek Water & Sewerage	LA1049028	C	A
Drinking Water - Purchased (Groundwater)	TESI - Country Pines	LA1055040	A	A
Drinking Water - Purchased (Groundwater)	TESI - Fox Run	LA1055043	A	A
Drinking Water - Groundwater	Village Quest	LA1055070	A	A
Drinking Water - Purchased (Groundwater)	TESI - Carencro Village	LA1055088	A	A
Drinking Water - Groundwater	Belleville Subdivision	LA1055094	A	A
Drinking Water - Groundwater	TESI - Jackson Square	LA1055101	B	A
Drinking Water - Purchased (Groundwater)	Grande Stakes	LA1055116	A	A
Drinking Water - Groundwater	TESI - Southfield Square	LA1055128	A	A
Drinking Water - Groundwater	TESI - Cote Gelee (Cottages of Acadiana)	LA1055131	A	A
Drinking Water - Groundwater	Markridge Subdivision	LA1055137	A	A
Drinking Water - Groundwater	Garden Heights	LA1055138	A	A
Drinking Water - Purchased (Groundwater)	TESI - Ossun Heights	LA1055140	A	A
Drinking Water - Purchased (Groundwater)	TESI - Coach House Manor	LA1055144	A	A
Drinking Water - Groundwater	TESI - Lexington Heights	LA1055147	A	A
Drinking Water - Purchased (Groundwater)	TESI - Trewhill	LA1055148	A	A
Drinking Water - Purchased (Groundwater)	TESI - Shenandoah	LA1055155	A	A
Drinking Water - Purchased (Groundwater)	Le Triomphe Subdivision	LA1055162	A	A
Drinking Water - Purchased (Groundwater)	TESI - Beau Parterre	LA1055164	A	A
Drinking Water - Purchased (Groundwater)	Brookhollow Subdivision	LA1055166	A	A
Drinking Water - Groundwater	TESI - Windy Meadows	LA1055169	B	A

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Type of System	System Name	PWSID	LDH Final Score 5.1.23	LDH Final Score 5.1.24
Drinking Water - Purchased (Groundwater)	Chartres Place Subdivision	LA1055173	A	A
Drinking Water - Purchased (Groundwater)	Habersham	LA1055174	A	A
Drinking Water - Purchased (Groundwater)	Pinnacle Place WTP	LA1055175	A	A
Drinking Water - Groundwater	TESI - Highland Ridge	LA1063087	A	A
Drinking Water - Purchased (Groundwater)	TESI - Lakeside East	LA1063098	A	A
Drinking Water - Groundwater	Riverscape	LA1063106	A	A
Drinking Water - Groundwater	Westlakes	LA1073097	A	A
Drinking Water - Purchased (Surface Water)	Peg Leg Cove	LA1085018	A	A
Drinking Water - Groundwater	Eden Isles	LA1103013	A	A
Drinking Water - Groundwater	Resolve	LA1103046	A	A
Drinking Water - Groundwater	Homeland	LA1103072	A	A
Drinking Water - Groundwater	The Meadows	LA1103106	A	A
Drinking Water - Groundwater	Greenleaves	LA1103118	A	A
Drinking Water - Groundwater	TESI - Rigolets Estates	LA1103122	A	A
Drinking Water - Groundwater	TESI - Cherrywood	LA1103129	A	A
Drinking Water - Groundwater	Bleu Lake	LA1103132	A	A
Drinking Water - Groundwater	TESI - Beau Pre	LA1103134	A	A
Drinking Water - Groundwater	Woodland Appts. (Grand Palms)	LA1103142	A	A
Drinking Water - Groundwater	TESI - Rigolets Harbor	LA1103144	A	A
Drinking Water - Groundwater	Monterey	LA1103148	A	A
Drinking Water - Groundwater	Port Louis Village	LA1103153	A	A
Drinking Water - Groundwater	Money Hill	LA1103164	A	A
Drinking Water - Groundwater	Whippoorwill Ph 7	LA1103165	A	A
Drinking Water - Groundwater	Beverly Heights	LA1103178	A	A
Drinking Water - Groundwater	I59 MHP	LA1103179	A	A
Drinking Water - Groundwater	Penn Mill Lakes	LA1103185	A	A
Drinking Water - Groundwater	Guste Island	LA1103189	A	A
Drinking Water - Groundwater	Autumn Haven	LA1103190	A	A
Drinking Water - Groundwater	Pilot Street	LA1103193	A	A
Drinking Water - Groundwater	*Pruden Creek	LA1103197	A	A
Drinking Water - Groundwater	River Park	LA1103198	A	A
Drinking Water - Groundwater	Penn Mill Place	LA1103200	A	A

Petitioners Exhibit TT-6

VERIFICATION

I, Todd Thomas, Sr. Vice President, verify, state, and affirm that I prepared or supervised the preparation of the Direct Testimony filed with this Verification, and that Direct Testimony is true and accurate to the best of my knowledge, information, and belief after a reasonable inquiry on this 12th day of July, 2024.

Todd Thomas
Sr. Vice President

STATE OF MISSOURI)
)
COUNTY OF ST. LOUIS)

SUBSCRIBED AND SWORN TO before me on this the 12th day of July, 2024.

Roshawne Vallandingham
Notary Public, State of Missouri
My Commission Expires 04-10-2027

ROSHAWNE VALLANDINGHAM
Notary Public - Notary Seal
Jefferson County - State of Missouri
Commission Number 23414639
My Commission Expires Apr 10, 2027