Boone County Regional Sewer District Area-Wide Management Plan

November 10, 2025
McClure Project No. 2022001400

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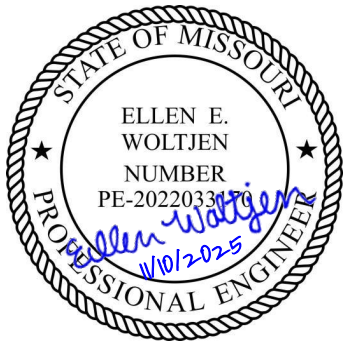

EXP. 12/31/2026

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Missouri.

Ellen Woltjen 11/10/2025

Ellen E. Woltjen - License No. 2022033170 (Date)

My license renewal date is December 31, 2026.

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LIST OF EXHIBITS

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

ARPA	American Rescue Plan Act
ARRA	American Recovery and Reinvestment Act
AWMP	Area-Wide Management Plan
BCRSD or District	Boone County Regional Sewer District
Board	BCRSD Board of Trustees
CIP	BCRSD Capital Improvements Plan
CSR	Missouri Code of State Regulations
CWC	Missouri Clean Water Commission
Department or MDNR	Missouri Department of Natural Resources
Gpd	Gallons per day
MGD	Million gallons per day
MoCWIS	Missouri Clean Water Information System
NID	Neighborhood Improvement District
NPDES	National Pollutant Discharge Elimination System
RSMo	Revised Statutes of the State of Missouri
SRF	State Revolving Fund
SSID	Sanitary Sewer Improvement District
SSUR	BCRSD Sanitary Sewer Use Regulations
WWTF	Wastewater Treatment Facility
WWTP	Wastewater Treatment Plant

1.0 INTRODUCTION

1.1 Boone County Regional Sewer District Overview

The Boone County Regional Sewer District (BCRSD or "District") was established in 1973 as a common sewer district pursuant to Chapter 204 of the Revised Statutes of the State of Missouri (RSMo). Documents recording the formation of BCRSD are included in Appendix A. The Board of Trustees of the Boone County Regional Sewer District (hereinafter "Board") is responsible for the control and operation of BCRSD. The Board consists of five trustees appointed by the Boone County Commission. One member of the Board must also be a member of the Commission per BCRSD's By-Laws. A copy of the By-Laws are included in Appendix B.

The mission of BCRSD is "to provide current and future customers with cost effective, reliable sanitary sewer service by collecting and treating wastewater, and to protect public health and the environment in accordance with local, state and federal permit requirements." BCRSD has a long history of providing essential sanitary sewer collection and treatment services to customers throughout Boone County.

1.2 Level 2 Continuing Authority Background

Title 10 of the Missouri Code of State Regulations (CSR), Division 20, Chapter 6, describes how the state government issues permits that contain guidelines and requirements related to discharging treated wastewater. Within this rule, permittees are assigned levels of authority. The levels of authority are divided into five preferential categories, from Level 1 (the highest) to Level 5 (the lowest). By statute, the highest level of authority is reserved for sewer districts formed under Section 208(c)(1) of the Federal Clean Water Act. In Missouri, there is only one such district, that being the St. Louis Metropolitan Sewer District.

On January 6, 2010, BCRSD was approved as a Level 2 Continuing Authority by the Missouri Clean Water Commission (CWC) in accordance with 10 CSR 20-6.010, provided that it holds a public meeting annually and submits a Tier 2 Plan by July 1, 2013. BCRSD's Level 2 Continuing Authority status was granted jointly with the City of Columbia. BCRSD's Tier 2 Plan titled *Master Plan for District Facilities and Tier 2 Plan for Private Facilities* (hereinafter "2013 Master Plan") was completed by HDR Engineering, Inc. in May 2013 and was last updated on August 8, 2013. All other wastewater permittees in Boone County are classified as a lower level (3 through 5) continuing authority.

1.3 Purpose and Scope

The purpose of this Area-Wide Management Plan (AWMP) report is to provide a framework for BCRSD's utility operations throughout Boone County, updating and building upon the *Tier 2 Plan for Private Facilities* originally developed by HDR Engineering, Inc. in 2013. This AWMP is intended to supplement and, to the extent inconsistent therewith, supersedes the 2013 Master Plan. The updated AWMP reflects significant progress and changes since the 2013 report, including the closure of numerous private wastewater facilities throughout the county. Many of these closures were accomplished by connecting private facilities to BCRSD or the City of Columbia, thereby advancing regionalization efforts. Additionally, since the 2013 Master Plan, BCRSD has revised its By-Laws and Sanitary Sewer Use Regulations to further support its mission and enhance its authority to provide

wastewater collection and treatment services within its service area. Upon approval, the AWMP will prevent utilization of a lower-level continuing authority where such would conflict with the AWMP, as provided in 10 CSR 20-6.010(2)(C).

The scope of this AWMP report was developed based on the requirements found in 10 CSR 20-6.010(2)(F)2., which describes the information that shall be included in the initial plan for submission to obtain higher authority. The scope of the AWMP includes:

1. Defined service area of BCRSD.
2. Capital Improvements Plan (CIP).
3. BCRSD's relevant Sanitary Sewer Use Regulations and ordinances and the process for providing waivers when connection is not available.
4. Overview of privately owned wastewater treatment facilities in Boone County and approach to address permit compliance with facilities in the service area.
5. Overview of publicly owned wastewater treatment facilities in Boone County and approach to address permit compliance with facilities in the service area.
6. Financial capability information.
7. Implementation of the AWMP.

The *Master Plan for District Facilities* included in the 2013 Master Plan has been updated as a supplemental document. The information in the *Master Plan for District Facilities* has been superseded by the *Capital Improvements Plan* prepared by McClure Engineering Company in 2025, which is included in Appendix C.

BCRSD staff conducted a public hearing on September 8, 2025 to receive public input on the AWMP and CIP draft reports. In addition, an informational meeting for BCRSD ratepayers was held on October 15, 2025 to obtain further public comments. A summary of stakeholder engagement conducted by BCRSD to obtain feedback on the AMWP and CIP is provided in Appendix D. Prior to submission of this AWMP to the Department, BCRSD will conduct an additional public meeting in accordance with 10 CSR 20-6.010(2)(F)4.

2.0 SERVICE AREA

2.1 Defined Service Area

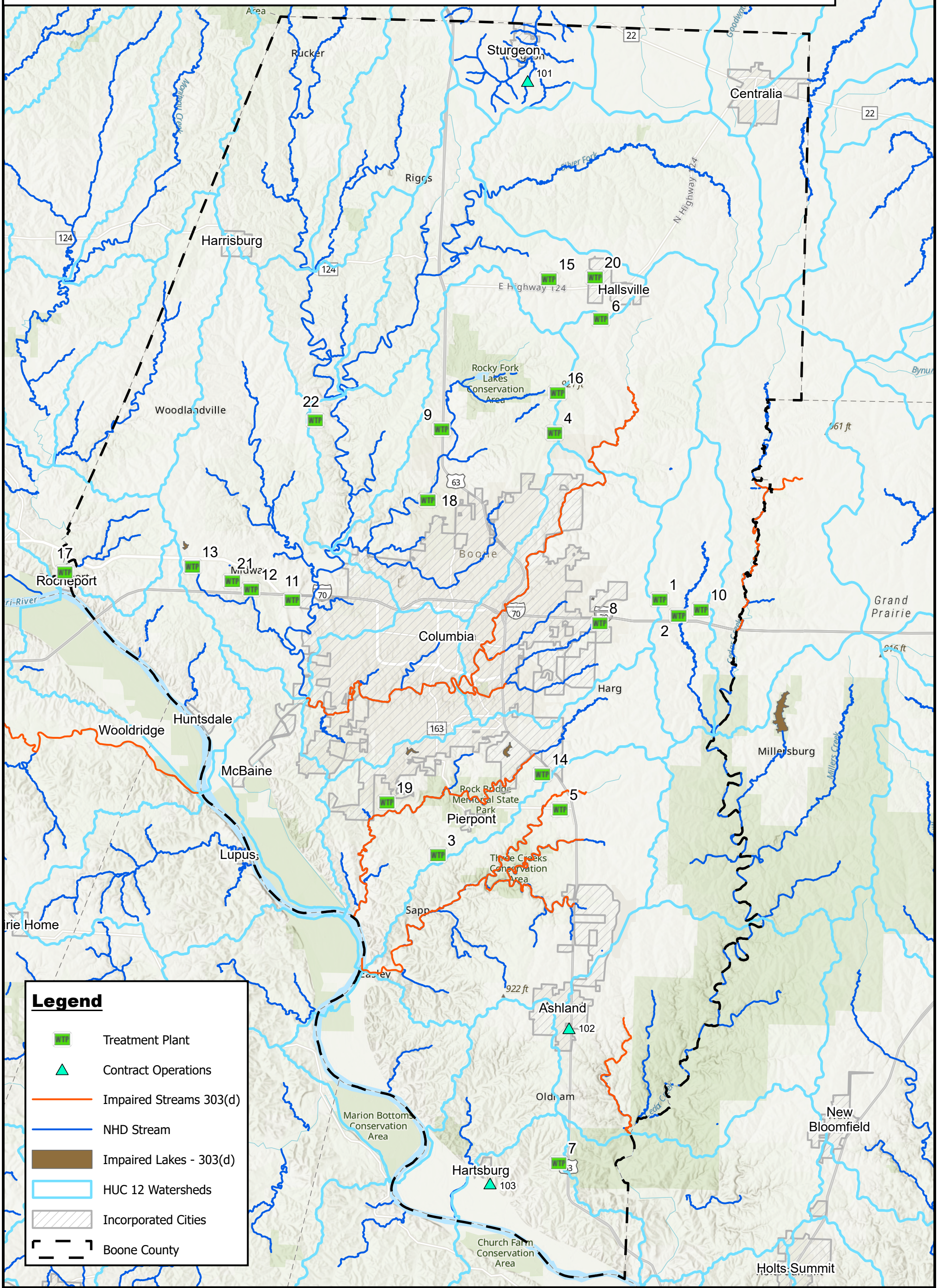
The service area of BCRSD includes all of Boone County, Missouri. Documentation of the formation of BCRSD and its service area boundaries of all of Boone County are included in Appendix A. Exhibit 3.1 on the following page highlights the location of active wastewater treatment facilities owned and operated by BCRSD throughout Boone County. In addition to these facilities, BCRSD also owns and operates an extensive network of collection system infrastructure throughout the county. These collection systems discharge to BCRSD treatment facilities or to the City of Columbia.

BCRSD WWTFs

1- American Outdoor Brands
2- Bobcat of Columbia
3- Brookfield Estates
4- Brown Station RSF
5- Butch's Investments
6- Cedar Gate
7- Eagle Knoll
8- Highfield Acres
9- Kinkade Crossing
10- Meadow Village
11- Midway Arms
12- Midway Crossing
13- Midway USA
14- Prairie Meadows
15- Quarter Mile Hills
16- Richardson Acres
17- Rocheport
18- Rocky Fork
19- South Route K
20- Sunny Slope
21- Trails West
22- Twin Lakes

CONTRACT OPERATIONS

101- Sturgeon
102- Ashland
103- Hartsburg



Legend

- Treatment Plant
- Contract Operations
- Impaired Streams 303(d)
- NHD Stream
- Impaired Lakes - 303(d)
- HUC 12 Watersheds
- Incorporated Cities
- Boone County

Exhibit 2.1- BCRSD WWTFs & Contract Operation Facilities

BCRSD CIP | Boone County, MO | 3/12/2025

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Document Path: C:\2022001400\07-GIS\MXD\BCRSD_MasterPlan\BCRSD_MasterPlan.aprx

3.0 SANITARY SEWER USE REGULATIONS AND WAIVER PROCESS

3.1 Sanitary Sewer Use Regulations

BCRSD's Sanitary Sewer Use Regulations (SSUR) govern the use of public sanitary sewers, the installation and connection of building sanitary sewers, and the discharge of waters and wastes into the public sanitary sewer systems: and provides penalties for violations thereof throughout the service area of the Boone County Regional Sewer District. A copy of the most recent version of the SSUR is provided in Appendix E.

The SSUR specifies the circumstances in which a private sanitary sewer system is allowed to operate within BCRSD's service area and establishes the requirements for private systems to obtain written consent from BCRSD prior to the issuance or renewal of a National Pollutant Discharge Elimination System (NPDES) operating permit from the Department. The regulations also govern the sale of municipal, governmental, and private sanitary sewer systems to a private entity.

3.2 Waiver Process

All developers and property owners seeking to develop a new property or connect existing homes or businesses within BCRSD's service area are required to consult with BCRSD to determine the appropriate means of providing sanitary sewer services. Each request will be reviewed individually by BCRSD. In cases where a direct sewer connection to a BCRSD facility is not feasible, applicants must follow the process outlined below to obtain a conditional waiver:

1. A formal request for a conditional waiver must be submitted in writing to BCRSD. The request must include, at a minimum, the following information:
    a. The developer and/or property owner contact information, and the proposed continuing authority for the sanitary sewer system.
    b. The location of the existing or proposed development, and the distance of the property from the nearest sanitary sewer facility operated under the jurisdiction of BCRSD or another governmental entity.
    c. The number and type of proposed connections to the facility.
    d. The anticipated design flows and loadings of the wastewater.
    e. The proposed means of wastewater collection, treatment, and disposal.
2. A preliminary meeting to discuss the request shall be held with BCRSD staff and all other relevant parties to ensure clarity on the details of the development and requirements for wastewater treatment.
3. Based on the information provided in the written request and during the pre-meeting, the BCRSD Engineer shall conduct a technical review of all relevant conditions. If additional information is required to complete the evaluation, the BCRSD Engineer will issue a written request outlining the specific details required from the applicant.
4. Once all requested information has been received and reviewed by the BCRSD Engineer, BCRSD staff will present the findings and recommendations for the proposed development to the Board for consideration.
5. The Board will determine if a conditional waiver can be granted based on the information presented. All decisions of the Board shall be final.

4.0 PRIVATELY OWNED TREATMENT FACILITIES

4.1 Approach to Privately Owned Facilities

Any private sanitary sewer system operating within BCRSD's service area is a lower tier Continuing Authority and is required by the SSUR to receive written consent from BCRSD to operate when BCRSD is willing and able to provide wastewater collection and treatment services. As such, BCRSD acts as a general review authority within its service area throughout Boone County. To maintain this authority, the Department engages in ongoing dialogue with BCRSD regarding its general regulatory activities within BCRSD's service area. The Department should provide BCRSD with the opportunity to review and provide comments on all regulatory actions within its service area, such as operating permit renewals or modifications, antidegradation reviews, facility plan reviews, construction permits, and enforcement actions. This includes the issuance and renewal of Master General Permits such as the MO-G823 for the Land Application of Domestic Wastewater, MO-GDS for Treatment Works ≤ 50,000 Gallons in Rivers/Streams, MO-GD for Treatment Works ≤ 50,000 Gallons in Lakes/Reservoirs, and MO-GSE for Sewer Extension Construction. Timely and regular access to this information is essential for BCRSD to assist facilities in its service area with permit compliance.

As part of BCRSD's joint Tier 2 Authority with the City of Columbia, BCRSD works in collaboration with the City to provide sanitary sewer service to residential subdivisions and businesses on the outskirts of city limits. This collaboration is evidenced by the numerous cooperative sewer connection agreements between BCRSD and the City of Columbia.

For private on-site sewage disposal systems that do not fall under the jurisdiction of the Department, BCRSD works in collaboration with Boone County Resource Management and the Columbia-Boone County Department of Public Health and Human Services. Boone County Resource Management is the on-site sewage disposal permit authority within BCRSD's service area.

These collaborative efforts ensure protection of public health and the environment within BCRSD's service area. BCRSD intends to continue encouraging privately owned facilities in its service area to either connect to a BCRSD facility or upgrade to BCRSD standards.

4.2 Summary of Privately Owned Facilities

The 2013 Master Plan submitted with its Tier 2 Authority application included 57 domestic wastewater facilities operating in Boone County. Since the 2013 Master Plan, 31 of the facilities have been eliminated either through connection to the City of Columbia or BCRSD or through closure. Four of the facilities have been re-named.

Sections 4.2.1 through 4.2.26 provide descriptions and recommendations for all private domestic wastewater treatment facilities regulated by the Department in Boone County. Facilities that are not regulated by the Department are not included in this summary unless they were previously included in the 2013 Master Plan and appear to be non-conforming lagoons. Information on each facility was obtained from its operating permit, the Missouri Clean Water Information System (MoCWIS), and Google Earth. 26 private facilities are included in this AWMP, while onsite treatment facilities serving a single residence or business within the jurisdiction of Boone County Resource Management are not included.

4.2.1 Adventures in Learning Childcare Center Wastewater Treatment Plant

Facility Information: Adventures in Learning Childcare Center WWTP is regulated under permit number MO-0117366. The current permit is effective from March 1, 2020 to December 31, 2024. The facility address is 6157 East Forsee Rd. Ashland, MO 65010. The facility serves a daycare center in Ashland.

Treatment Description: The facility treatment process includes a single-cell lagoon with sludge retained in the lagoon. The facility has a permitted design flow of 1,500 gpd and a design population equivalent of 100.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-1004. The receiving stream is a tributary to Foster Branch, and the first classified receiving stream is Foster Branch.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: Connect to the City of Ashland when service becomes available and close the treatment facility.

4.2.2 Ashland Christian Church Wastewater Treatment Facility

Facility Information: Ashland Christian Church WWTF is not regulated by MDNR based on available resources; however, it appears to be a non-conforming lagoon. The facility was included in the 2013 Master Plan and is believed to be an active treatment facility. The facility address is 14775 State Highway DD, Ashland, MO 65010.

Treatment Description: The facility treatment process includes a two-cell lagoon. Per the 2013 Master Plan, the facility has design capacity of 482 gallons per day.

Receiving Waterbody: The WWTF is located in the HUC 12 watershed 10300102-0902. The receiving stream is a tributary to a 100K Extent-Remaining Stream.

Compliance and Enforcement Status: Not applicable.

Recommendation: Connect to the City of Ashland when service becomes available and close the treatment facility.

4.2.3 Carlos Acres Wastewater Treatment Facility

Facility Information: Carlos Acres WWTF is regulated under permit number MO-0118290. The current permit is effective from June 1, 2021 through June 30, 2025. The facility address is 6699 West Hatton Chapel Rd. Columbia, MO 65202. The facility serves 3 homes.

Treatment Description: The facility treatment process includes a single-cell lagoon with sludge retained in lagoon. The facility has a permitted design flow of 740 gallons per day, a design population equivalent of 7, and an actual permit flow of 540 gallons per day.

Receiving Waterbody: The WWTF is located in the HUC 12 watershed 10300102-0708. The receiving stream is a tributary to Callahan Creek, and the first classified receiving stream is Callahan Creek.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: Convert to a no-discharge facility or connect to an area wide treatment facility when service becomes available.

4.2.4 Cooper's Landing Wastewater Treatment Facility

Facility Information: Cooper's Landing WWTF is regulated under general permit number MO-G823227. The current permit is effective from December 31, 2023 through August 23, 2027. The facility address is 11505 Smith Hatchery Rd. Columbia, MO 65203. The facility serves Cooper's Landing Riverside Resort & Marina.

Treatment Description: The facility treatment process includes a 3,000 gallon 2 compartment septic tank with effluent filter, 3,000 gallon time dosed holding tank with passive filter, and subsurface drip system. The facility has a permitted design flow of 1,614 gallons per day and serves a design population equivalent of 16.

Receiving Waterbody: The WWTF is located in the HUC 12 watershed 10300102-0903. The facility does not discharge to a surface waterbody.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: Continue operations as a no-discharge facility. If the BCRSD South Route K facility is relocated closer to Cooper's Landing, a future connection to the South Route K WWTP may be possible. Retain or build sufficient capacity in the South Route K WWTP to receive flow from Cooper's Landing WWTF.

4.2.5 Cornell's Friendly Acres Wastewater Treatment Facility

Facility Information: Cornell's Friendly Acres WWTF is regulated under permit number MO-0088200. The current permit is effective from April 1, 2023 through March 31, 2028. The facility address is 0.51 miles south of Route K and South Hill Creek Road intersection Columbia, MO 65203. The facility serves a small residential subdivision. The facility is located approximately 2,700 feet from BCRSD's sewer to the South Route K WWTP.

Treatment Description: The facility treatment process includes a three-cell lagoon with sludge retained in the lagoon. The facility has a permitted design flow of 22,000 gallons per day, a design population equivalent of 220, and an actual permit flow of 8,400 gpd.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0903. The receiving stream is a tributary to Little Boone Femme Creek, and the first classified receiving stream is Little Bonne Femme Creek.

Compliance and Enforcement Status: The current permit does include a Schedule of Compliance for new effluent ammonia limitations. The compliance deadline is April 1, 2027. The facility is not currently under enforcement action.

Recommendation: Connect to the BCRSD South Route K WWTP and close the treatment facility. Capacity in the existing South Route K WWTP has been reserved for this facility.

4.2.6 Crowley Subdivision Wastewater Treatment Facility

Facility Information: Crowley Subdivision WWTF is not regulated by MDNR based on information from available resources; however, it appears to be a non-conforming lagoon with multiple residential connections. The facility was included in the 2013 Master Plan and is believed to be an active treatment facility. The facility address is 4941 Creasy Spring Rd. Columbia, MO 65202. The facility serves a small residential subdivision. The facility is located approximately 400 feet from BCRSD's sewer to Rocky Fork WWTP.

Treatment Description: The facility treatment process includes a two-cell lagoon. Based on the 2013 Master Plan, the facility has a design capacity of 4,500 gpd.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0706. The receiving stream is a tributary to Rocky Fork.

Compliance and Enforcement Status: Not applicable

Recommendation: Connect to the BCRSD Rocky Fork WWTP and close the treatment facility. Retain or build sufficient capacity in the Rocky Fork WWTP to receive flow from Crowley Subdivision WWTF.

4.2.7 Edelweiss Wastewater Treatment Plant

Facility Information: Edelweiss WWTP is regulated under general permit number MOGDS0092. The current permit is effective from July 1, 2024 through June 30, 2029. The facility address is 10761 Interstate 70 Dr. NE, Columbia, MO 65202. The facility was previously named Chalet Park. It serves a small residential community. The facility is located approximately 1,500 feet from BCRSD's sewer to the Meadow Village WWTP.

Treatment Description: The facility treatment process includes a recirculating sand filter with tablet chlorination and de-chlorination. The facility has a permitted design flow of 2,800 gallons per day and serves a design population equivalent of 35.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0602. The receiving stream is a tributary to Little Cedar Creek, and the first classified receiving stream is Little Cedar Creek.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: Connect to the BCRSD Meadow Village WWTP and close the treatment facility, as there is sufficient existing capacity in Meadow Village WWTP to receive flow from Edelweiss WWTP.

4.2.8 Gilbane Rebuilders Wastewater Treatment Facility

Facility Information: Gilbane Rebuilders was previously regulated under permit number MO-0128287. The most recent permit was effective from April 30, 2004 through April 29, 2005. The facility address is 10371 I-70 Drive Columbia, MO 65202. The facility serves Gilbane Auto, an automotive sales and service center. The facility appears to be a non-conforming lagoon for a commercial purpose, and it was included in the 2013 Master Plan. The facility is located approximately 1,700 feet from BCRSD's sewer to the Meadow Village WWTP.

Treatment Description: The facility treatment process includes a two-cell lagoon with sludge retained in the lagoon. The facility has a permitted design flow of 150 gallons per day and serves a design population equivalent of 3.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0602. The receiving stream is an unnamed tributary to Little Cedar Creek, and the first classified receiving stream is Cedar Creek.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is currently under enforcement action. The enforcement case has been referred to the Missouri Attorney General's Office.

Recommendation: Connect to the BCRSD Meadow Village WWTP and close the treatment facility, as there is sufficient existing capacity in Meadow Village WWTP to receive flow from Gilbane Rebuilders.

4.2.9 Girl Scouts of the Missouri Heartland – Silver Meadows Camp Wastewater Treatment Facility

Facility Information: Silver Meadows Camp WWTF is regulated under permit number MO-0124338. The current permit is effective from April 1, 2020 through December 31, 2024. The facility address is 1501 Pinnacles Road Sturgeon, MO 65284. The facility serves Girl Scouts of the Missouri Heartland Silver Meadows camp.

Treatment Description: The facility treatment process includes a three-cell lagoon, chlorination, and sludge disposal by contract hauler. The facility has a permitted design flow of 2,000 gallons per day, a design population equivalent of 24, and an actual permit flow of 1,667 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0704. The receiving stream is a tributary to Silver Fork, and the first classified receiving stream is Silver Fork.

Compliance and Enforcement Status: The current permit does include a Schedule of Compliance for new effluent ammonia limitations. The compliance deadline was September 1, 2020. The facility is not currently under enforcement action.

Recommendation: Convert to a no-discharge facility or connect to an area wide treatment facility when service becomes available.

4.2.10 Hallsville United Methodist Church Wastewater Treatment Facility

Facility Information: Hallsville United methodist Church WWTF is regulated under permit number MO-0127779. The current permit is effective from June 1, 2020 through March 31, 2025. The facility address is 11700 North Route B Hallsville, MO 65255. The facility serves Hallsville United Methodist Church. The facility is located approximately 7,000 feet from BCRSD's sewer to the Richardson Acres WWTP.

Treatment Description: The facility treatment process includes a two-cell lagoon with sludge retained in lagoon. The facility has a permitted design flow of 587 gallons per day and serves a design population equivalent of 8.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0706. The receiving stream is a tributary to Rocky Fork Creek, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Compliance and Enforcement Status: The current permit does include a Schedule of Compliance for new effluent ammonia and *E. coli* limitations. The compliance deadline was June 1, 2021. The facility is not currently under enforcement action.

Recommendation: Connect to the BCRSD Richardson Acres WWTF or the proposed force main to the BCRSD Rocky Fork WWTP included in the 2025 CIP and close the treatment facility. Retain or build sufficient capacity at the BCRSD Rocky Fork WWTP to accommodate flow from Hallsville United Methodist Church WWTF. The facility could also connect to the City of Columbia via BCRSD's collection system.

4.2.11 Hillcrest Residential Care Wastewater Treatment Plant

Facility Information: Hillcrest Residential Care WWTP is regulated under permit number MO-0118303. The current permit is effective from May 1, 2022 through April 30, 2027. The facility address is 9415 North Brown Station Road Columbia, MO 65202. The facility serves the Hillcrest Residential Care senior living facility. The facility is located approximately 3,600 feet from BCRSD's sewer to the Brown Station WWTP.

Treatment Description: The facility treatment process includes extended aeration, chlorination, dechlorination, aerated sludge holding tank, and septage disposal by contract hauler. The facility has a permitted design flow of 3,075 gallons per day, a design population equivalent of 41, and an actual permit flow of 2,425 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0706. The receiving stream is a tributary to Clays Fork, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: Connect to the BCRSD Brown Station WWTP or the proposed force main to the BCRSD Rocky Fork WWTP included in the 2025 CIP and close the treatment facility. Retain or build sufficient capacity at the Rocky Fork WWTP to accommodate flow from Hillcrest Residential Care WWTP. The facility could also connect to the City of Columbia via BCRSD's collection system.

4.2.12 Junction Outpost LLC Wastewater Treatment Facility

Facility Information: Junction Outpost LLC WWTF is regulated under permit number MO-0129496. The most recent permit was effective from February 1, 2018, with a modification on July 1, 2019, through June 30, 2022. The facility address is 760 Highway 22 Sturgeon, MO 65284. The facility serves Junction Outpost LLC. It was previously named Crossroads.

Treatment Description: The facility treatment process includes two septic tanks, a two-cell lagoon, sludge retained in the lagoon and septic tanks, and sludge disposal by contract hauler. The facility has a permitted design flow of 1,379 gallons per day, a design population equivalent of 26, and an actual permit flow of 662 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 07110006-0303. The receiving stream is a tributary to Sailing Creek, and the first classified receiving stream is a 100K Extent Remaining Stream.

Compliance and Enforcement Status: The current permit does include a Schedule of Compliance for new effluent ammonia and *E. coli* limitations. The compliance deadline was February 1, 2022. The facility is not currently under enforcement action.

Recommendation: Convert to a no-discharge facility or connect to the City of Sturgeon when service becomes available and close the treatment facility.

4.2.13 Lake Chateau Subdivision Wastewater Treatment Facility

Facility Information: Lake Chateau Subdivision WWTF is regulated under permit number MO-0108332. The most recent permit was effective from January 1, 2019 through March 31, 2020. The facility is located 0.16 miles east of the Cabernet Ct. and Montrose Ave. intersection in Columbia, MO 65201. The facility serves a small residential subdivision.

Treatment Description: The facility treatment process includes a two-cell lagoon, chlorination, de-chlorination, and sludge retained in the lagoon. The facility has a permitted design flow of 6,200 gallons per day, a design population equivalent of 20, and an actual permit flow of 6,727 gallons per day. The facility was issued a construction permit by MDNR in 2021 to construct a NitrOx lagoon polishing system. Construction of the improvements was not completed.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-1001. The receiving stream is a tributary to Little Cedar Creek, and the first classified receiving stream is a 100K Extent Remaining Stream.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: Convert to a no-discharge facility or connect to an area wide treatment facility when service becomes available.

4.2.14 Les Bourgeois Winery Wastewater Treatment Plant

Facility Information: Les Bourgeois Winery WWTP is regulated under permit number MO-0130923. The current permit is effective from March 1, 2022 through June 30, 2025. The facility address is 12847 West Highway BB Rocheport, MO 65279. The facility serves the Les Bourgeois Winery. The facility is located approximately 9,300 feet from BCRSD's sewer to the Rocheport WWTP.

Treatment Description: The facility treatment process includes a three-cell aerated lagoon with seasonal disinfection by chlorination, sludge is retained in the lagoon and periodically removed by a contract hauler or land applied. The facility has a permitted design flow of 3,500 gallons per day, a design population equivalent of 35, and an actual permit flow of 2,460 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0305. The receiving stream is a tributary to a 100K Extent Remaining Stream, and the first classified receiving stream is a 100K Extent Remaining Stream.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is currently under enforcement action. The enforcement case has not been referred to the Missouri Attorney General's Office.

Recommendation: Connect to the BCRSD Rocheport WWTP and close the treatment facility or construct a new WWTP to BCRSD standards for BCRSD to own and operate.

4.2.15 Liberty Baptist Church Wastewater Treatment Facility

Facility Information: Liberty Baptist Church WWTF is regulated under permit number MO-0129003. The current permit is effective from February 1, 2023 through March 31, 2025. The facility address is 7461 N. Brown Station Road Columbia, MO 65202. The facility serves Liberty Baptist Church.

Treatment Description: The facility treatment process includes a two-cell lagoon with sludge retained in the lagoon. The facility has a permitted design flow of 179 gallons per day and serves a design population equivalent of 2.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0706. The receiving stream is a tributary to Bear Creek, and the first classified receiving stream is a 100K Extent Remaining Stream.

Compliance and Enforcement Status: The current permit does include a Schedule of Compliance for new effluent ammonia and *E. coli* limitations. The facility is not currently under enforcement action.

Recommendation: Connect to the proposed force main to the BCRSD Rocky Fork WWTP included in the 2025 CIP and close the treatment facility. Retain or build sufficient capacity in the BCRSD Rocky Fork WWTP to receive flow from Liberty Baptist Church WWTF. The facility could also connect to the City of Columbia via BCRSD's collection system.

4.2.16 Little City Mobile Home Park Wastewater Treatment Facility

Facility Information: Little City Mobile Home Park WWTF is regulated under permit number MO-0057363. The current permit is effective from July 1, 2022 through June 30, 2027. The facility address is 9301 West Highway 22 Centralia, MO 65240. The facility serves the Little City Mobile Home Park.

Treatment Description: The facility treatment process includes a single-cell lagoon with sludge retained in the lagoon. The facility has a permitted design flow of 6,300 gallons per day, a design population equivalent of 85, and an actual permit flow of 1,270 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 07110006-0101. The receiving stream is a tributary to Long Branch, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is currently under enforcement action. The enforcement case has been referred to the Missouri Attorney General's Office.

Recommendation: Convert to a no-discharge facility or connect to the City of Centralia and close the treatment facility.

4.2.17 Mathis Mobile Home Park Wastewater Treatment Facility

Facility Information: Mathis Mobile Home Park WWTF is regulated under permit number MO-0099198. The current permit is effective from April 1, 2023 through March 31, 2028. The facility is located near the Brown School Road and Kirsten Lane intersection in Columbia, MO 65202. The facility serves Mathis Mobile Home Park. The facility is located approximately 1,700 feet from BCRSD's sewer to the Rocky Fork WWTP.

Treatment Description: The facility treatment process includes a single-cell lagoon with sludge retained in the lagoon. The facility has a permitted design flow of 2,000 gallons per day, a design population equivalent of 20, and an actual permit flow of 400 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0706. The receiving stream is a tributary to Cow Branch, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Compliance and Enforcement Status: The current permit does include a Schedule of Compliance for new effluent *E. coli* limitations. The compliance deadline is April 1, 2025. The facility is currently under enforcement action. The enforcement case has not been referred to the Missouri Attorney General's Office.

Recommendation: Connect to the BCRSD Rocky Fork WWTP or the City of Columbia and close the treatment facility. Retain or build sufficient capacity in the BCRSD Rocky Fork WWTP to receive flow from Mathis Mobile Home Park WWTF.

4.2.18 Midway Auto/Truck Plaza Wastewater Treatment Facility

Facility Information: Midway Auto/Truck Plaza WWTF is regulated under permit number MO-0100862. The current permit is effective from March 1, 2023 through June 30, 2025. The facility address is 6401 W. Old Highway 40 Columbia, MO 65202. The facility serves the Midway Auto/Truck Plaza gas station. The facility is located approximately 3,800 feet from BCRSD's sewer to the Midway Crossing WWTP.

Treatment Description: The facility treatment process includes a two-cell lagoon with an aerated primary cell and sludge retained in the lagoon. The facility has a permitted design flow of 24,700 gallons per day, a design population equivalent of 932, and an actual permit flow of 27,500 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0708. The receiving stream is a tributary to Henderson Branch, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is currently under enforcement action. The enforcement case has not been referred to the Missouri Attorney General's Office.

Recommendation: Connect to the BCRSD Midway Crossing WWTP or to the City of Columbia and close the treatment facility.

4.2.19 Oak Ridge Trailer Court Wastewater Treatment Facility

Facility Information: Oak Ridge Trailer Court WWTF is regulated under general permit number MOG823109. The current permit is effective from July 18, 2018 through August 23, 2022. The facility address is 9803 N Route B Hallsville, MO 65255. The facility serves the Oak Ridge Trailer Court mobile home park. The facility is located approximately 1,400 feet from BCRSD's sewer to the Richardson Acres WWTF.

Treatment Description: The facility treatment process is a no-discharge system, which includes a single-cell lagoon with irrigation. Based on the 2013 Master Plan, the facility has a design capacity of 4,050 gallons per day.

Receiving Waterbody: The WWTF is located in the HUC 12 watershed 10300102-0706. The facility does not discharge to a surface waterbody.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: Connect to the BCRSD Richardson Acres WWTF or to the proposed force main to the BCRSD Rocky Fork WWTP included in the 2025 CIP and close the treatment facility. Retain or build sufficient capacity at the BCRSD Rocky Fork WWTP to receive flow from Oak Ridge Trailer Court WWTF. The facility could also connect to the City of Columbia via BCRSD's collection system.

4.2.20 Page Property Wastewater Treatment Facility

Facility Information: Page Property WWTF is regulated under permit number MO-0124494. The current permit is effective from April 1, 2023 through March 31, 2028. The facility is located 0.15 miles northeast of the MO-763 and Prathersville Road intersection in Columbia, MO 65202. The facility serves the Page Property business. The facility was previously named T&J Investments, LLC.

Treatment Description: The facility treatment process includes a single-cell lagoon with sludge retained in the lagoon. The facility has a permitted design flow of 723 gallons per day and serves a design population equivalent of 7.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0706. The receiving stream is a tributary to Cow Branch, and the first classified receiving stream is a 100K Extent Remaining Stream.

Compliance and Enforcement Status: The current permit does include a Schedule of Compliance for new effluent ammonia and *E. coli* limitations. The compliance deadline is April 1, 2027. The facility is not currently under enforcement action.

Recommendation: Connect to the City of Columbia and close the facility.

4.2.21 Phenora Subdivision North Lagoon Wastewater Treatment Facility

Facility Information: Phenora Subdivision North Lagoon WWTF is regulated under permit number MO-0099911. The most recent permit was effective from February 22, 2002 through February 21, 2007. The facility is located near W. Wilcott St. in Columbia, Mo 65202. The facility serves a small residential subdivision. The facility is located within BCRSD's Rocky Fork service area.

Treatment Description: The facility treatment process includes a two-cell lagoon with sludge is retained in the lagoon. The facility has a permitted design flow of 2,300 gallons per day, a design population equivalent of 23, and an actual permit flow of 2,000 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0706. The receiving stream is an unnamed tributary to Rocky Fork, and the first classified receiving stream is Rocky Fork.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is currently under enforcement action. The enforcement case has not been referred to the Missouri Attorney General's Office.

Recommendation: Connect to the BCRSD Rocky Fork WWTP and close the facility. This project is currently funded on the 2025 Missouri Clean Water SRF Intended Use Plan for a requested value of $406,798. Retain or build sufficient capacity in the BCRSD Rocky Fork WWTP to receive flow flow from Phenora Subdivision North Lagoon WWTF.

4.2.22 Pierpont Store Wastewater Treatment Facility

Facility Information: Pierpont Store WWTF is regulated under permit number MO-0140040. The current permit is effective from January 1, 2024 through December 31, 2028. The facility address is 801 E. Happy Hollow Road Columbia, MO 65203. The facility serves the Pierpont General Store and restaurant.

Treatment Description: The facility treatment process includes grease traps, a trash tank, flow equalization, an EcoPod 100 N-Aerated Treatment Unit, ultraviolet disinfection, dosing tank, disk filtration, and subsurface drip dispersal. Sludge disposal is by a contract hauler. The facility has a permitted design flow of 750 gallons per day and serves a design population equivalent of 7.5.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0903. The receiving stream is a tributary to Devils Icebox Cave Spring Branch, and the first classified receiving stream is Gans Creek.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: Connect to the BCRSD Brookfield Estates WWTP or the BCRSD South Route K WWTP when capacity becomes available and close the facility. Retain or build sufficient capacity at BCRSD Brookfield Estates WWTP or South Route K WWTP to receive flow from the Pierpont Store WWTF.

4.2.23 Sallee Post Service Wastewater Treatment Facility

Facility Information: Sallee Post Service WWTF is regulated under general permit number MOG823003. The current permit is effective from May 1, 2023 through August 24, 2027. The facility address is 11251 N Hecht Rd. Hallsville, MO 65255. The facility serves the Sallee Post Service Sanctuary mobile home park.

Treatment Description: The facility treatment process is a no-discharge system, which includes a single-cell lagoon with land application. Based on the 2013 Master Plan, the facility has a design capacity of 3,000 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0601. The facility does not discharge to a surface waterbody.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is currently under enforcement action. The enforcement case has not been referred to the Missouri Attorney General's Office.

Recommendation: Connect to an area wide treatment facility when service becomes available.

4.2.24 Smithview Development, LLC Wastewater Treatment Facility

Facility Information: Smithview Development, LLC WWTF is regulated under general permit number MOG823097. The current permit is effective from January 1, 2025 through August 24, 2027. The facility address is 7183 N Wagon Trail Rd. Columbia, MO 65202. The facility serves a manufactured home development. The facility was previously named Wagon Wheel Mobile Home Court.

Treatment Description: The facility treatment process is a no-discharge system, which includes a two-cell lagoon with land application. Based on the 2013 Master Plan, the facility has a design capacity of 6,750 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0706. The facility does not discharge to a surface waterbody.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: Connect to the BCRSD's Rocky Fork WWTP and close the facility. Retain or build sufficient capacity at the BCRSD Rocky Fork WWTP to receive flow from the Smithview Development, LLC WWTF.

4.2.25 Southridge Mobile Home Community Wastewater Treatment Facility

Facility Information: Southridge Mobile Home Community WWTF is regulated under general permit number MOG823254. The current permit is effective from November 1, 2024 through August 24, 2027. The facility address is 5950 South Rolling Hills Rd. Columbia, MO 65201. The facility serves the Southridge Mobile Home Community, which was previously called High Hill Circle Mobile Home Park.

Treatment Description: The facility treatment process is a no-discharge system, which includes a two-cell lagoon system with a pump station, a single-cell storage basin, and land application of wastewater using traveling guns. According the most recent construction permit, the facility has a permitted design flow including the 1-in-10 year rain event of 30,000 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0902. The facility does not discharge to a surface waterbody.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is currently under enforcement action. The enforcement case has not been referred to the Missouri Attorney General's Office.

Recommendation: Connect to the BCRSD Prairie Meadows WWTP or to the City of Columbia and close the treatment facility. The facility could also consider contract operations services with BCRSD to maintain the no-discharge system.

4.2.26 Woodstock Mobile Home Park Wastewater Treatment Facility

Facility Information: Woodstock Mobile Home Park WWTF is regulated under general permit number MO-0082066. The most recent permit was effective from May 30, 2008 through May 29, 2013. The facility address is 3501 New Haven Road #300, Columbia, MO 65201. The facility serves the Woodstock Mobile Home Park.

Treatment Description: The facility treatment process is an extended aeration package plant with seasonal chlorination. Sludge is disposed by a contract hauler. The facility has a permitted design flow of 23,000 gallons per day, a design population equivalent of 476, and an actual permit flow of 9,000 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0602. The receiving stream is an unnamed tributary to Grindstone Creek, and the first classified receiving stream is a Grindstone Creek.

Compliance and Enforcement Status: The most recent permit includes a schedule of compliance for new final effluent limitations for Total Residual Chlorine. The facility is currently under enforcement action. The enforcement case has not been referred to the Missouri Attorney General's Office.

Recommendation: Connect to the City of Columbia and close the treatment facility. The Woodstock Mobile Home Park was annexed into the City of Columbia in July 2025.

5.0 PUBLICLY OWNED TREATMENT FACILITIES

5.1 Approach to Publicly Owned Facilities

Other than the City of Columbia, all municipalities within BCRSD's service area are classified as a Level 3 Continuing Authority. If any such facilities are sold or transferred to a private person, entity, or organization, BCRSD has authority under its SSUR to provide wastewater collection and treatment services.

BCRSD also supports publicly owned facilities within its service area with contract operations and maintenance services, to assist in maintaining permit compliance. BCRSD currently provides contract services to two municipal facilities in Boone County: Ashland and Hartsburg. A Wastewater Operations and Maintenance Agreement has been executed between BCRSD and each municipality for a term of one year, with the option to renew for additional one-year terms by mutual agreement of both parties.

BCRSD began providing contract operations for the City of Ashland in 2022. For Ashland, BCRSD works with and trains city wastewater operations staff and provides emergency on-call services for the wastewater treatment plant and lift stations. Prior to hiring BCRSD, Ashland contracted with a private service provider for operations and management of its sanitary system.

For the Village of Hartsburg, BCRSD began providing contract services in the mid-1990's. BCRSD operates and maintains the wastewater lagoon system and lift station. BCRSD also manages all DNR required sampling and reporting and provides emergency on-call services. In 2024, BCRSD agreed to assist Hartburg with the administration of a $300,000 American Rescue Plan Act (ARPA) grant for improvements to the wastewater treatment system.

BCRSD also provides emergency on-call services as needed for the City of Sturgeon in Boone County and the City of Clark in Randolph County.

In addition to its contract operations and management services, BCRSD owns and operates the sanitary sewer system for the City of Rocheport. BCRSD began providing contract operations for Rocheport in 1986 and acquired the system from the city in 2012. The system includes gravity collection lines, two lift stations, and a mechanical wastewater treatment plant.

As evidenced by BCRSD's history of successful contract operations and its ownership of the Rocheport sanitary sewer system, BCRSD is an essential resource for publicly owned treatment facilities in Boone County. BCRSD intends to continue providing contract services to the municipalities it currently serves and to other publicly owned systems that require assistance through contract services or system ownership.

5.2 Summary of Publicly Owned Facilities

Sections 5.2.1 through 5.2.10 provide descriptions and recommendations for all publicly owned domestic wastewater treatment facilities regulated by the Department in Boone County. Information on each facility was obtained from its operating permit, the Missouri Clean Water Information System (MoCWIS), and Google Earth. There are 10 publicly owned facilities included in this AWMP.

5.2.1 City of Ashland Wastewater Treatment Plant

Facility Information: The Ashland WWTP is regulated under permit number MO-0106844. The current permit is effective from June 1, 2019 to May 31, 2024. The facility address is 0.18 miles South of 408 East Liberty Lane, Ashland, MO 65010. The facility serves the City of Ashland. BCRSD currently provides full-time contract operations services for the WWTP.

Treatment Description: The facility treatment process includes a bar screen, grit removal, extended aeration (Aero-Mod), clarifiers, UV disinfection, aerobic sludge digestion, sludge dewatering, and an equalization lagoon. The facility has a permitted design flow of 601,000 gpd, a design population equivalent of 6,400, and an actual permit flow of 301,000 gpd.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-1004. The receiving stream is a tributary to Foster Creek, and the first classified receiving stream is Foster Creek.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: It is recommended for BCRSD continue its contract operations services for the Ashland WWTP.

5.2.2 City of Centralia Wastewater Treatment Facility

Facility Information: The Centralia WWTF is regulated under permit number MO-0028789. The current permit is effective from November 1, 2022 through October 31, 2027. The facility is located 0.25 miles east of the March Road and Fountain Street intersection in Centralia, MO 65240. The facility serves the City of Centralia.

Treatment Description: The facility treatment process is a no-discharge system that includes nine (9) storage basins and nineteen (19) irrigation sites spread across northeastern Boone County and northwestern Audrain County. The facility has a permitted dry weather design flow of 806,000 gallons per day, a permitted design flow including the 10-year rainfall minus evaporation of 1,000,000 gpd, and a design population equivalent of 8,060.

Receiving Waterbody: The WWTF has treatment site located in the following HUC 12 watersheds: 07110006-0101, 07110006-0102, 071100060103, and 07110006-0103. The facility does not discharge to a surface waterbody.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: It is recommended that the City of Centralia continue to operate its WWTF as a no-discharge system. If the facility requires operations and maintenance assistance, it is recommended for BCRSD to provide contract operations services for the WWTF.

5.2.3 City of Columbia Wastewater Treatment Plant

Facility Information: The Columbia WWTP is regulated under permit number MO-0097837. The current permit is effective from July 1, 2020 through June 30, 2025. The facility address is 4900 West Gillespie Bridge Road Columbia, MO 65203. The facility serves the City of Columbia.

Treatment Description: The facility treatment process includes an influent pump station, peak flow clarifiers and storage basins, mechanical bar screens, a vortex grit system, primary clarifiers, activated sludge basins, final clarifiers, a sodium hypochlorite tank, ferric chloride treatment, multi-cell treatment wetlands, and an effluent pump station. Sludge is treated using anaerobic digesters, gravity thickeners, sludge thickening centrifuges with polymer system, and a sludge/biosolids holding tank. The treated biosolids are land applied, landfilled, or hauled to a permitted sludge/biosolids disposal facility. The facility has a permitted design flow of 25.2 million gallons per day, a design population equivalent of 178,700, and an actual permit flow of 14.2 million gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0709. The receiving stream is a tributary to Perche Creek, and the first classified receiving stream is Perche Creek.

Compliance and Enforcement Status: The current permit includes a Schedule of Compliance for new ammonia effluent limitations. The facility is currently under enforcement action. The enforcement case has not been referred to the Missouri Attorney General's Office.

Recommendation: Not applicable, the facility is owned and operated by the City of Columbia, which has joint Tier 2 Authority with BCRSD.

5.2.4 Columbia Regional Airport Wastewater Treatment Facility

Facility Information: The Columbia Regional Airport WWTF is regulated under permit number MO-0092924. The current permit is effective from January 1, 2020 through December 31, 2024. The facility address is 11000 South Airport Drive Columbia, MO 65201. The facility serves the Columbia Regional Airport.

Treatment Description: The facility treatment process is a no-discharge system, which includes a two-cell treatment lagoon, a single-cell storage lagoon, and a sprinkler irrigation field. The facility has a permitted design flow including the 10-year rainfall minus evaporation of 26,700 gallons per day, a design population equivalent of 246, and an actual permit flow of 7,500 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0902 and 10300102-1004. The facility does not discharge to a surface waterbody.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: Not applicable, the facility is owned and operated by the City of Columbia, which has joint Tier 2 Authority with BCRSD. The facility may connect to the City of Ashland WWTP in the future when service becomes available.

5.2.5 Two Mile Prairie Elementary School Wastewater Treatment Facility

Facility Information: The Two Mile Prairie Elementary School WWTF is regulated under permit number MO-0098019. The current permit is effective from June 1, 2020 through March 31, 2025. The facility address is 5450 North Highway Z Columbia, MO 65202. The facility serves Two Mile Prairie Elementary School, which is part of the Columbia Public Schools system.

Treatment Description: The facility treatment process is a no-discharge system, which includes a grease interceptor, septic tank, disk filter, effluent pump, and drip dispersal field. The facility has a permitted design flow of 4,999 gallons per day, a design population equivalent of 192, and an actual permit flow of 1,940 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-1001. The receiving stream is a tributary to Little Cedar Creek, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: The continuing authority for the facility is Columbia Public Schools. If the facility requires operations and maintenance assistance, it is recommended for BCRSD to provide contract operations services for the WWTF.

5.2.6 City of Hallsville Wastewater Treatment Facility

Facility Information: Hallsville WWTF is regulated under permit number MO-0104990. The current permit is effective from January 1, 2020 through December 31, 2024. The facility is located 0.3 miles northwest of the Route U and MO-124 intersection in Hallsville, MO 65255. The facility is owned by Missouri American Water Company and serves the City of Hallsville.

Treatment Description: The facility treatment process is a no-discharge system, which includes a bar screen, a single-cell aerated lagoon, two storage basins, and five center pivot irrigation fields. The facility has a permitted design flow including the 10-year rainfall minus evaporation of 212,622 gallons per day, a dry weather design flow of 197,650 gpd, a design population equivalent of 2,085, and an actual permit flow of 149,568 gpd.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0704. The facility does not discharge to a surface waterbody.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is currently under enforcement action. The enforcement case has been referred to the Missouri Attorney General's Office.

Recommendation: It is recommended that Missouri American Water Company and the City of Hallsville continue to operate its WWTF as a no-discharge system. If the facility requires operations and maintenance assistance, it is recommended for BCRSD to provide contract operations services for the WWTF. The facility could be a future connection to the proposed force main to BCRSD's Rocky Fork WWTP included in the 2025 CIP.

5.2.7 Village of Harrisburg Wastewater Treatment Facility

Facility Information: The Harrisburg WWTF is regulated under permit number MO- 0104809. The current permit is effective from August 1, 2020 through June 30, 2025. The facility is located approximately 0.6 miles southeast of the Highway F and Hughes Road intersection in Harrisburg, MO 65256. The facility serves the Village of Harrisburg.

Treatment Description: The facility treatment process is a no-discharge system, which includes individual septic tanks with pumps, a single-cell storage lagoon, and two irrigation fields. The facility has a permitted design flow including in the 10-year rainfall minus evaporation of 27,000 gallons per day, a dry weather design flow of 24,000 gpd, a design population equivalent of 536, and an actual permit flow of 19,000 gpd.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0702. The facility does not discharge to a surface waterbody.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: It is recommended that the Village of Harrisburg continue to operate its WWTF as a no-discharge system. If the facility requires operations and maintenance assistance, it is recommended for BCRSD to provide contract operations services for the WWTF.

5.2.8 Village of Hartsburg Wastewater Treatment Facility

Facility Information: The Hartsburg WWTF is regulated under permit number MO-0108995. The most recent permit was effective from November 1, 2018 through October 31, 2023. The facility is located approximately 0.5 miles southeast of the 2nd Street and Katy Trail intersection in Hartsburg, MO 65039. The facility serves the Village of Hartsburg.

Treatment Description: The facility treatment process includes a two-cell lagoon with an aerated primary cell, UV disinfection, and sludge retained in the lagoon. The facility has a permitted design flow of 14,400 gallons per day, a design population equivalent of 144, and an actual permit flow of 2,900 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-1302. The receiving stream is a tributary to Slate Creek, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Compliance and Enforcement Status: The current permit does include a Schedule of Compliance for new effluent ammonia limitations. The facility is not currently under enforcement action.

Recommendation: It is recommended for BCRSD to continue its contract operations services for the Hartburg WWTP. BCRSD is currently assisting Hartburg with the administration of an ARPA grant. The grant funding was allocated to Hartsburg by the Boone County Commission and is intended to be used for upgrades to the wastewater system to comply with the new effluent ammonia limitations.

5.2.9 City of Sturgeon Wastewater Treatment Facility

Facility Information: The Sturgeon WWTF is regulated under permit number MO-0052027. The current permit is effective from July 1, 2022 through June 30, 2027. The facility is located approximately 0.1 miles east of the Highway V and Proctor Street intersection in Sturgeon, MO 65284. The facility serves the City of Sturgeon.

Treatment Description: The facility treatment process is a no-discharge system, which includes a two-cell storage lagoon, a single-cell storage basin, and one center pivot irrigation field. The facility has a permitted design flow including the 10-year rainfall minus evaporation of 155,600 gallons per day, a dry weather design flow of 77,800 gpd, and a design population equivalent of 1,307.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 07110006-0303. The facility does not discharge to a surface waterbody.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: It is recommended for BCRSD to continue to provide emergency services to the City of Sturgeon as needed. If the facility requires additional operations and maintenance assistance, it is recommended for BCRSD to provide contract operations services for the WWTF.

5.2.10 UMC, Columbia KOMU-TV 8 Wastewater Treatment Facility

Facility Information: UMC, Columbia KOMU-TV 8 WWTF is regulated under general permit number MOG823021. The current permit is effective from May 1, 2023 through August 24, 2027. The facility address is 5550 Highway 63 Columbia, MO 65201. The facility serves the University of Missouri-Columbia KOMU 8 television news station and is owned by the Curators of the University of Missouri. The facility is located approximately 700 feet from BCRSD's sewer to the Prairie Meadows WWTP.

Treatment Description: The facility treatment process is a no-discharge system, which includes a single-cell lagoon with land application. Based on the 2013 Master Plan, the facility has a design capacity of 1,302 gallons per day.

Receiving Waterbody: The WWTP is located in the HUC 12 watershed 10300102-0903. The facility does not discharge to a surface waterbody.

Compliance and Enforcement Status: The current permit does not include a Schedule of Compliance for any new effluent limitations. The facility is not currently under enforcement action.

Recommendation: This is a state-owned WWTF, and it is recommended that the facility connect to the BCRSD Prairie Meadows WWTP or to the City of Columbia when service becomes available.

6.0 FINANCIAL CAPABILITY

6.1 Financial Capability Information

BCRSD has a successful track record of obtaining bonding authority to finance large scale capital improvements projects through government financing programs such as the Clean Water State Revolving Fund (SRF) loan program administered by the Department. As of February 2025, BCRSD has approximately $3 million in remaining bonding authority to finance capital projects with plans to hold a bond election to increase its authority in the future. Historically, BCRSD has also utilized grant funding to reduce the financial burden of its projects through programs such as the SRF grant program, the American Rescue Plan Act (APRA), the American Recovery and Reinvestment Act (ARRA), among others. BCRSD can assist private and public facilities in the process of obtaining and administering grant funding for capital projects, as it is doing currently with the City of Hartsburg.

BCRSD can also assist private facilities with the financing of improvements through the Neighborhood Improvement District (NID) program managed by the County or through the formation of Sanitary Sewer Improvement Districts (SSID) as defined by 240.650 – 204.672 RSMo. In the case of sewer related NIDs, BCRSD personnel typically serve as the NID coordinator and can provide the application to form a NID to interested property owners. As part of the NID program, the neighborhood borrows the cost of the sewer system from the County, and residents pay back their share of the cost over a twenty-year period at a low interest rate. In the SSID scenario, a petition to BCRSD signed by four-sevenths of the property owners within the geographic limits of a proposed improvement district is required to establish a SSID. Once established, BCRSD may issue temporary notes or revenue bonds that are repaid through assessments and user fees charged to the property owners in the improvement area.

7.0 IMPLEMENTATION

BCRSD will utilize this report as a comprehensive reference for its current and future services, encompassing both private and public treatment facilities in Boone County. The Sanitary Sewer Use Regulations established by the Board continue to govern the construction, operation, and ownership of sanitary sewer systems within BCRSD's service area. The updated Capital Improvements Plan, included in Appendix C, outlines planned improvements to BCRSD facilities, many of which will enable additional regionalization. Implementing these improvements will provide benefits to both BCRSD customers and the overall quality of waterbodies in Boone County.

As established by the approval of BCRSD as a Level 2 Continuing Authority in 2010, BCRSD conducts ongoing public outreach to discuss its operations and the resources it provides within the county and conducts at least one monthly public hearing. BCRSD plans to continue its public outreach, as well as providing increased guidance to developers and property owners seeking sanitary sewer services. In connection with the submission of this AWMP to the Department, BCRSD will hold at least one public hearing regarding the plan and its implementation.

As part of these ongoing efforts, BCRSD will continue to work collaboratively with the Department, the City of Columbia, Boone County Resource Management, and other affected stakeholders to implement its mission, which is "to provide current and future customers with cost effective, reliable sanitary sewer service by collecting and treating wastewater, and to protect public health and the environment in accordance with local, state and federal permit requirements." Working in partnership with all affected stakeholders is critical to ensuring the appropriate level of cost-effective sanitary sewer service within BCRSD's service area.

APPENDIX A

BCRSD Formation and Service Area Documents

PATTY ASH
CHIEF DEPUTY CLERK

Murry E. Glascock
Boone County Clerk

SEVENTH AND BROADWAY
MEZZANINE
COLUMBIA, MISSOURI 65201
TELEPHONE 449-3711, EXT. 210

September 4, 1974

To: The Circuit Court of Boone County, Missouri

I, Murry E. Glascock, Clerk of the Boone County Court, hereby certify that the attached is a true copy of the original court order canvassing the election returns of the October 9, 1973 Special Election held for the Boone County Regional Sewer District.

I also certify that the results of the election as recorded on the attached copy of the court order are accurate and correct.

In testimony whereof, witness my hand and official seal at my office in Columbia this 4th day of September, 1974.

Murry E. Glascock

MURRY E. GLASCOCK
Clerk of the County Court

FILED
BOONE COUNTY
SEP 4 1974
MARY BOOTHE
CLERK, CIRCUIT COURT
COLUMBIA, MO.

CERTIFIED COPY OF ORDER

(Rev. Stat. Sec. 2321.)

STATE OF MISSOURI, } ss.
County of Boone }

October Session September Adj Term, 19 73

In the County Court of said county, on the 11th day of October 19 73

the following, among other proceedings, were had, viz:

Now on this day, Murry E. Glascock, Clerk of the Boone County Court, certifies to the County Court that 1,141 votes cast in favor of a Boone County Regional Sewer District and that 629 votes cast against a Boone County Regional Sewer District. The Boone County Court having reviewed the abstract of votes cast, does hereby declare that a Boone County Regional Sewer District was formed.

ATTEST:

Murry E. Glascock
MURRY E. GLASCOCK
County Clerk

James C. Butcher
JAMES C. BUTCHER, PRESIDING JUDGE

L.R. Hughes III
L.R. HUGHES III, DISTRICT I JUDGE

Clarence Drew
CLARENCE DREW, DISTRICT II JUDGE

FILED
BOONE COUNTY
SEP 4 1974
MARY BOOTHE
CLERK, CIRCUIT COURT
COLUMBIA, MO.

CERTIFIED COPY OF ORDER

(Rev. Stat. Sec. 2321.)

STATE OF MISSOURI, } ss.
County of Boone }

May Term, 19 73

In the County Court of said county, on the 29th day of May 19 73

the following, among other proceedings, were had, viz:

RESOLUTION AND ORDER OF THE COUNTY COURT OF BOONE COUNTY TO BEGIN PROCEEDINGS FOR THE ESTABLISHMENT OF A COUNTY-WIDE SYSTEM OF TRUNK SEWERS AND SEWAGE TREATMENT FACILITIES

WHEREAS, the County Court of Boone County, Missouri, has determined that:

1) The construction and maintenance of a common system of trunk sewers and sewage treatment facilities is necessary to secure proper sanitary conditions for the preservation of public health; and

2) Major portions of this County constitute a natural drainage area, the major portion of which lies within Boone County, a second class county, and which natural drainage area contains all or portions of several drainage basins, municipalities, and sewer subdistricts; and

3) A common sewer district comprising the entire area would be eligible for federal aid and assistance under the provisions of Title 33, Section 1151 et seq., of the United States Code Annotated as now or hereafter may be amended; and

4) The establishment of such a sewer system of trunk sewers and sewage treatment facilities is necessary to guarantee the orderly growth and expansion of Boone County and to preserve its lakes, streams, and natural waterways; and

5) The issue of the creation of such a district should be presented to the legal voters residing in the area, sought to be organized, and incorporated as a sewer district;

NOW THEREFORE, IT IS ORDERED that this Court present to the Circuit Court of Boone County, in the form of this order, application for the appointment of commissioners pursuant to Chapter 204.250, et seq. (as amended), and to which petition shall be attached as "Exhibit A", a description in general terms of the territory to be embraced in said district;

IT IS FURTHER ORDERED that the suggestedname for the proposed district shall be "The Boone County Regional Sewer District".

IT IS HEREBY FURTHER ORDERED that a true copy of this Court Order be spread upon the Court's record of this date.

PRESIDING JUDGE

ATTEST:

MURRY E. GLASCOCK
Clerk of the County Court

DISTRICT I JUDGE

DISTRICT II JUDGE

IN THE CIRCUIT COURT OF BOONE COUNTY
STATE OF MISSOURI

IN RE: THE MATTER OF THE BOONE COUNTY REGIONAL SEWER DISTRICT	Cause No. 55343, Circuit Court Boone County, Missouri
THE COUNTY COURT OF BOONE COUNTY, MISSOURI, PETITIONER.	Division _____

PETITION FOR APPOINTMENT OF COMMISSIONERS TO ESTABLISH BOUNDARIES OF COMMON SEWER DISTRICT

Comes now the County Court of Boone County, Missouri, and files herein, pursuant to Chapter 204.250, the order of the Boone County Court and petitions this Court for the appointment of commissioners to establish the boundaries for a sewer district, the major portion of which lies within Boone County, Missouri. Attached hereto and incorporated herein as "Exhibit A" is a description in general terms of the territory to be embraced in said district, and as "Exhibit B" the order of the Boone County Court dated ordering the creation of the proposed district.

The Boone County Court further suggests to this Court that the name of the proposed district be "The Boone County Regional Sewer District".

WHEREFORE, The Boone County Court prays this Court to appoint three (3) disinterested persons, one of whom shall be a licensed civil engineer or surveyor, as commissioners to lay out and define the boundaries of the proposed district, and that said commissioners be ordered, pursuant to Chapter 204.260, to hold a hearing at the Courthouse in Boone County, Missouri, for the purpose of hearing any and all persons who wish to be heard as to the location of the boundaries of the proposed district, and to report back to this Court upon completion of their duties.

ATTEST:

MURRY E. GLASCOCK
Clerk of the County Court

PRESIDING JUDGE

DISTRICT I JUDGE

DISTRICT II JUDGE

DATED: May 29, 1973

Exhibit "A"

SUGGESTED BOUNDARIES FOR PROPOSED

BOONE COUNTY SEWER DISTRICT

Beginning in the middle of the main channel of the Missouri river, opposite the mouth of Moniteau creek; thence up said creek to the line between townships forty-eight and forty-nine; thence in a direct line to the northeast corner of township fifty-one of range fourteen, west; thence east with the township line between townships fifty-one and fifty-two to the northeast corner of section two of township fifty-one of range eleven, west; thence south with the subdivisional lines to the southeast corner of section thirty-five of township fifty, range eleven, west; thence west with the township lines between townships forty-nine and fifty to the middle of the main fork of Cedar creek; thence down Cedar creek, in the middle of the main channel thereof, to the most southern crossing of said creek by the range line between ranges eleven and twelve; thence south with said range line to the middle of the main channel of the Missouri river; thence up said river, in the middle of the main channel thereof; to the beginning.

IN THE CIRCUIT COURT OF BOONE COUNTY, MISSOURI

IN RE: THE MATTER OF THE BOONE COUNTY REGIONAL SEWER DISTRICT THE COUNTY COURT OF BOONE COUNTY, MISSOURI Petitioner.	)	Cause No. 55349

DECREE OF INCORPORATION OF THE BOONE COUNTY REGIONAL SEWER DISTRICT

WHEREAS, an election concerning the proposition of the organization and incorporation of The Boone County Regional Sewer District was duly held on the 9th day of October, 1973, and the County Clerk having certified to the Court the results of the election, the Court finds that a majority of the votes cast in the election were in favor of the organization and incorporation of the proposed district as a common sewer district pursuant to §204.280, RSMo.

WHEREFORE, it is hereby decreed that The Boone County Regional Sewer District be, and is hereby, incorporated as a common sewer district and a separate body corporate as of September 4, 1974.

CIRCUIT COURT - EN BANC

FRANK CONLEY, CIRCUIT COURT JUDGE

JOHN M. CAVE, CIRCUIT COURT JUDGE

STATE OF MISSOURI } ss
COUNTY OF BOONE }

I, BETTY DAVIS, Clerk of the Circuit Court of Boone County, Missouri, hereby certify the above and foregoing is a true and correct copy of
DECREE OF INCORPORATION OF THE BOONE COUNTY REGIONAL SEWER DISTRICT
as fully as the same remains of record in my said office.
IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of my said office this 30th day of October, 19 78

BETTY DAVIS, CLERK
Circuit Court of Boone County, Mo

By Bonnie Caldwell
Deputy Clerk

2. Affidavits of publication of such notice, setting forth the notice that was published, the name of the newspaper in which said notice was published, and the dates of publication of such notice by the newspaper referred to in the respective affidavit, are attached hereto, marked Exhibit B, are made a part hereof and incorporated herein by reference.

3. That the commissioners held a meeting open to the public, in accordance with the aforesaid published notice at 7:30 o'clock p.m. on the 28th day of August 1973, in the Division I Courtroom of the Boone County Courthouse, at Columbia, Missouri, to consider and establish the boundaries of the proposed Boone County Regional Sewer District. Carl H. Niewoehner, P.E., presided at the meeting. All persons that were present, residing or owning real property in the proposed district, or adjacent thereto, desiring to be heard, were heard as to the location of the boundaries of the proposed district.

4. Following said meeting, and upon due consideration of the views of all persons wishing to be heard therein, your commissioners have unanimously fixed and determined the boundaries of the proposed Boone County Regional Sewer District to be as set forth in Exhibit A, which is attached hereto and made a part hereof by reference.

5. Attached hereto, marked Exhibit C, and made a part hereof and incorporated herein by references though fully set forth, is a map showing the boundaries of the proposed Boone County Regional Sewer District, as fixed and determined by the Commissioners subsequent to and pursuant to the aforesaid meetings, in relation to the property lines intersected or followed by them, and also in relation to city or county boundaries.

WHEREFORE, your Commissioners hereby pray that if this report and the attached map are approved by this court and if the accounting and application for fees and expenses, if any, filed by the Commissioners in this cause is approved by this Court, said Commissioners be thereupon discharged.

Carl H. Niewoehner

Carl H. Niewoehner

Dated August 28th 1973

J. C. Turner

J. C. Turner

FILED
BOONE COUNTY
SEP 4 1973
MARY BOOTHE
CIRCUIT COURT
COLUMBIA, MO.

Charles H. Fountain

Charles H. Fountain

IN THE CIRCUIT COURT OF BOONE COUNTY
STATE OF MISSOURI
EN BANC

IN RE: THE MATTER OF THE BOONE COUNTY REGIONAL SEWER DISTRICT THE COUNTY COURT OF BOONE COUNTY, MISSOURI Petitioner.	Cause No. 55349 Circuit Court Boone County, Missouri

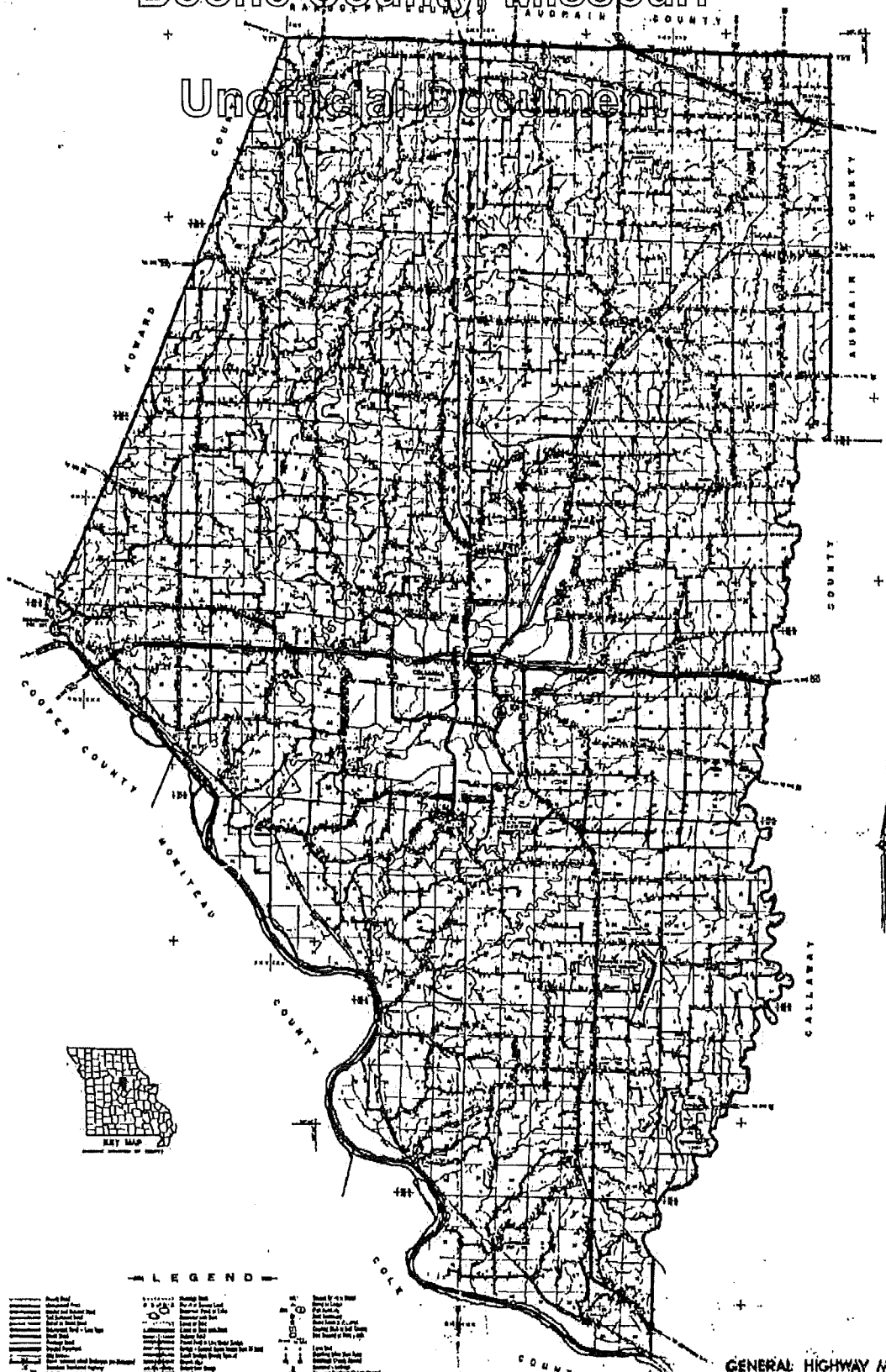
REPORT OF COMMISSIONERS OUTLINING AND DEFINING THE BOUNDARIES OF THE PROPOSED BOONE COUNTY REGIONAL SEWER DISTRICT

Come now Carl H. Niewoehner, J. C. Turner, and Charles H. Fountain appointed by the Circuit Court of Boone County, Missouri, (referred to herein as "This Court"), as commissioners (referred to herein as "The Commissioners"), to lay out and define the boundaries of the proposed Boone County Regional Sewer District, and make the following written report to this Court pursuant to the order of this Court entered on April 6, 1973, and state that:

1. The Commissioners caused notice to be given by publication in the following newspapers having a general circulation within the area proposed to be encompassed by the Boone County Regional Sewer District, on the respective date set forth opposite the name of such newspapers, of a meeting to be held by said commissioners at 7:30 o'clock p.m. on the 28th day of August 1973, in the Division I Courtroom of the Boone County Courthouse in Columbia, Missouri, to consider and establish the boundaries of the proposed Boone County Regional Sewer District, with relation to proposed construction and maintenance of a common system of trunk sewers and sewage treatment plants to secure proper sanitary conditions for the preservation of public health in the proposed Boone County Regional Sewer District. The name of the newspaper, and the issues of publication are as follows:

Name of Newspaper	Issue in which Notice Was Published
Columbia Tribune	August 8,9,10,11,12 - 1973
Columbia Missourian	August 8,9,10,11,12 - 1973

Exhibit "C"



GENERAL HIGHWAY MAP
BOONE COUNTY
MISSOURI

PREPARED BY THE
MISSOURI STATE HIGHWAY DEPARTMENT
DIVISION OF PLANNING
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

FILED
BOONE COUNTY
SEP 4 1973
MARY BOOTHE
CLERK, CIRCUIT COURT
COLUMBIA, MO.

GENERAL HIGHWAY MAP BOONE COUNTY, MISSOURI

STATE OF MISSOURI)
) ss.
County of Boone)

I, Mary Boothe, Clerk of the Circuit Court within and for the County and State aforesaid, hereby certify the foregoing to be ~~a true and perfect copy of the~~ The REPORT OF COMMISSIONERS with MAP showing the boundaries of the proposed district marked Exhibit "C" attached thereto, In Re: THE MATTER OF THE BOONE COUNTY REGIONAL SEWER DISTRICT, being Case No. 55349, as filed and approved by the Court,

~~entered~~ on the 4th day of September, 19 73, as fully as the same appears of record in my office.

WITNESS my hand as Clerk and hereto affixed the Seal of said Court. Done at office in Columbia, Missouri, this 6th day of September, A.D., 19 73.

(Seal)

Mary Boothe
Circuit Clerk

Deputy Clerk

State of Missouri } Sct.
County of Boone, }

I, the undersigned Recorder of Deeds for said County and State do hereby certify that the foregoing instrument of writing was filed for record in my office on the 6th day of September A.D., 19 73 at 11 o'clock and 45 minutes A M. and is truly recorded in Book 410 page 948

Witness my hand and official seal on the day and year aforesaid

Betty Saunders, Recorder

By Jennie Wilson Deputy

Filed for record on September 6, 1973 at 11:45 o'clock A.M. In Boone Co. Mo.
Document No. 8307 recorded in Book 410 page 948. Betty Saunders, Recorder of Deeds.

IN THE CIRCUIT COURT OF BOONE COUNTY
STATE OF MISSOURI
EN BANC

IN RE: THE MATTER OF THE BOONE COUNTY REGIONAL SEWER DISTRICT THE COUNTY COURT OF BOONE COUNTY, MISSOURI Petitioner.	Cause No. 55349 Circuit Court Boone County, Missouri

REPORT OF COMMISSIONERS OUTLINING AND DEFINING THE BOUNDARIES OF THE PROPOSED BOONE COUNTY REGIONAL SEWER DISTRICT

Come now Carl H. Niewoehner, J. C. Turner, and Charles H. Fountain appointed by the Circuit Court of Boone County, Missouri, (referred to herein as "This Court"), as commissioners (referred to herein as "The Commissioners"), to lay out and define the boundaries of the proposed Boone County Regional Sewer District, and make the following written report to this Court pursuant to the order of this Court entered on April 6, 1973, and state that:

1. The Commissioners caused notice to be given by publication in the following newspapers having a general circulation within the area proposed to be encompassed by the Boone County Regional Sewer District, on the respective date set forth opposite the name of such newspapers, of a meeting to be held by said commissioners at 7:30 o'clock p.m. on the 28th day of August 1973, in the Division I Courtroom of the Boone County Courthouse in Columbia, Missouri, to consider and establish the boundaries of the proposed Boone County Regional Sewer District, with relation to proposed construction and maintenance of a common system of trunk sewers and sewage treatment plants to secure proper sanitary conditions for the preservation of public health in the proposed Boone County Regional Sewer District. The name of the newspaper, and the issues of publication are as follows:

Name of Newspaper	Issue in which Notice Was Published
Columbia Tribune	August 8,9,10,11,12 - 1973
Columbia Missourian	August 8,9,10,11,12 - 1973

2. Affidavits of publication of such notice, setting forth the notice that was published, the name of the newspaper in which said notice was published, and the dates of publication of such notice by the newspaper referred to in the respective affidavit, are attached hereto, marked Exhibit B, are made a part hereof and incorporated herein by reference.

3. That the commissioners held a meeting open to the public, in accordance with the aforesaid published notice at 7:30 o'clock p.m. on the 28th day of August 1973, in the Division I Courtroom of the Boone County Courthouse, at Columbia, Missouri, to consider and establish the boundaries of the proposed Boone County Regional Sewer District. Carl H. Niewoehner, P.E., presided at the meeting. All persons that were present, residing or owning real property in the proposed district, or adjacent thereto, desiring to be heard, were heard as to the location of the boundaries of the proposed district.

4. Following said meeting, and upon due consideration of the views of all persons wishing to be heard therein, your commissioners have unanimously fixed and determined the boundaries of the proposed Boone County Regional Sewer District to be as set forth in Exhibit A, which is attached hereto and made a part hereof by reference.

5. Attached hereto, marked Exhibit C, and made a part hereof and incorporated herein by references though fully set forth, is a map showing the boundaries of the proposed Boone County Regional Sewer District, as fixed and determined by the Commissioners subsequent to and pursuant to the aforesaid meetings, in relation to the property lines intersected or followed by them, and also in relation to city or county boundaries.

WHEREFORE, your Commissioners hereby pray that if this report and the attached map are approved by this court and if the accounting and application for fees and expenses, if any, filed by the Commissioners in this cause is approved by this Court, said Commissioners be thereupon discharged.

Dated August 28th 1973

Carl H. Niewoehner

Carl H. Niewoehner

J. C. Turner

J. C. Turner

Charles H. Fountain

Charles H. Fountain

BOONE COUNTY
SEP 4 1973
MARY BOOTHE
CLERK, CIRCUIT COURT
COLUMBIA, MO.

STATE OF MISSOURI)
) ss.
County of Boone)

I, Mary Boothe, Clerk of the Circuit Court within and for the County and State aforesaid, hereby certify the foregoing to be ~~xxxxxxxxxxxxxxxxxxxxxxxxxx~~ The REPORT OF COMMISSIONERS with MAP showing the boundaries of the proposed district marked Exhibit "C" attached thereto, In Re: THE MATTER OF THE BOONE COUNTY REGIONAL SEWER DISTRICT, being Case No. 55349, as filed and approved by the Court,

~~xxxxxxxxxxxxxxxxxxxxxxxxxx~~ on the 4th day of September, 19 73, as fully as the same appears of record in my office.

WITNESS my hand as Clerk and hereto affixed the Seal of said Court. Done at office in Columbia, Missouri, this 6th day of September, A.D., 19 73.

Mary Boothe
Circuit Clerk

(Seal)

Deputy Clerk

State of Missouri }
County of Boone, } Set.

I, the undersigned Recorder of Deeds for said County and State do hereby certify that the foregoing instrument of writing was filed for record in my office on the 6th day of September A.D., 19 73 at 11 o'clock and 45 minutes A M. and is truly recorded in Book 410 page 948

Witness my hand and official seal on the day and year aforesaid

Betty Saunders, Recorder

By Jennie Wise Deputy

NO 203-80

CERTIFIED COPY OF ORDER

(Rev. Stat. Sec. 2321.)

STATE OF MISSOURI, } ss.
County of Boone }

October Session August Adj Term, 1980

In the County Court of said county, on the 30th day of October 1980

the following, among other proceedings, were had, viz:

Now on this day, the Boone County Court doth approve the following policy for establishment of sewer districts within the County of Boone for existing subdivision facilities:

1. Property owners must petition Boone County Court for consideration as a sewer district.
2. Petitioners must be able to convey title to sewage facilities.
3. Petitioners must give sufficient evidence of proof that sewage facilities meet current NPDES permit requirements or owners must agree to pay for possible necessary improvements.
4. There must be no major construction deficiencies in the collection system. If these exist, the owner agrees to pay for necessary repairs.
5. Petitioners must be able to provide necessary deeds and easements for treatment facilities, collection systems, and future interconnect systems if required. Deeds for treatment facilities to revert back to petitioners when no longer needed.
6. Petitioner must provide "As Built" plans or a current survey of the existing sewage facilities.
7. Petitioners must provide a total list of all users of existing sewage facilities.
8. Petitioners must agree to pay user charges and comply with policies and regulations as established by Boone County Court or its agent.

By order of the Boone County Court this 30th day of October, 1980.

ATTEST:

WILLIAM M. FRECH
Presiding Judge

CHRISTOPHER S. KELLY
Clerk of the County Court

CAROLYN LATHORP
District I Judge

RICHARD FARMER
District II Judge

ROBERT L. HAGERTY
Director of County Public Works

CERTIFIED COPY OF ORDER

(Rev. Stat. Sec. 2321.)

STATE OF MISSOURI } ss.
County of Boone }

Deeember Session of theNov Adj Term, 19 85

In the County Commission of said county, on the 5th day of December 19 85

the following, among other proceedings, were had, viz:

Now on this day the Boone County Commission does hereby authorize the property the Sewer District purchased from Mid-Missouri Sanitation to be removed from the tax rolls as of July 1, 1985 and that the Regional Sewer District pay the amount of $5151.85 which represents the tax due on the property through June 30, 1985.

Done this 3rd day of December, 1985.

Billie Tritschler
BILLIE TRITSCHLER
Presiding Commissioner

ATTEST:

WENDY S. NOREN
Clerk of the County Commission

David A Horner
DAVID A. HORNER
District I Commissioner

William A. Gates
WILLIAM A. GATES
District II Commissioner

CIRCUIT COURT

Case No. 55349

Number of Case	NAME OF PARTIES	ATTORNEYS	KIND OF ACTION	DATE OF FILING Month	Day	Year
55349	IN RE: THE MATTER OF THE BOONE COUNTY REGIONAL SEWER DISTRICT THE COUNTY COURT OF BOONE COUNTY, MISSOURI PETITIONER.		Appointment Of Commissioners To Establish Boundaries Of Common Sewer District	MAY	29	1973

Date of Orders	ORDERS OF COURT	Minute Book Vol.	Page
MAY 29 1973	The County Court of Boone County, Missouri, files Petition For Appointment Of Commissioners To Establish Boundaries Of Common Sewer District with Suggested Boundaries For Proposed Boone County Sewer District attached marked Exhibit "A".		
June 11-73	@ req't of ptnrs, cont'd to June 18, 1973, Div I @ 9:00 a.m. JMC		
June 18-73	@ req't of ptnrs, cont'd to June 25, 1973, Div II @ 9:00 a.m. JMC		
Jun 25 73	Cause transf. to Circuit Ct. En banc for hearing at 1:30 p.m. June 25, 73.		
June 25-73	Carl H. Niewoehner, J. C. Turner, and Charles H. Fountain appt'd commrs to define bndrys of proposd Boone City Rgnl Sewer Dist purs to fgd order filed herein. JMC		
JUL 20 1973	Carl H. Niewoehner, J. C. Turner, and Charles H. Fountain, duly appointed commissioners, ~~take, subscribe to and file herein their Oath of Commissioners.~~		
AUG 7 1973	Carl H. Niewoehner, J.C. Turner and Charles H. Fountain files Order Of Commissioners Setting Date For Public Hearing; showing Notice ~~of hearing on August 8, 9, 10, 11, and 12, 1973.~~		
AUG 20 73	Affidavit of Publication from Columbia Missourian received and filed.		

CERTIFIED COPY OF ORDER

(Rev. Stat. Sec. 2321.)

STATE OF MISSOURI, } ss.
County of Boone }

May Term, 19 73

In the County Court of said county, on the 29th day of May 19 73

the following, among other proceedings, were had, viz:

RESOLUTION AND ORDER OF THE COUNTY COURT OF BOONE COUNTY TO BEGIN PROCEEDINGS FOR THE ESTABLISHMENT OF A COUNTY-WIDE SYSTEM OF TRUNK SEWERS AND SEWAGE TREATMENT FACILITIES

WHEREAS, the County Court of Boone County, Missouri, has determined that:

1) The construction and maintenance of a common system of trunk sewers and sewage treatment facilities is necessary to secure proper sanitary conditions for the preservation of public health; and

2) Major portions of this County constitute a natural drainage area, the major portion of which lies within Boone County, a second class county, and which natural drainage area contains all or portions of several drainage basins, municipalities, and sewer subdistricts; and

3) A common sewer district comprising the entire area would be eligible for federal aid and assistance under the provisions of Title 33, Section 1151 et seq., of the United States Code Annotated as now or hereafter may be amended; and

4) The establishment of such a sewer system of trunk sewers and sewage treatment facilities is necessary to guarantee the orderly growth and expansion of Boone County and to preserve its lakes, streams, and natural waterways; and

5) The issue of the creation of such a district should be presented to the legal voters residing in the area, sought to be organized, and incorporated as a sewer district;

NOW THEREFORE, IT IS ORDERED that this Court present to the Circuit Court of Boone County, in the form of this order, application for the appointment of commissioners pursuant to Chapter 204.250, et seq. (as amended), and to which petition shall be attached as "Exhibit A", a description in general terms of the territory to be embraced in said district;

IT IS FURTHER ORDERED that the suggestedname for the proposed district shall be "The Boone County Regional Sewer District".

IT IS HEREBY FURTHER ORDERED that a true copy of this Court Order be spread upon the Court's record of this date.

PRESIDING JUDGE

ATTEST:

MURRY E. GLASCOCK
Clerk of the County Court

DISTRICT I JUDGE

DISTRICT II JUDGE

46.059. Boone. — Beginning in the middle of the main channel of the Missouri River, opposite the mouth of Moniteau Creek; thence up said creek to the line between townships forty-eight and forty-nine; thence in a direct line to the northeast corner of township fifty-one of range fourteen, west; thence east with the township line between townships fifty-one and fifty-two to the northeast corner of section two of township fifty-one of range eleven, west; thence south with the subdivisional lines to the southeast corner of section thirty-five of township fifty, range eleven, west; thence west with the township lines between townships forty-nine and fifty to the middle of the main fork of Cedar Creek; thence down Cedar Creek, in the middle of the main channel thereof, to the most southern crossing of said creek by the range line between ranges eleven and twelve; thence south with said range line to the middle of the main channel of the Missouri River; thence up said river, in the middle of the main channel thereof, to the beginning.

(RSMo 1939 § 13553)

Prior revisions: 1929 § 11894; 1919 § 9296; 1909 § 3513

---- end of effective 28 Aug 1939 ----

use this link to bookmark section 46.059

Effective dates prior to 1940 may not be the actual effective date. See FAQ 'When do laws become effective?'

Click here for the **Reorganization Act of 1974 - or - Concurrent Resolutions Having Force & Effect of Law**

In accordance with Section **3.090**, the language of statutory sections enacted during a legislative session are updated and available on this website on the effective date of such enacted statutory section.

▸ **Other Information**

▸ **Other Links**

Missouri Senate **MO.gov** **Missouri House**

APPENDIX B

BCRSD By-Laws

BOONE COUNTY REGIONAL SEWER DISTRICT
BOARD OF TRUSTEES
BY-LAWS

ARTICLE I – Purpose of the Board

The Boone County Regional Sewer District (hereinafter "District") is a common sewer district created pursuant to Chapter 204, RSMo. The Board of Trustees of the Boone County Regional Sewer District (hereinafter "Board") is responsible for the control and operation of the District.

ARTICLE II – Trustees

The Boone County Commission (hereinafter "Commission") shall appoint five trustees to the Board. The Commission shall appoint a member of the Commission as one of the five appointed trustees. The term of each trustee shall be five years, except that the member of the Commission appointed to the Board shall serve no longer than the expiration of their term on the Commission. The Commission shall make reasonable efforts to stagger the terms of the other trustees so as to avoid more than one vacancy on the Board during any year.

In accordance with Chapter 204, RSMo, vacancies on the Board shall be filled by appointment of the Commission. If, however, the Commission fails to appoint a trustee to a vacancy on the Board within sixty days after receiving written notification from the District of such vacancy, then the vacancy may be filled by a majority of the remaining trustees then in office.

The trustees may be paid reasonable compensation for their services to the District, subject to approval by the Commission. Any and all expenses incurred in the performance of their duties shall be reimbursed by the District.

When the best interests of the District will be served thereby, the Board may, by a three fifths vote of the Board, petition the Commission to remove a trustee or to repeal the resolution appointing said trustee.

ARTICLE III - Officers

The officers of the Board shall consist of a Chairperson, Vice-Chairperson, and Secretary. The officers of the Board shall be elected positions. Except as otherwise approved by the Board for good cause shown, nominations shall be made and voted on during the first meeting of each calendar year. Nomination may be made by any trustee for any position. All positions shall be elected by a majority vote. If on the first ballot, no candidate receives a majority vote, there shall be a second ballot of the two candidates receiving the most votes. Elections may be by secret ballot if a trustee so desires. Terms of office shall be for a period of twelve (12) months, provided, however, that a trustee may continue to serve as an officer until a successor is elected. Any officer may be removed from office by a majority of the Board whenever, in the Board's judgment, the best interest of the District will be served thereby.

The officers of the Board shall have the following duties and responsibilities:

CHAIRPERSON -- The Chairperson of the Board shall preside at all meetings of the Board; shall have the duties normally conferred by parliamentary usage of this office; shall sign official notices and certificates; shall call special meetings of the Board; and shall represent the Board in official or unofficial capacities as the need shall arise.

VICE-CHAIRPERSON -- The Vice-Chairperson of the Board shall assume the duties of the Chairperson whenever the Chairperson is unable to perform such duties or whenever the Chairperson shall disqualify himself or herself from serving on a temporary basis. If neither the Chairperson nor the Vice-Chairperson is present at a meeting of the Board, any member of the Board may serve as a Temporary Chairperson by election of the members present, for that meeting only.

SECRETARY -- The Secretary shall be responsible for the minutes and records of the Board; preparation of agenda of regular and special meetings; notification of meetings to trustees and the public; attendance to the correspondence of the Board; and such other duties as are normally carried out by a secretary. The administrative staff of the District shall assist the Secretary of the Board.

ARTICLE IV - Meetings

Regular meetings of the Board will be conducted as needed in the offices of the District, the chambers of the Commission, or at such other place accessible to the public as may be determined by the Board from time to time, and shall be held monthly unless otherwise determined by the Board. A majority of the trustees shall constitute a quorum of the Board. When a quorum is not present, the meeting may be postponed or the trustee acting as Chairperson for the meeting may proceed with conducting the meeting with less than a quorum, provided that the trustees present must vote unanimously in order to approve or disapprove of any matter and any such vote shall not be effective unless the matter voted upon is submitted in writing to all of the trustees absent and approved in writing by at least one of their number without objection by any trustee concerning the vote on the matter at a meeting conducted with less than a quorum. In the event that any trustee objects in writing to said vote, the matter shall be tabled until the next meeting of the Board.

A special meeting may be called by the Chairperson at any time or upon a written request to call a special meeting by two (2) trustees. The notice of such meeting shall specify the purposes of such a meeting and no other business may be considered except by approval of a majority of the Board. The Secretary shall notify all members of the Board in writing not less than five (5) days in advance of such meeting.

Notwithstanding anything to the contrary in these by-laws, in case of an emergency or other extraordinary circumstance or at the discretion of the Board, the Board may meet in the most expeditious manner possible, including by conference call, video conference communication systems, or other similar electronic communication systems, provided that the means utilized is made available to each trustee and to the public.

ARTICLE V – Committees

The Board may from time to time establish committees to assist in discharging its responsibility for the operation and control of the District. Such committees may be standing committees or may be ad-hoc committees. Committees shall have the powers and duties as authorized by the Board.

ARTICLE VI – Public Hearings

The Board may from time to time hold public hearings when such hearings will be in the public interest and shall hold such public hearings as and in the manner required by law. Any case before the Board shall be presented in summary by the Secretary or other designated persons, and parties in interest shall have an opportunity to be heard. The Chairperson, with consent of the majority of the Board, can establish reasonable time limits for parties in interest to participate in the hearing.

ARTICLE VII – Employees of the Board

The Board may employ and fix the compensation of such staff as may be necessary to discharge the business and purposes of the District.

The Board may assign such title and delegate such operational and management responsibilities to such staff as the Board may determine.

The Board shall select a Treasurer, who may be either a trustee or other qualified person. The Treasurer so selected shall give such bond as may be required by the Board. The Treasurer shall provide the Board with an accounting of all funds of the District. The Treasurer shall be responsible for the preparation of the budget; prompt payment of principal and interest on any revenue bonds; timely payment of accounts; and proper investment of those funds of the District not needed for day-to-day operations.

The Board shall employ a registered professional engineer to perform the functions of a chief engineer including advising on technical matters regarding planning, construction, and maintenance of the sewers and treatment facilities of the District and under such terms and conditions as the Board may determine. Such employment shall be approved by a majority of the Board.

ARTICLE VIII - Conflict of Interest

Any trustee may disqualify himself or herself with respect to any matter before the Board on the grounds of conflict of interest, in which case such trustee shall not vote on such matter or take any action with a tendency to influence the vote on such matter. The Board may determine that a conflict of interest exists for a trustee with respect to any matter and may, by a majority vote, exclude that trustee from voting on and participating in discussion relating to the matter.

Notwithstanding the foregoing, the disqualified trustee may provide information relating to such matter to the Board upon request by the Board.

ARTICLE IX – Sunshine Law

The Board and District shall conduct its business in compliance with the provisions of the Missouri Sunshine Law, Chapter 610, RSMo, and the Board shall adopt policies to facilitate such compliance.

ARTICLE X – Amendment

These bylaws may be amended or repealed by a majority vote of the Board, provided that such amendment or repeal has been announced at a previous meeting and notice of the proposed amendment or repeal has been provided at least seven (7) days prior to the meeting on which such amendment or repeal is to be considered by the Board. These bylaws shall be reviewed annually at the first meeting of the Board held in each calendar year.

Adopted by Board Resolution, February 21, 2023.

APPENDIX C

BCRSD Capital Improvements Plan

Boone County Regional Sewer District Capital Improvements Plan

November 10, 2025
McClure Project No. 2022001400

Report For:
Boone County Regional Sewer District
1314 N. 7th St.
Columbia, MO 65201
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McCLURE™
Your vision. Engineered here.

BCRSD Capital Improvements Plan

Boone County Regional Sewer District

November 2025

McClure Project No. 2022001400

Prepared in Collaboration with:

Jesse Stephens – BCRSD Executive Director

Daniel Cunningham – BCRSD Project Manager

BCRSD Board of Trustees

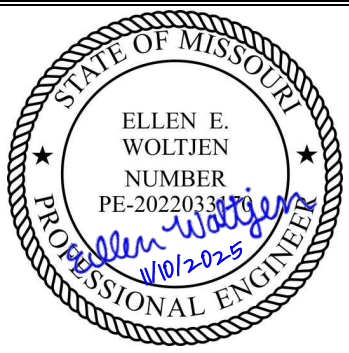
Randy Chann, Chair

Dave Bennett, Vice Chair

Brian Burks, Secretary

Bill Watkins, Trustee

Justin Aldred, Trustee



EXP. 12/31/2026

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Missouri.

Ellen Woltjen 11/10/2025

Ellen E. Woltjen - License No. 2022033170 (Date)

My license renewal date is December 31, 2026.

McCLURE

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0.0 EXECUTIVE SUMMARY

The Boone County Regional Sewer District (BCRSD or "District") has been providing sanitary sewer service across unincorporated Boone County since its establishment in 1973. BCRSD currently manages 22 active wastewater treatment facilities and associated collection systems, plus numerous gravity and pressure sewers that discharge to the City of Columbia sewer system. The treatment facilities managed by BCRSD primarily serve residential subdivisions and range in size from a 1,850 gallons per day (gpd) recirculating sand filter treatment plant to a 460,000 gpd oxidation ditch type mechanical treatment plant. Of the 22 treatment plants, 19 have permitted design capacities less than 100,000 gpd.

Over the past decade, new effluent limitations for ammonia and *Escherichia coli (E. coli)* have been promulgated by the Missouri Department of Natural Resources (MDNR). At the same time, above-average inflation in the construction industry has placed additional financial strain on the sewer sector. As a result of these and other contributing factors, the cost of providing wastewater treatment services to small, rural communities has risen considerably, a trend that is evident across the state. This Capital Improvements Plan (CIP) has been developed to outline a strategy for financing essential capital improvements that enable BCRSD to maintain cost-effective service.

Over the course of a year, McClure worked with BCRSD staff to identify issues affecting its wastewater infrastructure and develop planning level improvement recommendations to address changes in regulations, population growth, and aging facilities. Recommended improvements to BCRSD's wastewater collection and treatment infrastructure were divided into the following major categories:

1. Regulatory Compliance: Improvements essential for maintaining permit compliance.
2. Infrastructure Renewal: Improvements necessary to refurbish aging facilities or enhance functionality, focusing on condition improvement and system renewal.
3. Capacity Expansion: Improvements required to increase the overall treatment capacity of the system.
4. Collection System Upgrades: Improvements specifically targeting the collection system infrastructure.
5. Operational Enhancements: Improvements aimed at optimizing operations and maintenance processes.

The improvements were then categorized based on immediacy of need into the following implementation categories:

1. Phase 1: Improvements recommended for completion in 0-5 years.
2. Phase 2: Improvements recommended for completion in 6-10 years.
3. Phase 3: Improvements recommended for completion in 11-20 years.

The overall CIP developed for BCRSD's collection and treatment infrastructure is presented in Table 0.1 on the following page. Details regarding each recommended improvement are discussed in Sections 4.0, 5.0, and 6.0 of this report.

Table 0.1 BCRSD Capital Improvements Plan 2025

BCRSD Capital Improvements Plan 2025					
	Description	Phase 1 (0-5 YR)	Phase 2 (6-10 YR)	Phase 3 (11-20 YR)	Total
TREATMENT FACILITY PERMIT COMPLIANCE IMPROVEMENTS					
1	Rollingwood Plat 1 - Connect to Midway Crossing	-			-
2	Highfield Acres - Connect to City of Columbia	-			-
3	Brown Station WWTP - Connect to City of Columbia	$ 1,020,500			$ 1,020,500
4	Richardson Acres WWTF - Connect to Brown Station Pump Station	$ 1,956,900			$ 1,956,900
5	South Route K WWTP - New WWTP	$ 21,597,600			$ 21,597,600
6	Trails West WWTF - Connect to Midway Crossing		$ 1,715,500		$ 1,715,500
7	Twin Lakes WWTF - WWTF Upgrades		$ 2,284,100		$ 2,284,100
8	Cedar Gate WWTF - Connect to Brown Station Pump Station		$ 3,476,300		$ 3,476,300
9	Quarter Mile Hills WWTF - WWTF Upgrades			$ 1,697,400	$ 1,697,400
10	Sunnyslope WWTF - Connect to Hallsville			$ 1,059,900	$ 1,059,900
	Total Treatment Facility Permit Compliance	**$24,575,000**	**$7,475,900**	**$2,757,300**	**$34,808,200**
TREATMENT FACILITY INFRASTRUCTURE RENEWAL IMPROVEMENTS					
1	Kinkade Crossing WWTP Improvements	$488,900			$488,900
2	Meadow Village WWTP Improvements	$339,000			$339,000
3	Midway Crossing WWTP Improvements	$248,200			$248,200
4	Prairie Meadows WWTP Improvements	$1,345,400			$1,345,400
5	Rocheport WWTP Improvements	$75,400			$75,400
6	Rocky Fork WWTP Improvements	$487,100			$487,100
7	Trails West WWTF Improvements	$59,000			$59,000
8	American Outdoor Brands Improvements		$68,200		$68,200
9	Eagle Knoll WWTP Improvements		$255,400		$255,400
10	Midway USA Improvements		$68,200		$68,200
	Total Treatment Facility Infrastructure Renewal	**$3,043,000**	**$391,800**	**$0**	**$3,434,800**
TREATMENT FACILITY CAPACITY EXPANSION IMPROVEMENTS					
1	Rocky Fork WWTP Capacity Expansion	$1,255,800			$1,255,800
	Total Treatment Facility Capacity	**$1,255,800**	**$0**	**$0**	**$1,255,800**
COLLECTION SYSTEM IMPROVEMENTS					
1	Cedar Lake Siphon Sewer Elimination	$851,900			$851,900
2	Hillcreek Pressure Sewer Improvements	$183,900			$183,900
3	Woodlands Pressure Sewer Improvements	$239,000			$239,000
4	NewTown Pump Station Elimination	$145,700			$145,700
5	Rollingwood Aerial Crossing Elimination		$384,500		$384,500
6	Fairway West Pump Station Elimination		$1,336,200		$1,336,200
7	Clearview North Pump Station Replacement		$425,600		$425,600
8	Pump Station Improvements (BCP, Green Hills, & El Rey Heights)		$211,100		$211,100
9	Proposed Highway 163 / Route N Pressure Sewer			$4,086,400	$4,086,400
10	Water's Edge Sewer Improvements			$2,199,100	$2,199,100
	Total Collection System	**$1,420,500**	**$2,357,400**	**$6,285,500**	**$10,063,400**
OPERATIONAL ENHANCEMENTS					
1	Portable Sludge Press w/ Trailer (equipment only)	$1,531,538			$1,531,538
2	Portable Flow Meters	$68,919			$68,919
3	Collection System Evaluation	$638,141	$738,728	$2,182,875	$3,559,743
4	Collection System Rehabilitation	$3,190,704	$3,693,639	$10,914,373	$17,798,715
	Total Operations and Maintenance	**$5,429,302**	**$4,432,366**	**$13,097,248**	**$22,958,916**
	TOTAL IMPROVEMENTS	**$35,723,602**	**$14,657,466**	**$22,140,048**	**$72,521,116**

Note: All budget and cost data were compiled in 2024 and 2025. Costs were then inflated using a 5% annual inflation rate to the planning phase end year of 2030 for the Phase 1 recommendations, the midpoint year of 2033 for the Phase 2 recommendations, and the midpoint year of 2041 for the Phase 3 recommendations.

1.0 INTRODUCTION

1.1 District Overview

The Boone County Regional Sewer District (BCRSD or "District") was established in 1973 as a common sewer district pursuant to Chapter 204 of the Revised Statutes of the State of Missouri (RSMo). The mission of BCRSD is "to provide current and future customers with cost effective, reliable sanitary sewer service by collecting and treating wastewater, and to protect public health and the environment in accordance with local, state and federal permit requirements." BCRSD provides sanitary sewer collection and treatment services to customers throughout unincorporated Boone County and has been approved as a Level 2 Authority by the Missouri Clean Water Commission in accordance with 10 CSR 20-6.010(2). A Board of Trustees, appointed by the Boone County Commission, is responsible for the control and operation of BCRSD.

1.2 Purpose and Scope

The purpose of this Capital Improvements Plan (CIP) is to serve as an update to the *Master Plan for District Facilities* prepared by HDR Engineering, Inc. in 2013. The *Tier 2 Plan for Private Facilities* included in HDR's 2013 Master Plan has been updated as a separate document. The CIP considers long-term planning needs of BCRSD, providing recommendations for improvements to BCRSD facilities. The primary goals of this report are as follows:

1. Update the 2013 *Master Plan for District Facilities* prepared by HDR for long-term planning, allowing BCRSD to cost-effectively manage its facilities.
2. Prepare a CIP to support BCRSD's financial planning and potential future bond election.
3. Prepare a CIP to support a utility user rate study.

The scope of this CIP includes the following:

1. Summary of background information relevant to BCRSD's service area.
2. Review and update key regulatory requirements driving the need for treatment process upgrades.
3. Evaluation of existing wastewater treatment facilities, including an analysis of capacity, condition, and performance.
4. Evaluation of existing collection system infrastructure with planning level improvement recommendations and cost estimates.
5. Develop a preliminary strategy and schedule for completing capital improvement recommendations.

1.3 Previous Reports and References

The following resources were referenced in the development of this report:

- Master Plan for District Facilities and Tier 2 Plan for Private Facilities (HDR, Inc. 2013)
- Columbia Area Transportation Study Organization (CATSO) FY 2050 Long-range Transportation Plan (2019)

- Boone County Master Plan (The i5Group, 2025)
- Facility Plan for Brookfield Estates WWTP Upgrades (Crockett Engineering Consultants, 2021)
- Highfield Acres Facility Plan (Cochran Engineering, 2016)
- Midway Area Wastewater Facility Plan (McClure Engineering Company, 2022)
- Quarter Mile Hills Interconnection and Lagoon Closure Facility Plan (Cochran Engineering, 2017)
- Richardson Acres and Brown Station Wastewater Improvements Facility Plan Amendment 2 (HDR, Inc. 2021)
- Rollingwood Plat No. 1 Wastewater Improvements Facility Plan (HDR, Inc. 2017)
- South Route K Facility Plan (Donohue & Associates, Inc. 2017)
- Sunnyslope Facility Plan (Cochran Engineering, 2019)
- Facility Plan for Trails West Subdivision Pump Station & Lagoon Closure (Allstate Consultants LLC, 2012)
- Twin Lakes Subdivision WWTP Wastewater Facility Plan (Shafer, Kline & Warren, Inc. 2011)
- Edgewater Lots 1-14 Wastewater Evaluation (HDR, Inc. 2021)
- Hillcreek Subdivision Low Pressure Sewer System Report (HDR, Inc. 2014)
- The Woodlands Low Pressure Sewer System Analysis (HDR, Inc. 2019)

2.0 BACKGROUND INFORMATION

2.1 Study Area

The study area for the Capital Improvements Plan is all of Boone County, Missouri where BCRSD has existing or planned wastewater collection system and treatment infrastructure. Boone County encompasses an area of approximately 691 square miles in central Missouri. In the 2020 U.S. Census, Boone County was the eighth most populous county in Missouri. The City of Columbia, located in central Boone County, is the fourth largest city in Missouri. Additional cities in the county include Ashland, Centralia, Hallsville, Rocheport, and Sturgeon.

The majority of BCRSD's customers and infrastructure are located in unincorporated Boone County outside of the corporate limits of a city. However, in certain areas BCRSD does provide service to customers located within the City of Columbia through sewer service connection agreements. BCRSD also owns the wastewater system that serves the City of Rocheport. At the time of this report, BCRSD owns and operates 22 wastewater treatment facilities. The location of these facilities is shown on the following page in Exhibit 2.1. BCRSD's three largest treatment facilities are the Rocky Fork WWTP located north of Columbia, the South Route K WWTP located south of Columbia, and the Midway Crossing WWTP located west of Columbia.

2.1.1 Topography and Watersheds

Boone County has a varied topography ranging in elevation from approximately 540 feet above sea level at the lowest point to approximately 940 feet above sea level at its peak. The southwestern perimeter of the county is bordered by the Missouri River, and the southeastern perimeter generally follows Cedar Creek. The vast majority of land area in the county drains to the Missouri River as part of the Lower Missouri-Moreau (10300102) hydrologic unit code (HUC) 8 watershed. A small portion of northeastern Boone County eventually drains to the Mississippi River via the Salt River as part of the South Fork Salt (05100102) HUC 8 watershed.

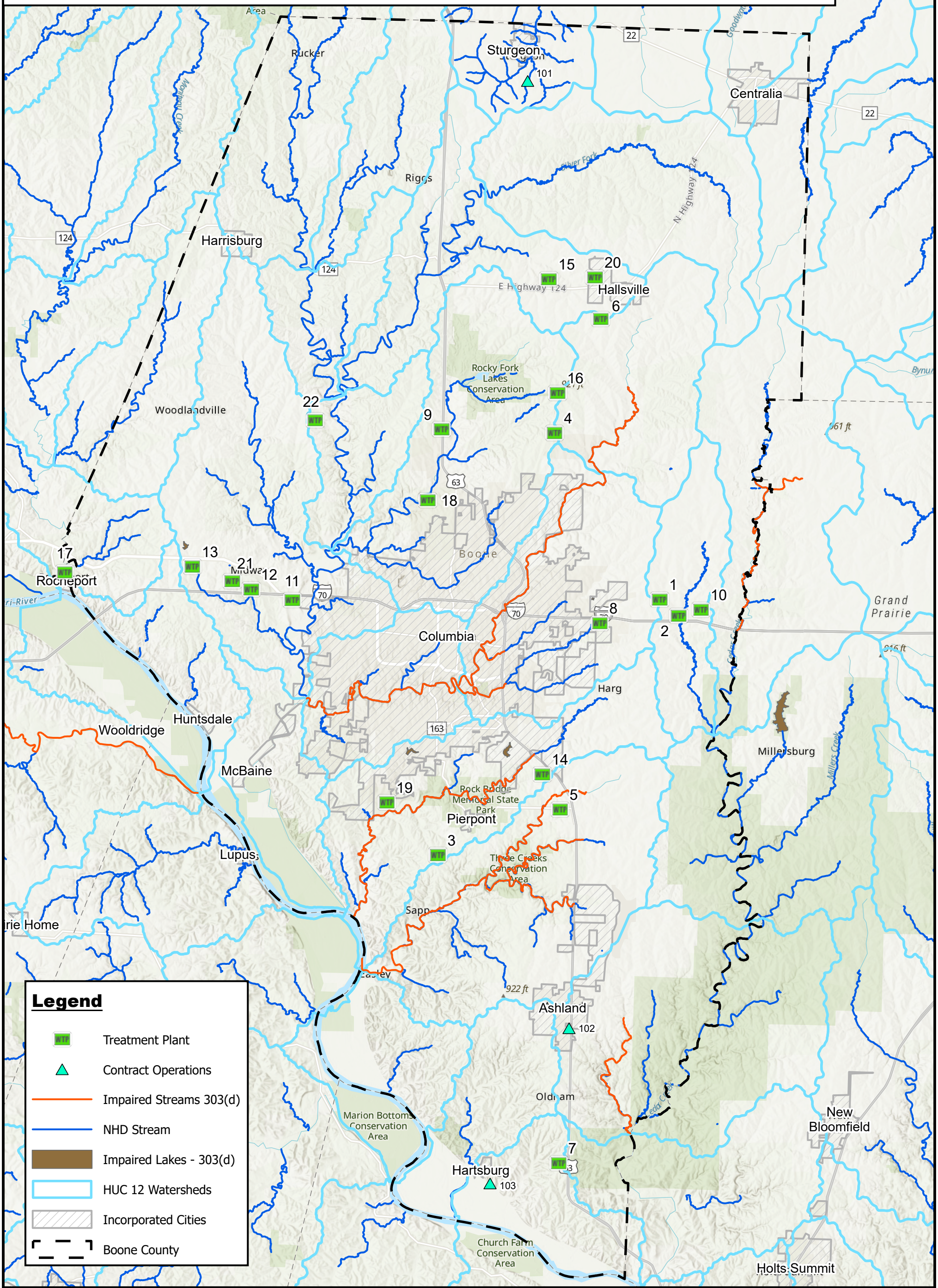
Besides the Missouri River, Perche Creek is the largest stream in Boone County, and the Perche Creek Watershed is the largest major watershed in Boone County, encompassing the central and northern two-thirds of the county. The Greater Bonne Femme Watershed includes the Bonne Femme and Little Bonne Femme sub-watersheds, which drain much of the southern third of the county. Areas south and west of the City of Columbia are known for their karst topography characterized by rocky ground, caves, sink holes, and losing streams.

BCRSD WWTFs

1- American Outdoor Brands
2- Bobcat of Columbia
3- Brookfield Estates
4- Brown Station RSF
5- Butch's Investments
6- Cedar Gate
7- Eagle Knoll
8- Highfield Acres
9- Kinkade Crossing
10- Meadow Village
11- Midway Arms
12- Midway Crossing
13- Midway USA
14- Prairie Meadows
15- Quarter Mile Hills
16- Richardson Acres
17- Rocheport
18- Rocky Fork
19- South Route K
20- Sunny Slope
21- Trails West
22- Twin Lakes

CONTRACT OPERATIONS

101- Sturgeon
102- Ashland
103- Hartsburg



Legend

- Treatment Plant
- Contract Operations
- Impaired Streams 303(d)
- NHD Stream
- Impaired Lakes - 303(d)
- HUC 12 Watersheds
- Incorporated Cities
- Boone County

Exhibit 2.1- BCRSD WWTFs & Contract Operation Facilities

BCRSD CIP | Boone County, MO | 3/12/2025

0 7,750 15,500
Feet

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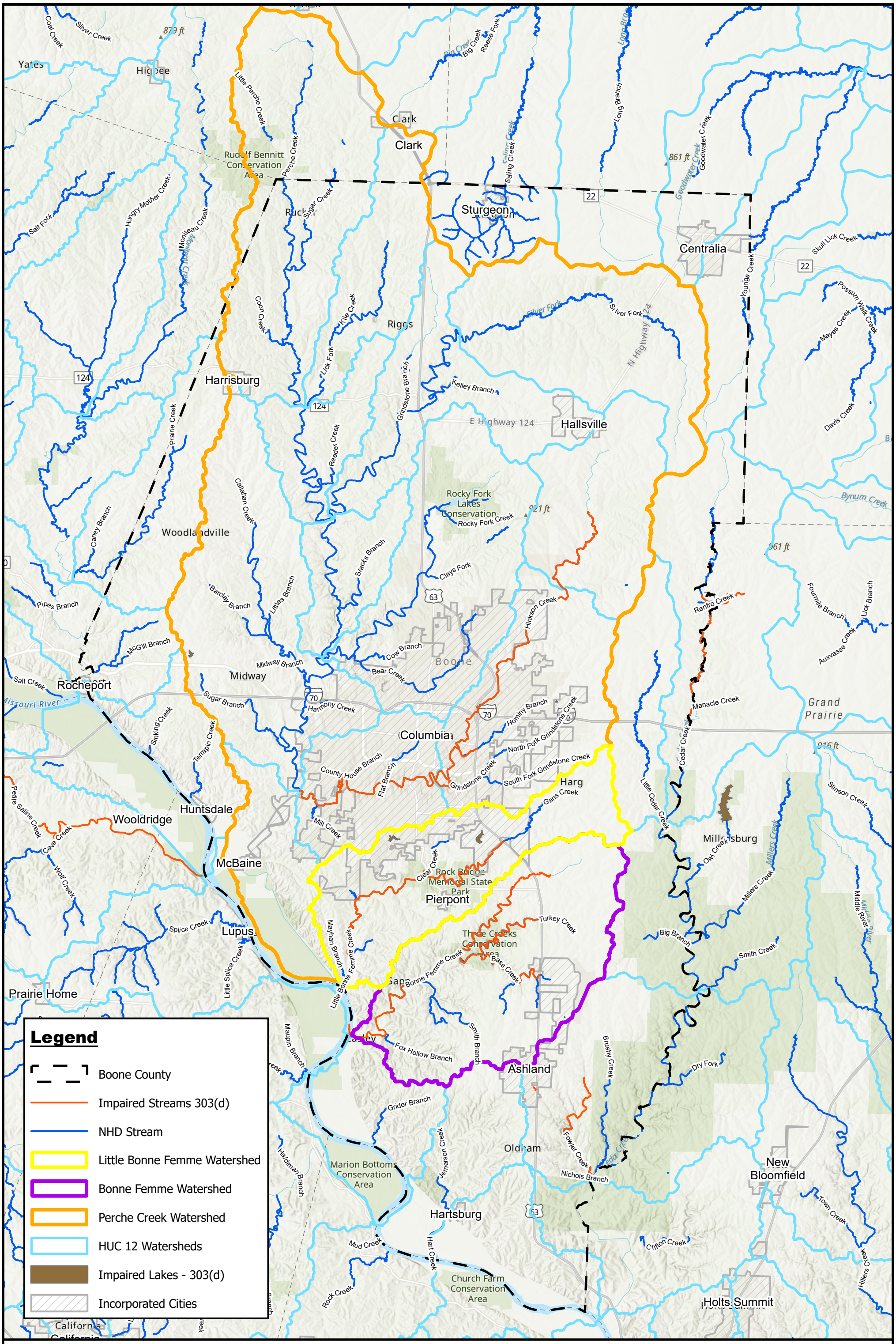
Document Path: C:\2022001400\07-GIS\MXD\BCRSD_MasterPlan\BCRSD_MasterPlan.aprx



Legend

- Boone County
- Impaired Streams 303(d)
- NHD Stream
- Little Bonne Femme Watershed
- Bonne Femme Watershed
- Perche Creek Watershed
- HUC 12 Watersheds
- Impaired Lakes - 303(d)
- Incorporated Cities

Exhibit 2.2 Boone County Major Watersheds

BCRSD CIP | Boone County, MO | 2/14/2025

0 8,250 16,500

Feet

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2.2 Planning Period

The planning period for the Capital Improvements Plan is approximately 20 years through the year 2045 for the purpose of identifying improvement recommendations and preparing cost estimates. Additionally, population growth projections were evaluated beyond the next 20 years to better understand potential scenarios for population increases throughout the county. The capital improvements recommendations are divided into three phases based on the immediacy of the need to complete the improvements:

1. Phase 1: Improvements to be completed in the next 0 to 5 years.
2. Phase 2: Improvements to be completed in the next 6 to 10 years.
3. Phase 3: Improvements to be completed in the next 11 to 20 years.

It is recommended that the CIP be reviewed annually and updated at a minimum of 10-year intervals.

2.3 Population and Growth

2.3.1 Historical Population

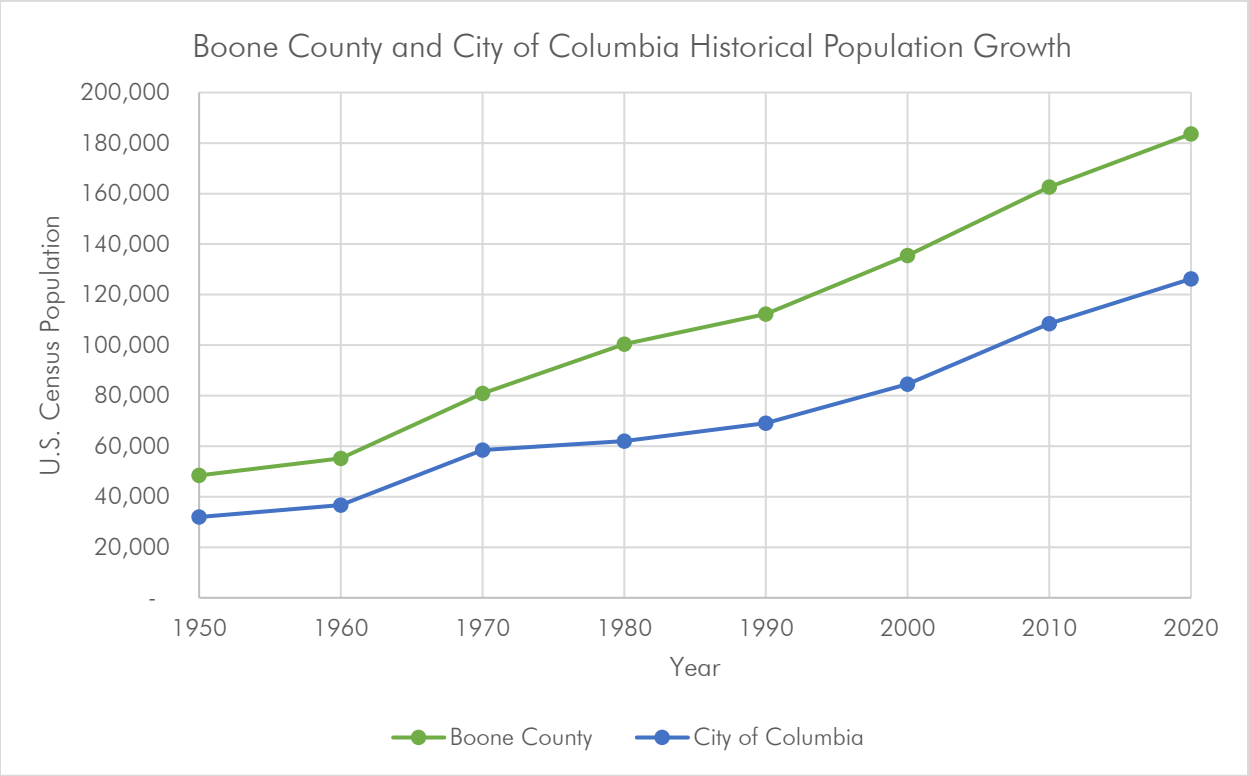
Historically, Boone County has experienced a steady increase in population growth dating back to the 1950s. Much of this growth has been driven by the City of Columbia and the University of Missouri. The 2020 United States Census recorded 183,610 persons residing in Boone County with 126,254 of these residents within the City of Columbia. Table 2.1 and Figure 2.1 present the historical population growth in the county and the City of Columbia based on U.S. Census data.

Table 2.1 Boone County Historical Population

	Boone County		City of Columbia	
Year	Population	Annualized Growth Rate*	Population	Annualized Growth Rate*
1950	48,432		31,974	
1960	55,202	1.32%	36,650	1.37%
1970	80,911	2.60%	58,521	3.07%
1980	100,376	2.46%	62,061	2.24%
1990	112,379	2.13%	69,101	1.95%
2000	135,454	2.08%	84,531	1.96%
2010	162,642	2.04%	108,500	2.06%
2020	183,610	1.92%	126,254	1.98%

*Annualized growth rate for each decade was calculated relative to 1950.

Figure 2.1 Boone County and City of Columbia Historical Population Growth



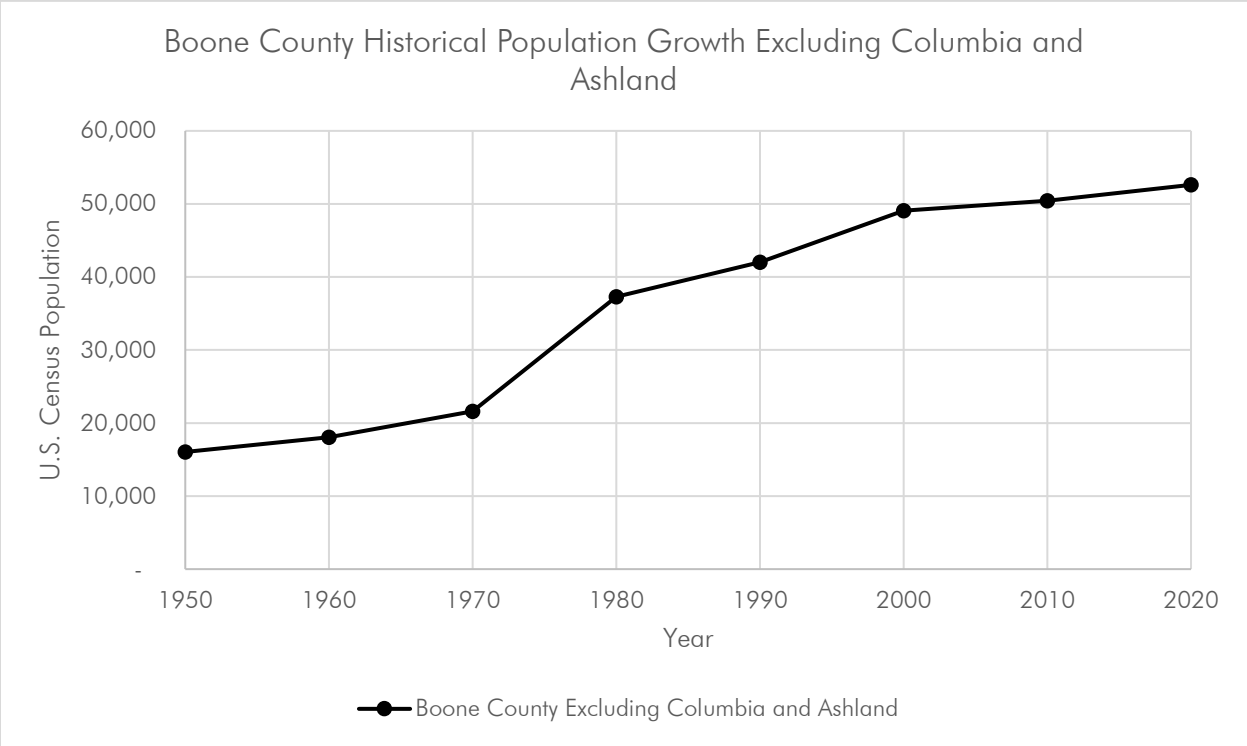
The annualized rate of growth in Boone County and the City Columbia since 1950 is approximately 1.92% per annum and 1.98% per annum respectively. As the majority of BCRSD's customers are located in unincorporated Boone County, population data for the county excluding Columbia and the City of Ashland, the second largest city in the county, was also examined and is presented in Table 2.2 and Figure 2.2. Extracting the population of the cities of Columbia and Ashland results in a 2020 population of approximately 52,609 persons and a slightly decreased annualized growth rate of approximately 1.71% per annum since 1950.

Table 2.2 Boone County Historical Population Excluding Columbia and Ashland

Boone County Excluding Columbia and Ashland		
Year	Population	Annualized Growth Rate*
1950	16,042	
1960	18,057	1.19%
1970	21,621	1.50%
1980	37,294	2.85%
1990	42,026	2.44%
2000	49,054	2.26%
2010	50,435	1.93%
2020	52,609	1.71%

*Annualized growth rate for each decade was calculated relative to 1950.

Figure 2.2 Boone County Historical Population Growth Excluding Columbia and Ashland



2.3.2 Projected Population

The 2013 Master Plan by HDR referenced population projections for Boone County completed by several agencies in Missouri. The population projections provided by the Missouri Economic Research and Information Center and the Missouri Office of Administration have not been updated since the 2013 Master Plan. The Long-Range Transportation Plan prepared by the Columbia Area Transportation Study Organization (CATSO) was updated in 2019, and the plan projected the population in Boone County to reach 292,969 by 2050 based on a 1.50% annual growth rate. The county is currently in the process of updating the Boone County Master Plan, which was last revised in 1996. Initial growth projections released by the Boone County Master Plan team led by the i5Group projected the population in Boone County to reach approximately 252,000 by 2050.

Although the planning period for the CIP was identified as 20 years, population growth to the year 2050 is presented for consistency with similar planning reports. Based on the historical population trends described in Section 2.3.1 above, a 1.50% growth rate was applied to the 2020 census population to perform growth projections for the purpose of this CIP. Applying this method results in a 2050 population of approximately 286,997 residents within Boone County by 2050. Excluding the population growth within Columbia and Ashland, the 2050 population is projected to be 82,232 residents. This represents a 30-year increase of approximately 29,623 residents from 2020 to 2050 that fall within the BCRSD service area of unincorporated Boone County. Projected populations for Boone County are presented in Figures 2.3 and 2.4.

Figure 2.3 Boone County 2050 Projected Population

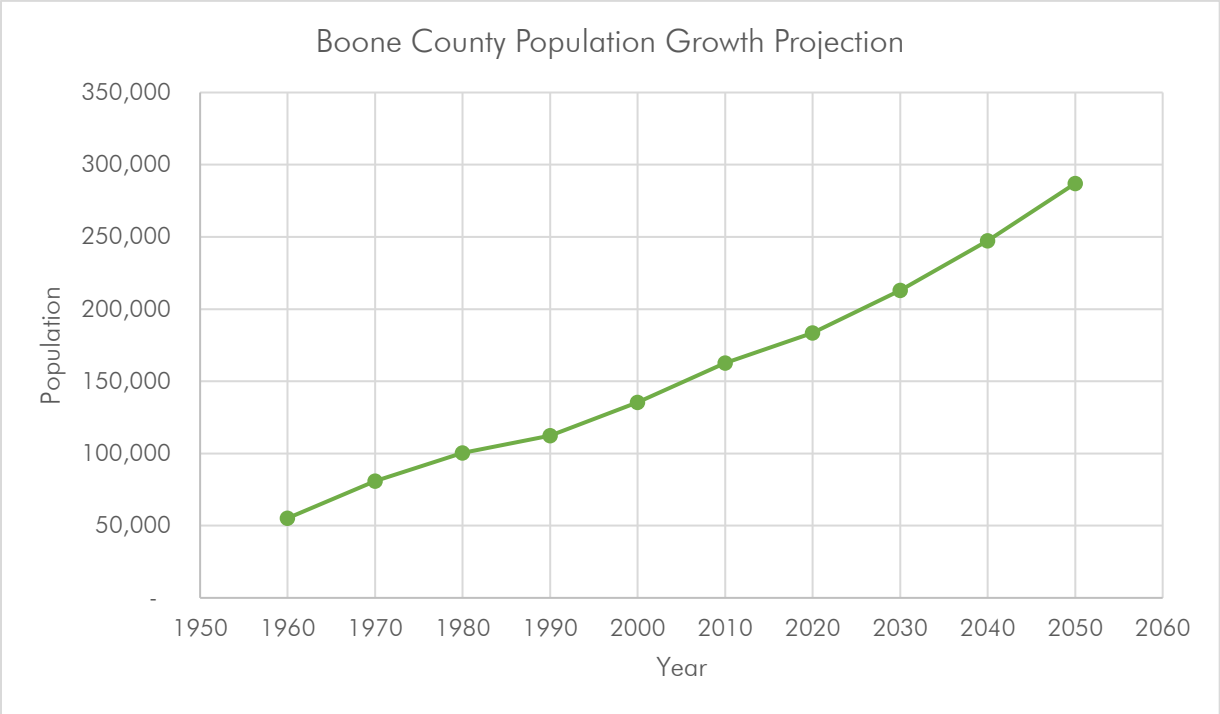
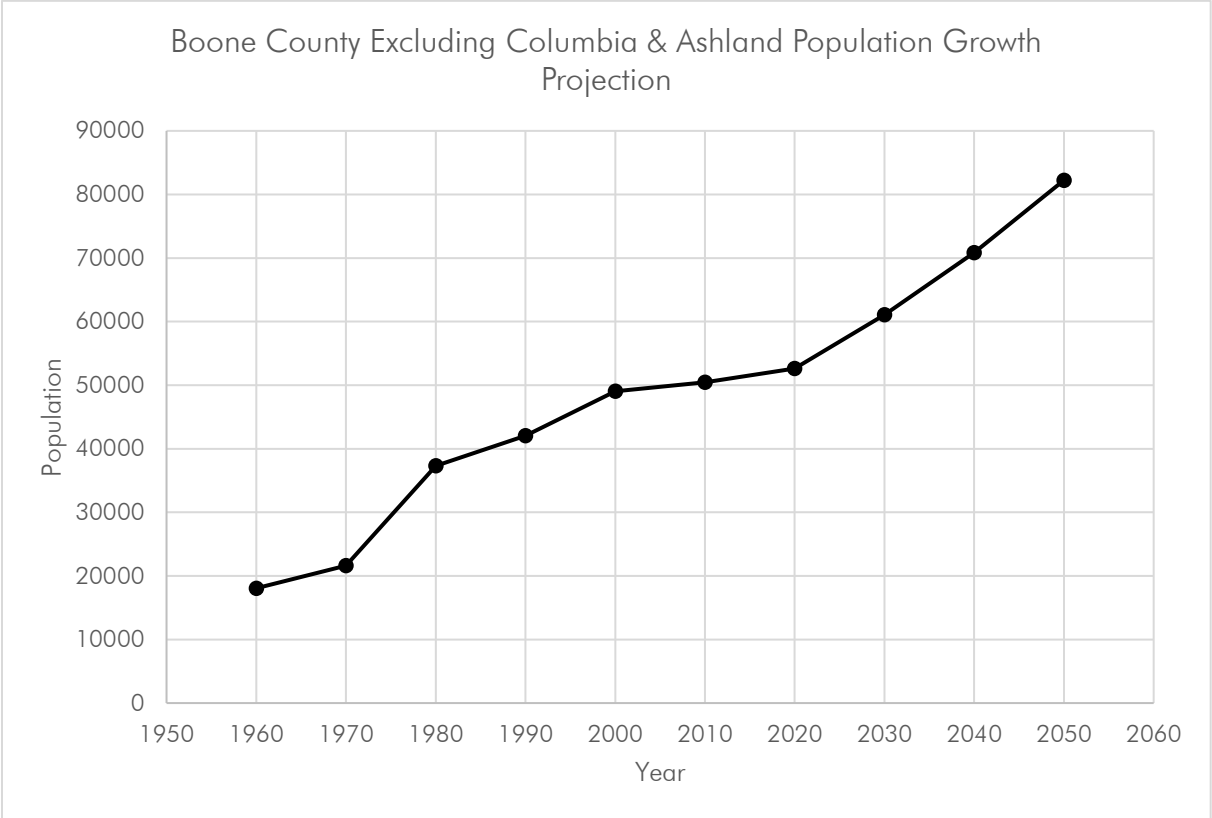


Figure 2.4 Boone County Excluding Columbia and Ashland 2050 Projected Population



2.3.3 BCRSD Customer Growth

As of August 2024, BCRSD serves 7,752 customers. This number has steadily increased over the past 10 years from 6,352 customers in 2014, see Table 2.3.

Table 2.3. Number of BCRSD Customers: 2014 – 2024

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
No. of BCRSD Customers	6,352	6,381	6,435	6,534	6,566	6,599	6,950	7,178	7,408	7,420	7,752

Since 2014, the annualized rate of growth of BCRSD customers is approximately 2.01% per annum, which is higher than the growth rate observed in unincorporated Boone County. This higher rate of growth is likely attributed to high density private subdivisions connecting to BCRSD systems for wastewater treatment. To project BCRSD's future customer growth over the planning period, the 1.50% growth rate identified for Boone County was applied to the 2024 customer count. Applying this method results in a projected number of customers of 10,441 in the year 2044, or an increase of 2,689.

Based on a review of the draft land use concepts prepared by the Boone County Master Plan planning team and meetings with BCRSD and City of Columbia staff, the proposed increase in customers is projected to fall within the following key areas:

Table 2.4 BCRSD Projected Customer Growth

BCRSD Service Area	Estimate of Projected Customer Growth (2024 – 2044)
Rocky Fork	300 – 500
South Route K	1,200 – 1,800
Midway Crossing	100 – 200
North Fork Grindstone Creek / Little Cedar Creek / Hominy Branch Watershed	200 – 400
Outlying Rural Subdivisions	300 – 400
Total	2,100 – 3,400

The South Route K service area located in southwest Columbia is the service area with the largest potential for future customer growth. Housing near southwest Columbia is in high demand; however, new development in this area is limited by the lack of available sewer and wastewater treatment capacity. The projected growth of 1,200 to 1,800 customers in the South Route K service area is based on a proposed alternative to relocate the plant farther south in the Little Bonne Femme Creek watershed and expand its treatment capacity. These recommendations are discussed in Section 4.19.

2.4 Economic Data

As of the 2020 U.S. Census, there are 79,836 total housing units in Boone County. The employment rate for the county stands at 64.7%, with an unemployment rate of 3.0% according to the 2023 American Community Survey (ACS) conducted by the U.S. Census Bureau. The median household income (MHI) in Boone County is $69,218, slightly above the Missouri state MHI of $68,545. In

comparison, an estimated 15.5% of the population in Boone County lives below the poverty line, which is higher than the state average of 12.0% per the 2023 ACS data. This data is summarized below in Table 2.5.

Table 2.5 Boone County and State of Missouri Economic Data

Factor	Description	Boone County Status	State of Missouri Status
Housing Units (2020 Census)	Number of housing units (occupied and vacant)	79,836	2,786,621
MHI (2023 ACS)	Income and benefits (2023 inflation-adjusted dollars)	$69,218	$68,545
Employment Rate (2023 ACS)	Population 16 and over in civilian labor force	64.7%	61.5%
Unemployment Rate (2023 ACS)	Population of unemployed people in civilian labor force	3.0%	3.4%
Poverty Status (2023 ACS)	Population for whom poverty status is determined	15.5%	12.0%

3.0 REGULATORY OVERVIEW

3.1 General

Of the 22 wastewater treatment facilities operated by BCRSD, 20 are permitted by MDNR under the National Pollutant Discharge Elimination System (NPDES). The two unpermitted facilities are exempt from MDNR permit requirements as non-discharging facilities for domestic wastewater flows of three thousand gallons per day (3,000 gpd) or less. The NPDES permits specify the level of treatment required for each facility to maintain compliance with applicable state and federal regulations.

3.2 Current Regulatory Drivers

3.2.1 Schedules of Compliance

At the time of this report, 11 of BCRSD's WWTFs have a schedule of compliance (SOC) to meet new final effluent limitations included in their most recent operating permit. These facilities are listed below in Table 3.1. The majority of the facilities are required to meet new effluent limitations for ammonia and *E. coli.* The deadline to comply with the new limits is specific to each facility and ranges from September 2024 to November 2038. The ability to comply with these new requirements is the key regulatory driver for treatment facility improvements over the next decade.

Table 3.1 Schedule of Compliance Summary

Facility	Permit Expiration Date	SOC Deadline	Effluent Parameters
Midway Arms	6/30/2025	9/1/2024	Ammonia
Highfield Acres	3/31/2025	11/1/2025	Ammonia and *E. coli*
Richardson Acres	3/31/2025	11/1/2028	Ammonia and *E. coli*
Brown Station	3/31/2025	11/1/2028	Ammonia and *E. coli*
South Route K	3/31/2025	11/1/2029	Ammonia and *E. coli*
Trails West	6/30/2025	11/1/2031	Ammonia and *E. coli*
Twin Lakes	9/30/2024	11/1/2033	Ammonia and *E. coli*
Cedar Gate	6/30/2025	11/1/2034	Ammonia and *E. coli*
Brookfield Estates	3/31/2025	11/1/2035	Chloride
Quarter Mile Hills	12/31/2024	11/1/2037	Ammonia and *E. coli*
Sunnyslope	12/31/2024	11/1/2038	Ammonia and *E. coli*

3.2.2 Sensitive and Impaired Waterbodies

Additional regulatory drivers include effluent receiving streams with special protections such as losing streams, Outstanding State Resource Waters (OSRW), and impaired waterbodies.

A losing stream is defined in Missouri's Water Quality Standards as "one that discharges 30% or more of its flow through natural processes such as through permeable geologic materials into a bedrock aquifer." As water in a losing stream enters groundwater much faster than a typical stream, special protections are applied to WWTF discharges within two miles upstream of a losing stream. These protections include more restrictive effluent limitations for Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TTS). Per the MDNR Water Quality Standards Map Viewer, three of BCRSD's

treatment facilities discharge to a losing stream. These facilities and their respective receiving stream are listed in Table 3.2. Out of these three facilities, losing streams limits are currently only applied in the Eagle Knoll Subdivision WWTF operating permit.

Table 3.2 BCRSD Facilities Discharging to Losing Streams

Treatment Facility	Receiving Stream Identified as Losing
Brookfield Estates WWTP	Tributary to Little Bonne Femme Creek
Eagle Knoll WWTP	Tributary to Slate Creek
Prairie Meadows WWTP	Gans Creek

Outstanding State Resource Waters (OSRW) are defined in Missouri's Water Quality Standards as "high quality waters with a significant aesthetic, recreational or scientific value which are specifically designated by the Clean Water Commission. These waters receive special protection against any degradation in water quality as per 10 CSR 20-7.031(2)(C)." BCRSD has one treatment facility that discharges to an OSRW. That facility is the Prairie Meadows WWTP, which discharges to Gans Creek.

Impaired waterbodies are those waters identified as not meeting water quality standards and for which adequate water pollution controls have not been required. These waterbodies are identified by MDNR and placed on the Missouri Section 303(d) Listed Waters. BCRSD has three facilities that are identified as discharging to a 303(d) Listed Waterbody. Those facilities are included in Table 3.3. None of these facilities are considered a source of the identified pollutant impairment.

Table 3.3 BCRSD Facilities Discharging to 303(d) Listed Streams

Treatment Facility	2022 303(d) Listed Receiving Stream	Pollutant Impairment	Source
Brookfield Estates WWTP	Little Bonne Femme Creek	*E. coli*	Source Unknown
Prairie Meadows WWTP	Gans Creek	*E. coli*	Rural Non-point Sources
South Route K WWTP	Little Bonne Femme Creek	*E. coli*	Source Unknown

The Clean Water Act requires states to develop Total Maximum Daily Loads (TMDLs) for all waters listed on its 303(d) List of impaired waterbodies. A TMDL is a calculation of the maximum amount of a pollutant that a body of water can assimilate and not exceed the water quality criteria for that waterbody. The goal of a TMDL is to restore an impaired waterbody to compliance with Missouri's Water Quality Standards. All BCRSD treatment facilities eventually drain to the Missouri River, which has a TMDL that was approved by the EPA on November 3, 2006. The TMDL was established for the pollutants Chlordane and Polychlorinated Biphenyls (PCBs). The TMDL discusses that there are no Missouri treatment facilities that have a potential to discharge detectable amounts of PCBs or Chlordane; and therefore, none of the BCRSD treatment facilities are considered a source of the impairment. Hinkson Creek is another major stream in Boone County that has an EPA approved TMDL. The Hinkson Creek TMDL was approved by EPA on January 28, 2011 for pollutants of concern which are unknown. Several BCRSD facilities are located within the Hinkson Creek watershed; however, the source of pollutants in the TMDL is listed as urban runoff and urban nonpoint sources. Domestic wastewater treatment facilities are not considered to contribute to the impairment of Hinkson Creek.

3.3 Future Regulatory Drivers

3.3.1 Total Phosphorus Rule (Statewide Nutrient Limits)

Effective October 30, 2023, the Effluent Regulations found in 10 CSR 20-7.015 were updated to establish a procedure for implementing total phosphorus reduction requirements in Missouri State Operating Permits for point source dischargers. The new rule requires a target reduction of total phosphorus for all domestic point sources with a design flow of greater than or equal to one million gallons per day (MGD), and all industrial facilities categorized as major that typically discharge phosphorus in their industrial wastewater.

Facilities subject to the rule as promulgated in 10 CSR 20-7.015(9)(B)2. currently have four options for compliance with the phosphorus reduction targets:

1. Concentration based: Total phosphorus target level of 1.0 milligrams per liter (1.0 mg/L), as an annual average; or
2. Mass based: Total phosphorus annual mass loading target equal to 1.0 mg/L based on the design flow; or
3. An overall reduction of total phosphorus from influent to effluent by seventy-five percent (75%) based on a one-time calculation of adequately representative effluent data; or
4. An overall reduction of annual load of total phosphorus discharged by seventy-five percent (75%) based on a one-time calculation of adequately representative effluent data.

Implementation dates for compliance with the rule varies by size and type of facility, and the rule does allow for permittees to request alternative implementation dates with justification. Currently, for domestic point source facilities with a design flow $>$ 15 MGD the rule must be implemented by January 1, 2029. For domestic point sources with a design flow of $\leq$15 MGD and $\geq$1 MGD, the rule must be implemented by January 1, 2033. For industrial facilities, the rule must be implemented by January 1, 2034.

The rule also includes provisions for facilities to utilize nutrient credits as part of a nutrient trading program to comply with the phosphorus reduction targets. To participate in the Missouri Nutrient Trading Program, facilities are required to submit plans for credit generation for approval by MDNR.

Currently, none of BCRSD's wastewater treatment facilities have a permitted design flow greater than or equal to 1 MGD; and therefore, are not subject to the new Total Phosphorus reduction targets. MDNR has not released information regarding if and when rulemaking to establish phosphorus reduction targets for facilities with design flows $<$ 1 MGD will be pursued. Based on the implementation dates for facilities with design flows $\geq$ 1 MGD, it is not anticipated that reduction targets for smaller facilities will be required within the next 10 years. For the purposes of this CIP, upgrades to BCRSD's treatment facilities to meet effluent limitations for total phosphorus were not evaluated. It is recommended that considerations for a treatment facility's ability to be adapted for future nutrient removal are made during the planning and design phase of any major treatment plant upgrade.

3.3.2 Numeric Nutrient Criteria for Lakes

On December 14, 2018, EPA approved Missouri's numeric nutrient criteria for lakes located in 10 CSR 20-7.031(5)(N) of Missouri's Water Quality Standards. The rule includes numeric chlorophyll-a

criteria for lakes based on ecoregion. The criteria apply to all lakes ten acres or larger during normal conditions that are assigned designated uses in the Missouri Use Designation Dataset, with the exception of lakes located in the Big River Floodplain. Domestic treatment facilities that are determined through a reasonable potential analysis to cause or contribute to violations of lake nutrient criteria should expect effluent limitations for these parameters in future permits. Currently, there are no lakes designated as impaired for the nutrient criteria located in Boone County. Additionally, none of the BCRSD treatment facilities discharge to a lake, so the new numeric nutrient criteria for lakes does not impact any of BCRSD's existing operating permits.

3.3.3 Ammonia Criteria for Aquatic Life Protection

In 2013, EPA updated the aquatic life criteria for ammonia to reflect new data on sensitive freshwater mussels and snails. EPA's final *Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater* (2013) incorporates scientific views received on EPA's 2009 draft updated ammonia criteria and supersede EPA's previously recommended 1999 ammonia criteria. Current ammonia criteria in Missouri are based on the 1999 recommendation. MDNR is currently evaluating potential updates to the water quality standards to adopt the 2013 ammonia criteria in two phases. Phase 1 would adopt the 2013 ammonia criteria statewide, except for the Missouri and Mississippi Rivers. The 2013 ammonia criteria would later be adopted for appropriate segments of the Missouri and Mississippi Rivers in a subsequent rulemaking under Phase 2.

Adoption of the 2013 ammonia criteria will result in lower effluent limitations for ammonia. As a flexibility to the more stringent criteria, MDNR is developing an ammonia water quality standards variance to provide a qualifying facility with temporarily relaxed ammonia effluent limits when compliance with the new water quality-based effluent limits is not feasible due to cost. As part of the variance, the department plans to establish ammonia limits based on a facility's highest attainable condition. The facility must then develop and implement a Pollution Minimization Plan that identifies actions to achieve the highest attainable condition during the variance period. BCRSD facilities that may qualify for the variance period include: Trails West, Twin Lakes, Cedar Gate, Quarter Mile Hills, and Sunnyslope.

Additionally, MDNR is proposing a staggered implementation approach that would provide time following the criteria effective date before the criteria is implemented in permits. For facilities with a design flow less than 0.5 MGD, the criteria would not be implemented for 60 months following the final rulemaking. The schedule of compliance (SOC) process allowing additional time to achieve compliance with the new water quality standards would also be available.

Since the rulemaking has not been formally initiated and the timing and details of the potentially reduced effluent ammonia limitations are not finalized, upgrades to BCRSD's treatment facilities to meet reduced ammonia limits were not evaluated as part of this CIP. It is recommended that considerations for a treatment facility's ability to treat for reduced ammonia limits are made during the planning and design phase of any major treatment plant upgrade. As previously mentioned, several of BCRSD's treatment plants are under a current compliance schedule to meet new final effluent limitations for ammonia. If the preferred alternative for compliance is a treatment facility upgrade as opposed to regionalization, it is recommended that the improvements are designed to meet stringent effluent ammonia limitations.

3.3.4 Emerging Contaminants

There are several contaminants of emerging concern (CECs) receiving increased attention from EPA and the public. The most notable of these contaminants are per- and polyfluoroalkyl substances (PFAS), which are widely used, long lasting chemicals that do not degrade easily in the environment. MDNR has established a Per- and Polyfluoroalkyl Substances (PFAS) Workgroup to begin evaluating issues related to PFAS in response to stakeholder concerns regarding these contaminants. At this time, there are no effluent wastewater monitoring requirements for PFAS, and there is no formal rulemaking in process. The MDNR Water Quality Standards Workgroup has discussed implementing a mandatory monitoring phase for PFAS in the next few years with the goal of identifying potential sources of PFAS entering domestic wastewater treatment plants. Additionally, PFAS in residual sludge and biosolids from the wastewater treatment process has raised concerns as biosolids are commonly land applied as a fertilizer on agricultural lands. Currently, no federal criteria have been established for PFAS in biosolids. Due to the uncertainty surrounding the timing and implementation of future PFAS regulations, capital improvements related to the treatment and disposal of PFAS were not evaluated.

4.0 EVALUATION OF TREATMENT FACILITIES

The 2013 *Master Plan for District Facilities* included an evaluation of 37 BCRSD treatment facilities. Of those 37 facilities, 18 have connected to either the Rocky Fork WWTP, the Midway Crossing WWTP, or the City of Columbia and no longer have an active treatment facility.

Table 4.1 below includes a list of those facilities included in the 2013 Master Plan that are no longer in service.

Table 4.1 BCRSD Treatment Facilities Closed Since the 2013 Master Plan

Past BCRSD Treatment Facilities	Update
Bon Gor Lake Estates	Connected to Rocky Fork WWTP by gravity sewer
Clearview Acres Subdivision	Connected to Rocky Fork WWTP by gravity sewer
County Downes	Connected to Rocky Fork WWTP by gravity sewer
El Rey Heights	Connected to City of Columbia by pump station and force main
Fall Creek Subdivision	Connected to City of Columbia by forcemain
Hillview Acres Subdivision	Connected to City of Columbia by pump station and force main
Lake Capri Subdivision	Connected to City of Columbia by pump station and force main
Lee Heights	Connected to City of Columbia by pump station and force main
Oberlin Valley	Connected to City of Columbia by pump station and force main
Phenora South Subdivision	Connected to Rocky Fork by gravity sewer
Powell Community Lagoon	Connected to Rocky Fork by gravity sewer
Rollingwood Plat #1	Connected to Midway Crossing WWTP by pump station and force main
Sharidan Hills Subdivision	Connected to City of Columbia by pump station and force main
Springpark Subdivision	Connected to City of Columbia by pump station and force main
Sun Valley Estates	Connected to Rocky Fork by pump station and force main
Sunrise Estates NE and NW	Connected to City of Columbia by gravity sewer
Wagon Trail Heights	Connected to Rocky Fork by gravity sewer
Westwood Meadows	Connected to City of Columbia by gravity sewer

Since the 2013 Master Plan, BCRSD has taken ownership of three additional treatment facilities bringing the total to 22 active WWTFs. This includes 9 mechanical plants, 6 aerated lagoon systems, 1 non-aerated lagoon system, 2 recirculating sand filters, and 4 drip irrigation systems. An evaluation of each facility is included in Sections 4.1 through 4.22 of this report.

4.1 American Outdoor Brands

Facility Information: The American Outdoor Brands WWTF is regulated under permit number MO-0138983. The most recent permit had effective dates from October 1, 2018 through September 30, 2023. A permit renewal application was submitted, but an updated permit has not yet been issued. The American Outdoor Brands system is located east of Columbia near the I-70 and Route Z intersection at 1800 North Route Z. This facility was constructed in 2018 and serves the American Outdoor Brands Corp. manufacturing and distribution center on an approximately 210-acre site.

Treatment Description: The treatment process currently includes a trash tank, flow equalization, septic tanks, and subsurface drip irrigation. The permitted design flow of the treatment facility is 4,889 gpd, and the design population equivalent is 65.

Receiving Waterbody Information: The WWTF is located in the Hydraulic Unit Codes (HUC) 12 Watershed 10300102-1001. The operating permit identifies the receiving stream as a tributary to Little Cedar Creek; however, the facility does not discharge wastewater to a surface waterbody.

Comments on Compliance, Condition, and Capacity: American Outdoor Brands does not have permitted effluent limits or a schedule of compliance. There are no reported problems with the facility other than paper products entering the treatment process. There are no known issues with treatment capacity and no plans for expansion of the facility at this time.

Recommended Improvements: Install a manual bar screen on the influent of the WWTF to catch any paper products or large debris.

Future development near the I-70 and Route Z intersection may bring City of Columbia sewer service near the American Outdoor Brands facility. It is recommended that the facility is closed and connected to the City of Columbia collection system at the end of its useful life, if this service becomes available.

Planning Phase: 6-10 years

Total Project Cost Estimate projected to 2033 Dollars: $68,200.00 (See Appendix A – Table A.1)

4.2 Bobcat of Columbia

Facility Information: The Bobcat of Columbia WWTF (formerly Bobcat of St. Louis) does not have a DNR issued operating permit, since the facility is a no-discharge system with a design flow less than 3,000 gpd. The system is located west of Columbia along I-70 Drive NE at 1101 Lenway Drive. The Bobcat of Columbia system was constructed in 2006 and serves the Bobcat Company sales and service department on an approximately 30-acre site.

Treatment Description: The treatment process includes subsurface drip irrigation. The design flow is less than 3,000 gpd, and the facility is estimated to use approximately 25% of its available treatment capacity.

Receiving Waterbody Information: The WWTF uses drip irrigation, so there is no discharge to a receiving waterbody.

Comments on Compliance, Condition, and Capacity: Bobcat of Columbia does not have a schedule of compliance or effluent limits. No issues with the treatment facility were reported by BCRSD staff. There are no issues with treatment capacity and no plans for expansion at this time.

Recommended Improvements: There are no recommended capital improvements for the Bobcat of Columbia wastewater system.

Planning Phase: Not Applicable

Total Project Cost Estimate: No Cost

4.3 Brookfield Estates WWTP

Facility Information: The Brookfield Estates WWTP is regulated under operating permit number MO-0126624. The current permit is effective from November 1, 2020 through March 31, 2025. Brookfield Estates WWTP is located on Lake Meadows Way off of Route N south of Columbia. The treatment plant was originally constructed in 2001 and serves a residential subdivision. The original recirculating sand filter treatment plant was replaced with a new mechanical treatment plant in 2024.

Treatment Description: The treatment process includes a septic tank effluent pump (STEP) system, manual bar screen, flow equalization, aeration tank, clarifier, dual tertiary media filters, post aeration tank, and UV disinfection. The previous treatment process was a recirculating sand filter that was taken offline in 2024 with the installation of the new WWTP. The recirculating sand filter WWTP had a permitted design flow of 10,500 gpd, a design population equivalent of 140, and an actual permit flow of 4,300 gpd. Based on the facility's Discharge Monitoring Report (DMR) data submitted to MDNR, effluent flows for the facility from 2019 through 2023 averaged approximately 3,806 gpd with the highest maximum daily flow reported as 11,900 gpd. An operating permit modification for the new treatment process was issued on September 4, 2024. The new WWTP has a permitted design flow of 30,000 gpd and a population equivalent of 400.

Receiving Waterbody Information: The WWTP is located in the HUC 12 Watershed 10300102-0903. The receiving stream is a tributary to Little Bonne Femme Creek, and the first classified receiving stream is a 100K Extent-Remaining Stream. As discussed in Section 3.2, Little Bonne Femme Creek is included on the 2022 303(d) List for an impairment due to *E. coli* from an unknown source.

Comments on Compliance, Condition, and Capacity: Brookfield Estates WWTP has a schedule of compliance for ammonia, *E. coli*, and chloride. The compliance deadline is November 1, 2035. The recently constructed mechanical treatment plant was designed to treat ammonia and *E. coli*; however, it is unlikely that the WWTP will be able to meet the proposed chloride limits in the SOC. No other issues with the WWTP were reported by BCRSD staff. There are no issues with treatment capacity and no additional plans for expansion at this time. The Pierpont Store located northeast of Brookfield Estates is a private treatment facility permitted by MDNR that could be a future connection to the wastewater system.

Recommended Improvements: Immediate capital improvements to the Brookfield Estates WWTP are not recommended at this time. Treatment to remove chloride from the facility's effluent would require advanced processes such as microfiltration and reverse osmosis. Due to the high cost associated with this advanced treatment, it is recommended BCRSD coordinates with the water supply district and subdivision homeowners to reduce the chloride concentration entering the WWTP at its source. It is likely that self-regenerating water softeners are the largest contributor of chloride to the plant. Coordination with the water district and homeowners in the subdivision to reduce the use of salt in water softeners may be sufficient to comply with the chloride limits in the SOC. Influent chloride levels to the WWTP should be monitored to determine progress. If this approach is unsuccessful, consideration should be given to connecting the system to the South Route K WWTP in the future.

Planning Phase: Not Applicable

Total Project Cost Estimate: No Cost

4.4 Brown Station WWTP

Facility Information: The Brown Station WWTP is regulated under operating permit number MO-0135305. The current permit is effective from November 1, 2020 through March 31, 2025. The WWTP is located off of Route B near the intersection of North Brown Station Road and O'Rear Road north of Columbia. The WWTP was constructed in 2009 and serves a residential community.

Treatment Description: The treatment process includes a STEP system and a recirculating sand filter. Septage is hauled to the Rocky Fork WWTP for disposal. The Brown Station WWTP has a permitted design flow of 1,850 gpd, a design population equivalent of 19, and an actual permit flow of 1,300 gpd. Based on the facility's DMR data submitted to MDNR, effluent flows for the facility from 2019 through 2023 averaged approximately 1,057 gpd with the highest maximum daily flow reported as 3,900 gpd.

Receiving Waterbody Information: The WWTP is in the HUC 12 Watershed 10300102-0706. The receiving stream is a tributary to Clays Fork, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Comments on Compliance, Condition, and Capacity: Brown Station WWTP has a schedule of compliance for ammonia and *E. coli*. The scheduled compliance deadline is November 1, 2028. The existing treatment facility will not comply with the new effluent limits. No other issues with the WWTP were reported by BCRSD staff. There are no issues with treatment capacity and no plans for expansion at this time. The Hillcrest Residential Care WWTP north of the Brown Station WWTP is a private facility permitted by MDNR that could be a future connection to the wastewater system.

Recommended Improvements: The *Amendment 2 – Richardson Acres and Brown Station Wastewater Improvements Facility Plan* completed by HDR in 2021 recommends closing the Brown Station WWTP by connection to the Rocky Fork WWTP via pump station and force main in a cooperative project with Richarson Acres and Cedar Gate. The facility plan estimated the total cost of the Brown Station pump station and force main and the Richardson Acres pump station and force main project at $2,366,000. This project is currently funded on the Fiscal Year 2026 Clean Water State Revolving Fund Intended Use Plan with a grant amount of $1,000,000 and a loan amount of $1,366,000. Exhibit C.1 in Appendix C illustrates the proposed force main route. An updated project cost estimate for the Brown Station pump station and force main connection to Rocky Fork is provided in Appendix A – Table A.2 for a total project cost estimate projected to 2030 dollars of $4,096,300.00. Alternatively, the facility could connect to the City of Columbia sewer near the Settlers Ridge Subdivision, which would reduce the length of the new force main. The total project cost projected to 2030 dollars for this connection is $1,020,500.00 Due to the reduced total project cost, it is recommended that the connection to the City of Columbia is pursued unless additional funding becomes available.

Planning Phase: 0-5 Years

Total Project Cost Estimate Projected to 2030 Dollars: $1,020,500.00 (See Appendix A – Table A.3; cost estimate includes Brown Station pump station and force main to City of Columbia sewer only.)

4.5 Butch's Investments

Facility Information: Butch's Investments WWTF does not have an operating permit, since the facility is a no-discharge system with a design flow less than 3,000 gpd. The system is located south of Columbia near the intersection of Highway 163 and Cadet Court. The facility was constructed in 2022 and serves four commercial lots.

Treatment Description: The treatment process includes subsurface drip irrigation with a design flow of 2,910 gpd.

Receiving Waterbody Information: The WWTF uses drip irrigation, so there is no discharge to a receiving waterbody.

Comments on Compliance, Condition, and Capacity: Butch's Investments WWTF does not have a schedule of compliance or effluent limits. No issues with the treatment facility were reported. There is an existing order from the county commission for a neighboring lot to connect to the Butch's Investments treatment facility. This connection will require a treatment capacity expansion, which will increase the design flow above 3,000 gpd requiring an operating permit from MDNR. The cost to expand the treatment capacity of the facility would be funded by the developer.

Recommended Improvements: It is recommended that the Butch's Investments WWTF is expanded to allow the neighboring lot to connect per the order from the county commission. It is anticipated this expansion will be developer funded.

Planning Phase: Not Applicable

Total Project Cost Estimate: No Cost

4.6 Cedar Gate WWTF

Facility Information: The Cedar Gate WWTF is regulated under operating permit number MO-0096415. The current permit is effective from November 1, 2020 through June 30, 2025. The facility is located off of Route B near the intersection of Birch St. and Branch St. south of Hallsville. It was constructed in 1971 and serves a small residential subdivision.

Treatment Description: The treatment process includes a two-cell lagoon with an aerated primary cell and sludge retained in the lagoon. The Cedar Gate WWTF has a permitted design flow of 11,000 gpd, a design population equivalent of 111, and an actual permit flow of 2,000 gpd. Based on the facility's DMR data submitted to MDNR, effluent flows for the facility from 2019 through 2023 averaged approximately 3,228 gpd with the highest maximum daily flow reported as 9,500 gpd.

Receiving Waterbody Information: The WWTP is in the HUC 12 watershed 10300102-0601. The receiving stream is a tributary to Varnon Branch, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Comments on Compliance, Condition, and Capacity: Cedar Gate WWTF has a schedule of compliance for ammonia and *E. coli*. The compliance deadline is November 1, 2034. The existing treatment facility will not comply with the new effluent limits. No other issues with the WWTP were

reported by BCRSD staff. There are no issues with treatment capacity and no plans for expansion at this time.

Recommended Improvements: The *Amendment 2 – Richardson Acres and Brown Station Wastewater Improvements Facility Plan* completed by HDR in 2021 recommends closing the Cedar Gate WWTF by connection to the Rocky Fork WWTP via pump station and force main in a cooperative project with Richarson Acres and Brown Station. The Cedar Gate pump station and force main project is currently planned to be completed as a second phase following the completion of the Richardson Acres and Brown Station pump station and force main projects. The facility plan estimated the total cost of completing the Cedar Gate pump station and force main project as $1,315,000. It is recommended these improvements are completed as planned. Exhibit C.2 in Appendix C illustrates the proposed force main route. If the Richardson Acres and Brown Station pump station and force main projects for connection to the Rocky Fork WWTP or the City of Columbia are not completed, an updated facility plan for the Cedar Gate WWTF should be prepared to evaluate other possible alternatives for compliance with the new effluent limits. One alternative may be regionalization through a cooperative agreement with Missouri American Water to connect to the City of Hallsville.

Planning Phase: 6-10 Years

Total Project Cost Estimate Projected to 2033 Dollars: $3,476,300.00 (see Appendix A – Table A.4; cost estimate includes Cedar Gate pump station and force main only)

4.7 Eagle Knoll WWTP

Facility Information: The Eagle Knoll WWTP is regulated under operating permit number MO-0117935. The most recent permit had effective dates from November 1, 2018 to October 31, 2023. A permit renewal application was submitted, but an updated permit has not yet been issued. The facility is located north of Eagle Trace near Highway 63 east of Hartsburg. It was constructed in 1996 and serves a small residential subdivision on a golf course.

Treatment Description: The treatment process includes extended aeration, sock filters, UV disinfection, and sludge holding tanks. Sludge is hauled to the City of Columbia for disposal. Eagle Knoll WWTP has a permitted design flow of 35,000 gpd, a design population equivalent of 350, and an actual permit flow of 2,100 gpd. Based on the facility's DMR data submitted to MDNR, the facility's effluent flow from 2019 through 2023 averaged approximately 2,699 gpd with the highest daily maximum flow reported as 8,800 gpd.

Receiving Waterbody Information: Eagle Knoll WWTP is in HUC 12 watershed 10300102-1302. The receiving stream is a tributary to Slate Creek, and the first classified receiving stream is a 100K Extent-Remaining Stream. The receiving stream is classified as losing, and losing stream limits are applied in the facility's operating permit.

Comments on Compliance, Condition, and Capacity: The current permit includes a schedule of compliance for ammonia limits, which became effective on September 1, 2019. The WWTP is in compliance with the new limits. The facility currently runs on single-phase power and is prone to power outages. The rock quarry south of the facility on Highway 63 causes short power drops that trip the blowers at the WWTP. The treatment capacity of the plant is oversized based on the actual flow amounts received. There are no known plans for future development near the plant at this time.

Recommended Improvements: It is recommended that three-phase power is brought to the WWTP site, and the existing single-phase aeration equipment is replaced. As part of this improvement, consideration should be given to downsizing the blowers and installing fine bubble diffusers in the aeration basin providing enhanced operational efficiency and reducing overall electricity usage.

Planning Phase: 6-10 Years

Total Project Cost Estimate Projected to 2033 Dollars: $255,400.00 (see Appendix A – Table A.5)

4.8 Highfield Acres WWTF

Facility Information: The Highfield Acres WWTF is regulated under operating permit number MO-0053376. The current permit is effective from November 1, 2020 to March 31, 2025. The WWTF is located west of Columbia near the intersection of Western Lane and I-70 Drive SE. It was constructed in 1968 and serves a small residential subdivision.

Treatment Description: The treatment process includes two separate single-cell aerated lagoons, each with its own permitted outfall. Combining the capacity of the two lagoons, the facility has a permitted design flow of 29,000 gpd, a design population equivalent of 290, and an actual permit flow of 6,900 gpd. Based on the facility's DMR data submitted to MDNR, the effluent flow from the south lagoon (Outfall #001) from 2019 through 2023 averaged approximately 4,490 gpd with the highest daily maximum flow reported as 8,600 gpd. Flow from the north lagoon (Outfall #002) averaged approximately 1,895 gpd with the highest daily maximum flow reported as 6,200 gpd.

Receiving Waterbody Information: Highfield Acres WWTF is in HUC 12 watershed 10300102-0602. The receiving stream is a tributary to North Fork Grindstone Creek, and the first classified receiving stream is the North Fork Grindstone Creek.

Current and Future Issues: Highfield Acres WWTF has a schedule of compliance for ammonia and *E. coli*. The compliance deadline is November 1, 2025. The existing treatment facility will not comply with the new effluent limits. The WWTF does also have occasional issues with algae blooms and exceeded BOD and TSS effluent limits in the first quarter of 2024. There are no issues with treatment capacity and no plans for expansion at this time.

Recommended Improvements: The *Highfield Acres Facility Plan* completed by Cochran in 2016 recommended closing the WWTF by connecting to BCRSD's existing Grindstone sewer, which flows to the City of Columbia. The project is currently funded on the Fiscal Year 2025 Clean Water State Revolving Fund Intended Use Plan for a loan amount of $107,312 and a grant amount of $160,968. The improvements are in design by Cochran, and it is recommended they are completed as planned.

Planning Phase: 0-5 Years

Total Project Cost Estimate in 2024 Dollars: $268,260 (Cost estimate as listed on the MDNR 2025 Clean Water State Revolving Fund Intended Use Plan. Project to be funded using BCRSD's existing available bonding capacity.)

4.9 Kinkade Crossing WWTP

Facility Information: The Kinkade Crossing WWTP is regulated under operating permit number MO-0133515. The current permit is effective from November 1, 2020 through March 31, 2025. The WWTP is located off of East Honey Lane near Highway 63 north of Columbia. It was constructed in 2007 and primarily serves a residential subdivision and duplexes. A gas station is also connected to the treatment system.

Treatment Description: The treatment process is an extended aeration package plant that includes a bar screen, aerated flow equalization basin, extended aeration, final clarifier, UV disinfection, and aerated sludge holding. Sludge is hauled to the City of Columbia for disposal. The Kinkade Crossing WWTP has a permitted design flow of 50,000 gpd, a design population equivalent of 671, and an actual permit flow of 7,500 gpd. Based on the facility's DMR data reported to MDNR, the facility had an average effluent flow from 2019 through 2023 of approximately 20,948 GPD with the highest maximum daily flow reported as 80,100 GPD.

Receiving Waterbody Information: Kinkade Crossing WWTP is located in HUC 12 watershed 10300102-0706. The receiving stream is a tributary to Rocky Fork, and the first classified receiving stream is Rocky Fork.

Comments on Compliance, Condition, and Capacity: Kinkade Crossing WWTP does not have a schedule of compliance; however, the current operating permit includes monitoring for ammonia, which could lead to future effluent limits. The facility typically discharges low effluent ammonia concentrations and should not require upgrades to meet ammonia limits. The treatment processes are contained in steel basins that exhibit significant signs of corrosion and are in generally poor condition. Effluent flows on the facility's DMR data were observed to noticeably increase in 2023 placing the plant near its design capacity. There are no plans for expansion of the facility at this time.

Recommended Improvements: It is recommended that the existing metal basins be rehabilitated and repainted to repair the corrosion damage. The anodes should also be replaced. During rehabilitation of the treatment basin, it is anticipated BCRSD will pump and haul the influent wastewater to Rocky Fork for treatment. If rehabilitation of the existing plant is not preferred, the Kinkade Crossing WWTP could also be a candidate for connection to the Rocky Fork WWTP via a new pump station and force main or a gravity sewer interceptor. A preliminary cost estimate for a pump station and force main from Kinkade Crossing to Rocky Fork is provided in Appendix A – Table A.7.

Planning Phase: 0-5 Years

Total Project Cost Estimate Projected to 2030 Dollars: $488,900.00 (see Appendix A – Table A.6)

4.10 Meadow Village WWTP

Facility Information: The Meadow Village WWTP is regulated under operating permit number MO-0098442. The current permit is effective from November 1, 2020 to March 31, 2025. The WWTP is located east of Columbia near the intersection of Serenity Circle and Doziers Station Road. It was constructed in 2009 and serves a small residential subdivision.

Treatment Description: The treatment process is an extended aeration package plant that includes a bar screen, extended aeration, an internal clarifier, UV disinfection, and aerated sludge holding. Sludge is hauled to the City of Columbia for disposal. Meadow Village WWTP has a permitted design flow of 16,500 gpd, a design population equivalent of 165, and an actual permit flow of 1,850 gpd. Based on the facility's DMR data reported to MDNR, the facility had an average effluent flow from 2019 through 2023 of approximately 3,527 gpd with the highest maximum daily flow reported as 22,800 gpd.

Receiving Waterbody Information: Meadow Village WWTP is in HUC 12 watershed 10300102-1001. The receiving stream is a tributary to Little Cedar Creek, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Comments on Compliance, Condition, and Capacity: Meadow Village WWTP does not have a schedule of compliance; however, the current operating permit includes monitoring for ammonia, which could lead to future effluent limits. The facility typically discharges low effluent ammonia concentrations and should not require upgrades to meet ammonia limits. The package treatment process is contained in a steel basin that is in poor condition due to significant corrosion. The WWTP site also has drainage issues, which has caused stormwater to overtop the treatment basin in the past. There are no issues with treatment capacity and no plans for expansion at this time. The Edelwiess WWTP south of Meadow Village is a private facility that could be a future connection to the WWTP.

Recommended Improvements: It is recommended that the existing metal basin is rehabilitated and repainted to repair the corrosion damage. The anodes should also be replaced. It is also recommended to install a railing around the basin to improve site safety. Site drainage improvements should be completed to divert stormwater away from the treatment basin. During rehabilitation of the treatment basin, it is anticipated BCRSD will pump and haul the influent wastewater to Rocky Fork for treatment.

Planning Phase: 0-5 Years

Total Project Cost Estimate Projected to 2030 Dollars: $339,000.00 (see Appendix A – Table A.8)

4.11 Midway Arms WWTP

Facility Information: The Midway Arms WWTP is regulated under operating permit number MO-0108421. The current permit is effective from November 1, 2020 to June 30, 2025. The WWTP is located at 5875 Van Horn Tavern Road off of I-70 west of Columbia. It was constructed in 2009 and serves a distribution facility warehouse.

Treatment Description: The treatment process includes a septic tank, recirculating sand filter, and UV disinfection with sludge hauled to the City of Columbia for disposal. Midway Arms WWTP has a permitted design flow of 4,800 gpd, a design population equivalent of 94, and an actual permit flow of 4,200 gpd. Based on the facility's DMR data submitted to MDNR, the facility had an average effluent flow from 2019 through 2023 of approximately 3,424 gpd with the highest maximum daily flow reported as 5,760 gpd.

Receiving Waterbody Information: Midway Arms WWTP is in HUC 12 watershed 10300102-0708. The receiving stream is a tributary to Henderson Branch, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Comments on Compliance, Condition, and Capacity: Midway Arms WWTP has a schedule of compliance for ammonia. The compliance deadline was September 1, 2024. The existing treatment facility will not comply with the new effluent limits. The facility has exceeded its effluent limits for BOD_5 several times in the past five years. No other issues with the WWTP were reported by BCRSD staff. There are no issues with treatment capacity and no plans for expansion at this time.

Recommended Improvements: The original developer of the Midway Arms facility is contractually obligated to keep the WWTP in compliance with its operating permit requirements. The facility should be connected to the City of Columbia's Henderson Branch Sewer Extension once service is available. If the Henderson Branch Sewer Extension is delayed or cancelled, the developer shall complete a facility plan for a no-discharge treatment facility located above the floodplain.

Planning Phase: 0-5 Years

Total Project Cost Estimate: Not Applicable

4.12 Midway Crossing WWTP

Facility Information: The Midway Crossing WWTP is regulated under operating permit number MO-0132705. The current permit is effective from November 1, 2020 to June 30, 2025. The WWTP is located near the Golden Willow Drive and Rollingwood Boulevard intersection west of Columbia. It was constructed in 2008 and primarily serves residential subdivisions as well as the Midway Elementary School.

Treatment Description: The treatment process includes a bar screen, influent pump station with flow equalization, extended aeration, two final clarifiers, UV disinfection, and aerobic sludge digestion. Sludge is hauled to the City of Columbia for disposal. The Midway Crossing WWTP has a permitted design flow of 150,000 gpd, a design population equivalent of 1,500, and an actual permit flow of 23,000 gpd. Based on the facility's DMR data submitted to DNR, the facility's average effluent flow from 2019 through 2023 was approximately 24,532 gpd with the highest maximum daily flow reported as 837,900 gpd.

Receiving Waterbody Information: Midway Crossing WWTP is located in HUC 12 watershed 10300102-0708. The receiving stream is a tributary to Sugar Branch, and the first classified receiving stream is Sugar Branch.

Comments on Compliance, Condition, and Capacity: Midway Crossing WWTP does not have a schedule of compliance. The current operating permit includes influent and effluent flow monitoring for nutrients as the facility has a design flow greater than 100,000 gpd. The treatment plant is in good condition with a few areas that present operational challenges. The influent manual barscreen has wide spacing, which allows debris to enter the WWTP. The clarifier equipment exhibits signs of rust and deterioration. The UV equipment has issues with freezing that are currently addressed by staff constructing temporary insulation. The average flow discharged by the facility is currently well below the plant's design flow; however, the calculated flows allocated to the plant would place the system at

its capacity. Additionally, the collection system may have I/I amounts that would be considered excessive based on the high maximum daily flow reported.

Recommended Improvements: Immediate improvement recommendations include replacing the manual bar screen with a new, finer manual screen, rehabilitating the existing clarifier equipment, and installing a cover over the existing UV equipment. It is also recommended to install permanent influent flow measurement to more accurately monitor the amount of flow entering the treatment plant.

In the future, as the treatment plant's age nears the end of its useful life, consideration should be given to connecting the plant influent to the City of Columbia collection system and closing the treatment facility. The City of Columbia is in the preliminary planning stages of a sewer project that would extend city sewer along the Henderson Branch of Perche Creek to the northwest corner of the intersection of Interstate 70 and U.S. Highway 40. Additionally, further in the future, as development pressure warrants, the city may extend sewer along the Sugar Branch of Perche Creek closer to the Midway Crossing WWTP site.

Planning Phase: 0-5 Years

Total Project Cost Estimate Projected to 2030 Dollars: $248,200.00 (see Appendix A – Table A.9)

4.13 Midway USA WWTF

Facility Information: The Midway USA WWTF is regulated under operating permit number MO-0129629. The current permit is effective from November 1, 2020 to June 30, 2025. The WWTF is located at 2200 State Highway J west of Columbia. It was constructed in 2017 and serves the Midway USA distribution center located on an approximately 180-acre site.

Treatment Description: The treatment process includes a trash tank, flow equalization, septic tanks, disc filters, and subsurface drip irrigation. Septage is hauled to the City of Columbia for disposal. Midway USA WWTF has a permitted design flow of 6,460 gpd and a design population equivalent of 259.

Receiving Waterbody Information: Midway USA WWTF is located in HUC 12 watershed 10300102-0708. The operating permit identifies the receiving stream as a tributary to Sugar Branch; however, the facility does not discharge wastewater to a surface waterbody.

Comments on Compliance, Condition, and Capacity: Midway USA WWTF does not have permitted effluent limits or a schedule of compliance. There are no reported problems with the WWTF other than paper products and other debris entering the treatment system. There are no known issues with treatment capacity and no plans for expansion of the facility at this time.

Recommended Improvements: Install a manual barscreen on the influent of the WWTF to catch any paper products or large debris. At the end of the facility's useful life, consideration should be given to connecting the site to the Midway Crossing WWTP collection system.

Planning Phase: 6-10 Years

Total Project Cost Estimate Projected to 2033 Dollars: $68,200.00 (see Appendix A – Table A.10)

4.14 Prairie Meadows WWTP

Facility Information: The Prairie Meadows WWTP is regulated under operating permit number MO-0083542. The current permit is effective from November 1, 2020 to March 31, 2025. The WWTP is located near the East Prairie Circle and Meadow Lark Lane intersection just west of Highway 63, south of Columbia. It was constructed in 2006 and primarily serves residential single-family housing and duplexes.

Treatment Description: The treatment process is an extended aeration package plant that includes an influent pump station, bar screen, flow equalization basin, extended aeration, final clarifier, UV disinfection, and aerated sludge holding. Sludge is hauled to the City of Columbia for disposal. The Prairie Meadows WWTP has a permitted design flow of 80,000 gpd, a design population equivalent of 1,000, and an actual permit flow of 33,500 gpd. Based on the facility's DMR data submitted to MDNR, the facility had an average effluent flow from 2019 through 2023 of approximately 31,287 gpd with a reported maximum daily flow of 384,400 gpd.

Receiving Waterbody Information: Prairie Meadows WWTP is located in HUC 12 watershed 10300102-0903. The receiving stream is a tributary to Gans Creek, and the first classified receiving stream is Gans Creek. As discussed in Section 3.2, Gans Creek is classified as an Outstanding State Resource Water. It is also included on the 2022 303(d) List for impairment due to *E. coli* from rural nonpoint sources.

Comments on Compliance, Condition, and Capacity: Prairie Meadows WWTP does not have a schedule of compliance; however, the current operating permit includes monitoring for ammonia, which could lead to future effluent limits. The facility typically discharges low effluent ammonia concentrations and should not require upgrades to meet ammonia limits. The package treatment process is contained in a steel basin that is in poor condition due to signification corrosion. Additionally, the facility began experiencing a significant increase in I/I in 2023. There are developers interested in connecting commercial properties to the WWTP; however, the peak flows experienced due to I/I during storm events severely limits the plant's available capacity for additional connections. Since the WWTP discharges within the watershed of an Outstanding State Resource Water (OSRW), increasing the treatment capacity and design flow of the plant is likely impermissible by MDNR under its current Antidegradation Implementation Procedure.

Recommended Improvements: It is recommended that the existing metal basin is rehabilitated and repainted to repair the corrosion damage. The anodes should also be replaced. The UV disinfection system should be modified or relocated for ease of operator access. During rehabilitation of the treatment basin, it is anticipated BCRSD will pump and haul the influent wastewater to Rocky Fork for treatment. Improvements to provide additional flow equalization are also recommended due to the high peak flows.

Due to the facility's discharge to an OSRW, future consideration should be given to closure of the WWTP via connection to the City of Columbia sewer system. However, the current City of Columbia collection system infrastructure in this area does not have the excess capacity necessary to accept the flow from Prairie Meadows.

Planning Phase: 0-5 Years

Total Project Cost Estimate Projected to 2030 Dollars: $1,345,400.00 (see Appendix A – Table A.11)

4.15 Quarter Mile Hills WWTF

Facility Information: The Quarter Mile Hills WWTF is regulated under operating permit MO-0126446. The current permit is effective from November 1, 2020 through December 31, 2024. The WWTF is located west of Hallsville near the intersection of Highway 124 and Barnes School Road off of Quarter Mile Drive. It was constructed in 2001 and serves a small residential subdivision.

Treatment Description: The treatment process is a three-cell lagoon with sludge retained in the lagoon. The Quarter Mile Hills WWTF has a permitted design flow of 5,480 gpd, a design population equivalent of 57, and an actual permit flow of 1,600 gpd. Based on the facility's DMR data submitted to MDNR, the facility had an average effluent flow from 2019 to 2023 of approximately 1,126 gpd with the highest daily maximum flow reported as 3,400 gpd.

Receiving Waterbody Information: The WWTF is located in HUC 12 watershed 10300102-0704. The receiving stream is a tributary to Kelley Branch, and the first classified receiving stream is Kelley Branch.

Comments on Compliance, Condition, and Capacity: Quarter Mile Hills WWTF has a schedule of compliance for ammonia and *E. coli*. The compliance deadline is November 1, 2037. The existing treatment facility will not comply with the new effluent limits. No other issues were reported by BCRSD staff. There are no issues with treatment capacity and no plans for expansion at this time.

Recommended Improvements: The *Quarter Mile Hills Interconnection and Lagoon Closure Facility Plan* completed by Cochran in 2017 recommended installing tertiary lagoon treatment such as a Nitrox Reactor and UV disinfection to meet the new effluent limits for ammonia and *E. coli.* The facility plan also evaluated a no-discharge alternative of installing a drip disposal system. Due to the benefits of no-discharge systems including the elimination of effluent limits and reduced operational requirements, it is recommended to pursue the conversion of the existing facility to a drip system. The facility plan estimated the total project cost to convert the facility to a drip system as $422,952.75. Alternatively, regionalization through a cooperative agreement with Missouri American Water to connect to the City of Hallsville could be considered if adequate treatment capacity is available.

Planning Phase: 11-20 Years

Total Project Cost Estimate Projected to 2041 Dollars: $1,697,400.00 (see Appendix A – Table A.12)

4.16 Richardson Acres WWTF

Facility Information: The Richardson Acres WWTF is regulated under operating permit number MO-0115185. The current permit is effective from November 1, 2020 to March 31, 2025. The WWTF is located near the Highway B and Flamingo Drive intersection off of Route B north of Columbia. It was constructed in 1989 and serves a small residential subdivision.

Treatment Description: The treatment process includes a STEP system, a two-cell lagoon with aeration in the primary cell, and sludge retained in the lagoon. The Richardson Acres WWTF has a permitted design flow of 8,510 gpd, a design population equivalent of 85, and an actual permit flow of 3,700

gpd. Based on the facility's DMR data submitted to MDNR, the facility had an average effluent flow from 2019 through 2023 of approximately 3,997 gpd with the highest daily maximum flow reported as 8,200 gpd.

Receiving Waterbody Information: Richardson Acres WWTF is located in HUC 12 watershed 10300102-0706. The receiving stream is a tributary to Clays Fork, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Comments on Compliance, Condition, and Capacity: Richardson Acres WWTF has a schedule of compliance for ammonia and *E. coli*. The compliance deadline is November 1, 2028. The existing treatment facility will not comply with the new effluent limits. No other issues were reported by BCRSD staff. There are no issues with treatment capacity and no plans for expansion at this time. Oak Ridge Mobile Home Park is a private treatment facility located south of Richardson Acres that could be a future connection to the wastewater system.

Recommended Improvements: The *Richardson Acres and Brown Station Wastewater Improvements Facility Plan – Amendment 2* completed by HDR in 2021 recommends closing the Richardson Acres WWTP by connection to the Rocky Fork WWTP via pump station and force main in a cooperative project with Brown Station and Cedar Gate. The facility plan estimated the total cost of the Brown Station pump station and force main and the Richardson Acres pump station and force main project as $2,366,000. This project is currently funded on the Fiscal Year 2026 Clean Water State Revolving Fund Intended Use Plan with a grant amount of $1,000,000 and a loan amount of $1,366,000. Exhibit C.2 in Appendix C illustrates the proposed force main route. It is recommended that pump station and force main connecting Richardson Acres to Brown Station is completed. From Brown Station, the flow could be connected to Rocky Fork or the City of Columbia.

Planning Phase: 0-5 Years

Total Project Cost Estimate Projected to 2030 Dollars: $1,956,900.00 (See Appendix A – Table A.13; cost estimate includes Richardson Acres pump station and force main only)

4.17 Rocheport WWTP

Facility Information: The Rocheport WWTP is regulated under operating permit number MO-0095222. The current permit is effective from April 1, 2021 to June 30, 2025. The WWTP is located near the Columbia Street and 4th Street intersection in Rocheport, MO. The Rocheport WWTP was constructed in 1980 and serves the City of Rocheport. A rehabilitation project at the WWTP was completed in 2018.

Treatment Description: The treatment process includes a manual bar screen, single unit modified circular oxidation ditch with final clarifier, UV disinfection, aerated sludge digester, and a sludge holding basin. Sludge is hauled to the City of Columbia for disposal. The plant has a permitted design flow of 34,400 gpd, a design population equivalent of 380, and an actual permit flow of 12,500 gpd. Based on the facility's DMR data submitted to MDNR, the facility had an average effluent flow from 2019 through 2023 of 25,764 gpd with the highest daily maximum flow reported as 83,000 gpd.

Receiving Waterbody Information: Rocheport WWTP is located in HUC 12 watershed 10300102-0305. The receiving stream is a tributary to Moniteau Creek, and the first classified receiving stream is Moniteau Creek.

Comments on Compliance, Condition, and Capacity: The plant does not have a schedule of compliance; however, the current operating permit includes monitoring for ammonia, which could lead to future effluent limits. The facility typically discharges low effluent ammonia concentrations and should not require upgrades to meet ammonia limits. No issues with the WWTP were reported by BCRSD staff. The Les Bourgeois Winery WWTF is a private facility near Rocheport that could be a future connection to the Rocheport collection system. The owner of the winery is also proposing additional new developments along Highway BB that may be future connections. The WWTP is nearing its permitted design capacity.

Recommended Improvements: It is recommended that an influent flow meter is installed at the WWTP to obtain more accurate flow data to determine the plant's remaining treatment capacity. Capacity upgrades may be needed in the future to serve new development in the area. It is anticipated that the expansion of the treatment plant would be developer funded.

Planning Phase: 0-5 Years

Total Project Cost Estimate Projected to 2030 Dollars: $75,400.00 (see Appendix A – Table A.14)

4.18 Rocky Fork WWTP

Facility Information: The Rocky Fork WWTP is regulated under operating permit number MO-0137294. The permit is effective from February 1, 2021 to June 30, 2025. The plant is located north of Columbia near the East Cedar Court and Rocky Fork Drive intersection. The plant was constructed in 2013 and serves several residential subdivisions north of Columbia.

Treatment Description: The treatment process includes an influent pump station, mechanical bar screen, grit removal, oxidation ditch, intermediate bar screen, two final clarifiers, UV disinfection, re-aeration, and aerated sludge storage. There is also an area for sludge dewatering in geotextile bags. Sludge is hauled to the City of Columbia landfill for disposal. The Rocky Fork WWTP has a permitted design flow of 460,000 gpd, a design population equivalent of 4,600, and an actual permit flow of 220,000 gpd. Based on the facility's DMR data submitted to MDNR, the facility's average effluent flow from 2019 through 2023 was approximately 277,108 gpd and the highest reported maximum daily flow was 1,610,000 gpd.

Receiving Waterbody Information: Rocky Fork WWTP is located in HUC 12 watershed 10300102-0706. The receiving stream is a tributary to Rocky Fork, and the first classified receiving stream is Rocky Fork.

Comments on Compliance, Condition, and Capacity: The current permit includes a schedule of compliance for lower ammonia limits, which became effective on February 1, 2022. The existing treatment facility is capable of meeting the lower limits. The current operating permit includes influent and effluent flow monitoring for nutrients as the facility has a design flow greater than 100,000 gpd. The treatment plant is in good condition with a few areas that present operational challenges. The key concerns identified by BCRSD staff include: the sludge management process is cumbersome and

inefficient, the controls for the return and waste activated sludge (RAS/WAS) pumps do not include redundancy, and algae growth accumulates on the cascade re-aeration stairs during warm weather. The plant is currently operating within its design treatment capacity; however, the collection system may have I/I amounts that would be considered excessive based on the high maximum daily flow reported. There are several private and BCRSD-owned systems that could be connected to the Rocky Fork WWTP in the future.

Recommended Improvements: It is recommended that the sludge handling process is upgraded to a more efficient system. The cost estimate for a portable sludge dewatering screw press that could be used at the Rocky Fork WWTP and South Route K WWTP is included in Section 6.3. Improvements to the Rocky Fork plant to accommodate the use of this screw press will be needed including electrical and site upgrades. The control panel for the RAS/WAS pumps should be upgraded to include provisions for manual operations in case of system outages. It is also recommended to install a cover over the cascade aeration stairs to prevent algae growth.

Although the WWTP has a design flow of 460,000 gpd, the oxidation ditch and clarifiers installed in 2013 do not require expansion or modification to treat a design average flow up to 690,000 gpd. To increase the overall treatment capacity of the plant to 690,000 gpd, the influent pump station should be modified by adding a third pump to the wet well and the existing two pumps should be replaced. The UV system should be modified to add an additional bank of UV lights. An additional sludge storage basin and blower may be necessary depending on the outcome of the portable screw press recommendation.

Planning Phase: 0-5 Years

Total Project Cost Estimate Projected to 2030 Dollars:
$487,100.00 (Infrastructure Renewal Improvements, see Appendix A – Table A.15)

$1,255,800.00 (Capacity Expansion Improvements, see Appendix A – Table A.16)

4.19 South Route K WWTP

Facility Information: The South Route K WWTP is regulated under operating permit number MO-0087173. The current permit is effective from November 1, 2020 through March 31, 2025. The plant is located near the Boris Drive and Amos Drive intersection off of Route K south of Columbia. The facility was originally constructed in 1969 and upgraded in 2000 to include a mechanical treatment plant. The WWTP serves several residential subdivisions south of Columbia.

Treatment Description: The treatment process includes two separate treatment trains, each with its own outfall. All flow to the plant first enters a flow equalization pump station. The pump station pumps flow to the Outfall #002 treatment train, which is an extended aeration package plant that includes a manual bar screen, two aeration chambers, two final clarifiers, and two aerated sludge holding tanks. Sludge dewatering in bags is also provided on site. When influent flows exceed the capacity of the pump station, flow is diverted through an overflow pipe to the Outfall #001 treatment train, which includes a four-cell lagoon with aeration in the first two cells and sludge retained in lagoon.

Combining the two treatment trains, the plant has permitted design flow of 244,000 gpd and a design population equivalent of 2,477. Based on the facility's DMR data submitted to MDNR, Outfall

#001 had an average effluent flow from 2019 to 2023 of 10,862 gpd with the highest daily maximum flow reported as 210,100 gpd. Outfall #002 had an average effluent flow of 95,751 gpd with its highest daily maximum flow reported as 210,100 gpd.

Receiving Waterbody Information: South Route K WWTP is located in HUC 12 watershed 10300102-0903. The receiving stream for both outfalls is a tributary to Little Bonne Femme Creek, and the first classified receiving stream is a 100K Extent-Remaining Stream. Little Bonne Femme Creek is included on the 2022 303(d) list for an *E. coli* impairment caused by an unknown source.

Comments on Compliance, Condition, and Capacity: South Route K WWTP has a schedule of compliance for ammonia and *E. coli.* The compliance deadline is November 1, 2029. The existing treatment facility will not comply with the new effluent limits. The current operating permit includes influent and effluent flow monitoring for nutrients as the facility has a design flow greater than 100,000 gpd. The package treatment process is contained in a steel basin that is in poor condition due to signification corrosion. Additionally, there is no headworks other than the manual bar screen and grit accumulates in the bottom of the basin. The plant is located in a floodplain and there have been flooding issues at the site in the past.

The area surrounding the treatment plant has a high potential for new residential development. Cornell's Friendly Acres is a private treatment facility permitted by MDNR that could be a future connection to the South Route K wastewater system.

Recommended Improvements:
The *South Route K Facility Plan* completed by Donohue & Associates, Inc. in 2017 recommended replacing the existing package plant and lagoons with a new oxidation ditch type wastewater treatment plant with the capacity to treat an average daily flow of 860,000 gpd. The plan recommends constructing the new plant on the existing South Route K site in two phases. The first phase would primarily include influent screening, a three-ring oxidation ditch, two secondary clarifiers, and UV disinfection designed to treat an average daily flow 435,000 gpd. Wastewater would be treated in the inner two rings of the oxidation ditch, and the third ring would be used for aerated WAS storage. When demand warrants, the second phase would involve placing the third oxidation ditch ring into operation to treat an average daily flow of 860,000 gpd and constructing an external aerated WAS storage basin. The total initial cost of the Phase 1 project was estimated to be $6,454,000, and the Phase 2 cost was estimated to be $3,237,000.

Due to the demand for new housing units in the Little Bonne Femme watershed, it is recommended that the South Route K treatment plant is relocated as part of the facility upgrades. Moving the South Route K treatment plant further downstream will open up a much larger service area with potential for new gravity sewer connections to the WWTP. The addition of the increased customer base should help to offset the high project cost associated with the treatment plant upgrades. Prior to the design of the new WWTP, a flow monitoring study and facility plan amendment should be completed to identify a preferred treatment plant site and re-evaluate the design flows and loadings for the new facility. For the purposes of the CIP, a cost estimate was prepared for relocating the WWTP approximately 1.6 miles south and constructing a new approximately 0.5 MGD mechanical treatment facility. Exhibit C.3 in Appendix C illustrates the proposed new gravity sewer route and WWTP site.

Alternatively, regionalization to the City of Columbia via a new pump station and force main could be considered if adequate sewer capacity becomes available. As an interim strategy to the larger

improvements project, several options could be explored such as converting the existing lagoon cells to no-discharge equalization basins or installing a post lagoon polishing reactor.

Planning Phase: 0-5 Years

Total Project Cost Estimate Projected to 2030 Dollars: $21,597,600.00 (see Appendix A – Table A.17)

4.20 Sunnyslope WWTF

Facility Information: The Sunnyslope WWTF is regulated under operating permit number MO-0095354. The current permit is effective from November 1, 2020 through December 31, 2024. The facility is located 0.1 miles southwest of the Ricketts Road and Sunnyslope intersection near Hallsville. The facility was constructed in 1971 and serves a small residential subdivision.

Treatment Description: The treatment process includes a single-cell aerated lagoon with sludge retained in the lagoon. The facility was constructed in 1971. The WWTF has a permitted design flow of 5,500 gpd, a design population equivalent of 55, and an actual permit flow of 1,900 gpd. Based on the facility's DMR data submitted to MDNR, the facility had an average effluent flow from 2019 to 2023 of 2,465 gpd with the highest daily maximum flow reported as 5,200 gpd.

Receiving Waterbody Information: Sunnyslope WWTF is located in HUC 12 watershed 10300102-0704. The receiving stream is a tributary to Kelley Branch, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Comments on Compliance, Condition, and Capacity: Sunnyslope WWTF has a schedule of compliance for ammonia and *E. coli*. The compliance deadline is November 1, 2038. The existing treatment facility will not comply with the new effluent limits. Additionally, the facility has had several exceedances of its effluent limits for BOD_5 and TSS in the past five years. There are no issues with treatment capacity and no plans for expansion at this time.

Recommended Improvements: The *Sunnyslope Facility Plan* completed by Cochran in 2017 and revised in 2019 recommended connecting the facility to the City of Hallsville's wastewater system and closing the Sunnyslope WWTF. The connection can be made by installing a short portion of new gravity sewer. BCRSD has an existing cooperative agreement with the City of Hallsville from January 2019 to provide wastewater treatment services for the Sunnyslope Subdivision. It is recommended that this connection is completed as planned. Additionally, a portion of the existing collection system is old truss pipe that is recommended to be replaced with new PVC gravity sewer. The facility plan estimated the total project cost of the new gravity sewer connection and sewer main replacement as $272,293.15.

Planning Phase: 11-20 Years

Total Project Cost Estimate Projected to 2041 Dollars: $1,059,900.00 (see Appendix A – Table A.18)

4.21 Trails West WWTF

Facility Information: The Trails West WWTF is regulated under operating permit number MO-0092002. The current permit is effective from November 1, 2020 through June 30, 2025. The facility is located at the south terminus of South Trails Court west of Columbia. The facility was constructed in 1970 and serves a residential subdivision.

Treatment Description: The treatment process includes a two-cell lagoon with aeration in the primary cell and sludge retained in the lagoon. The WWTF has a permitted design flow of 57,500 gpd, a design population equivalent of 644, and an actual permit flow of 29,400 gpd. Based on the facility's DMR data submitted to MDNR, the facility had an average effluent flow from 2019 to 2023 of 31,114 gpd with the highest daily maximum flow reported as 86,400 gpd.

Receiving Waterbody Information: The WWTF is located in HUC 12 watershed 10300102-0708. The receiving stream is a tributary to Sugar Branch, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Comments on Compliance, Condition, and Capacity: Trails West WWTF has a schedule of compliance for ammonia and *E. coli.* The compliance deadline is November 1, 2031. The existing treatment facility will not comply with the new effluent limits. The plant does not have screening and has experienced issues with aerators clogging due to wipes and debris entering the lagoon. The site is also prone to flooding.

Recommended Improvements: The *Facility Plan for Trails West Subdivision Pump Station & Lagoon Closure* completed by Allstate Consultants, LLC in 2012 and the *Midway Area Wastewater Facility Plan* completed by McClure in 2022 both recommended connecting the existing Trails West WWTF to the Midway Crossing WWTP system via pump station and force main. It is recommended that the connection is completed, and the Trails West WWTF is closed. To reduce the cost associated with the new pump station and force main, the force main should be designed to follow a more direct path to the nearest connection point within the Midway Crossing collection system than proposed in the facility plans. Exhibit C.4 in Appendix C illustrates the proposed force main route. Prior to the connection, it is recommended that a manual bar screen is installed at the Trails West WWTF to capture wipes and prevent the aerators from clogging in the interim. It is also recommended an influent flow monitoring study is conducted and a facility plan amendment is prepared to determine the amount of flow that will be connected to the Midway Crossing WWTP and properly size the pump station and force main. BCRSD staff has indicated inflow and infiltration concerns in the Trails West collection system, which may require rehabilitation prior to the connection to Midway Crossing.

Planning Phase: 0-5 Years (Influent Manual Screen)

Total Project Cost Estimate Projected to 2030 Dollars: $59,000.00 (see Appendix A – Table A.19)

Planning Phase: 6-10 Years (Connection to Midway Crossing)

Total Project Cost Estimate Projected to 2033 Dollars: $1,715,500.00 (see Appendix A – Table A.20)

4.22 Twin Lakes WWTF

Facility Information: The Twin Lakes WWTF is regulated under operating permit number MO-0101885. The current permit is effective from November 1, 2020 through September 30, 2024. The facility is located off of North Cedar Court near the intersection of Route E and Wilhite Road northwest of Columbia. The facility was constructed in 1972 and serves a residential subdivision.

Treatment Description: The treatment process includes a two-cell lagoon with aeration in the primary cell and UV disinfection. Sludge is retained in the lagoon. Twin lakes WWTF has a permitted design flow of 19,400 gpd, a design population equivalent of 194, and an actual permit flow of 1,700 gpd. Based on the facility's DMR data submitted to MDNR, the facility had an average effluent flow from 2019 to 2023 of 2,711 gpd with the highest daily maximum flow reported as 12,000 gpd.

Receiving Waterbody Information: The WWTF is located in HUC 12 watershed 10300102-0707. The facility's receiving stream is a tributary to Perche Creek, and the first classified receiving stream is a 100K Extent-Remaining Stream.

Comments on Compliance, Condition, and Capacity: Twin Lakes WWTF has a schedule of compliance for ammonia. The compliance deadline is November 1, 2032. The existing treatment facility will not comply with the new effluent limits. There are concerns with the existing site due to a spillway from the adjacent lake that runs between the two lagoon cells. The spillway is believed to be a corrugated metal pipe, which is not owned by BCRSD. There are no issues with treatment capacity and no plans for expansion at this time.

Recommended Improvements: The *Twin Lakes Subdivision WWTP Facility Plan* completed by Shafer, Kline & Warren, Inc. in 2011 recommended replacing the existing two-cell lagoon system with a new extended aeration package WWTP. Additional land would be needed to construct the new treatment system due to limited space at the current site. The facility plan estimated the total project cost of completing the proposed improvements as $813,869.00.

Due to the age of the report, it is recommended that a new facility plan and antidegradation review report is completed for the Twin Lakes WWTF. Several improvement options may be available to comply with new effluent limitations including conversion to a no discharge system, addition of a lagoon enhancement tertiary nitrification system such as a SAGR, or installation of a new extended aeration package plant. For the purposes of budgeting for capital improvements, the cost of constructing an extended aeration package plant as previously recommended has been included.

Planning Phase: 6-10 Years

Total Project Cost Estimate Projected to 2033 Dollars: $2,284,100.00 (see Appendix A – Table A.21)

5.0 COLLECTION SYSTEM INFRASTRUCTURE

In addition to the WWTFs included in Section 4.0, BCRSD also owns and maintains significant collection system infrastructure throughout Boone County. These wastewater collection systems discharge to BCRSD treatment facilities or the City of Columbia sewer system. Collection system infrastructure was reviewed with BCRSD staff to identify areas with ongoing issues that are in need of improvements.

5.1 Gravity Sewers

The majority of BCRSD's collection system infrastructure consists of conventional gravity flow sewer mains. As of September 2024, BCRSD's GIS includes 553,736 linear feet (lf) of pipe identified as gravity sewer main. Approximately 13,919 lf of the gravity sewers are less than 8-inches in diameter, which may be attributed to small diameter variable grade sewers. An additional approximately 45,179 lf is attributed to the Sturgeon collection system, which is not owned by BCRSD. Of the remaining pipes identified as gravity sewer main, 475,891 lf or 90.1 miles are 8-inch pipes and 18,748 lf or 3.6 miles are greater than 8-inches. BCRSD's GIS also includes 2,399 manholes of which 2,325 are identified as being owned by BCRSD. BCRSD staff estimate approximately 40 miles of the gravity sewer pipes in BCRSD's collection systems are vitrified clay pipes (VCP). Additional information regarding general collection system investigation and rehabilitation is provided in Section 6.2.

Based on conversations with BCRSD staff, the following gravity sewer segments were identified as priorities for improvement:

5.1.1 Cedar Lake Siphon Sewer Elimination

The Cedar Lake siphon sewer is located near the intersection of North Cedar Lake Dr. and Lake Valley Lane in southwest Columbia. The existing sewer is an 8-inch inverted siphon running underneath Cedar Lake. The siphon has been identified as a problem area by BCRSD staff, and it is recommended that the siphon is eliminated by re-routing the sanitary sewer in this area to a new approximately 2,000 lf gravity main. Pressure grouting 200 lf of existing ductile iron sewer pipe should also be included as part of the improvements.

Planning Phase: 0-5 Years

Total Project Cost Estimate Projected to 2030 Dollars: $851,900.00 (see Appendix B – Table B.1)

5.1.2 Rollingwood Aerial Crossing

An aerial sewer crossing located in the vicinity of the Midway Crossing WWTP near the Rollingwood Blvd. and Pinelawn Dr. intersection has been identified as an ongoing maintenance issue for BCRSD. The aerial crossing is approximately 105 lf of ductile iron pipe that is prone to freezing. It is recommended that this aerial crossing is eliminated by re-routing the sanitary sewer in this area to a new subsurface gravity main.

Planning Phase: 6-10 Years

Total Project Cost Estimate Projected to 2033 Dollars: $384,500.00 (see Appendix B – Table B.2)

5.1.3 Waters Edge Sewer Improvements

The Waters Edge subdivision is located east of Columbia, just north of the Clark Lane and St. Charles Rd. intersection. The *Edgewater Lots 1-14 Wastewater Evaluation* prepared by HDR in 2021 recommended upsizing the capacity of three sewer pipe segments from 8-inches to 24-inches in order accept wastewater flows from the Edgewater Lots 1-14 proposed development and additional undeveloped areas of the Waters Edge interceptor watershed. Design drawings have been prepared by HDR for the proposed improvement. The existing Grindstone Creek Watershed -Upper North Fork; Hominy Branch Watershed; Little Cedar Creek Watershed Cooperative Agreement between BCRSD and the City of Columbia dictates what areas of the undeveloped watershed fall within jurisdiction of BCRSD vs. the city for sewer services. It is recommended that this project be constructed when development pressure warrants in a cooperative effort with the City of Columbia.

Planning Phase: 11-20 Years

Total Project Cost Estimate Projected to 2041 Dollars: $2,199,100.00 (see Appendix B – Table B.3)

5.2 Pump Stations and Force Mains

Table 5.1 below includes a list of all wastewater pump stations currently owned and operated by BCRSD. The location of each pump station is shown in Exhibit 5.2 on the following page.

Table 5.1. BCRSD Pump Stations

Pump Station*	Receiving WWTP
BCP	Rocky Fork WWTP
Bonne Femme	South Route K WWTP
Clearview North	Rocky Fork WWTP
Clearview South	Rocky Fork WWTP
Concorde East	City of Columbia WWTP
Crestwood Hills	Rocky Fork WWTP
El Rey Heights	City of Columbia WWTP
Green Hills	Rocky Fork WWTP
Hillview Acres	City of Columbia WWTP
Lake Capri	City of Columbia WWTP
Lake of the Woods	City of Columbia WWTP
Lee Heights	City of Columbia WWTP
Martha's Grove	Prairie Meadows WWTP
Midway Elementary School	Midway Crossing WWTP
New Town	South Route K WWTP
Nursery Heights	South Route K WWTP
Oberlin Valley	City of Columbia WWTP
Rayfield	Rocky Fork WWTP
Rocheport North	Rocheport WWTP
Rocheport South	Rocheport WWTP
Rollingwood	Midway Crossing WWTP
Shalimar Gardens	Rocky Fork WWTP
Sharidan Hills	City of Columbia WWTP
Spring Park	City of Columbia WWTP
Sun Valley Estates	City of Columbia WWTP
Fairway West Pump Station	City of Columbia WWTP

* Does not include influent pump stations considered part of a WWTP.

1- Oberlin Valley
2- El Rey Heights
3- Lake Capri
4- Clearview North
5- Clearview South
6- Rayfield
7- BCP
8- Crestwood Hills
9- Shalimar Gardens
10- Bonne Femme
11- Fairway West
12- New Town
13- Lake of the Woods
14- Marthas Grove
15- Rocheport
16- Rocheport
17- Hillview Acres
18- Sharidan Hills
19- Sun Valley Estates
20- Spring Park
21- Nursery Heights
22- Green Hills
23- Concorde East
24- Midway Elem. School
25- Rollingwood
26- Lee Heights

Harrisburg
Hallsville
Hilldale
Woodlandville
Columbia
Rocheport
Huntsdale
Wooldridge
McBaine
Pierpont
Lupus
Sapp
Ashland
Sandy Hook
Wilton
Harg
Elkhurst
Pleasant Grove
Renfro
Rocky Fork Lakes Conservation Area
Big Muddy National Fish And Wildlife Refuge
University of Missouri
Three Creeks Conservation Area
Plowboy Bend Conservation Area
Hunters Creek
Prairie Creek
Reeder Creek
Little Creek
Vernon Branch
Mill Creek
South Fork Grindstone Creek
Maybon Branch
Fox Hollow Branch
Haldiman Branch
Highway 63 N
E Highway 124
819 ft
821 ft
921 ft
922 ft
896 ft

Legend

- Pump Station
- Boone County
- Impaired Streams 303(d)
- NHD Stream
- HUC 12 Watersheds
- Impaired Lakes - 303(d)
- Incorporated Cities

Exhibit 5.2- BCRSD Pump Stations

BCRSD CIP | Boone County, MO | 3/12/2025

0 5,250 10,500
Feet

N

McCLURE™

Document Path: C:\2022001400\07-GIS\MXD\BCRSD_MasterPlan\BCRSD_MasterPlan.aprx

Based on conversations with BCRSD staff, the following pump stations were identified as priorities for improvement:

5.2.1 Clearview North Pump Station

The Clearview North Pump Station is located approximately 0.5 miles south of Rocky Fork WWTP. It is a simplex pump station with a single Myers pump that serves five homes. Given the advantages of having a redundant pump, it is recommended that the existing pump station be replaced with a new duplex grinder pump station.

Planning Phase: 6-10 Years

Total Project Cost Estimate Projected to 2033 Dollars: $425,600.00 (see Appendix B – Table B.4)

5.2.2 Fairway West Pump Station

The Fairway West Pump Station is a duplex pump station located approximately 0.3 miles east of the I-70 and St. Charles Road junction. Records indicate the pump station was constructed in 1997. Due to the pump station's proximity to the City of Columbia sewer system, it could be eliminated by constructing a new gravity sewer line south across I-70 to the city sewer located along Bull Run Dr. Making this connection would eliminate the operation and maintenance costs associated with the Fairway West Pump Station. It is recommended that this connection is constructed as the pump station nears the end of its useful life.

The Lake of the Woods Pump Station located near the West Pump Station just south of the I-70 and St. Charles Road junction was also evaluated for potential elimination through a gravity connection to the City of Columbia. Initial analysis of the existing sewer elevations and topography in this area indicated that this option is not feasible.

Planning Phase: 6-10 Years

Total Project Cost Estimate Projected to 2033 Dollars: $1,366,200.00 (see Appendix B – Table B.5)

5.2.3 New Town Pump Station

The New Town Pump Station is a duplex pump station located just west of the South Route K WWTP at the intersection of Coneflower Ave. and New Meadow Lane. The pump station was constructed in 2000 in conjunction with the installation of the package plant treatment equipment at South Route K. Due to the proximity of the pump station to South Route K, it could potentially be eliminated by making a gravity connection to the proposed South Route K interceptor sewer discussed in Section 4.19. Making this connection would eliminate the operation and maintenance costs associated with the New Town Pump Station. It is recommended that this connection is constructed in coordination with improvements to the South Route K wastewater system.

The Bonne Femme Pump Station was also evaluated for potential elimination through a gravity connection to the proposed South Route K interceptor sewer; however, initial analysis of the existing sewer elevations in the Bonne Femme Estates area indicated that this option is not feasible.

Planning Phase: 0-5 Years

Total Project Cost Estimate Projected to 2033 Dollars: $145,700.00 (see Appendix B – Table B.6)

5.2.4 BCP, El Rey Heights, and Green Hills Pump Stations

The BCP Pump Station is located north of Columbia at 5340 N. Creasy Springs Rd. The pump station has a manhole style lid rather than a typical access hatch cover. It is recommended that the lid is replaced with a new hatch.

Planning Phase: 6-10 Years

Total Project Cost Estimate Projected to 2033 Dollars: $26,200.00 (see Appendix B – Table B.7)

The El Rey Heights Pump Station is located west of Columbia near the intersection of Highway PP and Mary Ann Circle. An approximately 2,000 lf portion of the force main from this pump station was installed without tracer wire. It is recommended that the force main is located and tracer wire is installed.

Planning Phase: 6-10 Years

Total Project Cost Estimate Projected to 2033 Dollars: $71,000.00 (see Appendix B – Table B.8)

The Green Hills Pump Station is located north of Columbia in the Green Hills Mobile Home Park off of Highway VV. The site has issues with stormwater drainage and water overtopping the wet well during wet weather. It is recommended that site drainage improvements are constructed.

Planning Phase: 6-10 Years

Total Project Cost Estimate Projected to 2033 Dollars: $113,500.00 (see Appendix B – Table B.9)

5.3 Pressure Sewers

In addition to the duplex pump stations and force mains that serve multiple connections, BCRSD owns several pressure sewer systems including both grinder pump systems and septic tank effluent pump (STEP) systems. Based on BCRSD's 2023 Annual Operating and Maintenance Summary, BCRSD owns and maintains approximately 253 individual grinder pumps as listed in Table 5.2.

Table 5.2. Summary of Grinder Pump Connections

Subdivision	Number of Grinder Pump Connections
Abel Acres	3
Clear Creek	45
Colchester Rd./Trobridge Rd.	14
Heather Hills	28
Hill Creek	90
Kinkade Crossing/Street Estates	50
Silver Fork	7
Toalson Estates	14
Waters Edge	2

BCRSD also owns and maintains approximately 268 individual septic tanks with effluent pumps as listed in Table 5.3.

Table 5.3 Summary of Septic Tank Effluent Pump Connections

Subdivision	Number of STEP Connections
Brookfield Estates	28
Deerfield Ridge	16
Fall Creek	8
Kristen Acres	3
Lake Capri	27
Quarter Mile Hills	16
Richardson Acres	24
Woodlands	146

In the following subdivisions with pressure sewer systems, BCRSD maintains the pressure sewer laterals only: Arrowhead Lake Estates, Arrowhead Plat 2, Hollingshead, Trobridge Road, Discount Homes, Bond, Buffalo Ridge, Campell and Harvester Rd., Valley Park, Wagon Trail Road, Happy Hollow, Eagles Nest, and Oak Hills.

Based on conversations with BCRSD staff, the following pressure sewer systems were identified as priorities for improvement:

5.3.1 Hill Creek Pressure Sewer

The Hill Creek subdivision is a low-pressure sewer system with approximately 90 grinder pumps owned and maintained by BCRSD. The subdivision is located southeast of the South Route K WWTP off of Hill Creek Road. Since the low-pressure system was installed in 2009, the subdivision has been

a problem area for BCRSD with numerous pump failures requiring total replacement and frequent service calls. A 2014 report prepared by HDR evaluated the hydraulics of the system and recommended increasing the pipe diameter of two existing pressure sewer segments in the system to reduce the head on the pumps. It is recommended that these improvements are implemented.

Planning Phase: 0-5 Years

Total Project Cost Estimated Projected to 2030 Dollars: $183,900.00 (see Appendix B – Table B.10)

5.3.2 Woodlands Pressure Sewer

The Woodlands subdivision is a low-pressure sewer system with approximately 146 connections. The subdivision is located east of Columbia near the intersection of New Haven Road and Rolling Hills Road. The subdivision is another problem area for BCRSD with frequent service calls. A 2019 report prepared by HDR evaluated the hydraulics of the system and recommended increasing the pipe diameter of one existing pressure sewer segment to accommodate flows from a proposed new connection and reduce the head on the pumps. The proposed new connection and pipe replacement has not been constructed. BCRSD staff also indicated an additional segment of pressure sewer that is desired to be upsized to improve operating conditions in the system in order to reduce service calls. It is recommended that these improvements are implemented.

Planning Phase: 0-5 Years

Total Project Cost Estimated Projected to 2030 Dollars: $239,900.00 (see Appendix B – Table B.11)

5.3.3 Proposed Highway 163 / Route N Pressure Sewer

The Rock Bridge Memorial State Park located south of the City of Columbia is a nature preserve and recreation area with several important geologic features such as the Devil's Icebox cave. There are multiple residences located adjacent to the state park in the Pierpont area near the intersection of Highway 163 and Route N. Environmental groups such as the Friends of Rock Bridge Memorial State Park and the Sierra Club have promoted the addition of a pressure sewer system in this area to connect the residences and businesses to the South Route K WWTP and close the onsite treatment systems currently serving these properties. The proposed project would involve installing approximately 11,000 lf of pressure sewer main from the intersection of Highway 163 and Route N to the west along High Point Lane to a connection point with existing BCRSD pressure sewer on Hill Creek Road, which pumps to the South Route K WWTP. At the Highway 163 and Route N intersection, the pressure sewer would branch north approximately 3,000 lf along Highway 163, east approximately 5,000 lf along Highway 163, and south approximately 2,000 lf along Tomlin Hill Road to connect properties in this vicinity. Additional planning and a long-term funding strategy is needed before a project of this nature is pursued. Collaboration between BCRSD and Boone County Resource Management on the onsite sewer strategy for this area should be ongoing.

Planning Phase: 11-20 Years

Total Project Cost Estimated Projected to 2040 Dollars: $4,086,400.00 (see Appendix B – Table B.12)

6.0 OPERATIONS AND MAINTENANCE

In addition to the infrastructure improvements discussed above, key operations and maintenance improvements were evaluated as part of this capital improvements plan based on BCRSD staff priorities.

6.1 CMMS and GIS Integration

The 2013 *Master Plan for District Facilities* discussed several improvements to the operations of BCRSD at a planning level including the implementation of a computerized maintenance management system (CMMS). A CMMS is software designed to streamline and optimize asset management and maintenance operations in organizations. It serves as a centralized hub for tracking work orders, managing assets and inventory, scheduling maintenance, and logging performance metrics. At this time, BCRSD does not use a CMMS to track its operations and maintenance activities; however, BCRSD does maintain a GIS system of its utility infrastructure. Integrating asset management software into the existing GIS system could help BCRSD staff streamline operations and improve efficiency. There are various levels of asset management software that could be implemented ranging from basic identification and tracking of materials to advanced real-time data monitoring with predictive analytics. The level of management software implemented will determine the cost of implementation and ongoing subscription fees. Due to the operational efficiencies produced by a GIS integrated asset management system, the cost of the software may be offset by the overall increased staff efficiency. For this reason, the cost of implementing a CMMS was not developed for the purposes of the CIP.

6.2 Collection System Maintenance and Rehabilitation

As discussed in Section 5.1., BCRSD maintains a vast network of sanitary sewer infrastructure throughout the county. Maintaining this system is critical for preventing issues like excessive inflow and infiltration (I/I) and sanitary sewer overflows (SSOs). Typically collection system maintenance involves two key steps: 1. Inspection and assessment and 2. Repair and rehabilitation. The purpose of the inspection and assessment phase, often referred to as a Sanitary Sewer Evaluation Survey (SSES), is to evaluate the physical and hydraulic conditions of the sanitary sewer system to more accurately determine the actions needed to correct defective areas of the collection system. A full-scale SSES often includes physical examination of system components, flow monitoring, smoke testing, closed circuit televising (CCTV), and hydraulic modeling to comprehensively evaluate all facets of the collection systems. Utilizing the results of the assessment phase, areas of the collection system in the worst condition can be prioritized for rehabilitation.

Some general unit costs for common collection system assessment and rehabilitation practices in 2025 dollars are listed below in Table 6.1.

Table 6.1 Collection System Assessment and Rehabilitation Costs

Description	Unit	Unit Cost
Smoke Testing	Linear Foot	$0.75
Manhole Inspections	Each Manhole	$150.00
CCTV	Linear Foot	$4.00
Sewer Main CIPP Lining	Linear Foot	$50.00
Manhole Rehabilitation	Each Manhole	$6,000.00

Based on the approximately 93.7 miles of gravity sewer and 2,325 manholes identified in BCRSD's GIS system, the replacement value of its collection system infrastructure assets can be estimated at upwards of $100 million dollars. Although funding the full value of the depreciation of these assets is cost prohibitive, funds should be allocated for maintaining this infrastructure.

It is estimated BCRSD should budget $100,000 per year for collection system assessment and another $500,000 per year for rehabilitation and repair. Additionally, BCRSD would benefit from the purchase of portable flow meters and associated monitoring equipment to conduct flow monitoring studies in collection systems with suspected I/I issues. Conducting the flow monitoring studies will allow BCRSD to strategically target the leakiest areas of its collection systems for further assessment. The estimated cost for six new portable flow meters in 2025 dollars is $54,000. It is recommended that the flow meters are purchased in Phase 1.

6.3 Biosolids Management

The majority of waste sludge produced at BCRSD facilities is hauled as a liquid to the City of Columbia WWTP by BCRSD staff for disposal. At the Rocky Fork WWTP and South Route K WWTP, sludge is dewatered onsite using passive sludge dewatering bags and then hauled to the City of Columbia landfill. To improve BCRSD's sludge processing capabilities, a portable, trailer-mounted screw press or centrifuge could be purchased to provide for enhanced sludge dewatering at multiple treatment plant sites. Currently, the Rocky Fork WWTP has limited capacity for the storage of liquid sludge creating operational challenges. The addition of a mechanical dewatering process would enhance operational efficiency and provide greater flexibility for operators. The portable equipment could be used at the Rocky Fork WWTP and the South Route K WWTP. Sludge from BCRSD's other smaller facilities could then be hauled to these sites for dewatering. The estimated cost for the dewatering equipment and trailer in 2025 dollars is $1,200,000. It is recommended this is purchased in collaboration with the Rocky WWTP improvements or South Route K WWTP relocation project in Phase 1.

7.0 SUMMARY OF CAPITAL IMPROVEMENTS RECOMMENDATIONS

To facilitate the development of a strategic approach for prioritizing and implementing the capital improvements outlined in Sections 4.0, 5.0, and 6.0, the recommendations were classified into five key categories:

1. Regulatory Compliance: Improvements essential for maintaining permit compliance.
2. Infrastructure Renewal: Upgrades necessary to refurbish aging facilities or enhance functionality, focusing on condition improvement and system renewal.
3. Capacity Expansion: Enhancements required to increase the overall treatment capacity of the system.
4. Collection System Upgrades: Improvements specifically targeting the collection system infrastructure.
5. Operational Enhancements: Improvements aimed at optimizing operations and maintenance processes.

Tables 7.1 through 7.5 on the following pages group and summarize all improvement recommendations and associated planning costs based on the five categories. This categorization serves as a framework to guide decision-making and resource allocation in the execution of the CIP. Table 7.6 on page 54 provides the complete Capital Improvements Plan.

All budget and cost data were compiled in 2024 and 2025. Costs were then inflated using a 5% annual inflation rate to the planning phase end year of 2030 for the 0 to 5 year recommendations, the midpoint year of 2033 for the 6 to 10 years recommendations, and the midpoint year of 2041 for the 11 to 20 years recommendations. Cost projections for improvements in the first two phases to be completed within the next 10 years are considered reliable for the purpose of evaluating bonding capacity and budgeting needs. As the accuracy of cost estimates diminishes the further costs are projected into the future, the cost for improvements recommended in Phase 3 are considered accurate in today's dollars; however, the projection of these costs is less sound. It is recommended that the CIP be reviewed annually and updated at a minimum of ten-year intervals.

Table 7.1 Regulatory Compliance Improvements

WWTP Regulatory Permit Compliance Improvements									
Facility	Permitted Design Flow (GPD)	Permit Expiration Date	SOC Deadline	SOC Parameters	Previous Facility Plan Date	Improvement Recommendation	CIP Phase	2025 Cost	CIP Cost - Future Planning Year
Midway Arms	4,800	6/30/2025	9/1/2024	Ammonia	None	Coordinate with original developer to complete a Facility Plan and implement recommendation.	0-5 years	$ -	$ -
Highfield Acres	29,000	3/31/2025	11/1/2025	Ammonia & *E. coli*	2016	Transport flow to City of Columbia and close facility.	0-5 years	$ -	$ -
Richardson Acres	8,510	3/31/2025	11/1/2028	Ammonia & *E. coli*	2021	Transport flow to City of Columbia via Brown Station and close the facility.	0-5 years	$ 1,551,700	$ 1,956,900
Brown Station	1,850	3/31/2025	11/1/2028	Ammonia & *E. coli*	2021	Transport flow to City of Columbia and close the facility.	0-5 years	$ 813,600	$ 1,020,500
South Route K	244,000	3/31/2025	11/1/2029	Ammonia & *E. coli*	2017	Replace with New WWTP on relocated site.	0-5 years	$ 17,028,300	$ 21,597,600
Trails West	57,500	6/30/2025	11/1/2031	Ammonia & *E. coli*	2022	Transport flow to Midway Crossing and close facility.	6-10 years	$ 1,186,900	$ 1,715,500
Twin Lakes	19,400	9/30/2024	11/1/2032	Ammonia & *E. coli*	2011	Upgrade facility to extended aeration package plant on adjacent site.	6-10 years	$ 1,571,800	$ 2,284,100
Cedar Gate	11,100	6/30/2025	11/1/2034	Ammonia & *E. coli*	2021	Transport flow to Brown Station pump station and close the facility.	6-10 years	$ 2,407,800	$ 3,476,300
Brookfield Estates	30,000	3/31/2025	11/1/2035	Chloride	None	Coordinate with water district and homeowners regarding use of water softeners.	11-20 years	$ -	$ -
Quarter Mile Hills	5,480	13/31/2024	11/1/2037	Ammonia & *E. coli*	2017	Upgrade facility to no discharge drip irrigation treatment system.	11-20 years	$ 820,900	$ 1,697,400
Sunnyslope	5,500	13/31/2024	11/1/2038	Ammonia & *E. coli*	2017	Transport flow to Hallsville and close facility.	11-20 years	$ 485,600	$ 1,059,900

Table 7.2 Infrastructure Renewal Improvements

WWTP Infrastructure Renewal Improvements							
Facility	Permitted Design Flow (GPD)	SOC Deadline	Final Improvement Recommendation	CIP Phase	2025 Cost	CIP Cost - Future Planning Year	Notes
Kinkade Crossing	50,000	N/A	Rehabilitate and repaint treatment basins Replace annodes	0-5 years	$ 383,100	$ 488,900	Includes cost for temporary pumping and hauling to Rocky Fork
Meadow Village	16,500	N/A	Rehabilitate and repaint treatment basin Replace anodes Install safety railing Improve site drainage	0-5 years	$ 265,600	$ 339,000	Includes cost for temporary pumping and hauling to Rocky Fork
Midway Crossing	150,000	N/A	New permanent influent flow measurement Replace influent manual bar screen Rehabilitate final clarifier equipment Add cover over UV equipment	0-5 years	$ 194,400	$ 248,200	
Prairie Meadows	80,000	N/A	Rehabilitate and repaint treatment basins Replace anodes UV equipment access improvements	0-5 years	$ 1,054,100	$ 1,345,400	Includes cost for temporary pumping and hauling to Rocky Fork
Rocheport	34,400	N/A	New permanent influent flow measurement	0-5 years	$ 59,100	$ 75,400	
Rocky Fork	460,000	N/A	Sludge handling improvements (not including equipment) Controls redundancy for RAS/WAS pumps Cover over cascade aerator	0-5 years	$ 381,600	$ 487,100	Separate equipment cost for portable sludge screw press.
Trails West	57,500	11/1/2031	New influent manual bar screen	0-5 years	$ 46,100	$ 59,000	
American Outdoor Brands	4,889	N/A	New influent manual screen	6-10 years	$ 46,100	$ 68,200	
Eagle Knoll	35,000	N/A	Upgrade site to 3-phase power Replace motors and install fine bubble diffusers	6-10 years	$ 172,800	$ 255,400	Dependent upon electric utility expense
Midway USA	<3,000	N/A	New influent manual screen	6-10 years	$ 46,100	$ 68,200	

Table 7.3 Capacity Expansion Improvements

WWTP Capacity Expansion Improvements				
Facility	Improvement Recommendation	CIP Phase	2025 Cost	CIP Cost - Future Planning Year
Rocky Fork WWTP	Expand Capacity to 690,000 gpd	0-5 Years	$ 983,900	$ 1,255,800

Table 7.4 Collection System Improvements

Collection System Improvements				
Facility	Improvement Recommendation	CIP Phase	2025 Cost	CIP Cost - Future Planning Year
Cedar Lake Siphon Elimination	Gravity re-route to eliminate inverted siphon sewer	0-5 years	$ 667,500	$ 851,900
Hillcreek LPS System	Upsize portion of existing pressure sewer	0-5 years	$ 144,000	$ 183,900
Woodland LPS System	Upsize portion of existing pressure sewer	0-5 years	$ 187,200	$ 239,000
NewTown Pump Station	Gravity to new South Route K sewer	0-5 years	$ 115,200	$ 145,700
Rollingwood Aerial Crossing	Gravity re-route of aerial crossing	6-10 years	$ 260,200	$ 384,500
Clearview North Pump Station	Replace with duplex grinder pump station	6-10 years	$ 288,000	$ 425,600
El Rey Heights Pump Station	Install 2,000 lf of tracer wire	6-10 years	$ 48,000	$ 71,000
Green Hills Pump Station	Site drainage improvements	6-10 years	$ 76,800	$ 113,500
BCP Pump Station	Replace access hatch	6-10 years	$ 18,000	$ 26,600
Fairway West Pump Station	Gravity to City of Columbia across I-70	6-10 years	$ 924,400	$ 1,336,200
Hwy 163 / Route N Pressure Sewer	Install 11,000 lf of LPS main and 10,000 lf of LPS Branch in 163/N area for connection to South Route K	11-20 years	$ 1,872,000	$ 4,086,400
Water's Edge	Upsize portion of existing sewer to 24" gravity main	11-20 years	$ 1,007,400	$ 2,199,100

Table 7.5 Operational Enhancements

Operational Enhancements			
Recommendation	CIP Phase	2025 Cost	CIP Cost - Future Planning Year
Purchase Trailer-Mounted Portable Sludge Dewatering Equipment	0-5 Years	$ 1,200,000	$ 1,531,538
Purchase Portable Flow Meters	0-5 Years	$ 54,000	$ 68,919
Collection System Investigation	0-5 Years	$ 500,000	$ 638,141
Collection System Rehabilitation	0-5 Years	$ 2,500,000	$ 3,190,704
Collection System Investigation	6-10 Years	$ 500,000	$ 738,728
Collection System Rehabilitation	6-10 Years	$ 2,500,000	$ 3,693,639
Collection System Investigation	11-20 Years	$ 1,000,000	$ 2,182,875
Collection System Rehabilitation	11-20 Years	$ 5,000,000	$ 10,914,373

Table 7.6 Capital Improvements Plan Summary

BCRSD Capital Improvements Plan 2025					
	Description	Phase 1 (0-5 YR)	Phase 2 (6-10 YR)	Phase 3 (11-20 YR)	Total
TREATMENT FACILITY PERMIT COMPLIANCE IMPROVEMENTS					
1	Rollingwood Plat 1 - Connect to Midway Crossing	-			-
2	Highfield Acres - Connect to City of Columbia	-			-
3	Brown Station WWTP - Connect to City of Columbia	$ 1,020,500			$ 1,020,500
4	Richardson Acres WWTF - Connect to Brown Station Pump Station	$ 1,956,900			$ 1,956,900
5	South Route K WWTP - New WWTP	$ 21,597,600			$ 21,597,600
6	Trails West WWTF - Connect to Midway Crossing		$ 1,715,500		$ 1,715,500
7	Twin Lakes WWTF - WWTF Upgrades		$ 2,284,100		$ 2,284,100
8	Cedar Gate WWTF - Connect to Brown Station Pump Station		$ 3,476,300		$ 3,476,300
9	Quarter Mile Hills WWTF - WWTF Upgrades			$ 1,697,400	$ 1,697,400
10	Sunnyslope WWTF - Connect to Hallsville			$ 1,059,900	$ 1,059,900
	Total Treatment Facility Permit Compliance	**$24,575,000**	**$7,475,900**	**$2,757,300**	**$34,808,200**
TREATMENT FACILITY INFRASTRUCTURE RENEWAL IMPROVEMENTS					
1	Kinkade Crossing WWTP Improvements	$488,900			$488,900
2	Meadow Village WWTP Improvements	$339,000			$339,000
3	Midway Crossing WWTP Improvements	$248,200			$248,200
4	Prairie Meadows WWTP Improvements	$1,345,400			$1,345,400
5	Rocheport WWTP Improvements	$75,400			$75,400
6	Rocky Fork WWTP Improvements	$487,100			$487,100
7	Trails West WWTF Improvements	$59,000			$59,000
8	American Outdoor Brands Improvements		$68,200		$68,200
9	Eagle Knoll WWTP Improvements		$255,400		$255,400
10	Midway USA Improvements		$68,200		$68,200
	Total Treatment Facility Infrastructure Renewal	**$3,043,000**	**$391,800**	**$0**	**$3,434,800**
TREATMENT FACILITY CAPACITY EXPANSION IMPROVEMENTS					
1	Rocky Fork WWTP Capacity Expansion	$1,255,800			$1,255,800
	Total Treatment Facility Capacity	**$1,255,800**	**$0**	**$0**	**$1,255,800**
COLLECTION SYSTEM IMPROVEMENTS					
1	Cedar Lake Siphon Sewer Elimination	$851,900			$851,900
2	Hillcreek Pressure Sewer Improvements	$183,900			$183,900
3	Woodlands Pressure Sewer Improvements	$239,000			$239,000
4	NewTown Pump Station Elimination	$145,700			$145,700
5	Rollingwood Aerial Crossing Elimination		$384,500		$384,500
6	Fairway West Pump Station Elimination		$1,336,200		$1,336,200
7	Clearview North Pump Station Replacement		$425,600		$425,600
8	Pump Station Improvements (BCP, Green Hills, & El Rey Heights)		$211,100		$211,100
9	Proposed Highway 163 / Route N Pressure Sewer			$4,086,400	$4,086,400
10	Water's Edge Sewer Improvements			$2,199,100	$2,199,100
	Total Collection System	**$1,420,500**	**$2,357,400**	**$6,285,500**	**$10,063,400**
OPERATIONAL ENHANCEMENTS					
1	Portable Sludge Press w/ Trailer (equipment only)	$1,531,538			$1,531,538
2	Portable Flow Meters	$68,919			$68,919
3	Collection System Evaluation	$638,141	$738,728	$2,182,875	$3,559,743
4	Collection System Rehabilitation	$3,190,704	$3,693,639	$10,914,373	$17,798,715
	Total Operations and Maintenance	**$5,429,302**	**$4,432,366**	**$13,097,248**	**$22,958,916**
	TOTAL IMPROVEMENTS	**$35,723,602**	**$14,657,466**	**$22,140,048**	**$72,521,116**

8.0 SCHEDULE AND IMPLEMENTATION

Projects recommended for completion in the Phase 1: 0-5 Years category are summarized below in Table 8.1. Further prioritization within each of the five improvement categories is provided in Section 8.1 through 8.5.

Table 8.1 CIP Phase 1 (0-5 Years)

BCRSD Capital Improvements Plan 2025		
Description		Phase 1 (0-5 YR)
TREATMENT FACILITY PERMIT COMPLIANCE IMPROVEMENTS		
1	Brown Station WWTP - Connect to City of Columbia	$ 1,020,500
2	Richardson Acres WWTF - Connect to Brown Station Pump Station	$ 1,956,900
3	South Route K WWTP - New WWTP or Connect to Columbia	$ 21,597,600
	Total Treatment Facility Permit Compliance	**$24,575,000**
TREATMENT FACILITY INFRASTRUCTURE RENEWAL IMPROVEMENTS		
1	Kinkade Crossing WWTP Improvements	$488,900
2	Meadow Village WWTP Improvements	$339,000
3	Midway Crossing WWTP Improvements	$248,200
4	Prairie Meadows WWTP Improvements	$1,345,400
5	Rocheport WWTP Improvements	$75,400
6	Rocky Fork WWTP Improvements	$487,100
7	Trails West WWTF Improvements	$59,000
	Total Treatment Facility Condition and Renewal	**$3,043,000**
TREATMENT FACILITY CAPACITY EXPANSION IMPROVEMENTS		
1	Rocky Fork WWTP Capacity Expansion	$1,255,800
	Total Treatment Facility Capacity	**$1,255,800**
COLLECTION SYSTEM IMPROVEMENTS		
1	Cedar Lake Siphon Sewer Elimination	$851,900
2	Hillcreek Pressure Sewer Improvements	$183,900
3	Woodlands Pressure Sewer Improvements	$239,000
4	NewTown Pump Station Elimination	$145,700
	Total Collection System	**$1,420,500**
OPERATIONAL ENHANCEMENTS		
1	Portable Sludge Press w/ Trailer (equipment only)	$1,531,538
2	Portable Flow Meters	$68,919
3	Collection System Evaluation	$638,141
4	Collection System Rehabilitation	$3,190,704
	Total Operations and Maintenance	**$5,429,302**
	TOTAL IMPROVEMENTS	**$35,723,602**

8.1 Regulatory Compliance

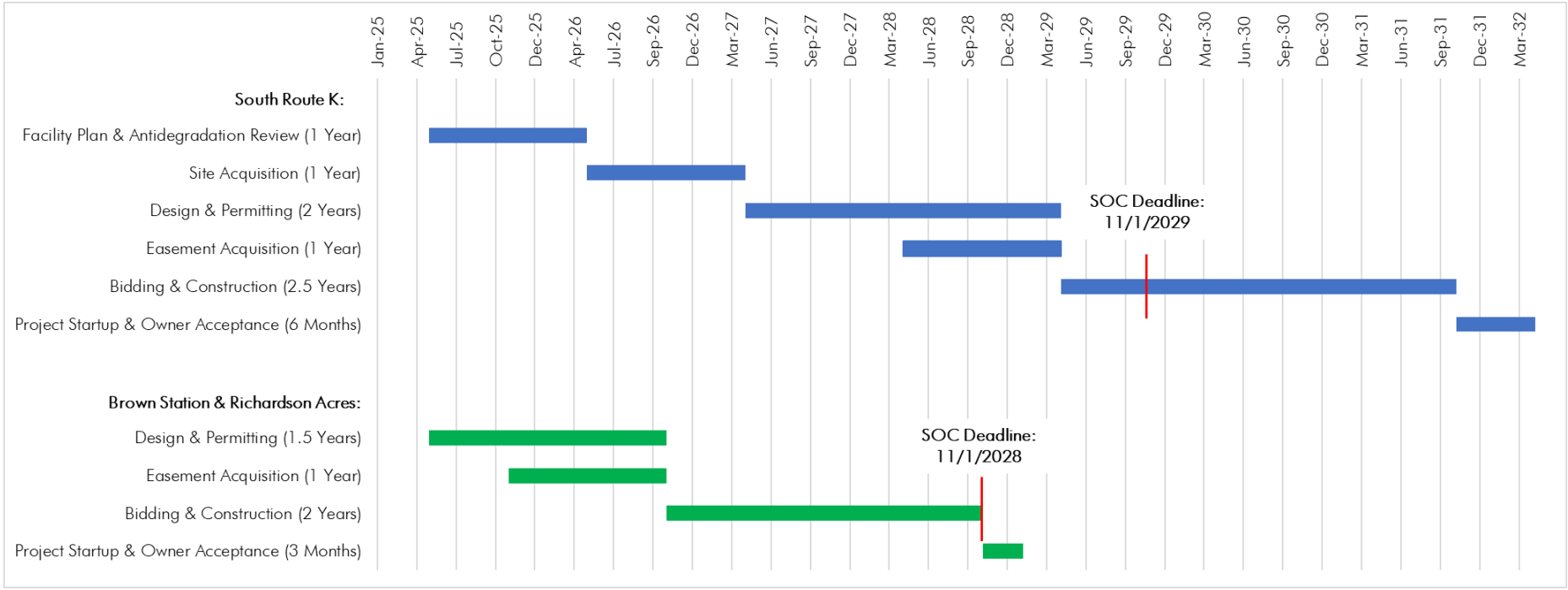
Completing projects identified in the regulatory compliance category should take first priority in order to meet SOC deadlines and maintain compliance with MDNR regulations. Projects in the regulatory compliance category to be completed in Phase 1 (0-5 Years) should be prioritized as follows:

1. Brown Station WWTP connection to Rocky Fork WWTP
2. Richardson Acres WWTF connection to Rocky Fork WWTP
3. South Route K WWTP relocation and capacity expansion

Initiating the design phase of the proposed pump stations and force mains for the connection of the Brown Station WWTP and the Richardson Acres WWTP to the City of Columbia or Rocky Fork WWTP should begin quickly as these projects are currently funded on the CWSRF 2026 IUP and have SOC deadlines in 2028. Due to the length of time required to complete the proposed South Route K WWTP relocation, it is also recommended that the facility plan and antidegradation review updates required to complete the project are initiated as soon as practicable.

Figure 8.1 on the following page illustrates the proposed timeline for completing these three projects. This schedule highlights the need for these projects to begin quickly, as it may not be possible to complete the necessary improvements by the current SOC deadlines. Prioritization of completing these projects could be shifted based on possible collaboration with DNR to extend the SOC deadlines.

Figure 8.1 Phase 1 Regulatory Compliance Proposed Project Schedules



8.2 Infrastructure Renewal

Projects in the infrastructure renewal category recommended for completion in Phase 1 (0-5 Years) should be prioritized as follows:

1. Trails West WWTF condition and renewal improvements
2. Rocky Fork WWTP condition and renewal improvements
3. Rocheport WWTP condition and renewal improvements
4. Kinkade Crossing WWTP condition and renewal improvements
5. Meadow Village WWTP condition and renewal improvements
6. Prairie Meadows WWTP condition and renewal improvements

The Trails West WWTF improvements for the new influent manual screen should be prioritized due to its relatively low capital cost and the ongoing need to replace aerators in the lagoon. The Rocky Fork WWTP improvements should be considered next due to the increased operational efficiency the improvements will provide. Improvements to Kinkade Crossing, Meadow Village, and Prairie Meadows could be completed as a joint project or separately. Timing for the completion of these improvements will be dependent upon the speed at which the existing basins continue to deteriorate.

8.3 Capacity Expansion

Projects in the treatment capacity expansion category to be completed in Phase 1 (0-5 Years) should be prioritized as follows:

1. Rocky Fork WWTP capacity expansion

Expansion of the Rocky Fork WWTP capacity to 690,000 gpd should be completed as development or regionalization pressure warrant.

8.4 Collection System Improvements

Projects in the collection system improvements category to be completed in Phase 1 (0-5 Years) should be prioritized as follows:

1. Hillcreek Pressure Sewer Improvements
2. Woodlands Pressure Sewer Improvements
3. Cedar Lake Siphon Sewer Elimination
4. New Town Pump Station Elimination (complete in Coordination with South Route K WWTP relocation)

Due to the frequent service calls and numerous pump failures experienced in the Hillcreek pressure sewer system, it is recommended that this project is prioritized first. The Woodlands pressure sewer improvements and Cedar Lake siphon sewer elimination should be completed next. The New Town pump station elimination project should be completed in coordination with the South Route K WWTP relocation project.

8.5 Operational Enhancements

Projects in the operational enhancements category to be completed in Phase 1 (0-5 Years) should be prioritized as follows:

1. Purchase Portable Flow Meters
2. Purchase Portable Sludge Dewatering Equipment (purchase in coordination with South Route K WWTP relocation or Rocky Fork WWTP condition and renewal improvements)
3. Collection System Investigation
4. Collection System Rehabilitation

Purchase of portable flow meters should be prioritized due to the low capital cost and the highly beneficial information provided by collection system flow monitoring and analysis. Purchase of portable sludge dewatering equipment should be prioritized next due to the enhanced operational efficiencies the equipment will provide. Collection system investigation and rehabilitation work should be completed on an annual basis, targeting the oldest and leakiest collection system infrastructure first.

Prioritization of the improvements within all five categories can be further developed by completing a cost-benefit analysis of the overall financial impact of each of the individual improvement recommendations. Additionally, project priorities may need to be shifted based on new development within Boone County, changes in DNR regulations, or other unpredictable circumstances.

9.0 FINANCING

9.1 Financing

At the time of this report, BCRSD has approximately $3 million dollars of remaining bonding capacity available to fund capital improvements. BCRSD may also pursue a bond issue to finance capital improvements projects recommended in this report. The bond amount and timing of any bond election would be determined by the Board of Trustees.

Historically, BCRSD has utilized the Clean Water State Revolving Fund (CWSRF) program to obtain low interest loans and grants to fund large capital improvements to its wastewater treatment and collection system infrastructure. The program features a fixed-rate loan with a subsidized target interest rate that is 30% of the municipal market rate for loans with a standard term of 20 years. Additionally, the CWSRF program offers additional subsidization in the form of grants. The most common grants for capital improvements projects are the CWSRF Affordability Grant and the CWSRF Water Quality Incentive Grant. Eligibility for an Affordability Grant is determined by the demographic and economic characteristics of the population served by the project. In the past, BCRSD did not meet the qualifications to receive Affordability Grant funds, but eligibility should be revisited at the time SRF applications are submitted. Water Quality Incentive Grants are available to fund projects that include certain components that have significant benefits to water quality, including projects for the construction of upgrades to meet new wastewater effluent permit limits and projects targeting collection system I/I reduction. The improvements projects recommended to upgrade or connect the treatment facilities with a SOC should qualify for the Water Quality Incentive Grant if the program has available funding. The maximum grant award available generally varies each fiscal year.

Projects can also be financed through private sources or by the sale of revenue bonds. Given the additional regulatory hurdles associated with funding projects through the CWSRF program, opting for private financing may be beneficial for projects that do not qualify for grant funding. Moreover, if a project can be completed more quickly with private financing, it can help mitigate the effects of inflation on construction costs.

9.2 Impact to User Rates

A user rate study was not included in the scope of the Capital Improvements Plan. An updated user rate study will be necessary to ensure BCRSD generates sufficient revenue to cover its operational and capital expenses and maintains the required 1.10 debt service coverage ratio. By analyzing the relationship between costs and revenue, the study will enable BCRSD to establish a fair and sustainable rate structure.

APPENDIX A

Treatment Facility Detailed Cost Estimates

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Table A.1 American Outdoor Brands

Engineer's Opinion of Probable Cost

Project Description: American Outdoor Brands Infrastructure Renewal Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Influent Manual Screen	1	LS	$ 32,000.00	$ 32,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 32,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 6,400.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 38,400.00**
				COST ESCALATION	$ 18,400.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 56,800.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 11,400.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 68,200.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

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Table A.2 Brown Station

Engineer's Opinion of Probable Cost

Project Description: Brown Station Connection to Rocky Fork WWTP

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Mobilization (5%)	1	LS	$ 99,650.00	$ 99,650.00
2	Pump Station	1	LS	$ 300,000.00	$ 300,000.00
3	6" Force Main	23,900	LF	$ 70.00	$ 1,673,000.00
4	WWTF Closure	1	LS	$ 20,000.00	$ 20,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 2,092,650.00**
				CONTINGENCY ALLOWANCE (20%)	$ 418,600.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 2,511,300.00**
				COST ESCALATION	$ 693,900.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 3,205,200.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 641,100.00
				LAND ACQUISITION	$ 250,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 4,096,300.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Land acquisition costs are included.

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Table A.3 Brown Station

Engineer's Opinion of Probable Cost

Project Description: Brown Station WWTP Connection to City of Columbia

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Mobilization (5%)	1	LS	$ 24,750.00	$ 24,750.00
2	Pump Station	1	LS	$ 300,000.00	$ 300,000.00
3	6" Force Main	2,500	LF	$ 70.00	$ 175,000.00
4	WWTF Closure	1	LS	$ 20,000.00	$ 20,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 519,750.00**
				CONTINGENCY ALLOWANCE (20%)	$ 104,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 623,800.00**
				COST ESCALATION	$ 172,400.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 796,200.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 159,300.00
				LAND ACQUISITION	$ 65,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 1,020,500.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Land acquisition costs are included.

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Table A.4 Cedar Gate

Engineer's Opinion of Probable Cost

Project Description: Cedar Gate Connection to Rocky Fork WWTP via Richardson Acres & Brown Station

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Mobilization (5%)	1	LS	$ 74,000.00	$ 74,000.00
2	Pump Station	1	LS	$ 300,000.00	$ 300,000.00
3	6" Force Main	16,000	LF	$ 70.00	$ 1,120,000.00
4	WWTF Closure	1	LS	$ 60,000.00	$ 60,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 1,554,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 310,800.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 1,864,800.00**
				COST ESCALATION	$ 890,400.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 2,755,200.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 551,100.00
				LAND ACQUISITION	$ 170,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 3,476,300.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Land acquisition costs are included.

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Table A.5 Eagle Knoll

Engineer's Opinion of Probable Cost

Project Description: Eagle Knoll WWTP Infrastructure Renewal Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Site Upgrade to 3-Phase Power and Motors	1	LS	$ 100,000.00	$ 100,000.00
2	Fine Bubble Diffusers	1	LS	$ 20,000.00	$ 20,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 120,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 24,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 144,000.00**
				COST ESCALATION	$ 68,800.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 212,800.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 42,600.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 255,400.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

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Table A.6 Kinkade Crossing

Engineer's Opinion of Probable Cost

Project Description: Kinkade Crossing WWTP Infrastructure Renewal Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Rehabilitate and Repaint Treatment Basin	1	LS	$ 210,000.00	$ 210,000.00
2	Anode Replacement	1	LS	$ 6,000.00	$ 6,000.00
3	Temporary Pump and Haul to Rocky Fork	1	LS	$ 50,000.00	$ 50,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 266,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 53,200.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 319,200.00**
				COST ESCALATION	$ 88,200.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 407,400.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 81,500.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 488,900.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Includes cost for temporary pumping and hauling to Rocky Fork WWTP during rehabilitation .

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Table A.7 Kinkade Crossing

Engineer's Opinion of Probable Cost

Project Description: Kinkade Crossing WWTP Connection to Rocky Fork

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Mobilization (5%)	1	LS	$ 30,625.00	$ 30,625.00
2	Pump Station	1	LS	$ 300,000.00	$ 300,000.00
3	3" Forcemain	5,850	LF	$ 50.00	$ 292,500.00
4	WWTF Closure	1	LS	$ 20,000.00	$ 20,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 643,125.00**
				CONTINGENCY ALLOWANCE (20%)	$ 128,700.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 771,900.00**
				COST ESCALATION	$ 213,300.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 985,200.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 197,100.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 1,182,300.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Land acquisition costs are not included.

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Table A.8 Meadow Village

Engineer's Opinion of Probable Cost

Project Description: Meadow Village WWTP Infrastructure Renewal Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Rehabilitate and Repaint Treatment Basin	1	LS	$ 70,400.00	$ 70,400.00
2	Anode Replacement	1	LS	$ 2,000.00	$ 2,000.00
3	Site Drainage Improvements	1	LS	$ 64,000.00	$ 64,000.00
4	Install Railing	1	LS	$ 23,000.00	$ 23,000.00
5	Temporary Pump and Haul to Rocky Fork	1	LS	$ 25,000.00	$ 25,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 184,400.00**
				CONTINGENCY ALLOWANCE (20%)	$ 36,900.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 221,300.00**
				COST ESCALATION	$ 61,200.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 282,500.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 56,500.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 339,000.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Includes cost for temporary pumping and hauling to Rocky Fork WWTP during rehabilitation .

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Table A.9 Midway Crossing

Engineer's Opinion of Probable Cost

Project Description: Midway Crossing WWTP Infrastructure Renewal Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Repair Clarifiers	1	LS	$32,000.00	$ 32,000.00
2	Replace Manual Barscreen	1	LS	$32,000.00	$ 32,000.00
3	Permanent Influent Flow Measurement	1	LS	$41,000.00	$ 41,000.00
4	Cover and Access Steps for UV Equipment	1	LS	$30,000.00	$ 30,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 135,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 27,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 162,000.00**
				COST ESCALATION	$ 44,800.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 206,800.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 41,400.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 248,200.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

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Table A.10 Midway USA

Engineer's Opinion of Probable Cost

Project Description: Midway USA WWTF Infrastructure Renewal Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Influent Manual Screen	1	LS	$ 32,000.00	$ 32,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 32,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 6,400.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 38,400.00**
				COST ESCALATION	$ 18,400.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 56,800.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 11,400.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 68,200.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

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Table A.11 Prairie Meadows

Engineer's Opinion of Probable Cost

Project Description: Prairie Meadows WWTP Infrastructure Renewal Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	UV Access Improvements	1	LS	$ 40,000.00	$ 40,000.00
2	Rehabilitate and Repaint Treatment Basin	1	LS	$ 334,000.00	$ 334,000.00
3	Anode Replacement	1	LS	$ 8,000.00	$ 8,000.00
4	Temporary Pump and Haul to Rocky Fork	1	LS	$ 100,000.00	$ 100,000.00
5	Additional Flow Equalization Improvements	1	LS	$ 250,000.00	$ 250,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 732,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 146,400.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 878,400.00**
				COST ESCALATION	$ 242,700.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 1,121,100.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 224,300.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 1,345,400.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Includes cost for temporary pumping and hauling to Rocky Fork WWTP during rehabilitation .

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Table A.12 Quarter Mile Hills

Engineer's Opinion of Probable Cost

Project Description: Quarter Mile Hills WWTF No-Discharge System Upgrade

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Mobilization (5%)	1	LS	$24,500.00	$ 24,500.00
2	Drip Irrigation Treatment System	1	LS	$490,000.00	$ 490,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 514,500.00**
				CONTINGENCY ALLOWANCE (20%)	$ 102,900.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 617,400.00**
				COST ESCALATION	$ 730,400.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 1,347,800.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 269,600.00
				LAND ACQUISITION	$ 80,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 1,697,400.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of planning phase (2041) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Land acquisition costs are included.

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Table A.13 Richardson Acres

Engineer's Opinion of Probable Cost

Project Description: Richardson Acres Connection to Rocky Fork WWTP or Columbia WWTP via Brown Station Pump Station

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Mobilization (5%)	1	LS	$ 48,500.00	$ 48,500.00
2	Pump Station	1	LS	$ 350,000.00	$ 350,000.00
3	6" Force Main	8,000	LF	$ 70.00	$ 560,000.00
4	WWTF Closure	1	LS	$ 60,000.00	$ 60,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 1,018,500.00**
				CONTINGENCY ALLOWANCE (20%)	$ 203,700.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 1,222,200.00**
				COST ESCALATION	$ 337,700.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 1,559,900.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 312,000.00
				LAND ACQUISITION	$ 85,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 1,956,900.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Land acquisition costs are included.

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Table A.14 Rocheport

Engineer's Opinion of Probable Cost

Project Description: Rocheport WWTP Infrastructure Renewal Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION	
1	Permanent Influent Flow Measurement	1	LS	$41,000.00	$	41,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$**	**41,000.00**
				CONTINGENCY ALLOWANCE (20%)	$	8,200.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$**	**49,200.00**
				COST ESCALATION	$	13,600.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$**	**62,800.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$	12,600.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$**	**75,400.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

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Table A.15 Rocky Fork

Engineer's Opinion of Probable Cost

Project Description: Rocky Fork WWTP Infrastrucutre Renewal Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Sludge Processing Improvements (excluding equipment)	1	LS	$150,000.00	$ 150,000.00
2	RAS/WAS Controls Redundancy	1	LS	$100,000.00	$ 100,000.00
3	Cover over Cascade Aeration	1	LS	$15,000.00	$ 15,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 265,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 53,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 318,000.00**
				COST ESCALATION	$ 87,900.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 405,900.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 81,200.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 487,100.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

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Table A.16 Rocky Fork

Engineer's Opinion of Probable Cost

Project Description: Rocky Fork WWTP Treatment Capacity Expansion Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Additional Sludge Digester Basin	1	LS	$353,400.00	$ 353,400.00
2	Operations Building - Digester Blower Improvements	1	LS	$38,700.00	$ 38,700.00
3	Influent Pump Station Improvements	1	LS	$188,900.00	$ 188,900.00
4	Additional UV Bank	1	LS	$102,200.00	$ 102,200.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 683,200.00**
				CONTINGENCY ALLOWANCE (20%)	$ 136,700.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 819,900.00**
				COST ESCALATION	$ 226,600.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 1,046,500.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 209,300.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 1,255,800.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

Table A.17 South Route K

Engineer's Opinion of Probable Cost

Project Description: South Route K WWTP Relocation and Capacity Expansion

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Mobilization	1	LS	$546,900.00	$ 546,900.00
2	Gravity Sewer Extension	8,500	LF	$300.00	$ 2,550,000.00
3	Manholes	24	EA	$12,000.00	$ 288,000.00
4	New 0.5 MGD Extended Aeration WWTP	1	LS	$8,000,000.00	$ 8,000,000.00
5	WWTF Closure	1	LS	$100,000.00	$ 100,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 11,484,900.00**
				CONTINGENCY ALLOWANCE (20%)	$ 2,297,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 13,781,900.00**
				COST ESCALATION	$ 3,807,700.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 17,589,600.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 3,518,000.00
				LAND ACQUISITION	$ 410,000.00
				FACILITY PLAN & ANTIDEGRADATION REVIEW AMENDMENT	$ 80,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 21,597,600.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Land acquisition costs are included.
4. As an alternative to this project, an interconnection with the City of Columbia via new pump station and force main could be investigated.

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Table A.18 Sunnyslope

Engineer's Opinion of Probable Cost

Project Description: Sunnyslope Connection to City of Hallsville WWTP

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Mobilization	1	LS	$16,050.00	$ 16,050.00
2	8" Gravity Sewer	1,400	LF	$175.00	$ 245,000.00
3	Manhole	3	EA	$12,000.00	$ 36,000.00
4	WWTF Closure	1	LS	$40,000.00	$ 40,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 337,050.00**
				CONTINGENCY ALLOWANCE (20%)	$ 67,500.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 404,600.00**
				COST ESCALATION	$ 478,600.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 883,200.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 176,700.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 1,059,900.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2041) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

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Table A.19 Trails West

Engineer's Opinion of Probable Cost

Project Description: Trails West Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Influent Manual Screen	1	LS	$ 32,000.00	$ 32,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 32,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 6,400.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 38,400.00**
				COST ESCALATION	$ 10,700.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 49,100.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 9,900.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 59,000.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

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Table A.20 Trails West

Engineer's Opinion of Probable Cost

Project Description: Trails West Connection to Midway Crossing WWTP

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Mobilization (5%)	1	LS	$ 36,600.00	$ 36,600.00
2	Pump Station	1	LS	$ 450,000.00	$ 450,000.00
3	4" Force Main	3,700	LF	$ 60.00	$ 222,000.00
4	WWTF Closure	1	LS	$ 60,000.00	$ 60,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 768,600.00**
				CONTINGENCY ALLOWANCE (20%)	$ 153,800.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 922,400.00**
				COST ESCALATION	$ 440,500.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 1,362,900.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 272,600.00
				LAND ACQUISITION	$ 40,000.00
				FACILITY PLAN AMENDMENT (Flow Monitoring Study)	$ 40,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 1,715,500.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Land acquisition costs are included.

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Table A.21 Twin Lakes

Engineer's Opinion of Probable Cost

Project Description: Twin Lakes Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Mobilization	1	LS	$49,325.00	$ 49,325.00
2	8" Gravity Sewer	300	LF	$175.00	$ 52,500.00
3	Manhole	2	EA	$12,000.00	$ 24,000.00
4	New 0.02 MGD Extended Aeration WWTP	1	LS	$850,000.00	$ 850,000.00
5	WWTF Closure	1	LS	$60,000.00	$ 60,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 1,035,825.00**
				CONTINGENCY ALLOWANCE (20%)	$ 207,200.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 1,243,100.00**
				COST ESCALATION	$ 593,600.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 1,836,700.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 367,400.00
				LAND ACQUISITION	$ 80,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 2,284,100.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Land acquisition costs are included.

APPENDIX B

Collection System Detailed Cost Estimates

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Table B.1 Cedar Lake Siphon Sewer Elimination

Engineer's Opinion of Probable Cost

Project Description: Cedar Lake Siphon Sewer Elimination

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	48" Sanitary Sewer Manhole	9	EA	$12,000.00	$ 108,000.00
2	8" Sewer Main	2,000	LF	$175.00	$ 350,000.00
3	Grouting Existing Sewer Main	200	LF	$15.00	$ 3,000.00
4	Surface Restoration	1.00	AC	$2,500.00	$ 2,500.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 463,500.00**
				CONTINGENCY ALLOWANCE (20%)	$ 92,700.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 556,200.00**
				COST ESCALATION	$ 153,700.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 709,900.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 142,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 851,900.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Land acquisition costs are not included.

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Table B.2 Rollingwood Sewer Aerial Crossing

Engineer's Opinion of Probable Cost

Project Description: Rollingwood Gravity Sewer Aerial Crossing Elimination

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	48" Sanitary Sewer Manhole	3	EA	$12,000.00	$ 36,000.00
2	8" Sewer Main	800	LF	$175.00	$ 140,000.00
3	Clearing and Grubbing	0.46	AC	$7,500.00	$ 3,450.00
4	Surface Restoration	0.46	AC	$2,500.00	$ 1,150.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 180,600.00**
				CONTINGENCY ALLOWANCE (20%)	$ 36,200.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 216,800.00**
				COST ESCALATION	$ 103,600.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 320,400.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 64,100.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 384,500.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.
3. Land acquisition costs are not included.

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Table B.3 Waters Edge Gravity Sewer

Engineer's Opinion of Probable Cost

Project Description: Waters Edge 24" Gravity Sewer

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Mobilization	1	LS	$36,337.50	$ 36,337.50
2	24" Sewer Main	1,670	LF	$325.00	$ 542,750.00
3	8" Sewer Main	80	LF	$175.00	$ 14,000.00
4	Manholes	9	EA	$12,000.00	$ 108,000.00
5	Rock Excavation	1	LS	$27,000.00	$ 27,000.00
6	Clearing and Grubbing	1	LS	$25,000.00	$ 25,000.00
7	Surface Restoration	1	AC	$10,000.00	$ 10,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 763,087.50**
				CONTINGENCY ALLOWANCE (20%)	$ 152,700.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 915,800.00**
				COST ESCALATION	$ 1,083,300.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 1,999,100.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (10%)	$ 200,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 2,199,100.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2041) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

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Table B.4 Clearview North Pump Station

Engineer's Opinion of Probable Cost

Project Description: Clearview North Pump Station Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	New Duplex Grinder Pump Station	1	EA	$ 200,000.00	$ 200,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 200,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 40,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 240,000.00**
				COST ESCALATION	$ 114,600.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 354,600.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 71,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 425,600.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

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Table B.5 Fairway West Pump Station

Engineer's Opinion of Probable Cost

Project Description: Fairway West Pump Station Elimination

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	8" Gravity Sewer Main	1600	LF	$ 175.00	$ 280,000.00
2	Manhole	4	EA	$ 12,000.00	$ 48,000.00
3	I-70 Bore	300	LF	$ 1,000.00	$ 300,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 628,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 125,600.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 753,600.00**
				COST ESCALATION	$ 359,900.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 1,113,500.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 222,700.00
				LAND ACQUISITION	$ 20,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 1,336,200.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

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Table B.6 New Town Pump Station

Engineer's Opinion of Probable Cost

Project Description: New Town Pump Station Elimination

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	8" Gravity Sewer Main	300	LF	$ 175.00	$ 52,500.00
2	Manhole	2	EA	$ 12,000.00	$ 24,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 76,500.00**
				CONTINGENCY ALLOWANCE (20%)	$ 15,300.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 91,800.00**
				COST ESCALATION	$ 25,400.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 117,200.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 23,500.00
				LAND ACQUISITION	$ 5,000.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 145,700.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

BOONE COUNTY REGIONAL SEWER DISTRICT
CAPITAL IMPROVEMENTS PLAN
BOONE COUNTY, MISSOURI
2022001400

Table B.7 BCP Pump Station

Engineer's Opinion of Probable Cost

Project Description: BCP Pump Station Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	New Access Hatch	1	EA	$ 15,000.00	$ 15,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 15,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 3,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 18,000.00**
				COST ESCALATION	$ 8,600.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 26,600.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	N/A
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 26,600.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

Table B.8 El Rey Heights Pump Station

Engineer's Opinion of Probable Cost

Project Description: El Rey Heights Pump Station Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Additional Tracer Wire	2,000	LF	$ 20.00	$ 40,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 40,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 8,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 48,000.00**
				COST ESCALATION	$ 23,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 71,000.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	N/A
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 71,000.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

Table B.9 Green Hills Pump Station

Engineer's Opinion of Probable Cost

Project Description: Green Hills Pump Station Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Site Drainage Improvements	1	EA	$ 64,000.00	$ 64,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 64,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 12,800.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 76,800.00**
				COST ESCALATION	$ 36,700.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (MIDPOINT OF CIP PHASE)	**$ 113,500.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	N/A
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 113,500.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2033) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

BOONE COUNTY REGIONAL SEWER DISTRICT
CAPITAL IMPROVEMENTS PLAN
BOONE COUNTY, MISSOURI
2022001400

Table B.10 Hill Creek LPS

Engineer's Opinion of Probable Cost

Project Description: Hillcreek LPS Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Upsize Pressure Sewer Main	2,000	LF	$ 50.00	$ 100,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 100,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 20,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 120,000.00**
				COST ESCALATION	$ 33,200.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 153,200.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 30,700.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 183,900.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

BOONE COUNTY REGIONAL SEWER DISTRICT
CAPITAL IMPROVEMENTS PLAN
BOONE COUNTY, MISSOURI
2022001400

Table B.11 Woodlands LPS

Engineer's Opinion of Probable Cost

Project Description: Woodlands LPS Improvements

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	Upsize Pressure Sewer Main	2,600	LF	$ 50.00	$ 130,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 130,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 26,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 156,000.00**
				COST ESCALATION	$ 43,100.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 199,100.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 39,900.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 239,000.00**

Notes:

1. Costs are 2025 dollars, escalated to end of CIP phase (2030) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

BOONE COUNTY REGIONAL SEWER DISTRICT
CAPITAL IMPROVEMENTS PLAN
BOONE COUNTY, MISSOURI
2022001400

Table B.12 Highway 163 / Route N LPS

Engineer's Opinion of Probable Cost

Project Description: New Pressure Sewer from 163/N down High Point Lane to South Route K

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1	New Pressure Sewer Main	11,000	LF	$ 50.00	$ 550,000.00
2	New Pressure Sewer Branch	10,000	LF	$ 45.00	$ 450,000.00
3	New Pump Station	1	LS	$ 300,000.00	$ 300,000.00
				SUBTOTAL - PROBABLE CONSTRUCTION COST	**$ 1,300,000.00**
				CONTINGENCY ALLOWANCE (20%)	$ 260,000.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	**$ 1,560,000.00**
				COST ESCALATION	$ 1,845,300.00
				ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST (END OF CIP PHASE)	**$ 3,405,300.00**
				ENGINEERING, LEGAL, ADMINISTRATIVE (20%)	$ 681,100.00
				ENGINEER'S OPINION OF PROBABLE PROJECT COST	**$ 4,086,400.00**

Notes:

1. Costs are 2025 dollars, escalated to midpoint of CIP phase (2041) utilizing a 5% inflation rate.
2. AACE Class 4 Level Cost Estimate.

APPENDIX C

Area Exhibits

ROCKY FORK WATERSHED

KINKADE CROSSING WWTP

BROWN STATION WWTP

BEAR CREEK WATERSHED

COUNTY DOWNES WATERSHED

BROWN STATION TO ROCKY FORK

CITY OF COLUMBIA SEWER

ROCKY FORK WWTP

LEGEND

- BCRSD PUMP STATION
- CITY OF COLUMBIA PUMP STATION
- BCRSD SANITARY GRAVITY
- BCRSD FORCEMAIN
- PROPOSED FORCEMAIN

N

HORIZ. SCALE

2500 1250 0 3000

Scale: 1" = 3000' (Sheet Size 11x17)

BROWN STATION TO ROCKY FORK
PROPOSED FORCE MAIN

EXHIBIT NUMBER	C.1
PROJECT NUMBER	2022001400

McCLURE™
2001 W. Broadway
Columbia, MO 65203
P 573-814-1568
F 573-814-1128

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ROCKY FORK WATERSHED

CEDAR GATE WWTF

CEDAR GATE TO RICHARDSON ACRES

RICHARDSON ACRES WWTF

RICHARDSON ACRES TO BROWN STATION

BROWN STATION WWTP

BEAR CREEK WATERSHED

LEGEND

- BCRSD PUMP STATION
- CITY OF COLUMBIA PUMP STATION
- BCRSD SANITARY GRAVITY
- BCRSD FORCEMAIN
- PROPOSED FORCEMAIN

CEDAR GATE & RICHARDSON ACRES TO BROWN STATION FORCE MAIN

EXHIBIT NUMBER C.2

PROJECT NUMBER 2022001400

HORIZ. SCALE

2500 1250 0 2500

Scale: 1" = 2500' (Sheet Size 11x17)

McCLURE™
2001 W. Broadway
Columbia, MO 65203
P 573-814-1568
F 573-814-1128

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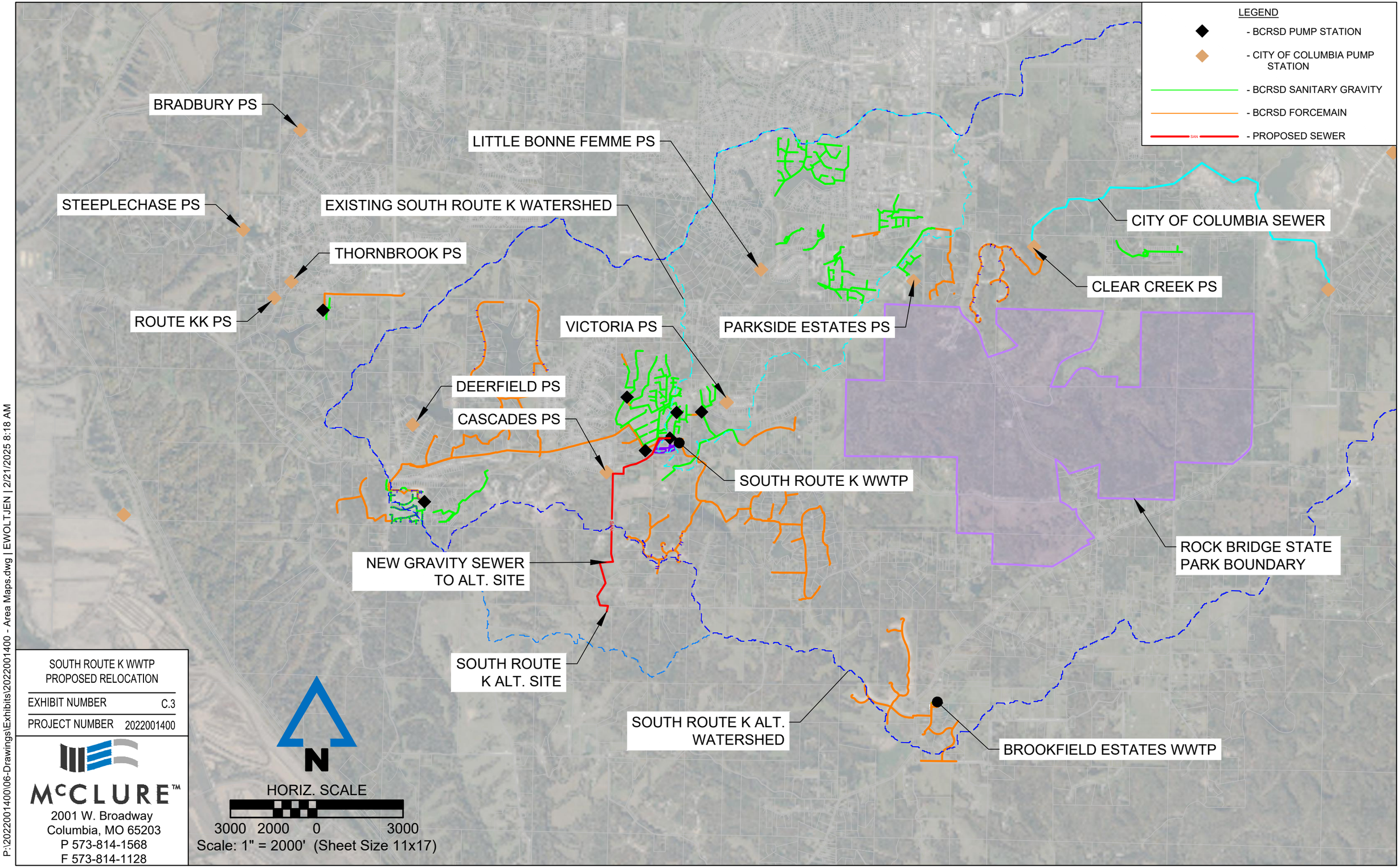

SOUTH ROUTE K WWTP
PROPOSED RELOCATION

EXHIBIT NUMBER C.3

PROJECT NUMBER 2022001400

McCLURE™
2001 W. Broadway
Columbia, MO 65203
P 573-814-1568
F 573-814-1128

N

HORIZ. SCALE

3000 2000 0 3000

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LEGEND

- BCRSD PUMP STATION
- CITY OF COLUMBIA PUMP STATION
- BCRSD SANITARY GRAVITY
- BCRSD FORCEMAIN
- PROPOSED FORCEMAIN

MIDWAY USA WWTF

ROLLINGWOOD PLAT #1 WWTP

HENDERSON BRANCH WATERSHED

NEW FORCE MAIN

TRAILS WEST WWTF

MIDWAY CROSSING WWTP

SUGAR BRANCH WATERSHED

PROPOSED
CITY OF COLUMBIA SEWER

MIDWAY ARMS WWTP

TRAILS WEST TO MIDWAY CROSSING
PROPOSED FORCE MAIN

EXHIBIT NUMBER	C.4
PROJECT NUMBER	2022001400

McCLURE™
2001 W. Broadway
Columbia, MO 65203
P 573-814-1568
F 573-814-1128

N

HORIZ. SCALE

1500 750 0 1500

Scale: 1" = 1500' (Sheet Size 11x17)

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APPENDIX D

BCRSD AWMP and CIP Stakeholder Engagement Matrix

From:	Stephens, Jesse
To:	Perkins, Drew
Cc:	Stephens, Jesse
Subject:	FW: AWMP and CIP Stakeholder Engagement Update - Item H)(1)(C)(1)
Date:	Friday, October 17, 2025 3:21:54 PM
Attachments:	image002.png

Dear Board of Trustees,

Please find my attached stakeholder engagement matrix update. I continue to meet with interested groups on a periodic basis. We conducted the public hearing on September 8th, and we followed this up with another public informational meeting at our office on October 15th. You can find a recording of the public hearing and presentation for your review on the website. This is uploaded on the website for all to see and hear, along with a copy of my powerpoint presentation.

We have not received additional public comment since the September board meeting.

Please make reference to all of the public comment received that was compiled from the September board meeting.

H.1.D.i.-PUBLIC-COMMENTS-EMAIL.pdf

Jesse Stephens, Facilities Engineering Manager
Boone County Regional Sewer District (BCRSD)
1314 N. 7th St., Columbia, MO 65201
C: 573.239.4025 | O: 573.443.2774
e: jstephens@bcrsd.com | w: www.bcrsd.com

STAKE HOLDER	PRIMARY CONTACT	MEETING (DATE)	CORRESPONDENCE
RATEPAYERS, CITIZENS, ALL STAKEHOLDERS	**PUBLIC HEARING - BEGINNING 5:30 P.M. ON MONDAY SEPT. 8TH BOONE ELECTRIC COMMUNITY ROOM AT 1413 RANGELINE ST., COLUMBIA, MO 65201**		
RATEPAYERS	**INFORMATIONAL MEETING - BEGINNING 5:30 P.M. ON WEDNESDAY OCT. 15TH 1314 N. 7TH ST., COLUMBIA, MO 65201**		
CITY OF COLUMBIA	ERIN KEYS JUSTIN FESSLER LINDSEY SCHAEFER NATE RUNYAN	6/11/2025	MEETING WITH ERIN KEYS AND JUSTIN FESSLER
CITY OF STURGEON	SETH TRUESDELL	9/17/2025	MEETING ON 9-17 UPCOMING STURGEON PROJECTS
CITY OF CENTRALIA	TARA STRAIN & MATTHEW RUSCH	8/20/2023	MEETING WITH CENTRALIA STAFF
CITY OF ROCHEPORT	JOHN ZONDCA	8/4/2025	MEETING WITH BOARD IN AUGUST BOARD MEETING
CITY OF HALLSVILLE	KENYETTA RIDGEWAY-SAMPLE	8/11/2025	MEETING WITH BOARD ON 8-11-2025 AT 7:00 P.M.
MISSOURI AMERICAN WATER	STEVE KADYK & ERIN ALLEN	6/13/2025 - Meet with Erin Allen	SCHEDULED MEETING WITH MAWC - WILL REVIEW AWMP AND CIP AT MEETING. OPS TEAM REVIEWING AWMP AND CIP
CITY OF ASHLAND	KYLE MICHEL KEVIN CROOKS DARIN RATERMANN	8/11/2025	SENT AN E-MAIL REQUESTING PRESENTATION TO ASHLAND BOARD. KYLE MICHEL INDICATED THEY WOULD REVIEW
CITY OF HARTSBURG	TIM HENTZ	7/2/2025	PRESENTATION OF AWMP & CIP TO HARTSBURG BOARD OF ALDERMEN

STAKE HOLDER	PRIMARY CONTACT	MEETING (DATE)	CORRESPONDENCE
TOWN OF HARRISBURG	KATHY WILHITE	7/15/2025	SENT AN E-MAIL REQUESTING PRESENTATION TO HARRISBURG BOARD. PLANNING ON 7-15-25 BOARD MEETING AFTER OUR BOARD MEETING. NEED TO MAKE OUR BOARD MEETING 30 MIN TO HOUR EARLIER THAT DAY
BOONE COUNTY P&Z	BILL FLOREA	6/12/2025 - 7:00 p.m.	PRESENTATION OF AWMP & CIP TO BOONE COUNTY PLANNING & ZONING COMMISSION
BOONE COUNTY COMMISSION	KIP KENDRICK, JANET THOMPSON, JUSTIN ALDRED	6/11/2025	DISCUSSED AT REGULAR MONTHLY MEETINGS AND OTHER SPECIAL PRESENTATIONS
REDI	PAUL EISENSTEIN & BERNIE ANDREWS	8/1/2025	SENT AN E-MAIL REQUESTING PRESENTATION TO REDI BOARD. MEETING WITH PAUL AND BERNIE FIRST ON 6-18-25. MEETING WITH FULL BOARD ON 8-1-2025
COLUMBIA CHAMBER OF COMMERCE	MATT MCCORMICK LILY WHITE	7/25/2025	SPEAKING AT CHAMEBER OF COMMERCE EMERGING ISSUES GROUP

STAKE HOLDER	PRIMARY CONTACT	MEETING (DATE)	CORRESPONDENCE
BOONE COUNTY HEALTH DEPARTMENT	REBECCA ROESSLET CHRYSTAL SMART JORDAN BALES	6/11/2025	SENT E-MAIL REQUESTING FEEDBACK. RECEIVED A RESPONS FROM JORDAN BALES. MEETING SET FOR 6-11-2025
BOONE COUNTY RESOURCE MANAGEMENT	BILL FLOREA	6/10/2025	SENT E-MAIL TO BCRM PLANNING AND ENGINEERING STAFF. OFFERED A MEETING WITH STAFF TO REVIEW
COLUMBIA BOARD OF REALTORS	BRIAN TOOHEY	6/26/2025 - 9:00 a.m.	PRESENTATION TO THE BOARD OF REALTORS SCHEDULED
SIERRA CLUB	CAROLYN AMPARAN DEE DOKKEN	6/11/2025	SENT E-MAIL LINK TO AWMP AND CIP THEY RESPONDED THAT THEY ARE LOOKING OVER AND WOULD SCHEDULE A FUTURE MEETING WITH ME. HAD FOLLOW-UP CONVERSATION WITH DEE DOKKEN. ANTICIPATE FEEDBACK FROM GROUP
FRIENDS OF ROCK BRIDGE STATE PARK	KEVIN ROBERSON	6/10/2025	SENT E-MAIL LINK TO AWMP AND CIP REQUESTING FEEDBACK FROM GROUP. KEVIN ROBERSON INDICATED HE WOULD PRESENT TO GROUP AND SOLICIT FEEDBACK
GREATER BONNE FEMME WATERSHED INITIATIVE	LYNNE HOOPER	7/15/2025	PRESENTATION AT 1:00 P.M. ON 7-15-2025

STAKE HOLDER	PRIMARY CONTACT	MEETING (DATE)	CORRESPONDENCE
MID MISSOURI REGIONAL PLANNING COMMISSION	DAVID BOCK	8/3/2025	MEETING 8-3-2025 AT MMRPC OFFICE
MO DEPARTMENT OF CONSERVATION	KEVIN BORISENKO	6/11/2025	SENT E-MAIL LINK TO AWMP AND CIP. KEVIN INDICATED THEIR POLICY GROUP WOULD REVIEW AND COMMENT
GREEN BELT LAND TRUST	NICK SHAPIRO	6/10/2025	SENT E-MAIL LINK TO AWMP AND CIP REQUESTING FEEDBACK FROM GROUP
QUAIL FOREVER	ANDREW WHITE	6/10/2025	SENT E-MAIL LINK TO AWMP AND CIP REQUESTING FEEDBACK FROM GROUP
DUCKS UNLIMITED	RYAN LUECKENHOFF	6/16/2025	SENT E-MAIL LINK TO AWMP AND CIP REQUESTING FEEDBACK FROM GROUP. SETTING UP CALL WITH RYAN L.
CAM ACTION TEAM	TOM WELLMAN	7-18-2025 AT 10:30 A.M	WILL PRESENT AT THE JULY 18TH CAM ACTION TEAM MEETING
COLUMBIA PUBLIC SCHOOLS - LONG RANGED PLANNING COMMITTEE	JEFF KLEIN, LAZELL OFIELD, CHRISTY SERRAGE, APRIL FERRAO	6/10/2025	SENT E-MAIL TO GROUP REQUESTING PRESENTATION AT JULY OR AUGUST LONG-RANGE PLANNING COMMITTEE MEETING
MODOT	Brian Hulett Michael Dixon Chase Barbarick Dan Oesch Kirsten Munck	6/11/2025	SENT E-MAIL REQUESTING FEEDBACK

STAKE HOLDER	PRIMARY CONTACT	MEETING (DATE)	CORRESPONDENCE
HOME BUILDERS ASSOCIATION	JAMI CLEVENGER	10/1/2025	SPEAKING AT THEIR ANNUAL MEETING
CSI	Susan Hart	9/19/2025	SCHEDULED TO SPEAK AT THE AUGUST MEETING
A CIVIL GROUP	JAY GEBHARDT	6/10/2025	SENT E-MAIL REQUESTING FEEDBACK. SAID HE WOULD PROVIDE FEEDBACK.
CROCKETT ENGINEERING	TIM CROCKETT & ANDY GREENE	6/11/2025	SENT E-MAIL REQUESTING FEEDBACK
SIMON & STREUMPF ENGINEERING	KEENAN SIMON	6/11/2025	SENT E-MAIL REQUESTING FEEDBACK
BRUSH & ASSOCIATES	KEVIN SCHWEIKERT	6/11/2025	SENT E-MAIL REQUESTING FEEDBACK
ALL STATE CONSULTANTS	CHAD SAYRE BRIAN HARRINGTON RON SHY	6/11/2025	SENT E-MAIL REQUESTING FEEDBACK
ENGINEERING SURVEYS AND SERVICES	ROSS KASSMAN	6/11/2025	SENT E-MAIL REQUESTING FEEDBACK. ROSS INDICATED THEY WOULD REVIEW AND MEET WITH ME ABOUT THIS.
OWN ENGINEERING	TOM WOOTEN	6/11/2025	SENT E-MAIL REQUESTING FEEDBACK
BLACK & VEATCH	MIKE HALL	6/12/2025	SENT E-MAIL REQUESTING FEEDBACK. MIKE RRESPONDED INDICATING HE WOULD REVIEW
THE SEWAGE DOCTOR	DENNIS SIEVERS	6/11/2025	SENT E-MAIL REQUESTING FEEDBACK

STAKE HOLDER	PRIMARY CONTACT	MEETING (DATE)	CORRESPONDENCE
BARTLETT & WEST ENGINEERING	KYLE LANDWHER	6/11/2025	SENT E-MAIL REQUESTING FEEDBACK. KYLE LANDWEHR INDICATED THEY WOULD PROVIDE FEEDBACK.
INNOVATE ENGINEERING	JOHN NEYENS	6/17/2025	SENT E-MAIL REQUESTING FEEDBACK
GREAT RIVERS ENGINEERING	JACOB DEAN	7/31/2025	HAD MEETING TO REVIEW ON 7-31-2025. REQUESTED FEEDBACK
WOODARD AND CURRAN	JACKI HUDENELL	8/21/2025	MEETING TO REVIEW AWMP AND CIP
COLUMBIA METRO ROTARY	MARGARET CONROY ANNA DRAKE TOM ROSE	9/3/2025	SCHEDULED TO SPEAK ON 9-3-2025
COLUMBIA DOWNTOWN ROTARY	JOSH LEHMEN	1/15/2026	MEETING SCHEDULED FOR JANUARY 15TH AT 11:30 A.M.
COLUMBIA SOUTH ROTARY	DARYL SMITH	8/1/2025	PRESENTATION ON 8-1-2025 AT 7:00 A.M.
ROCHEPORT ROTARY	SARAH URBISS	8/5/2025	MEETING SCHEDULED FOR AUGUST 5TH AT ROCHEPORT GENERAL STORE
STATE SENATE 19TH DISTRICT	STEPHEN WEBBER	6/10/2025	E-MAILED PLAN AND REQUESTED A PHONE CALL TO DISCUSS.
STATE REP - 44TH DISTRICT	JOHN MARTIN	7/16/2025	E-MAILED PLAN AND REQUESTED A PHONE CALL TO DISCUSS. HAVE A PLANNED MEETING FOR 7-16-2025 TO DISCUSS

STAKE HOLDER	PRIMARY CONTACT	MEETING (DATE)	CORRESPONDENCE
STATE REP - 45TH DISTRICT	KATHY STEINHOFF	6/11/2025	E-MAILED PLAN AND REQUESTED A PHONE CALL TO DISCUSS. RECEIVED E-MAIL BACK THAT IT WOULD BE REVIEWED.
STATE REP - 46TH DISTRICT	DAVID TYSON SMITH	6/10/2025	E-MAILED PLAN AND REQUESTED A PHONE CALL TO DISCUSS.
STATE REP - 47TH DISTRICT	ADRIAN PLANK	6/10/2025	E-MAILED PLAN AND REQUESTED A PHONE CALL TO DISCUSS.
STATE REP - 50TH DISTRICT	GREGG BUSH	6/10/2025	E-MAILED PLAN AND REQUESTED A PHONE CALL TO DISCUSS.
BOONE ELECTRIC LOCAL UTILITY PROVIDERS MEETING	JIMMY GOODNIGHT & TODD CULLEY	6/6/2025	GAVE BRIEF SYSNOPSIS OF AWMP AND CIP AND GAVE PROVIDERS INSTRUCTIONS ON HOW TO READ AND COMMENT ON WEBSITE
BOONE PWSD #9	ROGER BALLEW KYLE BAKER	9/26/2025	MEETING TO REVIEW ON 9-26-2025
CONSOLIDATED WATER #1	TANNER CRANE CHAD HENRY	6/16/2025	E-MAILED PLAN AND REQUESTED A PHONE CALL TO DISCUSS. THEY SAID THEY WOULD SCHEDULE A MEETING

STAKE HOLDER	PRIMARY CONTACT	MEETING (DATE)	CORRESPONDENCE
PIERPONT STORE	DAN BECKETT	6/10/2025	GAVE BRIEF SYSNOPSIS OF AWMP AND CIP AND GAVE PROVIDERS INSTRUCTIONS ON HOW TO READ AND COMMENT ON WEBSITE

APPENDIX E

BCRSD Sanitary Sewer Use Regulations

Chapter Two: Sanitary Sewer Use Regulations

2.1 Title - These regulations including appendixes and tables shall be known, referred to and cited as the Sanitary Sewer Use Regulations.

2.2 Scope and Purpose - These regulations govern the use of public sanitary sewers, the installation and connection of building sanitary sewers, and the discharge of waters and wastes into the public sanitary sewer systems: and provides penalties for violations thereof in the service area of the Boone County Regional Sewer District, as established by the Boone County Regional Sewer District Board of Trustees. These regulations are enacted in order to protect and promote the public health and to ensure the safe and efficient delivery of wastewater collection and centralized treatment services within the areas of Boone County, Missouri, subject to the jurisdiction of the Boone County Regional Sewer District.

2.3 Authority - These regulations are enacted under the authority vested in the Boone County Regional Sewer District by sections 204.320 and 204.330, Revised Statutes of Missouri.

2.4 Jurisdiction - These regulations shall be applicable to all areas within Boone County, Missouri, to which the District operates and maintains public sanitary sewer systems.

2.5 Exemptions from District Regulations - These regulations shall not be applicable in the following circumstances:

2.5.1 Systems Under Jurisdiction of Other Entity - No construction, operating, or other permit shall be issued in the name of the District for any wastewater collection system or treatment facility if there is another public or governmental wastewater management and treatment agency having jurisdiction, or concurrent jurisdiction with the consent of the District, willing to provide wastewater collection and treatment services.

2.5.2 Systems Permitted by Department to Other Entity - No wastewater collection system or treatment facility shall be subject to these regulations if constructed and operated under Department permit issued to another public or governmental wastewater management and treatment agency having exclusive jurisdiction or if the District waives the right to act as Continuing Authority for such system or facility.

2.6 General Provisions Governing Disposal of Wastewater - The following general provisions shall be applicable to the disposal of wastewater or sewage:

2.6.1 Wastewater Treatment Required - It shall be unlawful for any person to place, deposit, or allow to be deposited in an unsanitary manner on public or private property within any area under the jurisdiction of the District, any human or animal excrement, garbage, or other objectionable waste which contaminates or pollutes the waters of this state. It shall be unlawful to discharge to any natural outlet within any area under the jurisdiction of the

District, any sewage or other polluted waters, except where suitable treatment has been provided in accordance with provisions of these regulations.

2.6.2 Classes of Sanitary Sewers - The general sanitary sewer system shall be composed of four (4) classes of sanitary sewers: public sanitary sewer systems; private common collector sanitary sewers; private sanitary sewer systems; and on-site systems. The determination as to the class to which any sanitary sewer belongs shall be made without regard to the area drained, the size, character or purpose thereof. All public sanitary sewers shall be constructed along streets, alleys and other public ways wherever practicable; and no such sanitary sewer shall be built or acquired by the District, unless it is on a public way or right-of-way or easement dedicated to the District or easement dedicated to public utilities. Such sanitary sewers may be connected with any other sanitary sewer of any class or with a natural course of drainage in accordance with these regulations and applicable laws.

2.6.2.1 Public Sanitary Sewer Systems - A sanitary sewer controlled by public authority and regulated by the Department. Public sanitary sewers are those which have been or may be constructed or acquired and paid for wholly out of any public funds available for that purpose for the public use, or sanitary sewer systems which have been built by a developer and/or private person and conveyed to the District. Public sanitary sewers shall be established along the principal courses of drainage, at such points, to such extent, of such dimensions and under such conditions as may be provided by regulation, and these may be extensions or branches of sanitary sewers already constructed or entirely new throughout, as may be deemed expedient.

2.6.2.2 Private Common Collector Sanitary Sewers - A private common collector sanitary sewer is a sanitary sewer line which is not owned and maintained by the District or other public entity and which serves two (2) or more lots, tracts or parcels of land or two (2) or more structures under separate ownership. The District shall not accept ownership or responsibility for operation, maintenance, or repair of private common collector sanitary sewers, unless constructed or reconstructed to standards established by the Department and District and the conveyance of which is formally accepted by the District, regardless of whether the District accepts sewage or wastewater therefrom for treatment or disposal, and regardless of whether persons using such sanitary sewers are customers of the District. No person shall record any instrument of conveyance of any interest in a private common collector sanitary sewer without written acceptance of the Board prior to recordation. The District may accept wastewater for treatment from private collection sewers of any type constructed prior to the enactment of these regulations, but the District shall not operate or maintain or repair any collection sewers not owned by the District, nor shall the District assume any legal or financial responsibility for the operation, maintenance, or repair or common collection sewers not owned by the District. Whenever practicable, the District shall notify property owners or other persons who are connected t privately owned common collector sewers and who receive wastewater treatment services from the District of the existence of this regulation by any method deemed appropriate; such notice filed in the land records of Boone County, Missouri, pertaining to property effected by this regulation shall be presumed effective; provided, however, failure of the District to provide such notice shall not effect the validity of this regulation, nor establish any financial or legal obligation of the District to provide operation, maintenance, or repair serviced to private collection sewers, nor establish any legal liability on the part of the District for any injury or damage caused by non-maintenance or repair of private collection sewers.

2.6.2.3 Private Sanitary Sewer Systems - A private sanitary sewer system is a system that is not under the jurisdiction of the District or other governmental entity and which is regulated by the Department and, when applicable, the Missouri Public Service Commission. No private sanitary sewer system shall operate within the boundaries of the District without written consent of the District when the District is willing and able to provide wastewater collection and treatment services. No sanitary sewer system within the boundaries of the District operated by a municipal, governmental, private or other entity shall be sold or otherwise transferred to a private person, entity or organization without the District's written consent. If neither the District under the provisions of these regulations nor any other public or governmental agency having jurisdiction is willing and/or able to provide wastewater collection and treatment services, but wastewater collection and treatment services are nonetheless required in the geographic area to which a Department issued operating permit is applicable and it is demonstrated that a competent, qualified and solvent private person, entity or organization is ready, willing and available to provide such services as Continuing Authority pursuant to Department regulations, then such other person, entity or organization may act as Continuing Authority without objection of the District if approved by the Department. Provided, however, that as authorized by section 644.027, RSMo, when the District operates and maintains a public sanitary sewer collection and treatment system to which the private sanitary sewer system can be connected that is located within a reasonable distance of a District owned or operated public sanitary sewer to which connection is practicable, no private sanitary sewer system which is regulated by the Department shall be granted a new operating permit or renewal of an existing operating permit issued by the Department, nor shall any existing operating permit be transferred to a private sanitary sewer system, unless the District provides written consent to the Department and the Continuing Authority to whom such operating permit has been or will be issued or transferred. A District owned or operated public sanitary sewer shall be presumed to be within a reasonable distance of a private sanitary sewer system to which connection is practicable if the District determines that a) the operation of a private sanitary sewer system is or has not been in compliance with a Department issued operating permit or otherwise has been declared a public health nuisance or hazard by state or local authorities having jurisdiction, b) a connection to a District public sewer can be designed and constructed, c) the expense of connection to the District public sanitary sewer, either individually or in combination with one or more other new connections in close proximity to the private sanitary sewer system is no greater than the cost of installing a new private sanitary sewer system or repairing or reconstructing the existing private sanitary sewer system which complies with Department regulations and permit issued under such regulations as well as applicable District regulations, or d) that no private sanitary sewer system can be constructed or reconstructed which complies with all applicable state and local water pollution control regulations and applicable local zoning or land use regulations. In circumstances in which an existing private sanitary sewer system cannot be repaired or reconstructed to comply with all state and local water pollution control regulations and/or due to topography, local zoning, or other land use regulations, it is impracticable to repair or reconstruct the private sanitary sewer system which complies with all such applicable state and local regulations, then in such circumstances it shall be presumed that connection to a District public sanitary sewer is practicable. In such cases the Department shall deny issuance of a new operating permit, terminate or deny renewal of an existing operating permit, or deny transfer of an existing operating permit in accordance with Department

policies and regulations and the operator of such private sanitary sewer system shall connect to the District system within a reasonable time established by the District.

(Revised 11-15-05, 4-19-07, & 2-15-22)

2.6.2.4 Private On-site Sewage Disposal Systems - A private on-site sewage disposal system is defined as any subsurface sewage treatment system, lagoon disposal system or other waterborne waste disposal method employing basic hydrologic or engineering principles which receives 1500 gallons or less of waterborne waste per day. Private on-site sewage disposal systems are regulated by the Boone County Small On-site Wastewater System Regulations and Boone County Subdivision Regulations enforced by the Boone County Health Department. It shall be unlawful to construct or maintain any privy, privy vault, septic tank, cesspool, or other facility intended or used for the disposal of sewage except as otherwise regulated by Boone County and state law. The owner of any house, building, or property used for human employment, recreation, or other purposes, situated within Boone County, and abutting on any street, alley, or right-of-way without public sanitary sewer but which may have public sanitary sewer in the future are hereby required to install suitable toilet and waste water disposal facilities therein in accordance with applicable building and plumbing codes, and to connect such facilities directly with the closest public sanitary sewer at the owner's expense in accordance with the provisions of these regulations, within sixty (60) days after date of official notice to do so or such longer time as reasonably determined necessary by the District for good and sufficient cause, whenever a permit to construct or repair an onsite waste water disposal system is denied by the Boone County Health Director or designee in accordance with chapter IV of the Boone County Code of Health Regulations, which is hereby incorporated by reference.

(Revised 6-20-07)

2.7 Design and Construction of Wastewater Collection Systems and Treatment Facilities - Wastewater collection systems and treatment facilities shall be designed and constructed in accordance with the following requirements:

2.7.1 Design Standards for Wastewater Collection Systems and Treatment Facilities - All collection systems and treatment facilities shall be designed in accordance with generally accepted engineering principles with sufficient capacity to collect and/or treat wastewater generated in the geographic area which is subject to the Department construction permit application to which the system or facility pertains considering the maximum population density and permissible land uses in such area.

2.7.1.1 Specifications - All collection systems and treatment facilities shall be designed in accordance with the following: the Sanitary Sewer Specifications and Standards adopted by City of Columbia, the Septic Tank Effluent Pump Specifications adopted by the District, the Pump Station and Wastewater Treatment Facility Specifications adopted by the District.

2.7.1.2 Compliance with District's Long Range Plan - All plans and specifications issued in support of an application for a construction or operating permit shall be consistent and in compliance with the District's master plan for overall wastewater

collection and treatment services to the extent practicable. The District's Long range plan for capital improvements and additions is based on AC Kirkwood report of October 1991, ARecommended Sewerage System Improvements and Capital Cost Estimates,@ and other engineering studies and evaluations of geographic areas in Boone County.

2.7.1.2.1 Eliminate Points of Discharge - Whenever practical, wastewater collection systems and treatment facilities shall be designed in a manner to minimize or eliminate points of wastewater discharge in the environment and shall only create or establish new points of regulated wastewater discharge when no other alternative is reasonably available in the opinion of the District.

2.7.1.2.2 Provide for Future Growth - All collection systems and treatment facility designs submitted in support of construction permit issued in the name of the District as the Continuing Authority shall to the greatest extent practicable provide for or be designed to accommodate anticipated growth in wastewater collection and treatment capacity for the drainage area or service area to which the permit is applicable.

2.7.1.3 Design Compliance - All collection systems and treatment facilities shall be designed by an engineer registered in Missouri in compliance with applicable state of Missouri and federal clean water and pollution control regulations in effect at the time of design, and may only be constructed and modified in accordance with plans and specifications prepared by a registered engineer.

2.7.1.3.1 Public Sanitary Sewer Extended to Each Lot - It shall be unlawful to connect a sanitary sewer line of any type to a public sanitary sewer unless such public sanitary sewer is extended a minimum of ten feet inside the property line of the lot or tract to be provided with public wastewater collection and treatment service; and in any case where the public sanitary sewer is located deeper than ten feet from grade, it shall be extended at least one foot further inside the property line beyond ten feet for every twelve inches depth in excess of ten feet.

2.7.1.3.2 Private Sanitary Sewer Laterals - It shall be unlawful for any private sanitary sewer lateral to be extended off the described, platted or surveyed lot or tract of land from which it originates except in cases where such private lateral extends into or across a publicly maintained road or street right of way or general utility easement abutting such property in order to connect to an existing District owned and operated sewer line located within or immediately adjacent to such road or street or general utility easement such that such private sewer lateral does not extend into or encroach upon any other private property. Subject to the foregoing, it shall be unlawful for any person to connect a sanitary sewer line of any type to a District owned and operated sanitary sewer unless such public sanitary sewer is extended a minimum of ten feet from and within the property line of the lot or tract to be provided with public wastewater collection and treatment service; and in any case where the public sanitary sewer is located deeper than ten feet from grade, it shall be extended at least one foot further inside the property line beyond ten feet for every twelve inches depth in excess of ten feet. (Revised 11/21/2006; 9/16/08)

2.7.1.3.3 Common Collectors - It shall be unlawful for two or more privately owned wastewater collection lines originating from separate dwellings, buildings, or other structures, or from two or more septic tanks, lagoons or other wastewater treatment

facilities to be connected to each other unless the District grants a variance for such extension or connection. A variance may be granted upon showing that the extension or connection does not violate any applicable federal or state clean water law, rule or regulation, that without the variance the person or persons seeking the variance will incur unreasonable and unnecessary hardship, and that such person or persons can demonstrate that adequate provision has been made for perpetual maintenance and operation of such facilities.

2.7.1.4 Plan Approval - Plans and specifications prepared for any collection system or treatment facility shall be approved by the administrative authority when the District is the permittee and also by all public or governmental agencies having jurisdiction prior to construction, modification or operation.

2.7.1.5 Costs and Liability - Except in cases when the District is both the Owner and permittee under a Department construction permit, all design and construction work performed under such permit shall be performed at the sole cost, expense and liability of the Owner. The District shall have no liability or responsibility for such work.

2.7.1.6 Fees - The District by resolution or other official action by its Board may from time to time impose such user fees in the form of permit fees, inspection fees or other charges as it may deem appropriate as long as such user fees are based on the actual cost or reasonable estimate of actual cost of providing permits, inspections or administrative services of direct benefit to the person receiving such services.

2.7.1.7 Certification - No collection system or treatment facility shall be made operational unless written certification is issued by a licensed engineer that the facilities constructed or modified under Department construction permit have been completed in accordance with approved plans and specifications for the work under such permit as required by Department regulations.

2.7.1.8 Conveyance - Once the collection system and/or treatment facility is found to be in compliance with District regulations, the system and/or facility shall be conveyed to the District. The treatment facility and collection system shall be conveyed by Bill of Sale. Real estate rights to collection systems shall be conveyed by easement. Real estate rights to treatment facilities shall be conveyed by Warranty Deed. Prior to District's acceptance of any warranty deed, the party conveying such warranty deed shall provide the District with a policy of title insurance issued by a reputable insurer in such amount and with such coverage for the full insurable value of the property to be conveyed as determined by District to be appropriate to assure District of marketable title free and clear of all liens and encumbrances. District further reserves the right to require such title insurance on other interests in real property conveyed to District as determined reasonably appropriate by District under the circumstances to protect the interests of the District. Upon District formal acceptance of instruments of conveyance, the District will act as Continuing Authority and be responsible for the upkeep and maintenance of real estate and improvements located therein. The District reserves the right to further extend mains and collection lines and to connect other sanitary sewers without additional or further compensation to the grantors of real and personal property interests after District acceptance of conveyances. (Revised 6-20-07)

2.7.1.9 Condition of Conveyed Wastewater Collection and Treatment Equipment All manufactured wastewater collection and treatment equipment to be

transferred and conveyed to the Boone County Regional Sewer District for ownership and operation, including but not limited to pump stations and treatment plants, shall be new or reconditioned, but in all cases shall have at least a one year manufacturer warranty that such equipment is free from defect in material and workmanship and in the event that defects in materials or workmanship are discovered during the warranty period, such equipment shall be repaired or replaced at manufacturer expense. Boone County Regional Sewer District shall be the sole judge of the acceptability of all manufacturer warranties under the provisions of this regulation and reserves the right to refuse for acceptance and operation any equipment that is not reliably warranted by a manufacturer of established reputation within the industry that produces the equipment to be warranted. (Adopted 9/17/2002)

2.7.2 Construction Permits - Unless exempt from the provisions of these regulations, no collection system and/or treatment facility shall be constructed or modified except in compliance with the terms and conditions of both the Department construction permit as well as the District construction permit and in accordance with the approved application.

2.7.2.1 Plan Modifications - Unauthorized changes, deviations or modifications that constitute a violation of the Department construction permit shall subject the Owner to imposition of penalties as provided by these regulations.

2.7.2.2 Costs and Liability - Unless otherwise agreed by written contract, the person designated as Owner of the wastewater collection system and/or treatment facility specified in a construction permit application and permit shall be wholly responsible for the performance of and payment for all design and construction work necessary under the permit.

2.7.3 Inspections and Testing of Wastewater Collection Systems and Treatment Facilities - Except in cases in which the District is not the designated Continuing Authority, no collection system and/or treatment facility shall be used or operated except under permit issued to the District pursuant to Department regulations after inspection of same is conducted by the Administrative authority and the system and/or facility is approved and found to be in compliance with these regulations.

2.7.3.1 Access for Inspections - No final inspection shall be conducted or approval granted for the use or operation of any collection system and/or treatment facility unless such system and/or facility is exposed for inspection and/or put in a condition to be tested at the Owner's expense so that the system and/or facility can be examined for compliance with these regulations. Any system and/or facility which has been backfilled in whole or part, or covered or completed such that complete inspection or testing for compliance can not be conducted shall, upon request of the Administrative authority, be uncovered, re-excavated, or otherwise exposed or put in a condition to be inspected or tested at the sole expense of the Owner in order that a complete inspection or testing can be conducted for purposes of determining compliance with these regulations.

2.7.3.2 Failure to Allow Inspections - Any Owner which shall fail to expose or otherwise make a system and/or facility available for complete inspection or testing upon request of the Administrative authority or governmental agency having jurisdiction during construction or after completion of construction but prior to final inspection shall be subject to District's application to the Department to terminate the construction permit, or District's

refusal to obtain an operating permit from the Department, and/or penalties or relief provided for under these regulations.

2.7.4 Operation of Wastewater Collection Systems and Treatment Facilities Prior to District Acceptance - If operation and maintenance of a system and/or facility is necessary prior to District acceptance, the following applies:

2.7.4.1 District as Continuing Authority - Unless exempt from the provisions of these regulations, no owner or other person shall operate any wastewater collection system and/or treatment facility not owned by the District except under an operating permit issued in the name of the District.

2.7.4.2 Owner Responsibility - Except as may be otherwise provided by written contract between the District and the Owner or until such time as all property interests of or pertaining to a wastewater collection system and/or treatment facility operated under an operating permit issued to the District are conveyed to and accepted by the District, the Owner of such system and/or facility shall be wholly responsible for the operation and maintenance of such system and/or facility regardless of whether the District receives fees or charges for the use of such system and/or facility.

2.7.4.3 Repair of Deficiencies - The Owner of such system and/or facility shall be wholly responsible for the prompt remedy and repair of any operational defect or deficiency in the system and/or facility or violation of any applicable law, rule or regulation pertaining to such system and/or facility.

2.7.4.4 District Responsibility - The District shall have the right but not the obligation to take any measures necessary to protect the public health, safety or welfare for any system and/or facility for which a construction permit has been applied for from the Department listing the District as the continuing authority or the operating authority or under which an operating permit is or will be issued in the name of the District regardless of whether the Owner of such system and/or facility takes or has a legal obligation to take any such measures.

2.7.4.5 Remedial Measures and Costs - Any Owner which shall fail, neglect or refuse to operate or maintain such system and/or facility, or which shall fail, neglect or refuse to remedy or repair any such defect or deficiency or otherwise correct any such violation shall be liable to the District for the reasonable costs of any remedial measures taken by the District to protect the public health, safety or welfare necessitated by the Owner's failure, neglect or refusal to take necessary remedial measures in addition to being subject to any penalty or relief provided for in these regulations.

2.7.4.6 Enforcement Costs - Any person or Owner who or which obtains any permit issued in the name of the District as controlling or operating authority under Department regulations is presumed to understand and agree to the content of these regulations and in the event any person, entity, or organization, whether singular or plural, who or which is listed as an Owner or agent of the Owner on any such permit violates or facilitates a violation of any regulation hereunder shall be liable to the District for the actual cost of remedial measures taken to protect the public health or safety and for enforcing these regulations due to such violation, including court costs, reasonable attorney fees and the actual

expense of any laboratory testing and expert witness fees incurred by the District in enforcing these regulations as to the person or Owner in violation. Such costs may be entered as a judgment against the person or Owner in violation in addition to or in lieu of any court imposed penalty.

2.8 Acceptance of Existing Sanitary Sewer Systems - The District Board may accept the conveyance of a private sanitary sewer system if the system meets District specifications and is properly conveyed by way of easements, bill of sale and warranty deed.

2.9 Individual Building Connections to District Wastewater Treatment Works - Individual buildings may be connected to District owned and operated sewer lines by means of private service laterals in accordance with applicable plumbing codes and District regulations. Private service laterals extending from the building which they serve to the District sewer line, including the point of connection to the District sewer line, are the property of the person or persons owning the property upon which they are situated. As such, the owner of such property has the responsibility and liability for the installation, maintenance, and repair of such private laterals. Accordingly, individual building connections may be made to the District sewer lines in accordance with the following requirements:

(Revised 11/21/2006)

2.9.1 Application for Service - No unauthorized person shall uncover, make any connections with or opening into, use, alter, or disturb any public sanitary sewer or appurtenance thereof without first filing an application for service with the District.

2.9.2 Classes of Applications - There shall be two (2) classes of applications for service: (a) for residential and commercial service, and (b) for service to establishments producing industrial wastes. In either case, the owner or their agent shall make application on a form furnished by the District. The application shall be supplemented by any plans, specifications, or other information considered pertinent in the judgment of the District.

2.9.3 Fees - Payment of inspection fees and connection charges are due at the time of application. The District by resolution or other official action by its Board may from time to time impose such user fees in the form of permit fees or other charges as it may deem appropriate as long as such user fees are based on the actual cost or reasonable estimate of actual cost of providing permits, inspections or administrative services of direct benefit to the person receiving such services.

2.9.3.1 Inspection Fee For Connections -- An inspection fee shall be chargeable for new connections to District owned and operated sewers as follows: Seventy Dollars ($70.00) for a residential, commercial, and industrial building gravity sanitary sewer connection and One Hundred and Forty Dollars ($140.00) for a residential, commercial or industrial pressurized sanitary sewer connection. Inspection fees shall be paid to the District at the time the application for sewer service shall be filed. (Revised 01/01/2018)

2.9.3.2 Connection Charge – A charge with every new or additional or expanded building connection to the District, shall be paid to the District upon application for sewer service. Each new residential or commercial user of the wastewater system shall pay a

wastewater system connection fee per residential or commercial unit**.** An expanded connection is any existing connection that increases the size or number of water meters serving its premises. The connection charge shall be in accordance with the following connection charge schedule and shall be based upon the water meter(s) size serving the premises excluding those set by special regulation for particular collection systems.

Size of water meter in Inches	BCRSD Connect Fee
5/8 and ¾	$1,600.00
1	$2,675.00
1 1/2	$5,350.00
2	$8,560.00

The connection fee for water meters larger than 2" will be determined by District staff on a case by case basis. (Revised 12/15/2015, 12/17/2014, 1/1/04, 4/20/04, 12/19/06, 5/18/10)

2.9.3.2.1 New User Exemptions - New users of the District shall not be assessed an initial connection charge in the following instances but any increase in the size or number of water meters shall be assessed for expanded use:

(1) If an unexpired building permit is or was in existence for the premises on the date this new rule is adopted.

(2) If a user's premises is served by the District or the new user occupies a structure in and has been or will be assessed for connection to a sanitary sewer improvement project financed under the Neighborhood Improvement District Act for public sanitary sewer services on the effective date this new rule is adopted.

(3) If there is a break in sanitary sewer service to the user's premises for less than two years.

(4) If metered water usage on the user's premises is solely for purposes of fire protection or landscape irrigation or otherwise not connected to sewage collection or treatment facilities owned or operated by the District.

2.9.3.2.2 Waivers - The Board may waive imposition of connection charges in cases where the District has adopted a sewage capacity cost allocation ordinance in the area subject to connection charges or in cases where a real estate subdivider or developer has entered into a binding agreement with the District in which the subdivider or developer installs or pays for all or substantially all of the costs of installing public wastewater collection facilities and additional sewage treatment capacity, when applicable, and agrees to convey such facilities to the District. Connection charges also may be waived in cases where public wastewater collection and/or treatment facilities to which connection is made are being financed under the provisions of the Neighborhood Improvement District Act.

2.9.3.2.3 Increase in Size and Number of Water Meters - Any user who increases the size of a water meter(s) serving its property or premises shall pay a charge equal to the difference between the connection charge for the meter(s) which existed prior to the increase and the connection charge for the newly installed meter(s). Any user who increases the number of water meters serving its property or premises shall pay a connection charge for each additional water meter in accordance with section 2.9.3.2 above.

2.9.3.3 Elimination of Connection - Failure to pay inspection fees and connection charges and other applicable fees shall be grounds for the District to eliminate the connection until such time as the charges are paid in full or construction requirements are satisfied.

2.9.4 Construction Costs - All costs and expenses incident to the installation and connection of the building sanitary sewer shall be borne by the owner. The owner shall indemnify the District from any loss or damage that may directly or indirectly be occasioned by the installation of the building sanitary sewer.

2.9.5 Separate Building Connections - A separate and independent sanitary sewer connection shall be provided for every building.

2.9.6 Connection of New Buildings - The applicant shall install at applicant's expense necessary sewage facilities and sanitary sewer lines along public highways, roadways, streets, or alleys where grades have been established, or within dedicated easements acceptable to the District.

2.9.6.1 Private Service Laterals and Public Sanitary Sewer Extension- No private sewer service lateral shall extend off of the property which it serves except in cases where such private lateral extends into or across a publicly maintained road or street right of way or general utility easement abutting such property in order to connect to an existing District owned and operated sewer line located within or immediately adjacent to such road or street or general utility easement such that such private sewer lateral does not extend into or encroach upon any other private property. Subject to the foregoing, it shall be unlawful for any person to connect a sanitary sewer line of any type to a District owned and operated sanitary sewer unless such public sanitary sewer is extended a minimum of ten feet from and within the property line of the lot or tract to be provided with public wastewater collection and treatment service; and in any case where the public sanitary sewer is located deeper than ten feet from grade, it shall be extended at least one foot further inside the property line beyond ten feet for every twelve inches depth in excess of ten feet.

(Revised 11/21/2006)

2.9.6.2 Construction Specifications - The size, slope, alignment, materials of construction of a building sanitary sewer, and the methods to be used in excavating, placing of the pipe, jointing, testing and backfilling the trench, shall all conform to the requirements of the building and plumbing code or other applicable rules and regulations of the Boone County Department of Planning & Building Inspections.

2.9.6.3 Elevation - Whenever possible, the building sanitary sewer shall be brought to the building at an elevation below the basement floor. In all buildings in which any building drain is too low to allow gravity flow to the public sanitary sewer, sanitary sewage carried by such building drain shall be lifted by an approved means and discharged to the building sanitary sewer.

2.9.6.4 Connection Specifications - The connection of the building sanitary sewer into the public sanitary sewer shall conform to the requirements of the building and plumbing code or other applicable rules and regulations of the Boone County Department of

Planning and Building Inspection and/or the applicable regulations of the City of Columbia. All such connections shall be made gas tight and watertight. Any deviation from the prescribed procedures and materials must be approved by the administrative authority before installation.

2.9.6.5 Inspection of Connection and Building Lateral Required - The applicant for the building sanitary sewer connection permit shall notify the District when the connection to the public sanitary sewer is ready for inspection. The connection and the building lateral from the house or building drain to the District's sanitary sewer main shall be left uncovered for inspection. Failure of the applicant to provide for the inspection will result in the lateral and connection being uncovered at the applicant's expense in order that the connection and lateral may be inspected for proper installation by the District personnel.

2.9.6.6 Safety and Reclamation - All excavations for building sanitary sewer installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways, and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the District.

2.9.6.7 Use of Existing Sanitary Sewer Lines - Old sanitary sewer lines may be used in connection with new buildings only when they are found, on examination and test by the District, to meet the requirements of these regulations.

2.9.7 Connection of Existing Buildings - At such time as public sanitary sewer with sufficient treatment capacity becomes available to a property served by a private on-site sewage disposal system, a direct connection shall be made to the public sanitary sewer within ninety (90) days of availability in compliance with this regulation, if practicable. Any septic tanks, cesspools, and similar private sewage disposal facilities shall be abandoned and filled with suitable material.

2.9.8 Unlawful Connections - It shall be unlawful to make any connection to a public sanitary sewer in the following respects:

2.9.8.1 Sources of Surface Runoff or Groundwater - No person shall make connection of roof downspouts, exterior foundation drains, areaway drains, or other sources of surface runoff or groundwater to a building sanitary sewer or building drain which in turn is connected directly or indirectly to a public sanitary sewer.

2.9.8.2 Substantial Additions to the Water-using Equipment or Appliances - No substantial additions to the water-using equipment or appliances connected to the sanitary sewer system of the District shall be made except upon written notice to, and with the written consent of, the District.

2.9.9 Maintenance and Repair of Private Service Laterals and Connections – Any person or persons owning or possessing property served by and connected to a District owned and operated sewer line shall be solely responsible for the operation, maintenance and repair of the service lateral line from the building it serves up to and including the point of connection to the District sewer line unless otherwise specifically provided for by District regulation. In addition to the provisions of other District regulations and in the event that the District gives any person or persons owning or possessing property served by and connected

to a District owned and operated sewer line a warning or notice of violation as a result of inspection and determination that their private service lateral or connection to the District sewer line is defective or in disrepair, then such person or persons shall immediately repair or replace such lateral or connection or take such other remedial action as necessary in accordance with the requirements of such warning or notice so given. (Revised 11/21/2006)

2.10 Backflow Prevention Devices - The District may require any customer to install a backflow prevention device at the customer's expense on the customer's lateral or house drain as a condition to provision of wastewater collection and treatment services to the customer's property if the District finds that installation of such device is necessary to prevent a possible sewage backup into a habitable dwelling or structure. The District shall require every customer to install a backflow prevention device at the customer's expense on the customer's lateral or house drain as a condition to provision of wastewater collection and treatment services to the customer's property for all new construction and/or all repair, renovation, or rehabilitation of laterals or house drains. Such backflow prevention devices may include backwater valves, grinder pumps, or other equipment designed to prevent sewage backflow, so long as the particular device to be installed is approved by the District prior to installation; provided, however, that the District's approval of any backflow prevention device chosen by the customer is not intended and shall not be construed to indicate that the District assumes responsibility or liability for the adequacy or sufficiency of the design or function of any such device. The extendable backwater valve manufactured by Clean Check, Inc., Part # EBV-P401AP with adapter and plug, and approved equal, is hereby recognized and approved by the District for such installation. It shall be the responsibility of the customer or qualified professionals retained by the customer to periodically inspect, maintain, and repair any such device installed in accordance with manufacturer specifications and recommendations. The District assumes no responsibility or liability for the failure of a backflow prevention device to function or otherwise prevent sewage backflow after installation.

(Revised 9/21/04 & 11/21/2006, 6/15/10)

2.11 Notice Required Prior to Excavation - Any person desiring to lay pipes for water, gas, steam, or other purposes, in any street or alley upon which sanitary sewers are to be laid, shall give at least forty-eight (48) hours' notice to the District before opening the street, and the manner of excavating and backfilling over such pipe shall be subject to the approval of the District. All such work shall be planned and executed so that no injury shall occur to any public sanitary sewer or to any building sanitary sewer connected therewith.

2.12 Unlawful Discharges - The following discharges shall be prohibited in the public sanitary sewers:

2.12.1 Pollutant Limits - Except as hereinafter provided, it shall be unlawful for any person to discharge or cause to be discharged into any sanitary sewer any of the following described substances, materials, water or wastes:

(1) Any liquid or vapor having a temperature higher than one hundred fifty (150) degrees Fahrenheit (sixty-five (65) degrees Celsius).

(2) Any pollutants with a closed cup flashpoint of less than one hundred forty (140) degrees Fahrenheit or sixty (60) degrees Celsius.

(3) Any gasoline, benzene, naphtha, fuel oil, mineral oil, or other flammable or explosive liquid, solid or gas.

(4) Any water or wastes containing more than two hundred (200) milligrams per liter (mg/l) of fat, oil or grease [emulsified oil or grease exceeding on analysis an average of one hundred (100) mg/l floatable and six hundred (600) mg/l dispersed of other soluble matter].

(5) Any water or wastes that contain grease or oil or other substances that will solidify or become discernibly viscous at temperatures between thirty-two (32) and one hundred fifty (150) degrees Fahrenheit (zero (0) and sixty-five (65) degrees Celsius).

(6) Any garbage that has not been properly shredded or comminuted to a degree that all particles will be carried freely under the flow conditions of the sanitary sewer with no particle greater than one-half inch in any dimension.

(7) Any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure, hair and fleshings, entrails, lime slurry, lime residues, beer or distillery slops, chemical residues, paint residues, unapproved cannery waste, bulk solids, or any other solid or viscous substance capable of causing obstruction to the flow in sanitary sewers or other interference with the proper operation of the wastewater treatment facility.

(8) Any water or wastes having corrosive properties capable of causing damage or hazard to pipe, structures, equipment or personnel of the wastewater treatment facility or collection system. Free acids and alkalis of such wastes must be neutralized within a permissible range of pH between 5.5 and 9.5. The administrative authority may grant variances for higher pH than 9.5, but in no event lower than 5.5.

(9) Any water or wastes containing a toxic or poisonous substance, that result in toxic gases, fumes, or vapors, or of high chlorine demand in sufficient quantity to injure or interfere with any wastewater treatment works process, constitute a hazard to worker health and safety, or to other humans or animals, or create any hazard in the receiving waters or the effluent of the wastewater treatment facility.

(10) Any water or wastes that contain more than ten (10) mg/l by weight of the following gases: hydrogen sulfide, sulfur dioxide or nitrous oxide.

(11) Any water or wastes containing the discharge of acid pickling wastes or concentrated plating solutions, whether neutralized or not, which are capable of causing any obstruction, damage or corrosion in the sanitary sewers or the wastewater treatment facility.

(12) Any waters containing suspended solids of such character and quantity that unusual provision, attention or expense is required to handle such materials at the wastewater treatment facility.

(13) Any noxious or malodorous gas or other substance which either singly or by interaction with other wastes is capable of creating public nuisance or hazard to life or of preventing entry into sanitary sewers for maintenance and repair.

(14) Any waters, wastes, materials or substances which react with water or wastes in the sanitary sewer system to release noxious gases, develop color of undesirable intensity, form suspended solids in objectionable concentration, or create any other condition deleterious to structures and treatment processes.

(15) Any water or wastes that do not comply with applicable state and federal pretreatment standards and requirements.

(16) No user shall introduce or cause to be introduced into the wastewater treatment works any pollutant or wastewater that causes pass through or interference. These general prohibitions apply to all users of the wastewater treatment works whether or not they are subject to categorical pretreatment standards, any regulation containing pollutant discharge limits promulgated by EPA in accordance with 33 U.S.C. ' 1317 which applies to a specific category of users and which appear in 40 CFR Chapter I, Subchapter N, Parts 405-471 or any other national, state, or local pretreatment standards or requirements.

(17) No user shall introduce or cause to be introduced into the wastewater treatment works any pollutants, including oxygen-demanding pollutants (BOD, etc.), released in a discharge at a flow rate or pollutant concentration which, either singly or by interaction with other pollutants, will cause interference with the wastewater treatment works.

2.12.2 Remedies for Pollutant Limits - If any waters or wastes are discharged, or are proposed to be discharged to the public sanitary sewers, which waters contain the substances or possess the characteristics enumerated in these regulations, and which in the judgment of the District, may have a deleterious effect upon the treatment works, processes, equipment, or receiving waters, or which otherwise create a hazard to life to constitute a public nuisance, the District may: reject the wastes; require pretreatment to an acceptable condition for discharge to the public sanitary sewers; require control over the quantities and rates of discharge; and/or require payment to cover the added cost of handling and treating the wastes not covered by existing sanitary sewer charges under the provisions of these regulations.

2.12.3 Pretreatment - If the District allows the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the District, and subject to the requirements of all applicable codes, regulations and laws including those dictated by the City of Columbia's pretreatment program. No statement contained in this section shall be construed as preventing any special agreement or arrangement between the District and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the District for treatment, subject to payment therefore, by the industrial concern. (Revised 9/16/08)

2.12.3.1 Pretreatment Requirements - Grease, oil, and sand interceptors shall be provided when, in the opinion of the District, they are necessary for the proper handling of liquid wastes, sand, or other harmful ingredients, except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the District, and shall be located as to be readily and easily accessible for cleaning and inspection.

2.12.3.2 Pretreatment Costs - Where preliminary treatment or flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at the owner's expense.

2.12.3.3 Pretreatment Monitoring - When required by the District, the owner of any property serviced by a buildings sanitary sewer carrying wastes shall install a suitable control manhole together with such necessary meters and other appurtenances in the building's sanitary sewer to facilitate observation, sampling, and measurement of the wastes. Such manhole, when required, shall be accessibly and safely located, and shall be constructed in accordance with plans approved by the District. The manhole shall be installed by the owner at his or her expense, and shall be maintained by him or her so as to be safe and accessible at all times.

2.12.3.4 Pretreatment Analysis - All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in this regulation shall be determined in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater," published by the American Public Health Association, and shall be determined at the control manhole provided, or upon suitable samples taken at said control manhole. In the event that no special manhole has been required, the control manhole shall be considered to be the nearest downstream manhole in the public sanitary sewer to the point at which the building sanitary sewer is connected. Sampling shall be carried out by customarily accepted methods to reflect the effect of constituents upon the sewage works and to determine the existence of hazards to life, limb, and property. (The particular analysis involved will determine whether a twenty-four (24) hour composite of all outfalls or a premise is appropriate or whether a grab sample or samples should be taken. A grab sample is an individual sample collected in less than fifteen (15) minutes, without regard for flow or time. Normally, but not always, BOD and suspended solids analyses are obtained from 24-hour composites of all outfalls whereas pH analyses are determined from periodic grab samples.)

2.12.3.5 Other Pretreatment Standards Applicable - Whenever a District customer is connected to a District collection line for which waste water treatment is provided by the City of Columbia or other municipality, and such waste water treatment provider has adopted ordinances or regulations requiring pretreatment and monitoring, then the customer's compliance with the requirements of those ordinances or regulations shall be applicable to the customer as a condition to District services to the customer regardless of whether District imposes the same or differing requirements; in the event of conflict between particular requirements, the higher or more rigorous standards intended to protect the public health shall be applicable. (Revised 5/12/04)

2.12.4 Unusual Waste Subject to Review, Regulation and Approval - Unusual wastes discharged into the District wastewater treatment works shall be subject to the following:

2.12.4.1 Wastes Unusual in Composition - Wastes which are unusual in composition, i.e., contain an extremely large amount of TSS or BOD; are high in dissolved solids such as sodium chloride, calcium chloride, or sodium sulfate; or are in any other way unusual, shall be reviewed by the administrative authority, who will determine whether such wastes shall be prohibited from or may be admitted to the District sanitary sewers or shall be modified or treated before being admitted. Wastes that, in the opinion of the administrative authority, are unusual or highly variable in volume shall be subject to flow equalization or other forms of regulation.

2.12.4.2 Unusual Water or Wastewater Due to Interaction - Any water or waste which, by interaction with other water or wastes in the public sanitary sewer system, releases obnoxious gases or develops color of undesirable intensity, or forms suspended solids in objectionable concentration, or creates any other condition deleterious to structures and treatment processes, shall be subject to control of the administrative authority.

2.12.5 Treatment or Flow Control May be Required - In cases where the administrative authority determines that wastes may be deleterious to the wastewater treatment works or have an adverse effect upon the wastewater treatment process or the receiving stream, or body of water, the administrative authority may require treatment to reduce the TSS, BOD or other constituents to levels more closely approaching those of normal wastewater before discharging such wastes into the District sanitary sewers. The administrative authority may also require any user to control its discharge to the public sanitary sewers so that it will not exceed a maximum percentage of the total flow in a sanitary sewer or to a treatment facility.

2.13 Unlawful Acts - The following acts or conduct shall be unlawful:

2.13.1 Allowing Pollutants to Enter Sanitary Sewer - It shall be unlawful to place or deposit or cause to be deposited or placed into any sanitary sewer any normal domestic wastewater, industrial waste or other polluted water except in accordance with the provisions of these regulations.

2.13.2 Tampering or Vandalism - It shall be unlawful to adjust, obstruct, damage, break or remove any portion of any manhole, cleanout, catch basin, inlet, outlet, or any part of the wastewater treatment works, or throw or deposit or cause to be thrown or deposited in any sanitary sewer opening or receptacle connecting with the wastewater treatment works, any matter or thing whatsoever, except in accordance with the provisions of these regulations or to obstruct in any way or uncover the public sanitary sewers for any purpose, or to make connection therewith, or uncover the public connection branches thereof, unless and except with the consent and under the supervision of the administrative authority.

2.13.3 Unauthorized or Deficient Connections - It shall be unlawful to make or cause to be made any such connections, except as herein provided, and by a competent and

skillful mechanic, or to make such connections in any manner other than provided for by regulations adopted by the District.

2.13.4 Infiltration and Inflow - It shall be unlawful to allow the entry of ground water or storm water to the wastewater treatment works through: a faulty sanitary sewer service line or connection point with the public sanitary sewer; surface water area drain; subsurface cleanout; roof drain; or by pumping any unpolluted industrial process waters to any wastewater collection system.

2.13.5 Utilizing a Structurally Poor Connection - It shall be unlawful to utilize a service connection point that is structurally poor and deteriorated, protruding into the public sanitary sewer, causing infiltration or inflow of subsurface water, or allowing the growth of tree roots into the wastewater collection system.

2.13.6 Prohibited STEP System Waste Products – – It shall be unlawful to deposit or permit the deposit of solid or insoluble organic or inorganic waste products into a plumbing drainage system which uses a septic tank effluent pump except waste products generated by the human body and paper tissue products designed to dissolve and be used in sanitary sewer systems; provided, however, that no enforcement action shall be taken for violation of this rule unless the property owner or resident has first been given written notice of violation of this rule and thereafter commits a further violation of this rule.
(Revised 12-18-07)

2.13.7 Constructing or Utilizing a Private Lateral that extends into or encroaches upon any other private property - It shall be unlawful for any private sanitary sewer lateral to be extended off the described, platted or surveyed lot or tract of land from which it originates except in cases where such private lateral extends into or across a publicly maintained road or street right of way or general utility easement abutting such property in order to connect to an existing District owned and operated sewer line located within or immediately adjacent to such road or street or general utility easement such that such private sewer lateral does not extend into or encroach upon any other private property.
(Revised 9/16/08)

2.14 Enforcement - These regulations shall be enforced in the following manner:

2.14.1 Commission of Unlawful Act - Any person who commits an unlawful act under these regulations or who knowingly makes any false statement, representation or certification in any application, record plan or other document filed or required to be maintained or who falsifies, tampers with or knowingly renders inaccurate any monitoring device or method required hereunder shall be subject to the remedies provided for in section 2.15 below. Each day the unlawful act occurs or continues shall constitute a separate violation.

2.14.2 Violation of Chapter 644 RSMo Prohibited - It shall be unlawful for any person to violate or allow violation of any provision of Chapter 644 RSMo within the geographic boundaries of the District and any person who violates or allows violation of any such provision shall be subject to any penalties or relief provided for in these regulations; provided, however, that no enforcement proceeding hereunder shall be brought by or on behalf of the District or maintained by the District if any enforcement proceeding is brought by the

Missouri Clean Water Commission or the Missouri Department of Natural Resources for the same violation or if either such agency shall notify the District of its intent to bring an enforcement proceeding for any such violation. No violation proceeding shall be brought by or on behalf of the District for violation of any provision of Chapter 644 RSMo except in emergency or exigent circumstances unless the District has provided the Missouri Clean Water Commission or the Missouri Department of Natural Resources with actual notice of its intent to bring such proceeding, in writing or otherwise, and the fact of such notice is stated in the pleading filed in the legal proceeding for enforcement.

2.15 Remedies - If any person is found to be violating any provision of these regulations, the administrative authority may, at his or her discretion, pursue any combination of the following remedies. The penalty provided in this section shall not be construed to be exclusive but is intended to be supplementary and in addition to any other remedy provided by law or at equity. Any person who repeatedly violates the same provision or provisions of these regulations shall be subject to injunctive relief in addition to the remedies provided for herein.

2.15.1 Injunctive Relief - Injunctive or other appropriate relief in circuit court restraining the violation, requiring compliance with District regulations and recovering the District's cost in remediating any damage caused by the violation.

2.15.2 Civil Penalty - Any person or Owner who violates or facilitates the violation of any provision of these regulations shall be subject to payment of a civil penalty as determined by the Circuit Court of Boone County, Missouri, in a sum not to exceed $300.00 per day for each day's violation of any such regulation. Every separate violation of these regulations shall be considered subject to a separate penalty and each day's violation of each such regulation shall subject the violator to a cumulative penalty.

2.15.3 Costs and Expense of Violation and Remedy are Responsibility of Violator - In addition to any other remedy available to the District authorized under these regulations, any person violating any of the provisions of these regulations in accordance with their terms shall be liable to the District for any expense, loss, or damage occasioned to the District by reason of such violation. As an alternative to an enforcement action, the District may specially invoice or add as a special charge to a customer account the costs and expenses incurred by the District to respond to and repair or remedy defects or damages to property or equipment owned or otherwise maintained by the District resulting from any violation of these regulations. (Revised 12/18/07)

2.16 Failure to Remedy Violation - The District is authorized to do any combination of the following if any person shall fail to remedy a violation after notice of the violation: revoke any application for service or construction permit granted by the District; discontinue sanitary sewer service to that person; use District or contract forces to remedy the violation and charge the costs of the remedy to the person in violation.

2.17 Operational Inspections and Monitoring - The following provisions shall be applicable to operational inspections and monitoring of facilities subject to these regulations:

2.17.1 Residential and Commercial Users - The District is duly authorized to inspect and approve the installation of building laterals and their connection to the public sanitary sewer system, and to inspect such wastewater as may be discharged therefrom.

2.17.1.1 Access to Systems - The District's duly authorized employees bearing proper credentials and identification shall be permitted to enter all properties for the purposes of inspection, observation, measurement, sampling, and testing in accordance with the provisions of this regulation. The District's representatives shall have no authority to inquire into any processes including metallurgical, chemical, oil, refining, ceramic, paper, or other industries beyond that point having a direct bearing on the kind and source of discharge to the sanitary sewers or waterways or facilities for wastewater treatment.

2.17.1.2 Access to Easement - The District's duly authorized employees bearing proper credentials and identification shall be permitted to enter all private properties through which the District holds an easement for the purposes of inspection, observation, measurement, sampling, repair, and maintenance of any portion of the District facilities lying within said easement.

2.17.2 Industrial Users - Industrial users of the District's wastewater treatment works shall be subject to the following:

2.17.2.1 Certification Statement - All wastewater discharge permit applications and user reports must be signed by an authorized representative of the user and contain the following certification statement: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

2.17.2.2 Preliminary Treatment Facilities - Where preliminary treatment facilities are provided for any waters or wastes, they shall be owned and maintained continuously in satisfactory and effective operation by the owner at his or her expense.

2.17.2.3 Accidental Discharges and Slug Control Plans - At least once every two (2) years, the District shall evaluate whether each significant industrial user needs an accidental discharge/slug control plan. A significant industrial user is a noncategorical industry with >25,000 GPD; >5% of dry weather hydraulic or organic capacity; categorical industry; or any industrial user designated by continuing authority to have a reasonable potential to adversely affect the wastewater treatment works' operation. The District may require any user to develop, submit for approval, and implement such a plan. Alternatively, the District may develop such a plan for any user. An accidental discharge/slug control plan shall address, at a minimum, the following:

(1) Description of discharge practices, including nonroutine batch discharges;

(2) Description of stored chemicals;

(3) Procedures for immediately notifying the District of any accidental or slug discharge, as required by of this regulation; and

(4) Procedures to prevent adverse impact from any accidental or slug discharge. Such procedures include, but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants, including solvents, and measures and equipment for emergency response.

2.17.2.4 Reporting Accidental and/or Slug Discharges - The following shall be applicable to accidental and/or slug discharges:

2.17.2.4.1 Immediate Notification - In the case of any discharge, including, but not limited to, accidental discharges, discharges of a nonroutine, episodic nature, a noncustomary batch discharge, or a slug load, that may cause potential problems for the wastewater treatment works, the user shall immediately telephone and notify the District of the incident. This notification shall include the location of the discharge, type of waste, concentration and volume, if known, and corrective actions taken by the user.

2.17.2.4.2 Written Report - Within five (5) days following such discharge, the user shall, unless waived by the District, submit a detailed written report describing the cause(s) of the discharge and the measures to be taken by the user to prevent similar future occurrences. Such notification shall not relieve the user of any expense, loss, damage, or other liability that may be incurred as a result of damage to the wastewater treatment works, natural resources, or any other damage to person or property; nor shall such notification relieve the user of any penalties or other liability that may be imposed pursuant to this regulation.

2.17.2.4.3 Posted Notice - A notice shall be permanently posted on the user's bulletin board or other prominent place advising employees who to call in the event of an accidental or slug discharge. Employers shall ensure that all employees who may cause such a discharge to occur are advised of the emergency notification procedure.

2.18 Accounts and Billing - The following regulations shall be applicable to customer accounts and billing:

2.18.1 Liability For Payment of Accounts and Applications for Service- The liability for payment of any user charges, connection fees, or other charges levied by the sewer district shall be against the owner or owners of real property which is connected to District sanitary sewers made available for collection and treatment of waste water generated on the property and such property is subject to a statutory lien for payment as provided in section 204.455, RSMo. The District may permit the establishment of customer accounts by tenants, lessees and other persons who occupy or use property which is connected to District sanitary sewers with the express or implied consent of the property owner(s), but the establishment of

such accounts shall not relieve the property owner(s) from financial responsibility for payment of all such user charges, connection fees, or other charges levied by the sewer district, nor otherwise affect the discharge rights to assert a lien against the property served under section 204.455, RSMo. Customers shall apply for sewer service by submitting their name and address, the kind of service requested, and the location to be served. No customer shall be refused service due to race, sex, creed, national origin, marital status, age, number of dependents, source of income, or place of residence in the service area.

(Revised 2/17/04)

2.18.2 Billing & Payment - The manner of furnishing the statement shall be as determined by the Board, provided each customer is billed in a reasonable, predictable manner. The District may divide the service area into sections, and/or the customers into various classes for the purpose of rendering statements. Such sections or classes may be changed from time to time to meet the operating requirements of the District. Such sections or classes are for the sole purpose of establishing a billing rotation and shall have no affect on the amount or rate of billing.

2.18.2.1 Billing Period - The District shall render a bill once during each billing period to every customer in accordance with the applicable rate schedule. A billing period covers thirty (30) days of service. Each customer is billed for thirty (30) days of service in advance. When bills are rendered for a period of less than a complete billing period due to the connection or termination of service, the billing shall be for the proportionate part of the charge. (Revised 4-19-07)

2.18.2.2 Due and Payable - All service bills shall be due and payable in full ten (10) days from the date of the bill, after which they shall be subject to late charges. If the last day for remittance falls upon a weekend or holiday, or any other day when the offices regularly used for the payment of customer bills, are not open to the general public, the final payment date shall be extended through to the close of the next business day. The date of payment for remittance through the mail shall be the date on which the department receives the remittance. (Revised 4-19-07)

2.18.2.3 Late Charge - The District shall assess a two percent (2%) late charge upon the bill of a customer for the reason that any balance due and owing upon the bill remains outstanding beyond the ten (10) day period of time established for payment.

(Revised 4-19-07)

2.18.2.4 Contents of Statement - The statement shall contain the number of days of service, billing date, due date, previous balance, current amount due, total due, date delinquent, address and phone number to call for information. Billing or clerical errors or omissions contained on a statement shall not serve as a defense to late payment charges of the actual account balance when due to the extent of amounts actually due, nor a defense to the costs and expenses chargeable for delinquent accounts and collection thereof resulting from nonpayment in whole or in part of the actual account balance due and not paid.

(Revised 4-19-07)

2.18.2.5 Delinquent Accounts - A delinquent account is a bill remaining unpaid by a customer at least twenty (20) days from rendition of the bill by the District. The

District is hereby authorized to establish an administrative procedure to handle delinquent accounts. Collections of delinquent payments may be pursued through collection agencies and in the courts of jurisdiction and may include for collection the amount of the delinquent payments, service charges and collection costs, court costs, reasonable attorney's fees, and all other expenses incurred regarding the collection of the delinquent account. Any account remaining unpaid after six (6) months shall be subject to Section 204.455 RSMo relating to liens being placed upon property where services were provided. (Revised 4-19-07)

2.18.2.6 Termination of Service - Whenever a customer shall order services terminated or otherwise cease to be a customer, all amounts owed by the customer to the District shall immediately become due. Bills for accounts to which services have been terminated or discontinued for a period of thirty (30) days shall be considered delinquent thirty (30) days after the final billing date. Should the account remain outstanding for a period of sixty (60) days, the account will be submitted to a collection agency or attorney for collection as determined under District administrative procedures. All costs, fees and expenses chargeable for delinquent accounts as specified in section 2.18.2.5. shall be applicable to the debt owed under the delinquent account. (Revised 4-19-07)

2.18.3 Temporary Interruptions of Service - The District reserves the right to discontinue sanitary services in its mains at any time, without notice, for making repairs, extensions, or alterations to the wastewater treatment works.

2.18.3.1 Notification of Customers - Whenever service is interrupted for repairs, all customers affected by such interruptions will be notified in advance if it is possible to do so. Every effort will be made to minimize the interruption and temporary methods of disposing of bulk sewage will be provided for when possible.

2.18.3.2 Refunds - No refunds of charges for sanitary sewer service will be made for interruption of service unless the interruption is in effect for a continuous period in excess of forty-eight (48) hours without disposal by the District.

2.19 Disconnection - The following provisions shall be applicable to disconnections of service:

2.19.1 Reasons for Disconnection of Service - The District shall have the right to discontinue sanitary sewer service to the customer for the following reasons. Discontinuance of sanitary sewer service to a premise for any reason shall not prevent the District from pursuing any lawful remedy for the collection of monies due from the Customer, and the District shall have the right to include court costs, applicable service charge(s), disconnect and/or reconnect charges, collection charges and reasonable attorney's fees for collection.

2.19.1.1 Non-payment - Service may be discontinued for: nonpayment of a delinquent account; failure to comply with the terms and conditions of a settlement agreement relating to a current or prior sanitary sewer account; failure to inform the District of their intent to terminate sanitary sewer services; or for failure to respond to a delinquent notice.

2.19.1.2 Tampering or Vandalism - No person, except authorized employees of the District, shall connect to the service lines without written authorization. In the event the

District shall discover evidence of tampering with lines used for sewage distribution, or other such line of the sanitary sewer having the probable effect of rendering actual meter readings inaccurate, or to receive the service of the sanitary sewer without proper payments, sanitary sewer service may be discontinued.

2.19.1.3 Violation of Health Regulation and/or Unsafe Conditions - Service may be disconnected upon request from health department because of unsafe condition of structure or dwelling and/or non-compliance with sanitary sewer use regulations.

2.19.2 Procedures for Disconnection of Service - Prior to any service disconnection for any of the reasons listed in section 2.19.1.1-3, the District shall give five (5) working days' written notice of such intent by mail to the customer at their billing address. Service of notice is complete upon mailing. The District shall maintain an accurate record of the date of mailing. Such notice shall give a telephone number and address at which such disconnection may be contested. The general manager is hereby authorized to promulgate rules and regulations to establish an administrative procedure to handle such contests. The District may disconnect service between the hours of 8:00 a.m. and 4:00 p.m. on the date specified on the disconnection notice, or within a reasonable time thereafter. Service shall not be disconnected on a day when the offices of the District are not available to the public for the purpose of reconnecting discontinued service.

2.19.2.1 Notice of Disconnection - A Disconnection Notice shall contain the following: name and address of the customer; clear and concise statement of the reason for the proposed disconnection; cost of reconnection; date on or after which service shall be discontinued unless action is taken by the customer; terms under which disconnection may be avoided by the customer; and the telephone number where inquiry/complaint may be made.

2.19.2.2 Reasonable Effort to Contact - Immediately preceding the disconnection of service, the employee of the District designated to perform such function shall make a reasonable effort to contact and identify her/himself to the customer or responsible person then upon the premises stating action taken, reason for action, and phone numbers where inquiries may be made.

2.19.2.3 Postponement Due to Medical Circumstances - Notwithstanding any other provisions of this section, the District may postpone the disconnection of sanitary sewer service to a residential customer for a time not in excess of twenty-one (21) days if the disconnection will aggravate an existent medical emergency of the customer, a member of his/her family or other permanent resident of the premises where service is rendered.

2.19.2.4 Customer Dispute - If the District is advised, prior to the date of disconnection that any portion of bill is in dispute, the District shall record the date, place and time the complaint was made, and enter into the resolution process with the customer. The complaint may be initiated in person, by phone, or in writing. The District, in attempting to resolve the dispute in a mutually satisfactory manner, may employ those methods set forth by the management in the customer complaints process.

2.19.2.5 Failure to Pay Undisputed Amount - When a complaint is made, the customer shall make payment of the nondisputed amount; if customer fails to make payment of the nondisputed amount within three (3) working days from the date of registering

the complaint, the customer shall waive their right to continuance of service and disconnection of service may proceed.

2.19.2.6 Failure to Negotiate - Failure of the customer to enter into negotiation with the District to resolve a dispute shall constitute a waiver of the customer's right to continuance of service and the District may then proceed to disconnect service as provided.

2.19.3 Disconnect/Reconnect Charge - A fee equal to the actual costs of the District, to a minimum of three hundred dollars ($300.00), shall be charged to all accounts when it is necessary to utilize District forces to physically disconnect sanitary sewer service. Reconnection charges shall also be levied against the affected account on the basis of the actual costs of reconnection, to a minimum of three hundred dollars ($300.00). Total fees to disconnect and reconnect service will be a minimum of six hundred dollars ($600.00).

2.20 Reconnection/Restoration of Service - Upon the customer's request, the District shall restore service promptly if the cause for disconnection of service has been eliminated, applicable restoration charges paid and, if required, satisfactory credit arrangements have been made.

2.21 Resale of Sanitary Sewer Services - Should the resale of sanitary sewer service become necessary, the following regulations apply.

2.21.1 Resale at a Profit Prohibited - No customer shall sell at a profit, or offer for sale at a profit any sanitary sewer service purchased for their sole use from the District unless authorized by the District.

2.21.2 Authorization Required - Any customer wishing to resell a sanitary sewer service, shall do so only after having first obtained authorization from the District.

2.21.3 Evidence of Compliance - Any customer reselling sanitary sewer service, regardless of whether the sanitary sewer service so resold is metered or not, shall from time to time as determined by the District, furnish evidence that such resale is in compliance with all rules relating to such.

2.21.4 Submeters May be Required - Any customer wishing to resell sanitary sewer service may be required, as determined by the District, to install submeters where required and maintain records at such customer's expense, for the purpose of determining compliance with this section.

2.22 Interpretation and Severability - The regulations enacted hereunder are intended to be supplementary to all of the provisions or remedies authorized or prescribed by law, rule or regulation enacted thereunder. The invalidity of any particular regulation enacted herein shall not affect the validity of any other provision and all regulations hereunder shall be construed as consistently and harmoniously as possible with each other and other applicable provisions of law. In the event these regulations conflict with another law, rule or regulation, the law,

rule or regulation imposed by a higher governmental authority shall be applicable in cases of preemption, but otherwise the law, rule or regulation which affords the greater protection to the public health or safety shall prevail. These regulations also shall be liberally construed to the fullest extent permitted by law to effectuate the broad remedial purposes for which they are intended.

2.23 Variances - The Board may grant a variance from the strict application of the regulations adopted in this chapter upon application if it finds after public hearing and upon competent and substantial evidence that the applicant meets the criteria for grant of a variance required by these regulations. No variance from any requirement contained within chapter two of these regulations shall be granted unless the Board finds: (a) the applicant will incur unreasonable and unnecessary hardship if a variance is not granted and the variance is not sought primarily to avoid financial expense in complying with the requirements of these regulations (b) grant of a variance will not endanger the health, safety or welfare of the public, and (c) grant of a variance will not hinder, thwart or circumvent the general intent or any specific purpose of these regulations. All applications for variances shall be filed with the General Manager of the District and after review thereof the General Manager shall make a recommendation to the Board to grant or deny the application and state the reasons for his recommendation. The applicant may appeal any decision of the Board as provided by law.

2.24 Effective Date - This regulation shall be in full force and effect from the 15th day of September 1998.