

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Missouri-American Water)
Company for a Certificate of Convenience)
and Necessity Authorizing it to Install, Own,) **Case No. WA-2022-0049**
Acquire, Construct Operate, Control,) **Case No. SA-2022-0050**
Manage and Maintain a Water System and)
Sewer System in and around the City of)
Orrick, Missouri)

Staff's Recommendation

COMES NOW the Staff of the Missouri Public Service Commission, by and through counsel, and as explained in detail in the attached *Memorandum*, hereby recommends that the Commission **APPROVE** the above-referenced application and grant the requested Certificate of Convenience and Necessity, subject to certain conditions enumerated in the attached *Memorandum*.

WHEREFORE, Staff prays that the Commission will **APPROVE** the above-referenced application and grant the requested Certificate of Convenience and Necessity, subject to certain conditions enumerated in the attached *Memorandum*; and grant such other and further relief as the Commission finds just in the circumstances.

Respectfully submitted,

/s/ Kevin A. Thompson
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Certificate of Service

The undersigned hereby certifies that a true and correct copy of the foregoing has been served, by hand delivery, electronic mail, or First Class United States Mail, postage prepaid, to all parties of record on the Service List maintained for this case by the Data Center of the Missouri Public Service Commission, **on this 16th day of November, 2021.**

/s/ Kevin A. Thompson

MEMORANDUM

TO: Missouri Public Service Commission
Official Case File, Case No. WA-2022-0049
Missouri American Water Company

FROM: Keri Roth – Water and Sewer Department
Daronn A. Williams – Water and Sewer Department
Karen Lyons – Auditing Department
Jeremy Juliette – Auditing Department
Tammy Huber – Customer Experience Department
Scott J. Glasgow – Customer Experience Department
Amanda Coffey – Engineering Analysis Department

<u>/s/ Keri Roth</u>	<u>11/16/2021</u>	<u>/s/ Kevin Thompson</u>	<u>11/16/2021</u>
Case Manager	Date	Staff Counsel's Office	Date

SUBJECT: Staff's Recommendation to Approve Certificates of Convenience and Necessity

DATE: November 16, 2021

EXECUTIVE SUMMARY

In its Application and Motion for Waiver (“Application”) requesting Certificates of Convenience and Necessity (“CCNs”) for the city of Orrick, Missouri, Missouri-American Water Company (“MAWC”) has elected to exercise an option provided by §393.320, RSMo., to utilize the lesser of the purchase price or the appraised value to determine the ratemaking rate base. The appraised value, and the agreed upon purchase price, in this case is \$1,510,000 (\$840,000 for water system assets, and \$670,000 for sewer system assets). Staff reviewed the application and its supporting documents, performed a physical inspection of the utilities, reviewed data request responses, and reviewed available documentation from the Department of Natural Resources (“DNR”) and the city of Orrick. Staff recommends approval of MAWC’s Application to purchase the water and sewer assets from Orrick, for the reasons described below.

CASE BACKGROUND

On August 25, 2021, MAWC filed its Application with the Missouri Public Service Commission (Commission) for CCNs authorizing it to install, own, acquire, construct, operate, control, manage, and maintain the water and sewer system owned by the city of Orrick (“Orrick” or “City”), Missouri, which is located in Ray County. The Orrick systems, as municipal utilities, are not presently subject to the jurisdiction of the Commission. The Application was docketed in two separate cases, Case Nos. WA-2022-0049 and SA-2022-0050, which were consolidated by the Commission on October 5, 2021, with Case No. WA-2022-0049 being designated the lead case.

On August 25, 2021, the Commission issued its Order and Notice directing notice of the application be given to the county commission, local newspapers, and members of the General Assembly representing residents of Ray County, Missouri, setting a deadline for

intervention requests, and directing filing of the staff recommendation. Among other things, the Commission's order directed Staff to file a recommendation or alternative pleading no later than September 24, 2021. On September 23, 2021, Staff filed a Status Report, requesting the Commission establish an extended filing date for Staff's Recommendation of December 23, 2021, in order to complete its site inspection of the Orrick system assets, receive and review DNR information and data request responses from MAWC, determine net book value of the systems to evaluate the appraisal, and to complete its review of the appraisal and engineering report. On September 28, 2021, MAWC filed its Response to Staff Status Report and Proposed Date to Submit Recommendation opposing Staff's requested extension date and requested the Commission establish an extended filing date for Staff's Recommendation of October 29, 2021. On October 26, 2021, the Commission issued its Order Directing Filing setting a deadline for Staff to file its Recommendation no later than November 16, 2021. No parties sought to intervene in the case.

For this case, MAWC has chosen to exercise an option provided by §393.320, RSMo. This statute may be applied when a large water public utility as defined by the statute acquires a small water utility also as defined. For purposes of assessing compliance with §393.320, the Appraisal is discussed in further detail later in this memorandum.

BACKGROUND OF MAWC

MAWC is an existing water and sewer corporation and public utility subject to the jurisdiction of the Commission. MAWC is currently providing water service to approximately 470,000 customers and sewer service to more than 15,000 customers in several service areas throughout Missouri. In recent years, MAWC has acquired several existing small water and sewer systems.

MAWC is a subsidiary of American Water Works Company, Inc. ("American Water"), and is affiliated with other American Water companies that undertake some of the tasks associated with utility service, such as customer billing, and share technical resources. MAWC has no pending legal action or judgement from any state or federal agency or court, which involves customer service or rates, nor has MAWC been the recipient of a judgement in the three (3) years prior to the date of the Application.

BACKGROUND OF THE CITY OF ORRICK

The city of Orrick is a Fourth-Class City¹ with a population of approximately 746, located in Ray County. The City is a wholesale customer of Ray County Public Water Supply District #2 ("District"), and its water system consists of one master meter vault for metering the water supply from the District, an elevated storage tank, and the water distribution system. The wastewater system includes a three-cell lagoon system, five lift stations, and the sewer collection system.

¹ https://www.sos.mo.gov/CMSImages/Publications/2021-2022_MO_Roster.pdf

STAFF'S INVESTIGATION

Service Area

Orrick, Missouri, is located in the southwest central portion of Ray County, approximately nine miles west of Richmond, Missouri, on Highway 210.²

All water and sewer customers are located within the city limits; therefore, Orrick does not serve any customers outside of the city limits. The proposed service area extends outside of the city limits to capture the wastewater treatment lagoons and underground sewer lines.³ The wastewater lagoon is located to the south of the city limits. There are no sewer districts or other sewer systems surrounding Orrick.⁴ Therefore, territorial issues are not expected.

Per a conversation with City officials and a report on the City's drinking water system completed by Ponzer-Youngquist Consulting Engineers and Land Surveyors, dated June 2015, the city's population is stable and little to no growth is expected. The application for the CCN states the population is approximately 746 people, which consists of 335 water accounts and 335 sewer accounts.

Water and Sewer Systems

MAWC provided an engineering report completed by Flinn Engineering, LLC, dated January 19, 2021 ("Flinn report"). The purpose of the this report is to provide a review of the condition of the water and sewer systems, estimate the 2021 installation cost, and estimate the depreciated book value of the assets. Staff of the Water & Sewer Department focused on the report's review of the condition of the systems and historical data.

This report was completed as a part of the appraisal process Edward J. Batis & Associates completed for MAWC. This report uses two reports by Ponzer-Youngquist. One discusses the drinking water system and the other discusses the wastewater system. They were both completed in June 2015.

Per Flinn Engineering, "the above ground assets were observed to determine a high-level condition for this report. No additional testing was conducted beyond the visual observation of condition."

The water system includes a master meter vault, an elevated storage tank, and the water distribution system. The wastewater system includes a lagoon treatment plant, five (5) lift stations, and the sewer collection system.⁵

Description of the Water System

Ground Water Source

Since 2000, Orrick has purchased ground water from the District, which distributes chlorinated water under DNR Permit MO-1024511.⁶ The District borders the City on the north, east and south;

2 Ponzer-Youngquist Drinking Water report, dated June 2015.

3 Data Request ("DR") 0016 response.

4 DR0017.

5 Flinn Engineering report.

6 DNR's drinking water inspection reported dated February 5, 2020.

there is no known water supplier to the west.⁷ The District only distributes water and is not a sewer utility.

The water supply is obtained from the District through a master meter located at the southwest corner of Missouri State Highway 210 and State Route Z.⁸ During the site visit, city officials mentioned that before 2000, the City's water supply was a well and a 54,000 gallon water tower that was located behind the City Hall. The wells that previously provided water for the City reportedly have been abandoned.⁹ City officials stated to Staff during the site visit that the old water tower was too small and did not provide enough water. Instead of upgrading it, the City removed the old water tower and capped the wells when water service from the District began.

Orrick is a chlorinated distribution system and employs an operator with a DS II certification and distributes water under the DNR permit MO-1010607.¹⁰

The system has been able to keep up with the daily water demands. Pressures and volumes are adequate in the system with no known significant complaints with respect to those items. Based on data the City provided to MAWC, for approximately the last five years the average daily flow is 83,095 gallons per day and the peak daily flow is 322,000 gallons per day.

If the application for the CCN is approved by the Commission, MAWC stated, during the site visit, they will continue to purchase water from the District.

Master Meter Vault

The master meter vault is located below ground and is within the city limits. During Staff's inspection, city officials told Staff that both the meter vault and the actual meter belong to the City, and therefore would be an eligible asset sold to MAWC. The Flinn report states that the meter vault was in very good condition and Staff is in agreement. The meter vault was built in 2000.¹¹

The meter vault was locked but did not have any fencing around it.

Water Storage Tank

The 150,000-gallon elevated tank is a welded steel, multi-leg tank. The tank was painted in 2015.¹² According to the nameplate, the tower is 110 feet tall. The tower was surrounded by a fence with barbed wiring and was free of leaks, mildew and algae. The Flinn report states that the tank is in very good condition and based on its limited inspection from the ground, Staff is in agreement.

Water Distribution System

The Ponzer-Youngquist report was completed to assess damage to the drinking water system from a 2014 tornado. This report and the Flinn Report give the following breakdown of the water distribution system:

7 DR0017's response.

8 Ponzer-Youngquist Drinking Water report, dated June 2015.

9 Flinn Engineering report.

10 DNR's drinking water inspection reported dated February 5, 2020.

11 Valuation Report submitted in the Application for the CCN.

12 Flinn Engineering report.

Pipe Diameter and Material	Length (feet)
1-Inch Asbestos Cement	1,082
2-Inch Asbestos Cement	1,351
3-Inch Asbestos Cement	860
4-Inch Asbestos Cement	16,085
6-Inch Asbestos Cement	17,547
8-Inch PVC	2,318
TOTAL	39,243

The original water distribution system was installed in 1955.¹³ Per the application for the CCN, the City has 47 hydrants. Because the distribution system is underground, it was not observed by Flinn Engineering or Staff. The Ponzer-Youngquist report lists the water loss as 29%-59% over the available record period (approximately from 2007-2015). The report further says the existing distribution system was shown to be inadequate to handle some current and future conditions. The existing asbestos cement lines have caused problems with frequent leaks and have contributed significantly to the City's high water loss. These lines also pose a health hazard for the operators due to the potential exposure to asbestos during repairs or replacement efforts when the concrete is cut with machinery, but does not pose a threat to customers during normal operations. Available fire suppression flows within the existing system are very limited and the majority of the system has less than 250 gallons per minute available flow rates. Much of the City's system has dead-end and/or undersized lines, which can lead to reduced chlorine residuals and stale water complaints.

Based on the age of the water distribution system and its high non-revenue water loss, the Flinn report states that it is in poor condition and Staff agrees with this statement.

Orrick staff reported that there have been no boil orders in the last three years and approximately five boil advisories.¹⁴

DNR Permits and Inspections

There have not been any drinking water violations in the past five years.¹⁵ However, based on an inspection conducted January 9, 2020, and its corresponding inspection report dated February 5, 2020, DNR found the following unsatisfactory findings:

1. The water system has incomplete backflow device and test records
2. The water system failed to maintain water system records
3. The water system failed to develop a bacteriological site sampling plan meeting the requirements of Missouri Safe Drinking Water Regulation

These unsatisfactory findings have not been resolved.

¹³ Flinn Engineering report.

¹⁴ DR0012's response.

¹⁵ DR0014's response.

Proposed Improvements to the Water System

From MAWC's response to DR0001, the following improvements are proposed:

1. Replace five non-functioning hydrants and hydrant valves - at least one per year for first 5 years; total approximate cost is \$65,000;
2. Install Supervisory Control and Data Acquisition ("SCADA") system on Water Tower in first year; approximate cost is \$6,500;
3. Replace two leaking service lines per year for first five years; total estimated cost is \$30,000; and
4. Install two valves per year to provide better system isolation; total estimated cost is \$50,000.

Additional improvements mentioned during Staff's site visit included:

1. Adding SCADA system and pressure reducing valve to master meter and also bringing sampling and reading to the surface.

Description of the Sewer System

Treatment Plant

The wastewater treatment plant is a three-cell aerated lagoon system, with aeration occurring in the first cell. The design flow is 118,400 gallons per day. There is no chemical feed (such as chlorine) at the lagoon and sludge is retained in the lagoon. The plant's two aerators were replaced in 2020 and both were operating during Staff's site visit.¹⁶ The cell sizes are: 0.75, 1.5, and 3.4 acres.¹⁷

The Flinn report stated that sludge was removed in 2011. However, according to the City records it was removed in spring 2010 by Nutri-Ject Systems, Inc. The amount hauled away was 1,411,920 Gallons (235.51 Dry Tons) and it was land-applied to the land adjacent to the lagoons in accordance with U.S. Environmental Protection Agency and DNR regulations.¹⁸

The lagoon is located outside the city limits of Orrick so the City's service territory will extend beyond the city limits. There are no sewer districts or other sewer systems surrounding Orrick, and therefore, territorial disputes or issues are not a concern.

During Staff's site visit, the facility was not discharging. The lagoon had an appropriate appearance, and there was not a strong odor. The lagoon berms had deep-rooted vegetation growing, which is an indication of poor maintenance. Deep-rooted vegetation, such as trees and shrubs, are not allowed to grow on lagoon berms because the roots can create a pathway for precipitation or wastewater to leak through the berm, causing erosion and eventually berm failure. DNR requires that lagoon berms be mowed to prevent such vegetation. The lagoon berm was not protected by rip rap, which is a typical feature of lagoon berms for preventing erosion by wind-driven waves. The lagoon was surrounded by two fences. Both were locked and the inner fence had barbed wiring and the appropriate warning signs on all sides.

¹⁶ Flinn report.

¹⁷ Valuation Report.

¹⁸ DR0013.

Lift Stations

Staff inspected all five lift stations during its site visit. Lift Station #1 is located on the south side of North Front Street, at the intersection with North Bissell Street, which is located on property owned by the Norfolk Southern Railway.¹⁹ During the inspection, City officials confirmed an easement was in place to give them full access to it and a new pressure transducer was installed about one year ago at the lift station. The control panel was in good condition and has a hook up ready for an emergency generator. The electrical panel and meter are protected by a six-foot chain link fence. The wet well and pumps of the lift station are located outside of this fence enclosure, as these are below ground and protected by a locked cover. Lift station #1 was built as early as 1960 and minor modifications were done in 2008. After the 2014 tornado, the electrical controls were replaced, the piping was cleaned and replaced, and a manual transfer switch/portable generator connection was added. The Flinn report states that Lift Station #1 is in fair condition, and Staff agrees with this statement.

Lift Station # 2 is located on the east side of Wells Street, on the north side of the West Pine and Olive Streets alleyway. This property is owned by the City.²⁰ The lift station was installed in the mid to late 1960s.²¹ Per the City, the electrical panel was updated in 2016. The lift station and controls are not protected by a fence. Per the Flinn report, Lift Station #2 is in fair condition, and Staff agrees with this statement.

Lift Station #3 is located at the southern terminus of South Brasher Street, just south of its intersection with East Elm Street. Per MAWC's response to DR0020, the majority of Lift Station #3 is located on public right-of-way. A survey would be needed to determine if it is wholly on public right-of-way. This lift station and its controls are enclosed in a white PVC security fence, with a height of six feet.²² The lift station is located on an elevated concrete slab with four stairs. Per the Flinn report, Lift Station #3 was replaced in 2015 and is in excellent condition, and Staff agrees with this statement.

Lift Station #4 is located on the south side of Agnes Street, just west of its intersection with State Highway Z.²³ Per an e-mail from MAWC, the City owns the land where the lift station is located. The lift station and its electrical panel are out in the open and not protected by any fencing. The controls for this lift station are located underground. Lift Station #4 was installed in the late 1960s and is responsible for pumping all the wastewater from the town and other lift stations to the treatment plant. Its electrical panel was replaced recently as a result of the 2014 tornado. A portable generator connection and transfer switch were added in 2015.²⁴ During the site visit, City officials mentioned that new piping for the wet well was installed in 2014 or 2015. The Flinn reports states Lift Station #4 is in fair condition and Staff agrees with this statement.

Lift Station #5 is located on the north side of Sibley Road, approximately 0.15 miles west of its intersection with Gooch Street.²⁵ This lift station, and electrical panel, was installed around 2005

19 Valuation Report.

20 Valuation Report.

21 Flinn report, City officials.

22 Valuation Report.

23 Valuation Report.

24 Flinn report.

25 Valuation Report.

and was sized for a residential development that did not occur. The station currently serves approximately four homes. There are still some houses west of the lift station that are on private septic systems that could be connected to the lift station in the future.²⁶ The lift station is located between two homes on a public right-of-way gravel road. It has one new pump and city staff stated their intent to replace the other pump very soon. However, MAWC stated in an e-mail that this second pump powers up, but creates some noise, and it may be a bearing issue. The pump is operational and is not in imminent danger of failure, but it will require maintenance. The inside of this lift station is in good condition. The Flinn report states that Lift Station #5 is in excellent condition. However, because it has a pump that may have to be replaced soon, Staff believes the lift station is in very good condition.

Sewer Collection System

Per the Flinn report, the sewer collection system includes 34,200 feet of eight (8) inch vitrified clay pipe gravity sewer lines, 7,335 feet of six (6) inch cast iron force main, and 79 manholes. A 2015 report on the City's wastewater system by Ponzer-Youngquist states that there have not been any backups as a result of the lift stations not being able to handle wet weather flows, which indicates that infiltration and inflow ("I&I") is not an issue for the sewer collection system. This claim is affirmed by the Flinn report, as well. In addition, the Flinn report states the City conducted a smoke test recently without finding any significant issues, and that based on the sewer collection system's age, material, and lack of I&I issues, it is in good condition. Staff agrees with this statement.

DNR Permits and Inspections

The City's wastewater system operates under the DNR Permit MO-0022918. The permit states the design flow is 118,400 gallons per day, the actual flow is 11,087 gallons per day, and the design population equivalent is 1,184. With a population of approximately 746, per the application for the CCN, there are no capacity concerns with the lagoon.

The permit notes the facility was last inspected by DNR on July 14, 2016, and it showed the facility failed to do the following:

1. Operate and maintain the facility properly (one of two aerators were operating during DNR inspection);
2. Provide proper warning signs on all perimeter fence;
3. Remove deep-rooted vegetation from lagoon berms;
4. Upgrade facility to meet final bacteria effluent limits;
5. Comply with multiple effluent limits (Biological Oxygen Demand ("BOD"), Total Suspended Solids ("TSS"), and pH); and
6. Maintain the inner berm slopes of the lagoon to be less than a three-to-one (3:1) ratio.

During Staff's site visit, both aerators were operating and warning signs were posted on every side of the fence. The remaining unsatisfactory findings are still unresolved. As a result, this facility is being reviewed by DNR's Compliance and Enforcement Section of the Water Protection Program.

²⁶ Flinn report.

Monitoring reports of the past five years reveal consistent violations that exceed the effluent limits on the following: BOD, TSS, *E. coli* and pH. Although the facility has an *E. coli* limit in the permit, the facility has never constructed disinfection treatment to try to meet this limit.

In addition, the facility has a schedule of compliance for ammonia. The ammonia limits are effective November 1, 2020. The City has not taken any action and is unable to meet these new limits. Per DR0023 and the site visit, Orrick has not requested an extension on this deadline. If the Commission approves the CCN, MAWC will ask for an extension for both ammonia and *E. coli*, and make the necessary improvements to meet these effluent limits.

Proposed Improvements to the Sewer System

From MAWC's response to DR0001, the following improvements are proposed:

1. Install the SCADA system at each lift stations within the first year; total approximate cost is \$50,000.
2. Televis, smoke test and, if found necessary, line with cured-in-place pipe ("CIPP") approximately 5,000 linear feet ("LF") of sewer within the first five years to remedy any I&I issues found; total approximate cost is \$300,000. In addition, and per MAWC's response to DR0022, 5,000 LF represents approximately 15% of the total footage as a starting point. MAWC states this small percentage was chosen because the reported I&I issues are low. Furthermore, MAWC won't know the severity of I&I issues until it investigates the sewer lines and further states, "it is rare for a [vitrified clay pipe] system that has no lining to not have at least some areas that will benefit from some I&I improvements."
3. Install ultraviolet disinfection and effluent pump station, if needed, in year 2 to meet *E. coli* permit limits; total approximate cost is \$350,000.
4. Construct upgrades to meet effluent limits for ammonia and TSS in year 3; total approximate cost is \$250,000.
5. Install lagoon access ramps for safer entry in first three years; total approximate cost is \$40,000.

Per DR0023, specifics to control ammonia include additional mixing and aeration in the primary cell.

During the site inspection, MAWC mentioned the following additional investments they are considering:

1. Add more fencing, signs and emergency generators, and bring controls to more accessible locations, all where needed, at each lift station.
2. Kill or remove the deep-rooted vegetation in the lagoon berms and add rip rap to each lagoon cell. This would address DNR's issue of the deep-rooted vegetation in the lagoon berms and the berms not meeting the right slope of less than a three to one (3:1) ratio.
3. Possibly adding a filter before outfall to reduce TSS.
4. Use a sonic device to drive the algae in the lagoon cells deeper and improve the pH.

Rate Base

Plant-In-Service Balances

The Auditing Department reviewed information provided by MAWC in response to Staff's Data Requests and in MAWC's Application that included sale agreement documents, on-site visits, and MAWC's workpapers. Typically, Staff recommends the value of plant investment, or "rate base," by studying documentation of the cost of constructing plant, along with annual depreciation expense, and whether or not plant facilities or money was contributed by customers or land developers.

However, Staff calculated the net book value of the facilities as of January 19, 2021, using the information included in the Flinn engineering report provided as appendix H to the application, along with information obtained during a site visit to the city of Orrick on September 23, 2021, and the information included as appendices J and K to the application. Staff used the asset lists, estimated original costs, and installation dates to calculate the net book values for the water and sewer systems. The estimated net book values are \$488,464.18 for the sewer system and \$1,094,130.50 for the water system as shown below:

	Estimated Cost		Depreciation		Net Book Value
Sewer	\$ 3,293,095.00	-	\$ 2,804,630.82	=	\$ 488,464.18
Water	\$ 3,062,830.00	-	\$ 1,968,699.50	=	\$ 1,094,130.50

Staff's calculation is generally consistent with the appraised price and the agreed upon purchase price, and Staff therefore recommends a rate base value of \$1,510,000 for the combined water and sewer systems. Staff also does not object to MAWC's quantification of the breakout of that value between water and sewer, as referenced on the first page of this recommendation.

Appraisal

For this case, MAWC has chosen to exercise an alternative procedure authorized by §393.320, RSMo., to establish rate base via an appraisal process. The appraisal method outlined in this statute requires that an appraisal of the small water utility be performed by three (3) separate appraisers; one appointed by the small water utility, one appointed by the large water public utility, and a third chosen by the two appraisers so appointed. The three appraisers then perform a joint appraisal of the small water utility property and assets, coming to a common determination of the fair market value of the utility. The lesser of the purchase price or the appraised value, together with the reasonable and prudent transaction, closing, and transition costs incurred by the large water public utility, shall constitute the ratemaking rate base for the small water utility as acquired by the acquiring large water public utility. The Appraisal and the agreed upon purchase price in this case is \$1,510,000 for the water and sewer system.

Staff became aware during its review that MAWC has utilized Edward J. Batis & Associates, Colliers International, and Dinan Real Estate Advisors, Inc., as appraisers in approximately 30 acquisitions in Missouri over the past five years.²⁷ In response to Staff data request No. 9 in

²⁷ Response to Staff Data Request No. 9 in Case No. WA-2022-0049.

this case, MAWC stated there were no requests for proposals (RFPs) or requests for estimates (RFEs) during the selection process. Staff realizes there may be a limited number of appraisers capable of appraising water and wastewater systems; however, Staff is concerned about the ongoing independence of the appraisers.

The appraisal provided in the application in this case states the appraisers used the “sales comparison” approach when determining the appraised value of the systems. The sales comparison approach is defined in the appraisal as:

“The Sales Comparison Approach is an approach to value which measures the actions and activity of buyers and sellers in the market and relates those actions to the property being appraised. Also referred to as the Market Approach, the underlying premise of this approach to value is that no prudent purchaser will pay more for a property than the cost of acquiring an equally suitable parcel.”

While reviewing the appraisal provided with the application, Staff noticed that six out of the seven systems used as comparison for the sales comparison approach were acquired by MAWC or Illinois American Water Company, another subsidiary of American Water. Staff has concerns that by using these as comparisons, MAWC and the appraisers could inflate the appraised value of this system or appraised values of future potential acquisitions.

Should the Commission approve MAWC’s Application, the rate base of \$1,510,000 for the city systems must still be reflected on its utility plant account records. These records must be kept in accordance with the USOA, as required by Commission regulations 20 CSR 4240-50.030 for water utilities and 20 CSR 4240-61.020 for sewer utilities. The cost of individual plant assets must be booked into the appropriate plant account with original cost, along with information regarding the year constructed. MAWC will be tasked with making determinations, based on rate base as determined by the appraisal, of values for original cost, depreciation reserve, and CIAC amounts that can be booked in its plant records.

Depreciation

In Case No. WR-2020-0344, the Commission ordered the continued use of the depreciation rates currently ordered for all divisions of MAWC. Staff’s Engineering Analysis Department recommends the use of these rates for all plant in the city of Orrick service area. These depreciation rates are included as Attachment C.

Publicity and Customer Notice

According to information provided to Staff by MAWC,²⁸ the city of Orrick held a special meeting on Thursday, January 21, 2021. The city of Orrick held two town hall meetings on March 16 and 30, 2021, to discuss the sale to MAWC. The town hall meetings were available in person and 22 people were in attendance for the March 16th meeting, and 47 people attended the meeting on March 30th. The city of Orrick also has a frequently asked questions website page, www.yesonproposorrick.com, to answer questions concerning the MAWC proposed purchase of Orrick water and sewer. MAWC representatives were in attendance at the meetings to provide information and respond to questions. Notifications of the town hall meetings and events were sent

28 MAWC response to Staff Data Request No. 2 in Case No. SA-2022-0050.

to residents. An election was held on April 6, 2021, with 85% of votes in favor of Proposition S which asked whether the water and wastewater utility owned by the City of Orrick should be sold. There were 149 total votes cast of which 127 voted “yes” and 22 voted “no.”

Customer Experience

According to MAWC, a location and hours of operation for a business office that would serve customers in the Orrick service area has not been determined. Orrick customers will be able to call the MAWC customer service team (which is the same customer service team that takes care of all MAWC customers) toll free at 1-866-430-0820 from 7:00 a.m. to 7:00 p.m., Monday through Friday, with 24/7 coverage for emergencies.

MAWC will offer payment options including, cash, check, credit/debit cards, and electronic funds transfers (EFT). Online payments can be made using check or credit/debit cards. Customers can also make payments by cash or check in person at an approved payment location. Customers also have the ability to make payments over the phone by calling 855-748-6066.

In order to incorporate the Orrick customers into its billing and customer service systems, it will be necessary for MAWC to properly enter the appropriate customer information into its systems and apply the Commission-approved rates. MAWC has not identified any issues with integrating Orrick customers into its billing system. MAWC will also need to provide training to its call center personnel regarding rates and rules applicable to the Orrick water and sewer system customers so that customer service matters are handled accurately and in a timely manner.

Rate and Tariff Matters

According to the Application, MAWC proposes to provide water and sewer service pursuant to the rates being charged by the city at the time of closing, and to utilize the rules governing rendering of water and sewer service currently found in MAWC’s water tariff P.S.C. MO No. 13 and sewer tariff P.S.C. MO No. 26, respectively, until such time as the rates and rules are modified according to law. However, failing to consolidate rates with a nearby service area would have Orrick customers continuing to pay significantly higher rates than MAWC’s other customers for similar service. For example, an Orrick customer using 5,000 gallons currently pays \$84.48 for water and \$45.78 for sewer, for a total monthly bill of \$130.26. On MAWC rates, that same customer would pay \$40.23 for water and \$44.03 for sewer, for a total monthly bill of \$84.26. This is a monthly savings of \$46.00 and an annual savings of \$552.00. Therefore, Staff recommends rates for water be set the same as Rate A for ‘All Missouri Service Areas Outside of St. Louis County and Outside of Mexico,’ found on 4th Revised Sheet No. RT 1.2, in PSC MO No. 13. Staff recommends sewer rates be set equivalent to MAWC’s rates found on 5th Revised Sheet No. RT 3.1, in PSC MO No. 26, which is applicable to several systems and is closest to Orrick geographically.

City of Orrick current rates are as follows:

	Customer Charge (includes first 1,000 gal)	Commodity Charge
Water	\$43.68	\$10.20
Sewer	\$31.38	\$3.60

MAWC's current rates in effect in the area are as follows:

	Customer Charge (5/8" meter)	Commodity Charge
Water	\$9.00	\$6.2469
Sewer	\$44.03	N/A

For example, a customer using 5,000 gallons currently pays \$84.48 for water and \$45.78 for sewer, for a total monthly bill of \$130.26. On MAWC rates, that same customer would pay \$40.23 for water and \$44.03 for sewer, for a total monthly bill of \$84.26. This is a monthly savings of \$46.00 and an annual savings of \$552.00.

Technical, Managerial, and Financial Capacity and Tartan Energy Criteria

Staff utilizes the concepts of Technical, Managerial, and Financial capabilities (TMF) in studying applications involving existing water and/or sewer systems. Staff has reviewed and stated its position on TMF regarding each of MAWC's affiliates in previous CCN and transfer of assets cases before the Commission. Staff's position on MAWC's ability to meet TMF criteria remains positive regarding those affiliates, and similarly takes the position that MAWC has adequate TMF capability in this case. It is Staff's position that MAWC has the ability to secure funding, to oversee construction of any necessary upgrades or repairs, and the ability to successfully manage operations of the City utility systems.

When considering a request for a new CCN, the Commission applies criteria originally developed in a CCN case filed by the Tartan Energy Company and referred to now as the "Tartan criteria." The Tartan criteria contemplate 1) need for service; 2) the utility's qualifications; 3) the utility's financial ability; 4) the economic feasibility of the proposal; and, 5) promotion of the public interest. Similar to the TMF capabilities, in previous CCN cases, Staff investigated these criteria and that investigation relates to this proposed acquisition. The results of Staff's investigation are outlined below:

(1) Need for Service

There is both a current and future need for water and sewer service. The existing customer base in the City has both a desire and need for service. In addition, there is a need for the necessary steps to be taken to update the City's water and sewer systems, and to ensure the provision of safe and adequate service. Further, the City has made the decision to exit the water and sewer utility business, sell the existing system to MAWC, and rely upon MAWC to properly operate and maintain the existing water and sewer system in order that customers will continue to have safe and adequate service.

Additionally, as previously mentioned, while the City is unable to meet *E. coli* and ammonia standards, if approved for the CCNs, MAWC plans to request an extension for both ammonia and *E. coli*, and make the necessary improvements to meet these effluent limits.

(2) Applicant's Qualifications

MAWC is an existing water and sewer corporation and public utility subject to the jurisdiction of the Commission. MAWC is currently providing water service to approximately 470,000 customers and sewer service to more than 15,000 customers in several service areas throughout Missouri. MAWC is a subsidiary of American Water Works Company, Inc., and is affiliated with other American Water companies that undertake some of the tasks associated with utility service, such as customer billing, and technical resources.

(3) Applicant's Financial Ability

MAWC anticipates no need for external financing to complete this acquisition, and has demonstrated over many years that it has adequate resources to operate utility systems it owns, to acquire new systems, to undertake construction of new systems and expansions of existing systems, to plan and undertake scheduled capital improvements, and timely respond and resolve emergency issues when such situations arise.

(4) Feasibility of the Proposal

MAWC's purchase of the system, utilizing the previously approved rates noted above, is financially feasible. MAWC can draw upon the significant resources of its parent company, should any shortfall arise prior to the next rate case.

(5) Promotion of the Public Interest

As the Commission determined in GA-94-127, positive findings with respect to the other four standards above will in most instances support a finding that an application for a CCN will promote the public interest. Additionally, due to involvement by the public of the City in voting to approve the sale of the City's system, the involvement of the City of Orrick's elected officials in the negotiation with MAWC, and subsequent Purchase Agreement, and for the reasons outlined previously in this memorandum, Staff asserts that MAWC's request for a CCN and related acquisition of the City water and sewer assets promotes the public interest.

Staff's conclusion is that the points regarding TMF capacities and the Tartan Energy criteria are all met, for this case.

OTHER ISSUES

The City, as an unregulated water and sewer operation, has no obligations due to the Commission, and has no pending actions before the Commission.

MAWC is a corporation that is in "good standing" with the Missouri Secretary of State.

MAWC is current with annual report filings with the Commission through calendar year 2020, as documented on the Commission's Electronic Filing and Information System (EFIS).

MAWC is current on its annual assessment quarterly payments through the second quarter of fiscal year 2022.

MAWC has other pending cases before the Commission, as follows:

- SA-2021-0017 (Application for Certificate)
- WA-2021-0376 (Application for Certificate)
- WA-2021-0391 (Application for Certificate)
- WE-2021-0390 (Variance Request)
- WC-2020-0407 (Complaint)
- WC-2021-0075 (Complaint)
- WC-2021-0129 (Complaint)
- WC-2021-0227 (Complaint)
- WF-2022-0066 (Finance)
- WO-2020-0410 (ISRS)
- WO-2020-0410 (ISRS)
- WO-2021-0428 (WSIRA)
- WU-2020-0417 (Accounting Authority Order)
- WW-2019-0242 (Working Group)

These above-noted pending cases will have no impact upon this proposed case requesting a new CCN for water and sewer service in this requested area, nor will approval of the CCN impact the above-noted pending cases before the Commission.

STAFF RECOMMENDATION

Staff recommends the Commission find that MAWC has complied with the requirements of §393.320, RSMo., and approve MAWC's request for CCNs subject to the following conditions and actions:

1. Grant MAWC a CCN to provide water and sewer service in the proposed City service areas, as modified as outlined herein;
2. Approve existing MAWC water Rate A for 'All Missouri Service Areas Outside of St. Louis County and Outside of Mexico,' found on 4th Revised Sheet No. RT 1.2, in PSC MO No. 13;
3. Approve existing MAWC sewer rates found on 5th Revised Sheet No. RT 3.1, in PSC MO No. 26;

4. Require MAWC to submit tariff sheets, to become effective before closing on the assets, to include a service area map, service area written description, rates and charges to be included in its EFIS tariffs P.S.C. MO No. 13 and 26, applicable to water and sewer service, respectively;
5. Require MAWC to notify the Commission of closing on the assets within five (5) days after such closing;
6. If closing on the water and sewer system assets does not take place within thirty (30) days following the effective date of the Commission's order approving such, require MAWC to submit a status report within five (5) days after this thirty (30) day period regarding the status of closing, and additional status reports within five (5) days after each additional thirty (30) day period, until closing takes place, or until MAWC determines that the transfer of the assets will not occur;
7. If MAWC determines that a transfer of the assets will not occur, require MAWC to notify the Commission of such no later than the date of the next status report, as addressed above, after such determination is made, and require MAWC to submit tariff sheets as appropriate that would cancel service area maps and descriptions applicable to the City service area in its water and sewer tariffs, and rate and charges sheets applicable to customers in the City service area in both the water and sewer tariffs;
8. Require MAWC to develop a plan to book all of the City plant assets, with the concurrence of Staff and/or with the assistance of Staff, for original cost, depreciation reserve, and contributions (CIAC) for appropriate plant accounts, such that current rate base is broken down as \$840,000 for the water system, and \$670,000 for the sewer system, along with reasonable and prudent transaction, closing, and transition costs. This plan should be submitted to Staff for review within 60 days after closing on the assets;
9. Require MAWC to keep its financial books and records for plant-in-service and operating expenses in accordance with the NARUC Uniform System of Accounts;
10. Adopt for MAWC water and sewer assets the depreciation rates ordered for MAWC in Case No. WR-2020-0344;
11. Except as required by §393.320, RSMo., make no finding that would preclude the Commission from considering the ratemaking treatment to be afforded any matters pertaining to the granting of the CCN to MAWC, including expenditures related to the certificated service area, in any later proceeding;
12. Require MAWC to provide training to its call center personnel regarding rates and rules applicable to the Orrick water and sewer system customers;
13. Require MAWC to include the Orrick water and sewer system customers in its established monthly reporting to the CXD Staff on customer service and billing issues, on an ongoing basis, after closing on the assets;

14. Require MAWC to distribute to the Orrick water and sewer system customers an informational brochure detailing the rights and responsibilities of the utility and its customers regarding its water service, consistent with the requirements of Commission Rule 20 CSR 4240-13, within thirty (30) days of closing on the assets;
15. Require MAWC to provide to the CXD Staff an example of its actual communication with the Orrick water and sewer system customers regarding its acquisition and operations of the water system assets, and how customers may reach MAWC, within ten (10) days after closing on the assets;
16. Require MAWC to provide to the CXD Staff a sample of ten (10) billing statements from the first month's billing within thirty (30) days after closing on the assets; and,
17. Require MAWC to communicate with the City customers concerning the billing date, delinquent date, and billing changes that will occur once the acquisition is approved, and provide a copy of this communication to CXD Staff.
18. Require MAWC to file notice in this case outlining completion of the above recommended training, customer communications, and notifications within ten (10) days after such communications and notifications are complete.

ATTACHMENTS:

- A. Map of City of Orrick Service Area.
- B. Legal Description.
- C. Depreciation Schedule.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water)
Company for a Certificate of Convenience and)
Necessity Authorizing it to Install, Own,)
Acquire, Construct, Operate, Control, Manage)
and Maintain a Water System and Sewer System)
in and around the City of Orrick, Missouri)

Case No. WA-2022-0049

AFFIDAVIT OF KERI ROTH

STATE OF MISSOURI)
)
) ss.
COUNTY OF COLE)

COMES NOW Keri Roth, and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff Recommendation*; and that the same is true and correct according to her best knowledge and belief, under penalty of perjury.

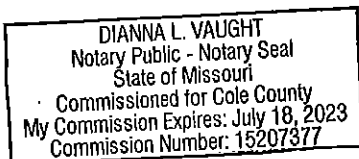
Further the Affiant sayeth not.

Keri Roth
Keri Roth

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 15th day of November, 2021.

Dianna L. Vaughn
Notary Public



BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water)
Company for a Certificate of Convenience and)
Necessity Authorizing it to Install, Own,)
Acquire, Construct, Operate, Control, Manage)
and Maintain a Water System and Sewer System)
in and around the City of Orrick, Missouri)

Case No. WA-2022-0049

AFFIDAVIT OF DARONN A. WILLIAMS

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW Daronn A. Williams, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Recommendation*; and that the same is true and correct according to his best knowledge and belief, under penalty of perjury.

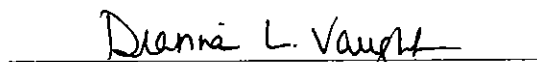
Further the Affiant sayeth not.



Daronn A. Williams

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 15th day of November, 2021.



Notary Public

DIANNA L. VAUGHT Notary Public - Notary Seal State of Missouri Commissioned for Cole County My Commission Expires: July 18, 2023 Commission Number: 15207377

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water)
Company for a Certificate of Convenience and)
Necessity Authorizing it to Install, Own,)
Acquire, Construct, Operate, Control, Manage)
and Maintain a Water System and Sewer System)
in and around the City of Orrick, Missouri)

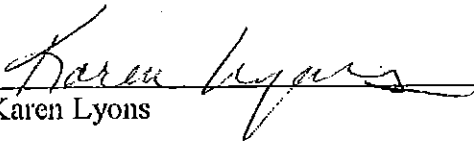
Case No. WA-2022-0049

AFFIDAVIT OF KAREN LYONS

STATE OF MISSOURI)
) ss.
COUNTY OF JACKSON)

COMES NOW Karen Lyons, and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff Recommendation*; and that the same is true and correct according to her best knowledge and belief, under penalty of perjury.

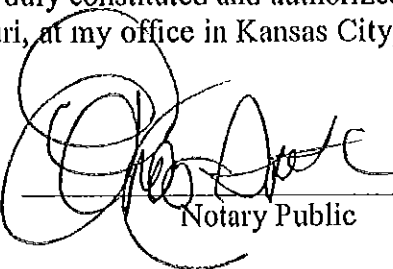
Further the Affiant sayeth not.



Karen Lyons

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Jackson, State of Missouri, at my office in Kansas City, on this 15th day of November, 2021.



Notary Public



EBONEY JACKSON-SPOTWOOD
My Commission Expires
April 8, 2023
Clay County
Commission #19865780

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water)
Company for a Certificate of Convenience and)
Necessity Authorizing it to Install, Own,)
Acquire, Construct, Operate, Control, Manage)
and Maintain a Water System and Sewer System)
in and around the City of Orrick, Missouri)

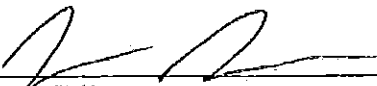
Case No. WA-2022-0049

AFFIDAVIT OF JEREMY JULIETTE

STATE OF MISSOURI)
) ss.
COUNTY OF JACKSON)

COMES NOW Jeremy Juliette, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Recommendation*; and that the same is true and correct according to his best knowledge and belief, under penalty of perjury.

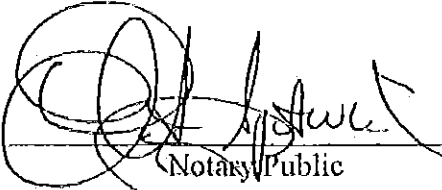
Further the Affiant sayeth not.



Jeremy Juliette

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Jackson, State of Missouri, at my office in Kansas City, on this 15th day of November, 2021.



Notary Public



EBONEY JACKSON-SHOTWOOD
My Commission Expires
April 8, 2023
Clay County
Commission #19865798

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water)
Company for a Certificate of Convenience and)
Necessity Authorizing it to Install, Own,)
Acquire, Construct, Operate, Control, Manage)
and Maintain a Water System and Sewer System)
in and around the City of Orrick, Missouri)

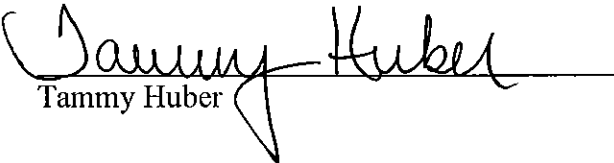
Case No. WA-2022-0049

AFFIDAVIT OF TAMMY HUBER

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW Tammy Huber, and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff Recommendation*; and that the same is true and correct according to her best knowledge and belief, under penalty of perjury.

Further the Affiant sayeth not.

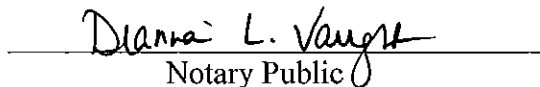


Tammy Huber

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 16th day of November, 2021.

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2023
Commission Number: 15207377



Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water)
Company for a Certificate of Convenience and)
Necessity Authorizing it to Install, Own,)
Acquire, Construct, Operate, Control, Manage)
and Maintain a Water System and Sewer System)
in and around the City of Orrick, Missouri)

Case No. WA-2022-0049

AFFIDAVIT OF SCOTT J. GLASGOW

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW Scott J. Glasgow, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Recommendation*; and that the same is true and correct according to his best knowledge and belief, under penalty of perjury.

Further the Affiant sayeth not.

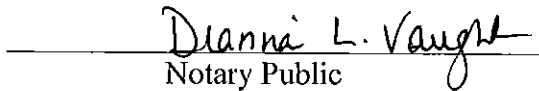


Scott J. Glasgow

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 16th day of November, 2021.

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2023
Commission Number: 15207377



Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water)
Company for a Certificate of Convenience and)
Necessity Authorizing it to Install, Own,)
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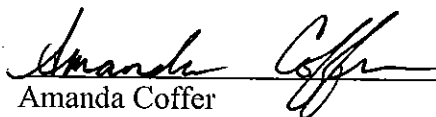
Case No. WA-2022-0049

AFFIDAVIT OF AMANDA COFFER

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

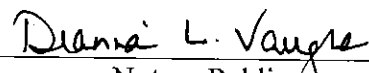
COMES NOW Amanda Coffe, and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff Recommendation*; and that the same is true and correct according to her best knowledge and belief, under penalty of perjury.

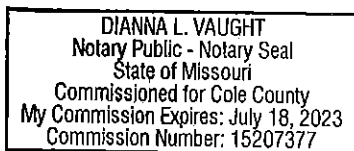
Further the Affiant sayeth not.

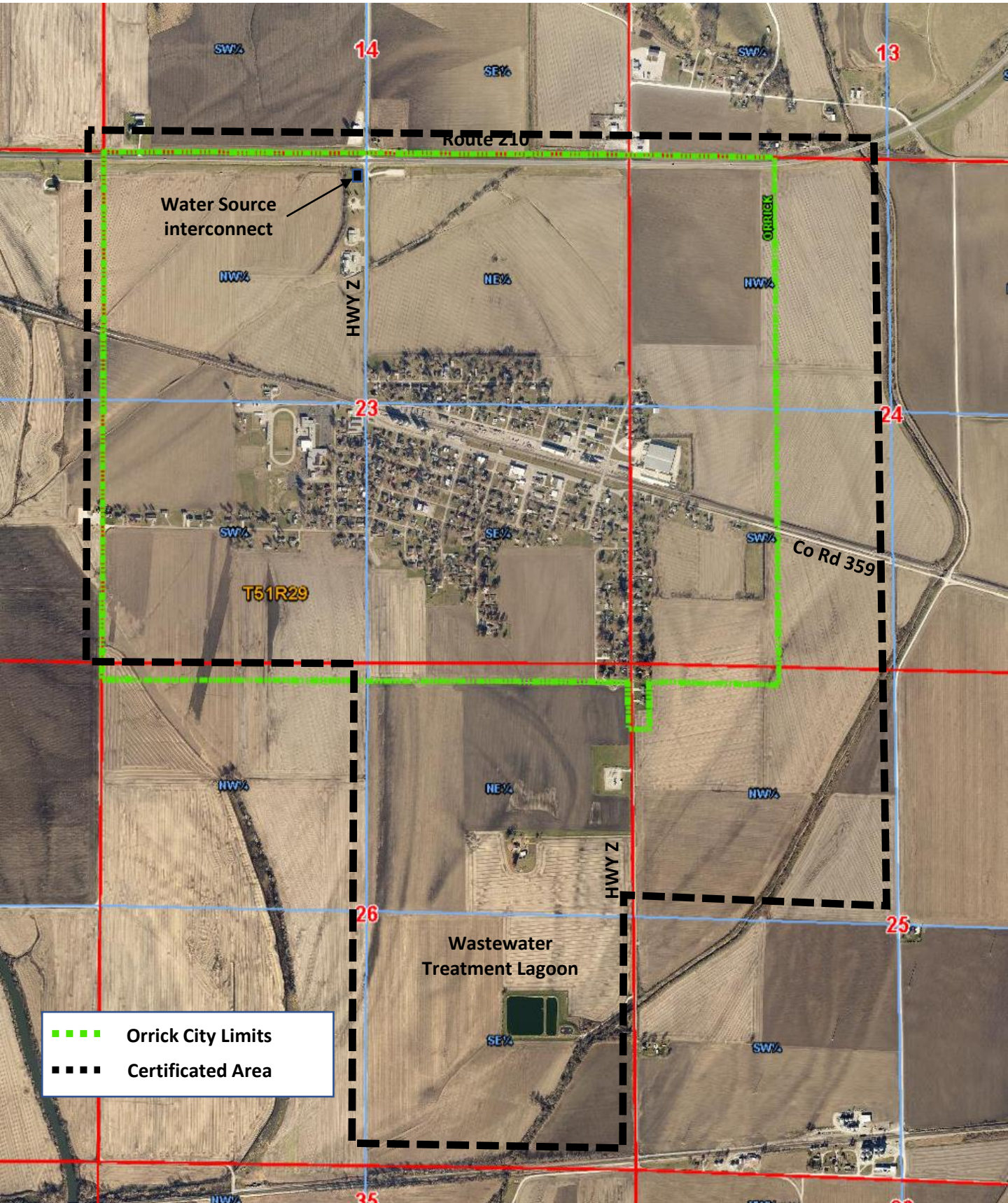

Amanda Coffe

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 16th day of November, 2021.


Notary Public





- ■ ■ Orrick City Limits
- ■ ■ Certificated Area

APPENDIX A

Legal Description

A tract of land in part of Section 23, 24, 25 and 26 Township 51 North, Range 29 West, City of Orrick, Ray County, Missouri and being more particularly described as follows:

BEGINNING at the Northwest corner of **Section 23, Township 51 North, Range 29 West**; thence East, along the North line of said Section to the Northeast corner thereof, being also the Northwest corner of **Section 24, Township 51 North, Range 29 West**; thence continuing East, along the North line of said **Section 24** to the Northeast corner of the Northwest Quarter of said **Section 24**; thence South, along the East line of said Quarter Section to the Southeast corner thereof, being the Northeast corner of the Southwest Quarter of said **Section 24**; thence continuing South, along the East line of said Quarter Section to the Southeast corner thereof, being also the Northeast corner of the Northwest Quarter of said **Section 25, Township 51 North, Range 29 West**; thence continuing South, along the East line of said Quarter Section to the Southeast corner thereof, being the Southeast corner of the Northwest Quarter of **Section 25**; thence West, along the South line of said Quarter Section to the Southwest corner thereof, being also the Northeast corner of the Southeast Quarter of **Section 26, Township 51 North, Range 29 West**; thence South, along the East line of said Quarter Section to the Southeast corner thereof; thence West, along the South line of said Quarter Section to the Southwest corner thereof, thence North, along the West line of said Quarter Section to the Northwest corner thereof, being also the Southwest corner of the Northeast Quarter of said **Section 26**; thence continuing North, along said West line to its intersection with the South line of the City limits of Orrick; thence West, along the South line of said City limits to its intersection with the West line of said Section 26; thence North, along said West line to the Northwest corner thereof, being also the Southwest corner of the Southwest Quarter of **Section 23, Township 51, Range 29 West**; thence North, along the West line of said Quarter Section to the Northwest corner thereof, being also the Southwest corner of the Northwest Quarter of said **Section 23**; thence continuing North, along the West line of said Quarter Section to the Northwest corner thereof and the POINT OF BEGINNING, containing 1,507 Acres, more or less.

Wastewater

Description	NARUC	In Service Year	HW Category	Basis Year	QTY	Unit	Basis Year Unit Cost	Estimated Cost Basis Year
Wastewater Treatment Lagoons								
Wastewater Treatment Lagoons	371	1965	WW - T&DP - Structures and Improvements	2021	1	EA	\$ 155,000.00	\$ 155,000.00
Aerators	372	2020	WW - T&DP - Pumps/Blowers/Generators/etc.	2021	2	EA	\$ 3,500.00	\$ 7,000.00
Fence around Lagoon Site	390	1965	WW - Structure & Improve - General	2021	2563	LF	\$ 10.00	\$ 25,630.00
Lift Station Structure	361	1965	Pumping Plant - Structures & Improv.	2021	1	EA	\$ 75,000.00	\$ 75,000.00
Electric Conrol Panel	363	2015	Pumping Plant - Elec. Pumping Equip.	2021	1	EA	\$ 10,000.00	\$ 10,000.00
Lift Station Structure	361	1965	Pumping Plant - Structures & Improv.	2021	1	EA	\$ 75,000.00	\$ 75,000.00
Electric Conrol Panel	363	2015	Pumping Plant - Elec. Pumping Equip.	2021	1	EA	\$ 10,000.00	\$ 10,000.00
Lift Station Structure	361	2015	Pumping Plant - Structures & Improv.	2021	1	EA	\$ 129,690.00	\$ 129,690.00
5HP Submersible Pump #1	363	2015	Pumping Plant - Elec. Pumping Equip.	2021	1	EA	\$ 5,000.00	\$ 5,000.00
5HP Submersible Pump #2	363	2015	Pumping Plant - Elec. Pumping Equip.	2021	1	EA	\$ 5,000.00	\$ 5,000.00
Electrical Panel	363	2015	Pumping Plant - Elec. Pumping Equip.	2021	1	EA	\$ 10,000.00	\$ 10,000.00
Fence	361	2015	Pumping Plant - Structures & Improv.	2021	80	LF	\$ 10.00	\$ 800.00
4" Check Valve	365	2015	Pumping Plant - Elec. Pumping Equip.	2021	2	EA	\$ 200.00	\$ 400.00
Lift Station Structure	361	1965	Pumping Plant - Structures & Improv.	2021	1	EA	\$ 100,000.00	\$ 100,000.00
Manual Transfer Switch	363	2015	Pumping Plant - Structures & Improv.	2021	1	EA	\$ 10,000.00	\$ 10,000.00
Lift Station Structure	361	2005	Pumping Plant - Structures & Improv.	2021	1	EA	\$ 75,000.00	\$ 75,000.00
Manual Transfer Switch	363	2015	Pumping Plant - Elec. Pumping Equip.	2021	1	EA	\$ 10,000.00	\$ 10,000.00
Gravity Sewer 8" VCP	352.2	1965	Collection Plant - Collection Sewer (Gravity)	2021	34,200	LF	\$55	\$ 1,881,000.00
Force Main 6" Cast Iron	352.1	1965	Collection Plant - Collection Sewer (Force)	2021	7,335	LF	\$45	\$ 330,075.00
Service Laterals 4" VCP	353	1965	Collection Plant - Services to customers	2021	340	EA	\$300	\$ 102,000.00
Manholes	351	1965	Collection Plant - Structures and Improvements	2021	79	EA	\$3,500	\$ 276,500.00

Depreciation Rate	Years in Service	Theoretical Depreciation Reserve	Net Book Value
1.43%	56	\$ 124,124.00	\$ 30,876.00
3.97%	1	\$ 277.90	\$ 6,722.10
3.11%	56	\$ 25,630.00	\$ -
2.17%	56	\$ 75,000.00	\$ -
4.31%	6	\$ 2,586.00	\$ 7,414.00
2.17%	56	\$ 75,000.00	\$ -
4.31%	6	\$ 2,586.00	\$ 7,414.00
2.17%	6	\$ 16,885.64	\$ 112,804.36
4.31%	6	\$ 1,293.00	\$ 3,707.00
4.31%	6	\$ 1,293.00	\$ 3,707.00
4.31%	6	\$ 2,586.00	\$ 7,414.00
2.17%	6	\$ 104.16	\$ 695.84
4.31%	6	\$ 103.44	\$ 296.56
2.17%	56	\$ 100,000.00	\$ -
4.31%	6	\$ 2,586.00	\$ 7,414.00
2.17%	16	\$ 26,040.00	\$ 48,960.00
4.31%	6	\$ 2,586.00	\$ 7,414.00
1.58%	56	\$ 1,664,308.80	\$ 216,691.20
1.64%	56	\$ 303,140.88	\$ 26,934.12
2.87%	56	\$ 102,000.00	\$ -
2.03%	56	\$ 276,500.00	\$ -
		\$ 2,804,630.82	\$ 488,464.18

90,300.00

Water

Description	NARUC	In Service Year	HW Category	Basis		Unit	Basis Year Unit Cost		Estimated Cost	
				Year	QTY		Basis Year	Unit Cost	Basis Year	Estimated Cost
1" Galvanize	343	1955	DP - Mains - Average All Types	2021	1,082	LF	\$30	\$		32,460.00
2" Galvanize	343	1955	DP - Mains - Average All Types	2021	1,351	LF	\$30	\$		40,530.00
3" Cast Iron	343	1955	DP - Mains - Cast Iron Mains	2021	860	LF	\$30	\$		25,800.00
4" Asbestos Cement	343	1955	DP - Mains - Cement Asbestos Mains	2021	16,085	LF	\$45	\$		723,825.00
6" Asbestos Cement	343	1955	DP - Mains - Cement Asbestos Mains	2021	17,547	LF	\$50	\$		877,350.00
8" PVC	343	2000	DP - Mains - PVC Mains	2021	2,318	LF	\$55	\$		127,490.00
5/8" x 3/4" Mueller SSM	346	2020	DP - Meters	2021	340	EA	\$1,500	\$		510,000.00
Elevated Tank	342	2000	TP - Elevated Steel Tanks	2021	1	EA	\$479,875	\$		479,875.00
Metering Station	332	2000	WTP - Small Treatment Plant Equip.	2021	1	EA	\$103,000	\$		103,000.00
Fence at Elevated Tank	331	2000	WTP - Structures	2021	250	LF	\$10	\$		2,500.00
Fire Hydrants	348	1955	DP - Hydrants	2021	40	EA	\$3,500	\$		140,000.00

Depreciation Rate	Years in Service	Theoretical Depreciation Reserve	Net Book Value
1.39%	66	\$ 29,778.80	\$ 2,681.20
1.39%	66	\$ 37,182.22	\$ 3,347.78
1.39%	66	\$ 23,668.92	\$ 2,131.08
1.39%	66	\$ 664,037.06	\$ 59,787.94
1.39%	66	\$ 804,880.89	\$ 72,469.11
1.39%	21	\$ 37,214.33	\$ 90,275.67
2.40%	1	\$ 12,240.00	\$ 497,760.00
1.70%	21	\$ 171,315.38	\$ 308,559.63
2.18%	21	\$ 47,153.40	\$ 55,846.60
2.34%	21	\$ 1,228.50	\$ 1,271.50
1.85%	66	\$ 140,000.00	\$ -
		\$ 1,968,699.50	\$ 1,094,130.50

	A		D
Intangible Plant		Intangible Plant	
Organization	301	Organization	301
Franchises and Consents	302	Franchises and Consents	302
Miscellaneous Intangible Plant	303	Miscellaneous Intangible Plant	303
Collection Plant		Land and Structures	
Land and Land Rights	350	Land and Land Rights	310
Structures and Improvements	351	Structures and Improvements	311
Collection Sewers	352	Collection Plant	
Collection Sewers - Force	352.1	Collection Sewers	352
Collection Sewers - Gravity	352.2	Collection Sewers-Force	352.1
Special Collecting Structures	352.3	Collection Sewers-Gravity	352.2
Services to Customers	353	Other Collecting Plant Facilities	353
Flow Measuring Devices	354	Services to Customers	354
Flow Measuring Installations	355	Flow Measuring Devices	355
Other Collection Plant Facilities	356	Pumping Plant	
Pumping Plant		Receiving Wells and Pump Pits	362
Land and Land Rights	360	Pumping Equipment	363
Structures and Improvements	361	Treatment and Disposal Plant	
Receiving Wells	362	Oxidation Lagoon	372
Electric Pumping Equipment	363	Treatment and Disposal Equipment	373
Diesel Pumping Equipment	364	Plant Sewers	374
Other Pumping Equipment	365	Outfall Sewer Lines	375
Treatment and Disposal Plant		Other Treatment and Disposal Equipment	376
Land and Land Rights	370	General Plant	
Oxidation Lagoon Land	370.1	Office Furniture and Equipment	391
Other Land and Land Rights	370.2	Transportation Equipment	392
Structures and Improvements	371	Other General Equipment	393
Treatment and Disposal Equipment	372		
Plant Sewers	373		
Outfall Sewer Lines	374		
Other Treatment and Disposal Plant Equipm	375		
General Plant			
Land and Land Rights	389		
Structures and Improvements	390		
Office Furniture and Equipment	391		
Transportation Equipment	392		
Stores Equipment	393		
Tools, Shop and Garage Equipment	394		
Laboratory Equipment	395		
Power Operated Equipment	396		
Communication Equipment	397		
Other Tangible Property	399		

PREVIOUSLY APPROVED DEPRECIATION RATES

SEWER

SOURCE:

Account Number	Account Description	Depreciation Rate	Average Service Life (Years)	Net Salvage
	Collection Plant			
351	Structures and Improvements	2.03%	50.0%	-5.0%
352.1	Collection Sewers (Force)	1.64%	60.0%	-10.0%
352.2	Collection Sewers (Gravity)	1.58%	70.0%	-20.0%
353	Services to Customers	2.87%	55.0%	-40.0%
354	Flow Measuring Devices	3.38%	25.0%	0.0%
356	Other Collection Equipment	3.15%	50.0%	0.0%
357	Communication Equipment	6.67%	15.0%	0.0%
	Pumping Plant			
361	Structures and Improvements	2.17%	45.0%	0.0%
362	Receiving Wells	2.87%	30.0%	0.0%
363	Electric Pumping Equipment (Includes Generators)	4.31%	15.0%	-5.0%
364	Diesel Pumping Equipment	4.31%	15.0%	-5.0%
365	Other Pumping Equipment	4.31%	15.0%	-5.0%
	Treatment and Disposal Plant			
371	Structures and Improvements	1.43%	60.0%	-5.0%
372	Treatment and Disposal Equipment (Includes Pumps, Blowers, Generators)	3.97%	30.0%	-20.0%
373	Plant Sewers	1.60%	50.0%	0.0%
374	Outfall Sewer Lines	3.04%	35.0%	0.0%
	General Plant			
390	Structures and Improvements (General)	3.11%	35.0%	-5.0%
390.9	Structures and Improvements (Leasehold)	5.00%	20.0%	0.0%
391	Office Furniture	5.00%	20.0%	0.0%

PREVIOUSLY APPROVED DEPRECIATION RATES

SEWER

SOURCE:

Account Number	Account Description	Depreciation Rate	Average Service Life (Years)	Net Salvage
	Source of Supply			
311	Structures and Improvements	1.97%	60	-25.0%
312	Collecting and Impoundment Reservoirs	0.35%	85	0.0%
313	Lake, River and other Intakes	3.57%	70	-10.0%
314	Wells and Springs	2.52%	55	-5.0%
315	Infiltration Galleries and Tunnels	1.77%	60	0.0%
316	Supply Mains	1.45%	80	-25.0%
317	Miscellaneous Source of Supply	4.97%	25	0.0%
	Pumping Plant			
321	Structures and Improvements	3.95%	75	-15.0%
322	Boiler Plant Equipment	3.05%	37	-5.0%
323	Power Generation Equipment	3.05%	37	-5.0%
324	Steam Pumping Equipment	1.89%	47	-10.0%
325	Electric Pumping Equipment	1.89%	47	-10.0%
326	Diesel Pumping Equipment	1.89%	47	-10.0%
327	Hydraulic Pumping Equipment	1.89%	47	-10.0%
328	Other Pumping Equipment	1.89%	47	-10.0%
	Water Treatment Plant			
331	Structures and Improvements	2.34%	80	-15.0%
332	Water Treatment Equipment	2.18%	48	-20.0%
333	Miscellaneous Water Treat, Other	3.33%	30	0.0%
	Transmission and Distribution			
341	Structures and Improvements	1.49%	55	-20.0%