

**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,) **File No. WA-2023-0071**
Manage and Maintain a Water System and)
Sewer System in and around the city of)
Smithton, 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,) **File No. SA-2023-0072**
Manage and Maintain a Water System and)
Sewer System in and around the city of)
Smithton, Missouri)

**CORRECTED ORDER DIRECTING NOTICE, SETTING
DEADLINES FOR INTERVENTION REQUESTS,
AND DIRECTING STAFF RECOMMENDATION**

Issue Date: August 15, 2022

Effective Date: August 15, 2022

On August 12, 2022, Missouri-American Water Company (MAWC) filed applications in the above-captioned matters seeking authority for MAWC to acquire and operate the assets of a water system and a sewer system in and around the City of Smithton, located in Pettis County, Missouri. MAWC has also requested a waiver of the 60-day notice requirements of 20 CSR 4240-4.017.

The City of Smithton has approved the sale of its existing water and sewer systems via Ordinance No. 691, which submitted the question to an election. The election was held on April 6, 2021, and a majority of votes cast were in favor of the sale. The stated amount that MAWC will pay is \$565,001.00. MAWC proposes to adopt the water rates

currently charged by MAWC in its Warrensburg Service Area and sewer rates currently charged in its Pettis County Service Area.

MAWC also seeks to establish the ratemaking rate base associated with the Smithton water and sewer assets pursuant to Section 393.320, RSMo, which permits a large water public utility to establish the ratemaking rate base of a small water utility during an acquisition.

The Commission will direct that notice of the application be given to the County Commission of Pettis County, to local newspapers, and to members of the General Assembly representing residents of Pettis County. The Commission will set a deadline for interested parties to intervene. The Commission will also direct the Staff of the Commission (Staff) to file a recommendation with regard to the application.

THE COMMISSION ORDERS THAT:

1. The Commission's Data Center shall provide a copy of this order and the applications to the County Commission of Pettis County, Missouri, and to the General Counsel for the Missouri Department of Natural Resources.
2. The Commission's Public Policy and Outreach Division shall make this order available to the members of the General Assembly representing Pettis County, Missouri, and to the news media serving Pettis County, Missouri.
3. Any person wishing to intervene in these matters shall file an application to intervene no later than September 12, 2022. The application shall be filed in the Commission's Electric Filing and Information System (EFIS) or with the Secretary of the Commission. Comments on the application can also be made in EFIS.

4. Staff shall file a recommendation on the applications or a pleading identifying a date by which it can file a recommendation on the applications no later than September 19, 2022.

5. This order shall be effective when issued.



BY THE COMMISSION

A handwritten signature in black ink that reads "Morris L. Woodruff". The signature is written in a cursive, flowing style.

Morris L. Woodruff
Secretary

Ross Keeling, Regulatory Law Judge,
By delegation of authority pursuant
To Section 386.240, RSMo 2016.

Dated at Jefferson City, Missouri,
On the 15th day of August, 2022.

**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,) File No. WA-2022-
Acquire, Construct, Operate, Control,) File No. SA-2022-
Manage and Maintain a Water System and)
Sewer System in and around the City of)
Smithton, Missouri.)

**APPLICATION AND
MOTION FOR WAIVER**

COMES NOW Missouri-American Water Company ("MAWC") pursuant to Sections 393.140, and 393.170 RSMo, and 20 CSR 4240-2.060, 20 CSR 4240-2.080 (14) 20 CSR 4240-3.305, 20 CSR 20 4240-3.600 and 20 CSR 4240-4.017(1)(D), and for its Application and Motion for Waiver, states as follows to the Missouri Public Service Commission:

BACKGROUND INFORMATION

1. This Application is being filed by MAWC to obtain a Certificate of Convenience and Necessity ("CCN") to install, own, acquire, construct, operate, control, manage and maintain a water system and sewer system in and around the City of Smithton, Missouri ("Smithton"), located in Pettis County.
2. MAWC is a Missouri corporation, active and in good standing with the Missouri Secretary of State, with its principal office and place of business at 727 Craig Road, St. Louis, Missouri 63141. Pursuant to Commission regulation 20 CSR 4240-2.060(1)(G), MAWC incorporates by reference the certified copies of its articles of incorporation and its certificate of good standing previously filed in File No. WO -2020-0190.
3. MAWC currently provides water service to approximately 475,000 customers and sewer service to approximately 18,000 customers in several counties throughout the state

of Missouri. MAWC is a "water corporation," a "sewer corporation" and a "public utility" as those terms are defined in Section 386.020 and is subject to the jurisdiction and supervision of the Commission as provided by law. MAWC has no overdue Commission annual reports or assessment fees. There is no pending action or final unsatisfied judgment or decision against MAWC from any state or federal agency or court which involves customer service or rates, which action, judgment, or decision has occurred within three years of the date of this Application.

4. Communications respecting this Application should be addressed to the undersigned counsel and:

Missouri-American Water Company:

Ms. Mary Beth Hercules

Paralegal

Missouri-American Water Company

727 Craig Road

Creve Coeur, Missouri 63141

Direct Dial 314-996-2343

marybeth.hercules@amwater.com

CERTIFICATE OF CONVENIENCE AND NECESSITY

5. MAWC proposes to purchase all the water and sewer assets of the currently unregulated system of Smithton, and requests permission, approval and a CCN to own, acquire, construct, operate, control, manage and maintain the water and sewer systems for the public in an area in and around Smithton, Missouri.

6. To provide service to the proposed area, MAWC will purchase the water and sewer systems from Smithton. Smithton is a fourth-class city located in Pettis County. Smithton serves approximately 220 water accounts and 220 sewer accounts. The City of Smithton has a population of approximately 510.

7. The water system consists of one elevated 50,000-gallon welded steel tank, two

deep wells and approximately 28,000 feet of 2, 4 and 6 inch water main. There are approximately 30 fire hydrants. The sewer system consists of a two-cell treatment lagoon and a collection system consisting of approximately 23,000 feet of sewer and 75 manholes.

8. On January 25, 2021, the Smithton Board of Aldermen passed Ordinance No. 692, *An Ordinance Amending Ordinance #691 Providing For Submission Of A Proposal To Be Added To The Qualified Voters Of The City For Their Approval At The General Election Called And To Be Held In The City On April 6, 2021*. A copy of the Ordinance is attached hereto as **Appendix A**. The Ordinance provided notice of an election to be held on April 6, 2021, to vote on whether the water and wastewater utility owned by the City of Smithton should be sold. The question on the ballot was: ***Shall the City of Smithton, Missouri be authorized to sell its Water and Wastewater (sewer) Utilities to Missouri American Water for the sum of \$565,001.00 (Five Hundred Sixty-Five Thousand and One Dollar)?***

9. Virtual Town Hall Meetings were held on March 11, 2021, and April 1, 2021, to discuss the proposed sale. MAWC representatives attended the virtual Town Hall Meetings and were available to answer any questions. Notifications of the Town Hall Meetings sent to the residents along with informational mailings are attached hereto as **Appendix B**. The election was held on April 6, 2021, with over 76% of the votes in favor of the sale of the water and sewer utilities of Smithton to MAWC. There were 104 total votes cast of which 80 voted "yes" and 24 voted "no".

10. On May 9, 2022, MAWC entered into a *Purchase Agreement* with Smithton. A copy of the *Purchase Agreement* is attached as **Appendix C**. The schedules and exhibits to the *Purchase Agreement* have not been created at this time. In most cases, they are prepared if, and when, approval is received from the Missouri Public Service Commission ("Commission")

to proceed with the transaction since these items are part of the closing process.

11. MAWC proposes to purchase the water and sewer utility assets of Smithton, as specifically described in, and under the terms and provisions of the *Purchase Agreement*. A legal description of the area sought to be certificated is attached as **Appendix D**. A map of the area sought to be certificated is attached to this Application as **Appendix E**.

12. Attached hereto and marked as **Appendix F-C** is a list of ten residents or landowners within the proposed service area. **Appendix F-C** has been identified as Confidential in accordance with Commission Rule 20 CSR 4240-2.135(2)(A)1, as it contains customer-specific information.

APPRAISAL

13. MAWC seeks to establish the ratemaking rate base associated with the Smithton water and sewer assets pursuant to Section 393.320, RSMo. Section 393.320.2 states as follows:

The procedures contained in this section may be chosen by a large water public utility, and if so chosen shall be used by the public service commission to establish the ratemaking rate base of a small water utility during an acquisition.

14. MAWC is a “large water public utility” as it is a “public utility that regularly provides water service or sewer service to more than eight thousand customer connections and that provides safe and adequate service.” Section 393.320.1(1), RSMo. Smithton is a “small water utility” as it is a “water system or sewer system owned by a municipality that regularly provides water service or sewer service to eight thousand or fewer customer connections.” Section 393.320.1(2), RSMo.

15. Section 393.320.3(1), RSMo requires an appraisal to be performed by three appraisers. Such an appraisal has been performed on the Smithton water and sewer systems

and is attached hereto as **Appendix G**. The appraisal references the Flinn Engineering Report which is attached hereto as **Appendix H**. The appraisal contains a joint assessment of the fair market value of the water system and sewer system.

16. Section 393.320.5(1), RSMo states, in part, that 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...” In this case, the purchase price is (\$565,001.00 (\$565,000.00 for water system assets, and \$1.00 for sewer system assets)). Therefore, that amount together with the reasonable and prudent transaction, closing, and transition costs incurred by MAWC, shall constitute the ratemaking rate base. MAWC intends to make significant investments in the first five years of operation. The most significant improvement will be to the lagoons. The investments will include installation of a disinfection system and an ammonia removal system. Also anticipated are investments in sewer lining, point repairs and manhole rehabilitation.

ADDITIONAL INFORMATION

17. Attached hereto and marked as **Appendix I-C** is the feasibility study for the water system and **Appendix J-C** is the feasibility study for the sewer system. No external financing is anticipated. **Appendix I-C** and **Appendix J-C** have been marked as "Confidential" in accordance with Commission Rule 20 CSR 4240-2.135(2)(A)3, 4 and 6 as they contain market specific information and information representing strategies employed in contract negotiations.

18. Attached hereto and marked as **Appendix K** is an Integration Appendix that includes information relevant to the integration process of this proposed acquisition.

19. MAWC will receive a franchise from the City of Smithton.

TARIFFS/RATES

20. MAWC proposes to provide water service pursuant to the existing rates currently applicable to MAWC's Warrensburg Service Area and to utilize the rules governing the rendering of water service currently found in MAWC's water tariff P.S.C. MO No. 13 until such time as the rates and rules are modified according to law.

21. MAWC proposes to provide sewer service pursuant to the existing rates currently applicable to MAWC's Pettis County Service Area and to utilize the rules governing the rendering of sewer service currently found in MAWC's sewer tariff P.S.C. MO No. 26, until such time as the rates and rules are modified according to law.

PUBLIC INTEREST

22. The grant of the requested CCN (and approval of the underlying transaction) is in the public interest and will result in the provision of regulated water and sewer service to the current and future residents of the service area. The water and sewer assets of Smithton would be acquired by MAWC, a Missouri public utility, and be subject to the jurisdiction of the Commission. MAWC has considerable expertise and experience in providing water and sewer utility services to residents of the State of Missouri and is fully qualified, in all respects, to own and operate the water and sewer systems currently being operated in and around the City of Smithton.

23. The City of Smithton water and wastewater customers will benefit from this acquisition for various reasons, which include the need for investment to replace aging infrastructure, the need for investment to maintain compliance with existing and new regulations, to relieve the responsibility of operating and maintaining systems in the face of ever-increasing complexity and liability and the desire to maintain affordability.

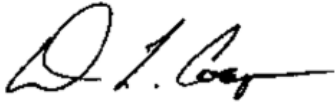
MOTION FOR WAIVER

24. Commission Rule 20 CSR 4240-4.017(1) provides that "(a)ny person that intends to file a case shall file a notice with the secretary of the commission a minimum of sixty (60) days prior to filing such case." A notice was not filed 60 days prior to the filing of this Application. As such, and to the extent required, MAWC seeks a waiver of the 60-day notice requirement.

25. Rule 20 CSR 4240-4.017(l)(D) provides that a waiver may be granted for good cause. In this regard, MAWC declares (as verified below) that it has had no communication with the Office of the Commission (as defined by Commission Rule 20 CSR 4240-4.015(10)) within the prior 150 days regarding any substantive issue likely to be in this case, other than those pleadings filed for record. Accordingly, for good cause shown, MAWC moves for a waiver of the 60-day notice requirement of Rule 20 CSR 4240-4.017(1) and acceptance of this Application at this time.

WHEREFORE, MAWC requests the Commission issue an order:

1. Granting MAWC permission, approval and a Certificate of Convenience and Necessity authorizing MAWC to install, acquire, build, construct, own, operate, control, manage and maintain water and sewer systems for the public within the area referred to above;
2. Granting MAWC permission to acquire the water and sewer assets identified herein of the City of Smithton, Missouri; and,
3. Authorizing MAWC to take such actions as may be deemed necessary and appropriate to accomplish the purposes of the *Purchase Agreement* and the Application and to consummate related transactions in accordance with the *Purchase Agreement*



Dean L. Cooper MBE #36592
BRYDON, SWEARENGEN & ENGLAND P.C.
312 E Capitol Avenue
P.O. Box 456
Jefferson City, MO 65102
(573) 635-7166
dcooper@brydonlaw.com

Respectfully Submitted,

Timothy W. Luft, MBE #40506
Rachel Niemeier, MBE #56073
Corporate Counsel
MISSOURI-AMERICAN WATER
COMPANY
727 Craig Road
St. Louis, MO 63141
(314) 996-2279 (Tim)
(314) 996-2390 (Rachel)
timothy.luft@amwater.com
rachel.neimeier@amwater.com

ATTORNEYS FOR MISSOURI-AMERICAN WATER COMPANY

CERTIFICATE OF SERVICE

I hereby certify that a copy of the above and foregoing document was sent via electronic mail on this 12th day of August, 2022 to:

Karen Bretz
Staff Counsel's Office
karen.bretz@psc.mo.gov
staffcounsel@psc.mo.gov

Marc Poston
Office of the Public Counsel
opcservice@opc.mo.gov



D. J. Coyle

VERIFICATION

State of Missouri)
)
County of St. Louis) ss

I, Timothy W. Luft, under penalty of perjury, and pursuant to Section 509.030, RSMo, state that I am Vice-President - Legal of Missouri-American Water Company, that I am duly authorized to make this affidavit on behalf of MAWC, that I have knowledge of the matters stated herein, and that said matters are true and correct to be best of my knowledge and belief. Additionally, no representative of MAWC has had any communication with the office of the Missouri Public Service Commission as defined in Commission Rule 20 CSR 4240-4.015(10) within the immediately preceding 150 days regarding the subject matter of this Application.



List of Appendices

Appendix A	Ordinance
Appendix B	Town Hall Meetings
Appendix C	Purchase Agreement
Appendix D	Legal Description
Appendix E	Map
Appendix F-C	List of Ten Residents
Appendix G	Appraisal
Appendix H	Engineering Report
Appendix I – C	Feasibility Study – Water System
Appendix J - C	Feasibility Study – Sewer System
Appendix K	Integration

BILL NO 1252021

ORDINANCE NO # 692

AN ORDINANCE AMENDING ORDINANCE #691 PROVIDING FOR SUBMISSION OF A PROPOSAL TO BE ADDED TO THE QUALIFIED VOTERS OF THE CITY FOR THEIR APPROVAL AT THE GENERAL ELECTION CALLED AND TO BE HELD IN THE CITY ON APRIL 6, 2021.

WHEREAS, the City is required to submit to the qualified voters of the City the question of whether the city of Smithton, Missouri be authorized to sell its' Water and Wastewater (sewer) utility to Missouri American Water for the sum of \$565,001.

WHEREAS, the City is required to submit the question to its voters no later than the general election in April 6, 2021:

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF ALDERMEN In the City of Smithton, Missouri, as follows:

Section 1. Pursuant to the provisions of Sections 105.010 RSMo, the Board of Aldermen, has determined that it would be appropriate to submit the proposal to the voters.

Section 2. This proposition shall be submitted to the qualified voters of the city of Smithton, Missouri, for their approval, as required by the provisions of Section 105.010 RSMo, at the election hereby called and to be held in the City on Tuesday, the sixth day of April 2021. The ballot of submission shall contain substantially the following language:

Shall the City of Smithton be authorized to sell its Water and Wastewater (sewer)utilities to Missouri American Water for the sum of \$565,001 (Five Hundred Sixty-Five Thousand and One dollar?

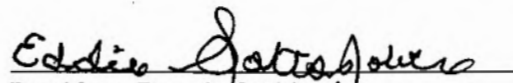
YES NO

If you are in favor of the question, place an "X" in the box opposite "YES".


If you are opposed to the question, place an "X" in the box opposite "NO".


Section 3. This Ordinance shall be in full force and effect from and after the date of its passage and approval.

Read and passed by the Board of Aldermen of the City of Smithton, Missouri, on this 25th day of January, 2021


President, Board of Aldermen

Approved by the Mayor of said City on the 25th day of January, 2021.

ATTEST:

Cynthia Williams, City Clerk


Damian Lemens, Mayor

You're invited!

Town Hall Meetings

**YES
ON 1**

**QUALITY WATER AND
SEWER SERVICE FROM
TRUSTED EXPERTS**

APPENDIX B Page 1 of 8



Thursday, March 11th
at 7:00 PM

Thursday, April 1st
at 7:00 PM

Smithton Community Center
200 Chestnut
Smithton, MO 65350



Join us for a Town Hall Meeting.

We hope you can join us to learn more about the proposed sale of Smithton's water and sewer systems to Missouri American Water. We look forward to speaking with you and answering any questions you may have.

**To learn more about
Question 1 please visit us at:**



www.yesonquestiononesmithton.com

VOTE YES ON 1 ON APRIL 6TH

WHY VOTE YES ON QUESTION 1?

REGULATORY COMPLIANCE:

Missouri American Water will invest \$1.7 million in water and sewer system improvements over the next 5 years, including critical upgrades to meet regulatory requirements.

SAFETY:

Dependable sewer service is critical to public health as it serves as a barrier protecting us from disease. Missouri American Water can make the improvements needed, both now and in the future, to protect the health and safety of the residents of Smithton.

STABILITY:

Missouri American Water's team of nearly 700 dedicated employees keep quality water flowing and operate sewer systems efficiently. Our nearby districts in Warrensburg and Maplewood can provide operations support and have certified operators licensed by the Missouri Department of Natural Resources.

**YES
ON 1**

LEARN MORE, ASK A QUESTION OR REQUEST A YARD SIGN AT
YesOnQuestionOneSmithton.com

Paid for by Missouri American Water 2323 Davis Blvd. Joplin, MO 64804



For information on upcoming town hall meetings, visit our website by taking a photo of this code.



SCAN ME



Missouri American Water
2323 Davis Blvd
Joplin, MO 64804

VOTE YES ON 1 ON APRIL 6TH

Quality Water and Sewer from Trusted Experts.

On April 6th, residents will vote on the sale of Smithton's water and sewer systems to Missouri American Water, a trusted and experienced water and sewer provider proudly serving Missourians for more than 140 years. We want to partner with Smithton by providing practical solutions to save you money and make the necessary investments to improve service, reliability, and meet future regulations.

We would be honored to serve Smithton.



**YES
ON 1**

WATER AND SEWER IS ALL WE DO.

LEARN MORE, ASK A QUESTION OR REQUEST A YARD SIGN AT YESONQUESTIONONESMITHTON.COM

VOTE YES ON 1 ON APRIL 6TH

WHY VOTE YES ON QUESTION 1?

It's the best
option for
Smithton!

Safety. Stability. Service.

Dependable water service. Fire protection. A barrier to disease. Healthy water and sewer systems provide these and more. Missouri American Water will invest \$1.7 million in system upgrades to meet future state and federal regulations. This keeps your family and community safe.

As of March 1, the Smithton Sewer System is out of compliance. Voting YES means Missouri American Water's team of nearly 700 dedicated employees will keep quality water flowing and will operate the sewer system efficiently and in compliance with state and federal regulations.

Our nearby districts in Warrensburg and Maplewood can provide operations support and have certified operators licensed by the Missouri Department of Natural Resources. This means residents will have rapid response for emergencies.

WATER AND SEWER IS ALL WE DO!

Missouri American Water has been providing high-quality service for more than 140 years.



**YES
ON 1**

LEARN MORE, ASK A QUESTION OR REQUEST A YARD SIGN AT
YesOnQuestionOneSmithton.com

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Vote Yes on Question 1 on April 6th

Quality Water and Sewer from Trusted Experts.

Smithton city leaders considered the options, and Missouri American Water was selected as the best choice. On April 6th, you have the opportunity to vote on the sale of the city's water and sewer systems to a trusted industry expert providing reliable water and sewer service to about 1.5 million Missourians every day. Missouri American Water partners with communities throughout the state providing practical and cost saving solutions while making the critical improvements needed to improve service and meet regulatory requirements.

A YES VOTE MEANS

- \$1.7 million will be invested in water and sewer system improvements.
- Rapid emergency response and professional expertise.
- Smithton will receive **\$565,001** from the sale, making the city debt-free and able to focus on other community priorities.



Missouri American Water
2323 Davis Blvd
Joplin, MO 64804

APPENDIX B
Page 6 of 8

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PAID
SMV



**YES
ON 1**

WATER AND SEWER IS ALL WE DO.

LEARN MORE, ASK A QUESTION OR REQUEST A YARD SIGN AT YESONQUESTIONONESMITHTON.COM

Why Vote YES on Question 1?

Safety. Savings. Stability.

SAFETY.

As of March 1, the Smithton Sewer System will be out of regulatory compliance. Voting **YES** means Missouri American Water will invest \$1.7 million in both water and sewer over the next 5 years, improving service reliability and keeping your family and community safe. Our nearby districts in Warrensburg and Maplewood can provide operations support and have certified operators licensed by the Missouri Department of Natural Resources. This means you will have rapid response for emergencies.

SAVINGS.

Rates for sewer and water are going to increase because of the improvements needed. Missouri American Water can make the investment for less than the City can by itself due to economies of scale and purchasing power. This will help to stabilize rates in the long term and improve operational efficiencies.

STABILITY.

Missouri American Water's nearly 700 dedicated employees provide high-quality water and sewer service to 1.5 million Missourians every day. For 140 years communities throughout the state have looked to us to provide practical and cost saving solutions while making necessary system improvements.



For information on upcoming town hall meetings, visit our website by taking a photo of this code.



**YES
ON 1**

LEARN MORE, ASK A QUESTION OR REQUEST A YARD SIGN AT
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Missouri American Water
2323 Davis Blvd
Joplin, MO 64804

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SMV

Vote Yes on Question 1 on April 6th The Best Option for Smithton!

On April 6th, you have the opportunity to vote on the sale of the city's water and sewer systems to a trusted industry expert with a 140-year history of providing reliable service to customers throughout the state. Smithton is facing water and sewer challenges similar to many communities throughout Missouri, with increasing regulations requiring additional investment. If passed, the city will be debt free.

"Voting yes on Question 1 is absolutely the best move for the city, that's why the city council voted unanimously to put the measure before voters."

– City of Smithton Mayor, Damian Lemens

Vote Yes on 1 on April 6th



**YES
ON 1**

WATER AND SEWER IS ALL WE DO.

LEARN MORE, ASK A QUESTION OR REQUEST A YARD SIGN AT YESONQUESTIONONESMITHTON.COM

Agreement for Purchase of Water and Wastewater System

This Agreement for Purchase of Water and Wastewater System (the “Agreement”) is made and entered into on the 9th day of May, 2022 by and between **Missouri-American Water Company**, a Missouri corporation (“Buyer”), and the **City of Smithton**, formed under Missouri law and located in Pettis County, Missouri (“Seller”). Hereinafter, Buyer and Seller may be referred to individually as a “Party” or together as the “Parties”.

RECITALS:

- A. Seller currently owns and operates a water treatment and distribution system and a wastewater treatment and collection system (collectively, the “System”) in Pettis County, Missouri with approximately 225 water connections and 225 wastewater connections.
- B. On April 6, 2021 there was a referendum on the sale of the System. Over 76% of the votes cast were “yes” to sell the System.
- C. Seller desires to sell substantially all of the assets that constitute or are used in furtherance of the System to Buyer pursuant to the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the foregoing recitals, and the representations, warranties, and covenants contained herein, and in exchange for other consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, agree as follows:

ARTICLE 1 Definitions and Related Matters

For purposes of this Agreement, the capitalized terms used herein shall have the meanings assigned to them herein or in the attached Exhibit 1 and, for purposes of this Agreement and all other documents executed in connection herewith, the rules of construction set forth in Exhibit 1 shall govern.

ARTICLE 2 Purchase and Sale of Assets; Closing

2.1 Transfer of Assets. On and subject to the terms and conditions of this Agreement, at the Closing on the Closing Date and effective as of the Effective Time, Buyer shall purchase, acquire and accept from Seller, and Seller shall sell, convey, transfer, assign and deliver to Buyer, free and clear of all Encumbrances, the Acquired Assets. Notwithstanding anything to the contrary contained in this Section 2.1 or elsewhere in this Agreement, the Excluded Assets are not part of the sale and purchase contemplated hereunder, are excluded from the Acquired Assets, and shall remain the exclusive property of Seller subsequent to the Closing.

2.2 Consideration.

The consideration for the System and the Acquired Assets shall consist of the Purchase Price of **Five Hundred Sixty-Five Thousand and One Dollars (\$565,001.00)**.

(a) . At Closing, Buyer shall pay to the Seller and such other payees set forth on Schedule 2.2, in accordance with wire transfer instructions to be provided by the Seller to Buyer at least ten (10) Business Days prior to the Closing Date, in immediately available funds, an aggregate amount equal to the Purchase Price.

(b) Buyer shall deliver the Statement to Seller at least three (3) Business Days prior to the Closing Date. Seller shall provide Buyer and its representatives reasonable access, during normal business hours of Seller, to all personnel, books and records of or related to the System or the Business within Seller's direction or control as reasonably requested by Buyer to assist it in its preparation of the Statement. Buyer shall deliver to Seller a copy of the work papers prepared or used in connection with the Statement's preparation as reasonably requested by Seller to assist in its review of the Statement, and Seller shall have an opportunity, prior to the Closing Date, to review with representatives of Buyer and object to all or any part of the Statement, such review to be reasonable and in good faith. Buyer shall consider such objections, if any, in good faith but Buyer's reasonable, good faith determination with respect to the Adjustment Amount shall be final and binding for the purpose of calculating the Purchase Price.

(c) Buyer shall prepare the Allocation, which Allocation shall be binding upon Seller. The Parties shall report, act, and file Tax Returns in all respects and for all Tax purposes consistent with the Allocation. No Party shall take any Tax position (whether in audits, Tax Returns, or otherwise) that is inconsistent with or contrary to the Allocation. In the event that the Allocation is disputed by any Governmental Authority, the Party receiving notice of such dispute will promptly notify the other Party, and the Parties will consult in good faith as to how to resolve such dispute in a manner consistent with the Allocation.

2.3 No Assumption of Liabilities. All Liabilities of Seller, whether or not incurred in connection with the operation of the System, shall remain the sole responsibility of and shall be retained, paid, performed and discharged solely by Seller. Notwithstanding anything to the contrary contained in this Agreement, Buyer will not assume or be deemed to assume, and shall have no liability or obligation with respect to, any Liability of Seller, none of which Liabilities are part of the Contemplated Transaction

2.4 Closing. Unless this Agreement is first terminated pursuant to Article 8 hereof, and subject to the satisfaction or, if permissible, waiver of each of the conditions set forth in Article 5 hereof, the Closing will take place at a mutually agreeable location in the City of Trimble or such other place or by such other means (e.g., e-mail/PDF or facsimile and overnight delivery of original execution documents) as is agreed to by the Parties at 10:00 A.M., Central time, on (a) such date as is three (3) Business Days after the date on which all of the conditions set forth in Article 5 hereof shall have been satisfied or (to the extent permissible) waived (other than those conditions which, by their nature are to be satisfied or waived at Closing but subject to their satisfaction or waiver at Closing) or, if Buyer shall so elect, the final day of Seller's billing period of which such date is a part or (b) such other date as the Parties hereto may agree upon in writing. In any event, the Closing shall be effective as of the Effective Time.

2.5 Closing Obligations.

In addition to any other documents to be delivered under other provisions of this Agreement, at Closing:

(a) Seller shall deliver or cause to be delivered to Buyer, together with funds sufficient to pay all Taxes necessary for the transfer, filing or recording thereof, the following documents:

- (i) the Bill of Sale, duly executed by Seller;
- (ii) the Intangible Assignment, duly executed by Seller;

(iii) all Consents and approvals from Governmental Authorities, and third parties under Contracts, necessary to ensure that Buyer will continue to have the same full rights with respect to the Acquired Assets as Seller had immediately prior to the consummation of the Contemplated Transactions, including the written Consents, in form and substance reasonably acceptable to Buyer, of the Governmental Authorities and third parties set forth in Schedule 2.5(a)(iii);

(iv) a payoff letter from each lender from which Seller has incurred indebtedness for borrowed money which is outstanding, if any, and from each person or entity listed on Schedule 2.2, and a release of all Encumbrances relating to the Acquired Assets executed, filed and/or recorded by the holder of or parties to each such Encumbrance (including without limitation any violations cited by the Missouri Department of Natural Resources or any other Governmental Authority with authority over the System or the Acquired Assets), if any, in each case in substance and form reasonably satisfactory to Buyer and its counsel;

(v) for each interest in Real Property and each easement and/or right-of-way affecting any Real Property or Acquired Asset, whether or not identified on Schedule 3.4, a recordable warranty deed or such other appropriate document or instrument of transfer or approval, as the case may require, each in form and substance reasonably satisfactory to Buyer;

(vi) such other deeds, bills of sale, assignments, certificates of title, documents and other instruments of transfer and conveyance as may reasonably be requested by Buyer, each in form and substance reasonably satisfactory to Buyer;

(vii) a copy of each permit, license, easement, land-right and other necessary authority for the operation of the System and the Acquired Assets, in each case validly issued in the name of the Seller and in full force and effect;

(viii) the certificate contemplated by Section 5.1(d);

(ix) a legal opinion of Seller's legal counsel, affirmatively opining to such matters as Buyer or its legal counsel may reasonably request, including but not limited to the due authorization and execution of this Agreement by Seller and the enforceability thereof;

(x) a copy, certified by the Secretary of Seller to be true, complete and correct as of the Closing Date, of the governing documents and resolutions of the City and any required representatives of Seller authorizing and approving the Contemplated Transactions and as to the incumbency and signatures of the city council members of Seller executing this Agreement or any of the Transaction Documents on behalf of Seller;

(xi) to the extent such transfer is requested by Buyer, evidence satisfactory to Buyer of the transfer of all utilities with respect to the System from Seller to Buyer;

(xii) all other documents, instruments and writings required or reasonably requested by Buyer to be delivered at or prior to the Closing pursuant to this Agreement or otherwise required in connection herewith.

(b) At or prior to the Closing, Buyer shall deliver the following:

(i) to the Seller and such other payees set forth on Schedule 2.2, in accordance with wire transfer instructions to be provided by the Seller to Buyer at least ten (10) Business Days prior to the Closing Date, in immediately available funds, an aggregate amount equal to the Purchase Price;

(ii) to the Seller, the Intangible Assignments, duly executed by Buyer; and

(iii) to the Seller, all other documents, instruments and writings required or reasonably requested by Seller to be delivered at or prior to the Closing pursuant to this Agreement or otherwise required in connection herewith.

ARTICLE 3 Representations and Warranties of Seller

Seller hereby makes the following representations and warranties to Buyer, each of which is true and correct on the date hereof, will be true and correct at Closing and shall survive the Closing and the Contemplated Transactions hereby to the extent set forth herein:

3.1 Power and Authority. Seller has full power and authority to conduct the Business and the System as they are now being conducted and to own, lease and operate the System and the Acquired Assets.

3.2 Enforcement; Authority; No Conflict.

(a) This Agreement constitutes the legal, valid and binding obligation of Seller, enforceable against Seller in accordance with its terms except as such enforcement may be limited by bankruptcy, insolvency or other similar Laws affecting the rights of creditors generally and by general principles of equity. Seller has the absolute and unrestricted right, power and authority to execute and deliver this Agreement and the Transaction Documents and to consummate the Contemplated Transactions. The City of Trimble has duly authorized the execution, delivery, and performance of this Agreement by Seller and no other proceeding on the part of Seller is necessary to authorize the execution, delivery and performance of this Agreement.

(b) This Agreement has been, and the Transaction Documents will be, duly executed and delivered by Seller.

(c) Neither the execution, delivery or performance by Seller of this Agreement or the Transaction Documents nor the consummation by it of the Contemplated Transactions will (i) contravene, conflict with or result in a violation of any provisions of the governing documents of Seller, (ii) contravene, conflict with or result in a violation of or give any Governmental Authority or other Person the right to challenge any of the Contemplated Transactions or to exercise any remedy or obtain any relief under any Laws or any Order to which Seller or any of the Acquired Assets may be subject, (iii) contravene, conflict with or result in a violation of any of the terms

or requirements of or give any Governmental Authority the right to revoke, withdraw, suspend, cancel, terminate or modify any Permit or other authorization by a Governmental Authority that is held by Seller or that otherwise relates to the System or any of the Acquired Assets, (iv) contravene, conflict with or result in a violation or breach of any provision of, require the Consent of any Person under, or give any Person the right to declare a default or exercise any remedy under or to accelerate the maturity or performance of or to cancel, terminate or modify any Contract, indenture, mortgage, note, lease or other instrument or document to which Seller is a party or by which any of the Acquired Assets are bound or (v) result in the imposition or creation of any Encumbrance upon or with respect to any of the Acquired Assets.

(d) No filings or registrations with, notifications to, or authorizations, Consents or approvals of, a Governmental Authority or third party are required to be obtained or made by Seller in connection with the execution, delivery or performance by Seller of this Agreement or the Transaction Documents or the consummation by Seller of the Contemplated Transactions except related to the MoPSC approval. Neither the Contemplated Transactions nor the Transaction Documents will result in the creation of any Encumbrance against any of the Acquired Assets.

3.3 Assets. Seller has clear, good, and marketable title to, or a valid leasehold interest in, all of the Acquired Assets, free and clear of all Encumbrances. None of the Acquired Assets are leased or on loan by Seller to any third party. The Acquired Assets constitute all of the assets and property that, together with the rights granted or conveyed under the Transaction Documents, are necessary for the operation of the System, the Business and the Acquired Assets as conducted as of the date hereof. Upon the Closing, Buyer shall continue to be vested with good title or a valid leasehold interest in the System and all of the Acquired Assets. The Business constitutes all of the business conducted by any Person in connection with the System.

3.4 Real Property; Easements.

(a) Seller owns and has good and marketable title to the Real Property, free and clear of all options, leases, covenants, conditions, easements, agreements, claims, and other Encumbrances of every kind and there exists no restriction on the use or transfer of such property, in each case except as set forth on Schedule 3.4(b)(i) or Schedule 3.4(b)(ii). Set forth on Schedule 3.4(a) is a complete and accurate listing of all Real Property. Seller is not the lessor or lessee of any real property, and there are no outstanding options, rights of first refusal or rights of first offer to purchase any of the Real Property or any portion thereof or interest therein. Seller has made available to Buyer copies of all title reports, surveys, title policies and appraisals relating to the Real Property. At and after the Closing, Buyer shall have the right to maintain or use the Real Property, including the space, facilities or appurtenances outside the building lines, whether on, over or under the ground, and to conduct such activities thereon as maintained, used or conducted by Seller on the date hereof and such right is not subject to revocation. At and after the Closing, Buyer shall have all rights, easements and agreements necessary for the use and maintenance of water, sewer or other utility pipelines, poles, wires, conduits or other like facilities, and appurtenances thereto, over, across and under the Real Property.

(b) The Real Property is properly classified under applicable zoning Laws, ordinances, and regulations for the current and continued operation of the System on the Real Property. No Proceeding is pending or threatened which could adversely affect the zoning classification of the Real Property. There are sufficient parking spaces, loading docks and other

facilities at such Real Property to comply with such zoning Laws, ordinances, and regulations and Seller's use or occupancy of the Real Property is not dependent on any permitted non-conforming use or similar variance, exemption, or approval from any Governmental Authority. Seller's current use and occupancy of the Real Property and its operation of the System thereon does not violate any easement, covenant, condition, restriction or similar provision in any instrument of record or other unrecorded agreement affecting such Real Property. The present use and operation of the Real Property does not constitute a non-conforming use and is not subject to a variance. Seller has not received any notice of violation of any easements, covenants, restrictions or similar instruments and there is no basis for the issuance of any such notice or the taking of any action for such violation. Set forth on Schedule 3.4(b)(i) hereto is a true, correct and complete list of all easements relating to the Real Property or the Acquired Assets. All of such easements are valid and will be transferred to Buyer and remain in full force as of the Closing. Set forth on Schedule 3.4(b)(ii) hereto is a true, correct and complete list of all rights of way relating to the Real Property or the Acquired Assets. All of such rights of way are valid and will be transferred to Buyer and remain in full force as of the Closing. All Improvements located on, and the use presently being made of, the Real Property comply with all applicable zoning and building codes, ordinances and regulations and all applicable fire, environmental, occupational safety and health standards and similar standards established by Law and the same use thereof by Buyer following Closing will not result in any violation of any such code, ordinance, regulation or standard. There is no proposed, pending or threatened change in any such code, ordinance, regulation or standard which would adversely affect the Business, the System or the Acquired Assets.

(c) No Improvements encroach on any land that is not included in the Real Property or on any easements affecting such Real Property, or violate any building lines or set-back lines, and there are no encroachments onto the Real Property, or any portion thereof, which would interfere with the use or occupancy of such real Property or the continued operation of the System as currently conducted.

(d) There is no unpaid property Tax, levy or assessment against the Real Property (except for Encumbrances relating to Taxes not yet due and payable), nor is there pending or threatened any condemnation Proceeding against the Real Property or any portion thereof.

(e) Except as set forth in Schedule 3.4(e), there is no condition affecting the Real Property or the Improvements located thereon which requires repair or correction to restore the same to reasonable operating condition.

3.5 Personal Property. Set forth on Schedule 3.5(a) is a complete and accurate listing of all Acquired Assets which are personal property. Except as set forth in Schedule 3.5(b): (i) no Acquired Asset which is personal property is in the possession of others (other than immaterial items temporarily in the possession of others for maintenance or repair), (ii) neither Seller nor any of its Affiliates holds any such property on consignment, and (iii) each item of such Acquired Assets has been maintained in accordance with normal industry practice, is in good operating condition and repair (subject to normal wear and tear) and is suitable for the purposes for which it is presently used.

3.6 No Undisclosed Liabilities. Seller does not have any subsidiaries and does not directly or indirectly own or have any capital stock or other equity interest in any Person. Except (a) to the extent and for the amount reflected as a Liability on the balance sheet included in the Unaudited Financial Statements, (b) Liabilities incurred in the Ordinary Course of Business since the date of the balance sheet included in the Unaudited Financial Statements (none of

which will or may reasonably be expected to have an adverse effect upon the Business), or (c) as set forth on Schedule 3.6, Seller does not have any Liabilities whatsoever, known or unknown, asserted or unasserted, liquidated or unliquidated, accrued, absolute, contingent, or otherwise, there is no basis for any claim against Seller, the System or any of the Acquired Assets for any such Liability and there is no basis for any such Liability to become the Liability of Buyer from and after the Closing.

3.7 Tax Matters.

(a) Seller has timely and properly filed all Tax Returns that it was required to file. All such Tax Returns were complete and correct in all respects and were prepared in compliance with all applicable Laws. All Taxes owed by Seller have been paid. Seller is not the beneficiary of any extensions of time within which to file any Tax Return. No claim has ever been made by an authority in a jurisdiction where Seller does not file Tax Returns that Seller is or may be subject to taxation by that jurisdiction. There are no Encumbrances on any of the Acquired Assets that arose in connection with any failure (or alleged failure) to pay any Tax.

(b) Seller has withheld and paid all Taxes required to have been withheld and paid in connection with any amounts paid or owing to any employee, independent contractor, creditor, member, stockholder, or other third party. Forms W-2 and 1099 required with respect thereto have been properly completed and timely filed.

(c) There are no audits or examinations of any Tax Returns pending or threatened that relate to Seller's operation of the System or the Acquired Assets. Seller is not a party to any action or Proceeding by any Governmental Authority for the assessment or collection of Taxes relating to the operation of the System or Acquired Assets, nor has such event been asserted or threatened. There is no waiver or tolling of any statute of limitations in effect with respect to any Tax Returns relating to Seller's operation of the System or the Acquired Assets.

(d) None of the Acquired Assets (i) has been or could be treated as a partnership or corporation for United States federal income Tax purposes or (ii) is property that is required to be treated for Tax purposes as being owned by any other Person (other than those Acquired Assets that are leased).

(e) None of the Acquired Assets represent property or obligations of Seller, including but not limited to uncashed checks to vendors, customers or employees, non-refunded overpayments or unclaimed subscription balances, that is escheatable to any Governmental Authority under any applicable escheatment Laws as of the date hereof or that may at any time after the date hereof become escheatable to any Governmental Authority under any applicable escheatment Law.

3.8 Contracts. Set forth on Schedule 3.8 is a complete and correct list of all Contracts related to the System to which Seller is a party or is otherwise bound. Seller has delivered or caused to be delivered to Buyer correct and complete copies of each such Contract (including any and all amendments), a description of the terms of each such Contract which is not in writing, if any, and all documents affecting the rights or obligations of any party thereto.

3.9 Environmental Matters.

(a) Seller is and at all times has been in full compliance with and has not been and is not in violation of or liable under any applicable Environmental Law. Seller has no basis to

expect nor has it received any actual or threatened Order, notice or other communication from any Governmental Authority or other Person of any actual or potential violation or failure to comply with any Environmental Law or of any actual or threatened obligation to undertake or bear the cost of any Environmental, Health and Safety Liabilities with respect to the Real Property or any other properties or assets (whether real, personal or mixed) in which Seller has or has had an interest or with respect to the Real Property or any other real property at or to which Hazardous Materials were generated, manufactured, refined, transferred, imported, used or processed by Seller or any other Person for whose conduct it is or may be held responsible, or from which Hazardous Materials have been transported, treated, stored, handled, transferred, disposed, recycled or received.

(b) There are no pending or threatened claims, Encumbrances or other restrictions of any nature, resulting from any Environmental, Health and Safety Liabilities or arising under or pursuant to any Environmental Law with respect to or affecting the Real Property or any other properties and assets (whether real, personal or mixed) in which Seller has or had an interest.

(c) Neither Seller nor any other Person for whose conduct it is or may be held to be responsible has any Environmental, Health and Safety Liabilities with respect to the Real Property or with respect to any other properties and assets (whether real, personal or mixed) in which Seller (or any predecessor) has or has had an interest or at any property geologically or hydrologically adjoining the Real Property or any such other property or assets that could reasonably be expected to have a material adverse effect thereon.

(d) There are no Hazardous Materials, except those used in connection with the operation of the System and set forth in the list on Schedule 3.9(d), present on or in the Environment at the Real Property or at any geologically or hydrologically adjoining property, including any Hazardous Materials contained in barrels, above or underground storage tanks, landfills, land deposits, dumps, equipment (whether moveable or fixed) or other containers, either temporary or permanent and deposited or located in land, water, sumps or any other part of the Real Property or such adjoining property or incorporated into any structure therein or thereon. Neither Seller nor any other Person for whose conduct it is or may be held to be responsible has permitted or conducted, or is aware of, any Hazardous Activity conducted with respect to the Real Property or any other properties or assets (whether real, personal or mixed) in which Seller has or has had an interest except in material compliance with all applicable Environmental Laws. There has been no Release or threat of Release, of any Hazardous Materials at or from the Real Property or from or by any other properties and assets (whether real, personal or mixed) in which Seller has or has had an interest, or any geologically or hydrologically adjoining property, whether by Seller or any other Person.

(e) Except as set forth in Schedule 3.9(e), none of the following exists at the System or on the Real Property: (1) underground storage tanks; (2) asbestos-containing material in any form; (3) materials or equipment containing polychlorinated biphenyl; (4) groundwater monitoring wells; or (5) landfills, surface impoundments, or disposal areas.

(f) Except as set forth in Schedule 3.9(f) neither Seller nor any of its Affiliates is obligated to provide financial assurance in consideration of the System under Environmental Law.

(g) Seller has delivered to Buyer true and complete copies and results of any reports, studies, analyses, tests or monitoring possessed or initiated by Seller or its

predecessors pertaining to Hazardous Materials or Hazardous Activities in, on or under the Real Property, or concerning compliance by Seller, its predecessors, or any other Person for whose conduct Seller is or may be held to be responsible, with Environmental Laws, said reports, studies, etc. to include without limitation, any and all Phase I environmental reports now or hereafter in the possession or control of Seller.

3.10 Permits. Set forth on Schedule 3.10 is a complete and correct list of all Permits used by Seller in the continuing operation of the System. Such Permits constitute all those necessary for the continuing operation of the System and are all valid and subsisting and in full force and effect. No fact or circumstance exists which is reasonably likely to cause any such Permit to be revoked or materially altered subsequent to the execution of this Agreement and the Closing Date. Neither the execution of this Agreement nor the Closing do or will constitute or result in a default under or violation of any such Permit.

3.11 Insurance. Seller maintains and has maintained appropriate insurance necessary for the full protection of all of its assets, properties, the System, operations, products and services. All such policies are in full force and effect and Seller will use commercially reasonable efforts to cause such policies to be outstanding and in full force and effect as of Closing and immediately following the execution of this Agreement and the consummation of the Contemplated Transactions. There are no pending Proceedings arising out of, based upon or with respect to any of such policies of insurance and, to Seller's Knowledge, no basis for any such Proceedings exists. Seller is not in default with respect to any provisions contained in any such insurance policies and no insurance provider is in default with respect to such insurance policies. Set forth in Schedule 3.11 is a true and accurate list of all such insurance policies Seller maintains, and the premiums therefor have been paid in full as they have become due and payable.

3.12 Absence of Certain Changes. There has not been any occurrence or event which, individually or in the aggregate, has had or is reasonably expected to have any Material Adverse Effect. Seller has continually operated the System and the Business only in the Ordinary Course of Business. Without limitation of the foregoing, Seller has not entered into, amended, terminated or received notice of termination of any Permit necessary for the continued operation of the System. In addition, Seller has not taken any action in connection with the System or the Business which, if taken on or after the date hereof, would have required the prior written Consent of Buyer pursuant to Section 6.6 hereof.

3.13 Litigation and Proceedings. There are no Proceedings, either pending or threatened, anticipated or contemplated, against Seller or involving the operation of the System, any of the Acquired Assets, or any of Seller's agents or other personnel in their capacity as such, which could directly affect any of the Acquired Assets or the System. Seller has not been charged with, nor is it under investigation with respect to, any charge which has not been resolved to its favor concerning any violation of any applicable Law with respect to any of the Acquired Assets or the System and there is no valid basis for any such charge or investigation. Neither Seller nor any of its Affiliates has been subject to or threatened to be subject to any Proceeding or Order relating to personal injury, death or property or economic damage arising from products sold, licensed or leased and services performed by Seller or any of its Affiliates with respect to the System or the Business. No judgment, Order, writ, injunction, decree, assessment or other command of any Governmental Authority affecting Seller or any of the Acquired Assets or the System has been entered which is presently in effect. There is no Proceeding pending or, to Seller's Knowledge, threatened which challenges the validity of this Agreement or the Contemplated Transactions or otherwise seeks to prevent, directly or

indirectly, the consummation of the Contemplated Transactions, nor is there any valid basis for any such Proceeding.

3.14 Compliance with Laws. Seller is in compliance with all Laws, Permits, Orders, ordinances, rules and regulations, whether civil or criminal, of any federal, state, local or foreign governmental authority applicable to the System or the Business and has not committed any violation of any Law or any provision of its Articles of Incorporation or Bylaws or equivalent governing documents applicable to the Acquired Assets and/or the operation of the System. Except as set forth in Schedule 3.14 neither Seller nor any of its Affiliates has received any notice alleging such default, breach or violation.

3.15 Financial Statements. Attached as Schedule 3.15 are the Financial Statements. The Financial Statements have been prepared in accordance with GAAP and the Accounting Methodologies, subject in the case of the Unaudited Financial Statements to normal year-end adjustments and the absence of footnotes. The Financial Statements were derived from the books and records of Seller, are true, correct and complete in all material respects and present fairly in all material respects the financial condition, operating results and cash flows of Seller as of the dates and during the periods indicated therein (subject, in the case of the Unaudited Financial Statements, to normal year-end adjustments and the absence of footnotes).

3.16 Transactions with Related Parties. Except as set forth on Schedule 3.16, no city employee has any financial interest, direct or indirect, in any supplier or customer of, or other business which has any transactions or other business relationship with, Seller. Without limiting the generality of the foregoing, neither Seller nor any of its Affiliates nor any executive officer of Seller, any of its Affiliates or the Business owns, directly or indirectly, any interest in or is an owner, sole proprietor, member, stockholder, partner, director, officer, employee, consultant or agent of any Person which is a lessor, lessee, customer, licensee, or supplier of the Business and none of the employees of or servicing the Business owns, directly or indirectly, in whole or in part, any tangible property, patent, trademark, service mark, trade name, copyright, franchise, invention, Permit or license which was developed by or is used and necessary for the operation of the Business

3.17 Customer Advances. Set forth on Schedule 3.16 is a complete and accurate list of all unexpired Extension Deposit Agreements (or similar agreements) to which Seller is a party (each an "Extension Deposit Agreement") and which contain unexpired obligations of Seller to provide for the payment of periodic refunds to parties making advances for the construction of facilities for water service. Seller will provide to Buyer within 15 days of the execution of this Agreement (to be updated at Closing), true and complete copies of each such Extension Deposit Agreement. All records of Seller relating to each Extension Deposit Agreement is complete and accurate in all material respects and, together with the relevant Extension Deposit Agreement, is all the information reasonably required to determine Seller's, and, consequently, Buyer's obligations to each party to the Extension Deposit Agreements; and there are no disputes or disagreements with any party to an Extension Deposit Agreement relating to the amount due under that agreement or the method of calculating that amount. Schedule 3.16 may be updated at Closing only with the mutual consent of the parties.

3.18 Accounts Receivable. Set forth on Schedule 3.18 is a list of all the accounts receivable of Seller with respect to the System and an aging schedule related thereto, as of October 31, 2017. Such accounts receivable, together with any such accounts receivable arising between such date and the Closing Date (collectively, the "Accounts Receivable"), are

(to the extent not yet paid in full) valid, genuine and existing and arose or will have arisen from bona fide sales of products or services actually made in the Ordinary Course of Business. The Accounts Receivable are not subject to, and Seller has received no notice of, any counterclaim, set-off, defense or Encumbrance with respect to the Accounts Receivable. Except to the extent paid prior to Closing, the Accounts Receivable are and will be current and fully collectible. No agreement for deduction, free goods, discount or deferred price or quantity adjustment has been made with respect to any Accounts Receivable.

3.19 Brokers, Finders. Except as set forth in Schedule 3.19, no finder, broker, agent or other intermediary, acting on behalf of Seller or any of Seller's Affiliates, is entitled to a commission, fee or other compensation in connection with the negotiation or consummation of this Agreement or any of the transactions contemplated hereby.

ARTICLE 4 Representations and Warranties of Buyer

Buyer hereby makes the following representations and warranties to Seller:

4.1 Organization. Buyer is a duly organized and validly existing corporation in good standing under the Laws of Missouri and has the power and authority to own, lease and operate its assets and properties.

4.2 Enforcement; Authority; No Conflict.

(a) This Agreement constitutes the legal, valid and binding obligation of Buyer and is enforceable against Buyer in accordance with its terms, except as such enforcement may be limited by bankruptcy, insolvency or other similar Laws affecting the rights of creditors generally and by general principles of equity. Buyer has the absolute and unrestricted right, power and authority to execute and deliver this Agreement and the Transaction Documents to which it is a party and to perform its obligations hereunder and thereunder.

(b) Neither the execution or delivery of this Agreement nor the consummation of the Contemplated Transactions shall result in: (i) a violation of or a conflict with any provision of the articles of incorporation or the bylaws of Buyer; (ii) a material breach of or default under any term, condition or provision of any Contract to which Buyer is a party, or an event which, with the giving of notice, lapse of time, or both, would result in any such breach or default; or (iii) a material violation of any applicable Law, Order, judgment, writ, injunction, decree or award or any event which, with the giving of notice, lapse of time, or both, would result in any such violation.

4.3 Brokers, Finders. No finder, broker, agent or other intermediary, acting on behalf of Buyer or any of Buyer's Affiliates, is entitled to a commission, fee or other compensation in connection with the negotiation or consummation of this Agreement or any of the transactions contemplated hereby.

ARTICLE 5 Conditions Precedent to Closing

5.1 Conditions Precedent to the Obligations of Buyer. Buyer's obligations to consummate the Contemplated Transactions are subject to the satisfaction in full, unless expressly waived in writing by Buyer, of each of the following conditions:

(a) **Authorization of Contemplated Transactions.** Buyer shall have obtained all necessary corporate approvals to consummate the Contemplated Transactions, including but not limited to the approval of its Board of Directors;

(b) **Representations and Warranties.** Each of the representations and warranties of Seller contained in this Agreement or in any Transaction Document shall have been true, correct and accurate in all respects on and as of the date hereof and shall also be true, correct and accurate in all material respects (other than Section 3.5 and representations and warranties qualified as to materiality, which shall have been true, correct and accurate in all respects) on and as of the Closing Date with the same force and effect as though made by Seller on and as of the Closing Date (except to the extent that any such representation or warranty is made solely as of the date hereof or as of another date earlier than the Closing Date, which shall be accurate as of such date);

(c) **Covenants.** Seller shall have performed, observed and complied in all material respects with all of its obligations, covenants, undertakings and agreements contained in this Agreement or any Transaction Document and required to be performed, observed or complied with by Seller prior to or at the Closing;

(d) **Certificates.** Seller shall have delivered to Buyer a certificate, dated as of the Closing Date and executed by an officer or other duly authorized representative of Seller, to the effect that the conditions set forth in Sections 5.1(b), (c) and (i) have been satisfied;

(e) **Proceedings.** No provision of any Law or Order shall be in effect, and no Proceeding by any Person shall be threatened or pending before any Governmental Authority, or before any arbitrator, which would: (i) prevent consummation of the Contemplated Transactions; (ii) have a likelihood of causing the Contemplated Transactions to be rescinded following consummation; (iii) adversely affect the right of Buyer to own any of the Acquired Assets; or (iv) adversely affect the System prospects or the value or condition of any of the Acquired Assets or the System;

(f) **Closing Deliverables.** Seller shall have delivered or caused to be delivered to Buyer each of the items set forth in Section 2.5(a);

(g) **Governmental and Third Party Approvals.** (i) Buyer shall have obtained a certificate of convenience and necessity and all necessary regulatory approvals by the MoPSC, or any other applicable regulatory body, and all other applicable Consents and approvals from Governmental Authorities and other third parties which are required in connection with the Contemplated Transactions, each in form and substance (including without limitation with respect to the terms and conditions contained in any such approval) acceptable to Buyer in its sole and absolute discretion, and (ii) any waiting periods under existing Laws, and all extensions thereof, the passing of which is necessary to consummate the Contemplated Transactions, shall have expired;

(h) **Due Diligence.** Buyer shall have completed and be satisfied, in its sole and absolute discretion, with the results of its due diligence review of the Acquired Assets and Seller, including without limitation with the results of any Phase I Environmental Site Assessment or other environmental assessment performed with respect to the Real Property or the Acquired Assets or chain of title search, all material contracts and operating permits and licenses of the System, and the Seller's operations, contracts, employment practices,

compliance, accounting and other items as Buyer deems necessary, as each of the foregoing items relate to the System or the Acquired Assets; and

(i) **No Material Adverse Effect.** Buyer shall have determined that there shall not have occurred any event or circumstance which, individually or in the aggregate, has had or could reasonably be expected to have a Material Adverse Effect.

5.2 Conditions Precedent to Obligations of Seller. Seller's obligation to consummate the Contemplated Transactions is subject to the satisfaction in full, unless expressly waived in writing by Seller, of each of the following conditions:

(a) **Representations and Warranties.** Each of the representations and warranties of Buyer contained in this Agreement or in any Transaction Document shall have been true, correct and accurate in all respects on and as of the date hereof and shall also be true, correct and accurate in all material respects (other than representations and warranties qualified as to materiality, which shall have been true, correct and accurate in all respects) on and as of the Closing Date with the same force and effect as though made by Buyer on and as of the Closing Date (except to the extent that any such representation or warranty is made solely as of the date hereof or as of another date earlier than the Closing Date, which shall be accurate as of such date);

(b) **Covenants.** Buyer shall have performed, observed and complied in all material respects with all of its obligations, covenants, undertakings and agreements contained in this Agreement or any Transaction Document and required to be performed, observed or complied with by Buyer prior to or at the Closing;

(c) **Proceedings.** No provision of any Law or Order shall be in effect which would prevent consummation of the Contemplated Transactions; and

(d) **Closing Deliverables.** Buyer shall have delivered or caused to be delivered to Seller each of the items set forth in Section 2.5(b).

ARTICLE 6 Covenants and Special Agreements

6.1 **Access to Information; Confidentiality**

(a) **Access.** Between the date of this Agreement and the Closing Date, Buyer may, directly and through its representatives, make such confirmatory investigation of the System and the Acquired Assets as each deems necessary or advisable. In furtherance of the foregoing, Buyer and its representatives shall have reasonable access, upon reasonable notice during normal business hours, to all employees, properties, books, Contracts, customer lists, commitments and records of the Business, and Seller shall furnish and cause to be furnished to Buyer and its representatives such financial and operating data and other information as may from time to time be reasonably requested relating to the System, shall permit Buyer or its representatives to conduct such physical inspections and environmental audits of the Real Property as requested by Buyer and shall permit Buyer or its representatives to conduct interviews of employees of or servicing the Business. Seller and the management, employees, accountants and attorneys of or servicing the Business shall cooperate fully with Buyer and its representatives in connection with such investigation.

(b) **Confidentiality.**

(i) Prior to Closing, each Party shall ensure that all Confidential Information which such Party or any of its respective officers, directors, employees, counsel, agents, or accountants may have obtained, or may hereafter obtain, from the other Party (or create using any such information) relating to the financial condition, results of operations, System, properties, assets, Liabilities or future prospects of the other Party, any Related Person of the other Party or any customer or supplier of such other Party or any such Related Person shall not be published, disclosed or made accessible by any of them to any other Person at any time or used by any of them, in each case without the prior written Consent of the other Party; provided, however, that the restrictions of this sentence shall not apply (i) as may otherwise be required by Law, (ii) to the extent such Confidential Information shall have otherwise become publicly available, and (iii) as to Buyer, to disclosure by or on its behalf to regulatory authorities or other third parties whose Consent or approval may be required to consummate the Contemplated Transactions and to its lenders and professionals for the purpose of obtaining financing of such transactions. Following Closing, Seller shall ensure that all Confidential Information relating to the financial condition, results of operations, System, properties, assets, Liabilities or future prospects of the Buyer, any Related Person of the Buyer or any customer or supplier of the Buyer or any such Related Person shall not be published, disclosed or made accessible by any of them to any other Person at any time or used by any of them, in each case without the prior written Consent of the Buyer; provided, however, that the restrictions of this sentence shall not apply (i) as may otherwise be required by Law, (ii) to the extent such Confidential Information shall have otherwise become publicly available, and (iii) as to Buyer, to disclosure by or on its behalf to regulatory authorities or other third parties whose Consent or approval may be required to consummate the Contemplated Transactions and to its lenders and professionals for the purpose of obtaining financing of such transactions.

(ii) In the event of termination of negotiations or failure of the Contemplated Transactions to close for any reason whatsoever, each Party promptly will destroy or deliver to the other Party and will not retain any documents, work papers and other material (and any reproductions thereof) obtained by each Party or on its behalf from such other Party or its subsidiaries as a result of this proposal or in connection therewith, whether so obtained before or after the execution hereof, and will not use any information so obtained and will cause any information so obtained to be kept confidential and not used in any way detrimental to such other Party.

6.2 Publicity; Announcements. Until after the Closing, no press release concerning this Agreement or the transactions contemplated hereby shall be issued or made without the prior approval of the parties hereto, except as required by applicable law.

6.3 Cooperation. Subject to the terms and conditions of this Agreement, the Parties shall cooperate fully with each other and their respective counsel and accountants in connection with, and take or cause to be taken and do or cause to be done, any actions required to be taken under applicable Law to make effective the Contemplated Transactions as promptly as practicable. Prior to the Closing, the parties shall proceed expeditiously and in good faith to make such filings and take such other actions as may be reasonably necessary to satisfy the conditions to Closing set forth in Section 5.1(g). Any and all filing fees in respect of such filings shall be paid by Seller. From and after the Closing, the parties shall do such acts and execute such documents and instruments as may be reasonably required to make effective the transactions contemplated hereby. On or after the Closing Date, the parties shall, on request, cooperate with one another by furnishing any additional information, executing and delivering

any additional documents and instruments, including contract assignments, and doing any and all such other things as may be reasonably required by the parties or their counsel to consummate or otherwise implement the transactions contemplated by this Agreement. Should Seller, in its reasonable discretion, determine after the Closing that books, records or other materials constituting Acquired Assets are still in the possession of Seller, Seller shall promptly deliver them to Buyer at no cost to Buyer. Seller hereby agrees to cooperate with Buyer to ensure a proper transition of all customers with respect to billing and customer service activities. Buyer shall take the lead in obtaining MoPSC approval with respect to the Contemplated Transactions.

6.4 Exclusivity. Seller will not and will not permit its affiliates, officers, directors, employees or other agents or representatives to, at any time prior to the termination of this Agreement, directly or indirectly, (i) take any action to solicit, initiate or encourage the making of any Acquisition Proposal, or (ii) discuss or engage in negotiations concerning any Acquisition Proposal with, or further disclose any non-public information relating to Seller to, any person or entity in connection with an Acquisition Proposal, in each case, other than Buyer and its representatives.

6.5 No Inconsistent Action. Prior to the Closing Date, no Party shall take any action, and each Party will use its commercially reasonable efforts to prevent the occurrence of any event (but excluding events which occur in the Ordinary Course of Business and events over which such Party has no control), which would result in any of its representations, warranties or covenants contained in this Agreement or in any Transaction Document not to be true and correct, or not to be performed as contemplated, at and as of the time immediately after the occurrence of such action or event. If at any time prior to the Closing Date, a Party obtains knowledge of any facts, circumstances or situation which constitutes a breach, or will with the passage of time or the giving of notice constitute a breach, of any representation, warranty or covenant of such Party under this Agreement or any Transaction Document or will result in the failure of any of the conditions contained in Article 5 to be satisfied, such Party shall give the other Party prompt written notice thereof; provided, however, that no such notice shall cure any breach of any representation, warranty or covenant contained herein or therein or will relieve any such Party of any obligations hereunder or thereunder unless specifically agreed to in writing by the other Party.

6.6 Conduct of Business. Between the date of this Agreement and the Closing Date, Seller shall carry on the operation of the System, the Business and the Acquired Assets in the Ordinary Course of Business and in compliance with Law, not introduce any materially new method of management or operation, use reasonable best efforts to preserve the System, the Business and the Acquired Assets, conserve the goodwill and relationships of its customers, suppliers, Governmental Authorities and others having business relations with it, maintain in full force and effect all policies of insurance now in effect for the benefit of Seller, maintain supplies at a level which is sufficient to operate the System in accordance with past practice and maintain the Acquired Assets in substantially the condition currently existing, normal wear and tear excepted. By way of illustration and not limitation, Seller will not, between the date hereof and the Closing Date, directly or indirectly do, or prepare to do, any of the following without the prior written Consent of Buyer, (a) sell, lease, transfer or otherwise dispose of, or license, mortgage or otherwise encumber, or give a security interest in or subject to any Encumbrances, any of the Acquired Assets, (b) merge or consolidate with or acquire, or agree to merge or consolidate with or acquire (by merging or consolidating with, or by purchasing a substantial portion of the stock or assets of, or by any other manner), any business or corporation, partnership, joint venture, association or other business organization or division thereof or

otherwise change the overall character of the Business in any material way, (c) enter into any Contract other than in the Ordinary Course of Business, (d) abandon, sell, license, transfer, convey, assign, fail to maintain or otherwise dispose of any item of the transferred intellectual property, (e) make any change in any of its present accounting methods and practices, (f) make any new Tax election, or change or revoke any existing Tax election, or settle or compromise any Tax liability or file any income Tax Return prior to the last day (including extensions) prescribed by Law, in the case of any of the foregoing, material to the business, financial condition or results of operations of Seller, (g) engage in any transactions with any Related Person which would survive Closing, (h) pay, discharge, settle or satisfy any material claims or Liabilities (absolute, accrued, asserted or unasserted, contingent or otherwise), other than the payment, discharge or satisfaction, in the Ordinary Course of Business or in accordance with their terms, of Liabilities reflected or reserved against in the Financial Statements (or the notes thereto), or not required by GAAP to be so reflected or reserved, or incurred since December 31, 2016 in the Ordinary Course of Business, or waive any material benefits of, or agree to modify any material confidentiality, standstill, non-solicitation or similar agreement with respect to the Business to which Seller or any of its Affiliates is a party, (i) engage in any activity with the purpose or intent of (A) accelerating the collection of accounts receivable or (B) delaying the payment of the accounts payable, (j) enter into commitments for new capital expenditures in excess of \$25,000 in the aggregate, (k) create or issue or grant an option or other right to subscribe, purchase or redeem any of its securities or other equity interests (other than with Buyer), (l) adopt a plan of complete or partial liquidation or resolutions providing for or authorizing such a liquidation or dissolution, merger, consolidation, restructuring, recapitalization or reorganization or (m) enter into any agreement (conditional or otherwise) to do any of the foregoing.

6.7 No Transfer at Odds with Law. Notwithstanding anything to the contrary contained herein, nothing in this Agreement shall be deemed to require the conveyance, assignment or transfer of any Acquired Asset that by operation of applicable Law cannot be conveyed, assigned, transferred or assumed. Each Party shall continue to use reasonable best efforts to obtain at the earliest practicable date all unobtained Consents or approvals required to be obtained by it in connection with the transfer of the Acquired Assets or performance of any Transaction Document. If and when any such Consents or approvals shall be obtained, then Seller shall promptly, and hereby does, assign its rights and obligations thereunder to Buyer without payment of consideration and Buyer shall, and hereby does, without the payment of any consideration therefor, (i) assume such rights and obligations or (ii) perform (or agree to perform) under such Transaction Document, as applicable. Each Party shall execute such good and sufficient instruments as may be necessary to evidence such assignment and assumption. The entire beneficial interest in and to, and the risk of loss with respect to, the Acquired Assets shall, regardless of when legal title thereto shall be transferred to Buyer, pass to Buyer at Closing as of the Effective Time, and Seller shall, without consideration therefor, pay, assign and remit to Buyer all monies, rights and other consideration received in respect of such performance. To the extent permitted by Law, Seller shall exercise or exploit its rights in respect of such Acquired Assets only as directed by Buyer.

6.8 Release of Encumbrances. Seller promptly shall take such actions as shall be requested by Buyer to secure the release of all Encumbrances relating to the Acquired Assets, in each case in substance and form reasonably satisfactory to Buyer and its counsel.

6.9 Retention of Records. Subject to applicable Law and, subject to any applicable restrictions as to confidentiality (as to which Buyer does not provide indemnification, or the waiver of which Seller shall not have obtained after using reasonable best efforts), Seller shall

preserve any books and records relating to the System or the Business that are not delivered to Buyer hereunder for a period no less than seven (7) years after the Closing Date (or such longer period as shall be required by applicable Law), and Seller shall make available such books and records for review and copying to Buyer and its authorized representatives following the Closing at Buyer's expense upon reasonable notice during normal business hours. During such period, Seller shall permit, to the extent permitted by applicable Law and upon request of Buyer, Buyer and any of its agents, representatives, advisors or consultants reasonable access to employees of or servicing the Business for information related to periods up to and including the Closing.

6.10 Tax Covenants.

(a) Seller shall pay all Taxes of Seller, the System and the Acquired Assets for any Tax year or period (or portion thereof) ending at or before the Closing. For the purposes of this Section 6.10(a), the portion of such personal property or similar ad valorem Tax that relates to the Tax period ending as of the Closing shall be deemed to be the amount of such Tax for the entire Tax period multiplied by a fraction, the numerator of which is the number of days in the Tax period ending as of the Closing and the denominator of which is the number of days in the entire Tax period. For purpose of this Section 6.10(a), the portion of all other Taxes that relates to the Tax period ending as of the Closing shall be determined on the basis of an interim closing of the books.

(b) Each Party agrees to furnish or cause to be furnished to the other Party, upon request, as promptly as practical, such information (including reasonable access to books and records, Tax Returns and Tax filings) and assistance as is reasonably necessary for the filing of any Tax Return, the conduct of any Tax audit, and for the prosecution or defense of any claim, suit or Proceeding relating to any Tax matter. The Parties shall cooperate with each other in the conduct of any Tax audit or other Tax Proceedings and each shall execute and deliver such powers of attorney and other documents as are necessary to carry out the intent of this Section 6.10(b).

ARTICLE 7 Indemnification

7.1 Survival of Representations and Warranties and Covenants.

(a) All of the representations and warranties made by Seller in this Agreement, its Schedules, or any certificates or documents delivered hereunder shall survive the Closing Date and consummation of the Contemplated Transactions for a period of three (3) years; provided, however, that the representations and warranties contained in Sections 3.1, 3.2, 3.3, 3.5, 3.6, 3.7, 3.9 and 3.19 shall survive indefinitely.

7.2 Indemnification and Payment of Damages by Seller. Subject to the terms of this Article 7, and to the extent allowed under Missouri law, Seller hereby agrees to fully pay, protect, defend, indemnify and hold harmless the Indemnified Persons from any and all Damages arising out of, resulting from, relating to or caused by: (i) any inaccuracy in or breach of (or any claim by any third party alleging or constituting an inaccuracy or breach of) any representation or warranty of, or any failure to perform or nonfulfillment of any provision or covenant contained in this Agreement or any other Transaction Document by, Seller; (ii) all Liabilities and/or duties of Seller, whether accruing prior to or after the Closing Date, and any Encumbrance affecting the Acquired Assets; (iii) assessments, charges and other similar claims due or owing, directly or indirectly, by Seller or otherwise as a result of or on account of

the Acquired Assets or the System at any time prior to the Closing Date; (iv) the ownership and/or operation of any of the Acquired Assets or the System prior to Closing; (v) any Proceeding now existing or hereafter arising and relating to the Acquired Assets or the System and arising from events or matters occurring prior to the Closing Date; (vi) any Excluded Assets; (vii) any and all Taxes imposed on or arising from the transfer of the Acquired Assets; (viii) intercompany accounts payable and accounts receivable by and among Seller and/or its Affiliates; (ix) transaction costs and expenses incurred by or on behalf of Seller in connection with this Agreement or the Contemplated Transactions; or (x) any matters described on Schedule 7.2.

7.3 Indemnification By Buyer. Buyer hereby agrees to fully pay, protect, defend, indemnify and hold harmless Seller and its respective successors and assigns, from any and all Damages incurred by any of them arising out of, resulting from, relating to or caused by (i) any inaccuracy in or breach of any representation or warranty of, or any failure to perform or nonfulfillment of any provision or covenant contained in this Agreement or any other Transaction Document by, Buyer or (ii) transaction costs and expenses incurred by or on behalf of Buyer in connection with this Agreement or the Contemplated Transactions.

7.4 Notice of Claim. In the event that either party seeks indemnification on behalf of an Indemnified Person, such party seeking indemnification (the "Indemnified Party") shall give reasonably prompt written notice to the indemnifying party (the "Indemnifying Party") specifying the facts constituting the basis for such claim and the amount, to the extent known, of the claim asserted; provided, however, that the right of a person or entity to be indemnified hereunder shall not be adversely affected by a failure to give such notice unless, and then only to the extent that, an Indemnifying Party is actually irrevocably and materially prejudiced thereby. Subject to the terms hereof, the Indemnifying Party shall pay the amount of any valid claim not more than 10 days after the Indemnified Party provides notice to the Indemnifying Party of such amount.

7.5 Right to Contest Claims of Third Persons. If an Indemnified Party is entitled to indemnification hereunder because of a claim asserted by any Third Person, the Indemnified Party shall give the Indemnifying Party reasonably prompt notice thereof after such assertion is actually known to the Indemnified Party; provided, however, that the right of a Person to be indemnified hereunder in respect of claims made by a Third Person shall not be adversely affected by a failure to give such notice unless, and then only to the extent that, an Indemnifying Party is actually irrevocably and materially prejudiced thereby. Buyer shall have the right, upon written notice to Seller, to investigate, contest or settle the Third Person Claim. Seller may thereafter participate in (but not control) the defense of any such Third Person Claim with its own counsel at its own expense. If Seller thereafter seeks to question the manner in which Buyer defended such Third Person Claim or the amount or nature of any such settlement, Seller shall have the burden to prove by clear and convincing evidence that conduct of Buyer in the defense and/or settlement of such Third Person Claim constituted gross negligence or willful misconduct. The Parties shall make available to each other all relevant information in their possession relating to any such Third Person Claim and shall cooperate in the defense thereof, provided that Buyer shall control the defense thereof. Promptly (and in any event within 10 days) following the resolution of any Third Person Claim, Seller shall pay to Buyer any amount to which Buyer is entitled pursuant to this Article 7 with respect to such Third Person Claim.

7.6 Certain Indemnification Matters.

(a) Notwithstanding anything contained herein or elsewhere to the contrary, all “material” and “Material Adverse Effect” or similar materiality type qualifications contained in the representations and warranties set forth in this Agreement shall be ignored and not given any effect for purposes of the indemnification provisions hereof, including, without limitation, for purposes of determining whether or not a breach of a representation or warranty has occurred and/or determining the amount of any Damages.

(b) No information or knowledge acquired, or investigations conducted, by Buyer or its representatives, of Seller or the System or otherwise shall in any way limit, or constitute a waiver of, or a defense to, any claim for indemnification by any Indemnified Persons under this Agreement.

**ARTICLE 8
Termination**

8.1 Termination. This Agreement may be terminated at any time prior to the Closing only (a) by mutual written Consent of Seller and Buyer, (b) by Buyer, if the Seller is unable to obtain the assignment contemplated in section 2.5(xii) within a reasonable amount of time, (c) by Buyer, if Buyer is not in material breach of any of its representations, warranties, covenants and agreements under this Agreement and there has been a material breach of any representation, warranty, covenant or agreement contained in this Agreement on the part of Seller and Seller has not cured such breach within five (5) Business Days after receipt of notice of such breach (provided, however, that, no cure period shall be required for a breach which by its nature cannot be cured), (d) by Buyer, if, at any time before Closing, Buyer is not satisfied with the results of its due diligence review of the System and the Acquired Assets, (e) by Seller if Seller is not in material breach of any of its representations, warranties, covenants and agreements under this Agreement and there has been a material breach of any representation, warranty, covenant or agreement contained in this Agreement on the part of Buyer and Buyer has not cured such breach within five (5) Business Days after receipt of notice of such breach (provided, however, that, no cure period shall be required for a breach which by its nature cannot be cured), (f) by Seller or Buyer upon written notice to the other, if any court of competent jurisdiction or other competent Governmental Entity shall have issued a statute, rule, regulation, Order, decree or injunction or taken any other action permanently restraining, enjoining or otherwise prohibiting the Contemplated Transactions, and such statute, rule, regulation, Order, decree or injunction or other action shall have become final and non-appealable, (g) by Buyer, if all necessary regulatory approvals (including rate treatment, refunds and setting of rate base and all approvals described in Section 5.1(g)) contemplated hereby or otherwise necessary to close the Contemplated Transactions have not been obtained within 270 days of the date hereof, or (h) by Buyer if any Material Adverse Effect shall have occurred or, in the reasonable judgment of Buyer, shall be reasonably likely to occur.

8.2 Effect of Termination. The right of each Party to terminate this Agreement under Section 8.1 is in addition to any other rights such Party may have under this Agreement or otherwise, and the exercise of a right of termination will not be an election of remedies. If this Agreement is terminated pursuant to Section 8.1, all further obligations of the Parties under this Agreement will terminate, except that the obligations set forth in the Confidentiality Agreement, Section 6.1(b) (“Confidentiality”), Section 6.2 (“Publicity; Announcements”), this Section 8.2 (“Effect of Termination”) or Article 9 (“General Provisions”) will survive; provided, however, that if this Agreement is terminated by a Party because of the breach of the Agreement by another

Party or because one or more of the conditions to the terminating Party's obligations under this Agreement is not satisfied as a result of the other Party's failure to comply with its obligations under this Agreement, the terminating Party's right to pursue all legal remedies will survive such termination unimpaired.

ARTICLE 9 General Provisions

9.1 Amendment and Modification. No amendment, modification or supplement of any provision of this Agreement will be effective unless the same is in writing and is signed by the Parties.

9.2 Assignments. Seller may not assign or transfer any of its rights or obligations under this Agreement to any other Person without the prior written Consent of Buyer. Buyer may not assign its rights and obligations under this Agreement to any third party, without the prior written Consent of Seller, but may assign its rights and obligations under this Agreement to any Related Person or successor in interest without the Consent of Seller. Subject to this Section 9.2, all provisions of this Agreement are binding upon, inure to the benefit of and are enforceable by or against the Parties hereto and their respective heirs, executors, administrators or other legal representatives and permitted successors and assigns.

9.3 Captions; Construction. Captions contained in this Agreement and any table of contents preceding this Agreement have been inserted herein only as a matter of convenience and in no way define, limit, extend or describe the scope of this Agreement or the intent of any provision hereof. In the event of an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the Parties and no presumption or burden of proof shall arise favoring or disfavoring any Party by virtue of the authorship of any provisions of this Agreement.

9.4 Counterparts; Facsimile. This Agreement may be executed by the Parties hereto on any number of separate counterparts, and all such counterparts so executed constitute one agreement binding on all the Parties hereto notwithstanding that all the Parties hereto are not signatories to the same counterpart. For purposes of this Agreement, a document (or signature page thereto) signed and transmitted by e-mail, facsimile machine or telecopier is to be treated as an original document.

9.5 Entire Agreement. This Agreement and the other Transaction Documents constitute the entire agreement among the Parties hereto pertaining to the subject matter hereof and supersede all prior agreements, letters of intent, understandings, negotiations and discussions of the Parties hereto, whether oral or written, executed by the Parties pertaining to the subject matter hereof. All of the Exhibits and Schedules attached to this Agreement are deemed incorporated herein by reference.

9.6 Governing Law. This Agreement and the rights and obligations of the Parties hereunder are to be governed by and construed and interpreted in accordance with the Laws of the State of Missouri applicable to Contracts made and to be performed wholly within Missouri, without regard to choice or conflict of laws rules.

9.7 Legal Fees, Costs. Except as provided herein, all legal, consulting and advisory fees and other costs and expenses incurred in connection with this Agreement and the Contemplated Transactions are to be paid by the Party incurring such costs and expenses.

9.8 Notices. All notices, Consents, requests, demands and other communications hereunder are to be in writing and are deemed to have been duly given, made or delivered: (i) when delivered in person or by e-mail, (ii) three (3) Business Days after deposited in the United States mail, first class postage prepaid, or (iii) in the case of telegraph or overnight courier services, one (1) Business Day after delivery to the telegraph company or overnight courier service with payment provided, in each case addressed as follows:

(a) if to Seller, (i) to City of Smithton, Attention Mayor, City Hall, 101 Washington Street, Smithton, Missouri 65350.

(b) if to Buyer, (i) to Missouri-American Water Company, 727 Craig Road, St. Louis, Missouri 63141, Attn: Rich Svindland, President (rich.svindland@amwater.com), (ii) with a copy to Missouri-American Water Company, 727 Craig Road, St. Louis, Missouri 63141, Attn: Legal Department (tim.luft@amwater.com) or to such other address as any Party hereto may designate by notice to the other Parties in accordance with the terms of this Section.

9.9 Severability. This Agreement shall be deemed severable; the invalidity or unenforceability of any term or provision of this Agreement shall not affect the validity or enforceability of this Agreement or of any other term hereof, which shall remain in full force and effect, for so long as the economic or legal substance of the Contemplated Transactions is not affected in any manner materially adverse to any Party.

9.10 Specific Performance and Injunctive Relief; Remedies. The Parties hereto recognize that if any or all of them fail to perform, observe or discharge any of their respective obligations under this Agreement, a remedy at law may not provide adequate relief to the other Parties hereto. Therefore, in addition to any other remedy provided for in this Agreement or under applicable Law, any Party hereto may demand specific performance of this Agreement, and such Party shall be entitled to temporary and permanent injunctive relief, in a court of competent jurisdiction at any time when any of the other Parties hereto fail to comply with any of the provisions of this Agreement applicable to such Party. To the extent permitted by applicable Law, all Parties hereto hereby irrevocably waive any defense based on the adequacy of a remedy at law which might be asserted as a bar to such Party's remedy of specific performance or injunctive relief. Except as otherwise provided herein, all rights and remedies of the parties under this Agreement are cumulative and without prejudice to any other rights or remedies under Law. Nothing contained herein shall be construed as limiting the Parties' rights to redress for fraud.

9.11 No Third-Party Beneficiary. This Agreement is solely for the benefit of the Parties hereto and their respective successors and permitted assigns (and those Persons entitled to recover under the indemnity provisions hereof), and no other Person (other than those Persons entitled to recover under the indemnity provisions hereof) has any right, title, priority or interest under this Agreement or the existence of this Agreement.

9.12 Waiver of Compliance; Consents. Any failure of a Party to comply with any obligation, covenant, agreement or condition herein may be waived by the other Party only by a written instrument signed by the Party granting such waiver, but such waiver or failure to insist upon strict compliance with such obligation, covenant, agreement or condition shall not operate as a waiver of, or estoppel with respect to, any subsequent or other failure. Whenever this Agreement requires or permits Consent by or on behalf of any Party hereto, such Consent shall be given in writing in a manner consistent with the requirements for a waiver of compliance as set forth in this Section 9.12.

PASSED by the City Council on the 9th day of May 2022.

CITY OF SMITHTON MISSOURI




Mayor

Attest:



Clerk

MISSOURI-AMERICAN WATER COMPANY



By: Rich Svindland
Title: President

EXHIBIT 1
Definitions

“Acquired Assets” means all right, title, and interest in and to all of the assets which are owned or held by Seller as of the Effective Time that constitute the System or that are used in the operation thereof, including, with respect to the System, all of its (a) Real Property now used and required in the ongoing operation of the System, (b) Tangible Personal Property, (c) intellectual property, goodwill associated therewith, licenses and sublicenses granted and obtained with respect thereto, and rights thereunder, remedies against past, present, and future interests therein under the Laws of all jurisdictions, (d) leases, subleases, easements, rights of way, and rights thereunder, (e) all rights of Seller in and to the Assumed Contracts, (f) all rights of Seller in and to any indentures, mortgages, instruments, Encumbrances, or guaranties secured for the operation of the System, (g) accounts, notes, and other receivables arising after the Effective Time, (h) claims, deposits, prepayments, refunds, causes of action, rights of recovery, rights of set-off, and rights of recoupment (including any such item relating to the payment of Taxes), (i) franchises, approvals, Permits, pending application for Permits and Permit renewals, exemptions from any Permits, licenses, Orders, registrations, certificates, variances, and similar rights obtained from governments and governmental agencies in each case to the extent assignable or transferable to Missouri-American, (j) books, data, records, ledgers, files, documents, correspondence, lists, plats, architectural plans, drawings, specifications, creative materials, studies, reports, and other printed or written materials related to Seller’s construction, maintenance, and operation of the System, and (k) all of the intangible rights and property, if any, of Seller utilized in the operation of the System, provided that Acquired Assets shall not include any Excluded Assets.

“Acquisition Proposal” means any offer or proposal for the acquisition of Seller, the Acquired Assets or any portion thereof, whether by way of merger, consolidation or statutory share exchange or the acquisition of shares of capital stock, the acquisition of assets or similar transaction.

“Adjustment Amount” means the amount determined in the manner described on Exhibit 3. The Adjustment Amount may be a positive or negative number, and if the Adjustment Amount is a negative number, the Purchase Price shall be less than **Five Hundred Sixty-Five Thousand and One Dollars (\$565,001.00)**.

“Affiliate” means, with respect to any Person, any Person which, directly or indirectly controls, is controlled by, or is under common control with, such Person.

“Allocation” means a reasonable and supportable allocation of the Purchase Price and the Assumed Liabilities among the Acquired Assets in accordance with Code section 1060 and the Treasury regulations thereunder (and any similar provisions of state or local Law, as appropriate).

“Assignment and Assumption Agreement” means an Assignment and Assumption Agreement for the Assumed Liabilities in form and substance reasonably acceptable to Missouri-American.

“Assumed Contracts” means the Contracts listed on Exhibit 3.

“Assumed Liabilities” means only the Liabilities arising out of, resulting from or relating to the Assumed Contracts, but only to the extent such Liabilities (A) are to be performed after the Effective Time, (B) do not arise as a consequence of any breach or default prior to the Effective

Time, and (C) are accompanied by a correlated duty of performance or payment on the part of the other party(s) thereto.

“Audited Financial Statements” means the audited balance sheets of Seller as of December 31, 2019 and 2020 and the related audited statements of income and cash flows for the twelve (12) month period ended December 31, 2019 and 2020, respectively.

“Bill of Sale” means a bill of sale for all of the Acquired Assets that are Tangible Personal Property in form and substance reasonably acceptable to Missouri-American.

“Business” means the business of Seller as the same is conducted by Seller as of the date hereof and as the same shall be conducted by Seller as of immediately prior to the Closing.

“Business Day(s)” means any day other than (i) Saturday or Sunday, or (ii) any other day on which governmental offices in the State of Missouri are permitted or required to be closed.

“Cleanup” means investigation, cleanup, removal, containment or other remediation or response actions.

“Closing” means the closing of the Contemplated Transactions.

“Closing Date” means the date on which the Closing actually occurs.

“Code” means the Internal Revenue Code of 1986, as amended, and the regulations and other guidance promulgated thereunder.

“Confidential Information” means (i) information not available to the general public concerning the System and financial affairs with respect to a Party hereto or its Affiliates, and (ii) analyses, compilations, forecasts, studies and other documents prepared on the basis of such information by the Parties or their agents, representatives, any Related Person, employees or consultants.

“Consent” means any approval, consent, ratification, waiver or other authorization.

“Contemplated Transactions” means the transactions contemplated by this Agreement and the Transaction Documents.

“Contract” means any agreement, contract, obligation, legally binding commitment or undertaking (whether written or oral and whether express or implied).

“Damages” means any and all claims, losses and other liabilities, plus reasonable attorneys’ fees and expenses, including court costs and expert witness fees and costs, incurred in connection with such claims, losses and other liabilities and/or enforcement of this Agreement.

“DNR” means the Missouri Department of Natural Resources.

“Effective Time” means 12:01 a.m. on the Closing Date.

“Encumbrance” means any charge, claim, community property interest, condition, easement, equitable interest, encumbrance, lien, mortgage, option, pledge, security interest, right of first refusal, right of way, servitude or restriction of any kind, including any restriction on use, transfer, receipt of income or exercise of any other attribute of ownership, or any repayment obligation under any grant.

“Environment” means soil, land surface or subsurface strata, surface waters (including navigable waters, ocean waters, streams, ponds, drainage basins and wetlands), groundwater, drinking water supply, stream sediments, ambient air (including indoor air), plant and animal life and any other environmental medium or natural resource.

“Environmental, Health and Safety Liabilities” means any cost, damages, expense, liability, obligation or other responsibility arising from or under Environmental Law or Occupational Safety and Health Law and consisting of or relating to (a) any environmental, health or safety matters or conditions (including on-site or off-site contamination, occupational safety and health and regulation of chemical substances or products), (b) fines, penalties, judgments, awards, settlements, legal or administrative Proceedings, damages, losses, claims, demands and response, investigative, remedial or inspection costs and expenses arising under Environmental Law or Occupational Safety and Health Law, (c) financial responsibility under Environmental Law or Occupational Safety and Health Law for cleanup costs or corrective action, including any Cleanup required by applicable Environmental Law or Occupational Safety and Health Law (whether or not such Cleanup has been required or requested by any Governmental Authority or any other Person) and for any natural resource damages, or (d) any other compliance, corrective, investigative or remedial measures required under Environmental Law or Occupational Safety and Health Law. The terms “removal,” “remedial,” and “response action,” include the types of activities covered by the United States Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 et seq., as amended, and the United States Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 et seq., as amended.

“Environmental Law” means any Law relating to pollution or protection of human health, safety, the environment, natural resources or Law relating to releases or threatened releases of Hazardous Materials into the indoor or outdoor environment (including, without limitation, ambient air, surface water, groundwater, land, surface and subsurface strata) or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, release, transport or handling of Hazardous Materials.

“Excluded Assets” means (a) all cash, cash equivalents and short-term investments of Seller, including all bank accounts, demand accounts, certificates of deposit, time deposits, marketable securities, negotiable instruments and the proceeds of accounts receivable paid prior to the Closing Date, other than deposits and funds included in the Acquired Assets, (b) all accounts receivable of Seller accrued and payable prior to the Effective Time, (c) all intercompany accounts receivable of Seller and notes for those accounts receivable, (d) all Contracts to which the Seller is a party (other than the Assumed Contracts), including the Contracts listed on Schedule 3.8 (other than the Assumed Contracts listed thereon), (e) all equity interests owned or held by Seller, (f) all insurance policies of Seller and rights thereunder, (g) all causes of action, judgments, claims, reimbursements and demands of whatever nature (including rights under and pursuant to all warranties, representations and guarantees made by suppliers of products, materials or equipment, or components thereof) in favor of Seller to the extent related to any Excluded Asset or Excluded Liability, (h) all corporate minute books and stock Records of Seller and personnel Records and other Records that Seller is required by Law to retain in its possession, (i) all rights of Seller under this Agreement and the Transaction Documents and (j) all rights, properties and assets set forth on Schedule A.

“Excluded Liabilities” means any and all Liabilities of Seller, whether or not incurred in connection with the operation of the System, other than the Assumed Liabilities.

“Financial Statements” means the Audited Financial Statements and the Unaudited Financial Statements.

“Franchise Agreement” means that certain Franchise Agreement in form and substance reasonably acceptable to Missouri-American.

“Governmental Authority(ies)” means any (a) nation, state, county, city, village, district or other jurisdiction of any nature, (b) federal, state, local, municipal, foreign or other government, (c) governmental or quasi-governmental authority of any nature (including any governmental agency, branch, department, official or entity and any court or other tribunal), (d) multi-national organization or body or (e) body exercising, or entitled to exercise, any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power of any nature. For purposes of this Agreement, Seller shall not be deemed included in the definition of a “Governmental Authority.”

“Hazardous Activity” means the distribution, generation, handling, importing, management, manufacturing, processing, production, refinement, Release, storage, transfer, transportation, treatment or use (including any withdrawal or other use of groundwater) of Hazardous Materials in, on, under, about or from the System or any part thereof into the Environment, and any other act, system, operation or thing that increases the danger or risk of danger, or poses an unreasonable risk of harm to persons or property on or off the System, or that may affect the value of the System or the Business.

“Hazardous Materials” means any waste or other substance that is listed, defined, designated or classified as, or otherwise determined to be, hazardous, radioactive or toxic or a pollutant or a contaminant under or pursuant to any Environmental Law, including any admixture or solution thereof, and specifically including petroleum and all derivatives thereof or synthetic substitutes therefor and asbestos or asbestos-containing materials.

“Improvements” means all buildings, structures, fixtures, building systems and equipment, and all components thereof, including the roof, foundation, load-bearing walls, and other structural elements thereof, heating, ventilation, air conditioning, mechanical, electrical, plumbing, and other building systems, environmental control, remediation, and abatement systems, sewer, storm, and waste water systems, irrigation and other water distribution systems, parking facilities, fire protections, security, and surveillance systems, and telecommunications, computer, wiring, and cable installations, included in the Real Property.

“Indemnified Persons” means Missouri-American and Missouri-American’s Affiliates and the past, present and future officers, directors, shareholders, partners, employees, agents, attorneys, representatives, successors and assigns of each of them in their capacities as such.

“Intangible Assignments” means the assignments of all of the Acquired Assets which are intangible personal property in form and substance reasonably acceptable to Missouri-American.

“Knowledge” means (i) the actual knowledge of a particular fact by any of the Persons listed on Schedule B (each, a “Knowledge Party”), and (ii) knowledge that would have been acquired by any Knowledge Party acting reasonably and diligently in the performance of such person’s role with and duties to Seller. The words “know,” “knowing” and “known” shall be construed accordingly.

“Law(s)” means any law, rule, regulation or ordinance of any federal, foreign, state or local Governmental Authority or other provisions having the force or effect of law, including all judicial or administrative Orders and determinations, and all common law.

“Lease” means that certain real property lease in form and substance reasonably acceptable to Missouri-American.

“Liability” or “Liabilities” means any liability, indebtedness or obligation of any kind, character or description, whether known or unknown, absolute or contingent, accrued or unaccrued, disputed or undisputed, liquidated or unliquidated, secured or unsecured, joint or several, due or to become due, vested or unvested, executory, determined, determinable or otherwise and whether or not the same is required to be accrued on the financial statements of a Person.

“Material Adverse Effect” means a material adverse effect on (a) the business, assets, Liabilities (contingent or otherwise), operations or condition (financial or otherwise) of the System, the Business and the Acquired Assets, taken as a whole; provided, however, that “Material Adverse Effect” shall not include any changes resulting from general business or economic conditions, including such conditions related to the industry in which the System is operated, which do not specifically relate to the System and which are not disproportionately adverse to the System than to other businesses being operated in the industries in which the System operates, or (b) the ability of Seller to consummate the Contemplated Transactions.

“MoPSC” means the Missouri Public Service Commission.

“Occupational Safety and Health Law” means any Law designed to provide safe and healthful working conditions and to reduce occupational safety and health hazards, and any program, whether governmental or private (including those promulgated or sponsored by industry associations and insurance companies), designed to provide safe and healthful working conditions.

“Order” means any award, decision, injunction, judgment, order, ruling, subpoena or verdict entered, issued, made or rendered by any court, administrative agency or other Governmental Authority or by any arbitrator.

“Ordinary Course of Business” means, with respect to the System and the Business, only the ordinary course of commercial operations customarily engaged in by the System and the Business consistent with past practices, and specifically does not include (a) activity (i) involving the purchase or sale of the System or the Business or any product line or business unit thereof, or (ii) that requires approval by governing persons or equity holders of Seller or any of its Affiliates, as applicable, or (b) the incurrence of any Liability for any tort or any breach or violation of or default under any Contract or Law.

“Permit” means any approval, Consent, license, permit, waiver or other authorization issued, granted, given or otherwise made available by or under the authority of any Governmental Authority or pursuant to any Law.

“Person” means any individual, corporation (including any non-profit corporation), general or limited partnership, limited liability company, joint venture, cooperative, estate, trust, association, organization, labor union or other entity or Governmental Authority.

“Proceeding” means any action, arbitration, audit, hearing, investigation, litigation or suit (whether civil, criminal, administrative, investigative or informal) commenced, brought,

conducted or heard by or before, or otherwise involving, any Governmental Authority or arbitrator.

“Purchase Price” means Five Hundred Sixty Five Thousand and One Dollars (\$565,001.00).

“Real Property” means those parcels of real property and those easements or any right-of-way used in the operation of the System, together with all fixtures, fittings, buildings, structures and other Improvements erected therein or thereon.

“Records” means information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form.

“Related Person” means: (a) with respect to a particular individual, (i) each other member of such individual’s Family, (ii) any Person that is directly or indirectly controlled by such individual or one or more members of such individual’s Family, (iii) any Person in which such individual or members of such individual’s Family hold (individually or in the aggregate) a Material Interest, and (iv) any Person with respect to which such individual or one or more members of such individual’s Family serves as a director, officer, partner, executor or trustee (or in a similar capacity) and (b) with respect to a specified Person other than an individual, (i) any Person that directly or indirectly controls, is directly or indirectly controlled by, or is directly or indirectly under common control with such specified Person, (ii) any Person that holds a Material Interest in such specified Person, (iii) each Person that serves as a director, officer, partner, executor or trustee of such specified Person (or in a similar capacity), (iv) any Person in which such specified Person holds a Material Interest, (v) any Person with respect to which such specified Person serves as a general partner or a trustee (or in a similar capacity) and (vi) any Related Person of any individual described in clause (ii) or (iii). For purposes of this definition, (x) the “Family” of an individual includes (A) the individual, (B) the individual’s spouse, (C) any other natural person who is related to the individual or the individual’s spouse within the second degree, and (D) any other natural person who resides with such individual; and (y) “Material Interest” means direct or indirect beneficial ownership (as defined in Rule 13d-3 under the Securities Exchange Act of 1934) of voting securities or other voting interests representing at least five percent (5%) of the outstanding equity securities or equity interests in a Person.

“Release” means any spilling, leaking, emitting, discharging, depositing, escaping, leaching, dumping or other releasing into the Environment, whether intentional or unintentional.

“Statement” means a statement setting forth Buyer’s determination and calculation, as of the Closing Date, of the Adjustment Amount, setting forth in reasonable detail the respective components and calculations thereof and prepared in good faith and in accordance with GAAP and the Accounting Methodologies.

“Tangible Personal Property” means all machinery, equipment, tools, furniture, office equipment, computer hardware, supplies (including chemicals and spare parts), materials, vehicles and other items of tangible personal property of every kind owned or leased by Seller (wherever located and whether or not carried on Seller’s books), together with any express or implied warranty by the manufacturers or lessors of any item or component part thereof, and all maintenance records and other documents relating thereto.

“Tax” or “Taxes” means all taxes, charges, withholdings, fees, duties, levies, or other like assessments including, without limitation, income, gross receipts, ad valorem, value added,

excise, property, sales, employment, withholding, social security, Pension Benefit Guaranty Corporation premium, environmental (under Section 59A of the Code) occupation, use, service, service use, license, payroll, franchise, transfer and recording taxes, fees and charges, windfall profits, severance, customs, import, export, employment or similar taxes, charges, fees, levies or other assessments, imposed by any Governmental Authority, whether computed on a separate, consolidated, unitary, combined or any other basis, and shall include any interest, fines, penalties, assessments, or additions to tax resulting from, attributable to, or incurred in connection with any such Tax or any contest or dispute thereof, and including any Liability for the Taxes of another Person under Treasury Regulation section 1.1502-6 (or any similar provisions of state, local, or foreign Law), as transferee or successor, by Contract or otherwise.

“Tax Return” or “Tax Returns” means any return, declaration, report, claim for refund, or information return or statement relating to, or required to be filed in connection with any Taxes, including any schedule or attachment thereto and including any amendment thereof.

“Third Person” means a claimant other than an indemnified person hereunder.

“Third Person Claim” means a claim alleged by a Third Person.

“Transaction Documents” means this Agreement, the Bill of Sale, the Intangible Assignments, the Assignment and Assumption Agreement, the Franchise Agreement, the Lease and all other documents, certificates, assignments and agreements executed and/or delivered in connection with this Agreement in order to consummate the Contemplated Transactions, as the same may be amended, restated, modified or otherwise replaced from time to time.

“Unaudited Financial Statements” means the unaudited balance sheet of Seller as of June 30, 2022 and the related compiled consolidated statements of income and cash flows for the three month period then ended.

Rules of Construction

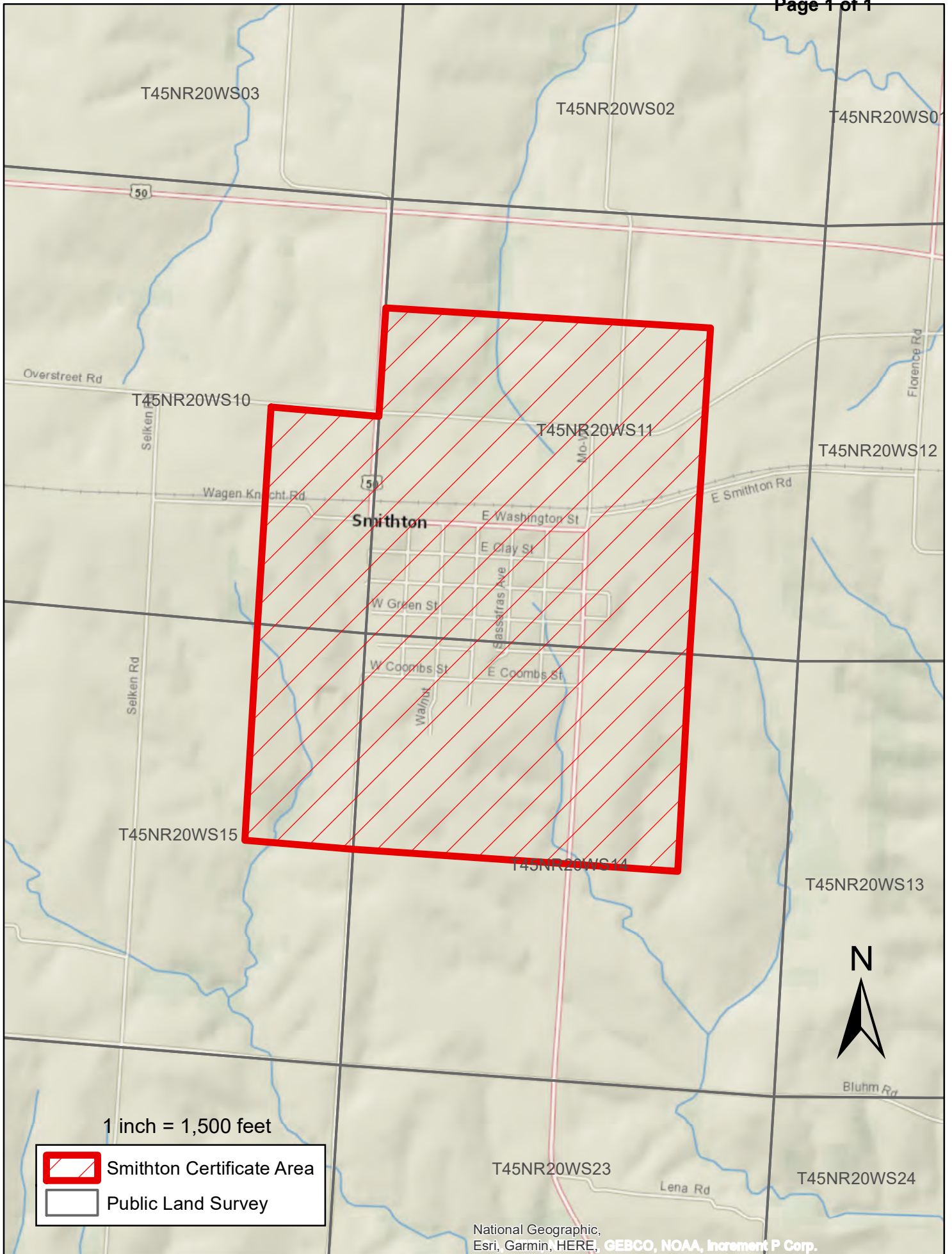
For purposes of this Agreement and the other documents executed in connection herewith, the following rules of construction shall apply, unless specifically indicated to the contrary: (i) wherever from the context it appears appropriate, each term stated in either the singular or plural shall include the singular and the plural, and pronouns stated in the masculine, feminine or neuter gender shall include the masculine, the feminine and the neuter; (ii) the term “or” is not exclusive; (iii) the term “including” (or any form thereof) shall not be limiting or exclusive; (iv) the terms “hereof,” “herein” and “herewith” and words of similar import shall, unless otherwise stated, be construed to refer to this Agreement as a whole (including the Schedules and Exhibits hereto) and not to any particular provision of this Agreement; (v) all references to statutes and related regulations shall include any amendments of same and any successor statutes and regulations as well as all rules and regulations promulgated thereunder, unless the context otherwise requires; (vi) all references in this Agreement or in the Schedules to this Agreement to sections, schedules, exhibits and attachments shall refer to the corresponding sections, schedules, exhibits and attachments of or to this Agreement; and (vii) all references to any instruments or agreements, including references to any of the documents executed in connection herewith, shall include any and all modifications or amendments thereto and any and all extensions or renewals thereof.

Legal Description

City of Smithton

A tract of land in part of Section 10, 11, 14 and 15 Township 45 North, Range 20 West, Pettis County, Missouri and being more particularly described as follows:

Beginning at a point being the intersection of the Center line of Overstreet Road and the North and South common line between Sections 10 and 11, Township 45 North, Range 20 West; thence North, along said common line to the Northwest corner of the Southwest Quarter of the Northwest Quarter of Section 11; thence East, along the North line of said Quarter-Quarter Section and the East prolongation to the Northeast corner of the Southwest Quarter of the Northeast Quarter of Section 11; thence South and along said East line of said Quarter-Quarter Section and its South prolongation thereof to the Southeast corner of the Southwest Quarter of the Southeast Quarter of said Section 11, being also the Northeast corner of the Northwest Quarter of the Northeast Quarter of Section 14, Township 45 North, Range 20 West; thence continuing South, along the East line of said Quarter-Quarter Section and its South prolongation to the Southeast corner of the Southwest Quarter of the Northeast Quarter of said Section 14; thence West, along the South line of said Quarter-Quarter Section and its West prolongation to the Southwest corner of Southwest Quarter of the Northwest Quarter of said Section 14, being also the Southeast corner of the Southeast Quarter of the Northeast Quarter of Section 15, Township 45 North, Range 20 West; thence West, along the South line of said Quarter-Quarter section to the Southwest corner thereof; thence North, along the West line of said Quarter-Quarter section and its North prolongation to a point on the North line of said Section 15, being also the Southwest corner of the Southeast Quarter of the Southeast Quarter of said Section 10; thence continuing North, along the West line of said Quarter-Quarter Section and the North prolongation thereof to the center of Overstreet Road; thence East, along said center line to the common line between Sections 10 and 11 and the Point of Beginning. Containing 480 acres more or less.



Appendix F-C has been marked CONFIDENTIAL in its entirety.

VALUATION REPORT

City of Smithton, Missouri Water Delivery and Wastewater Collection Systems

Prepared for:

Ms. Nikki Pacific
Manager Business Development – Proposal & Integration
Missouri American Water Company
727 Craig Road
St. Louis, Missouri 63141

Prepared by:

Chris Stallings, MAI, CCIM, MRICS
Colliers International
1828 Walnut Street
Kansas City, Missouri 64108

Joseph E. Batis, MAI, AI-GRS, R/W-AC
Edward J. Batis & Associates, Inc.
313 N. Chicago Street
Joliet, Illinois 60432

Edward W. Dinan, CRE, MAI
Dinan Real Estate Advisors, Inc.
2023 South Big Bend Boulevard
St. Louis, Missouri 63117

COLLIERS INTERNATIONAL 1828 Walnut Street Kansas City, Missouri 64108	EDWARD J. BATIS & ASSOCIATES, INC. 313 N. Chicago Street Joliet, Illinois 60432	DINAN REAL ESTATE ADVISORS, INC. 2023 S. Big Bend Boulevard St. Louis, Missouri 63117
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June 30, 2022

Ms. Nikki Pacific
Business Development Manager
Missouri American Water Company
727 Craig Road
St. Louis, Missouri 63141

Re: **Valuation Report**
City of Smithton (Pettis County), Missouri
Water Delivery and Wastewater Collection Systems Appraisal

Dear Ms. Pacific:

In accordance with your request, we have made a physical inspection on July 14, 2020, of the facilities and real estate that comprise the City of Smithton water and wastewater systems' assets.¹

The water delivery and wastewater collection systems (referred to herein as "the subject properties") are owned by the City of Smithton and are located in Pettis County, Missouri. The customer count includes 225 water customers and 223 wastewater customers.

The purpose of the appraisal report was to arrive at opinions of market value of the subject water and wastewater systems as private systems (the intended use) as of the date of our inspection of the subject property systems.

This Appraisal Report is prepared in conformance with Standards Rule 2-2(a) of the 2020-2023 Edition of the *Uniform Standards of Professional Appraisal Practice* (USPAP). In addition to being prepared in compliance with USPAP, this appraisal has been prepared in accordance with the *Code of Ethics* and *Standards of Professional Practice* of the Appraisal Institute.

¹ Throughout the attached appraisal report, any reference to the appraisers' "inspection", "subject property inspection", "inspection of the subject property", "inspection of the subject water and wastewater systems", etc., refers to the appraisers' customary task of viewing the subject property for purposes of observing the condition, layout, design, and utility of the real property (land and building), as is typical in the appraisal profession and in the framework of completing the appraisal process. The reference to the term "inspection" in the context of the appraisers' work should not be interpreted to suggest the appraisers have any expertise and/or qualifications in the assessment of the condition and functionality of any mechanical and non-mechanical components of the subject property water and wastewater systems. The appraisers refer the client and intended users of the attached appraisal report to the engineer's report for an assessment of the water and wastewater systems' infrastructure components. The three professional real estate appraisers co-signing the attached appraisal report are not qualified to independently detect and assess the condition and functionality of the water and wastewater systems' infrastructure components. However, the three professional real estate appraisers co-signing the attached appraisal report assume that the water and wastewater systems' components (including the plant, pumps, and all related facilities) are in proper working order and have been maintained adequately to meet all pertinent codes and regulatory requirements.

Ms. Pacific
Missouri American Water Company
June 30, 2022
Page 2

In completing our analysis of the subject property water and wastewater systems, we relied on a report prepared by Flinn Engineering, dated June 30, 2022. The Flinn Engineering report is attached to this appraisal report. Based upon our analysis of the subject property systems and taking into consideration the independent report prepared by Flinn Engineering, dated June 30, 2022, our opinions of the market values of the City of Smithton systems are as follows:

Market Value of Water Delivery System	Market Value of Wastewater Collection System
\$565,000	\$670,000

This appraisal report is prepared subject to the Extraordinary Assumptions found on Pages 11-13. The assumptions address several significant issues that impact the analysis and conclusions presented in the attached report, including:

- Information provided by the client and the City of Smithton
- Water and sewer mains presumed to be located in public rights-of-way
- Identification of the parcels owned in fee
- The Flinn Engineering Report
- The term "Inspection"
- Customer counts
- Presumed permanent easement for Well/Pump #2
- Presumed permanent easement for Water Storage Tank

This appraisal report is prepared subject to Hypothetical Conditions found on Pages 14-15.

Each of the three appraisers co-signing this appraisal report (Mr. Dinan, Mr. Batis, and Mr. Stallings) participated in the assignment by collecting and analyzing relevant data, and forming the opinions and final conclusions. In addition, Mr. Jordan Leiner of Dinan Real Estate assisted in the collection of data for this assignment. While each of the appraisers performed different tasks and were responsible for different parts of this valuation assignment, the appraisers consulted throughout the assignment with each other, the client, and representatives from the City of Smithton.

We certify that we personally have no undisclosed interest, either present or contemplated, in the real estate described herein as the subject properties; furthermore, neither the procurement of this appraisal assignment nor the negotiated compensation was contingent upon predetermined conclusions of value, value estimates which advocate the client's position, or the occurrence of any subsequent event.

Ms. Pacific
Missouri American Water Company
June 30, 2022
Page 3

On behalf of Edward J. Batis & Associates, Inc., Colliers International, and Dinan Real Estate Advisors, Inc., we appreciate the opportunity to prepare this appraisal report for the Missouri American Water Company. Please feel free to contact the undersigned should you have any questions regarding the assignment.

Sincerely,



Joseph E. Batis, MAI, AI-GRS, R/W-AC
Edward J. Batis & Associates, Inc.

General Certification Lic. #553.000493 (IL; Expires 09/21)
General Certification Lic. #2016044083 (MO; Expires 06/22)
General Certification Lic. #CG03684 (IA; Expires 06/22)
General Certification Lic. #5660 (TN; Expires 06/21)
General Certification Lic. #4001017857 (VA; Expires 06/21)



Edward W. Dinan, CRE, MAI

Dinan Real Estate Advisors, Inc.
State Certified General Real Estate Appraiser RA001300 (MO; Expires 06/22)



Chris Stallings, MAI, CCIM, MRICS

Colliers International
General Certification 202003408 (MO; Expires 06/22)

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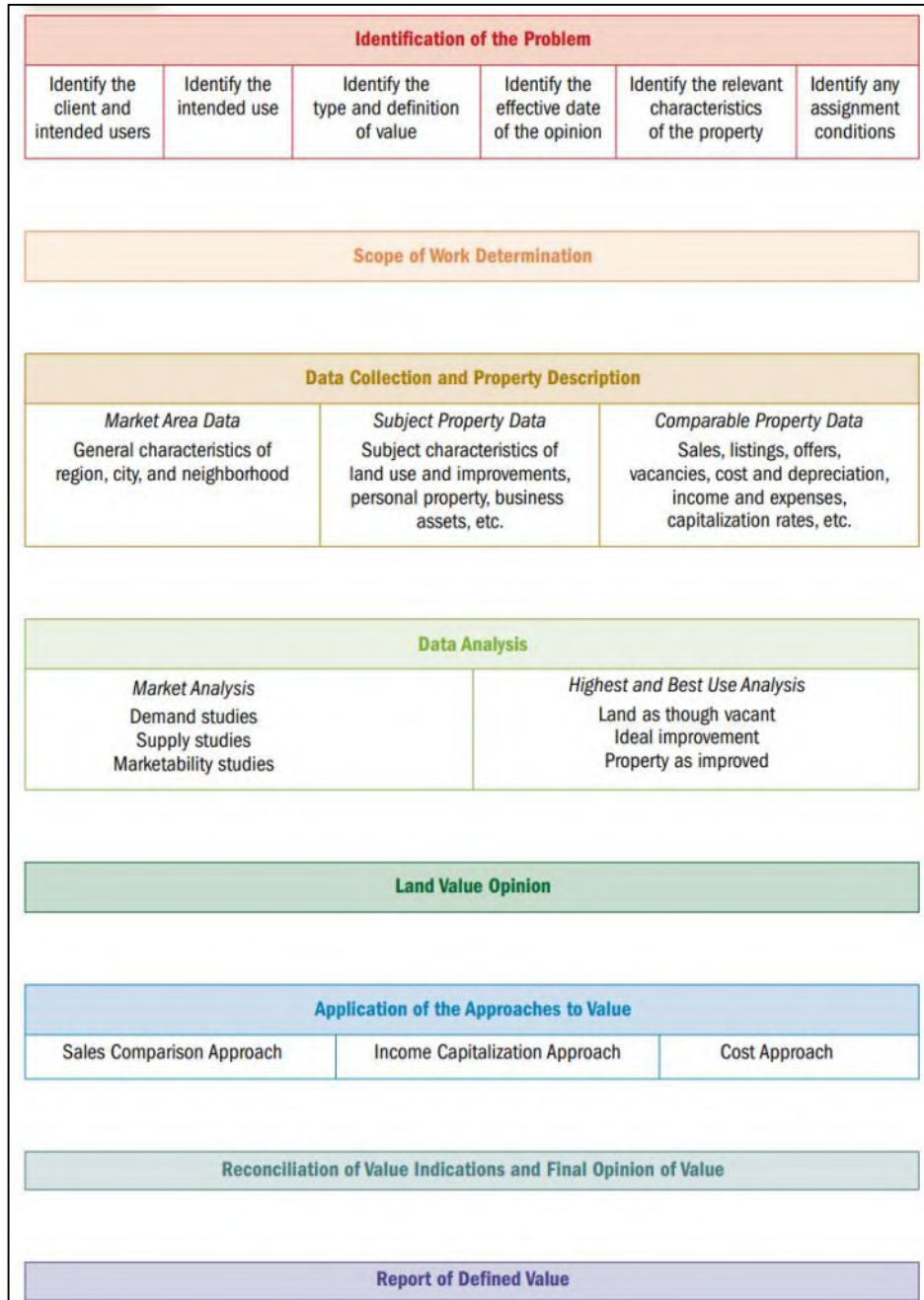
ADDENDA

Summary of Salient Facts

Property Type:	Water and wastewater systems
Location:	City of Smithton, Pettis County, Missouri
Facilities:	<p>The subject property includes the facilities that comprise the treatment and delivery of public water and the collection and treatment of wastewater.</p> <p>The water treatment and delivery system serves 225 customers and the wastewater collection and treatment system serves 223 customers.</p> <p>Please refer to the attached report prepared by Flinn Engineering for a list of the infrastructure, system assets, and facilities.</p>
Date of Inspection:	July 14, 2020
Date of Value:	July 14, 2020
Date of Report:	June 30, 2022
Type of Value:	Market Value
Property Rights:	Fee Simple Estate
Value Conclusions:	
Market Value of Water Delivery System:	<p>\$565,000 Five Hundred Sixty-Five Thousand Dollars</p>
Market Value of Wastewater Collection System:	<p>\$670,000 Six Hundred Seventy Thousand Dollars</p>

The Appraisal Process

The client requested opinions of market value for the City of Smithton water treatment and delivery system and the wastewater collection and treatment system. In arriving at opinions of value for the two subject property systems, we followed an orderly set of steps that has led us to the final conclusions of market value. This procedure is known as the "Appraisal Process" and is summarized in the exhibit below.

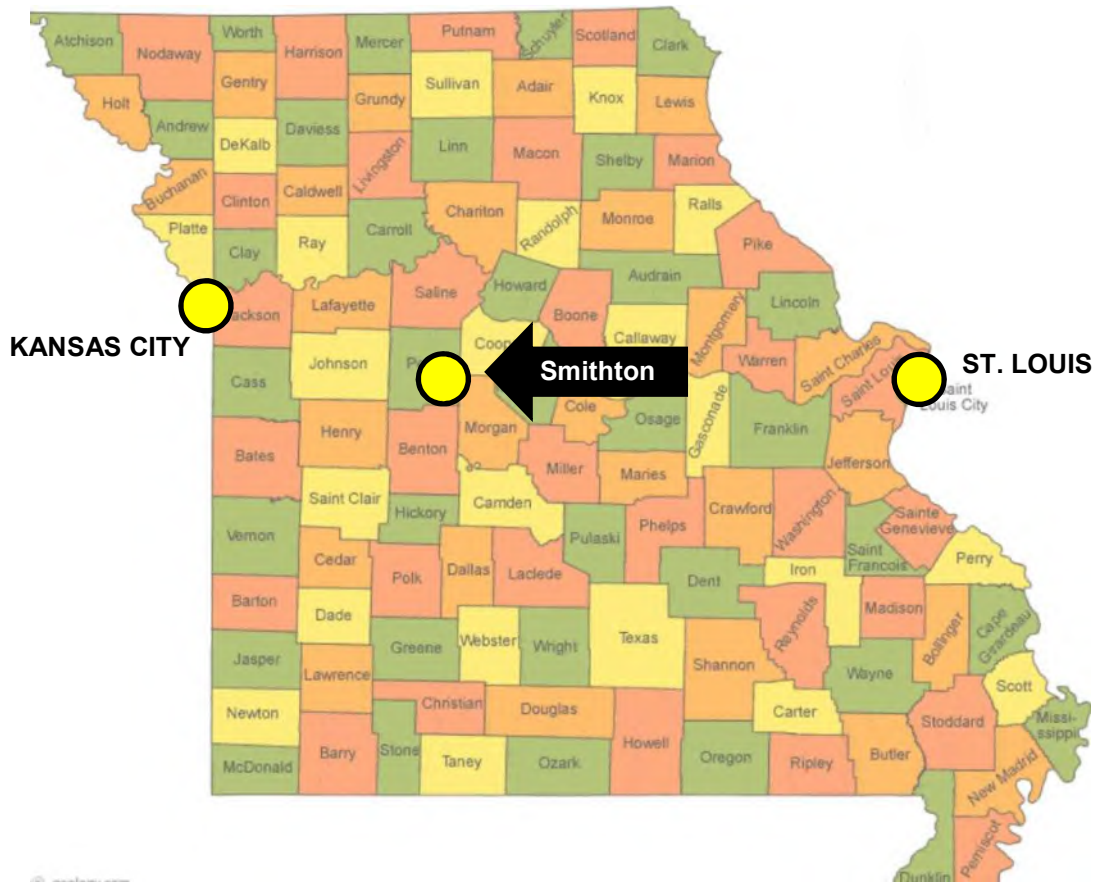


Identification of the Subject Properties

The subject properties are a combination of water and wastewater infrastructure and related components that are owned and operated by the City of Smithton. The systems provide services to residents of the Smithton (Pettis County), Missouri.

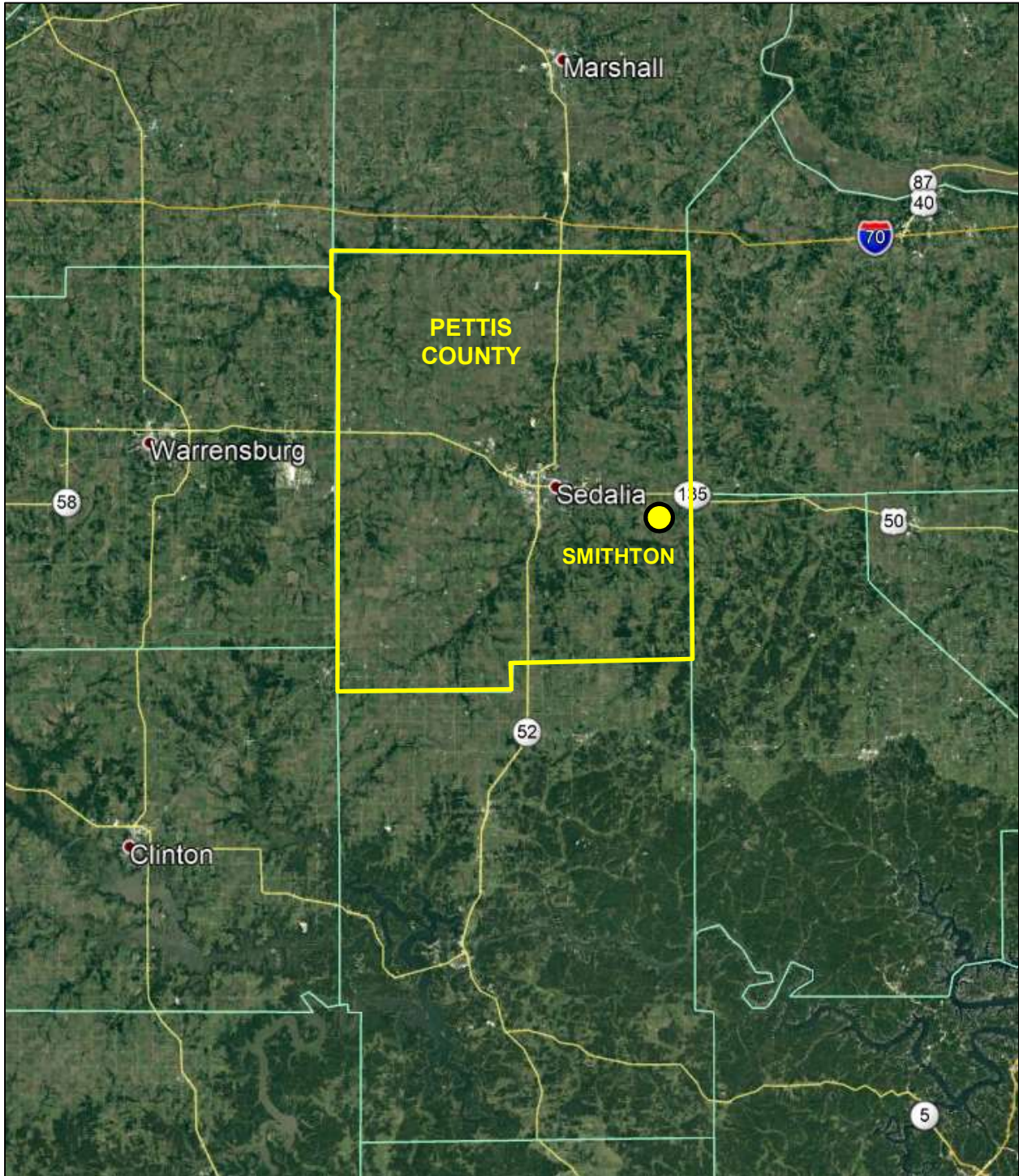
There are 225 customers for the water delivery system and 223 customers for the sewer collection system. The subject property assets include infrastructure and facilities associated with the two systems and includes three parcels of land to be conveyed in fee plus permanent easements (see Extraordinary Assumptions, Page 11 of this report).

The City of Smithton is located in the eastern part of Pettis County approximately 100 miles southeast of Kansas City and approximately 8 miles east of the City of Sedalia, the county seat of Pettis County.



Identification of the Subject Properties

(Continued)



Purpose of the Assignment and Definition of Market Value

The purpose of this appraisal assignment is to arrive at opinions of market value for the two subject property systems.

Market value is defined as:

The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.²

Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. Buyer and seller are typically motivated;
2. Both parties are well informed or well advised, and acting in what they consider their best interest;
3. A reasonable time is allowed for exposure in the open market;
4. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Effective Dates

Date of physical inspection of the property:	July 14, 2020
Effective date of value:	July 14, 2020
Date of report:	June 30, 2022

² *The Appraisal of Real Estate*, 15th Edition, (Chicago, Illinois: Appraisal Institute, 2020), p. 48.

Property Rights Appraised

The property rights appraised for the subject properties include the Fee Simple Estate of the properties which is defined as:

*Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.*³

A fee simple estate implies absolute ownership unencumbered by any other interest or estate.

Legal Descriptions

No legal descriptions have been provided for this assignment. The real property included in this valuation assignment includes four parcels of land owned in fee, presumed permanent easements for two additional facility locations, plus presumed permanent easement rights conveyed to Missouri American Water for all mains for the water and wastewater systems and related assets that are located throughout the City of Smithton. Please refer to the Extraordinary Assumptions section of this report for an explanation regarding the appraisal assignment assumptions relative to the presumed permanent easements. With respect to the four parcels owned in fee, the parcels have been identified based upon information provided by the representative of the City of Smithton at the inspection and county GIS data. In the exhibit below, the fee-owned and easement parcels are identified.

SUMMARY OF PARCELS FOR APPRASIAL			
Property Identification	Location	Property Owner	Property Interest for Appraisal
Well/Pump #1	107 E. Washington Street	City of Smithton	Permanent easement
Well/Pump #2	SE corner of Coombs St. & Myrtle Ave.	Smithton School District	Permanent easement
Lift Station #1	320 W. Coombs Street	City of Smithton	Fee estate (whole property)
Lift Station #2	600 Highway W	City of Smithton	Fee estate (whole property)
Water Storage Tank	302 E. Washington Street	City of Smithton	Permanent easement
Wastewater Treatment Lagoon	Rattlesnake Hill Road	City of Smithton	Fee estate (part of whole)

³ *The Appraisal of Real Estate*, 15th Edition, (Chicago, Illinois: Appraisal Institute, 2020), p. 60.

Exposure Time and Marketing Time

The estimated marketing time of a property implicitly assumes the property would be marketed in a manner typical in the market for that particular type of property, including utilization of the normal channels of exposure; also, implicit is the assumption that the asking price would be reasonably close to the market value of the property; and, the sale terms would conform to the market value definition included herein.

Based upon the conditions which prevailed in the local market effective July 14, 2020, we have concluded a reasonable market time for the subject property systems, each as a whole, is 12 to 24 months and the exposure time for the subject properties is also estimated to be from 12 to 24 months.

Intended Use and Intended User of the Appraisal

The intended use of this appraisal report is to assist the client (Missouri American Water Company) and the City of Smithton with the acquisition of the City of Smithton water and wastewater systems by the client. The intended users of this appraisal report include the client (for acquisition purposes), the City of Smithton (for asset disposition), and any regulatory agency with jurisdiction over the transfer of the water delivery and wastewater collection systems' assets from the City of Smithton to Missouri American Water Company.

History of the Subject Property

Pursuant to Standards Rule 1-5 of USPAP, we are required to consider and analyze any current Agreement of Sale, option, or listing of the property being appraised. We are also required to consider and analyze any sales of the subject property that have occurred within the last three years.

To the best of our knowledge, and based upon discussions with the client and a representative of the City of Smithton, the subject property has not been the subject of any sales, listings, offerings or contracts during the last three years.

Scope of Work

The subject property systems are reportedly owned and operated by the City of Smithton. In addition to receiving and reviewing numerous pertinent documents from the client pertaining to the subject property water and wastewater systems, we inspected the subject property, met with a representative from the City of Smithton, and collected market data for this assignment.

Proper and accepted appraisal methodology in the subject matter is (1) governed by Missouri legislation⁴, and (2) guided by the binding requirements of the Uniform Standards of Professional Appraisal Practice (USPAP).⁵

Explicit in the SCOPE OF WORK RULE section of the current (2020-2023) edition of USPAP is the requirement of the real estate appraiser to include research and analysis necessary to develop credible assignment results. The standard for acceptability of Scope of Work is, in part, what an appraiser's peers' actions would be in performing the same or similar assignment.⁶

In accordance with USPAP, consideration was given to the market standards in the appraisal profession established in other market areas by qualified appraisers performing similar assignments. In our opinion, the applicable professional standards of valuation of utility systems generally in Missouri -- and specifically in the case of the valuation of the City of Smithton systems -- are similar to those established and utilized in other market areas, including Illinois.

Illinois has similar legislation in place regulating the procedures for acquisitions of public utility systems by investor-owned companies. Although not identical, the procedures and framework for valuation are considered to be very similar.⁷

⁴ The Missouri legislation mandates the inclusion and participation of three independent professional real estate appraisers, all of which shall be licensed in the State of Missouri. Missouri Revised Statutes, Chapter 393, Section 393.321.1 (August 28, 2016).

⁵ USPAP is developed, interpreted, and amended by The Appraisal Standards Board (ASB) of The Appraisal Foundation. State and federal regulatory authorities enforce the content of the current or applicable edition of USPAP. All state licensed/certified professional real estate appraisers must adhere to USPAP.

⁶ USPAP, 2020-2023 Edition, Page 14.

⁷ On August 9, 2013, P.A. 98-0213, codified as 220 ILCS 5/9-210.5, went into effect in Illinois. That Section of the Public Utilities Act ("Act") provides an alternate procedure that a large public utility may choose in establishing the ratemaking rate base of a water or sewer utility that the large public utility is acquiring. Among other things, Section 9-210.5 requires that if the utility company elects the procedures of that Section of the Act, three appraisals shall be performed, the appraisers must be selected by the Illinois Commerce Commission, and each appraiser must be State certified general real estate appraiser under the Illinois Real Estate Licensing Act of 2002.

Scope of Work

(Continued)

The Illinois legislation has been in place since 2013. In Illinois, there have been several conveyances of utility systems from the public sector to investor-owned companies that were subject to the recently-enacted legislation governing such transactions.

The standards for valuation in Illinois have been established by the market and are consistently followed by the professional appraisers who engage in valuation assignments of public utility systems pursuant to the applicable governing legislation. The industry-accepted framework for the valuation of utility system assets includes the application of the Cost Approach and the application of the Sales Comparison Approach, and the omission of the Income Capitalization Approach.

The Income Capitalization Approach is not relied on in the typical appraisals of the utility systems due to the generally limited information available from the market necessary for the credible and reliable application of the Income Capitalization Approach. For instance, a proper application of the Income Capitalization Approach would require substantial detail from competing/alternate utility systems in the market, including, but not limited to, income levels from all sources (historic and future expectations), operating expense details, and market-derived capitalization rates used to convert projected net operating income into present value.

One of the factors impacting the challenges of obtaining necessary income and expense data from other systems pertains to the fact that most of the municipal-owned utility systems include public water and sanitary sewer, and often the management and budget operations for the two systems are not separated. Therefore, we have not applied the Income Capitalization Approach in the valuation of the subject property system. The omission of the Income Capitalization Approach does not result in a misleading analysis or conclusion of value. The omission of the Income Capitalization Approach is in compliance with USPAP, and is consistent with the actions of peers for similar assignments.

We applied the cost approach in arriving at an opinion of value for the system. The cost approach included an analysis and valuation of the parcels in fee, the permanent easements necessary for the water delivery and wastewater systems, the contributory value of the buildings and improvements situated on the fee parcels, and the infrastructure and components that comprise the City of Smithton water and wastewater systems.

Scope of Work

(Continued)

We then reviewed limited market data pertaining to sales of other utility systems in order to apply the Sales Comparison Approach. In our selection of market data, we included transactional data pertaining to utility systems located in Illinois. The market data available for utility systems acquired in Missouri is very limited, with Missouri American Water Company being the primary entity acquiring systems. Therefore, it is reasonable and acceptable to expand the search for comparable market data to areas outside the borders of Missouri. We selected the Illinois market due to the following factors: proximity, availability of relatively current market data, similarity of legislative rules governing the valuation process, and the existence of a competitive market environment with multiple buyers influencing the balance of supply and demand.

Also required by Missouri statute pertaining to the valuation is the inclusion of a professional engineer's report addressing the depreciated cost estimates for the components and infrastructure relating to the water delivery and wastewater system. For purposes of this appraisal report, we are relying, in part, on a report prepared by Flinn Engineering, dated June 30, 2022, in which Flinn Engineering arrives at an opinion of the depreciation cost new of the infrastructure components of the City of Smithton water and wastewater systems. We reviewed the Flinn Engineering report, consulted with its author, and reviewed the data Flinn relied on in forming their opinions. Furthermore, we reviewed other engineering data and reports pertaining to the subject system as well as several other water and wastewater systems. Based upon our reviews and independent research, we find the report prepared by Flinn Engineering to be thorough, prepared in compliance with industry standards, and credible. Therefore, we have relied on the opinions rendered in the Flinn Engineering report. Our reliance on the Flinn report is consistent with the Appraisal Institute's Guide Note 4 which addresses the conditions for an appropriate reliance by appraisers of reports prepared by others.⁸

The Flinn Engineering report does not give any value consideration to the permanent easement rights being acquired by Missouri American Water Company as part of its acquisition of the City of Smithton water and wastewater systems, nor does the Flinn report include any contributory value for the parcels owned in fee that are included with the systems. Therefore, we arrived at an independent opinion of the market value of the easements and fee parcels being acquired as part of the purchase of the subject property water and wastewater systems by Missouri American Water Company.

Finally, we prepared this appraisal report in compliance with the applicable standards as set forth in the 2020-2023 Edition of USPAP.

⁸ The Appraisal Institute has adopted Guide Notes to the Institute's Standards of Professional Practice ("SPP"). The Guide Notes are not part of the SSP but provide guidance on how the standards requirements may apply to specific situations.

Extraordinary Assumptions

The 2020-2023 Edition of the *Uniform Standards of Professional Appraisal Practice* (USPAP) defines an extraordinary assumption as follows:

An assignment-specific assumption as of the effective date regarding uncertain information used in an analysis which, if found to be false, could alter the appraiser's opinions and conclusions.

This appraisal report is prepared subject to the following Extraordinary Assumptions.

INFORMATION PROVIDED BY THE CLIENT AND THE CITY OF SMITHTON

We have been provided information for this assignment by the client (Missouri American Water Company) and from the City of Smithton. The information is assumed to be correct, accurate, and complete. This includes, but is not limited to, all information pertaining to the subject property systems (financial, physical, legal) as well as all information pertaining to other systems acquired by American Water.

We reserve the right to revise all opinions and conclusions presented herein upon receiving or becoming aware of any information that is inconsistent with and/or contradicts the information provided by the client and the City of Smithton. The client and intended users are advised that if this assumption is found to be false, it could impact the analysis and opinions.

WATER AND SEWER MAINS PRESUMED TO BE LOCATED IN PUBLIC RIGHTS OF WAY

The valuation of the subject property water delivery and wastewater collection systems includes the water and sewer mains that are located throughout the community and that connect the facilities. According to City Smithton officials, the water mains and sewer mains are located in public rights of way.

We reserve the right to revise all opinions and conclusions presented herein upon receiving or becoming aware of any information that is inconsistent with and/or contradicts the assumption outlined above. The client and intended users are advised that if this assumption is found to be false, it could impact the analysis and opinions.

Extraordinary Assumptions

(Continued)

IDENTIFICATION OF THE PARCELS OWNED IN FEE

Part of this analysis includes the valuation of three parcels of land owned in fee. Surveys of the parcels had not been performed at the time of this report; therefore, the parcels are described herein based upon information from public sources, namely the county GIS data. The information obtained from the public sources is assumed to be correct.

We reserve the right to revise all opinions and conclusions presented herein upon receiving or becoming aware of any information that is inconsistent with and/or contradicts the land sizes/characteristics as reported herein for the parcels owned by the City of Smithton. The client and intended users are advised that if this assumption is found to be false, it could impact the analysis and opinions.

THE FLINN ENGINEERING REPORT

The Flinn Engineering report, dated June 30, 2022, referenced in the Scope of Work section of this report is assumed to be accurate, complete, and prepared in compliance with applicable industry standards.

We reserve the right to revise all opinions and conclusions presented herein upon receiving or becoming aware of any information that is inconsistent with and/or contradicts the information, analysis, opinions, and conclusions presented in the Flinn report. We also reserve the right to revise all opinions and conclusions presented herein upon receiving more detailed and complete information regarding the age and condition of the existing water and sewer mains. The client and intended users are advised that if this assumption is found to be false, it could impact the analysis and opinions.

THE TERM “INSPECTION”

Throughout this appraisal report, any reference to the appraisers' "inspection", "subject property inspection", "inspection of the subject property", "inspection of the subject water and wastewater systems", etc., refers to the appraisers' customary task of viewing the subject property for purposes of observing the condition, layout, design, and utility of the real property (land and building), as is typical in the appraisal professional and in the framework of completing the appraisal process.

The reference to the term "inspection" in the context of the appraisers' work should not be interpreted to suggest the appraisers have any expertise and/or qualifications in the assessment of the condition and functionality of any mechanical and non-mechanical components of the subject water delivery and wastewater systems.

Extraordinary Assumptions

(Continued)

The appraisers refer the client and intended/authorized users of this appraisal report to the Flinn Engineering report for an assessment of the water and wastewater systems' infrastructure components. The three professional real estate appraisers co-signing this appraisal report are not qualified to independently detect and assess the condition and functionality of the water and wastewater systems' infrastructure components. However, the three professional real estate appraisers co-signing this appraisal report assume that the water delivery and wastewater systems' components (including the plant, pumps, and all related facilities) are in proper working order and have been maintained adequately to meet all pertinent codes and regulatory requirements. The client and intended users are advised that if this assumption is found to be false, it could impact the analysis and opinions.

CUSTOMER COUNTS

According to the City of Smithton, the subject property water delivery system serves 225 customers and the wastewater collection system serves 223 customers. This appraisal is based upon the assumption that the customer counts provided by City of Smithton are accurate. The client and intended users are advised that if this assumption is found to be false, it could impact the analysis and opinions.

PRESUMED PERMANENT EASEMENT FOR WELL/PUMP #2

With the exception of Well #2, all of the facilities that are part of the subject properties are located on parcels of land owned by the City of Smithton. Well #2 is located on property owned by the school district. This appraisal assumes there is a permanent easement that provides reasonable access to Well #2 for the continued use, operation, maintenance, repair, inspection, etc., of Well #2. We have not been provided plats and/or easement documents to review. The client and intended users are advised that if this assumption is found to be false, it could impact the analysis and opinions.

PRESUMED PERMANENT EASEMENT FOR WATER STORAGE TOWER

The City of Smithton owns the tract of land on which the water tower is located. The appraisal assumes the City of Smithton will grant a permanent easement over the whole parcel for the continued use, operation, maintenance, repair, inspection, etc., of the water tower, including reasonable means of ingress and egress. We have not been provided plats and/or easement documents to review. The client and intended users are advised that if this assumption is found to be false, it could impact the analysis and opinions.

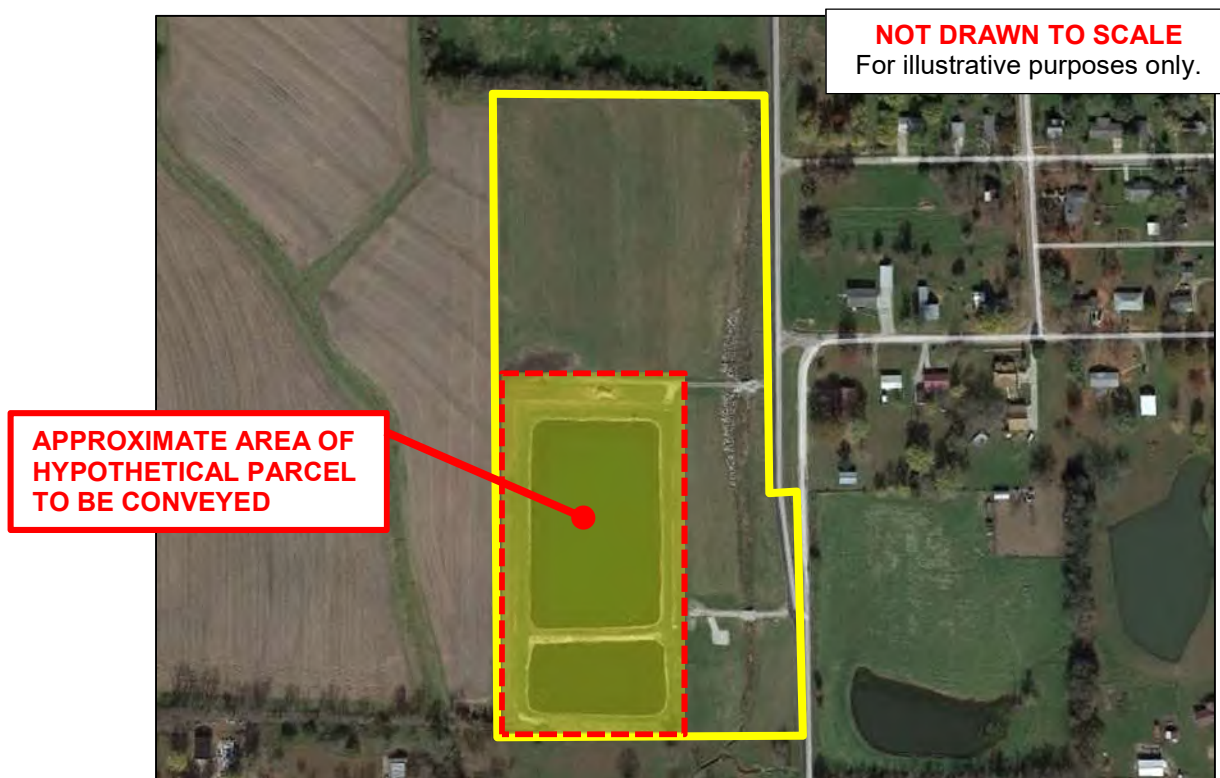
Hypothetical Conditions

The 2020-2023 Edition of the *Uniform Standards of Professional Appraisal Practice* (USPAP) defines a hypothetical condition as follows:

A condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis.

This appraisal assignment includes two hypothetical conditions.

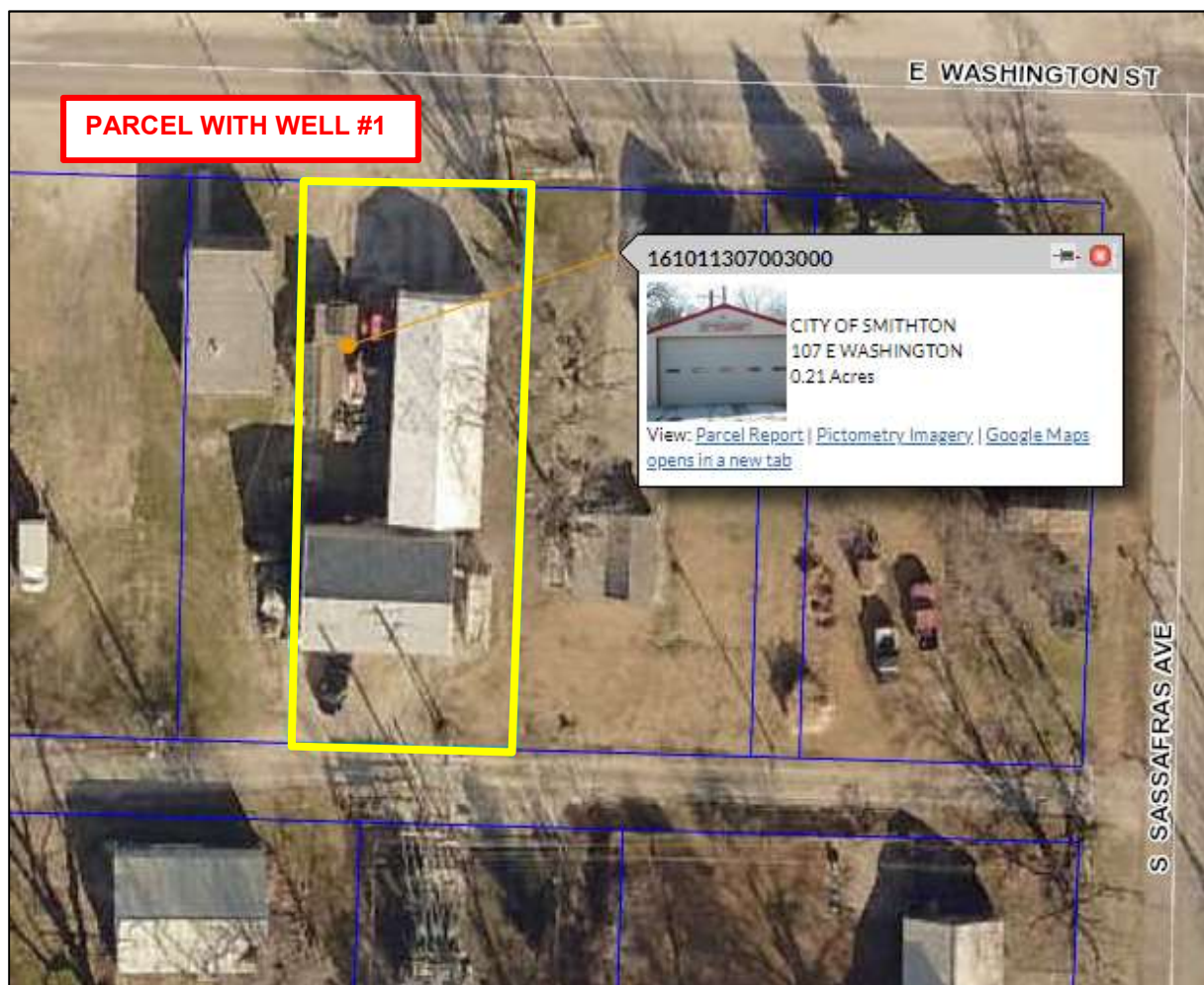
First, the asset identified as the wastewater treatment facility is located on city-owned property that contains approximately 16.5 acres (outlined in yellow in exhibit below). In addition to the wastewater treatment lagoon, 16.5-acre parcel is improved with a helipad and has vacant/unimproved land located north of the lagoon. The client seeks to acquire only a portion of the property – that part necessary for access to and the operation of the wastewater plant -- and the City of Smithton will retain ownership of the balance of the land. For purposes of this appraisal, the parcel of land assumed to be transferred as part of the acquisition contains approximately 5.5 acres (shaded in yellow and outlined in red in exhibit below). This appraisal assumes the whole property will be legally subdivided and the proposed purchaser, Missouri American Water, will be conveyed a parcel of approximately 5.5 acers with legal and reasonable means of access for the continued use, operation, maintenance, inspection, repairs, etc., of the wastewater treatment facility.



Hypothetical Conditions

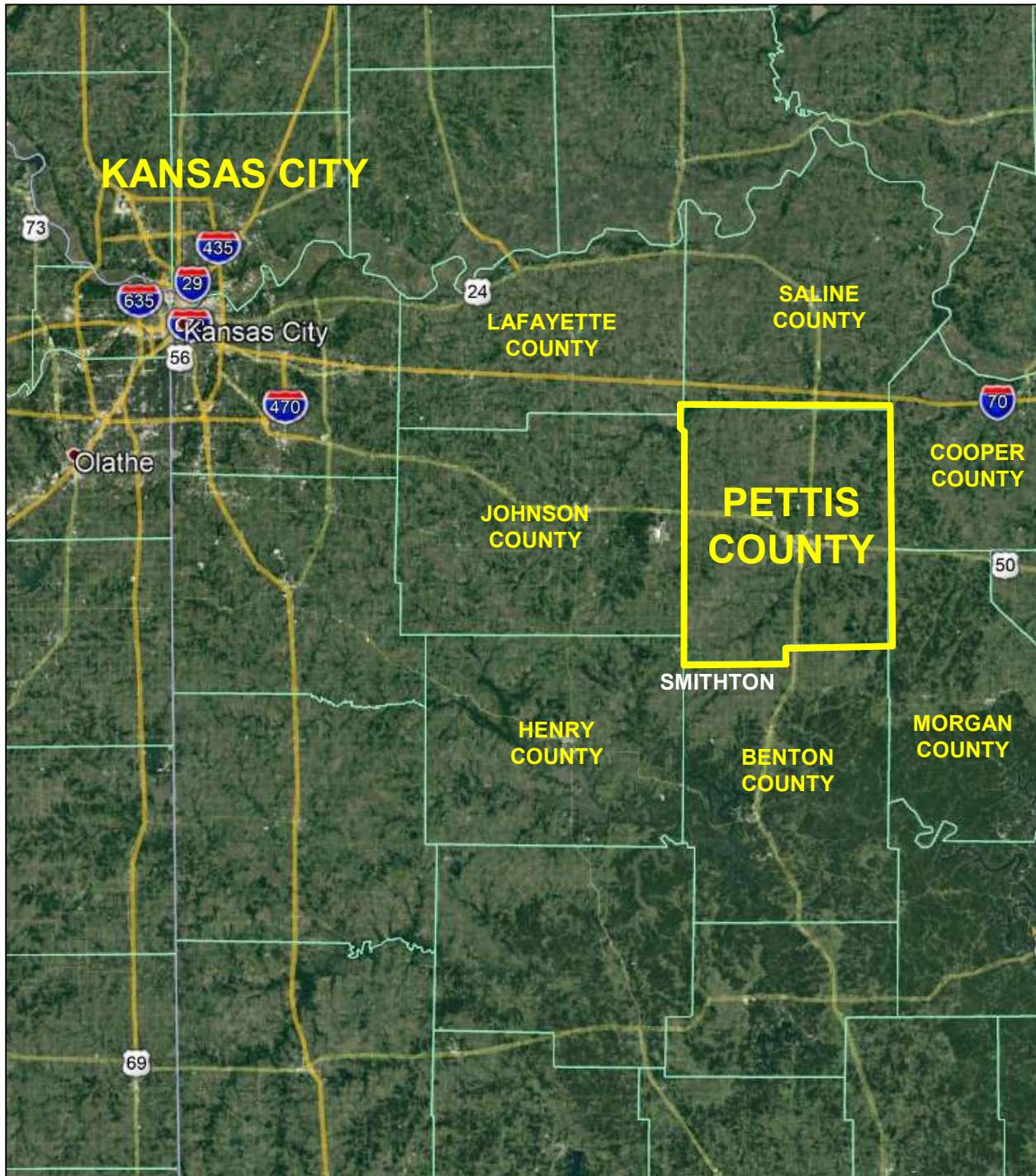
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Second, the asset identified as Well #1 is located on a city-owned parcel of land that is improved with buildings that are not part of the subject property assets. The city-owned parcel is located at 107 E. Washington Street, is further identified as tax parcel 161011307003000, and is outlined in yellow in the exhibit below. This appraisal assumes there will be a permanent easement providing the necessary real property rights for the proposed purchaser to have reasonable access for the continued use, operation, maintenance, inspection, repairs, etc., of Well #1.



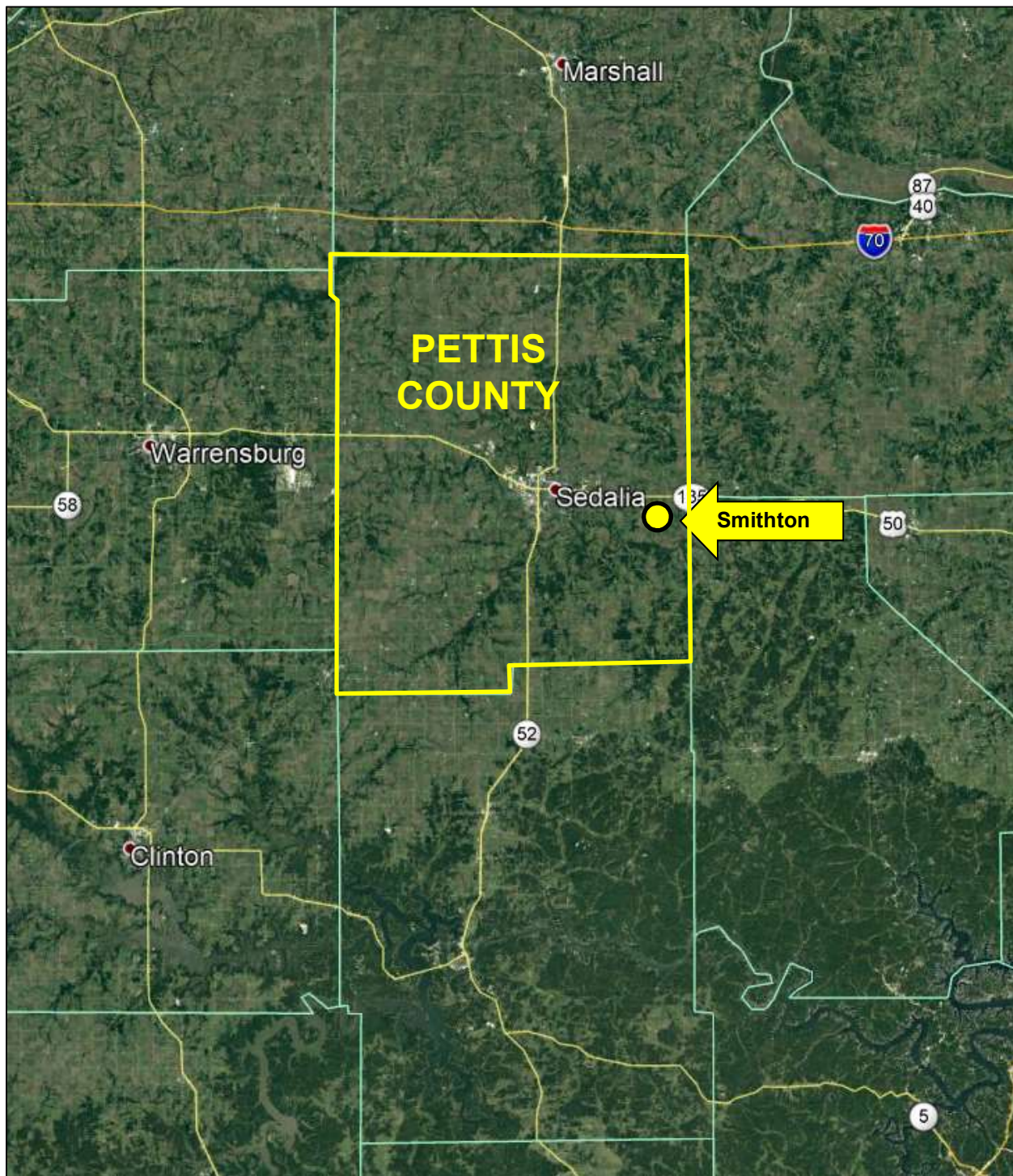
Pettis County and City of Smithton Overview

The City of Smithton is a municipality located within Pettis County, a fourth class county in the State of Missouri. Pettis County comprises the Sedalia, Missouri Micropolitan Statistical Area which is home to the site of the Missouri State Fair, in Sedalia.



Pettis County and City of Smithton Overview

(Continued)



Pettis County and City of Smithton Overview

(Continued)

The demographic information below pertaining to Lincoln County is based on U.S. Census Bureau data from 2020.

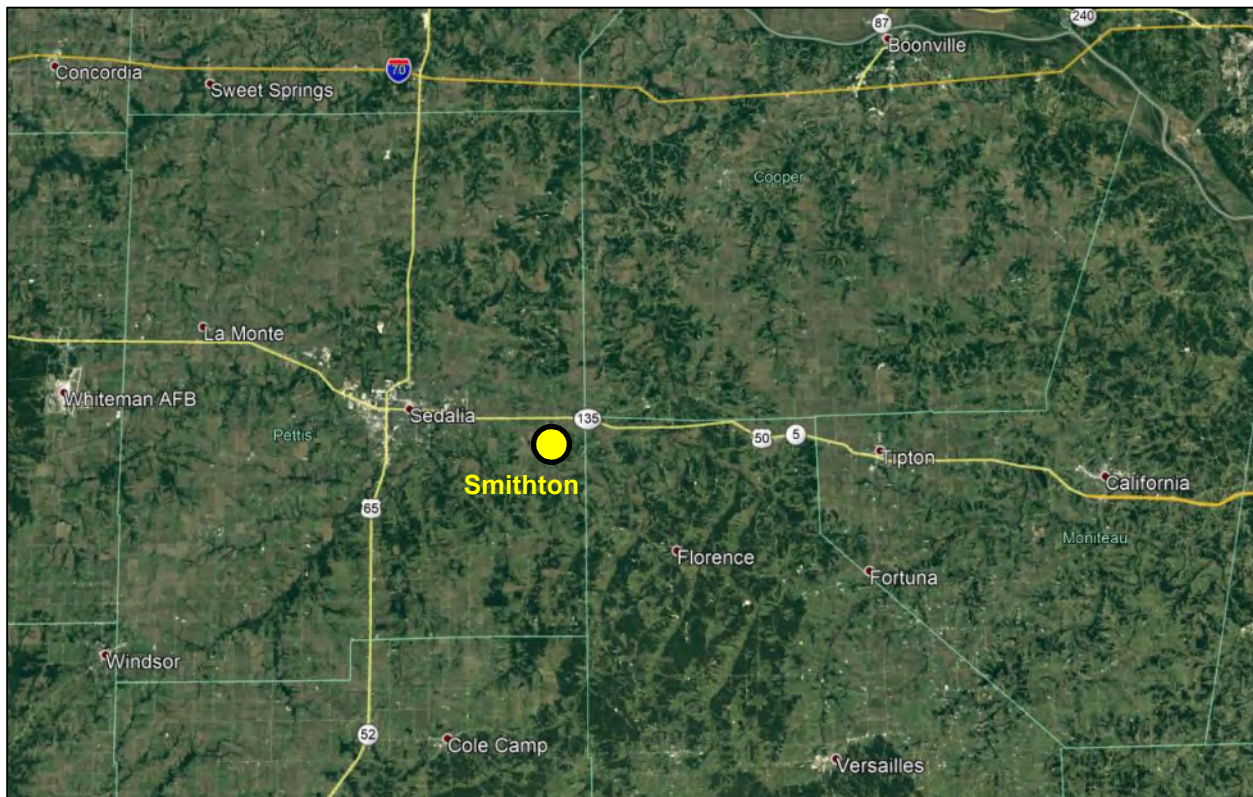
<i>Pettis County MO Data & Demographics (As of July 1, 2020)</i>			
POPULATION		HOUSING	
Total Population	43,404 (100%)	Total HU (Housing Units)	18,733 (100%)
Population in Households	42,553 (98.0%)	Owner Occupied HU	11,056 (59.0%)
Population in Families	33,910 (78.1%)	Renter Occupied HU	5,740 (30.6%)
Population in Group Quarters ¹	851 (2.0%)	Vacant Housing Units	1,937 (10.3%)
Population Density	64	Median Home Value	\$125,430
Diversity Index ²	37	Average Home Value	\$160,673
		Housing Affordability Index ³	199
INCOME		HOUSEHOLDS	
Median Household Income	\$45,096	Total Households	16,796
Average Household Income	\$59,687	Average Household Size	2.53
% of Income for Mortgage ⁴	12%	Family Households	11,033
Per Capita Income	\$23,125	Average Family Size	3
Wealth Index ⁵	56		
GROWTH RATE / YEAR		2010-2020	2020-2025
Population		0.27%	0.28%
Households		0.22%	0.24%
Families		0.07%	0.14%
Median Household Income			1.21%
Per Capita Income			1.85%
Owner Occupied HU			0.27%
<i>Pettis County MO - Peer Comparisons by Rank and Percentile</i>			
The table below compares Pettis County to the other 115 counties and county equivalents in Missouri by rank and percentile using July 1, 2020 data. The location Ranked # 1 has the highest value. A location that ranks higher than 75% of its peers would be in the 75th percentile of the peer group.			
Variable Description	Rank	Percentile	
Total Population	# 26	78th	
Population Density	# 31	74th	
Median Household Income	# 59	50th	
Housing Affordability Index	# 58	50th	
Per Capita Income	# 66	43rd	
Diversity Index	# 16	87th	

Pettis County and City of Smithton Overview

(Continued)

Smithton is a relatively small rural community located in the eastern part of the county and surrounded by undeveloped agricultural land (see exhibit below). The major roads into the community include Highway W (north/south; located on the east side of the community) and U.S. Route 50 (east/west; located north of the community and providing access to Smithton from Sedalia to the west and Tipton (Moniteau County) to the east).

The nearest interstate to Smithton is Interstate 70 (east/west; connects Kansas City to the west with Columbia and St. Louis to the east) which is located approximately 18 miles north of Smithton.



Pettis County and City of Smithton Overview

(Continued)

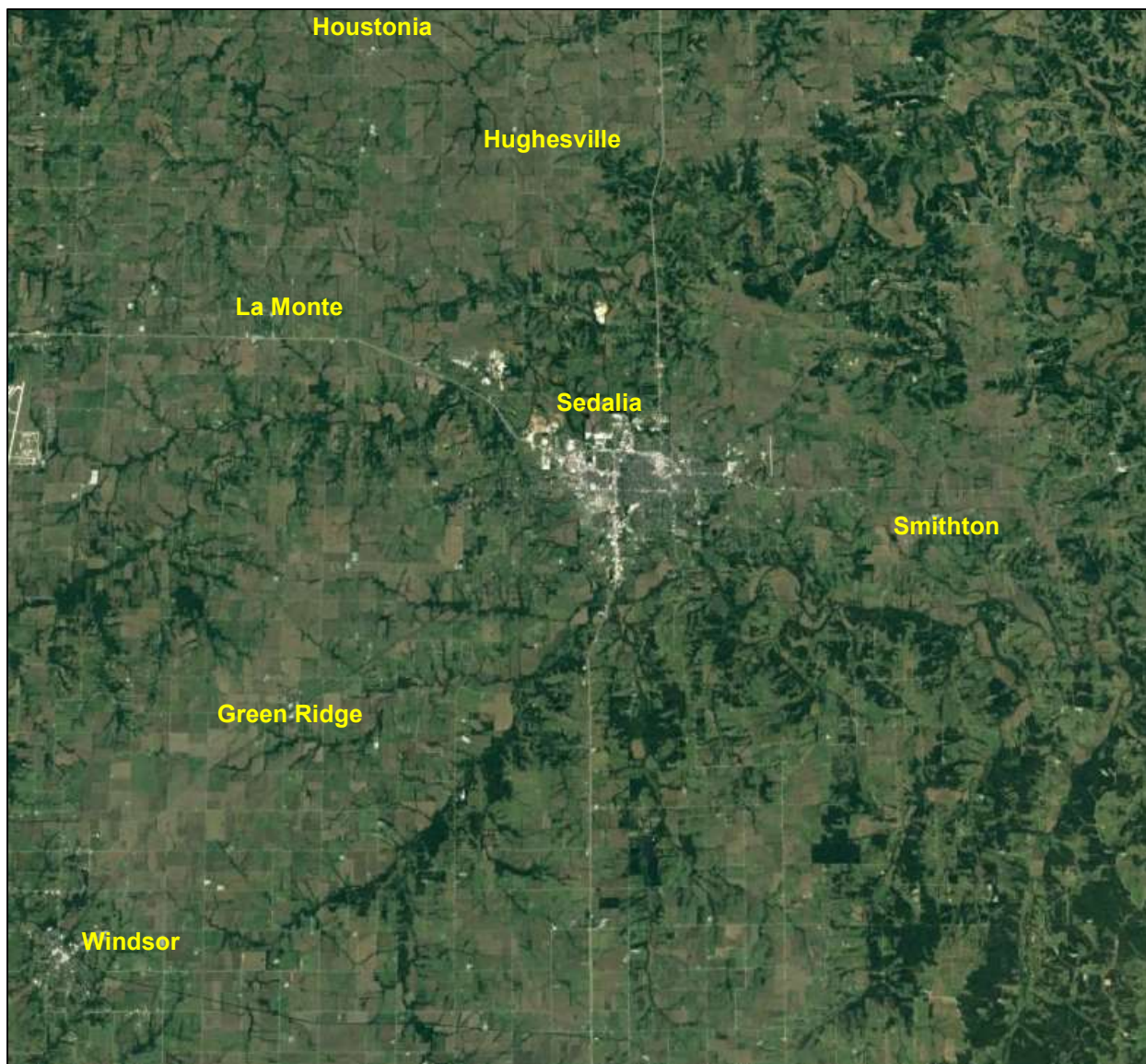
The demographic information below pertaining to Smithton is based on U.S. Census Bureau data from 2020. On the following page is a comparison of Smithton to the other communities located in Pettis County.

Smithton, MO Data & Demographics (As of July 1, 2020)			
POPULATION		HOUSING	
Total Population	565 (100%)	Total HU (Housing Units)	224 (100%)
Population in Households	555 (98.2%)	Owner Occupied HU	157 (70.1%)
Population in Families	464 (82.1%)	Renter Occupied HU	47 (21.0%)
Population in Group Quarters ¹	10 (1.8%)	Vacant Housing Units	20 (8.9%)
Population Density	1,878	Median Home Value	\$80,707
Diversity Index ²	26	Average Home Value	\$100,796
		Housing Affordability Index ³	326
INCOME		HOUSEHOLDS	
Median Household Income	\$44,658	Total Households	204
Average Household Income	\$49,984	Average Household Size	2.72
% of Income for Mortgage ⁴	8%	Family Households	146
Per Capita Income	\$18,486	Average Family Size	3
Wealth Index ⁵	40		
GROWTH RATE / YEAR		2010-2020	2020-2025
Population		-0.09%	0.07%
Households		-0.1%	0.0%
Families		-0.33%	-0.14%
Median Household Income			-0.28%
Per Capita Income			0.53%
Owner Occupied HU			-0.13%
Smithton, MO - Peer Comparisons by Rank and Percentile			
The table below compares Smithton to the other 1,032 incorporated cities, towns and CDPs in Missouri by rank and percentile using July 1, 2020 data. The location Ranked # 1 has the highest value. A location that ranks higher than 75% of its peers would be in the 75th percentile of the peer group.			
Variable Description	Rank	Percentile	
Total Population	# 478	54th	
Population Density	# 115	89th	
Median Household Income	# 587	43rd	
Housing Affordability Index	# 953	92nd	
Per Capita Income	# 925	10th	
Diversity Index	# 197	81st	

Pettis County and City of Smithton Overview

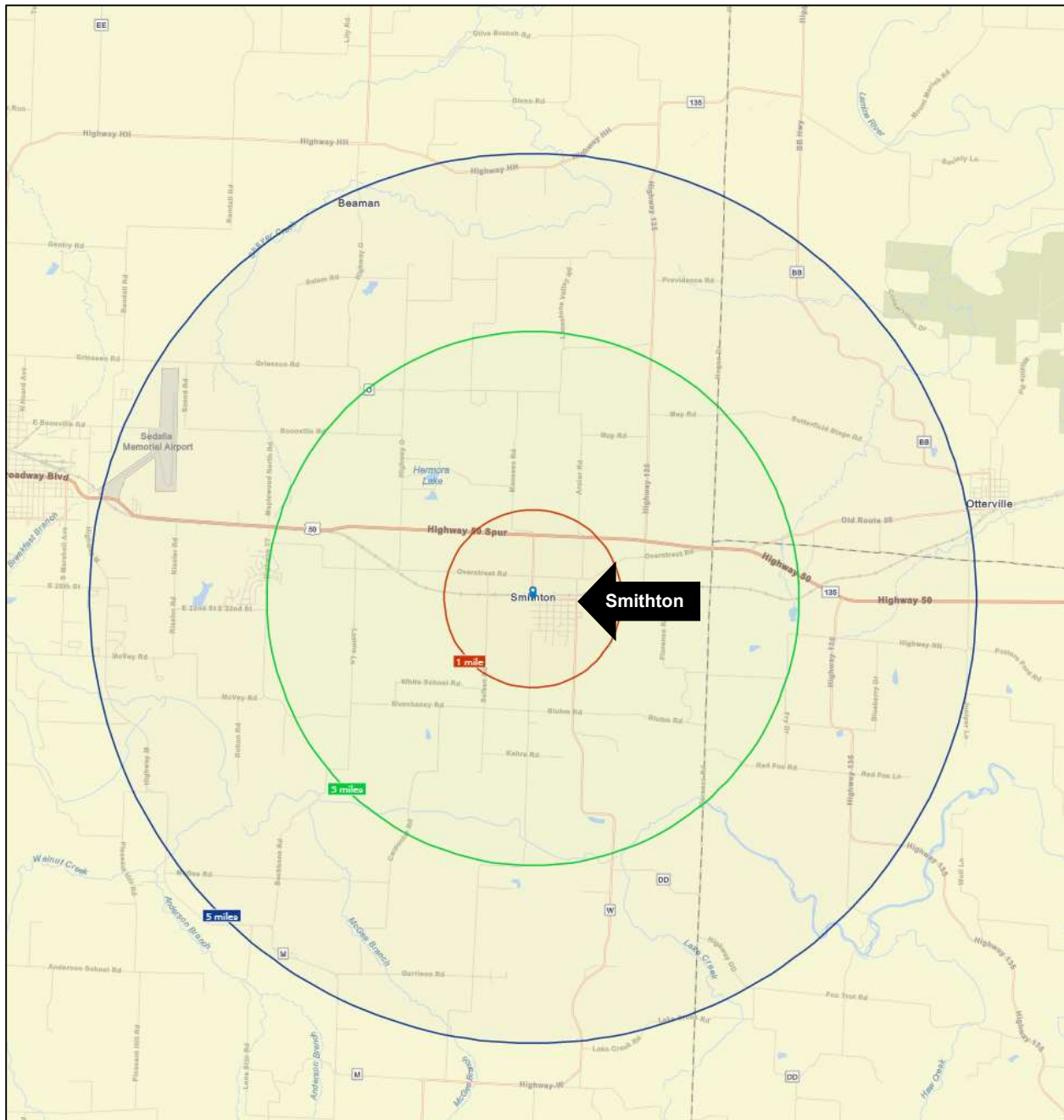
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Pettis County - Community Demographic Data			
2020 Census Bureau Data			
<i>Location</i>	<i>Total Population</i>	<i>Median Household Income</i>	<i>Average Home Value</i>
Sedalia (county seat)	21,765	\$38,137	\$113,010
Smithton	565	\$44,658	\$100,796
Green Ridge	473	\$50,478	\$145,246
Houstonia	220	\$57,443	\$126,838
Hughesville	183	\$57,128	\$125,439
La Monte	1,148	\$42,073	\$122,465
Windsor	2,865	\$41,419	\$93,171



Pettis County and City of Smithton Overview (Continued)

According to U.S. Census Bureau data, the total estimated 2020 population within five miles of the City of Smithton is approximately 4,090 although the population within one mile of Smithton is approximately 645. The exhibit below shows rings of 1, 3 and 5 miles from Smithton. On the following two pages are exhibits with corresponding demographic data.



Pettis County and City of Smithton Overview

(Continued)

**Executive Summary**

Smithton, Missouri
Rings: 1, 3, 5 mile radii

Prepared by Esri
Latitude: 38.68339
Longitude: -93.09751

	1 mile	3 miles	5 miles
Population			
2000 Population	607	1,603	3,924
2010 Population	651	1,670	4,096
2020 Population	645	1,639	4,090
2025 Population	647	1,638	4,110
2000-2010 Annual Rate	0.70%	0.41%	0.43%
2010-2020 Annual Rate	-0.09%	-0.18%	-0.01%
2020-2025 Annual Rate	0.06%	-0.01%	0.10%
2020 Male Population	49.0%	49.4%	50.1%
2020 Female Population	50.9%	50.6%	49.9%
2020 Median Age	36.4	40.7	41.9

In the identified area, the current year population is 4,090. In 2010, the Census count in the area was 4,096. The rate of change since 2010 was -0.01% annually. The five-year projection for the population in the area is 4,110 representing a change of 0.10% annually from 2020 to 2025. Currently, the population is 50.1% male and 49.9% female.

Median Age

The median age in this area is 36.4, compared to U.S. median age of 38.5.

Race and Ethnicity

	1 mile	3 miles	5 miles
2020 White Alone	91.5%	92.1%	93.6%
2020 Black Alone	1.4%	1.5%	1.1%
2020 American Indian/Alaska Native Alone	0.2%	0.5%	0.6%
2020 Asian Alone	0.5%	0.5%	0.5%
2020 Pacific Islander Alone	0.0%	0.1%	0.1%
2020 Other Race	3.6%	3.0%	2.1%
2020 Two or More Races	2.9%	2.4%	2.0%
2020 Hispanic Origin (Any Race)	6.2%	5.4%	4.2%

Persons of Hispanic origin represent 4.2% of the population in the identified area compared to 18.8% of the U.S. population. Persons of Hispanic Origin may be of any race. The Diversity Index, which measures the probability that two people from the same area will be from different race/ethnic groups, is 19.3 in the identified area, compared to 65.1 for the U.S. as a whole.

Households

	1 mile	3 miles	5 miles
2020 Wealth Index	41	51	57
2000 Households	222	547	1,372
2010 Households	238	586	1,480
2020 Total Households	235	573	1,474
2025 Total Households	235	571	1,477
2000-2010 Annual Rate	0.70%	0.69%	0.76%
2010-2020 Annual Rate	-0.12%	-0.22%	-0.04%
2020-2025 Annual Rate	0.00%	-0.07%	0.04%
2020 Average Household Size	2.69	2.67	2.62

The household count in this area has changed from 1,480 in 2010 to 1,474 in the current year, a change of -0.04% annually. The five-year projection of households is 1,477, a change of 0.04% annually from the current year total. Average household size is currently 2.62, compared to 2.61 in the year 2010. The number of families in the current year is 1,069 in the specified area.

Data Note: Income is expressed in current dollars. Housing Affordability Index and Percent of Income for Mortgage calculations are only available for areas with 50 or more owner-occupied housing units.
Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2020 and 2025. Esri converted Census 2000 data into 2010 geography.

October 14, 2020

Pettis County and City of Smithton Overview

(Continued)



Executive Summary

Smithton, Missouri
Rings: 1, 3, 5 mile radii

Prepared by Esri
Latitude: 38.68339
Longitude: -93.09751

	1 mile	3 miles	5 miles
Mortgage Income			
2020 Percent of Income for Mortgage	7.5%	7.6%	9.2%
Median Household Income			
2020 Median Household Income	\$44,699	\$47,150	\$50,254
2025 Median Household Income	\$44,167	\$48,401	\$52,278
2020-2025 Annual Rate	-0.24%	0.53%	0.79%
Average Household Income			
2020 Average Household Income	\$50,510	\$56,707	\$60,696
2025 Average Household Income	\$52,099	\$60,474	\$65,892
2020-2025 Annual Rate	0.62%	1.29%	1.66%
Per Capita Income			
2020 Per Capita Income	\$18,522	\$20,374	\$21,779
2025 Per Capita Income	\$19,040	\$21,668	\$23,572
2020-2025 Annual Rate	0.55%	1.24%	1.59%

Households by Income
Current median household income is \$50,254 in the area, compared to \$62,203 for all U.S. households. Median household income is projected to be \$52,278 in five years, compared to \$67,325 for all U.S. households

Current average household income is \$60,696 in this area, compared to \$90,054 for all U.S. households. Average household income is projected to be \$65,892 in five years, compared to \$99,510 for all U.S. households

Current per capita income is \$21,779 in the area, compared to the U.S. per capita income of \$34,136. The per capita income is projected to be \$23,572 in five years, compared to \$37,691 for all U.S. households

Housing			
2020 Housing Affordability Index	313	310	258
2000 Total Housing Units	246	600	1,467
2000 Owner Occupied Housing Units	185	467	1,184
2000 Renter Occupied Housing Units	36	80	189
2000 Vacant Housing Units	25	53	94
2010 Total Housing Units	260	641	1,595
2010 Owner Occupied Housing Units	191	486	1,252
2010 Renter Occupied Housing Units	47	100	228
2010 Vacant Housing Units	22	55	115
2020 Total Housing Units	260	642	1,618
2020 Owner Occupied Housing Units	181	459	1,206
2020 Renter Occupied Housing Units	54	114	267
2020 Vacant Housing Units	25	69	144
2025 Total Housing Units	260	643	1,628
2025 Owner Occupied Housing Units	180	456	1,207
2025 Renter Occupied Housing Units	55	115	270
2025 Vacant Housing Units	25	72	151

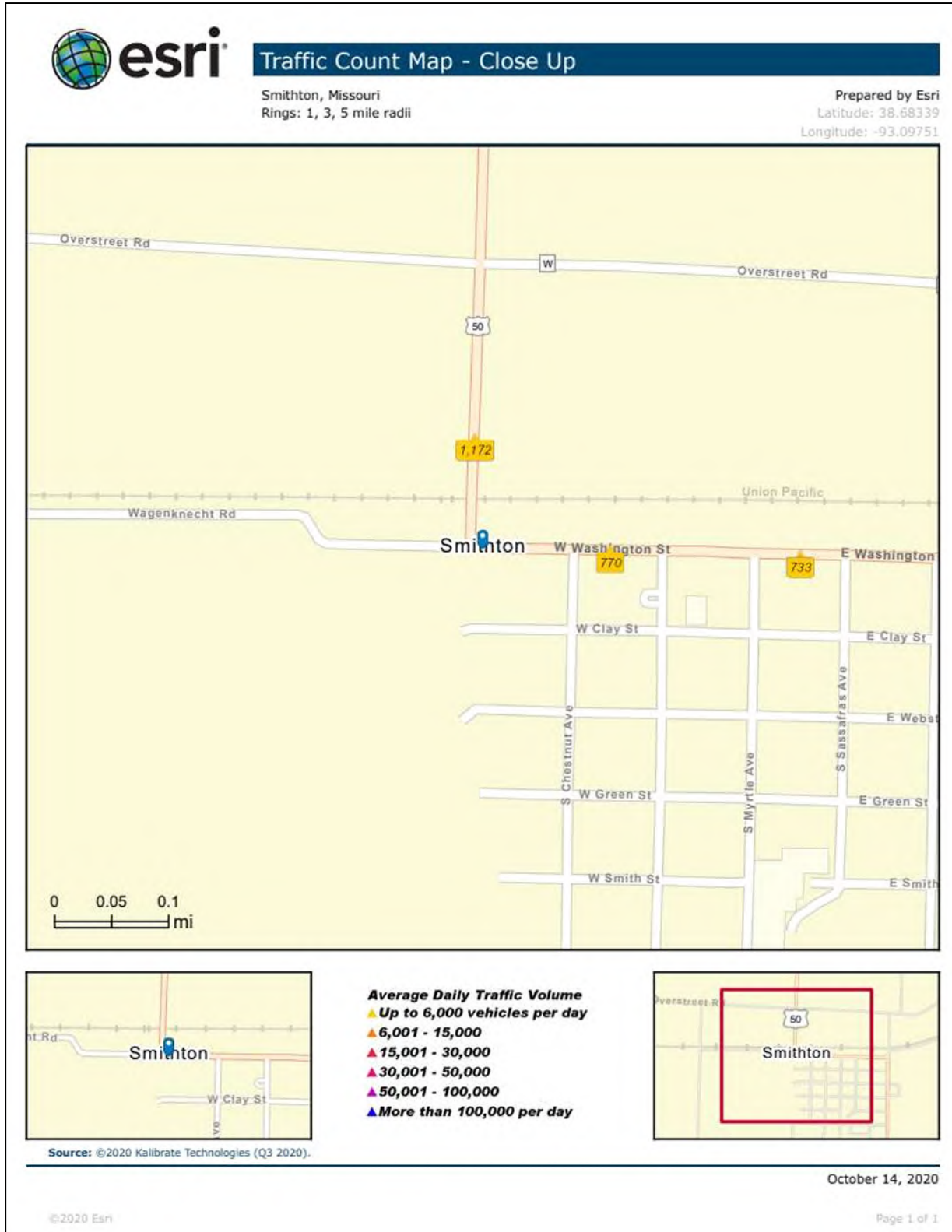
Currently, 74.5% of the 1,618 housing units in the area are owner occupied; 16.5%, renter occupied; and 8.9% are vacant. Currently, in the U.S., 56.4% of the housing units in the area are owner occupied; 32.3% are renter occupied; and 11.3% are vacant. In 2010, there were 1,595 housing units in the area - 78.5% owner occupied, 14.3% renter occupied, and 7.2% vacant. The annual rate of change in housing units since 2010 is 0.64%. Median home value in the area is \$110,405, compared to a median home value of \$235,127 for the U.S. In five years, median value is projected to change by 4.00% annually to \$134,317.

Data Note: Income is expressed in current dollars. Housing Affordability Index and Percent of Income for Mortgage calculations are only available for areas with 50 or more owner-occupied housing units.

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2020 and 2025. Esri converted Census 2000 data into 2010 geography.

October 14, 2020

Pettis County and City of Smithton Overview (Continued)



Pettis County and City of Smithton Overview

(Continued)

Incorporated in 1955, the city of Smithton is a fourth class city in the State of Missouri. Smithton is located approximately five miles west of the City of Sedalia, the Pettis County Seat, and approximately twenty miles south of Interstate 70 and is generally bordered by Overstreet Road to the north, Bluhm Road to the south, Florence Road to the east, and Selken Road to the west. Nearby communities include Bearman, Clifton City, Otterville, Florence, Bahner, Spring Fork, and Sedalia.

Smithton was platted in 1859 by William E. Combs. It was named after General George R. Smith, one of the most active workers in raising funds to locate on what was called the “inland route” to distinguish it from the “river route” on the Missouri Pacific Railway, now the Union Pacific Railway which runs east and west along the northern border of the city.

According to the United States Census Bureau, the City of Smithton has a total area of 0.30 square miles. In 2018 there were 517 people and 188 households residing in the City of Smithton. The population density was 1,723 inhabitants per square mile. There were 220 housing units of which were 85.5 percent owner occupied. The average household size was 2.67. The median age in the village was 36.4 years. 30.8 percent of residents were under the age of 20; 29 percent were between the ages of 21 and 40; 10.2 percent were from 41 to 50; 20.3 percent were in the range of 51 to 64; and 9.7 percent were 65 years of age or older.

Major employers include Gargill Pork, Smithton R-VI School District, and the City of Smithton.

In summary, the subject neighborhood is an established area with adequate access to Interstate 70. The overall outlook for the neighborhood is one of relative stability with little to modest growth taking place in the foreseeable future.

Description of the Subject Properties

The subject property systems include the assets and facilities that comprise the treatment and delivery of water and the collection and treatment of wastewater. The information below is from the Flinn Engineering Report, dated June 30, 2022. Please refer to the attached report prepared by Flinn Engineering for more details pertaining of the infrastructure, system assets, and facilities.

Water System

The water system includes two (2) deep wells, an elevated water storage tank, and the water distribution system.

Well #1 was constructed in 1929 and had a major improvement completed in 1993. The improvement included a pump replacement and the addition of chlorine room. In 2010, a new meter was installed on the well and pump controls were installed. The control system is used to operate both wells. The well is 2,300 feet deep and has a pumping capacity of 170 gallons per minute (gpm). Well #2 was constructed in 1983 and is 1,980 feet deep. The building includes a chlorine room. The pumping capacity is 200 gpm.

Wastewater System

The wastewater system includes a treatment plant, two (2) lift stations, and the wastewater collection system.

The wastewater treatment plant is a two-cell lagoon system with a design flow of 62,000 gallons per day, according to the MDNR Operating Permit (Appendix A of the Flinn Report). The City did not provide documentation on the lagoons. There is no chemical feed at the lagoons and sludge is retained in the lagoon. The plant was originally constructed in 1969.

Both lift stations are similar in type and size. They include two (2) pumps, but they do not include standby generators. The lift stations include heat sensors on the pumps and are automatically controlled. Each pump station pumps to separate force mains to the treatment plant. Pump Station #1 is located on Rattlesnake Hill Road near the treatment plant and pumps from the west portion of the City. Pump Station #2 is located on the southeast side of the City and pumps from the east portion of the City. The lift stations are assumed to date back to 1969 when the treatment plant was installed. Lift Station #1 was replaced in 2000.

Description of the Subject Properties

(Continued)

Land (Fee Parcels and Easements)

There are six locations of facilities that comprise the subject property water and wastewater systems. Below is an overview of the locations followed by exhibits on the following pages including maps and details of the six locations.



Wastewater Treatment/Lagoon

This parcel is located on the west side of the community along the west side of Rattlesnake Hill Road and is identified as tax parcel 165015000001001. The total acreage for the site is 16.5 acres, and the parcel includes vacant/undeveloped agricultural land and a helipad. However, this appraisal includes a hypothetical condition that explains the analysis includes only 5.5 acres, more or less, of the larger parcel (refer to Page 14 for additional explanation). This property is owned by the City of Smithton.

Description of the Subject Properties

(Continued)

Water Tower/Storage

This parcel is located on the north side of the community and has a common address of 302 E. Washington Street. The parcel is also identified as tax parcel 161011304005000. The parcel is located on the north side of Washington Street and contains 0.25 acres. The site is improved with a 50,000 gallon multi-leg elevated tank that was reportedly erected in 1955 and is considered to be in good condition. This property is owned by the City of Smithton. However, this assignment assumes a permanent easement for this parcel (see Extraordinary Assumption on Page 13). The permanent easement is assumed to encumber the whole property.

Well #1 and Chlorine Room

This parcel is also located on the north side of the community and its common address is 107 E. Washington Street. The tax parcel, 161011307003000, contains 0.21 acres. The property is owned by the City of Smithton and is improved with two municipal buildings. However, the well site is estimated to consist of a 75 foot by 25 foot, or 1,875 square foot, area. The site is improved with a one-story, with a concrete slab foundation, well house of masonry construction, containing approximately 116 square feet of gross building area, that was reportedly constructed in 1929 and a one-story, with concrete slab foundation, chlorine room of concrete block construction, containing approximately 132 square feet of gross building area that was reportedly constructed in 1993. These buildings are considered to be in average condition. This appraisal includes a hypothetical condition regarding presumed permanent easement rights for access to the well (refer to Page 15 for additional explanation).

Well #2 and Chlorine Room

This site is located on the south side East Coombs Street, in Smithton, Missouri in the southeast quadrant of its intersection with South Myrtle Avenue. The Pettis County Assessor identifies this site as Parcel Number 16-60-14-210-0030001 and calculates it to be 1.54 acres in size. However, the well site is estimated to consist of a 30 foot by 25 foot, or 750 square foot, area. According to public records, this parcel is in the name of Smithton School District R-VI. The site is improved with a one-story, with a concrete slab foundation, well building and chlorine room of corrugated metal panel construction, containing approximately 195 square feet of gross building area that was reportedly constructed in 1983. This building is considered to be in average condition. This appraisal includes an extraordinary assumption regarding the presumed permanent easement rights for access to the well (refer to Page 13 for additional explanation).

Description of the Subject Properties

(Continued)

Lift Station #1

This parcel is located on the southwest side of the community across the street from the wastewater treatment/lagoon parcel and has a common address of 320 W. Coombs Street. The property is identified as tax parcel 166014206002000 and is owned by the City of Smithton. The site contains 0.01 acres according to county GIS data.

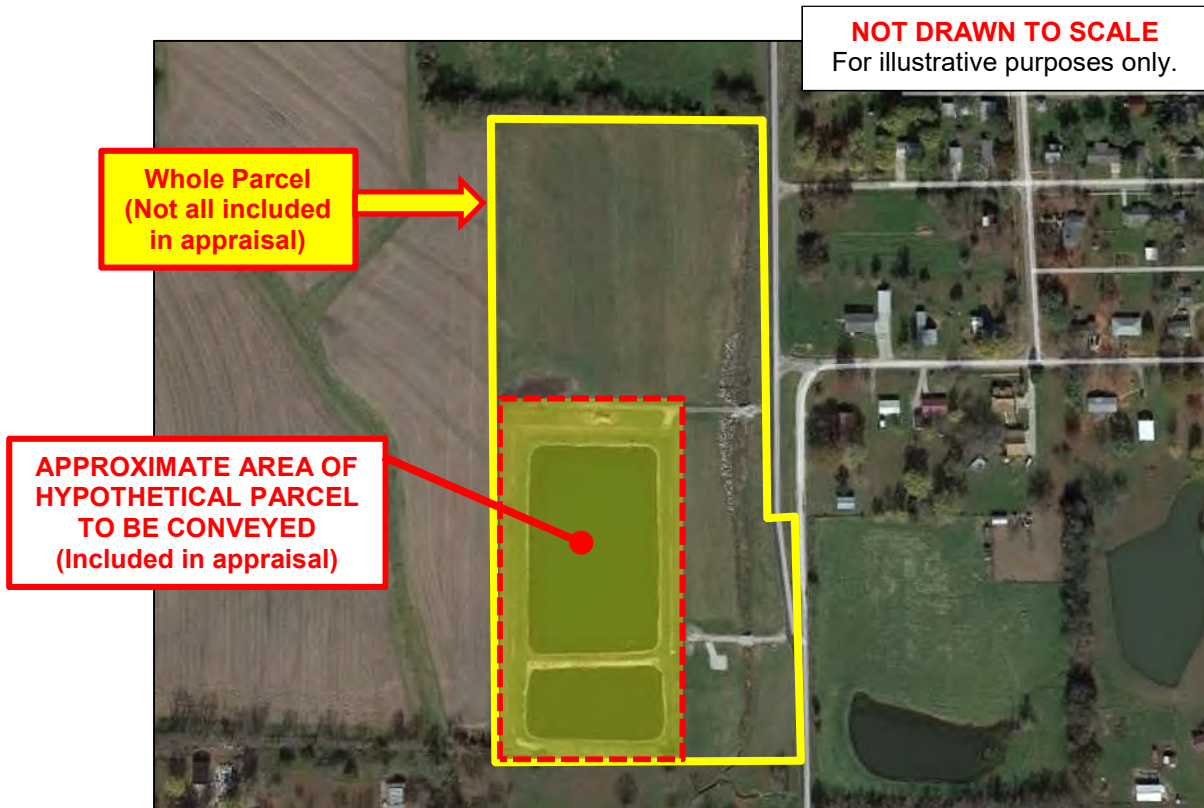
Lift Station #2

This parcel is located on the southeast side of the community at the southwest corner of the intersection of Coombs Street and Highway W. The property has a common address of 600 Highway W. The property is identified as tax parcel 166014210001000 and is owned by the City of Smithton. The site contains 0.05 acres according to county GIS data.

Description of the Subject Properties

(Continued)

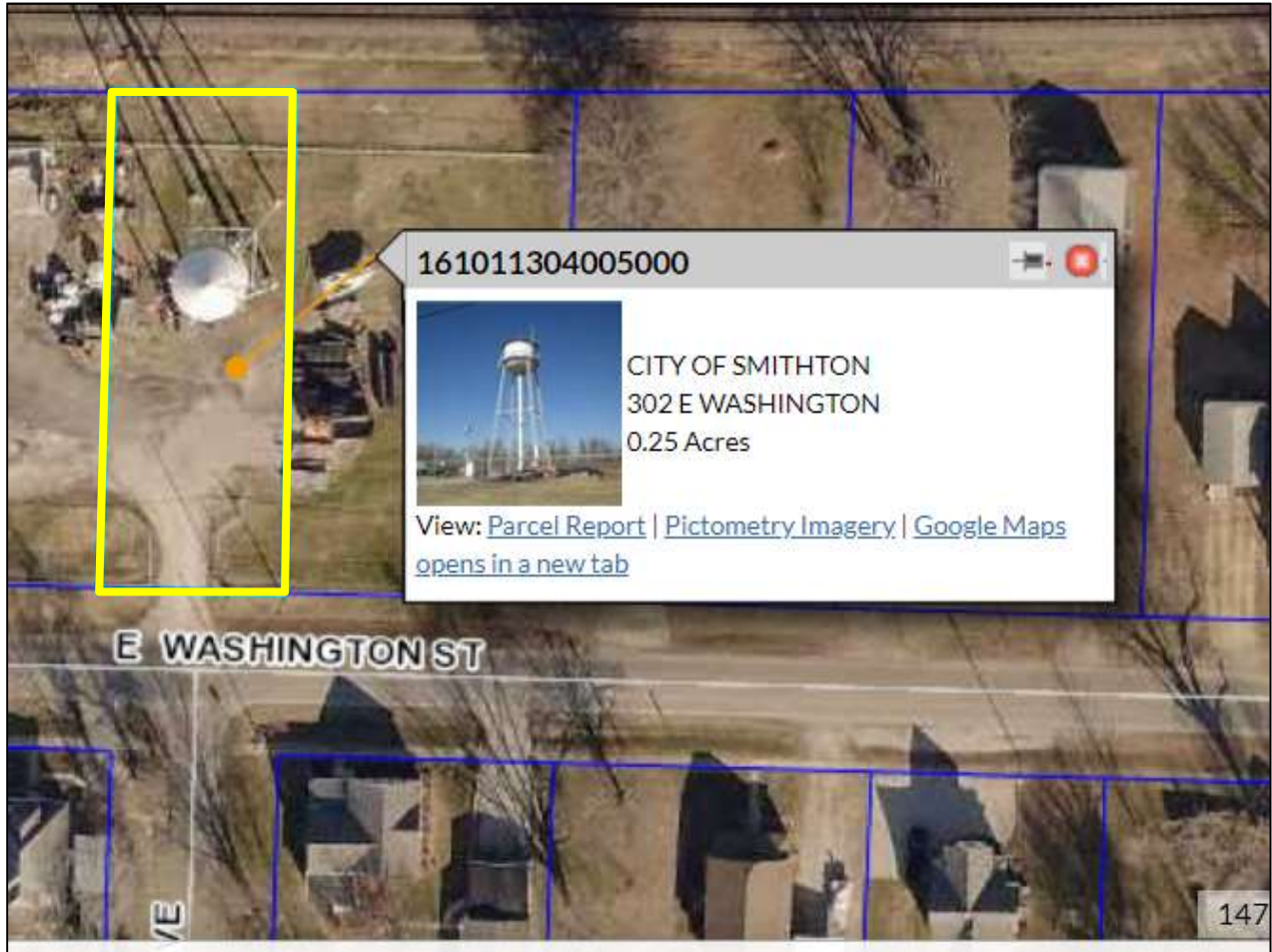
Wastewater Treatment/Lagoon



Description of the Subject Properties

(Continued)

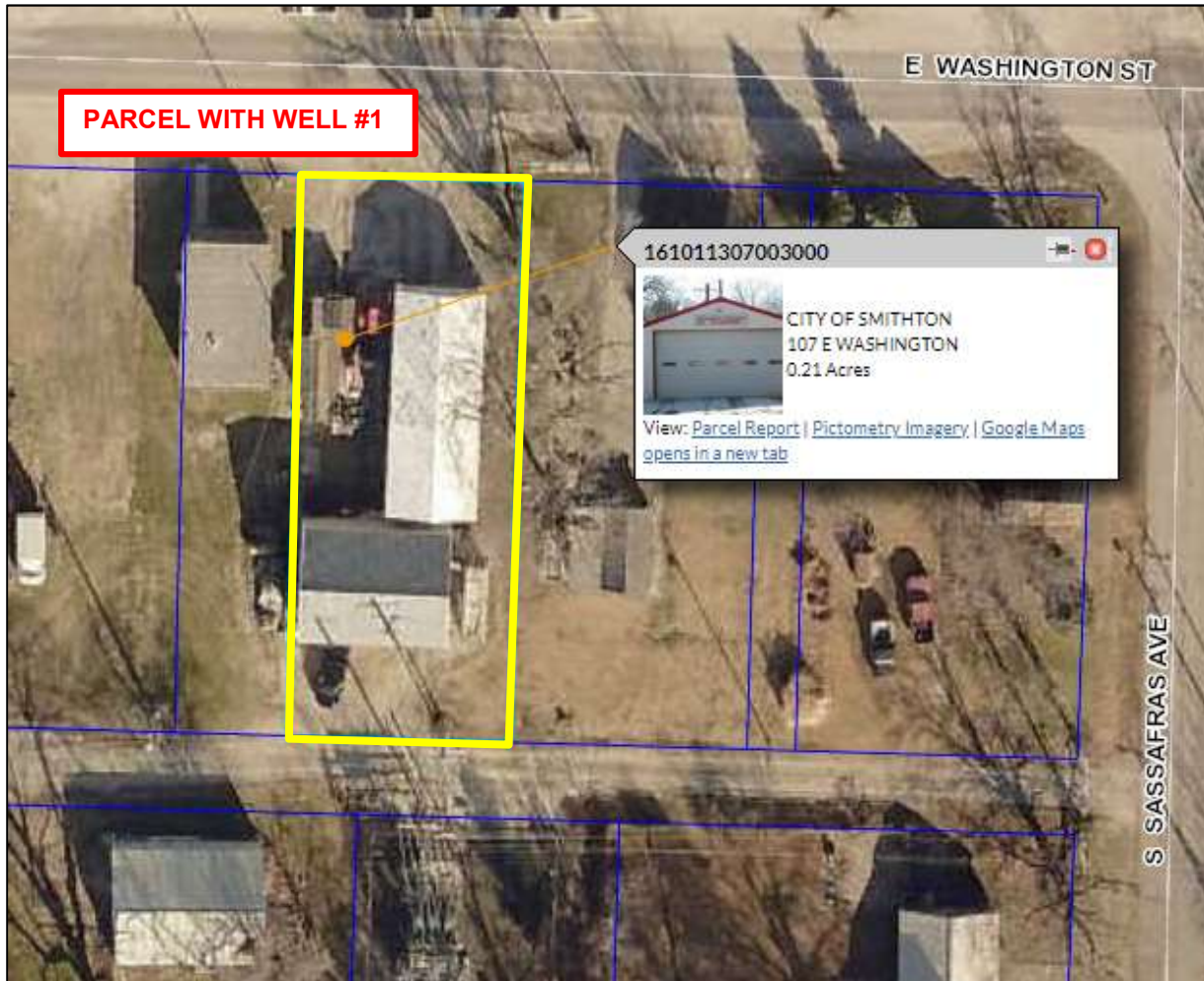
Water Tower/Storage



Description of the Subject Properties

(Continued)

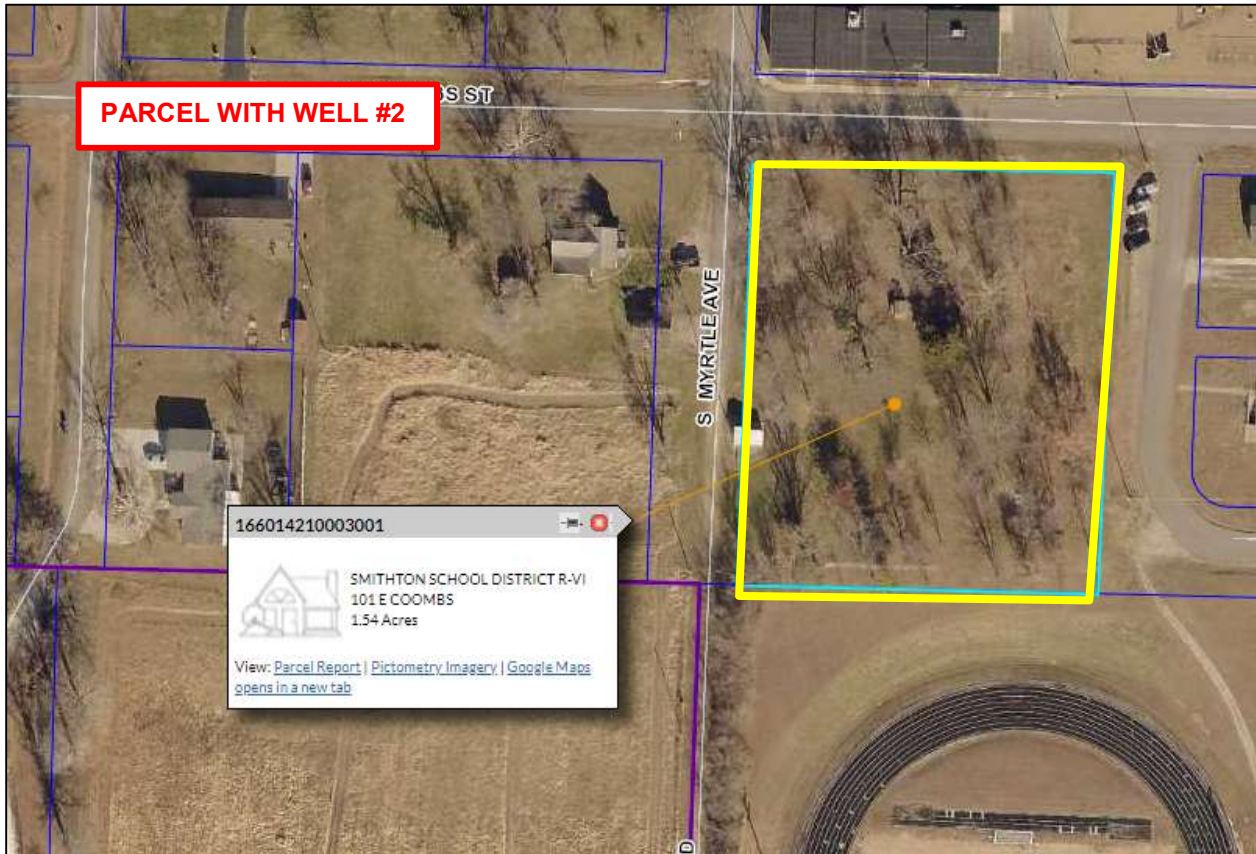
Well #1



Description of the Subject Properties

(Continued)

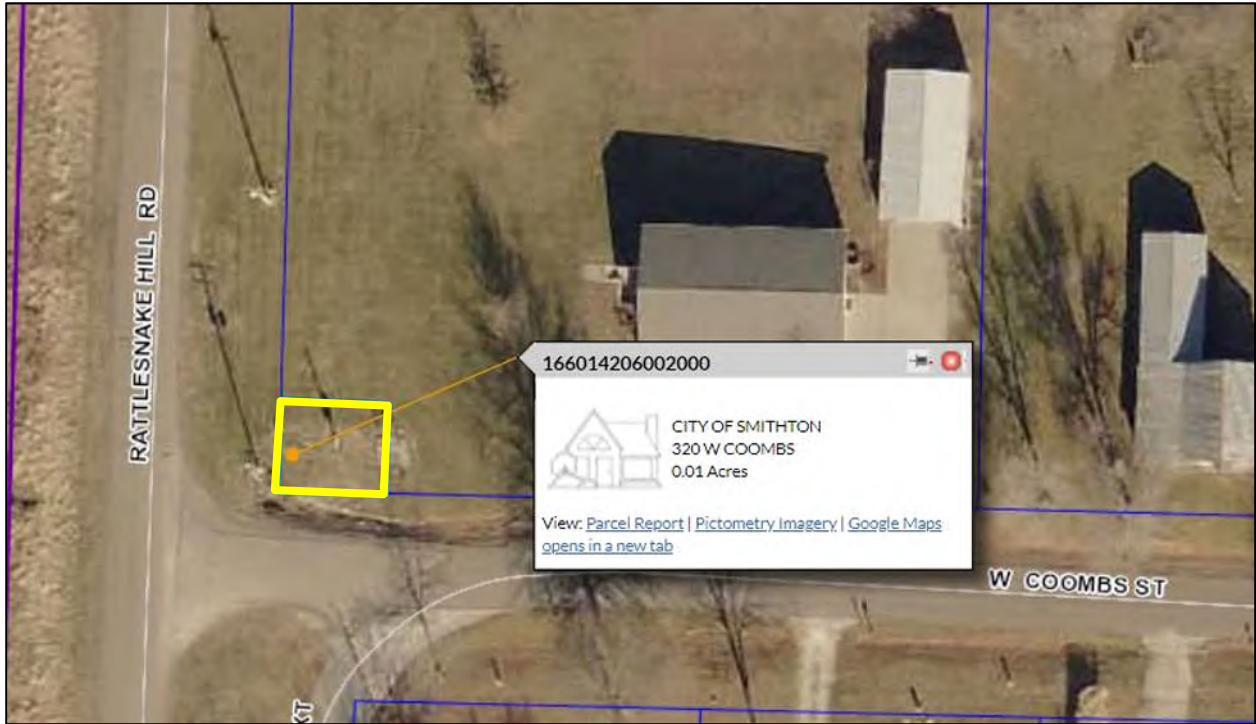
Well #2



Description of the Subject Properties

(Continued)

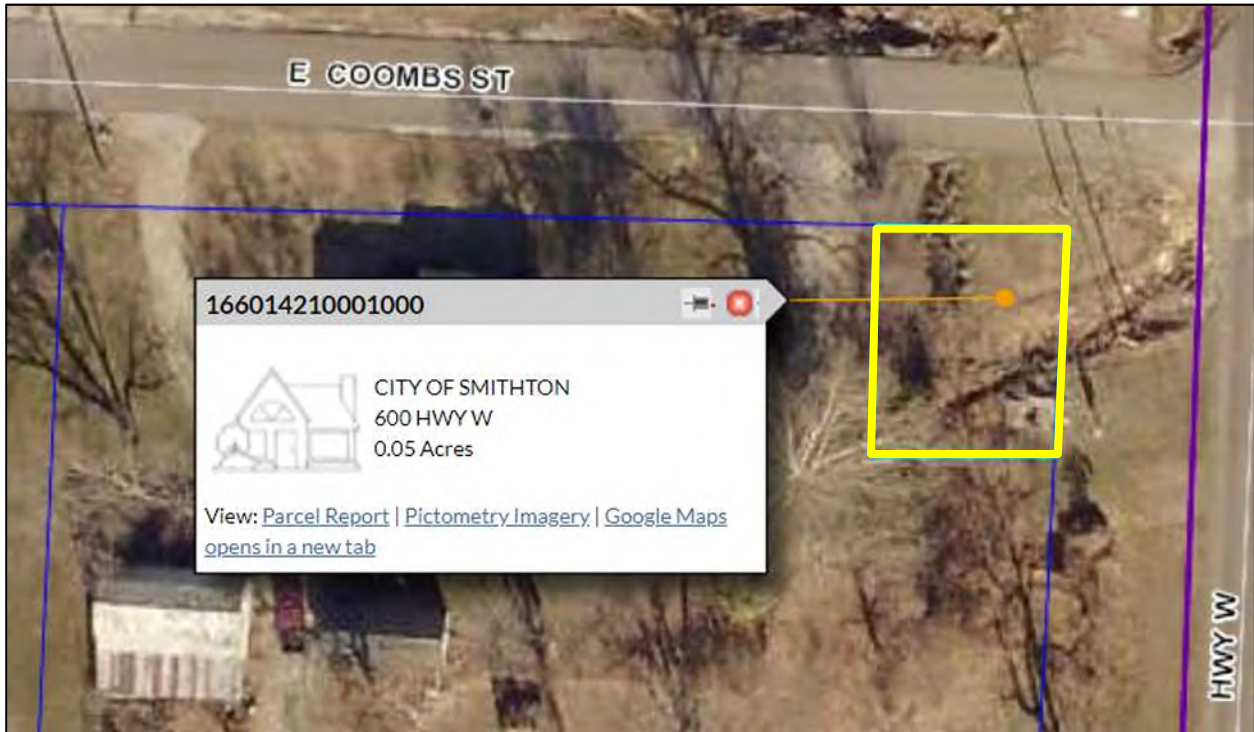
Lift Station #1



Description of the Subject Properties

(Continued)

Lift Station #2



Subject Property Photographs

WASTEWATER TREATMENT PARCEL

Rattlesnake Hill Road



Subject Property Photographs

(Continued)

WATER STORAGE TANK
302 E. Washington Street



Subject Property Photographs

(Continued)

Well #1
107 E. Washington Street



Subject Property Photographs

(Continued)

Well #1
107 E. Washington Street



Subject Property Photographs

(Continued)

Well #2

Coombs Street south of Myrtle Avenue



Subject Property Photographs

(Continued)

Lift Station #1
320 W. Coombs Street



Subject Property Photographs

(Continued)

Lift Station #2
600 Highway W



Highest and Best Use Analysis

The beginning point in the valuation of any real estate is the determination of the property's highest and best use. Highest and Best Use is defined in the 15th Edition of *The Appraisal of Real Estate* as follows:

The reasonably probable and legal use of vacant land or an improved property that is physically possible, appropriately supported, and financially feasible and that results in the highest value.

The 14th Edition states that there are four implicit steps as part of the analysis that are applied in the following order: (1) Legally Permissible, (2) Physically Possible, (3) Financially Feasible, and (4) Maximally Productive.

The subject property includes land (owned in fee and permanent easements), and infrastructure/facilities associated with the City of Smithton water delivery and wastewater systems. After considering the components of the subject property systems as a whole, and taking into account the analysis and report prepared by Flinn Engineering, it is our opinion the highest and best use of the subject property as of July 14, 2020, is its present use as a water delivery and wastewater system. Furthermore, it is our opinion the market value of the land, as vacant, is also for its present use as part of a utility infrastructure system.

Application of the Approaches to Value

Normally included within the steps of the valuation process are the three classic approaches to a value estimate: the Cost Approach, the Sales Comparison Approach and the Income Capitalization Approach. Each of these approaches tends to independently serve as a guide to the valuation of the property with varying degrees of validity.

The Cost Approach gives recognition to the fact that buyers have available to them the alternative of constructing a new building when contemplating the purchase of an existing building. Thus, the cost to reproduce the property is utilized as a measure of value.

However, most properties experience varying degrees of accrued depreciation which result from physical depreciation, functional obsolescence and external obsolescence. Any of these three types of depreciation (or a combination thereof) from which the property suffers must be deducted from the estimated cost new of the improvements. The difficulty, then, in applying the Cost Approach is the ability of the appraiser to accurately extract or estimate the amount of depreciation the property being appraised suffers.

The Sales Comparison Approach is based upon the theory that the value of a property is determined by the actions of buyers and sellers in the market for comparable types of property. Recognizing no two properties are identical and that properties sell at different times under different market conditions, the application of the Sales Comparison Approach requires the appraiser to consider any differences between a respective sale and the subject property which may affect value. After the relevant differences are adjusted for, an indicated range of value results.

The theory of the Sales Comparison Approach also realizes that buyers and sellers often have motivations that are unknown to the appraiser and difficult to quantify in the adjustment process. Therefore, while this approach has certain strengths and foundation, it must be carefully applied in order to lead the appraiser to a realistic opinion of value.

And lastly, the Income Capitalization Approach is typically given very much consideration in the appraisal process for income-producing properties. The Income Capitalization Approach gives recognition to the subject property's capabilities of producing an income and that investors in the real estate market will pay a specific amount of cash, or its equivalency, to receive that income, as well as the rights of ownership of the property at the end of the income period.

The Income Capitalization Approach is applied based upon market-extracted information, most notably the income and expenses that prevail in the market for the type of property being appraised. After an appropriate estimate of income is arrived at, the income is converted to an estimate of value via a capitalization rate. The capitalization rate is also either extracted from the market or may be derived based upon a built-up method.

Application of the Approaches to Value

(Continued)

After the appraiser independently applies each approach to value, the three resultant value estimates are reconciled into an overall estimate of value. In the reconciliation process, the appraiser analyzes each approach with respect to its applicability to the property being appraised. Also considered in the reconciliation process is the strength and weakness of each approach with regards to supporting market data.

Regarding the valuation of the subject property, we have applied the Cost Approach and the Sales Comparison Approach. The Income Capitalization Approach was not applied due to the unavailability of the significant amount of market data pertaining to income and expenses that would be necessary to arrive at a credible conclusion.

Following this section is a more detailed explanation of the Cost Approach and the Sales Comparison Approach.

Cost Approach

The Cost Approach to Value is a technique in the appraisal process which recognizes that a prudent purchaser/investor of real estate may consider constructing a new building as an alternative to buying an existing property.

Although it holds true that a prudent purchaser would not pay more for a building than the cost of buying the land and constructing a new building which would offer similar utility, the estimated cost new of the property must be adjusted for items of depreciation which the property being appraised has suffered. Only then will the Cost Approach yield an indication of value which can be correlated with the other two approaches to arrive at the Market Value of the property.

The beginning point of the typical Cost Approach is to arrive at an estimate of the land value as vacant. The land value is arrived at by applying the Direct Comparison Approach utilizing vacant land sales from the market.

The next step is to estimate the cost new of the building. There are two primary types of cost: the Reproduction Cost and the Replacement Cost.

Reproduction Cost is defined as:

*The cost of construction, at current prices, of an exact duplicate, or replica, using the same materials, construction standards, design, layout, and quality of workmanship, and embodying all of the deficiencies, superadequacies, and obsolescence of the subject building.*⁹

Replacement Cost is defined as:

*The cost of construction, at current prices, of a building having utility equivalent to the building being appraised but built with modern materials and according to current standards, design, and layout.*¹⁰

If a property suffers any functional obsolescence, it is necessary to utilize the Reproduction Cost estimate. The measure of loss of value from the functional inadequacy (or superadequacy) would then be deducted as an item of depreciation.

⁹ *The Dictionary of Real Estate Appraisal*, Second Edition, (Chicago, Illinois: American Institute of Real Estate Appraisers, 1989), p. 254.

¹⁰ Ibid.

Cost Approach

(Continued)

After the cost of the property is estimated, all items of depreciation are measured and deducted from the cost to arrive at an estimate of the depreciated cost new of the improvements. The land value as vacant is then added to arrive at a total estimate of the property via the Cost Approach.

Thus, to accurately estimate the value of the property, the appraiser must:

- 1). Estimate the value of the land as vacant;
- 2). Estimate the cost new of the building;
- 3). Estimate the amount of all items of depreciation, if any;
- 4). Deduct the depreciation estimate from the cost new estimate; and
- 5). Add the estimated land value to the depreciated value of the improvements.

The starting point in the application of the Cost Approach is to arrive at an estimate of the subject property land as vacant. The land value is estimated based upon the Sales Comparison theory which basically states that no one will pay more for a parcel of land than the cost of acquiring an equally suitable parcel. Therefore, the value of the site is arrived at by measuring the actions of buyers and sellers in the market for comparable parcels of land.

With regard to the fee value of the subject property parcels owned in fee (Lift Station #1, Lift Station #2, and the Water Treatment Lagoon parcel) and the contributory value of the easements presumed to be in place for the two well pump sites and the water storage tank site, we have undertaken a study of market sales of vacant land.

The land sales are presented in two categories: Small Tract and Large Tract. The following is a summary of the adjusted market data relied on for this analysis. The subject property parcels are referred to as follows:

- Parcel A – Well #1 (assumed permanent easement)
- Parcel B – Well #2 (assumed permanent easement)
- Parcel C – Wastewater Treatment Lagoon (owned in fee)
- Parcel D – Lift Station #1 (owned in fee)
- Parcel E – Water Storage Tower (assumed permanent easement)
- Parcel F – Lift Station #2 (owned in fee)

Cost Approach

(Continued)

SMALL TRACT LAND SALE COMPARABLES					
TRANSACTION	LOCATION	DATE OF SALE	LAND SIZE (ACRES)	ZONING/ USE	ADJUSTED PRICE PSF
1	NWC Highway E and White Oak Lane, Green Ridge	10/31/2019	5.00	Rural Residential	\$0.20
2	101 Rebar Road, Sedalia	5/31/2019	7.02	Rural Commercial	\$1.88
3	991 Winchester Drive, Sedalia	4/2/2018	1.01	Commercial	\$5.11
4	503 W. Newton Street, Versailles	3/16/2017	1.12	Commercial	\$2.13
5	3197 S Odell Avenue, Marshall	1/4/2015	4.50	Rural Commercial	\$0.51
6	W/S Maple Street, South of Airport Road, Lincoln	Listing	1.50	Commercial	\$0.45
7	W/S Maple Street, South of Airport Road, Lincoln	Listing	2.80	Commercial	\$0.45
8	SWC Maple Street and Airport Road, Lincoln	Listing	10.00	Commercial	\$0.23
9	SWC Maple Street and Airport Road, Lincoln	Listing	14.30	Commercial	\$0.29
			STATISTICS FOR ALL TRANSACTIONS		
			LOW	1.01	\$0.20
			HIGH	14.30	\$5.11
			AVERAGE	5.25	\$1.25
			MEDIAN	4.50	\$0.45

The Small Tract comparables indicate adjusted prices ranging from \$0.20/SF to \$5.11/SF with an average of \$1.25/SF and a median of \$0.45/SF depending upon location, size, and use. These comparables are utilized to value the parcels owned in fee identified herein as Parcels D and F permanent easement parcels identified herein as Parcels A, B, and E.

LARGE TRACT LAND SALE COMPARABLES					
TRANSACTION	LOCATION	DATE OF SALE	LAND SIZE (ACRES)	ZONING/ USE	ADJUSTED PRICE ACRE
1	Smasal Road, Saedalia	3/3/2020	39.80	Agricultural	\$4,617
2	NWC Highway E and White Oak Lane, Green Ridge	10/31/2019	5.00	Rural Residential	\$8,813
3	Rear Land, Smithton	9/25/2019	10.00	Agricultural	\$3,750
4	3197 S Odell Avenue, Marshall	1/4/2015	4.50	Rural Commercial	\$22,222
5	W/S Maple Street, South of Airport Road, Lincoln	Listing	2.80	Commercial	\$19,602
6	SWC Maple Street and Airport Road, Lincoln	Listing	10.00	Commercial	\$9,801
7	SWC Maple Street and Airport Road, Lincoln	Listing	14.30	Commercial	\$12,748
			STATISTICS FOR ALL TRANSACTIONS		
			LOW	2.80	\$3,750
			HIGH	39.80	\$22,222
			AVERAGE	12.34	\$11,650
			MEDIAN	10.00	\$9,801

The Large Tract comparables indicate adjusted prices ranging from \$3,750/acre to \$22,222/acre with an average of \$11,650/acre and a median of \$9,801/acre depending upon location, size, floodplain and use. These comparables are utilized to value the parcel owned in fee identified herein as Parcel C.

Cost Approach

(Continued)

VALUATION OF THE THREE FEE PARCELS

With respect to Parcel C (Lagoon Site), we relied on the large tract data. The subject property tract contains 5.50 acres and has below average access and utility. The unit value applicable to Parcel C based upon available market data and subject property information is \$8,000/acre, resulting in a value indication rounded to \$44,000.

With respect to Parcel D (Lift Station #1), we relied on the small tract market data. The subject property tract contains 0.01 acres and has average access and utility. The unit value applicable to Parcel D based upon available market data and subject property information is \$0.50/SF, resulting in a value indication rounded to \$200.

With respect to Parcel F (Lift Station #2), we relied on the small tract market data. The subject property tract contains 0.05 acres and has average access and utility. The unit value applicable to Parcel F based upon available market data and subject property information is \$0.50/SF, resulting in a value indication rounded to \$1,100.

Based upon this market data, we have arrived at an opinion of market value of the subject property parcels owned in fee (Parcels C, D, and F):

VALUE OF PARCELS OWNED IN FEE								
PARCEL	PARCEL NUMBER	ADDRESS CITY	DESCRIPTION	SIZE ACRES	SIZE SF	ESTIMATED PER ACRE/SF	VALUE INDICATION	ROUNDED
C	165015000001001	Rattlesnake Hill Road Smithton	Lagoon Site	5.500	239,580	\$8,000 /Acre	\$44,000	\$44,000
D	166014206002000	320 W. Coombs Street Smithton	Lift Station #1	0.010	436	\$0.50 /SF	\$218	\$200
F	166014210001000	600 Hwy W Garden City	Lift Station # 2	0.050	2,178	\$0.50 /SF	\$1,089	\$1,100
							Total	\$45,300

Based upon a review of the three locations, a review of the land values researched for Smithton and surrounding market area that are presented herein, it is our opinion the total fee simple value of the three parcels owned in fee by the City of Smithton is \$45,300.

Cost Approach

(Continued)

VALUATION OF THE PRESUMED PERMANENT EASEMENT RIGHTS FOR THE THREE ADDITIONAL PROPERTIES

The next step is to determine the contributory value of the permanent easements that are presumed to be in place for the parcels identified herein as Parcels A, B, and E.

With respect to Parcel A (Well/Pump #1), we relied on the small tract land market data. The permanent easement tract is a commercial use that contains 0.21 acres. The well/pump station is located at the rear of the property. As such, the area affected by the easement is 100% of the total site with the permanent easement representing 15% of fee value. The fee unit value applicable to Parcel A, based upon available market data and subject property information, is \$2.00/SF, resulting in a rounded contribution value indication of \$2,700.

With respect to Parcel B (Well/Pump #2), we relied on the small tract land market data. The permanent easement tract is a residential use that contains 1.54 acres. The well/pump station is located at the rear of the property. As such, the area affected by the easement is 100% of the total site with the permanent easement representing 15% of fee value. The fee unit value applicable to Parcel B, based upon available market data and subject property information, is \$0.50/SF, resulting in a rounded contribution value indication of \$5,000.

With respect to Parcel E (Water Tower Site), we relied on the small tract land market data. The permanent easement tract is a commercial use that contains 0.25 acres. The water tower is located in the center of the tract. As such, the area affected by the easement is 100% of the total site with the permanent easement representing 15% of fee value. The fee unit value applicable to Parcel E, based upon available market data and subject property information, is \$2.00/SF, resulting in a rounded contribution value indication of \$3,300.

The following table summarizes the contribution value of the presumed permanent easement rights for the additional properties:

CONTRIBUTION VALUE OF PERMANENT EASEMENT												
PARCEL	PARCEL NUMBER	DESCRIPTION	ACRES	AREA AFFECTED		ESTIMATED		EASEMENT		VALUE		
				SF	%	SF	FEE PSF	FEE VALUE	% OF FEE	INDICATION	ROUNDED	
A	161011307003000	Well/Pump #1	0.210	9,148	100.0%	9,148	\$2.00	\$18,295	15%	\$2,744	\$2,700	
B	166014210003001	Well/Pump #2	1.540	67,082	100.0%	67,082	\$0.50	\$33,541	15%	\$5,031	\$5,000	
E	161011304005000	Water Tower Site	0.250	10,890	100.0%	10,890	\$2.00	\$21,780	15%	\$3,267	\$3,300	
Total										\$11,000		

Cost Approach

(Continued)

Based upon a review of the three locations, a review of the land values researched for Smithton and surrounding market area that are presented herein, and a review of permanent easements for water systems for other utility projects, it is our opinion the contributory value of the permanent easements presumed to be in place and encumbering Parcels A, B, and E for the benefit of the City of Smithton is \$11,000.

CONTRIBUTION OF THE BUILDINGS

The next component of the Cost Approach is to add the contributory value (depreciated cost new) of the buildings that are part of the subject property water system. The building contribution is arrived at by applying a cost new unit value (cost per square foot) and deducting estimated depreciation using a simple age/lift method.

The contributory value of the well house and chlorine room at the Well #1 location was concluded to be \$3,000 and the contributory value of the well house and chlorine room at the Well #2 location was concluded to be \$2,500.

Cost Approach

(Continued)

CONSIDERATION OF THE ASSETS IDENTIFIED IN THE FLINN ENGINEERING REPORT

The final step in the Cost Approach is to add the depreciated value of the water and wastewater assets that comprise the water and wastewater system infrastructure. With respect to the system facilities, we have consulted with Flinn Engineering, an engineering firm that is very familiar with water and wastewater facility construction costs, depreciation and valuations. A copy of the Flinn report is attached to this appraisal report.

The Flinn report includes a detailed inventory of the water and wastewater assets that are part of this analysis. The analysis by Flinn Engineering concludes an estimated depreciated book value for the water system of \$836,302 and an estimated depreciated book value for the wastewater system assets of \$147,000 (see Page 5, Table 6 of the Flinn Engineering report).

The Flinn report explains that even though the majority of the wastewater system is completely depreciated (per accounting methodology), the wastewater system is still very functional and it is reasonable to anticipate the wastewater assets have a remaining economic life well beyond the depreciation period. For example, Page 4 of the Flinn Report states that lift station equipment has a depreciation period of only 10 years, and thus, both subject property lift stations are fully depreciated. However, the Flinn Report goes on to state *“They could remain in service well beyond the depreciation period if they are continually maintained. Both stations appear to be in good condition.”* The same general statements (assets are fully depreciated) regarding the wastewater collection system are found on Page 5 of the Flinn Report.

Based upon our analysis of the real property rights, combined with the Flinn analysis, the total values of the subject property water and wastewater systems by the Cost Approach are summarized in the table on the following page.

Cost Approach

(Continued)

COST APPROACH SUMMARY - WATER SYSTEM		
CONTRIBUTORY VALUE OF PERMANENT EAEMENTS		
PARCEL	DESCRIPTION	VALUE
A	Well/Pump #1	\$2,700
B	Well/Pump #2	\$5,000
E	Water Tower Site	\$3,300
	Total	\$11,000
WATER SYSTEM DEPRECIATED ASSET VALUE		
	DESCRIPTION	VALUE
	Water System (From Flinn Report)	\$836,302
	Buildings	\$5,500
	Total	\$841,802
TOTAL WATER SYSTEM		\$852,802
ROUNDED VALUE INDICATION		\$850,000

COST APPROACH SUMMARY - WASTEWATER SYSTEM		
MARKET VALUE OF PARCELS OWNED IN FEE		
PARCEL	DESCRIPTION	VALUE
C	Lagoon Site	\$44,000
D	Lift Station #1	\$200
F	Lift Station #2	\$1,100
	Total	\$45,300
WATER SYSTEM DEPRECIATED ASSET VALUE		
	DESCRIPTION	VALUE
	Wastewater System (from Flinn Repc	\$147,000
	Total	\$147,000
TOTAL WASTEWATER SYSTEM		\$192,300
ROUNDED VALUE INDICATION		\$190,000

Cost Approach

(Continued)

SUMMARY OF VALUE OPINIONS INDICATED BY COST APPROACH

Based upon our analysis of the subject property, our independent research, and our reliance on the Flinn Engineering report, the values indicated by the Cost Approach are as follows:

Cost Approach - Indicated Value of Smithton Water System

\$850,000

Eight Hundred Fifty Thousand Dollars

Cost Approach - Indicated Value of Smithton Wastewater System

\$190,000

One Hundred Ninety Thousand Dollars

Sales Comparison Approach

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. The fundamental concept of the Sales Comparison Approach is the Principle of Substitution, which is defined as:

A valuation principle that states that a prudent purchaser would pay no more for real property than the cost of acquiring an equally desirable substitute on the open market. The Principle of Substitution presumes that the purchaser will consider the alternatives available and will act rationally or prudently on the basis of the information about those alternatives, and that reasonable time is available for the decision. Substitution may assume the form of the purchase of an existing property, with the same utility, or of acquiring an investment which will produce an income stream of the same size with the same risk as that involved in the property in question.

Research of the area, state and national real estate market was completed in order to find sales of water distribution systems that included comparable features to the subject property. There have been several sale properties selected from all available sale transactions for analysis in this approach. The sales data was provided through information from the Missouri Public Service Commission, Illinois Commerce Commission, Aqua America Inc., American Water Company, and Hartman Consultants LLC.

The sales were considered to be the most comparable to the subject property in terms of arms-length sales transactions, location of the system, capital improvements supporting the water system and number of water customer accounts in the entire system. All information of the sale transactions and properties was confirmed by the previously mentioned party or parties to the transaction.

As explained in the Scope of Work section of this report, we included transactional data pertaining to utility systems located in Illinois. We did consider transactions by Missouri American Water of systems in Missouri. However, the market data available for utility systems acquired in Missouri is very limited, with Missouri American Water Company being the primary entity acquiring systems. Therefore, it is reasonable and acceptable to expand the search for comparable market data to areas outside the borders of Missouri. The following is a summary of the market data relied on for this assignment.

Sales Comparison Approach

(Continued)

Sale 1**City of Rosiclare Water and Wastewater Utility (Water & Sewer)
City of Rosiclare, Hardin County, Illinois****Closed May 29, 2020****Asset Purchase Agreement signed June 4, 2019****Price: \$480,000 Water****\$120,000 Sewer****Water system with 525 customers (\$914 per customer)****Wastewater system with 400 customers (\$300 per customer)****Seller: City of Rosiclare, IL****Buyer: Illinois American****ICC Docket #19-0733**

This sale included the transfer of a water treatment and sewer system. The water system includes two parcels of land owned in fee, one water treatment plant built in 1934, two active wells built in 1995, one 150,000 gallon water tower, one settling basin and one overflow basin. The water system purchase does not include the distribution system. The water treatment plant design maximum capacity is 350,000 gpd. The wastewater system includes four parcels of land owned in fee, one wastewater lift station built in 2017, one wastewater treatment plant built in 1951 with major improvements in 1987, and approximately 46,000 linear feet of mains.

Sales Comparison Approach

(Continued)

Sale 2

**Village of Andalusia Water and Wastewater Utility (Water & Sewer)
Village of Andalusia, Rock Island County, Illinois**

Closed July 20, 2020

Asset Purchase Agreement signed May 7, 2019

Price: \$1,800,000 Water

\$1,500,000 Sewer

Water system with 490 customers (\$3,674 per customer)

Wastewater system with 460 customers (\$3,261 per customer)

Seller: Village of Andalusia, IL

Buyer: Illinois American

ICC Docket #19-0732

This sale included the transfer of a water treatment and distribution system, and sewer system. The water system includes a 310,000 gallon storage tank built in 1980, a chlorination and fluoridation water treatment plant operating in the 60 to 80 psi range, 106 hydrants, a booster pump station, and approximately 55,000 linear feet of water mains. The sewer system includes three lift stations, approximately 6,000 linear feet of force mains, 34,800 linear feet of gravity collection mains, 140 manholes, and a three cell wastewater treatment plant. The sanitary system does not include stormwater and is not a CSO type facility.

Sales Comparison Approach

(Continued)

Sale #3

**Village of Glasford Water & Wastewater Utility (Water & Sewer)
Village of Glasford, Peoria County, Illinois**

Closed September 19, 2019

Asset Purchase Agreement signed August 28, 2018

Water System Price: \$800,000

Water System with 492 Customers (\$1,626 per customer)

Wastewater System Price: \$1,100,000

Wastewater System with 482 Customers (\$2,282 per customer)

Seller: Village of Glasford, IL

Buyer: Illinois American

ICC Docket #18-1498

This sale included the transfer of a water and wastewater system.

The water system is in average condition and includes a water treatment plant with a capacity of 200 gpm or 288,000 gpd with attained capacity of 150 gpm or 216,000 gpd; two active wells and one well not in service; a 125,000 gallon elevated storage tank; a 50,000 gallon ground storage tank; meters; hydrants; approximately 48,000 linear feet of water mains; four parcels of land owned in fee; and permanent easements pertaining to water mains located on private property. Well #1 is 876 feet deep; Well #2 is not in service (radius) and is 1,750 feet deep; Well #3 is 1,000 feet deep with 1,300 linear feet of 4" raw water main.

The wastewater system is in average condition and includes a 0.26 MGD DAF wastewater treatment plant with a MDF of 0.65 MGD with basic secondary treatment with filtration and sludge treatment; one lagoon; one wastewater lift station; and approximately 47,000 linear feet of mains.

Sales Comparison Approach

(Continued)

Sale #4

**Grant Park Wastewater Utility (Sewer)
Village of Grant Park, Kankakee County, Illinois**

Closed in December 2019

Asset Purchase Agreement signed May 17, 2018

Price: \$2,300,000

Wastewater System with 535 Customers (\$4,299 per customer)

Seller: Village of Grant Park, IL

Buyer: Aqua Illinois

ICC Docket #18-1093

This sale included the transfer of a sewer system. The sale includes a wastewater treatment plant, one lift station, portions of two parcels of land owned in fee and permanent easement interests, and a wastewater collection system. The permanent easements pertain to properties that are utilized for the lift station, wastewater mains located on private property, an access road, and septic tanks located on private property.

Sales Comparison Approach

(Continued)

Sale #5

**Lawson Water and Wastewater Utilities (Water and Sewer)
City of Lawson, Clay and Ray Counties, Missouri**

Sold August 2018 (Letter of Intent signed April 21, 2017)

Price: \$4,000,000

Price breakout per appraisal of this system:

\$2,619,000 for Water System with 970 Customers (\$2,711 per customer)

\$1,356,000 for Sewer System with 904 Customers (\$1,515 per customer)

**\$3,975,000 for both Water and Sewer System, rounded within client
documentation to \$4,000,000**

Seller: City of Lawson, MO

Buyer: Missouri American

This sale included the transfer of a water system sewer system. The sale includes three parcels of land owned in fee and a permanent easement interest in nine additional tracts. The permanent easements pertain to properties that are utilized for lift stations, a water tower, and a pump station.

The water system was built in 1956 and includes two elevated water storage tanks, a pump system, and the water distribution system. The 300,000 gallon tank was constructed in the 1990-1991. The 50,000 gallon tank was constructed in the 1940s or 1950s. The sewer system includes a sewer treatment facility including a four-cell lagoon system, eight lift stations, and the sewer collection system.

An appraisal report dated July 7, 2017 of the Lawson system indicated the following expected expenditures after sale:

According to information from Lawson's current permit (MO-0091031) and the Missouri Department of Natural Resources affordability study, the regulations regarding the sewer system operations will be changing in 2020. The water will be required to be disinfected prior to discharge. In addition, a different chemical will need to be added to offset the disinfectant that was added before it can be released into a stream. This will require either a new system to be built or significant changes will need to be made to the existing facility. The chemical added is to control the ammonia levels and nutrient levels. Also, an in-cell aeration system will be needed to help remove the sludge the 1st and 2nd cells. Cost at this time are not known.

Sales Comparison Approach

(Continued)

Sale #6

**Village of Fisher Water and Sewer System (Water & Sewer)
Fisher, Champaign County, Illinois**

Sold March 2018 (Asset Purchase Agreement Signed July, 2017)

Water System Price: \$3,700,000 with 890 Customers (\$4,157 per customer)

Sewer System Price: \$3,100,000 with 890 Customers (\$3,483 per customer)

Seller: Village of Fisher

Buyer: Illinois American Water

ICC Docket #17-0339

This sale includes a water delivery system that includes a water treatment facility, two elevated water storage tanks and two groundwater supply wells. The water treatment plant includes the treatment process, one 30,000 gallon capacity clearwell, and three pumps rated 167 GPM. The clearwell (underground storage tank) has a capacity of 30,000 gallons. Tank #1 has a capacity of 50,000 gallons and was constructed in 1936. Tank #2 has a capacity of 100,000 gallons and was constructed in 1973. The wells are both 236' deep and rated 125 GPM, drilled in 1936 and 1959. Average daily production is 135,000 per day.

This sale includes a wastewater system that includes a wastewater treatment facility with an average daily flow between 170,000 and 180,000 gallons per day.

Expenditures during the first five years after sale are estimated at \$610,000 for the water utility and \$2,300,000 for the sewer utility.

Sales Comparison Approach

(Continued)

Sale #7

**Village of Wardsville Utility System (Water and Sewer)
Wardsville, Cole County, Missouri**

Sold May, 2017 (Asset Purchase Agreement Signed December 8, 2016)

Price: \$2,750,000 (\$2,750,003 for both Water and Sewer System, rounded within client documentation to \$2,750,000)

\$795,428 for Water System with 480 Customers (\$1,657 per customer)

\$1,954,575 for Sewer System with 407 Customers (\$4,802 per customer)

Seller: Village of Wardsville

Buyer: Missouri American Water

MO Docket #WA-2017-0181

According to a press release on April 11, 2017, from the Board of Trustees of the Village of Wardsville, Wardsville has three sewage treatment plants (Deer Haven, Churchview, and Northwest), none of which reportedly are able to meet the Missouri Department of Natural Resources and the EPA requirements regarding limitations of the amount of ammonia that can be discharged from sewage treatment plants. After a study by an engineering firm, it was determined that the three options to meet the EPA limits ranged from \$4 million to \$12 million. According to Missouri American Water, the expected capital investment after the sale includes \$305,000 for the water system and \$395,000 for the sewer system, all of which is projected to be invested over a five-year period.

Wardsville's water system (MO3010831) produces an average of 90,000 gpd. Water system assets include two (2) wells, 150,000-gallon elevated tank, 250,000-gallon ground storage tank, 300 gpm booster pump, 63 hydrants, 146 valves and over 15 miles of distribution main ranging in size from 2" to 8" in diameter.

The wastewater system includes the following treatment facilities:

Churchview WWTP (NPDES MO-0109118) is a packaged extended aeration system with a design flow of 30,000 gpd and actual flow of 15,000 gpd. It services 102 connections. Deerhaven WWTP (NPDES MO-119326) is a packaged extended aeration system with a design flow of 21,368 gpd and actual flow of 17,000 gpd. It serves 81 connections. Northwest WWTF (NPDES MO-0129658) is an aerated lagoon system with design flow of 151,000 gpd and actual flow of 44,000 gpd. It serves 212 connections.

The collection system includes five (5) pump stations, 38 brick manholes, 238 concrete manholes, approximately 9 miles of gravity sewers and 1.7 miles of force main.

Sales Comparison Approach

(Continued)

We were able to determine a unit value for each of the transactions. In addition, we have reviewed the respective engineering reports for all of the systems for the purpose of comparing the condition and contributory values of assets.

Most of the transactions involved conveyances of both water and wastewater systems. However, we are familiar with the transactions and in most cases the purchase includes an allocation for the separate systems.

Based upon this market data, we have concluded a unit value of \$2,500 per water customer for the subject property water system and \$3,000 per wastewater customer for the subject property wastewater system.

Based on the 225 reported water customers and 223 wastewater customers served by the City of Smithton systems, the indicated value of the subject property systems is as follows:

SUMMARY OF WATER DELIVERY SYSTEM VALUATION**SALES COMPARISON APPROACH**

Number of Water Customers for Smithton System:	225
Unit Value (value per customer) Concluded from Market Data:	\$2,500
Value of Smithton Water Delivery System (rounded):	\$565,000

SUMMARY OF WASTEWATER COLLECTION SYSTEM VALUATION**SALES COMPARISON APPROACH**

Number of Wastewater Customers for Smithton System:	223
Unit Value (value per customer) Concluded from Market Data:	\$3,000
Value of Smithton Wastewater Collection System (rounded)	\$670,000

Final Reconciliation

The purpose of this appraisal report was to arrive at an estimate of market value for the City of Smithton water delivery and wastewater systems based upon conditions evident in the market as of July 14, 2020. We inspected the subject property, reviewed numerous reports and documents provided by the client and the City of Smithton, conducted research with regard to land values and easement valuation, and reviewed a report prepared by Flinn Engineering.

Our analysis of the City of Smithton water delivery and wastewater collection systems included the application of the Cost Approach and the Sales Comparison Approach. As explained in the report, the Income Capitalization Approach is not customarily relied on for the valuation of water delivery and wastewater collection systems acquired by investor-owned entities.

The Sales Comparison Approach included an analysis of transactions from Missouri and transactions from Illinois. As explained in this report, the Illinois market is more representative of a competitive market with balance the supply and demand forces. The market approach resulted in opinions of \$565,000 for the subject property water delivery system and \$670,000 for the subject property wastewater collection system.

The Cost Approach included the analysis and valuation of the system by its components: land (fee owned parcels and permanent easements), and facilities/infrastructure associated with the water delivery and wastewater collection systems. The Cost Approach resulted in a conclusion of value for the water delivery system of \$850,000 and a conclusion of value for the wastewater collection system of \$190,000.

Based upon a review of the market data available for both approaches to value, we have concluded that primary emphasis should be placed on the value opinions indicated by the Sales Comparison Approach. The Cost Approach was not considered to be reliable due to the fully depreciated assets that still have significant remaining economic life.

Therefore, our final value opinions for the subject property systems are as follows:

Market Value of Water Delivery System \$565,000	Market Value of Wastewater Collection System \$670,000
--	---

These valuation opinions are developed subject to the extraordinary assumptions and hypothetical conditions explained in this appraisal report.

Statement of Certification – Joseph E. Batis

I certify that, to the best of my knowledge and belief:

- the statements of fact contained in this report are true and correct.
- the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
- I have not completed a real estate appraisal of the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.
- my compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- my analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice* and in conformity with the requirements of the *Code of Professional Ethics* and the *Standards of Professional Appraisal Practice* of the Appraisal Institute.
- I have made a personal inspection of the property that is the subject of this report.
- no one other than Chris Stallings, Jordan Leiner, and Edward Dinan provided significant real property professional assistance to the person signing this certification.

As of the date of this report, Joseph E. Batis has completed the requirements of the continuing education program of the Appraisal Institute.

Furthermore, I certify that the use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.

June 30, 2022



Joseph E. Batis, MAI, AI-GRS, R/W-AC

Edward J. Batis & Associates, Inc.

General Certification Lic. #553.000493 (IL; Expires 09/23)

General Certification Lic. #2016044083 (MO; Expires 06/24)

General Certification Lic. #CG03684 (IA; Expires 06/22)

General Certification Lic. #5660 (TN; Expires 06/23)

General Certification Lic. #4001017857 (VA; Expires 06/23)

General Certification Lic. #TX 131049 G (TX; Expires 11/22)

General Certification Lic. #A8416 (NC; Expires 06/22)

General Certification Lic. #CGA-1027103 (AZ; Expires 07/23)

General Certification Lic. #34627 (MD; Expires 04/25)

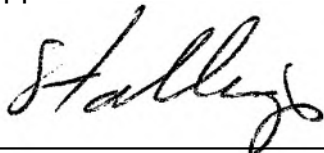
Statement of Certification – Chris Stallings

I certify that, to the best of my knowledge and belief:

- the statements of fact contained in this report are true and correct.
- the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
- I have not completed a real estate appraisal of the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.
- my compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- my analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice* and in conformity with the requirements of the *Code of Professional Ethics* and the *Standards of Professional Appraisal Practice* of the Appraisal Institute.
- I have not made a personal inspection of the property that is the subject of this report.
- no one other than Edward Dinan, Jordan Leiner, and Joseph E. Batis provided significant real property professional assistance to the person signing this certification.

As of the date of this report, Chris Stallings has completed the requirements of the continuing education program of the Appraisal Institute.

Furthermore, I certify that the use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.



Chris Stallings, MAI, CCIM, MRICS
Colliers International

June 30, 2022

Statement of Certification – Edward Dinan

I certify that, to the best of my knowledge and belief:

- the statements of fact contained in this report are true and correct.
- the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
- I have not completed a real estate appraisal of the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.
- my compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- my analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice* and in conformity with the requirements of the *Code of Professional Ethics* and the *Standards of Professional Appraisal Practice* of the Appraisal Institute.
- I have made a personal inspection of the property that is the subject of this report.
- no one other than Chris Stallings, Jordan Leiner, and Joseph Batis provided significant real property professional assistance to the person signing this certification.

As of the date of this report, Edward Dinan has completed the requirements of the continuing education program of the Appraisal Institute.

Furthermore, I certify that the use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.



Edward W. Dinan, CRE, MAI
Dinan Real Estate Advisors, Inc.

June 30, 2022

ADDENDA

Statement of Assumptions and Limiting Conditions

Qualifications of the Appraisers

Flinn Engineering Report

STATEMENT OF ASSUMPTION AND LIMITING CONDITIONS

The value herein estimated and/or other opinions presented are predicated on the following:

1. No responsibility is assumed for matters of a legal nature concerning the appraised property -- especially those affecting title. It is considered that the title is marketable for purposes of this report. The legal description as used herein is assumed to be correct.
2. The improvement is considered to be within the lot lines (unless otherwise stated); and, except as herein noted, is presumed to be in accordance with local zoning and building ordinances. Any plots, diagrams, and drawings found herein are to facilitate and aid the reader in picturing the subject property and are not meant to be used as references in matters of survey.
3. The appraiser assumes that there are no hidden or unapparent conditions of the property, subsoil or structure which would render it more or less valuable than otherwise comparable properties. The appraiser assumes no responsibility for such conditions or for engineering which might be required to discover such things.
4. Any description herein of the physical condition of improvements including, but not limited to, the heating, plumbing, and electrical systems, is based on visual inspection only, with no demonstration performed, and they are thus assumed to be in normal working condition. No liability is assumed for same, nor for the soundness of structural members for which no engineering tests were made.
5. The appraiser shall not be required to give testimony or appear in court by reason of this appraisal with reference to the property herein described unless prior arrangements have been made.
6. The distribution of total valuation in this report between land and improvements applies only under the existing program of utilization under the conditions stated. This appraisal and the allocations of land and building values should not be used as a reference for any other purpose and are invalid if used so.
7. That this report is to be used in its entirety and only for the purpose for which it was rendered.
8. Information, estimates, and opinions furnished to us and considered in this report were obtained from sources considered reliable and believed to be true and correct; however, no responsibility for guaranteed accuracy can be assumed by the appraiser.
9. The property is appraised as though under responsible ownership and competent management.
10. The report rendered herein is based upon the premise that the property is free and clear of all encumbrances, all mortgage indebtedness, special assessments, and liens--unless specifically set forth in the description of property rights appraised.
11. No part of this report is to be reproduced or published without the consent of its author.
12. The appraisal covers only the property described herein. Neither the figures therein, nor any analysis thereof, nor any unit values thereof derived, are to be construed as applicable to any other property, however similar it may be.
13. Neither all, nor any part, of the contents of this report, or copy thereof, shall be used for any purpose by any but the client without the previous written consent of the appraiser and/or the client; nor shall it be conveyed by any including the client to the public through advertising, public relations, news, sales, or other media, without the written consent and approval of the author--particularly as to value conclusions, the identity of the appraiser or a firm with which he is connected, or any reference to any professional society or institute or any initialed designations conferred upon the appraiser, as stated in his qualifications attached hereto.
14. Any cash flow calculations included in this report are developed from but one of a few alternatives of a possible series and are presented in that context only. Specific tax counsel should be sought from a C.P.A., or attorney, for confirmation that this data is the best alternative. This is advised since a change in value allocation, method or rate of depreciation or financing will have consequences in the taxable income.
15. This appraisal has been made in accordance with the Code of Ethics of the Appraisal Institute.
16. This report has not taken into consideration the possibility of the existence of asbestos, PCB transformers, or other toxic, hazardous or contaminated substances, and/or underground storage tanks (hazardous materials), or the cost of encapsulation or removal thereof. Should client have concern over the existence of such substances on the property, the appraiser considers it imperative for the client to retain the services of a qualified, independent engineer or contractor to determine the existence and extent of any hazardous materials, as well as the cost associated with any required or desirable treatment or removal thereof. The valuation stated herein would therefore be void, and would require further analysis to arrive at a market estimate of value.



Christopher J. Stallings, MAI, CCIM, MRICS

MANAGING DIRECTOR | HOUSTON
Valuation & Advisory Services



chris.stallings@colliers.com

EDUCATION AND QUALIFICATIONS

Master of Science, - Land
Economics and Real Estate
Texas A&M University

Bachelor of Science –
Texas A&M University

STATE CERTIFICATION

Texas, Maryland, Alabama,
Arkansas, Colorado,
Kansas, Louisiana,
Mississippi, New Jersey,
New Mexico, New York,
Oklahoma, Vermont,
Washington

CONTACT DETAILS

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Christopher Stallings is the Managing Director of the Houston office of Colliers International Valuation & Advisory Services. Mr. Stallings started his career in valuation and consulting in 1983 after completing a Masters Degree in Land Economics and Real Estate at Texas A&M University. He also holds the MAI designation by the Appraisal Institute as well as the CCIM and MRICS designations.

As a Managing Director, Mr. Stallings has extensive experience in commercial real estate valuation. Based on 25+ years of experience, he has significant expertise with multi-family valuation, feasibility, and market studies of conventional and affordable properties, condominiums, hotels, single and multi-tenant office buildings, industrial, retail, mixed-use developments, subdivisions, master planned communities, golf courses, marinas, and a wide variety of special purpose property types. Other valuation specialties include going concerns, FF&E and property tax appeal representation. Chris is qualified as an expert witness and has testified in numerous courts regarding real estate valuation matters.

EXPERIENCE

Chris was a Managing Director at BBG, and Grubb & Ellis Landauer Valuation Advisory Services, LLC. Prior to becoming associated with Grubb & Ellis Landauer, Mr. Stallings was an Associate Director with Integra, Houston; he was Director and Regional Manager for the Commercial Appraisal Group with CB Richard Ellis in Houston and San Francisco and served as a Manager for Standard and Poor's Corporate Value Consulting.

PROFESSIONAL MEMBERSHIPS AND ACCREDITATIONS

Appraisal Institute, Member (MAI), No. 7422

Certified Commercial Investment Member
No. 7871

Royal International Charter of Surveyors
(MRICS #1262784)

Texas Real Estate Broker No. 0351782

Texas Property Tax Consultant No. 10481

Director: Houston Chapter – Appraisal
Institute and Region VIII Appraisal Institute

Public Relations Committee Chair –
Appraisal Institute Region VIII

Board of Directors – Foundation Appraisers
Coalition of Texas (FACT)

Advisory: Leadership Development &
Advisory (LDAC) – Appraisal Institute

Member: Eagle Scout Association – BSA
Sam Houston Area Council



Qualifications of
Joseph E. Batis, MAI, AI-GRS, R/W-AC
OCTOBER 2020



EMPLOYMENT

President of EDWARD J. BATIS & ASSOCIATES, INC. (1992 – Present), providing real estate valuation and consulting services.

PROFESSIONAL AFFILIATIONS

Member of the Appraisal Institute, MAI designation, AI-GRS designation (Member #63637)

Listed on the Appraisal Institute's *Litigation* and *Valuation of Conservation Easements* Professional Development Registries (Only Member in Illinois on both registries).

Member of the International Right of Way Associations, R/W-AC designation (Member #7482)

Member of the American Water Works Association (Member #03666505)

Approved Instructor – Appraisal Institute

STATE – GENERAL CERTIFICATION APPRAISAL LICENSES

Illinois – Missouri – Tennessee – Virginia – Iowa

GENERAL PROFESSIONAL EXPERIENCE

Real estate valuation services since 1983 for residential, agricultural commercial, industrial, and special purpose properties. Market areas include primarily Illinois and Chicago metropolitan area. Services provided throughout various Midwest states.

SPECIALIZED SERVICES AND EXPERIENCE

- Right of Way / Energy Transmission Lines / Fiber Optic Corridors / Railroad Corridors
- Power Transmission Line Corridors / Solar Energy Fields / Underground Gas Storage Fields
- Public and Investor-Owned Utility Systems (water distribution and wastewater collection)
- Valuation of Permanent and Temporary Easements
- Market Impact Studies for Corridors (Power Transmission Lines, Underground Pipelines)
 - Remainder Properties / Proposed Projects / Expansion of Infrastructure Systems

LITIGATION, ARBITRATION, AND CONSULTING SERVICES

- Expert Testimony (Federal and Circuit Courts, Commerce Commission Hearings)
- Value Dispute Resolution Services - Review and Rebuttal Services
- Litigation Consultation and Support Services

DEVELOPMENT OF STATE-ACCREDITED CONTINUING EDUCATION SEMINARS

- *Understanding Easements – What is Being Acquired? (2003)*
- *Pipelines and Easements – Can They Co-Exist? (2003)*
- *Midwest Pipeline and Corridor Easements – Aren't They All the Same? (2020)*
- *The Valuation of Water of Wastewater Systems (2020)*

**Qualifications of
Joseph E. Batis, MAI, AI-GRS, R/W-AC**



**EXAMPLES OF SPECIALIZED VALUATION PROJECTS AND
SPECIALIZED MARKET RESEARCH ASSIGNMENTS**

○ **PRIVATE AND PUBLIC UTILITY ASSET VALUATION (2013-PRESENT)**

Valuation and/or consulting services of assets of public water delivery and/or wastewater collection systems and natural gas delivery systems for acquisition and allocation purposes for the following communities (or private systems within the communities):

<i>MANTENO, IL</i>	<i>PEOTONE, IL</i>	<i>GRANT PARK, IL</i>	<i>LAKEMOOR, IL</i>
<i>FARMINGTON, IL</i>	<i>MONEE, IL</i>	<i>COTTAGE HILLS, IL</i>	<i>WASHINGTON, IL</i>
<i>SADORUS, IL</i>	<i>GLENVIEW, IL</i>	<i>McHENRY, IL</i>	<i>FISHER, IL</i>
<i>NILES, IL</i>	<i>PALOS HEIGHTS, IL</i>	<i>ALTON, IL</i>	<i>GRANITE CITY, IL</i>
<i>GODFREY, IL</i>	<i>GLASFORD, IL</i>	<i>PEVELY, MO</i>	<i>DESOTO, MO</i>
<i>LAWSON, MO</i>	<i>ODESSA, MO</i>	<i>GOWER, MO</i>	<i>GRANT PARK, IL</i>
<i>SKYLINE/KANE CO., IL</i>	<i>TRIMBLE, MO</i>	<i>BOLIVAR, MO</i>	<i>EUREKA, MO</i>
<i>DIXON, IA</i>	<i>ANDALUSIA, IL</i>	<i>LEONORE, IL</i>	<i>ROSICLARE, IL</i>
<i>SIDNEY, IL</i>	<i>JERSEYVILLE, IL</i>	<i>GARDEN CITY, MO</i>	<i>MOSCOW MILLS, MO</i>
<i>WOODRIDGE, IL</i>	<i>BOURBONNAIS, IL</i>	<i>FRANKFORT, IL</i>	

○ **MARKET IMPACT STUDIES – SOLAR FIELD PROJECTS (2018)**

Market impact studies pertaining to the proposed development of solar energy fields in several counties in the Chicago metropolitan area. Each market study included a site analysis and “before and after” analysis to determine the impact from the proposed solar projects to properties in the immediate and general market areas of the proposed facilities.

○ **MARKET STUDY AND APPRAISAL REVIEW - CONTAMINATION (2018)**

Appraisal review services and market data research pertaining to the impact to the market values of numerous properties resulting from the contamination of underground water sources. Litigation pending.

○ **MARKET IMPACT STUDY – CONTAMINATION FROM UNDERGROUND LEAK AT NUCLEAR POWER GENERATING STATION (2007)**

Coordinated the market research, analysis, and valuation services pertaining to the impact of more than 500 properties potentially impaired by an underground leak of tritium from the Braidwood Nuclear Power Plant.

**Qualifications of
Joseph E. Batis, MAI, AI-GRS, R/W-AC**



**EXAMPLES OF SPECIALIZED VALUATION PROJECTS AND
SPECIALIZED MARKET RESEARCH ASSIGNMENTS**

○ **ANALYSIS AND ALLOCATION OF THE CONTRIBUTORY VALUES OF MULTIPLE
PERMANENT EASEMENTS CO-LOCATED IN A TRANSMISSION CORRIDOR**

An analysis and valuation of the easement values for multiple contiguous and overlapping permanent easements within a right-of-way corridor, including gas pipeline easements, power transmission lines, public utility (water line) easements, and recreational easements.

○ **MANAGEMENT AND SUPERVISION OF VALUATION SERVICES FOR
SIMULTANEOUS ACQUISITION OF EASEMENTS FOR MULTIPLE OIL
PIPELINES (2012-2016)**

Valuation and consulting services including the coordination and management of appraisal services for acquisition and condemnation hearings, Illinois Commerce Commission hearings, and appraisal review services, rebuttal report/testimony, and settlement conferences. Project involved acquisition of permanent and temporary easements for the simultaneous construction of three interstate oil transmission lines. Responsible for management of the projects' valuation services pertaining to more than 2,000 properties in 22 counties and managing the participation of 35 appraisers, consultants, and researchers involved with the project.

○ **INTERSTATE NATURAL GAS PIPELINE PROJECT (2000-2003)**

Valuation and consulting services including the coordination and management of appraisal services for acquisition and condemnation hearings in federal court, appraisal review services, rebuttal report/testimony, and settlement conferences. Project involved acquisition of permanent and temporary easements for the construction of a natural gas transmission line. Responsible for management of the project's valuation services including more than 600 properties in 4 counties.

○ **VALUATION REVIEW SERVICES OF 1,000+ MILE RAILROAD CORRIDOR**

In 2019, provided valuation and consulting services including the review of appraisals and consulting reports pertaining to the valuation of a 1,000+ mile fiber optic corridor within a railroad corridor extending through Virginia, North Carolina, South Carolina, Tennessee and Illinois.



Qualifications of Joseph E. Batis, MAI, AI-GRS, R/W-AC

MOST RECENT APPRAISAL INSTITUTE EDUCATIONAL AND INSTRUCTOR EXPERIENCE

<i>APPRAISAL REVIEW THEORY-GENERAL (AUDIT)</i> OCTOBER 2020, PITTSBURGH, PA	<i>EMINENT DOMAIN AND CONDEMNATION</i> September 2017, Online Seminar
<i>THE APPRAISER AS AN EXPERT WITNESS (AUDIT)</i> SEPTEMBER 2020, PITTSBURGH, PA	<i>RATES AND RATIOS: MAKING SENSE OF GIMS, OARS, AND DCF</i> September 2017, Online Seminar
<i>MIDWEST PIPELINE AND CORRIDOR EASEMENTS (DEVELOPER & PRESENTER)</i> SEPTEMBER 2020, CHICAGO, IL	<i>NATIONAL USPAP UPDATE COURSE</i> May 2016, Chicago, IL
<i>VALUATION OF CONSERVATION EASEMENTS</i> March 2020, Ft. Lauderdale, FL	<i>NATIONAL USPAP UPDATE COURSE</i> July 2015, Columbus, OH
<i>GENERAL APPRAISAL INCOME PART II (INSTRUCTOR AUDIT)</i> October 2019, Chicago, IL	<i>INSTRUCTOR WEBINAR</i> May 2015, Online Webinar
<i>BASIC APPRAISAL PRINCIPLES (INSTRUCTOR)</i> March 2019, Chicago, IL	<i>BUSINESS PRACTICE AND ETHICS</i> March 2015, Online Seminar
<i>GENERAL INCOME APPROACH (CO-INSTRUCTOR)</i> February 2019, Chicago, IL	<i>INSTRUCTOR WEBINAR</i> May and October 2014, Online Webinar
<i>GENERAL SALES COMPARISON APPROACH (INSTRUCTOR AUDIT)</i> February 2019, Chicago, IL	<i>GENERAL APPRAISER MARKET ANALYSIS AND HIGHEST AND BEST USE</i> January 2014, Chicago, IL
<i>GENERAL APPRAISER INCOME APPROACH PART I (INSTRUCTOR AUDIT)</i> November 2018, Nashville, TN	<i>INSTRUCTOR WEBINAR</i> April and October 2013, Online Webinar
<i>GENERAL APPRAISER PROCEDURES (CO-INSTRUCTOR)</i> October 2018, Chicago, IL	<i>KNOWLEDGE CENTER FOR INSTRUCTORS</i> October 2012, Online Webinar
<i>INSTRUCTOR QUALIFYING CONFERENCE</i> September 2018, Chicago, IL	<i>CANDIDATE FOR DESIGNATION PROGRAM</i> July 2012, Online Webinar
<i>ADULT LEARNING – EFFECTIVE CLASSROOM LEARNING</i> September 2018, Online Webinar	<i>NATIONAL USPAP UPDATE COURSE</i> June 2012, Chicago, IL
<i>LITIGATION APPRAISING: SPECIALIZED TOPICS AND APPLICATIONS</i> July 2018, Roseville, MN	<i>GENERAL APPRAISER INCOME APPROACH PART I</i> October 2011, Chicago, IL
<i>THE APPRAISER AS AN EXPERT WITNESS: PREPARATION AND TESTIMONY</i> May 2018, Woburn, MA	<i>NATIONAL USPAP UPDATE COURSE</i> September 2011, Chicago, IL
<i>QUANTITATIVE ANALYSIS</i> March 2018, Chicago, IL	<i>CONDEMNATION APPRAISING: PRINCIPLES AND APPLICATIONS</i> August 2011, Chicago, IL
<i>NATIONAL USPAP UPDATE COURSE</i> February 2018, Chicago, IL	<i>NATIONAL USPAP UPDATE COURSE</i> September 2009, Online Seminar
	<i>EMINENT DOMAIN AND CONDEMNATION</i> September 2009, Online Seminar

DINAN REAL ESTATE ADVISORS, INC.

EDWARD W. DINAN, MAI, CRE®
PRESIDENT

ACADEMIC

Rockhurst College, Kansas City, Missouri, A.B., 1972

American Institute of Real Estate Appraisers

Course 1A, Memphis State University - May 1975

Course 1B, Tulane University - July 1975

Course II, University of Georgia - February 1976

Course VI, Chicago Education Center - March 1977

Appraisal Institute

Standards of Professional Practice, Parts A and B

Seminars include: Cash Equivalency, Subdivision Analysis, Rates Ratios and Reasonableness, Feasibility, Valuation of Leasehold Interests, Americans with Disability Act Review, Condemnation Process and Appraisal, Condemnation Appraising: Advanced Topics and Applications, Standards of Professional Practice, Parts A and B, Corridors And Rights-Of-Way II Symposium Valuation and Policy

Harvard Law School, Program of Instruction for Lawyers

Advanced Negotiation: Deal Design and Implementation

University of Houston

Dispute Resolution Institute

EXPERIENCE

Professional experience includes market and financial feasibility studies, highest and best use analyses, transient housing and convention market surveys, analysis of redevelopment potential of existing communities, lease analysis and consultation, as well as the appraisal and evaluation of many types of properties including:

Airports

Apartments (high rise, garden, townhouse)

Banks

Casinos

Cemeteries

Condemnation Appraisals

Condominiums/Co-op/Timeshare

Duck Clubs

Farms

Golf Courses/Country Clubs

Hotels and Motels

Industrial Plants and Warehouses

Mobile Home Parks

Office Buildings

Planned Communities

Quarries/Mines

Railroad Properties

Resorts

Restaurants

Sales and Service Buildings

Schools (private, parochial, secondary, higher education)

Shopping Centers (regional, community, neighborhood)

Single Family Residential

Special Use Properties

Subdivisions

Surgical Centers

Theaters

Urban Renewal (acquisition, reuse)

Vacant Land (commercial, industrial, residential, rural, agricultural)

Vessels

In addition, Mr. Dinan has been approved as a fee appraiser for the U.S. Department of Justice, Missouri Department of Natural Resources, Missouri Department of Highways and Transportation, Illinois Department of Transportation, Probate Court of St. Louis City, as well as FNMA, FDIC, RTC, HUD, SBA, OTS, along with numerous other governmental agencies and is qualified in court as an expert witness. Mr. Dinan has also served as a hearing officer for the St. Louis County Board of Equalization.

Prior to forming Dinan Real Estate Advisors, Inc., Mr. Dinan was employed by the Turley Martin Company as Vice President of their Consulting and Appraising Division. Mr. Dinan has also participated as a guest lecturer on real estate appraising at Washington University, as well as several seminars sponsored jointly by the University of Missouri - St. Louis and the Home Builders Association of Greater St. Louis, Counselors of Real Estate®, and Law Seminars International. In addition, Mr. Dinan is approved as an instructor for the Missouri Real Estate Commission's Continuing Education Program, and has been a lectured speaker for the Bar Association of Metropolitan St. Louis. Mr. Dinan has also delivered seminars on appraisal reviews to loan officers at several financial institutions in the St. Louis area.

GEOGRAPHICAL AREAS OF EXPERIENCE

Territory covered is primarily Metropolitan St. Louis, but also includes professional experience in the following 27 states: Arizona, Arkansas, California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Michigan, Mississippi, Missouri, Nebraska, New York, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, Wisconsin and Wyoming.

PROFESSIONAL AFFILIATION

Mr. Dinan has held virtually every position as an officer and has served on the Board of Directors for the local chapter of the Appraisal Institute. In 1990, Mr. Dinan served as President of the former American Institute of Real Estate Appraisers and coordinated its unification with the local Society Chapter. Mr. Dinan also served as a Regional Representative for Region II of the Appraisal Institute. Mr. Dinan currently serves on the Board of Directors and is a National Liaison Membership Chair for the Counselors of Real Estate® as well as serving on the Advisory Board of Great Southern Bank. In addition, Mr. Dinan has the following affiliations:

Counselor of Real Estate® - 1996

2010 National Chairman - Dispute Resolution

2011 National Liaison Vice Chair

2011 National Co-Chair - Litigation Support

2012-2017 Board of Directors

2013 Recipient of the Chairs Award presented by The Counselors of Real Estate

2013 -2014 National Liaison Membership Chair

Appraisal Institute MAI Designation, Certificate Number 6103 -1980

St. Louis Association of Realtors

Royal Institution of Chartered Surveyors - 2006

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Flinn Engineering, LLC
11216 Neumann Lane
Highland, Illinois 62249
618-550-8427
ksimpson@flinnengineering.com

June 30, 2022

Mr. Joseph E. Batis, MAI, R/W-AC
Edward J. Batis & Associates
313 N. Chicago Street
Joliet, IL 60432

Re: Engineering Report-Revised
Water and Wastewater System Appraisal
Smithton, Missouri

Dear Mr. Batis:

This report supersedes the previous version dated October 5, 2020. The revision is a result of receiving maps of the water distribution system and the sewer collection system. The previous report relied on discussions with City staff during the site visit for the length of water and sewer main. City staff indicated that they have 14 miles of water main and it was assumed that the length of sewer main was also 14 miles. The water and sewer locations were redrawn and measured using *Google Earth™ mapping service*. The revised length of water main is 5.3 miles and sewer main is 4.3 miles. The following report and tables have been updated accordingly.

Flinn Engineering, LLC is pleased to present the following information regarding the water and wastewater systems owned by the City of Smithton, Missouri (City) as part of the appraisal process you are completing for Missouri American Water. The purpose of this Engineering Report is to provide a high-level review of the condition of the system, estimate the 2020 installation cost, and estimate the depreciated value of the assets. The original installation costs and installation dates were not documented by the City. The 2020 estimated cost of installation was calculated using a combination of an engineering opinion of cost to install the assets based on knowledge of other systems of similar size, as well as correspondence from the City, vendors, and contractors. The 2020 estimated installation cost was depreciated based on the estimated age of each asset.

A site visit was conducted on August 13, 2020. 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 two (2) wells, an elevated storage tank, and the water distribution system. The wastewater system includes a treatment plant, two (2) lift stations, and the sewer collection system.

Wells

The City owns two (2) deep wells. The City did not provide documentation on the wells. The information was provided by City staff during the site visit. Well #1 was constructed in 1929 and had a major improvement completed in 1993. The improvement included a pump replacement

and the addition of chlorine room. In 2010 a new meter was installed on the well and pump controls were installed. The control system is used to operate both wells. The well is 2,300 feet deep and has a pumping capacity of 170 gallons per minute. Well #2 was constructed in 1983 and is 1,980 feet deep. The building includes a chlorine room. The pumping capacity is 200 gpm. **Table 1** summarizes the estimated cost to install the wells in 2020.

Table 1 – Well Estimated Installation Cost in 2020

Description of Work	Well #1	Well #2
Well Depth (feet)	2300	1980
Well Drilling, Casing, Pump, Electrical (\$125/foot)	\$287,500.00	\$247,500.00
Site Piping (5% of Well)	\$ 14,375.00	\$ 12,375.00
Site Work (Lump sum \$5,000)	\$ 5,000.00	\$ 5,000.00
Subtotal	\$309,175.00	\$266,855.00
Engineering (10% of Subtotal)	\$ 30,917.50	\$ 26,685.50
Total	\$340,092.50	\$293,540.50

The well pump replacement in 1993 is estimated to cost \$15,000 in 2020, assuming the pump cost is \$5,000 and the labor and installation is \$10,000. The new chlorine storage and metering pump equipment is estimated to cost \$6,000 in 2020, assuming the tank and metering pump cost is \$2,000 and the labor and installation is \$4,000. The chlorine storage and metering pump equipment is assumed to be similar for Well #2. The new meter and pump control equipment is estimated to cost \$7,500 in 2020, assuming the meter and installation is \$2,500 and the control system and programming is \$5,000.

The wells and chlorine feed equipment appear to be in good condition. Although Well #1 is fully depreciated, it is still in operation and could continue to be operational beyond the depreciation period.

Water Storage Tank

The water system includes a 50,000-gallon elevated tank. The tank is a riveted steel, multi-leg tank. The City did not provide documentation on the tank. The information was provided by City staff during the site visit. Based on conversations with tank manufacturers, the estimated cost for supplying and constructing a storage tank in 2020 would be in the range of \$2.00 to \$2.50 per gallon depending on the height of the tank. We estimated the cost of the tank to be \$2.50 per gallon because of the height. We estimated the cost of the foundation to be 10% of the tank cost, the site piping to be 5% of the tank cost, and the site work (grading, fencing, etc) to be \$5,000. The engineering is estimated at 10% of the subtotal for the tank, foundation, etc. **Table 2** summarizes the estimated cost to install the tank in 2020.

Table 2 – Tank Estimated Installation Cost in 2020

Description of Work	Elevated Tank (50,000 gallons)
Tank (\$2.50 per gallon)	\$ 125,000.00
Foundation (10% of Tank)	\$ 12,500.00
Site Piping (5% of Tank)	\$ 6,250.00
Site Work (Lump sum \$5,000)	\$ 5,000.00
Subtotal	\$ 148,750.00
Engineering (10% of Subtotal)	\$ 14,875.00
Total	\$ 163,625.00

The tank is inspected every year. The tank was painted 8 or 9 years ago and was cleaned when it was painted. It has also been cleaned once since the painting. The tank is covered in a black residue that was tested for mold by MDNR. The black residue is diesel suet from the truck traffic at the facility next to the tank.

Although the tank is fully depreciated, the tank appears to be in good condition and can continue to be in service well beyond the depreciation period.

Water Distribution System

The City provided a .pdf of the Water System Map showing locations of 2-inch, 4-inch, and 6-inch water main and another .pdf showing the water meter locations. The water distribution system was drawn in *Google Earth™ mapping service* to estimate the length of each size. The number of fire hydrants was provided by City staff during the site visit. The water distribution system includes approximately 5.3 miles of C900 PVC water main, 30 fire hydrants, and 256 customer service connections and meters. The entire water distribution system was replaced in 1996 over a 7-month period. The cost for the replacement reported by the City during the site visit was \$400,000, which is \$14.40 per foot. It is assumed that the City staff performed most of the installation work and the reported \$400,000 was mostly for material. We assumed a 2020 cost for the installation of water main, 30 fire hydrants, and 256 services and meters and it is summarized in **Table 3**. The estimated cost assumes the main is approximately 3 feet deep. The estimate includes excavation, material, installation, fittings, valves, backfill, and restoration.

Table 3 – Distribution System Estimated Installation Cost in 2020

Asset Description	Quantity	Unit	Estimated Unit Cost 2020	2020 Estimated Installation Cost
2-inch Water Main	12,200	feet	\$ 25.00	\$ 305,000
4-inch Water Main	2,300	feet	\$ 45.00	\$ 103,500
6-inch Water Main	13,300	feet	\$ 50.00	\$ 665,000
Fire Hydrants	30	each	\$ 3,500.00	\$ 105,000
Services and Meters	256	each	\$ 1,500.00	\$ 384,000
Total				\$ 1,154,000

The water distribution system was not observed for condition. Based on the age of the water

distribution system, it is assumed that the water distribution system is in very good condition.

Wastewater Treatment Plant

The wastewater treatment plant is a two-cell lagoon system with a design flow of 62,000 gallons per day, according to the MDNR Operating Permit (**Appendix A**). The City did not provide documentation on the lagoons. The information was provided by City staff during the site visit. There is no chemical feed at the lagoons and sludge is retained in the lagoon. The plant was originally constructed in 1969.

The USEPA published a Technology Fact Sheet on lagoons (**Appendix B**). The Fact Sheet does not list typical installation costs because the costs vary significantly based on the cost of the land, excavation, grading, berm construction, inlet and outlet structures, and permeability of the soil. Based on some recent projects and discussions with contractors, we estimate the 2020 installation cost at \$2.50 per gallon treated (\$155,000).

The treatment plant is fully depreciated. It appears to be in very good condition and can continue to be in service well beyond the depreciation period.

Sewer Lift Stations

The wastewater system includes two (2) sewer lift stations. The City did not provide documentation on the pump stations. The information was provided by City staff during the site visit. Both lift stations are similar in type and size. They include two (2) pumps. They do not include standby generators. The lift stations include heat sensors on the pumps and are automatically controlled. Each pump station pumps to separate forcemains to the treatment plant. Pump Station #1 is located on Rattlesnake Hill Road near the treatment plant and pumps from the west portion of the City. Pump Station #2 is located on the southeast side of the City and pumps from the east portion of the City.

The lift stations are assumed to date back to 1969 when the treatment plant was installed. Lift Station #1 was replaced in 2000. The cost to install each lift station in 2020 is estimated to be \$26,950, which is summarized in **Table 4**.

Table 4 – Sewer Lift Station Estimated Installation Cost in 2020

Description of Work	2020 Estimated Installation Cost
10-hp, 3-ph Sewer Pumps	\$ 8,000.00
Installation	\$ 10,000.00
Controls	\$ 5,000.00
Site Work	\$ 1,500.00
Subtotal	\$ 24,500.00
Engineering (10% of Subtotal)	\$ 2,450.00
Total	\$ 26,950.00

Lift station equipment has a depreciation period of only 10 years. Both stations are fully depreciated and are still in service. They could remain in service well beyond the depreciation period if they are continually maintained. Both stations appear to be in good condition.

Sewer Collection System

The City provided a .pdf of the Waste Water System showing locations of the sewer main and manholes. The system was drawn in *Google Earth™ mapping service* to estimate the length of sewer main. The Waste Water System map does not include size and material. During the site visit, City staff indicated that the sewer collection system is mostly 8-inch clay pipe and was installed in 1965. The collection system includes 75 manholes and all manholes have been replaced since the original installation. We assumed the manholes were replaced in 1998 around the same time the entire water distribution system was replaced. We assumed the number of sewer laterals were similar to the number of water meters. **Table 5** summarizes the estimated installation cost for the sewer collection system in 2020. The estimated cost assumes the average depth of the sewer is approximately 6 feet deep. The estimate includes design, excavation, materials, installation, backfill, and restoration.

Table 5 – Sewer Collection System Estimated Installation Cost in 2020

Asset Description	Quantity	Unit	Estimated Unit Cost 2020	2020 Estimated Installation Cost
Sewer	22,600	feet	\$ 55.00	\$ 1,243,000
Manholes	75	each	\$ 3,500.00	\$ 262,500
Service Laterals	256	each	\$ 300.00	\$ 76,800
Total				\$ 1,582,300

The sewer collection system was not observed for condition. The city reported that the inflow and infiltration in the collection system is approximately 10-15% on the eastern portion of the City and considerably higher in the western portion of the City. The entire sewer system has been inspected using CCTV equipment. Although the majority of the sewer collection system is completely depreciated, the system is still in use and could continue to be in use well beyond the depreciation period. Based on the age and material, the collection system is assumed to be in fair condition.

Estimated Depreciated Value

Table 6 shows a summary of the estimated cost for installation in 2020 and the depreciated value based on the age of the assets. The depreciation calculation is included in **Appendix C**. The depreciation periods are based on depreciation periods used by the Missouri Public Service Commission (PSC) during recent rate cases. The depreciation schedules from six (6) recent rate cases are included in **Appendix D**. Three (3) are from water systems and three (3) are from wastewater systems. The depreciation periods used are summarized in **Table 7**.

Table 6 - Summary of Estimated Depreciated Value

	Estimated 2020 Installation Cost	Depreciated from 2020 Estimate
Smithton Water System	\$ 2,394,258.00	\$ 836,302.09
Smithton Wastewater System	\$ 1,791,200.00	\$ 147,000.00
Total	\$ 4,185,458.00	\$ 983,302.09

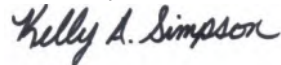
Table 7 – Depreciation Periods

Asset	Depreciation Period (years)
Water Treatment Equipment	35
Tanks	42
Water Main	50
Fire Hydrants	50
Services and Meters	35
WWTP-Lagoon	40
Lift Station	10
Sanitary Sewer, Manholes, Laterals	50

Overall the water and wastewater systems appear to be in good condition. Although many of the assets are fully depreciated, they are still in operation and could continue to stay in operation well beyond the depreciation period.

Thank you for the opportunity to assist you on this project. Please let me know if you have any questions.

Sincerely,



Kelly A. Simpson, PE, LEED® AP
Owner

Enclosures:

- Appendix A – MDNR Operating Permit
- Appendix B – USEPA Fact Sheet on Lagoons
- Appendix C – Depreciation Calculation
- Appendix D – Missouri PSC Depreciation Schedules

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0025828

Owner: City of Smithton
Address: 101 W. Washington, Smithton, MO, 65350

Continuing Authority: Same as above
Address: Same as above

Facility Name: Smithton Wastewater Treatment Facility
Facility Address: Rattlesnake Hill Rd. Smithton, MO, 65350

Legal Description: NE ¼, NE ¼, Sec. 15, T45N, R20W, Pettis County
UTM Coordinates: X=491323, Y=4280837

Receiving Stream: Tributary to Tributary to Flat Creek (C)
First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) (3960)
USGS Basin & Sub-watershed No.: (10300103-0306)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 – POTW – SIC #4952

The use or operation of this facility shall be by or under the supervision of a Certified “D” Operator.

Two cell lagoon /sludge retained in lagoon
Design population equivalent is 620.
Design flow is 62,000 gallons per day.
Actual flow is 40,000 gallons per day.
Design sludge production is 9.3 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 621.250 RSMo, Section 640.013 RSMo and Section 644.051.6 of the Law.

September 1, 2016 June 1, 2017
Effective Date Modification Date

Edward B. Galbraith, Director, Division of Environmental Quality

March 31, 2021
Expiration Date

David J. Lamb, Acting Director, Water Protection Program

OUTFALL #001	TABLE A-1. INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 2 of 8
		PERMIT NUMBER MO-0025828

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective on **September 1, 2016** and remain in effect through **January 31, 2021**. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	twice/week	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		65	45	once/month	grab
Total Suspended Solids	mg/L		120	80	once/month	grab
<i>E. coli</i> (Note 1, Page 3)	#/100mL		*	*	once/month	grab
Ammonia as N	mg/L	*		*	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE OCTOBER 28, 2016. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

EFFLUENT PARAMETER(S)	UNITS	MINIMUM		MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH – Units **	SU	6.5			once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE OCTOBER 28, 2016.

* Monitoring requirement only.
** pH is measured in pH units and is not to be averaged.

OUTFALL #001	TABLE A-2. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 3 of 8
		PERMIT NUMBER MO-0025828

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on **February 1, 2021**. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	twice/week	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		65	45	once/month	grab
Total Suspended Solids	mg/L		120	80	once/month	grab
<i>E. coli</i> (Note 1, Page 3)	#/100mL		1030	206	once/month	grab
Ammonia as N (Apr 1 – Sep 30) (Oct 1 – Mar 31)	mg/L	5.0 9.0		1.3 2.8	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED **MONTHLY**; THE FIRST REPORT IS DUE **MARCH 28, 2021**. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

EFFLUENT PARAMETER(S)	UNITS	MINIMUM		MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH – Units **	SU	6.5			once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED **MONTHLY**; THE FIRST REPORT IS DUE **MARCH 28, 2021**.

- * Monitoring requirement only.
- ** pH is measured in pH units and is not to be averaged.

Note 1 - Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

OUTFALL #001	TABLE A-3. WHOLE EFFLUENT TOXICITY FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	
		PERMIT NUMBER MO-0025828

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on **September 1, 2016** and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Acute Whole Effluent Toxicity (Note 2)	TU _a	*			once/5 years***	grab

MONITORING REPORTS SHALL BE SUBMITTED **ONCE EVERY 5 YEARS*****; THE FIRST REPORT IS DUE **SEPTEMBER 28, 2022**

- * Monitoring requirement only.
- *** Five year period from 2018 to 2023
- Note 2 –See Special Condition #22 for additional requirements.

TABLE B.		PAGE NUMBER 4 of 8	
INFLUENT MONITORING REQUIREMENTS		PERMIT NUMBER MO-0025828	
The facility is required to meet a removal efficiency of 65% or more as a monthly average. The monitoring requirements shall become effective on September 1, 2016 and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:			
SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
Biochemical Oxygen Demand ₅	mg/L	once/quarter*****	grab
Total Suspended Solids	mg/L	once/quarter*****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2017</u> .			

**** See table below for quarterly sampling requirements

Minimum Sampling Requirements			
Quarter	Months	Influent Parameters	Report is Due
First	January, February, March	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28th
Third	July, August, September	Sample at least once during any month of the quarter	October 28th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28th

C. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Parts I, II, & III standard conditions dated August 1, 2014, May 1, 2013, and March 1, 2015, and hereby incorporated as though fully set forth herein.

D. SPECIAL CONDITIONS

1. This permit establishes final ammonia limitations based on Missouri's current Water Quality Standard. On August 22, 2013, the U.S. Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of the final national recommended ambient water quality criteria for protection of aquatic life from the effects of ammonia in freshwater. The EPA's guidance, Final Aquatic Life Ambient Water Quality Criteria for Ammonia – Fresh Water 2013, is not a rule, nor automatically part of a state's water quality standards. States must adopt new ammonia criteria consistent with EPA's published ammonia criteria into their water quality standards that protect the designated uses of the water bodies. The Department of Natural Resources has initiated stakeholder discussions on how to best incorporate these new criteria into the State's rules. A date for when this rule change will occur has not been determined. Also, refer to Section VI of this permit's factsheet for further information including estimated future effluent limits for this facility. It is recommended the permittee view the Department's 2013 EPA criteria Factsheet located at <http://dnr.mo.gov/pubs/pub2481.htm>.
2. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test including acute and chronic Whole Effluent Toxicity (WET) tests, or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.
 - (d) Incorporate the requirement to develop a pretreatment program pursuant to 40 CFR 403.8(a) when the Director of the Water Protection Program determines that a pretreatment program is necessary due to any new introduction of pollutants into the Publicly Owned Treatment Works or any substantial change in the volume or character of pollutants being introduced.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

3. All outfalls must be clearly marked in the field.
4. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.
5. Report as no-discharge when a discharge does not occur during the report period.
6. Water Quality Standards
 - (a) To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
 - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
7. Reporting of Non-Detects:
 - (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
 - (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
 - (c) The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
 - (d) The permittee shall use one-half of the detection limit for the non-detect result when calculating monthly averages.
 - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
8. The permittee shall develop and implement a program for maintenance and repair of the collection system. The recommended guidance is the US EPA's Guide For Evaluating Capacity, Management, Operation, And Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document number EPA 305-B-05-002) or the Departments' CMOM Model located at <http://dnr.mo.gov/env/wpp/permits/docs/cmom-template.doc>. For additional information regarding the Departments' CMOM Model, see the CMOM Plan Model Guidance document at <http://dnr.mo.gov/pubs/pub2574.htm>.

The permittee shall also submit a report to the Kansas City Regional Office annually, by January 28th, for the previous calendar year. The report shall contain the following information:

- (a) A summary of the efforts to locate and eliminate sources of excessive infiltration and inflow into the collection system serving the facility for the previous year.
- (b) A summary of the general maintenance and repairs to the collection system serving the facility for the previous year.
- (c) A summary of any planned maintenance and repairs to the collection system serving the facility for the upcoming calendar year. This list shall include locations (GPS, 911 address, manhole number, etc.) and actions to be taken.

D. SPECIAL CONDITIONS (continued)

9. Bypasses are not authorized at this facility unless they meet the criteria in 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Kansas City Regional Office or by using the online Sanitary Sewer Overflow/Facility Bypass Application, located at: <http://dnr.mo.gov/modnrcag/> during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass. If the permittee wishes to utilize blending, the permittee shall file an application to modify this permit to facilitate the inclusion of appropriate monitoring conditions.
10. The facility must be sufficiently secured to restrict entry by children, livestock and unauthorized persons as well as to protect the facility from vandalism.
11. At least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain closed except when temporarily opened by; the permittee to access the facility, perform operational monitoring, sampling, maintenance, mowing, or for inspections by the Department. The gate shall be closed and locked when the facility is not staffed.
12. At least one (1) warning sign shall be placed on each side of the facility enclosure in such positions as to be clearly visible from all directions of approach. There shall also be one (1) sign placed for every five hundred feet (500') (150 m) of the perimeter fence. A sign shall also be placed on each gate. Minimum wording shall be SEWAGE TREATMENT FACILITY—KEEP OUT. Signs shall be made of durable materials with characters at least two inches (2") high and shall be securely fastened to the fence, equipment or other suitable locations.
13. An Operation and Maintenance (O & M) manual shall be maintained by the permittee and made available to the operator. The O & M manual shall include key operating procedures and a brief summary of the operation of the facility.
14. An all-weather access road shall be provided to the treatment facility.
15. The discharge from the wastewater treatment facility shall be conveyed to the receiving stream via a closed pipe or a paved or rip-rapped open channel. Sheet or meandering drainage is not acceptable. The outfall sewer shall be protected against the effects of floodwater, ice or other hazards as to reasonably insure its structural stability and freedom from stoppage. The outfall shall be maintained so that a sample of the effluent can be obtained at a point after the final treatment process and before the discharge mixes with the receiving waters.
16. A minimum of two (2) feet freeboard must be maintained in each lagoon cell. A lagoon level gauge, which clearly marks the minimum freeboard level, shall be provided in each lagoon cell. .
17. The berms of the lagoons shall be mowed and kept free of any deep-rooted vegetation, animal dens, or other potential sources of damage to the berms.
18. The facility shall ensure that adequate provisions are provided to prevent surface water intrusion into the lagoon and to divert stormwater runoff around the lagoon and protect embankments from erosion.
19. Acute Whole Effluent Toxicity (WET) tests shall be conducted as follows:
 - (a) Freshwater Species and Test Methods: Species and short-term test methods for estimating the acute toxicity of NPDES effluents are found in the most recent edition of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 48-hour, static, non-renewal toxicity tests with the following species:
 - o The fathead minnow, *Pimephales promelas* (Acute Toxicity EPA Test Method 2000.0).
 - o The daphnid, *Ceriodaphnia dubia* (Acute Toxicity EPA Test Method 2002.0).
 - (b) Chemical and physical analysis of the upstream control sample and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping. Where upstream receiving water is not available or known to be toxic, other approved control water may be used.

D. SPECIAL CONDITIONS (continued)

- (c) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
 - (d) The Allowable Effluent Concentration (AEC) for this facility is 100% with the dilution series being: 100%, 50%, 25%, 12.5%, and 6.25%.
 - (e) All chemical and physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% effluent concentration.
 - (f) All chemical analyses shall be performed and results shall be recorded in the appropriate field of the report form. The parameters for chemical analysis include Temperature (°F), pH (SU), Conductivity (µmohs/cm), Dissolved Oxygen (mg/L), Un-ionized Ammonia (mg/L), Total Alkalinity (mg/L), and Total Hardness (mg/L).
 - (g) The facility must submit a full laboratory report for all toxicity testing. The report must include a quantification of acute toxic units ($TU_a = 100/LC_{50}$) reported according to the test methods manual chapter on report preparation and test review. The Lethal Concentration 50 Percent (LC_{50}) is the effluent concentration that would cause death in 50 percent of the test organisms at a specific time.
20. Electronic Discharge Monitoring Report (eDMR) Submission System.
- (a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.
 - (b) Programmatic Reporting Requirements. The following reports (if required by this permit) must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:
 - (1) Collection System Maintenance Annual Reports;
 - (2) Schedule of Compliance Progress Reports;
 - (3) Sludge/Biosolids Annual Reports; and
 - (4) Any additional report required by the permit excluding bypass reporting.After such a system has been made available by the department, required data shall be directly input into the system by the next report due date.
 - (c) Other actions. The following shall be submitted electronically after such a system has been made available by the department:
 - (1) General Permit Applications/Notices of Intent to discharge (NOIs);
 - (2) Notices of Termination (NOTs); and
 - (3) Bypass reporting, See Special Condition #9 for 24-hr. bypass reporting requirements.
 - (d) Electronic Submissions. To access the eDMR system, use the following link in your web browser: <https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.
 - (e) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. The department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period that the approved electronic reporting waiver is effective.

E. SCHEDULE OF COMPLIANCE

The previous permit included the following schedule of compliance. The six (6) year schedule of compliance will be continued as it were originally written.

The facility shall attain compliance with final effluent limitations as soon as reasonably achievable.

1. The permittee shall submit interim progress reports detailing progress made in attaining compliance with the final effluent limits every 12 months from February 1, 2015.
2. By February 1, 2021, the permittee shall attain compliance with the final effluent limits.

Please submit progress reports to the Missouri Department of Natural Resources, Kansas City Regional Office, 500 NE Colburn Rd, Lee Summit Missouri, 64086

MISSOURI DEPARTMENT OF NATURAL RESOURCES
EDMR STATEMENT OF BASIS
MO-0025828
SMITHTON WASTEWATER TREATMENT FACILITY

This Statement of Basis gives pertinent information regarding an internal minor permit modification to the above listed operating permit without the need for a public comment process. A statement of basis is not an enforceable part of a Missouri State Operating Permit.

Part I – Facility Information

Facility Type: POTW - SIC #4952

Facility Description:

Single Cell Lagoon /Sludge Retained in Lagoon

Part II – Modification Rationale

This operating permit was modified by adding a special condition to the permit to require the permittee to submit all discharge monitoring reports electronically (eDMR) to the department. The final rule (eReporting Rule) substitutes electronic reporting for paper-based reports and, over the long term, saves time and resources for permittees, states, tribes, territories, and EPA, while improving compliance and better protecting the Nation's waters. The final rule requires permittees and regulators to use existing, available information technology to electronically report information and data related to the NPDES permit program in lieu of filing paper-based reports. All authorized programs are required to electronically transmit the federally-required data (identified in appendix A to 40 CFR part 127) to EPA. The purpose and need for this rule was highlighted in the development of the Clean Water Act Enforcement Action Plan (Plan).

Announced by EPA in October 2009, the Plan was a collaborative effort by EPA and state environmental agencies to explore opportunities to improve water quality by emphasizing and adopting new approaches that will improve how the NPDES permitting and enforcement program is administered. The goals of the Plan include improving transparency of the information on compliance and enforcement activities in each state, connecting this information to local water quality, and providing the public with real-time, easy access to this information.

No other changes were made at this time to this permit.

Part III –Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit.

DATE OF STATEMENT OF BASIS: MAY 22, 2017

COMPLETED BY:

ANGELA FALLS, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
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**MISSOURI DEPARTMENT OF NATURAL RESOURCES
 FACT SHEET
 FOR THE PURPOSE OF RENEWAL
 OF
 MO-0025828
 SMITHTON WASTEWATER TREATMENT FACILITY**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for a Minor

Part I – Facility Information

Facility Type: POTW - SIC #4952

Facility Description:

Single Cell Lagoon /Sludge Retained in Lagoon

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?

- No.

Application Date: 09/23/2015

Expiration Date: 03/31/2016

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.093	Equivalent to Secondary	Domestic

Facility Performance History:

This facility was last inspected on 08/15/2013. The inspection showed the following unsatisfactory features; failed to provide locked gate, failed to provide adequate fencing to prevent unauthorized access. Failed to provide and all weather access road. The facility has since returned to compliance. Review of the previous five years of discharge monitoring reports shows the following reported exceedences:

Limit value exceeded	08/31/2011	Total Suspended Solids (TSS)
Limit value exceeded	10/31/2011	Total Suspended Solids (TSS)
Limit value exceeded	08/31/2012	Total Suspended Solids (TSS)
Limit value exceeded	09/30/2012	Total Suspended Solids (TSS)
Limit value exceeded	09/30/2012	pH
Limit value exceeded	09/30/2012	BOD, 5-day, 20 deg. C
Limit value exceeded	04/30/2014	Total Suspended Solids (TSS)

Comments:

Changes in this permit include the removal of the schedule of compliance to submit a Wasteload Allocation Study. See Part VII of the Fact Sheet for further information regarding the addition and removal of effluent parameters. Special conditions were updated to include the reporting of Non-detects

Part II – Operator Certification Requirements

- This facility is required to have a certified operator.

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], the permittee shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.020(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Owned or operated by or for a

- Municipalities
- State agency
- Federal agency
- Public Sewer District
- County

- Public Water Supply Districts
- Private Sewer Company regulated by the Public Service Commission
- State agency
- Federal agency

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200) or fifty (50) or more service connections.

This facility currently requires an operator with a D Certification Level. Please see **Appendix - Classification Worksheet** Modifications made to the wastewater treatment facility may cause the classification to be modified.

<http://www.dnr.mo.gov/operator/index.do>

Operator's Name: Joel Hughes
Certification Number: 13920
Certification Level: D

The listing of the operator above only signifies that staff drafting this operating permit have reviewed appropriate Department records and determined that the name listed on the operating permit application has the correct and applicable Certification Level.

Part III– Operational Monitoring

- As per [10 CSR 20-9.010(4)], the facility is required to conduct operational monitoring.

Part IV – Receiving Stream Information

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(4)].

RECEIVING STREAM(S) TABLE: OUTFALL #001

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
8-20-13 MUDD V1.0	C	3960	AQL, IRR, LWW, SCR, WBCB, HHP	10300103-0306	0

*As per 10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission's water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and 1st classified receiving stream's beneficial water uses to be maintained are in the receiving stream table in accordance with [10 CSR 20-7.031(1)(C)].

Uses which may be found in the receiving streams table, above:

10 CSR 20-7.031(1)(C)1.:

AQL = Protection of aquatic life (Current narrative use(s) are defined to ensure the protection and propagation of fish shellfish and wildlife, which is further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat designations unless otherwise specified.)

10 CSR 20-7.031(1)(C)2.: Recreation in and on the water

WBC = Whole Body Contact recreation where the entire body is capable of being submerged;

WBC-A = Whole body contact recreation that supports swimming uses and has public access;

WBC-B = Whole body contact recreation that supports swimming;

SCR = Secondary Contact Recreation (like fishing, wading, and boating).

10 CSR 20-7.031(1)(C)3. to 7.:

HHP (formerly HHF) = Human Health Protection as it relates to the consumption of fish;

IRR = Irrigation for use on crops utilized for human or livestock consumption;

LWW = Livestock and wildlife watering (Current narrative use is defined as LWP = Livestock and Wildlife Protection);

DWS = Drinking Water Supply;

IND = Industrial water supply

10 CSR 20-7.031(1)(C)8-11.: Wetlands (10 CSR 20-7.031 Table A currently does not have corresponding habitat use criteria for these defined uses)

WSA = Storm- and flood-water storage and attenuation; **WHP** = Habitat for resident and migratory wildlife species;

WRC = Recreational, cultural, educational, scientific, and natural aesthetic values and uses; **WHC** = Hydrologic cycle maintenance.

10 CSR 20-7.031(6): GRW = Groundwater

RECEIVING STREAM(S) LOW-FLOW VALUES:

RECEIVING STREAM (C, E, P, P1)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Tributary to Tributary to Flat Creek (C)	0	0	0

MIXING CONSIDERATIONS

Mixing Zone: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Receiving Water Body's Water Quality

A stream survey was conducted on the receiving water body on 09/10/2013. The stream survey found 50 yards below the lagoon anaerobic substrate, discoloration, organic suspended solids and sphaerotilis. The second survey site observed at the same time 0.8 miles below the lagoon, pools, no flow, minnows and sunfish.

Part V – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

- The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

ANTI-BACKSLIDING:

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(o); 40 CFR Part 122.44(l)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- All limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply.

ANTIDEGRADATION:

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(3)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

- No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

BIOSOLIDS & SEWAGE SLUDGE:

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address:

<http://extension.missouri.edu/main/DisplayCategory.aspx?C=74>, items WQ422 through WQ449.

- Permittee is not authorized to land apply biosolids. Sludge/biosolids are removed by contract hauler, incinerated, stored in the lagoon, etc. The permittee must submit a sludge management plan for approval that details removal and disposal plans when sludge is to be removed from lagoons.

COMPLIANCE AND ENFORCEMENT:

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

- The facility is not currently under Water Protection Program enforcement action.

DISCHARGE MONITORING REPORTS:

On July 30, 2013, EPA proposed the Clean Water Act National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, which requires electronic reporting of NPDES information rather than the currently-required paper-based reports from permitted facilities. To comply with the upcoming federal rule, the Department is asking all permittees to begin submitting discharge monitoring data online. For permittees already using the Department's eDMR data reporting system, those permittees will be required to exclusively use the eDMR data reporting system.

- The permittee/facility is not currently using the eDMR data reporting system. To sign up for the eDMR system, visit the Department's eDMR page at <http://dnr.mo.gov/env/wpp/edmr.htm>.

PRETREATMENT PROGRAM:

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].

Pretreatment programs are required at any POTW (or combination of POTW operated by the same authority) and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:

- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

- The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

REASONABLE POTENTIAL ANALYSIS (RPA):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(1)(iii)] if the permit writer determines that any given pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

- An RPA analysis was completed for the last permit cycle. Due to permit synchronization, the previous permit cycle was reduced to a time period of less than 5 years. Therefore, all RPA results from short term permit have been carried over to this permit

REMOVAL EFFICIENCY:

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

- Equivalent to Secondary Treatment is 65% removal [40 CFR Part 133.105(a)(3) & (b)(3)].

SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):

Sanitary Sewer Overflows (SSOs) are defined as untreated sewage releases and are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSOs result from a variety of causes including blockages, line breaks, and sewer defects that can either allow wastewater to backup within the collection system during dry weather conditions or allow excess stormwater and groundwater to enter and overload the collection system during wet weather conditions. SSOs can also result from lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs include overflows out of manholes, cleanouts, broken pipes, and other into waters of the state and onto city streets, sidewalks, and other terrestrial locations.

Inflow and Infiltration (I&I) is defined as unwanted intrusion of stormwater or groundwater into a collection system. This can occur from points of direct connection such as sump pumps, roof drain downspouts, foundation drains, and storm drain cross-connections or through cracks, holes, joint failures, faulty line connections, damaged manholes, and other openings in the collection system itself. I&I results from a variety of causes including line breaks, improperly sealed connections, cracks caused by soil erosion/settling, penetration of vegetative roots, and other sewer defects. In addition, excess stormwater and groundwater entering the collection system from line breaks and sewer defects have the potential to negatively impact the treatment facility.

Missouri RSMo §644.026.1.(13) mandates that the Department issue permits for discharges of water contaminants into the waters of this state, and also for the operation of sewer systems. Such permit conditions shall ensure compliance with all requirements as established by sections 644.006 to 644.141. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Missouri RSMo §644.026.1.(15) instructs the Department to require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities. To ensure that public health and the environment are protected, any noncompliance which may endanger public health or the environment must be reported to the Department within 24 hours of the time the permittee becomes aware of the noncompliance. Standard Conditions Part I, referenced in the permit, contains the reporting requirements for the permittee when bypasses and upsets occur.

- At this time, the Department recommends the US EPA's Guide for Evaluating Capacity, Management, Operation and Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document # EPA 305-B-05-002) or the Departments' CMOM Model located at <http://dnr.mo.gov/env/wpp/permits/docs/cmom-template.doc>. For additional information regarding the Departments' CMOM Model, see the CMOM Plan Model Guidance document at <http://dnr.mo.gov/pubs/pub2574.htm>. The CMOM identifies some of the criteria used to evaluate a collection system's management, operation, and maintenance and was intended for use by the EPA, state, regulated community, and/or third party entities. The CMOM is applicable to small, medium, and large systems; both public and privately owned; and both regional and satellite collection systems. The CMOM does not substitute for the Clean Water Act, the Missouri Clean Water Law, and both federal and state regulations, as it is not a regulation.

SCHEDULE OF COMPLIANCE (SOC):

Per 644.051.4 RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. A SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. *See also* Section 502(17) of the Clean Water Act, and 40 CFR §122.2. For new effluent limitations, the permit includes interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR § 122.47(a)(1) and 10 CSR 20-7.031(11), compliance must occur as soon as possible. If the permit provides a schedule for meeting new water quality based effluent limits, a SOC must include an enforceable, final effluent limitation in the permit even if the SOC extends beyond the life of the permit.

A SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed. 40 CFR § 125.3.
- For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit that was not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be granted for conducting these activities.

In order to provide guidance to Permit Writers in developing SOCs, and attain a greater level of consistency, on April 9, 2015 the Department issued an updated policy on development of SOCs. This policy provides guidance to Permit Writers on the standard time frames for schedules for common activities, and guidance on factors that may modify the length of the schedule such as a Cost Analysis for Compliance.

- The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(11)]. The facility has been given a schedule of compliance to meet final effluent limits for Ammonia and E. coli. The six year schedule of compliance allowed for this facility should provide adequate time to evaluate operations, obtain an engineering report, hold a bond election, obtain a construction permit and implement upgrades required to meet effluent limits. This schedule of compliance was originally included in the previous permit cycle, due to the schedule of compliance exceeding the length of the previous permit the schedule will be continued unchanged as it were originally written.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of stormwater discharges.

In lieu of requiring sampling in the site-specific permit, the facility is required to develop and implement a Stormwater Pollution Prevention Plan. A facility can apply for conditional exclusion for "no exposure" of industrial activities and materials to stormwater by submitting to the Department a completed NPDES Form 3510-11 – No Exposure Certification for Exclusion from NPDES Stormwater Permitting. That document and additional information may be found at <http://water.epa.gov/polwaste/npdes/stormwater/Conditional-No-Exposure-Exclusion.cfm>. Upon approval of the "No Exposure", the permit can be modified to remove the SWPPP requirements. If the facility chooses to retain the conditional exclusion for "no exposure", the facility is required to renew the "No Exposure" exemption during the permit renewal period by submitting NPDES Form 3510-11 with Form B2.

- At this time, the permittee is not required to develop and implement a SWPPP.

VARIANCE:

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

- This operating permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

- Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C_e = \frac{(Q_e + Q_s)C - (Q_s \times C_s)}{(Q_e)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration C_e = effluent concentration
Cs = upstream concentration Q_e = effluent flow
Q_s = upstream flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Number of Samples "n":

Additionally, in accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance, which should be, at a minimum, be targeted to comply with the values dictated by the WLA. Therefore, it is recommended that the actual planned frequency of monitoring normally be used to determine the value of "n" for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for "n" must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is "n = 4" at a minimum. For Total Ammonia as Nitrogen, "n = 30" is used

WLA MODELING:

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

- A WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARDS:

Per [10 CSR 20-7.031(4)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:

- The permittee is required to conduct WET test for this facility.

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(4)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by facilities meeting the following criteria:

- Facility is a designated Major.
- Facility continuously or routinely exceeds its design flow.
- Facility that exceeds its design population equivalent (PE) for BOD₅ whether or not its design flow is being exceeded.
- Facility (whether primarily domestic or industrial) that alters its production process throughout the year.
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH₃)
- Facility is a municipality with a Design Flow ≥ 22,500 gpd.
- Other – please justify.

40 CFR 122.41(M) - BYPASSES:

The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from “bypassing” untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-7.015(9)(G) states a bypass means the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending, to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri’s Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

- This facility does not anticipate bypassing.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

- This facility does not discharge to a 303(d) listed stream.

Part VI –2013 Water Quality Criteria for Ammonia

Upcoming changes to the Water Quality Standard for ammonia may require significant upgrades to wastewater treatment facilities.

On August 22, 2013, the U.S. Environmental Protection Agency (EPA) finalized new water quality criteria for ammonia, based on toxicity studies of mussels and gill breathing snails. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels or gill breathing snails. Missouri is home to 69 of North America's mussel species, which are spread across the state. According to the Missouri Department of Conservation nearly two-thirds of the mussel species in Missouri are considered to be "of conservation concern". Nine species are listed as federally endangered, with an additional species currently proposed as endangered and another species proposed as threatened.

The adult forms of mussels that are seen in rivers, lakes, and streams are sensitive to pollutants because they are sedentary filter feeders. They vacuum up many pollutants with the food they bring in and cannot escape to new habitats, so they can accumulate toxins in their bodies and die. But very young mussels, called glochidia, are exceptionally sensitive to ammonia in water. As a result of a citizen suit, the EPA was compelled to conduct toxicity testing and develop ammonia water quality criteria that would be protective if young mussels may be present in a waterbody. These new criteria will apply to any discharge with ammonia levels that may pose a reasonable potential to violate the standards. Nearly all discharging domestic wastewater treatment facilities (cities, subdivisions, mobile home parks, etc.), as well as certain industrial and stormwater dischargers with ammonia in their effluent, will be affected by this change in the regulations.

When new water quality criteria are established by the EPA, states must adopt them into their regulations in order to keep their authorization to issue permits under the National Pollutant Discharge Elimination System (NPDES). States are required to review their water quality standards every three years, and if new criteria have been developed they must be adopted. States may be more protective than the Federal requirements, but not less protective. Missouri does not have the resources to conduct the studies necessary for developing new water quality standards, and therefore our standards mirror those developed by the EPA; however, we will utilize any available flexibility based on actual species of mussels that are native to Missouri and their sensitivity to ammonia.

Many treatment facilities in Missouri are currently scheduled to be upgraded to comply with the current water quality standards. But these new ammonia standards may require a different treatment technology than the one being considered by the permittee. It is important that permittees discuss any new and upcoming requirements with their consulting engineers to ensure that their treatment systems are capable of complying with the new requirements. The Department encourages permittees to construct treatment technologies that can attain effluent quality that supports the EPA ammonia criteria.

Ammonia toxicity varies by temperature and by pH of the water. Assuming a stable pH value, but taking into account winter and summer temperatures, Missouri includes two seasons of ammonia effluent limitations. Current effluent limitations in this permit are:

Summer – 5.0 mg/L daily maximum, 1.3 mg/L monthly average.
Winter – 9.0 mg/L daily maximum, 2.8 mg/L monthly average.

Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, the estimated effluent limitations for a facility in a location such as this that discharges to a receiving stream with no mixing consideration listed in Part IV of the Fact Sheet will be:

Summer – 1.7 mg/L daily maximum, 0.6 mg/L monthly average.
Winter – 5.6 mg/L daily maximum, 2.1 mg/L monthly average.

These estimated limits above are based in part on the actual performance of the plant at the time of the drafting of this permit and should not be construed as future effluent limitations. Future effluent limits, based on the EPA's 2013 water quality criteria for ammonia, will depend in part on the actual performance of the facility at the time the permit is renewed.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. When setting schedules of compliance for ammonia effluent limitations, consideration will be given to facilities that have recently constructed upgraded facilities to meet the current ammonia limitations.

For more information on this topic feel free to contact the Missouri Department of Natural Resources, Water Protection Program, Water Pollution Control Branch, Operating Permits Section at (573) 751-1300.

Part VII – Effluent Limits Determination

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

As per Missouri’s Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall’s Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

- Missouri or Mississippi River [10 CSR 20-7.015(2)]
- Lake or Reservoir [10 CSR 20-7.015(3)]
- Losing [10 CSR 20-7.015(4)]
- Metropolitan No-Discharge [10 CSR 20-7.015(5)]
- Subsurface Water [10 CSR 20-7.015(7)]
- All Other Waters [10 CSR 20-7.015(8)]

OUTFALL #001 – MAIN FACILITY OUTFALL

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average	Previous Permit Limit	Sampling Frequency	Reporting Frequency	Sample Type ****
Flow	MGD	1	*		*	*/*	twice /week	monthly	E
BOD ₅	mg/L	1		65	.45	.65/45	1/month	monthly	G
TSS	mg/L	1		120	.80	.120/80	1/month	monthly	G
<i>Escherichia coli</i> **	#/100mL	1, 3		1030	206	.1030/206	1/month	monthly	G
Ammonia as N (Apr 1 – Sep 30)	mg/L	2, 3	5.0		.13	5.0/1.3	1/month	monthly	G
Ammonia as N (Oct 1 – Mar 31)	mg/L	2, 3	9.0		2.8	9.0/2.8	1/month	monthly	G
Oil & Grease	mg/L	1, 3	15		.10	.15/10	1/month	monthly	G
Acute Whole Effluent Toxicity	TUa	1, 9	*			*	1/five years	once/five years	G
PARAMETER	Unit	Basis for Limits	Minimum		Maximum	Previous Permit Limit	Sampling Frequency	Reporting Frequency	Sample Type
pH	SU	1	6.5			≥6.5	1/month	monthly	G

* - Monitoring requirement only.

** - #/100mL; the Monthly Average for *E. coli* is a geometric mean.

*** - Parameter not previously established in previous state operating permit.

**** - C = 24-hour composite

G = Grab

T = 24-hr. total

E = 24-hr. estimate

Basis for Limitations Codes:

- | | | |
|--|---------------------------|-----------------------------------|
| 1. State or Federal Regulation/Law | 4. Antidegradation Review | 7. Best Professional Judgment |
| 2. Water Quality Standard (includes RPA) | 5. Antidegradation Policy | 8. TMDL or Permit in lieu of TMDL |
| 3. Water Quality Based Effluent Limits | 6. Water Quality Model | 9. WET Test Policy |

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Biochemical Oxygen Demand (BOD₅).**

- Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Effluent Limits Determination**.

- **Total Suspended Solids (TSS).**

- Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Effluent Limits Determination**.

Please note that the final effluent limits for BOD and TSS contained in the permit are Equivalent to Secondary limits as per 10 CSR 20-7.015. Any changes made to the lagoon system that modifies it such that it no longer functions as a typical lagoon will result in the facility no longer qualifying for Equivalent to Secondary limitations. The facility may be required to also to follow the Missouri Antidegradation Rule and Implementation Procedure if the discharge is expanded.

- **Escherichia coli (E. coli)**. Monthly average of 206 per 100 mL as a geometric mean and Weekly Average of 1030 per 100 mL as a geometric mean during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation B designated use of the receiving stream, as per 10 CSR 20-7.031(5)(C). An effluent limit for both monthly average and weekly average is required by 40 CFR 122.45(d). The Geometric Mean is calculated by multiplying all of the data points and then taking the nth root of this product, where n = # of samples collected. For example: Five E. coli samples were collected with results of 1, 4, 6, 10, and 5 (#/100mL). Geometric Mean = 5th root of (1)(4)(6)(10)(5) = 5th root of 1,200 = 4.1 #/100mL.
- **Total Ammonia Nitrogen**. Effluent limitations have been retained from previous operating permit as the previous permit cycle was less than 5 years due to permit synchronization.
- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **pH**. ≥ 6.5 SU. pH limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the in-stream Water Quality Standard, which states that water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU. 10 CSR 20-7.015 allows pH for lagoons to be maintained above 6.0 SU. With no mixing zone, the water quality standard, ≥ 6.5 SU, must be met at the outfall. No mixing zone is allowed due to the classification of the receiving stream, therefore the water quality standard must be met at the outfall.

Whole Effluent Toxicity

- **Acute Whole Effluent Toxicity**. Monitoring requirement only. Monitoring is required to determine if reasonable potential exists for this facility's discharge to exceed water quality standards. Where no mixing is allowed, the acute criterion must be met at the end of the pipe. However, when using an LC50 as the test endpoint, the acute toxicity test has an upper sensitivity level of 100% effluent, or 1.0 TUa. If less than 50% of the test organisms die at 100% effluent, the true LC50 value for the effluent cannot be measured, effectively acting as a detection limit. Therefore, when the allowable effluent concentration is 100% a limit of 1.0 TUa will apply. If more than 50% of the organisms survive at 100% effluent, the permittee should report TUa <1.

Acute and/or Chronic Allowable Effluent Concentrations (AECs) for facilities that discharge to Waters of the State lacking designated uses, Class C, Class P (with default Mixing Considerations), or Lakes [10 CSR 20-7.031(5)(A)4.B.(IV)(b)] are 100%, 50%, 25%, 12.5%, & 6.25%.

Sampling Frequency Justification:

Sampling and Reporting Frequency was retained from previous permit. Sampling for *E. coli* is set at monthly per 10 CSR 20-7.015(9)(D)6.C.

WET Test Sampling Frequency Justification. WET Testing schedules and intervals are established in accordance with the Department's Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow.

Acute Whole Effluent Toxicity

- No less than **ONCE/PERMIT CYCLE**:
- Municipality with a design flow $\geq 22,500$ gpd, but less than 1.0 MGD.
- Other, please justify.

Sampling Type Justification:

As per 10 CSR 20-7.015, BOD₅, TSS and WET test samples collected for lagoons may be grab samples. Grab samples must be collected for pH, Ammonia as N, *E. coli*, and Oil & Grease. This is due to the holding time restriction for *E. coli*, the volatility of Ammonia and the fact that pH cannot be preserved and must be sampled in the field. As Ammonia and Oil & Grease samples must be immediately preserved, these samples are to be collected as a grab. For further information on sampling and testing methods please review 10 CSR 20-7.015(9)(D) 2.

Part VIII – Cost Analysis for Compliance

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a “finding of affordability” on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

Cost Analysis for Compliance - The Department has made a reasonable search for empirical data indicating the permit is affordable. The search consisted of a review of Department records that might contain economic data on the community, a review of information provided by the applicant as part of the application, and public comments received in response to public notices of this draft permit. If the empirical cost data was used by the permit writer, this data may consist of median household income, any other ongoing projects that the Department has knowledge, and other demographic financial information that the community provided as contemplated by Section 644. 145.3. See **Appendix – Cost Analysis for Compliance**

- The Department is not required to determine Cost Analysis for Compliance because the permit contains no new conditions or requirements that convey a new cost to the facility. Due to length of the schedule of compliance implemented in the previous permit extending through this permit cycle the Cost Analysis for Compliance conducted during the previous permit renewal has been attached.

Part IX – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PERMIT SYNCHRONIZATION:

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the Department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than 4 years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit.

PUBLIC NOTICE:

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing. The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit. For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The Public Notice period for this operating permit was from April 22nd 2016 to May 23rd 2016. No comments were received during this time period.

DATE OF FACT SHEET: 03/09/2016

COMPLETED BY:

SHAWN MASSEY, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
(573) 751-1399
Shawn.massey@dnr.mo.gov

Appendices

APPENDIX - CLASSIFICATION WORKSHEET:

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	0
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	0
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:		
Missouri or Mississippi River	0	0
All other stream discharges except to losing streams and stream reaches supporting whole body contact	1	0
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	0
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	3
PRELIMINARY TREATMENT - Headworks		
Screening and/or comminution	3	0
Grit removal	3	0
Plant pumping of main flow (lift station at the headworks)	3	0
PRIMARY TREATMENT		
Primary clarifiers	5	0
Combined sedimentation/digestion	5	0
Chemical addition (except chlorine, enzymes)	4	0
REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)		
Push – button or visual methods for simple test such as pH, Settleable solids	3	3
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	5
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	0
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	0
ALTERNATIVE FATE OF EFFLUENT		
Direct reuse or recycle of effluent	6	0
Land Disposal – low rate	3	0
High rate	5	0
Overland flow	4	0
Total from page ONE (1)	----	11

APPENDIX - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)		
Variation do not exceed those normally or typically expected	0	0
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	0
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	0
Raw wastes subject to toxic waste discharge	6	0
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers	10	0
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	0
Stabilization ponds without aeration	5	5
Aerated lagoon	8	0
Advanced Waste Treatment Polishing Pond	2	0
Chemical/physical – without secondary	15	0
Chemical/physical – following secondary	10	0
Biological or chemical/biological	12	0
Carbon regeneration	4	0
DISINFECTION		
Chlorination or comparable	5	0
Dechlorination	2	0
On-site generation of disinfectant (except UV light)	5	0
UV light	4	0
SOLIDS HANDLING - SLUDGE		
Solids Handling Thickening	5	0
Anaerobic digestion	10	0
Aerobic digestion	6	0
Evaporative sludge drying	2	0
Mechanical dewatering	8	0
Solids reduction (incineration, wet oxidation)	12	0
Land application	6	0
Total from page TWO (2)	----	5
Total from page ONE (1)	---	11
Grand Total	---	16

- A: 71 points and greater
- B: 51 points – 70 points
- C: 26 points – 50 points
- D: 0 points – 25 points

APPENDIX – COST ANALYSIS FOR COMPLIANCE

**Missouri Department of Natural Resources
 Water Protection Program
 Cost Analysis for Compliance
 (In accordance with RSMo 644.145)**

**Smithton WWTF, Permit Renewal
 City of Smithton
 Missouri State Operating Permit #MO-0025828**

Section 644.145 RSMo requires the Department of Natural Resources (DNR) to make a “finding of affordability” when “issuing permits under” or “enforcing provisions of” state or federal clean water laws “pertaining to any portion of a combined or separate sanitary sewer system for publicly-owned treatment works.”

This cost analysis is based on data available to the Department as provided by the permittee and data obtained from readily available sources. For the most accurate analysis, it is essential that the permittee provides the Department with current information about the City’s financial and socioeconomic situation. A request for information was sent to the permittee, seeking data for input into this analysis prior to its development. The Department currently uses software to estimate the cost for reconstruction of a treatment plant titled CAPDETWORKS (CapDet). CapDet is a preliminary design and costing software program from Hydromantis¹ for wastewater treatment plants that uses national indices, such as the Marshall and Swift Index and Engineering News Records Cost Index for pricing in development of capital, operating, maintenance, material, and energy costs for each treatment technology. As the program works from national indices and each community is unique in its budget commitments and treatment design, the estimated costs are expected to be higher than actual costs. The cost estimates located within this document are for the construction of a brand new treatment facility or system that is the most practical to facilitate compliance with new requirements. For the most accurate analysis, it is essential that the permittee provides the Department with current information about the City’s financial and socioeconomic situation.

The Department is required to issue a permit with final effluent limits in accordance with 644.051.1.(1) RSMo, 644.051.1.(2) RSMo, and the Clean Water Act. The table below summarizes the results of this cost analysis for the Village of Smithton. The practical result of this analysis is to incorporate a long compliance schedule into the permit in order to mitigate adverse impact to distressed populations resulting from the costs of upgrading the wastewater treatment facility.

Cost Analysis for Compliance Summary Table

Estimated present worth to upgrade to land application	Median Household Income (MHI) for the City of Smithton	Estimated monthly cost per user as a percent of MHI with 6 year schedule of compliance
\$917,697 - \$1,347,684	\$43,680	0.60% - 0.86%

Current Facility Description: Two-cell lagoon / sludge is retained in lagoon.

Flow evaluated: Actual flow of 40,000 GPD

Residential Connections:	<u>209</u>
Commercial Connections:	<u>13</u>
Industrial Connections:	<u>1</u>
Total Connections for this facility:	<u>223</u>

New Permit Requirements:

The permit requires compliance with new effluent limitations for ammonia and *E. coli*, which may require the design, construction and operation of different treatment technology. The cost assumptions in this cost analysis anticipate complete replacement of the existing treatment facility. To calculate the estimated user cost per 5,000 gallons, the Department used the equations currently being used in the Financial Assistance Center's rate calculator. The equations account for replacement of equipment during the life of the treatment facility, debt retirement, capital costs, and an inflation factor. The calculator evaluates multiple technologies through CapDet at a range of flows, then, using a linear interpolation, develops a spreadsheet outlining high and low costs for treatment plants. For this analysis the Department has selected the mechanical treatment technology that could be the most practical solution to meet the new requirements for the community as well as cost estimation to install a land application system. Because the methods used to derive the analysis estimate costs that are greater than actual costs associated with an upgrade, it reflects a conservative estimate anticipated for a community. An overestimation of costs is due to the fact that it is not possible for the permit writer to determine what existing equipment and structures will be reused in the upgraded facility before an engineer completes a facility design.

The size of the facility evaluated for upgrades was chosen based on the permitted actual flow. If significant population growth is expected in the community, or if a significant portion of the flow is due to I&I, the flows used in the Facility Plan prepared by a consulting engineer may be different than this flow.

Anticipated Costs Associated with Complying with the New Requirements:

Costs associated with land application:

The total present worth estimated to purchase land and install a land application system is between \$917,697 and \$1,347,684 (*CAPDEWORKS cost estimator was used*). The user costs over a thirty year period are estimated to be between \$21.60 and \$31.58 per household per month. The low cost estimate for land application assumes that the community will not have to construct a new storage basin and the high cost estimate assumes the construction of a storage basin. The estimation includes the purchase of a minimum of 29 acres and a maximum of 32 acres. Four regions divided by highways have been established to estimate the minimum storage time required and the amount of land necessary for land application within the State. The cost of land has been estimated based on county averages. The regions are north of Highway 36, between Highways 36 and 50, between Highways 50 and 60, and south of Highway 60. For communities that are divided by highways, the region selected is where the majority of the county resides. The acreage estimated through CapDet does not reflect site-specific conditions and more or less land may be required based on site-specific considerations, such as streams, sinkholes, severe slopes, or roads. A no discharge facility, of which land application is the most common form, is required to be demonstrated as infeasible before a discharging system may be constructed per [10 CSR 20-6.010(4)(D).] When land is available, it is the Department's stance that land application is an important treatment option to be considered because of the expected lower cost over a longer term associated with construction and operation and maintenance. Also, the no discharge system is of value to the permittee when considering additional costs associated with possible future changes to Water Quality Standards.

Cost associated with mechanical treatment:

The total present worth to add ultraviolet disinfection treatment is estimated at \$194,858 (*CAPDEWORKS cost estimator was used*). This cost, if financed through user fees, might cost each household approximately \$4.61 per month. Due to the design limitations in the CapDet cost estimator, the costs for disinfection have been over estimated. For any flows less than 100,000 gpd, CapDet assumes a flow of 100,000 gpd when estimating the cost for UV disinfection. The assumptions for chlorine disinfection are that the chlorine used will either be in the liquid or gas phase and not the tablets which are used by many smaller facilities.

The costs estimated in CAPDEWORKS are associated with a complete reconstruction of a new treatment plant. The total present worth for complete replacement of the existing treatment facility in order to meet new ammonia effluent limits is estimated at \$1,451,845 (*CAPDEWORKS cost estimator was used*). This cost, if financed through user fees, might cost each household approximately \$33.43 per month. The Department has estimated the construction and treatment costs for a package plant. The treatment type has been set to meet effluent ammonia limits of less than 1.0 mg/L and losing stream criteria for BOD₅ and TSS. Sludge handling and sludge treatment were not included in the capital, operations, maintenance, and present worth cost estimations as there are multiple ways for sludge handling to occur, including reuse of existing sludge equipment. Disinfection is not represented in the present worth listed in this paragraph, as it was discussed in the previous paragraph. It is the Department's opinion that a package plant is the most practical mechanical treatment technology for your community based on the current actual flow. A more detailed engineering and design report conducted for your specific facility will be completed by your hired engineer. This may reflect a different type of treatment option than what is described within this analysis and may include additional collection system work or additional upgrades at the treatment plant.

The total present worth over a 20 year period of adding both ammonia and disinfection treatment has been estimated to cost approximately \$1,461,609. The total capital cost to construct both treatment upgrades may cost approximately \$669,000. These costs if financed through user fees, might cost each household in the community approximately \$41.84 per month. These costs will be used to complete this analysis.

This cost analysis does not dictate that a permittee will upgrade their facility, or how they will comply with the new permit requirements. For any questions associated with the *CAPDEWORKS cost estimator*, please contact the Engineering Section at (573) 751-6621.

(1) A community's financial capability and ability to raise or secure necessary funding;

Current User Rates:	<u>\$17.30</u>
Rate Capacity or Pay as You Go Option:	<u>Pay as You Go</u>
Municipal Bond Rating (if applicable):	<u>Not Provided by Applicant</u>
Bonding Capacity: <i>(General Obligation Bond capacity allowed by constitution: cities=up to 20% of taxable tangible property sewer districts or villages=up to 5% of taxable tangible property)</i>	<u>Not Provided by Applicant</u>
Current outstanding debt for the City of Smithton:	<u>No Debt</u>
Amount within the current user rate used toward payments on outstanding debt related to the current wastewater infrastructure:	<u>No Debt</u>
Consideration of integrated planning to address the most significant needs of the municipality	<u>Not Provided by Applicant</u>
Other indicators:	<u>Not Provided by Applicant</u>

(2) Affordability of pollution control options for the individuals or households at or below the median household income level of the community;

A Current Costs

Current operating costs (exclude depreciation):	<u>\$17,000</u>
Current user rate:	<u>\$17.30</u>

B-1 Estimated Costs for Mechanical Plant Pollution Control Option

Estimated total present worth of pollution control*:	<u>\$1,461,609</u>
Estimated capital cost of pollution control**:	<u>\$669,000</u>
Annual cost of operation and maintenance***:	<u>\$63,601</u>
Estimated resulting user cost per household per month****:	<u>\$41.84</u>
Estimated resulting user cost per household per month plus the amount within the current user rate used toward payments on outstanding debt:	<u>No Debt</u>
Median household income(MHI) ² :	<u>\$43,680</u>
Cost per household as a percent of median household income ³ :	<u>1.2%</u>
Estimated cost per household per month plus the amount within the current user rate used toward payments on outstanding debt as a percent of median household income ⁴ :	<u>No Debt</u>

CAPDET estimates the total present worth to finance a new mechanical treatment facility with disinfection to be approximately \$1,461,609. If financed through user costs, the future user costs have the potential to be estimated at \$41.84 per month. These costs assume a 5% interest rate over 20 years for mechanical treatment. It is the Department's opinion that a package plant is the most practical mechanical treatment option for design actual flow of this facility. All treatment technologies were set to meet effluent ammonia limits of less than 1.0 mg/L and losing stream criteria for BOD₅ and TSS. Sludge handling, sludge treatment, and disinfection have not been included in the capital, operations and maintenance, and present worth cost estimations.

B-2 Estimated Costs for Land Application Pollution Control Options

Estimated total present worth of pollution control*:	<u>\$917,697 - \$1,347,684</u>
Estimated capital cost of pollution control**:	<u>\$690,810 - \$902,301</u>
Land required:	<u>29 acres to 32 acres</u>
Annual cost of operation and maintenance***:	<u>\$22,768 - \$37,709</u>
Estimated resulting user cost per household per month****:	<u>\$21.60 - \$31.58</u>
Estimated resulting user cost per household per month plus the amount within the current user rate used toward payments on outstanding debt:	<u>No Debt</u>
Median household income(MHI) ² :	<u>\$43,680</u>
Cost per household as a percent of median household income ⁵ :	<u>0.60% - 0.86%</u>
Estimated cost per household per month plus the amount within the current user rate used toward payments on outstanding debt as a percent of median household income ⁶ :	<u>No Debt</u>

CAPDET estimates the total present worth to finance a land application system to be between \$917,697 and \$1,347,684. If the cost of the upgrade is financed through the user cost, the future user cost is estimated to be between \$21.60 and \$31.58 per month. The low cost for land application assumes the existing lagoon or storage basin has sufficient storage capacity for conversion to land application. The high cost estimates that a new lagoon or storage basin will need constructed, either at the existing facility or at the land application fields to comply with the storage requirements for land application. All estimated costs for land application assume a 5% interest rate over 30 years. The estimated capital cost assumes the City must purchase the land. If the City already owns the land, the resulting costs will be less than what is described in Table B-2.

The resulting cost per household as a percent of MHI will be used as the residential indicator in Criteria 7 below.

- * Total Present Worth includes a five percent interest rate to construct and perform annual operation and maintenance of the new treatment plant over the term of the loan.
- ** Capital Cost includes project costs from CapDet with design, inspection and contingency costs.
- *** O&M cost shown in Tables B-1 and B-2 is includes operations, maintenance, materials, chemical and electrical costs for the facility on an annual basis. It includes items that are expected to replace during operations, such as pumps. O&M is estimated between 15% and 45% of the user cost.
- **** The Estimated User Cost shown in Tables B-1 and B-2 is composed of two factors, Operation & Maintenance (O&M), and Debt Retirement Costs.

(3) An evaluation of the overall costs and environmental benefits of the control technologies;

On August 22, 2013, the U.S. Environmental Protection Agency (EPA) finalized new water quality criteria for ammonia, based on toxicity studies of mussels and gill breathing snails. When new water quality criteria are established by the EPA, states must adopt them into their regulations in order to keep their authorization to issue permits under the National Pollutant Discharge Elimination System. This permit renewal requires final effluent limitations for Ammonia as N based on Missouri Water Quality Standards (WQS) 10 CSR 20-7.031 and the Clean Water Act. Ammonia (NH₃) is toxic to early stages of aquatic life. NH₃ removal prevents damage to aquatic life and enables the receiving stream to support a healthier and diverse aquatic life community. The technologies evaluated by CapDet are a sequencing batch reactor, extended aeration mechanical plant, and an oxidation ditch. All technologies evaluated have demonstrated the capability of meeting the 2013 ammonia criteria when operated and maintained at a proper level. Land application is another option that has been evaluated within this document. Land application is of value to the permittee when considering costs associated with possible future changes with Water Quality Standards. Please see the Water Protection Program fact sheet titled “Changes to the Water Quality Standard for Ammonia” at <http://dnr.mo.gov/pubs/pub2481.htm>.

Land application in the state is divided into four regions, based on the minimum storage time, rainfall amounts, and land required for land application to occur. The regions are north of Highway 36, between Highways 36 and 50, between Highways 50 and 60, and south of Highway 60. For communities that are divided by highways, the region selected is where the majority of the county resides. The low cost estimate for land application assumes that the community will not have to construct a new storage basin and the high cost estimate assumes the construction of a storage basin.

For all mechanical treatment technologies calculated by the Department’s CapDet calculator, sludge handling, sludge treatment is not included in the capital, operations and maintenance, and annual or present worth costs. All treatment technologies were designed to meet effluent ammonia of less than 1.0 mg/L and losing stream criteria for BOD₅ and TSS of less than 10 mg/L.

E. coli is an indicator of the presence of fecal contamination in water and possible disease-causing bacteria and viruses in water and wastewater. The receiving stream has a WBC (B) designated use to protect human health in accordance with Water Quality Standards (10 CSR 20-7.031) and the Clean Water Act. Disinfection benefits human health by reducing exposure to disease-causing bacteria and viruses. The City of Smithton will have to upgrade the treatment facility with a disinfection system in order to meet the final effluent limitations.

(4) Inclusion of ongoing costs of operating and maintaining the existing wastewater collection and treatment system, including payments on outstanding debts for wastewater collection and treatment systems when calculating projected rates:

The community has reported that they have no outstanding debts for the current wastewater collection and treatment systems.

(5) An inclusion of ways to reduce economic impacts on distressed populations in the community, including but not limited to low and fixed income populations. This requirement includes but is not limited to:

- (a) Allowing adequate time in implementation schedules to mitigate potential adverse impacts on distressed populations resulting from the costs of the improvements and taking into consideration local community economic considerations.
- (b) Allowing for reasonable accommodations for regulated entities when inflexible standards and fines would impose a disproportionate financial hardship in light of the environmental benefits to be gained.

Socioeconomic Data⁷⁻⁹:

Potentially Distressed Populations – City of Smithton	
Unemployment	6.8%
Adjusted Median Household Income (MHI)	\$43,680
Percent Change in MHI (1990-2012)	+106.8%
Percent Population Growth/Decline (1990-2012)	-6.0%
Change in Median Age in Years (1990-2012)	+5.9 years
Percent of Households in Poverty	20.6 %
Percent of Households Relying on Food Stamps	10.2 %

Opportunity for cost savings or cost avoidance:

If available, connection to a larger centralized sewer system in the area may be more cost effective for the community.

The permittee may apply for State Revolving Fund (SRF) financial support in order to help fund a Capital Improvements Plan. Other loans and grants also exist for which the facility may be eligible. Contact information for the Department's Financial Assistance Center (FAC) and more information can be found on the Department's website at <http://dnr.mo.gov/env/wpp/srf/wastewater-assistance.htm>.

Opportunity for changes to implementation/compliance schedule, new technology, site specific criteria, use attainability analysis:

The facility may propose changes to the schedule of compliance based on their own cost estimate or financial information.

If the permittee can demonstrate that the proposed pollution controls result in substantial and widespread economic and social impact, the permittee may use the Use Attainability Analysis (UAA) in the form of a variance. This process is completed by determining the treatment type with the highest attainable effluent quality that would not result in a socio-economic hardship. This process could potentially become expensive in itself.

(6) An assessment of other community investments and operating costs relating to environmental improvements and public health protection;

The community did not report any other investments relating to environmental improvements

(7) An assessment of factors set forth in the United States Environmental Protection Agency's guidance, including but not limited to the "Combined Sewer Overflow Guidance for Financial Capability Assessment and Schedule Development" that may ease the cost burdens of implementing wet weather control plans, including but not limited to small system considerations, the attainability of water quality standards, and the development of wet weather standards;

Secondary indicators for consideration:

Indicators	Strong (3 points)	Mid-Range (2 points)	Weak (1 point)	Score
Bond Rating Indicator	Above BBB or Baa	BBB or Baa	Below BBB or Baa	Not Provided by Applicant
Overall Net Debt as a % of Full Market Property Value	Below 2%	2% - 5%	Above 5%	No Debt
Unemployment Rate	>1% below Missouri average of 6.0%	± 1% of Missouri average of 6.0%	>1% above Missouri average of 6.0%	2
Median Household Income	More than 25% above Missouri MHI (\$47,333)	± 25% of Missouri MHI (\$47,333)	More than 25% below Missouri MHI (\$47,333)	2
Percent of Households in Poverty*	>10% below Missouri average of 14.0%	± 10% of Missouri average of 14.0%	>10% above Missouri average of 14.0%	2
Percent of Households Relying on Food Stamps*	>5% below Missouri average of 11.4%	± 5% of Missouri average of 11.4%	>5% above Missouri average of 11.4%	2
Property Tax Revenues as a % of Full Market Property Value	Below 2%	2% - 4%	Above 4%	3
Property Tax Collection Rate	Above 98%	94% - 98%	Below 94%	2

Financial Capability (FCI) Indicators Average Score: 2.2
 Mechanical Plant Residential Indicator (RI, from Criteria #2 above): 2.3%
 Land Application Residential Indicator (RI, from Criteria #2 above): 0.60% - 0.86%

* Financial Capability Indicators are specific to the State of Missouri

Financial Capability Matrix:

Financial Capability Indicators Score from above ↓	Residential Indicator (User cost as a % of MHI)		
	Low (Below 1%)	Mid-Range (Between 1.0% and 2.0%)	High (Above 2.0%)
Weak (below 1.5)	Medium Burden	High Burden	High Burden
Mid-Range (1.5 – 2.5)	Low Burden (Land Application)	Medium Burden	High Burden (Mechanical)
Strong (above 2.5)	Low Burden	Medium Burden	High Burden

Estimated Financial Burden for Mechanical Plant: High Burden

Estimated Financial Burden for Land Application: Low Burden

The resulting financial burden has been determined by comparing the Financial Capability Indicator score (FC) with the Residential Indicator (RI) stated in Criteria #2. The cost associated with a mechanical plant could result in a High financial burden placed on the community due to the Mid-Range FC paired with the High RI. The cost associated with a land application system could result in a Low financial burden placed on the community due to the Mid-Range FC paired with the Low RI. Please see Criteria #2 for more information on the costs specific to each treatment technology.

(8) An assessment of any other relevant local community economic condition.

The community did not report any other relevant local economic conditions.

Conclusion and Finding

As a result of new regulations, the Department is proposing modifications to the current operating permit that may require the permittee to upgrade the facility and construct new control technologies. The Department identified the actions for which cost analysis for compliance is required under Section 644.145 RSMo.

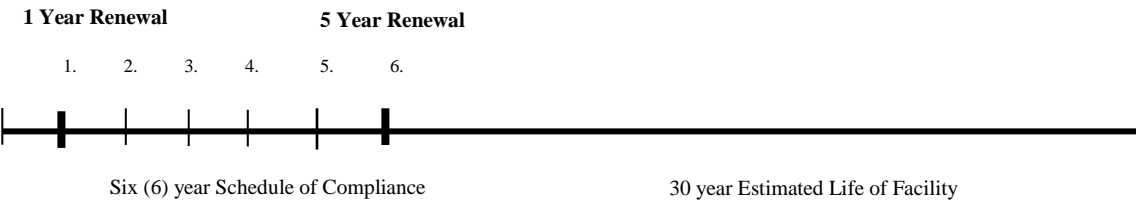
The Department estimates the total present worth for complete replacement of the existing treatment facility in order to meet new ammonia effluent limits is \$917,697 for land application and \$1,461,609 for mechanical treatment.

The Department considered the eight (8) criteria presented in subsection 644.145.3 when evaluating the cost associated with the relevant actions. Using this analysis, the Department finds that a land application system is the most practical and affordable option for your community. The construction and operation of a land application system will ensure that the individuals within the community will not be required to make unreasonable sacrifices in their essential lifestyle or spending patterns or undergo hardships in order to make the projected monthly payments for sewer connections. Also, a land application treatment system has the potential to generate agricultural revenues that could offset cost. This can include but is not limited to revenue from the sale of a forage or grain crop as well as rent from livestock grazing.

The Department also estimated the costs of four mechanical treatment options appropriate to the design flow of the facility. After estimating the costs associated with an oxidation ditch plant and an package plant, the Department finds that the package plant is the most practical mechanical treatment plant option, though it may require user costs to be as high as 2.3% of the community’s MHI (shown in Criteria #2). The Department has determined that the package plant does not meet the definition of affordable over a twenty year period for your community. If this option is selected, the City Smithton will need to apply for a permit modification to obtain a schedule of compliance that will mitigate the cost of compliance.

In accordance with 40 CFR § 122.47(a)(1) and 10 CSR 20-7.031(11), compliance must occur as soon as possible. Therefore, the City Smithton has received a six year schedule of compliance to conduct a Wasteload Allocation Study as well as to design and construction of a land application system with the assumption that land is attainable for the purpose of land application of effluent. The following timeline illustrates milestones on which the 6 year schedule of compliance should focus to maintain compliance with the permit requirements.

Timeline 1: (not drawn to scale)



Suggested milestones to meet within each year listed below:

- Year 1. Hire an engineer / Evaluation of Rate Structure and Treatment Plant / and Submit an application for renewal of the existing operating permit with new financial and socio-economic data.
- Year 2. Hold bond election / Apply for State Revolving Fund loans and/or grants, submit facility plan /and Apply for Construction permit
- Year 3. Close on loan / Construction
- Year 4. Construction
- Year 5. Construction
- Year 6 Complete Construction / Submit an application for renewal of the existing operating permit.

The schedule of compliance allows the community the first permit cycle (one year) to hire an engineer and evaluate operations and rate structure. At this time the community will know what the user rates will be based on the present worth of the chosen treatment type decided on by the community and the design engineer hired by the community. It is anticipated by the Department that rates will be increased at the end of the first permit cycle to mitigate the cost of compliance of the new requirements. The Department is committed to reassessing the Cost Analysis for Compliance at renewal to determine if the initial schedule of compliance will accommodate the socioeconomic data and financial capability of the community at that time.

The remaining five (5) years of the schedule give the community ample time to obtain an engineering report, hold a bond election, close on a loan construct the facility and complete the project. If the community wishes to seek funding from the Department, please contact the Financial Assistance Center for more information. <http://www.dnr.mo.gov/env/Wpp/srf/index.html>

The Department is committed to reassessing the cost analysis for compliance at renewal to determine if the initial schedule of compliance will accommodate the socioeconomic data and financial capability of the community at that time. In this longer time frame, the Department will work with you to explore the wastewater treatment options that make the most sense for your community. By working more closely with your community, the Department and permittees will be able to identify opportunities to extend the schedule of compliance, if appropriate. Because each community is unique, we want to make sure that you have the opportunity to consider all your options and tailor solutions to best meet your community's needs. The Department understands the economic challenges associated with achieving compliance, and is committed to using all available tools to make an accurate and practical finding of affordability for the communities in the State.

This determination is based on readily available data and may overestimate the financial impact on the community. The community's facility plan that is submitted as a part of the construction permit process includes a discussion of community details, what the community can afford, existing obligations, future growth potential, an evaluation of options available to the community with cost information, and a discussion on no-discharge alternatives. The cost information provided through the facility plan process, which is developed by the community and their engineer, is more comprehensive of the community's individual factors in relation to selected treatment technology and costing information.

References:

1. <http://www.hydomantis.com/>
2. The Median Household Income was found using the American Community Survey by the U.S. Census Bureau
3. $(41.84/(43,680/12))100 = 1.2$ (mechanical)
4. No Debt
5. $(21.60/(43,680/12))100 = 0.60$ and $(31.58/(43,680/12))100 = 0.86$ (land application)
6. No Debt
7. Unemployment data was obtained from Missouri Department of Economic Development (July 2014) – <http://www.missourieconomy.org/pdfs/urel1407.pdf>
8. Population trend data was obtained from online at: 2012 Census Bureau Population Data - http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?_afpt=table, 2000 Census Bureau Population Data - <http://www.census.gov/popest/data/cities/totals/2009/tables/SUB-EST2009-04-29.xls>, 1990 Census Bureau Population Data - <http://www.census.gov/prod/cen1990/cp1/cp-1-27.pdf>
9. Poverty data – American Community Survey- <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>



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ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
 - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
 - a. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.
 - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee’s sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
 - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
 - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Section B – Reporting Requirements

1. **Planned Changes.**
 - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
 - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
 - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
 - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - ii. Any upset which exceeds any effluent limitation in the permit.
 - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
 - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
 4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
 5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
 6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
 7. **Discharge Monitoring Reports.**
 - a. Monitoring results shall be reported at the intervals specified in the permit.
 - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
 - c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.
- b. Notice.
 - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
 - c. Prohibition of bypass.
 - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
 1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 3. The permittee submitted notices as required under paragraph 2. b. of this section.
 - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
 - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated; and
 - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
 - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
 - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section C – Bypass/Upset Requirements

1. **Definitions.**
 - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
 - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
 - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
 - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
 - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



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10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
 - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
 - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
 - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
 - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
MAY 1, 2013

PART II - SPECIAL CONDITIONS – PUBLICLY OWNED
TREATMENT WORKS
SECTION A – INDUSTRIAL USERS

1. Definitions

Definitions as set forth in the Missouri Clean Water Laws and approved by the Missouri Clean Water Commission shall apply to terms used herein.

Significant Industrial User (SIU). Except as provided in the *General Pretreatment Regulation* 10 CSR 20-6.100, the term Significant Industrial User means:

1. All Industrial Users subject to Categorical Pretreatment Standards; and
2. Any other Industrial User that: discharges an average of 25,000 gallons per day or more of process wastewater to the Publicly-Owned Treatment Works (POTW) (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's or for violating any Pretreatment Standard or requirement.

Clean Water Act (CWA) is the the federal Clean Water Act of 1972, 33 U.S.C. § 1251 et seq. (2002).

2. Identification of Industrial Discharges

Pursuant to 40 CFR 122.44(j)(1), all POTWs shall identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging to the POTW subject to Pretreatment Standards under section 307(b) of the CWA and 40 CFR 403.

3. Application Information

Applications for renewal or modification of this permit must contain the information about industrial discharges to the POTW pursuant to 40 CFR 122.21(j)(6)

4. Notice to the Department

Pursuant to 40 CFR 122.42(b), all POTWs must provide adequate notice of the following:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging these pollutants; and
2. Any substantial change into the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
3. For purposes of this paragraph, adequate notice shall include information on:
 - i. the quality and quantity of effluent introduced into the POTW, and
 - ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

For POTWs without an approved pretreatment program, the notice of industrial discharges which was not included in the permit application shall be made as soon as practicable. For POTWs with an approved pretreatment program, notice is to be included in the annual pretreatment report required in the special conditions of this permit. Notice may be sent to:

Missouri Department of Natural Resources
Water Protection Program
Attn: Pretreatment Coordinator
P.O. Box 176
Jefferson City, MO 65102

**STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
March 1, 2015**

**PART III – SLUDGE AND BIOSOLIDS FROM DOMESTIC AND INDUSTRIAL WASTEWATER
TREATMENT FACILITIES**

SECTION A – GENERAL REQUIREMENTS

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation for domestic wastewater and industrial process wastewater. This permit also incorporates applicable federal sludge disposal requirements under 40 CFR 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR 503 for domestic wastewater. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address the federal requirements.
2. These PART III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW), privately owned facilities and sludge or biosolids generated at industrial facilities.
3. Sludge and Biosolids Use and Disposal Practices:
 - a. The permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
 - b. The permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
 - c. The permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
4. Sludge Received from other Facilities:
 - a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
 - b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act or under Chapter 644 RSMo.
8. In addition to STANDARD CONDITIONS, the Department may include sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Alternate Limits in the Site Specific Permit.

Where deemed appropriate, the Department may require an individual site specific permit in order to authorize alternate limitations:

 - a. A site specific permit must be obtained for each operating location, including application sites.
 - b. To request a site specific permit, an individual permit application, permit fee, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the Department, as follows:
 - a. The Department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
 - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

SECTION B – DEFINITIONS

1. Best Management Practices include agronomic loading rates, soil conservation practices and other site restrictions.
2. Biosolids means organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge.
3. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
4. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
5. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
6. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a (POTW) or a privately owned facility.
7. Industrial wastewater means any wastewater, also known as process water, not defined as domestic wastewater. Per 40 CFR Part 122, process water means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.
8. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include wastewater treatment lagoons and constructed wetlands for wastewater treatment.
9. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
10. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the growing seasons after biosolids application.
11. Public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
12. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks or equivalent facilities. Sludge does not include carbon coal byproducts (CCBs)
13. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
14. Septage is the material pumped from residential septic tanks and similar treatment works (with a design population of less than 150 people). The standard for biosolids from septage is different from other sludges.

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

1. Sludge shall be routinely removed from wastewater treatment facilities and handled according to the permit facility description and sludge conditions of this permit.
2. The permittee shall operate the facility so that there is no sludge discharged to waters of the state.
3. Mechanical treatment plants shall have separate sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove sludge from these storage compartments on the required design schedule is a violation of this permit.

SECTION D – SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR CONTRACT HAULER

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the Department; or the hauler transports the sludge to another permitted treatment facility.
3. Haulers who land apply septage must obtain a state permit.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility, unless it is required by the accepting facility.

SECTION E – INCINERATION OF SLUDGE

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or if the ash is determined to be hazardous with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored, and ash used or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.

SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

1. Surface disposal sites of domestic facilities shall comply with the requirements in 40 CFR 503 Subpart C; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Sludge storage lagoons are temporary facilities and are not required to obtain a permit as a solid waste management facility under 10 CSR 80. In order to maintain sludge storage lagoons as storage facilities, accumulated sludge must be removed routinely, but not less than once every two years unless an alternate schedule is approved in the permit. The amount of sludge removed will be dependent on sludge generation and accumulation in the facility. Enough sludge must be removed to maintain adequate storage capacity in the facility.
 - a. In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the Department; or
 - b. Permittee shall close the lagoon in accordance with Section H.

SECTION G – LAND APPLICATION

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the facility description or the special conditions of the issued NPDES permit.
2. Land application sites within a 20 miles radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless otherwise specified in a site specific permit. If the permittee's land application site is greater than a 20 mile radius of the wastewater treatment facility, approval must be granted from the Department.
3. Land application shall not adversely affect a threatened or endangered species or its designated critical habitat.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
 - a. This permit does not authorize the land application of domestic sludge except for when sludge meets the definition of biosolids.
 - b. This permit authorizes "Class A or B" biosolids derived from domestic wastewater and/or process water sludge to be land applied onto grass land, crop land, timber or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites:

Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the Department after two years of proper operation with acceptable testing documentation that shows the biosolids meet Class A criteria. A shorter length of testing will be allowed with prior approval from the Department. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site specific permit.

 - a. After Class B biosolids have been land applied, public access must be restricted for 12 months.
 - b. Class B biosolids are only land applied to root crops, home gardens or vegetable crops whose edible parts will not be for human consumption.
6. Agricultural and Silvicultural Sites:

Septage – Based on Water Quality guide 422 (WQ422) published by the University of Missouri

 - a. Haulers that land apply septage must obtain a state permit
 - b. Do not apply more than 30,000 gallons of septage per acre per year.
 - c. Septage tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to other mechanical type treatment facilities.
 - d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.
 - e. Lime is to be added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.

Biosolids - Based on Water Quality guide 423, 424, and 425 (WQ423, WQ424, WQ425) published by the University of Missouri;

- a. Biosolids shall be monitored to determine the quality for regulated pollutants
- b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to reach the maximum concentration of pollutants allowed.
- c. Table 1 gives the maximum concentration allowable to protect water quality standards

TABLE 1

Biosolids ceiling concentration ¹	
Pollutant	Milligrams per kilogram dry weight
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

¹ Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

- d. The low metal concentration biosolids has reduced requirements because of its higher quality and can safely be applied for 100 years or longer at typical agronomic loading rates. (See Table 2)

TABLE 2

Biosolids Low Metal Concentration ¹	
Pollutant	Milligrams per kilogram dry weight
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	36
Zinc	2,800

¹ You may apply low metal biosolids without tracking cumulative metal limits, provided the cumulative application of biosolids does not exceed 500 dry tons per acre.

- e. Each pollutant in Table 3 has an annual and a total cumulative loading limit, based on the allowable pounds per acre for various soil categories.

TABLE 3

Pollutant	CEC 15+		CEC 5 to 15		CEC 0 to 5	
	Annual	Total ¹	Annual	Total ¹	Annual	Total ¹
Arsenic	1.8	36.0	1.8	36.0	1.8	36.0
Cadmium	1.7	35.0	0.9	9.0	0.4	4.5
Copper	66.0	1,335.0	25.0	250.0	12.0	125.0
Lead	13.0	267.0	13.0	267.0	13.0	133.0
Mercury	0.7	15.0	0.7	15.0	0.7	15.0
Nickel	19.0	347.0	19.0	250.0	12.0	125.0
Selenium	4.5	89.0	4.5	44.0	1.6	16.0
Zinc	124.0	2,492.0	50.0	500.0	25.0	250.0

¹ Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

TABLE 4 - Guidelines for land application of other trace substances ¹

Cumulative Loading	
Pollutant	Pounds per acre
Aluminum	4,000 ²
Beryllium	100
Cobalt	50
Fluoride	800
Manganese	500
Silver	200
Tin	1,000
Dioxin	(10 ppt in soil) ³
Other	⁴

¹ Design of land treatment systems for Industrial Waste, 1979. Michael Ray Overcash, North Carolina State University and Land Treatment of Municipal Wastewater, EPA 1981.)

² This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.

³ Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.

⁴ Case by case review. Concentrations in sludge should not exceed the 95th percentile of the National Sewage Sludge Survey, EPA, January 2009.

Best Management Practices – Based on Water Quality guide 426 (WQ426) published by the University of Missouri

- a. Use best management practices when applying biosolids.
- b. Biosolids cannot discharge from the land application site
- c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
- d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
- e. Do not apply more than the agronomic rate of nitrogen needed.
- f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil, and crop removal when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) When biosolids are land applied at an application rate greater than two dry tons per acre per year.
 - i. PAN can be determined as follows and is in accordance with WQ426
(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor¹).
¹Volatilization factor is 0.7 for surface application and 1 for subsurface application.
- g. Buffer zones are as follows:
 - i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
 - ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
 - iii. 150 feet if dwellings;
 - iv. 100 feet of wetlands or permanent flowing streams;
 - v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
- h. Slope limitation for application sites are as follows;
 - i. A slope 0 to 6 percent has no rate limitation
 - ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
 - iii. Slopes > 12 percent, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
- i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
- j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the Department.
- k. Biosolids / sludge applicators must keep detailed records up to five years.

SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the Department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
 - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
 - b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
 - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
 - i. PAN can be determined as follows:

$$(\text{Nitrate} + \text{nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor}^1).$$
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application.
4. When closing a domestic wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works definition. See Section B of these standard conditions. Under the septage category, residuals may be left in place as follows:
 - a. Testing for metals or fecal coliform is not required
 - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
 - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.
5. Residuals left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berm shall be demolished, and the site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoons and/or earthen structure and/or ash pond closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200
7. When closing a mechanical wastewater and/or industrial process wastewater plant; all sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
 - a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
 - b. Per 10 CSR 20-6.015(4)(B)6, Hazardous Waste shall not be land applied or disposed during industrial and mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations under 10 CSR 25.
 - c. After demolition of the mechanical plant / industrial plant, the site must only contain clean fill defined in RSMo 260.200 (5) as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill or other beneficial use. Other solid wastes must be removed.
8. If sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or H, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

SECTION I – MONITORING FREQUENCY

1. At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed. Please see the table below.

TABLE 5

Design Sludge Production (dry tons per year)	Monitoring Frequency (See Notes 1, 2, and 3)			
	Metals, Pathogens and Vectors	Nitrogen TKN ¹	Nitrogen PAN ²	Priority Pollutants and TCLP ³
0 to 100	1 per year	1 per year	1 per month	1 per year
101 to 200	biannual	biannual	1 per month	1 per year
201 to 1,000	quarterly	quarterly	1 per month	1 per year
1,001 to 10,000	1 per month	1 per month	1 per week	-- ⁴
10,001 +	1 per week	1 per week	1 per day	-- ⁴

¹ Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less.

² Calculate plant available nitrogen (PAN) when either of the following occurs: 1) when biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.

³ Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) and toxicity characteristic leaching procedure (40 CFR 261.24) is required only for permit holders that must have a pre-treatment program.

⁴ One sample for each 1,000 dry tons of sludge.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids.

This data shall be used to calculate the dry tons of sludge applied per acre.

Note 2: Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.

Note 3: Table 5 is not applicable for incineration and permit holders that landfill their sludge.

2. If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.
3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the Department.
4. At this time, the Department recommends monitoring requirements shall be performed in accordance with, "POTW Sludge Sampling and Analysis Guidance Document," United States Environmental Protection Agency, August 1989, and the subsequent revisions.

SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these standard conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting period
 - a. By January 28th of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
 - b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Forms. The annual report shall be submitted on report forms provided by the Department or equivalent forms approved by the Department.
4. Reports shall be submitted as follows:

Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the Department and EPA. Other facilities need to report only to the Department. Reports shall be submitted to the addresses listed as follows:

DNR regional office listed in your permit
(see cover letter of permit)
ATTN: Sludge Coordinator

EPA Region VII
Water Compliance Branch (WACM)
Sludge Coordinator
11201 Renner Blvd.
Lenexa, KS 66219

5. Annual report contents. The annual report shall include the following:
- a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
 - b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
 - c. Gallons and % solids data used to calculate the dry ton amounts.
 - d. Description of any unusual operating conditions.
 - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
 - i. This must include the name, address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
 - ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
 - f. Contract Hauler Activities:

If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.
 - g. Land Application Sites:
 - i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. The facility shall report PAN when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.
 - ii. If the “Low Metals” criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
 - iii. Report the method used for compliance with pathogen and vector attraction requirements.
 - iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.

SEP 23 2015

AP 21965



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
**FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT
 RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW LESS
 THAN OR EQUAL TO 100,000 GALLONS PER DAY**

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
9/23/15	\$88

READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1. THIS APPLICATION IS FOR:

- An operating permit for a new or unpermitted facility. Construction Permit # _____
(Include completed antidegradation review or request for antidegradation review, see instructions)
- A new site-specific operating permit formerly general permit #MOG _____
- A site-specific operating permit renewal: Permit #MO- 0025828 Expiration Date _____
- A site-specific operating permit modification: Permit #MO- _____ Reason: _____
- General permit (MOGD – Non POTWs discharging < 50,000 GPD or MOG823 – Land Application of Domestic Wastewater):
Permit #MO- _____ Expiration Date _____

1.1 Is the appropriate fee included with the application (see instructions for appropriate fee)? YES NO NA

2. FACILITY

NAME <u>Smithton Lagoon</u>		TELEPHONE NUMBER WITH AREA CODE: <u>660-343-5444</u>	
ADDRESS (PHYSICAL) <u>Rattlesnake Hill Rd.</u>	CITY <u>Smithton</u>	STATE <u>Mo.</u>	ZIP CODE <u>65350</u>
2.1 Legal description: <u>NE 1/4, NE 1/4, 1/4, Sec. 15, T45N R 20 W</u>	County <u>Pettis</u>		
2.2 UTM Coordinates - Easting (X): <u>38° 40'36.51 N</u>		Northing (Y): <u>93° 05' 58.11 W.</u>	
<i>For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)</i>			
2.3 Name of receiving stream: <u>Unnamed tributary to Flat Creek</u>			
2.4 Number of outfalls: <u>Wastewater outfalls:</u>		<u>Stormwater outfalls:</u> Instream monitoring sites:	

3. OWNER

NAME <u>City of Smithton</u>		EMAIL ADDRESS <u>cityofsmithton63@yahoo</u>		TELEPHONE NUMBER WITH AREA CODE <u>660-343-5444</u>	
ADDRESS <u>101 W Washington</u>	CITY <u>Smithton</u>	STATE <u>Mo</u>	ZIP CODE <u>65350</u>		
3.1 Request review of draft permit prior to public notice? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					
3.2 Are you a publicly owned treatment works? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
If yes, is the Financial Questionnaire attached? <input type="checkbox"/> YES <input type="checkbox"/> NO					
3.3 Are you a privately owned treatment works? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
3.4 Are you a privately owned treatment facility regulated by the Public Service Commission? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					

4. CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the facility.

NAME <u>City of Smithton</u>		EMAIL ADDRESS <u>cityofsmithton63@yahoo</u>		TELEPHONE NUMBER WITH AREA CODE <u>660-343-5444</u>	
ADDRESS <u>101 W Washington</u>	CITY <u>Smithton</u>	STATE <u>Mo</u>	ZIP CODE <u>65350</u>		

If the continuing authority is different than the owner, include a copy of the contract agreement between the two parties and a description of the responsibilities of both parties within the agreement.

5. OPERATOR

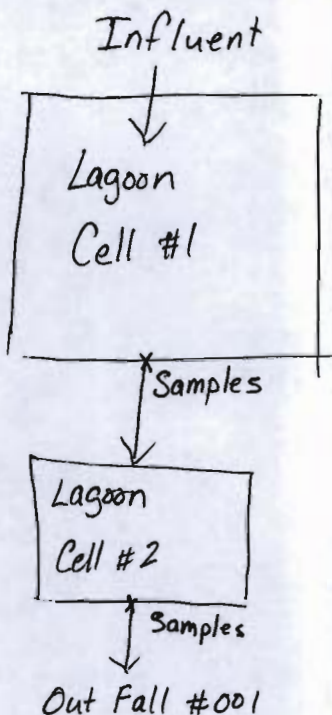
NAME <u>Joel Hughes</u>	TITLE	CERTIFICATE NUMBER <u>13920</u>
EMAIL ADDRESS <u>f1502010@yahoo.com</u>	TELEPHONE NUMBER WITH AREA CODE <u>660-619-4565</u>	

6. FACILITY CONTACT

NAME <u>Paul Williams</u>		TITLE <u>Water Supt</u>	
EMAIL ADDRESS		TELEPHONE NUMBER WITH AREA CODE <u>660-343-5444</u>	
ADDRESS <u>101 W. Washington</u>	CITY <u>Smithton</u>	STATE <u>Mo</u>	ZIP CODE <u>65350</u>

7. DESCRIPTION OF FACILITY

7.1 Process Flow Diagram or Schematic: Provide a diagram showing the processes of the treatment plant. Show all of the treatment units, including disinfection (e.g. – chlorination and dechlorination), influents, and outfalls. Specify where samples are taken. Include a brief narrative description of the diagram.
Attach sheets as necessary.



7.2 Attach an aerial photograph or USGS topographic map showing the location of the facility and outfall.

8. ADDITIONAL FACILITY INFORMATION	
8.1	Facility SIC code: <u>4952</u> Discharge SIC code: <u>001</u>
8.2	Number of people presently connected or population equivalent (P.E.) _____ Design P.E. _____
8.3	Connections to the facility: Number of units presently connected: Homes <u>196</u> Trailers <u>2</u> Apartments <u>11</u> Other (including industrial) <u>1</u> Number of commercial establishments: <u>13</u>
8.4	Design flow: <u>62,000 gpd</u> Actual flow: <u>40,000 gpd</u>
8.5	Will discharge be continuous through the year? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>N/A</u> Discharge will occur during the following months: <u>N/A</u> How many days of the week will discharge occur? <u>N/A</u>
8.6	Is industrial wastewater discharged to the facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, attach a list of the industries that discharge to your facility
8.7	Does the facility accept or process leachate from landfills? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
8.8	Is wastewater land applied? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, is Form I attached? Yes <input type="checkbox"/> No <input type="checkbox"/>
8.9	Does the facility discharge to a losing stream or sinkhole? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
8.10	Has a wasteload allocation study been completed for this facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
9. LABORATORY CONTROL INFORMATION	
LABORATORY WORK CONDUCTED BY PLANT PERSONNEL	
Lab work conducted outside of plant.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Push-button or visual methods for simple test such as pH, settleable solids.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Additional procedures such as dissolved oxygen, chemical oxygen demand, biological oxygen demand, titrations, solids, volatile content.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph.	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
10. COLLECTION SYSTEM	
10.1	Length of pipe in the sewer collection system? _____ Feet, or <u>4.0</u> Miles (either unit is appropriate)
10.2	Does significant infiltration occur in the collection system? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, briefly explain any steps underway or planned to minimize inflow and infiltration:
11. BYPASSING	
Does any bypassing occur in the collection system or at the treatment facility? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, explain:	

Google Maps Google Maps



Imagery ©2015 Google, Map data ©2015 Google 500 ft



United States
Environmental Protection
Agency

Wastewater Technology Fact Sheet

Facultative Lagoons

DESCRIPTION

Facultative waste stabilization ponds, sometimes referred to as lagoons or ponds, are frequently used to treat municipal and industrial wastewater in the United States. The technology associated with facultative lagoons has been in widespread use in the United States for at least 90 years, with more than 7,000 facultative lagoons in operation today. These earthen lagoons are usually 1.2 to 2.4 m (4 to 8 feet) in depth and are not mechanically mixed or aerated. The layer of water near the surface contains dissolved oxygen due to atmospheric reaeration and algal respiration, a condition that supports aerobic and facultative organisms. The bottom layer of the lagoon includes sludge deposits and supports anaerobic organisms. The intermediate anoxic layer, termed the facultative zone, ranges from aerobic near the top to anaerobic at the bottom. These layers may persist for long periods due to temperature-induced water-density variations. Inversions can occur in the spring and fall when the surface water layer may have a higher density than lower layers due to temperature fluctuations. This higher density water sinks during these unstable periods, creates turbidity, and produces objectionable odors.

The presence of algae in the aerobic and facultative zones is essential to the successful performance of facultative ponds. In sunlight, the algal cells utilize CO_2 from the water and release O_2 produced from photosynthesis. On warm, sunny days, the oxygen concentration in the surface water can exceed saturation levels. Conversely, oxygen levels are decreased at night. In addition, the pH of the near surface water can exceed 10 due to the intense use of CO_2 by algae, creating conditions favorable for ammonia removal via volatilization. This photosynthetic activity occurs on a diurnal basis, causing both oxygen and pH levels to shift from a maximum in daylight hours to a minimum at night.

The oxygen, produced by algae and surface reaeration, is used by aerobic and facultative bacteria to stabilize organic material in the upper layer of water. Anaerobic fermentation is the dominant activity in the bottom layer in the lagoon. In cold climates, oxygenation and fermentation reaction rates are significantly reduced during the winter and early spring and effluent quality may be reduced to the equivalent of primary effluent when an ice cover persists on the water surface. As a result, many states in the northern United States and Canada prohibit discharge from facultative lagoons during the winter.

Although the facultative lagoon concept is land intensive, especially in northern climates, it offers a reliable and easy-to-operate process that is attractive to small, rural communities.

Common Modifications

A common operational modification to facultative lagoons is the "controlled discharge" mode, where pond discharge is prohibited during the winter months in cold climates and/or during peak algal growth periods in the summer. In this approach, each cell in the system is isolated, then discharged sequentially. A similar modification, the "hydrograph controlled release" (HCR), retains liquid in the pond until flow volume and conditions in the receiving stream are adequate for discharge.

A recently developed physical modification uses plastic curtains, supported by floats and anchored to the bottom, to divide lagoons into multiple cells and/or to serve as baffles to improve hydraulic conditions. Another recent development uses a floating plastic grid to support the growth of duckweed (*Lemna* sp.) plants on the surface of the final cell(s) in the lagoon system, which restricts the penetration of light and thus reduces algae (with

sufficient detention time ≥ 20 days), improving the final effluent quality.

APPLICABILITY

The concept is well suited for rural communities and industries where land costs are not a limiting factor. Facultative lagoons can be used to treat raw, screened, or primary settled municipal wastewater and biodegradable industrial wastewaters.

ADVANTAGES AND DISADVANTAGES

Some advantages and disadvantages of facultative lagoons are listed below:

Advantages

Moderately effective in removing settleable solids, BOD, pathogens, fecal coliform, and ammonia.

Easy to operate.

Require little energy, with systems designed to operate with gravity flow.

The quantity of removed material will be relatively small compared to other secondary treatment processes.

Disadvantages

Settled sludges and inert material require periodic removal.

Difficult to control or predict ammonia levels in effluent.

Sludge accumulation will be higher in cold climates due to reduced microbial activity.

Mosquitos and similar insect vectors can be a problem if emergent vegetation is not controlled.

Requires relatively large areas of land.

Strong odors occur when the aerobic blanket disappears and during spring and fall lagoon turnovers.

Burrowing animals may be a problem.

DESIGN CRITERIA

Waste stabilization pond systems are simplistic in appearance, however, the reactions are as complicated as any other treatment process. Typical equipment used in facultative lagoons includes lining systems to control seepage to groundwater (if needed), inlet and outlet structures, hydraulic controls, floating dividers, and baffles. Many existing facultative lagoons are large, single-cell systems with the inlet constructed near the center of the cell. This configuration can result in short-circuiting and ineffective use of the design volume of the system. A multiple-cell system with at least three cells in series is recommended, with appropriate inlet and outlet structures to maximize effectiveness of the design volume. Most states have design criteria that specify the areal organic loading (kg/ha/d or lbs/acre/d) and/or the hydraulic residence time. Typical organic loading values range from 15 to 80 kg/ha/d (13 to 71 lbs/acre/d). Typical detention times range from 20 to 180 days depending on the location. Detention times can approach 200 days in northern climates where discharge restrictions prevail. Effluent biochemical oxygen demand (BOD) ≤ 30 mg/L can usually be achieved, while effluent TSS may range from ≤ 30 mg/L to more than 100 mg/L, depending on the algal concentrations and design of discharge structures.

A number of empirical and rational models exist for the design of simple and series constructed facultative lagoons. These include first-order plug flow, first-order complete mix, and models proposed by Gloyna, Marais, Oswald, and Thirumurthi. None of these has been shown to be clearly superior to the others. All provide a reasonable design as long as the basis for the formula is understood, proper parameters are selected, and the hydraulic detention and sludge retention characteristics of the system are known. This last element is critical because short circuiting in a poorly designed cell can result in

detention time of 40 percent or less than the theoretical design value.

PERFORMANCE

Overall, facultative lagoon systems are simple to operate, but only partially reliable in performance. BOD₅ removal can range up to 95 percent. However, the TSS range may exceed 150 mg/L. Removal of ammonia nitrogen can be significant (up to 80 percent), depending on temperature, pH, and detention time in the system. However, the removal cannot be sustained over the winter season. Due to precipitation reactions occurring simultaneously with the daily high pH (alkaline) conditions in the lagoon, approximately 50 percent phosphorus removal can be expected. Removal of pathogens and coliforms can be effective, depending on temperature and detention time.

Limitations

Limitations may include the inability of the process to meet a 30 mg/L limit for TSS due to the presence of algae in the effluent, particularly during warm weather, and not meeting effluent criteria consistently throughout the year. In cold climates, low temperatures and ice formation will limit process efficiency during the winter. Odors may be a problem in the spring and fall during periods of excessive algal blooms and unfavorable weather conditions.

OPERATION AND MAINTENANCE

Most facultative lagoons are designed to operate by gravity flow. The system is not maintenance intensive and power costs are minimal because pumps and other electrically operated devices may not be required. Although some analytical work is essential to ensure proper operation, an extensive sampling and monitoring program is usually not necessary. In addition, earthen structures used as impoundments must be inspected for rodent damage.

COSTS

Cost information for facultative lagoons varies significantly. Construction costs include cost of the land, excavation, grading, berm construction, and inlet and outlet structures. If the soil is permeable, an additional cost for lining the lagoon should be considered.

REFERENCES

Other Related Fact Sheets

Other EPA Fact Sheets can be found at the following web address:

<http://ww.epa.gov/owm/mtb/mtbfact.htm>

1. Middlebrooks, E.J., et al., 1982. *Wastewater Stabilization Lagoon Design, Performance and Upgrading*, McMillan Publishing Co., New York, NY.
2. Pano, A. and Middlebrooks, E.T., 1982. Ammonia Nitrogen Removal in Facultative Wastewater Stabilization Ponds. *Water Pollution Control Federation Journal*, 54 (4) 344-351.
3. Reed, S.C., et al., 1995, 2nd Ed. *Natural Systems for Waste Management and Treatment*, McGraw Hill Book Co., New York, NY.
4. Reed, S.C., 1985. *Nitrogen Removal in Wastewater Stabilization Ponds*, *Water Pollution Control Federation Journal*. 57(1)39-45.
5. U.S. EPA, 1983. *Design Manual - Municipal Wastewater Stabilization Ponds*, EPA-625/1-83-015, US EPA CERL, Cincinnati, OH.

6. WPCF, 1990. MOP FD-16, *Natural Systems for Wastewater Treatment*, Water Pollution Control Federation, Alexandria, VA.

The mention of trade names or commercial products does not constitute endorsement or recommendation for use by the U.S. Environmental Protection Agency.

ADDITIONAL INFORMATION

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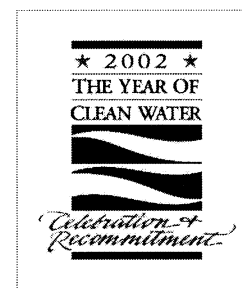
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Office of Water
EPA 832-F-02-014
September 2002

For more information contact:

Municipal Technology Branch
U.S. EPA
1200 Pennsylvania Ave., NW
Mail Code 4201M



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MTB

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Smithton, MO
Asset Report

Depreciated Value of 2020 Cost

Asset Description	Year Installed	Estimated Installation Cost 2020	Age (2020)	Depreciation Period ¹	Depreciation ²	Depreciated Value ³
Well #1	1929	\$ 340,092.50	91	55	\$ 562,698.50	\$ -
Well #1 Improvement-Pump	1993	\$ 15,000.00	27	12	\$ 33,750.00	\$ -
Well #1 Improvement-Chlorine Feed Equipment	1993	\$ 6,000.00	27	35	\$ 4,628.57	\$ 1,371.43
Well #1 Improvement-New Meter & Controls	2010	\$ 7,500.00	10	35	\$ 2,142.86	\$ 5,357.14
Well #2	1983	\$ 293,540.50	37	55	\$ 197,472.70	\$ 96,067.80
Well #2 Chlorine Feed Equipment	1983	\$ 6,000.00	37	35	\$ 6,342.86	\$ -
Elevated Tank	1953	\$ 163,625.00	67	42	\$ 261,020.83	\$ -
2-inch Water Main	1996	\$ 305,000.00	24	50	\$ 146,400.00	\$ 158,600.00
4-inch Water Main	1996	\$ 103,500.00	24	50	\$ 49,680.00	\$ 53,820.00
6-inch Water Main	1996	\$ 665,000.00	24	50	\$ 319,200.00	\$ 345,800.00
Hydrants	1996	\$ 105,000.00	24	50	\$ 50,400.00	\$ 54,600.00
Water Services and Meters	1996	\$ 384,000.00	24	35	\$ 263,314.29	\$ 120,685.71
Total Water Assets		\$ 2,394,258.00				\$ 836,302.09
Wastewater Treatment Plant	1969	\$ 155,000.00	51	40	\$ 197,625.00	\$ -
Lift Station #1	2000	\$ 26,950.00	20	10	\$ 53,900.00	\$ -
Lift Station #2	1969	\$ 26,950.00	51	10	\$ 137,445.00	\$ -
Sewer	1965	\$ 1,243,000.00	55	50	\$ 1,367,300.00	\$ -
Manholes	1998	\$ 262,500.00	22	50	\$ 115,500.00	\$ 147,000.00
Service Laterals	1965	\$ 76,800.00	55	50	\$ 84,480.00	\$ -
Total Wastewater Assets		\$ 1,791,200.00				\$ 147,000.00

Note 1 - Based on Missouri PSC Rate Case Dockets WR-2015-0138 Village Greens Water Company; WR-2016-0169 Woodland Manor Water Company; WR-2015-0104 Spokane Highlands Water Company; SR-2014-0105 Terre Du Lac Utility Company; SR-2014-0068 P.C.B., Inc.; and SR-2013-0435 Rogue Creek Sewer.

Note 2 - Depreciation = Age/Depreciation Period X Estimated Installation Cost

Note 3 - Depreciated Value = Estimated Installation Cost - Depreciation

VILLAGE GREENS WATER COMPANY
SCHEDULE of DEPRECIATION RATES
(WATER Class D)
WR-2015-0138 Attachment D

NARUC USOA ACCOUNT NUMBER	ACCOUNT DESCRIPTION	DEPRECIATION RATE	AVERAGE SERVICE LIFE (YEARS)	NET SALVAGE
Source of Supply				
311	Structures & Improvements	2.5%	44	-10%
314	Wells & Springs	2.0%	55	-8%
Pumping Plant				
321	Structures & Improvements	2.5%	44	-10%
325.1	Submersible Pumping Equipment	10.0%	12	-20%
Water Treatment Plant				
331	Structures & Improvements	2.5%	44	-10%
332	Water Treatment Equipment	2.9%	35	0%
Transmission and Distribution				
342	Distribution Reservoirs & Standpipes	2.5%	42	-5%
343	Transmission & Distribution Mains	2.0%	50	0%
345	Customer Services	2.5%	40	0%
346.1	Customer Meters, Plastic (Throw Aways)	10.0%	10	0%
347	Customer Meter Pits & Installation	2.5%	40	0%
348	Hydrants	2.0%	50	0%
General Plant CLASS D				
371	Structures & Improvements	2.5%	40	0%
372	Office Furniture & Equipment	5.0%	20	0%
372.1	Office Electronic & Computer Equip.	14.3%	7	0%
373	Transportation Equipment	13.0%	7	9%
379	Other General Equipment (tools, shop equip., backhoes, trenchers, etc.)	10.0%	8.7	13%

https://www.efis.psc.mo.gov/mpsc/commoncomponents/view_itemno_details.asp?caseno=WR-2015-0138&attach_id=2015030930

*Revised 1/23/2015

For Staff Proposed Adoption by Missouri-American Water Company
WM-2016-0169

Woodland Manor Water Company
SCHEDULE of DEPRECIATION RATES dated 4/1/2013
(WATER Class D)
WR-2013-0326

USOA

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	DEPRECIATION RATE	AVERAGE SERVICE LIFE (YEARS)	NET SALVAGE
Source of Supply				
311	Structures & Improvements	2.5%	44	-10%
314	Wells & Springs	2.0%	55	-8%
Pumping Plant				
321	Structures & Improvements	2.5%	44	-10%
325	Electric Pumping Equip. (Plus Generator)	6.7%	15	0%
328	Other Pumping Equipment	5.0%	20	0%
Water Treatment Plant				
332	Water Treatment Equipment	2.9%	35	\$0
Transmission and Distribution				
342	Distribution Reservoirs & Standpipes	2.5%	42	-5%
343	Transmission & Distribution Mains	2.0%	50	0%
345	Customer Services	2.9%	35	0%
346.1	Customer Meters (Installed after 2012)*	10.0%	10	0%
346.2	Bronze Meters and Installs prior 2013	3.3%	30	0%
347	Meter Installations (Meter Pits after 2012)	2.5%	40	0%
348	Hydrants	2.5%	40	0%
349	Other Transmission & Distribution Plant	3.3%	30	0%
General Plant				
372	Office Equipment & Furniture	5.0%	20	0%
372.1	Office Electronic Equipment	14.3%	7	0%
373	Transportation Equipment	13.0%	7	9%
379	Other General Equipment	6.7%	13	13%

Customer Meters (Installed after 2012)* Plus 18 plastic meters installed in 2007

The above recommended depreciation rates are based on Staff's review of the Company's operation and records.

https://www.efis.psc.mo.gov/mpsc/commoncomponents/view_itemno_details.asp?caseno=WM-2016-0169&attach_id=2016015052

**SPOKANE HIGHLANDS WATER COMPANY
DEPRECIATION RATES
(WATER)
CASE NO. WR-2015-0104**

<u>ACCOUNT NUMBER</u>	<u>ACCOUNT</u>	<u>DEPRECIATION RATE %</u>	<u>AVERAGE SERVICE LIFE (YEARS)</u>	<u>SALVAGE %</u>
311	Structures & Improvements	2.5%	44	-10%
314	Wells & Springs	2.0%	55	-8%
325	Electric Pumping Equipment			
325.1	Submersible (Well Pump) Equipment	10.0%	12	-20%
325.2	High Service or Booster Pumps	2.0%	7	0%
342	Distribution Reservoirs & Standpipes	2.5%	42	-5%
343	Transmission & Distribution Mains	2.0%	50	0%
345	Services	2.9%	35	0%
346	Meters	2.0%	10	0%
347	Meter Installations	1.0%	50	0%
348	Hydrants	2.5%	40	0%
372	Office Furniture & Equipment	5.0%	20	0%
379	Other General Equipment	6.7%	13	13%

ATTACHMENT C

Terre Du Lac Utility Company
DEPRECIATION RATES
(SEWER)
SR-2014-0105

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	DEPRECIATION RATE	AVERAGE SERVICE LIFE (YEARS)	NET SALVAGE
300	Stipulated Plant	2.5%	40	0%
311	Structures and Improvements	2.5%	44	-10%
352.1	Collection Sewers (Force)	2.0%	50	0%
352.2	Collection Sewers (Gravity)	2.0%	50	0%
353	Services	2.0%	50	0%
354	Flow Measurement Devices	3.3%	30	0%
362	Receiving Wells	5.0%	26	-5%
363	Electric Pumping Equipment	10.0%	10	0%
371	Treatment Plant Shed	2.5%	44	-10%
372	Treatment & Disposal Equipment	5.0%	22	-10%
390	Structures & Improvements Office/Shop	2.5%	44	-10%
391	Office Furniture & Equipment	5.0%	20	0%
391.1	Electronic Office Equipment	0.0%	Excessively Accrued	
392	Transportation Equipment	13.0%	7	9%
393	Stores Equipment	4.0%	25	0%
394	Tools, Shop, and Garage Equipment	5.0%	18	10%
395	Laboratory Equipment	8.3%	12	0%
396	Power Operated Equipment	6.7%	13	13%
397	Communication Equipment	3.3%	Over Accrued	

Reviewed, 1/7/2014. The above are standard small company depreciation rates modified as a result of Staff's investigation of the Company's operation, records, and physical plant, and are dependent on the Company's implementation of the end of test year adjustments to the Company's plant in service and accumulated reserves as shown in the Staff accounting schedules.

https://www.efis.psc.mo.gov/mpsc/commoncomponents/view_itemno_details.asp?caseno=SR-2014-0105&attach_id=2014014505

P.C.B., Inc.
SCHEDULE of DEPRECIATION RATES
(SEWER Class C & D)
SR-2014-0068 Attachment D

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	DEPRECIATION RATE	AVERAGE SERVICE LIFE (YEARS)
COLLECTION PLANT			
311	Structures & Improvements	3.3%	33
352.2	Collection Sewers (Gravity)	2.0%	50
355	Flow Measurement Devices	3.3%	30
PUMPING PLANT			
362	Receiving Wells	4.0%	26
363	Electric Pumping Equipment	10.0%	10
TREATMENT & DISPOSAL PLANT			
372	Oxidation Lagoons	4.0%	40
373	Treatment & Disposal Facilities	5.0%	22
375	Outfall Sewer Lines	2.0%	50
GENERAL PLANT			
391	Office Furniture & Equipment	5.0%	20

Reviewed, 1/07/2014. The above are standard small company depreciation rates modified as a result of Staff's investigation of the Company's operation, records, and physical plant, and are dependent on the Company's implementation of the end of test year adjustments to the Company's plant in service and accumulated reserves as shown in the Staff accounting schedules.

https://www.efis.psc.mo.gov/mpsc/commoncomponents/view_itemno_details.asp?caseno=SR-2014-0068&attach_id=2014016258

Rogue Creek Sewer
Interim Rate Case
SR-2013-0435
Test Year Ending 12-31-2012
Depreciation Expense - Sewer

Line Number	A Account Number	B Plant Account Description	C Adjusted Jurisdictional	D Depreciation Rate	E Depreciation Expense
1		INTANGIBLE PLANT			
2	301.000	Organization	\$135	0.00%	\$0
3	302.000	Franchises	\$1,127	0.00%	\$0
4	303.000	Miscellaneous Intangible Plant	\$0	0.00%	\$0
5		TOTAL INTANGIBLE PLANT	<u>\$1,262</u>		<u>\$0</u>
6		SOURCE OF SUPPLY PLANT			
7	310.000	Land & Land Rights	\$0	0.00%	\$0
8	311.000	Structures & Improvements	\$2,532	3.00%	\$76
9		TOTAL SOURCE OF SUPPLY PLANT	<u>\$2,532</u>		<u>\$76</u>
10		COLLECTION PLANT			
11	352.100	Collection Sewers - Force	\$12,827	2.00%	\$257
12	352.200	Collection Sewers - Gravity	\$105,094	2.00%	\$2,102
13	353.000	Other Collection Plant Facilities	\$0	0.00%	\$0
14	354.000	Services to Customers	\$18,120	2.00%	\$362
15	355.000	Flow Measuring Devices	\$0	0.00%	\$0
16		TOTAL COLLECTION PLANT	<u>\$136,041</u>		<u>\$2,721</u>
17		PUMPING PLANT			
18	362.000	Receiving Wells and Pump Pits	\$1,804	5.00%	\$90
19	363.000	Pumping Equipment (Elec., Diesel, other)	\$24,068	10.00%	\$2,407
20		TOTAL PUMPING PLANT	<u>\$25,872</u>		<u>\$2,497</u>
21		TREATMENT & DISPOSAL PLANT			
22	372.000	Oxidation Lagoon	\$0	0.00%	\$0
23	373.000	Treatment and Disposal Equipment	\$31,190	4.50%	\$1,404
24	374.000	Plant Sewers	\$0	0.00%	\$0
25	375.000	Outfall Sewer Lines	\$0	0.00%	\$0
26	376.000	Other Treatment & Disposal Plant Equip.	\$0	0.00%	\$0
27		TOTAL TREATMENT & DISPOSAL PLANT	<u>\$31,190</u>		<u>\$1,404</u>
28		GENERAL PLANT			
29	391.000	Office Furniture & Equipment	\$467	5.00%	\$23
30	391.100	Office Computer Equipment	\$371	20.00%	\$74
31	392.000	Transportation Equipment	\$228	13.00%	\$30
32	394.000	Tools Shop & Garage Equipment.	\$15	5.00%	\$1
33		TOTAL GENERAL PLANT	<u>\$1,081</u>		<u>\$128</u>
34		Total Depreciation	<u>\$197,978</u>		<u>\$6,826</u>

https://www.efis.psc.mo.gov/mpsc/commoncomponents/view_itemno_details.asp?caseno=SR-2013-0435&attach_id=2013018070

Appendix I-C has been marked CONFIDENTIAL in its entirety.

Appendix J-C has been marked CONFIDENTIAL in its entirety.

**Customer Service Transition
City of Smithton Acquisition**

Current Smithton Practice		Proposed MAWC Practice	
Customer Service Physical Location			
<u>Office Location:</u> Smithton City Hall 101 West Washington Smithton, MO 65350	<u>Hours of Operation:</u> Tuesday & Thursday 8:30 am-12:30 pm 1:30 pm-5:30 pm Wednesday 8:30 am-12:30 pm	<u>Office Location:</u> Missouri-American Water 1705 Montserrat Park Rd Warrensburg, MO 64093	<u>Hours of Operation:</u> Monday - Friday 7:30 am to 4:00 pm
Customer Service Contact Information			
<u>Contact:</u> Smithton City Hall 101 West Washington Smithton, MO 65350	<u>Hours Available:</u> Tuesday & Thursday 8:30 am-12:30 pm 1:30 pm-5:30 pm Wednesday 8:30 am-12:30 pm	<u>Contact:</u> Customer Service Center (866-430-0820) OR Customer Portal www.missouriamwater.com OR Direct E-mail welcomemoaw@amwater.com	<u>Hours Available:</u> Customer Service Center Monday – Friday 7:00 am – 7:00 pm (24/7 for emergencies)
Payment Options			
Cash or Check Debit/Credit Card Pay in-person, drop-off, via mail, and online.		Cash or Check Debit/Credit Card Electronic Funds Transfer (“EFT”) Pay via mail, telephone, online or at select third party payment locations. No transaction fees for debit/credit cards	
Billing Process			
Meters are read around the 18th of every month. Bills are sent out a few days after meters are read. A \$10.00 late fee is added to the account balance if a payment is not made by the 10th day of the month. Service is discontinued if not paid by the 17th of the month.		Standard MAWC billing process Bill generated within 3 days of meter read, with due date of 21 days from invoice date.	

Note: Customers will be integrated into the MAWC systems, and do not need to apply for service at the time of transition.

Other Customer Service Documentation

Attachment K1	MAWC Collections Process Timeline
Attachment K2	Sample Customer Discontinuance, Final Discontinuance & Overdue Payment Notices
Attachment K3	Sample Customer Welcome Letter & Customer Rights and Responsibilities
Attachment K4	Sample Customer Bill

1017	Missouri	Missouri	Missouri	Missouri
Strategy	Residential	Non-Residential	Sewer Only	MultiDwelling
Threshold	\$75	\$75	\$135	\$100
Day Zero = Invoice Postmark				
Day 1	Invoice	Invoice	Invoice	Invoice
Day 2	↓	↓	↓	↓
Day 3	↓	↓	↓	↓
Day 4	↓	↓	↓	↓
Day 5	↓	↓	↓	↓
Day 6	↓	↓	↓	↓
Day 7	↓	↓	↓	↓
Day 8	↓	↓	↓	↓
Day 9	↓	↓	↓	↓
Day 10	↓	↓	↓	↓
Day 11	↓	↓	↓	↓
Day 12	↓	↓	↓	↓
Day 13	↓	↓	↓	↓
Day 14	↓	↓	↓	↓
Day 15	↓	↓	↓	↓
Day 16	↓	↓	↓	↓
Day 17	↓	↓	↓	↓
Day 18	↓	↓	↓	↓
Day 19	↓	↓	↓	↓
Day 20	↓	↓	↓	↓
Day 21	Due Date	Due Date	Due Date	Due Date
Day 22	DD+1	DD+1	DD+1	DD+1
Day 23	DD+2	DD+2	DD+2	DD+2
Day 24	DD+3	DD+3	DD+3	DD+3
Day 25	DD+4	DD+4	DD+4	DD+4
Day 26	DD+5	DD+5	DD+5	DD+5
Day 27	LDSN	LDSN	LSON	MDDN
Day 28	DD+7	DD+7	DD+7	DD+7
Day 29	DD+8	DD+8	DD+8	DD+8
Day 30	CAF1	CAF1	DD+9	CAF1
Day 31	CAFP	CAFP	CAF1	CAFP
Day 32	DD+11	DD+11	CAFP	DD+11
Day 33	LDMO	LDMO	BSEW	DD+12
Day 34	DD+13	DD+13		DD+13
Day 35	DD+14	DD+14		DD+14
Day 36	DD+15	DD+15		DD+15
Day 37	DD+16	DD+16		DD+16
Day 38	ODSN	ODSN		OPNL
Day 39	DD+18	DD+18		DD+18
Day 40	DD+19	DD+19		DD+19
Day 41	DD+20	DD+20		DD+20
Day 42	DD+21	DD+21		DD+21
Day 43	DD+22	DD+22		DD+22

Day 44	DD+23	DD+23		DD+23
Day 45	MOUT	MOUT		DD+24
Day 46				DD+25
Day 47				DD+26
Day 48				DD+27
Day 49				DD+28
Day 50				OMDN
Day 51				DD+30
Day 52				DD+31
Day 53				DD+32
Day 54				DD+33
Day 55				DD+34
Day 56				DD+35
Day 57				DD+36
Day 58				MOUT

Write Off Occurs 90 Days after final bills due.

For Service To:

Account Number	
Pay Before	08/22/2022
Total Due	371.73

TIME SENSITIVE NOTICE:

To ensure timely receipt of your payment, please use one of the payment options noted below. Do not mail your payment.

IMPORTANT: DISCONTINUANCE NOTICE
Please read and take the steps needed to avoid your service from being discontinued.

PAY THIS AMOUNT \$371.73 PRIOR TO 08/22/2022

Payment on your Water account is overdue. If payment is not received, your service may be shut off on or after 08/22/2022. You can prevent discontinuation of water service by paying the amount printed above. Please use one of our convenient payment options listed below to ensure your payment is applied to your account immediately.

It is our sincere goal to work with you to correct this situation before further action becomes necessary. Please respond immediately so that we can assist you as best as possible. If you do not respond to this notice and your service is disconnected, any installment plan may be considered in default and you may be required to pay the full amount due including a disconnection charge, a restoration charge, along with an excavation charge, if required.

Please note, someone must be available at the premises when service is restored.

- Disconnection Charge: \$27.50**
- Regular Hour Restoration Charge: \$27.50**
- Off Hour Restoration Charge: \$159.00**
- Excavation Charge: Actual Cost**

Payment must be made before 3:00 pm to have service restored the same day and to avoid the off-hour restoration charge.

If discontinuance of service becomes necessary, operation of the customer owned stop cock will be necessary. If the stop cock is found inoperable or breaks in the process of either discontinuing or restoring service, you will be required to repair or replace the stop cock prior to service being restored.

CONVENIENT PAYMENT OPTIONS

8 Pay your bill online:
www.amwater.com/myaccount

Pay by Phone: 855-748-6066
24 hours a day, seven days a week
TTY/TDD FOR THE HEARING
IMPAIRED: 711 (and then
reference Customer Service
number listed above)

€ Pay in person: for a list of approved payment locations, visit www.amwater.com/myaccount



MISSOURI AMERICAN WATER CUSTOMER SERVICE

1-866-430-0820

HOURS: M-F, 7am-7pm ▪ Emergencies: 24/7

TTY/TDD FOR THE HEARING IMPAIRED: 711 (and then reference Customer Service number listed above)

Esto es un aviso importante sobre su servicio de agua. Para la ayuda de la traducción, por favor llamas a Missouri American Water al numero 1-866-430-0820.

ADDRESS, EMAIL OR PHONE NUMBER CHANGE REQUEST

Please let us know if we need to update your contact information in our records. NOTE: If you are moving or need to make a name change, please contact our customer service center at the phone number listed on the front of this notice. Updates to your contact information can also be made through our online self-service tool, **MyWater**. Access MyWater by visiting amwater.com/mywater.

EASY PAYMENT OPTIONS

- **Online:** Visit www.amwater.com/billpay.
- **By phone:** 24/7 at 1-855-748-6066.
- **In person:** To find an authorized payment location near you, visit us online at missouriamwater.com. See Customer Service & Billing or call.

Want to avoid late payments in the future?

Consider enrolling in Auto Pay. Enroll in Auto Pay, and your bill will be paid on time, every time. Each month, payments are automatically deducted from your checking or savings account on the due date. No stamps required.

Want to cut down on clutter and save some trees?

Consider enrolling in our Paperless Billing Program. You must first sign up for MyWater by visiting amwater.com/mywater. After you enroll, you will only receive your bills online.

CUSTOMER ASSISTANCE PROGRAMS

If you're experiencing financial hardship, please reach out to us. We may be able to assist. Here are some of the programs we offer to help keep your life flowing:

FINANCIAL ASSISTANCE

Through our H2O Help to Others Program, we offer financial assistance to customers who qualify, as well as a Low-Income Assistance Program for eligible customers in certain areas.

Learn more online at missouriamwater.com. Under Customer Service & Billing, select Payment Assistance Program.

INSTALLMENT PLANS

You may be eligible for an installment plan to extend the time you have to pay a past due balance. Installment plans vary based on your past due amount and the information you provide to us about your ability to pay. We collect this information, including household income and number of people in your household, to determine what options we can provide to you.

BUDGET BILLING

Budget billing is a free service that is available to eligible residential customers. The program makes managing your cash flow easier by providing predictable monthly payments and avoiding unplanned seasonal spikes that may be difficult to pay.

WATER SAVING TIPS AND TOOLS

We offer tips and tools to help customers save water and money:

- **Leak Detection Kit** to help identify common and not-so-common household leaks.
- **Conservation Tips**

Visit missouriamwater.com. Under Water Information, select Detecting Leaks and Wise Water Use.

MANAGE YOUR ACCOUNT ONLINE WITH MYWATER

MyWater is a fast and easy way to access and manage your account online.

Here are a few things you can do through MyWater:

- View and pay your bill
- Sign up for our Auto Pay and Paperless Billing programs.
- Check your account balance.
- Update your contact information.
- Sign up to receive emergency and non-urgent alerts by email, phone and text.
- View your water use history. (See in which months you use the most water to help determine ways you can save water and money.)

Access MyWater online at amwater.com/mywater.

08/11/2022

For Service To:
Account Number:
Service Address:

FINAL DISCONTINUANCE NOTICE
PAY THIS AMOUNT: \$156.28 PRIOR TO: 08/16/2022

Payment on your Water account is overdue. If payment is not received, your service may be shut off on or after 08/16/2022. You can prevent discontinuation of water service by paying \$156.28.

It is our sincere goal to work with you to correct this situation before further action becomes necessary. Please respond immediately so that we can assist you as best as possible. If you do not respond to this notice and your service is disconnected, any installment plan may be considered in default and you may be required to pay the full amount due including a disconnection charge, restoration charge, along with an excavation charge, if required. Please call customer service at the number listed below to ensure payment is applied to your account immediately.


Please note, someone must be available at the premises when service is restored.

Disconnection Charge: \$27.50
Regular Hour Restoration Charge: \$27.50
Off Hour Restoration Charge: \$159.00
Excavation Charge: Actual Cost


Payment must be made before 3:00 pm to have service restored the same day and to avoid the off-hour restoration charge.

For St. Louis County customers only: If discontinuance of service becomes necessary, operation of the customer owned stop cock will be necessary. If the stop cock is found inoperable or breaks in the process of either discontinuing or restoring service, you will be required to repair or replace the stop cock prior to service being restored.

CONVENIENT PAYMENT OPTIONS

 **Pay your bill online:**
www.amwater.com/myaccount

Pay by Phone: 855-748-6066
24 hours a day, seven days a week
TTY/TDD FOR THE HEARING
IMPAIRED: 711 (and then
reference Customer Service
number listed above)

 **Pay in person:** for a list of approved payment locations, visit www.amwater.com/myaccount

Customer Service: M-F 7am to 7pm Emergency: 24/7: 1-855-669-8753 www.missouriamwater.com

For Service To:

Account Number	
Pay Before	08/17/2022
Total Due	131.96

TIME SENSITIVE NOTICE:

To ensure timely receipt of your payment, please use one of the payment options noted below. Do not mail your payment.

IMPORTANT: OVERDUE NOTICE
Please read and take the steps needed to avoid your service from being terminated.

PAY THIS AMOUNT \$131.96 PRIOR TO 08/17/2022

Providing reliable, quality wastewater service to our customers is a top priority. That's why we are contacting you today about a very important matter regarding your account. Your wastewater bill for the amount shown above is now overdue. To assure continued service, payment is due upon receipt of this notice. If you have already submitted your payment, thank you and please disregard this notice. As a reminder, we provide our customers with several convenient ways to pay their bills.

1. Register for a self-service account and submit payment at www.amwater.com/MyAccount.
2. Sign up for our automatic payment program through our web site.
3. Mail your payment using the return envelope enclosed with your bill.
4. Pay by phone by calling 855-748-6066. (A small fee is charged for this service.)
5. Pay at a local authorized payment location. You can search for sites by zip code on our website.
6. If you do not respond to this notice and your service is disconnected, any installment plan may be considered in default and you may be required to pay the full amount due and a service charge of \$0.00 before service is reconnected.

If you are unable to make payment in full, you may contact the company within the next 10 days to see if you are eligible to make payment arrangements.

Again, thank you for the opportunity to provide quality, reliable wastewater service in your community. If you have additional questions, please contact our customer service center at 1-855-669-8753.

CONVENIENT PAYMENT OPTIONS

8 Pay your bill online:
www.amwater.com/myaccount

Pay by Phone: 855-748-6066
24 hours a day, seven days a week
TTY/TDD FOR THE HEARING
IMPAIRED: 711 (and then
reference Customer Service
number listed above)

€ Pay in person: for a list of approved payment locations, visit www.amwater.com/myaccount

ADDRESS, EMAIL OR PHONE NUMBER CHANGE REQUEST

Please let us know if we need to update your contact information in our records. NOTE: If you are moving or need to make a name change, please contact our customer service center at the phone number listed on the front of this notice. Updates to your contact information can also be made through our online self-service tool, **MyAccount**. Access MyAccount from any electronic device by visiting www.amwater.com/MyAccount.



February 25, 2022

Dear City of Hallsville Customer:

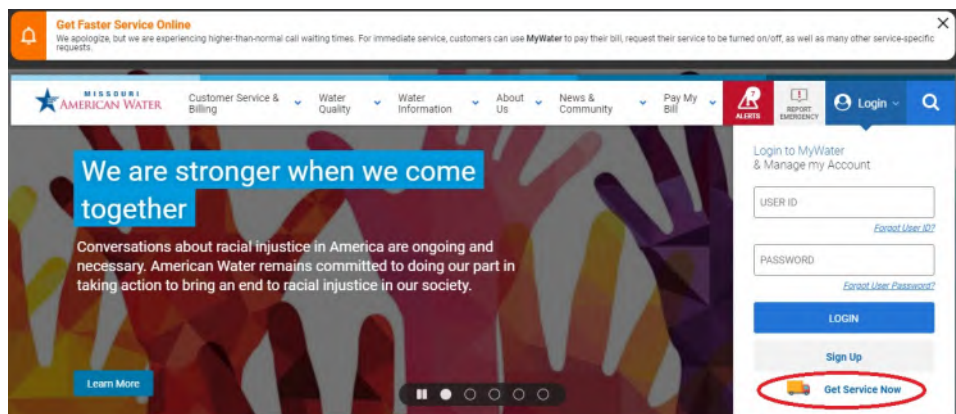
Welcome to the Missouri American Water family! We are thrilled to have you as a customer since February 25, 2022.

The transfer of your wastewater service account is being completed. There are no additional steps you need to take for your service to continue. Billing information is being transferred to our system. Your first bill from Missouri American Water is scheduled for the week of March 28.

Below are helpful tips as we transition to being your wastewater service provider. This information can also be found on our website at missouriamwater.com > **Customer Service & Billing**.

CUSTOMER SERVICE AT YOUR FINGERTIPS

As a customer of Missouri American Water, you have access to a self-service website allowing you to manage your account and get emergency updates any time, day or night. With MyWater, you can pay your bill and turn wastewater service on and off. When emergencies do occur, be sure you have access to the most up-to-date information by also signing up for alerts.



Signing up for MyWater is easy, free and simple! Visit missouriamwater.com and click on “Sign Up” in the “Login to MyWater” box in the top right corner. Make sure you have your Missouri American Water account number handy which is listed on the top corner of your bill.

MyWater provides you with 24/7 payment ability. With MyWater, you can view and pay your bill, manage your account, set up paperless billing, and enroll in autopay. Payments can also be made by phone or via mail. You can also pay by cash, check, or credit card. To learn more about these options, please visit missouriamwater.com. You can also contact customer service at **1-866-430-0820** or email welcomemoaw@amwater.com with any questions or concerns.

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YOUR SERVICE

Missouri American Water operates under regulations established by the Missouri Public Service Commission (MoPSC). If you believe we have not responded to an issue in a satisfactory manner, you have the right to request that the MoPSC review the unresolved issue. You may contact them at:

Missouri Public Service Commission
Governor Office Building
200 Madison St, PO Box 360
Jefferson City, MO 65102-0360
800-392-4211 or psc.mo.gov

Included in this packet you will find a copy of our welcome booklet, our bill redesign fact sheet and our rights and responsibilities outline, which provides specific information about our policies regarding your wastewater service with us. It defines your rights and responsibilities and provides information about your bill, how to pay your bill and who to contact for questions regarding your service.

Our team of dedicated professionals is committed to providing exceptional wastewater and customer service. From customer service representatives to plant operators, our employees recognize the critical role they play in meeting your daily wastewater service needs. You will notice our employees are easily recognizable as they wear uniforms and carry company identification.

As a subsidiary of American Water, we have been providing reliable water and wastewater services for more than 140 years. We are a proud community partner, dedicated to making your customer experience a pleasant one. We look forward to serving your community.

Sincerely,



Patrick Kelly
Manager of Operations
Missouri American Water

Your Rights and Responsibilities as a Customer of Missouri American Water

If You Have a Question or Complaint

Missouri American Water customer service representatives are dedicated to handling every customer inquiry with attention and care. Our goal is to answer your question or resolve your issue quickly and effectively. We encourage customers to call us at 866-430-0820 as soon as an issue arises.

Bill Payment/Discontinuance of Service

Bill payments are due 21 days after the billing date. The due date is printed on the front of the bill. A delinquent charge may be applied to all accounts not paid in full by the due date. Bills become delinquent after the due date stated on the bill. If the bill is not paid, service may be disconnected.

We will mail a written notice at least 10 days before we discontinue service for water customers (including customers that are both water and wastewater customers of Missouri American Water), and at least 30 days before we discontinue service for wastewater-only customers. The notice explains the reason for the discontinuance of service and the amount of money owed in the case of a past due bill. For wastewater customers, the 30-day notice may be waived if there is any waste discharge that might be detrimental to the health and safety of the public or cause damage to the wastewater system.

If you receive a notice, please take immediate action to avoid service discontinuance. Call our Customer Service Center at 866-430-0820.

We will restore service when the bill has been paid or the conditions that caused the disconnection have been corrected. There is a reconnection fee. If you will be absent from your home or business for a period of time, you may avoid discontinuance of service by:

1. Forwarding your mail to an address where your bill will reach you.
2. Signing up for automatic payment.
3. Requesting termination of your service.

If you have a question about your bill that we cannot resolve to your satisfaction, you may pay the bill in full and Missouri American Water will credit any overpayment if the matter is resolved in your favor. If you do not pay the bill in full, Missouri American Water and the Missouri Public Service Commission (MoPSC) have complaint procedures in place that are available to customers to resolve disputes and avoid service discontinuance.

1. Customers must register a complaint by phone or in writing at least 24 hours before the date stated in the notice of discontinuance.
2. Within four days after registering the complaint, the customer must pay the part of the bill not in dispute. If the company and the customer cannot agree on the undisputed amount, at the company's discretion, it may be set at 50 percent of the disputed bill or at the amount of the customer's bill during the same time a year ago.
3. Missouri American Water will thoroughly investigate the complaint and attempt to resolve the problem. If, at the conclusion, the customer is still dissatisfied, we will mail a written notice explaining the MoPSC's informal complaint process. Informal complaints must be made to the MoPSC within five days after the date of the notice to avoid service disconnection. Informal complaints can be made by phone at 800-392-4211 or through the MoPSC's website at psc.mo.gov.
4. The MoPSC staff will investigate the informal complaint and issue findings. Missouri American Water or the customer may elect to file a formal complaint following the issuance of the finding.
5. A formal customer complaint must be filed within 30 days of the MoPSC findings to avoid disconnection. Formal complaints must follow specific rules set out in the MoPSC's Rules of Practice and Procedures, which is available on the MoPSC website at psc.mo.gov.

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Missouri American Water operates under regulations established by the Missouri Public Service Commission. If you feel we have not responded to your issue in a satisfactory manner, you have the right to request that the MoPSC review the unresolved issue. You may contact the MoPSC at:

Missouri Public Service Commission
Governor Office Building
200 Madison Street, PO Box 360
Jefferson City, MO 65102-0360
800-392-4211
psc.mo.gov

The Office of Public Counsel (OPC) provides an additional resource for Missouri utility customers. The OPC represents the interests of the public and utility customers in proceedings before the Missouri Public Service Commission and in appeals in the courts. You may contact the OPC at:

Office of Public Counsel
Governor Office Building
200 Madison Street, PO Box 2230
Jefferson City, MO 65102-2230
866-922-2959
opc.mo.gov

From time to time, Missouri American Water's policies may change, so please visit our website at **missouriamwater.com** for the latest information.



WELCOME NEW CUSTOMERS



MISSOURI
AMERICAN WATER

WE KEEP LIFE FLOWING®



WELCOME TO MISSOURI AMERICAN WATER! We look forward to serving you. Inside this booklet, you will find information on the following:

- Water and wastewater service
- System investment
- Emergency notifications
- Saving water and money
- Customer service
- Payment options
- Payment assistance program

For additional information, visit our website at **missouriamwater.com**.



RICHARD SVINDLAND
President

A Message from Missouri American Water President RICHARD SVINDLAND

Dear Customer,

Welcome to Missouri American Water. We are proud to be your water and/or wastewater service provider. Our team of experts delivers high-quality drinking water to nearly one in four Missourians, and we also treat wastewater for thousands of homes and businesses to protect the environment. **We're dedicated to providing our customers and communities with safe, clean, reliable and affordable water and wastewater service.**

This guide will answer questions you may have about our company and the services we offer. We hope you will review its contents and keep it for future reference. If you have questions about Missouri American Water, please call our Customer Service Center at 866-430-0820.

Sincerely,

A handwritten signature in blue ink, appearing to read "Richard Svindland".

RICHARD SVINDLAND
President

A young girl with brown hair is drinking water from a chrome faucet. She is looking up at the water. The background is a soft, out-of-focus indoor setting.

PROVIDING YOU WITH HIGH-QUALITY WATER

Nothing is more important than the safety and quality of our water. We work closely with the U.S. Environmental Protection Agency and the Missouri Department of Natural Resources to provide water that consistently meets or surpasses federal and state standards. To do this, we closely monitor our treatment process by performing more than 500,000 tests each year.

Our commitment to exceptional water quality is recognized in Missouri and across the country. Our parent company American Water has received more than 150 awards for superior water quality. All six of Missouri American Water's surface water treatment plants are recognized by the Partnership for Safe Water, an honor achieved by less than 1% of all water utilities.





RELIABLE WASTEWATER TREATMENT

We only have one environment, so we provide communities with scientifically proven solutions for the safe collection, treatment, and release of wastewater.

Below are a few examples of technology we implement:

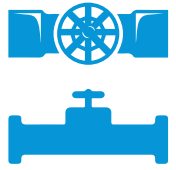
- ◆ **Membrane Bioreactors:** A powerful and efficient solution for the treatment of wastewater.
- ◆ **Biological Nutrient Removal:** The removal of nutrients through an activated sludge system.
- ◆ **UV Disinfection:** Replacing chlorine with more environmentally friendly technologies for a safer, more efficient way to treat the water making it safe enough to return to the environment.



INVESTMENT YOU CAN COUNT ON



We continuously monitor, maintain and upgrade our facilities so they operate efficiently and meet all regulatory standards. This requires investing in our treatment plants, tanks, pump stations, fire hydrants and metering equipment.



Statewide, we invest more than \$200 million per year in water and wastewater system improvements. Our ongoing commitment to investing in and updating our plants, pumps and pipelines helps provide safe, clean, and reliable service.



EMERGENCY INFORMATION YOU NEED

Missouri American Water uses a high-speed mass notification system to keep customers informed about water-emergencies and planned temporary service interruptions.

Make sure we can reach you by updating your contact information today through **MyWater** at [amwater.com/mywater](https://www.amwater.com/mywater) or by calling us at **866-430-0820**.



CONVENIENT CUSTOMER SERVICE

We know you're busy, so we've made it easier than ever to manage your account online through **MyWater**:

- Turn water service on and off
- Track water use
- Sign up for emergency alerts
- Manage your account
- View and pay your bill
- Set up paperless billing

Sign up today by visiting missouriamwater.com. You can also contact us at **866-430-0820** to speak with a U.S.-based customer service representative. Call anytime for a water emergency or 7 a.m. – 7 p.m. for non-emergency issues.

PAYMENT OPTIONS

Missouri American Water offers a number of payment options to fit into your busy lifestyle.



AUTOMATIC PAYMENTS: Pay your bill on time, every time. Each month, payments will be automatically deducted from your checking or savings account on the due date.



PAY ONLINE: Visit [amwater.com/billpay](https://www.amwater.com/billpay). Be sure to have your 16-digit account number handy.



PAY BY PHONE: Call **855-748-6066** and use your Visa or MasterCard.



PAY BY MAIL: Send your payment and payment stub in the envelope provided. No cash, staples or paper clips.



PAY IN PERSON: Visit our website to find a location near you. Locations DO NOT accept payments by mail.



PAYMENT ASSISTANCE

Sometimes customers face circumstances that stretch their financial resources. Missouri American Water is here to assist. Our customer service representatives will work with you on a plan to pay the balance of your bill over time. You may also be qualified to receive emergency assistance through our H2O Help to Others Program™, which is supported by voluntary donations from our customers and the company.

For more information about payment assistance options, contact our Customer Service Center at **866-430-0820** or visit us online at **missouriamwater.com > Customer Service & Billing > Payment Assistance Program.**

CONTACT US

Our customer service representatives are dedicated to handling every customer inquiry with attention and care.



866-430-0820

Hours: 7 a.m.–7 p.m.

For emergencies, we're available 24/7.



infomo@amwater.com



missouriamwater.com



/missouriaiw



/moamwater



/moamwater



727 Craig Road
St. Louis, MO 63141



506 S. Western St
Mexico, MO 65265



Service Address:
JUANITA SAMPLE
123 WATER WAY
SMITHTON, MO 65350-0001



Important Account Messages

- Want to get to know us better? Visit www.missouriamwater.com to learn more about the services we provide.

For more information, visit www.missouriamwater.com

Statement

Account No. **1017-200000000001**

Total Amount Due:	\$96.03
Payment Due By:	February 15, 2022

Billing Date: January 24, 2022
Service Period: Dec 29 to Jan 28 (31 Days)
Total Gallons: 4,000

Account Summary – See page 3 for Account Detail

Prior Billing:		\$0.00
Payments:	-	\$0.00
Balance Forward:	=	\$0.00
Service Related Charges:	+	\$94.64
Pass Through Charges:	+	\$0.44
Taxes:	+	\$0.95
Total Amount Due:	=	\$96.03

View your account information or pay your bill anytime at: www.amwater.com/MyAccount

Pay by Phone*: Pay anytime at 1-855-748-6066
**A convenience fee may apply*

Customer Service: 1-866-430-0820
M-F 7:00am to 7:00pm – Emergencies 24/7

MISSOURI AMERICAN WATER
PO BOX 6029
CAROL STREAM, IL 60197-6029

▼ Please return bottom portion with your payment. DO NOT send cash. Retain upper portion for your records. ▼



P.O. BOX 91623
RANTOUL, IL 61866-8623

Service to: 123 WATER WAY
SMITHTON, MO 65350-0001

JUANITA SAMPLE
123 WATER WAY
SMITHTON, MO 65350-0001

Account No. **1017-200000000001**

Total Amount Due:	\$96.03
Payment Due By:	February 15, 2022

If paying after 2/15/22, pay this amount: \$97.18

Amount Enclosed \$

MISSOURI AMERICAN WATER
PO BOX 6029
CAROL STREAM, IL 60197-6029

0001017220031739458000000000069501013

Messages from Missouri American Water

- Effective 02/01/22, the Water and Sewer Infrastructure Rate Adjustment (WSIRA) per 1,000 gallons is \$0.2559 for Rate A (residential & commercial), \$0.0825 for Rate B (sale for resale), and \$0.0894 for Rate J (large industrial). The WSIRA funds completed water infrastructure replacements and related improvements for our Missouri customers. WSIRA is implemented pursuant to Sections 393.1500 through 393.1509, RSMo. Additional information is available on our website at www.missouriamwater.com

CUSTOMER SERVICE
1-866-430-0820
HOURS: M-F, 7am-7pm • Emergencies: 24/7
TTY/TDD FOR THE HEARING IMPAIRED:
711 (and then reference Customer Service
number listed above)

SERVICES

- Go Paperless:** Save time. Save money. Sign up for **Paperless Billing** and **Auto Pay** on My Account at amwater.com/myaccount. Not registered? Log in and be sure to have your account number handy.
- Water Quality:** We take water quality seriously. When it comes to complying with federal drinking water standards, we consistently score better than the industry average. For a copy of the annual water quality report for your area, visit missouriamwater.com. Under Water Quality, select Water Quality Reports.
- H₂O Help To Others:** H₂O Help to Others is an emergency assistance program created by Missouri American Water and Missouri's Community Action Agencies. The program helps provide supplemental funding to Missouri American Water customers who would otherwise have trouble paying their bills. H₂O Help to Others is supported by contributions from Missouri American Water and voluntary contributions from customers.

EXPLANATION OF OTHER TERMS

- Payment by Check:** Paying by check authorizes American Water to send the information from your check electronically to your bank for payment. The transaction will appear on your bank statement. The physical check will not be presented to your financial institution or returned to you.
- Estimated Bill:** This occurs when we are unable to read the water meter. Your usage from the same billing period the prior year is used to calculate the estimated bill. The next actual meter reading corrects any over or under estimates.
- Disputes:** If you have questions or complaints about your bill, please call us at 1-866-430-0820 before the due date. If your bill is unusually high, it may indicate that there is a leak in your plumbing. For tips on how to detect leaks and use water wisely, visit us online. You'll find helpful tools under the Water Information menu. Every drop counts!
- Rates:** A detailed listing of charges that make up your bill is available upon request by contacting Customer Service or visiting us online at missouriamwater.com. Under Customer Service & Billing, select Your Water and Sewer Rates.
- Correspondence:** Please send written correspondence to PO Box 578, Alton, IL 62002-0578. Be sure to include your name, account number, service address, mailing address and phone number including area code. Please do not send correspondence with your payment, as it may delay processing your payment and correspondence.

H2O HELP TO OTHERS PROGRAM - lend a hand to customers in need

I'm adding a one time contribution of \$_____ with my payment.

I'd like to add a recurring contribution to each bill of \$_____. I understand this amount will be added to each bill.

Address Change(s) _____

Name _____

Address _____

City _____




State _____ Zip Code _____

() _____ Mobile Number

Phone Number _____

E-mail Address _____

Other ways to pay your bill

 Auto Pay	 Online	 In Person
Save time and money. Enroll in Auto Pay, and your bill will be paid on time, every time, directly from your bank account on the due date. No stamps required!	With My Account, you can pay your bill anytime, anywhere. Registration is fast and easy. Visit www.amwater.com/MyAccount or pay without registration at www.amwater.com/billpay (fee may apply).	We have agreements with several authorized payment locations in our service areas. Visit our website to find one near you.



Meter Reading and Usage Summary

Meter No.	Measure	Size	From Date	To Date	Previous Read	Current Read	Meter Units	Billing Units	Total Gallons
12345678	100 gal	5/8"	12/29/2021	01/28/2022	1,548 (A)	1,588 (A)	40	40.00	4,000

A = Actual E = Estimate

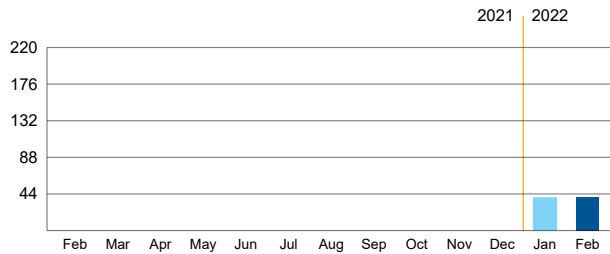
1 Billing Unit = 100 gallons

Total Gallons: 4,000

Billed Usage History (graph shown in 100 gallons)

Next Scheduled Read Date: on or about February 25, 2022
Account Type: Residential

4,000 gallons = usage for this period



Average daily use for this period is: (31 days)



Year to Date Billed Usage: 8,000 gallons

Account Detail

Account No. 1017-200000000001

Service To: 123 WATER WAY SMITHTON, MO 65350-0001

Prior Billing 0.00

Payments 0.00

Balance Forward 0.00

Service Related Charges - 12/29/21 to 01/28/22

Water Service 35.01
 Water Service Charge 9.00
 Water Usage Charge (40 x \$0.62469) 24.99
 WSIRA Surcharge (40 x \$0.025591) 1.02

Wastewater Service 59.63
 Wastewater Service Charge 58.13
 WSIRA Surcharge (\$58.13 x 2.5882%) 1.50

Total Service Related Charges 94.64

Pass Through Charges 0.44
 Water Primacy Fee 12/29/21 to 01/28/22 (1 x \$0.44) 0.44

Taxes 0.95
 City Sales Tax 0.95

Total Current Period Charges 96.03

Total Amount Due \$96.03

Understanding Your Bill

The information below defines some of the new terms you may find on your bill:

- Service Related Charges:** This section includes charges for services related to water, wastewater and fire protection. If applicable, credits and debits for correction to previously billed charges are itemized in this section.
- Fees and Adjustments:** This section provides details related to additional charges or adjustments for the service period referenced. Fees, when applicable, would include items such as service activation and late payment charges.
- Pass Through Charges:** Charges in this section, when applicable, are separated from other service related charges to provide visibility into what portion of your bill is being remitted to other entities. Payment received for these charges does not remain with American Water. While we may bill and collect for them, the payments received are passed along to other companies and agencies.
- Billing Units:** One billing unit equals 100 gallons of water used. If the meter serving your property measures your water use in cubic feet or a different unit of measure, we convert the usage to gallons to make it easier to understand.
- Average Daily Use:** The gallons shown in the water droplet above represent your average daily water use for the current billing period. Tracking the amount of water you use can help you manage your overall water use from month to month.
- Still have questions?** We are here to help. Our customer service representatives are available M-F, 7 a.m. to 7 p.m. More information on understanding your bill and charges can also be found on our website. See the link below.

For more information about your charges and rates, please visit: <https://amwater.com/moaw/rates>



WATER MAIN BREAKS WHAT YOU NEED TO KNOW



Our employees work around the clock in all types of weather to restore service to you as quickly as possible.

We also work to prevent breaks – this year we’re investing nearly \$150 million to replace aging pipe.



We can be reached at our Customer Service Center:

1-866-430-0820

Hours: Mon-Fri,
7am – 7pm

For emergencies, we’re available 24/7.

What causes a water main break?

WEATHER

- In winter the water flowing through pipes can drop to near freezing, causing old pipes to contract and break.
- Freezing and thawing can cause soil to shrink, swell, and shift, leaving pipes unsupported.

DEMAND

- Higher demand means higher pressure, which can break weak spots in pipes.

How long do repairs take?

Most breaks are repaired within 6-8 hours.

However, the time it can take to repair varies on a number of factors including:

- The time it takes to identify and locate other utility lines (gas, electric and sewer)
- How quickly we can pinpoint the location of the break
- The severity of the break
- If other utilities are in close proximity to the break

Will water be shut off?

Water service may be interrupted. We make every attempt to repair breaks without shutting off water, but this is not always possible.

Will the water be safe to drink?

Water quality is often not affected by main breaks, but in some cases we issue precautionary boil advisories due to a loss of pressure in the water system. If this happens water should be brought to a rolling boil for 3 minutes before drinking or cooking.

You may notice air in the pipes after a repair or discoloration, which will go away after letting your cold water run briefly.



WAYS TO REPORT

- » missouriamwater.com
- » MyWater account
- » 1-866-430-0820

To receive Alerts during a water emergency, sign up for MyWater at amwater.com/mywater

Bill Inserts and Important Notices

We encourage you to click the link(s) below to view any bill inserts and other important notices you would have received with your printed bill.

<https://amwater.com/files/Smithton.pdf>

STATE OF MISSOURI

OFFICE OF THE PUBLIC SERVICE COMMISSION

I have compared the preceding copy with the original on file in this office and I do hereby certify the same to be a true copy therefrom and the whole thereof.

WITNESS my hand and seal of the Public Service Commission, at Jefferson City, Missouri, this 15th day of August, 2022.





Morris L. Woodruff
Secretary

MISSOURI PUBLIC SERVICE COMMISSION

August 15, 2022

File/Case No. WA-2023-0071 and SA-2023-0072

**Missouri Public Service
Commission**

Staff Counsel Department
200 Madison Street, Suite 800
P.O. Box 360
Jefferson City, MO 65102
staffcounselerservice@psc.mo.gov

Office of the Public Counsel

Marc Poston
200 Madison Street, Suite 650
P.O. Box 2230
Jefferson City, MO 65102
opcservice@opc.mo.gov

County of Pettis, Missouri

County Commission Clerk
415 S. Ohio
Pettis County Courthouse
Sedalia, MO 65301
nick@pettisco.com

**Missouri Department of Natural
Resources**

Legal Department
1101 Riverside Drive, 2nd Floor
P.O. Box 176
Jefferson City, MO 65102-0176

**Missouri-American Water
Company**

Dean L Cooper
312 East Capitol
P.O. Box 456
Jefferson City, MO 65102
dcooper@brydonlaw.com

**Missouri-American Water
Company**

Timothy W Luft
727 Craig Road
St. Louis, MO 63141
Timothy.Luft@amwater.com

**Missouri-American Water
Company**

Rachel Niemeier
737 Craig Rd.
St. Louis, MO 63141
rachel.niemeier@amwater.com

Enclosed find a certified copy of an Order or Notice issued in the above-referenced matter(s).

Sincerely,



**Morris L. Woodruff
Secretary**

Recipients listed above with a valid e-mail address will receive electronic service. Recipients without a valid e-mail address will receive paper service.