CHARLES TOWN UTILITY BOARD
AGENDA

WEDNESDAY, JANUARY 24, 2024

Regular Meeting | **661 South George Street, Charles Town, WV 25414** | **4:00 PM**

CALL TO ORDER

1. **APPROVAL OF MINUTES**
   a. Approval of January 10, 2024 Regular Meeting Minutes
   UB Minutes 01.10.24.pdf

2. **PUBLIC COMMENT**
   This portion of the agenda is designed for members of the general public to share thoughts on items of interest in the community. By law, Board members may ask clarifying questions or discuss procedural matters but are not permitted to discuss the policy merits of any issue unless it is scheduled for discussion.

   The Public is invited to attend this meeting in person or via webcast (www.ctubwv.com- Board Meeting - Meeting Agendas and Minutes 2024) or by accessing the following zoom link:

   https://us06web.zoom.us/j/88173375276?pwd=mdaF8LcsdQBhUQD5sg0MxLh4SQcvVl.1

   Meeting ID: 881 7337 5276
   Passcode: 598784
   (301) 715-8592

3. **UNFINISHED BUSINESS**
   a. Utility Manager Performance Evaluation Review - Possible Executive Session Under: WV State Code Section 6-9A-4(b)(2)(A) - Matters arising from the appointment, employment of an employee.

4. **NEW BUSINESS**
   a. Locust Hill Unit Owners Association Request for Deed of Easement
   Locust Hill Request.pdf
   b. Dewberry Valve Assessment Program update
   Valve Assessment Program.pdf
   c. Source Water Protection Plan Update - Dewberry proposal for services
   SWPP Update letter and fee proposal.pdf
   d. Capacity Improvement Fee Discussion requested by Heidi Parker
   2021-12-29 - CTUB Sewer - Final Tech Memo.pdf

2022-10-28 - CTUB Water - Tech Memo - FINAL.pdf
CIF ACCOUNT DETAIL FY 2024.pdf

e. Industrial User #7 Rockwool Permit Modification request
IU07 Permit Modification.pdf

5. **MANAGER REPORTS**
   a. Utility Manager Report
   REVENUE & EXPENSE NOVEMBER.pdf
   REVENUE EXPENSE DECEMBER.pdf
   b. Chairman Report

6. **APPROVAL OF BILLS**
   a. January 24, 2024
   Board Report 01.24.24.pdf

7. **ADJOURNMENT**

8. **INFORMATION ONLY - NEXT MEETING - FEBRUARY 14, 2024 4:00 P.M.**

Charles Town Utility Board
Regular Board Meeting
January 10, 2024

The Charles Town Utility Board held a regular meeting on January 10, 2024 at 4:00 P.M. Members of the Board present were John Nissel, Chairman; Duke Pierson, Vice Chairman; Tommy Stocks, Treasurer; Jeff Whitten, Board Member; and Heidi Parker, Board Member. Also present were Kristen Stolipher, Utility Manager; April Shultz, Assistant Utility Manager; and Ashley Stottlemyer, Secretary.

CALL TO ORDER

The Chairman called the meeting to order at 4:00 P.M.

APPROVAL OF MINUTES

Approval of December 13, 2023 Special Meeting Minutes

The Chairman called for changes or corrections to the December 13, 2023 special meeting minutes.

Action: **Motion made by Mr. Pierson, second by Mrs. Parker, the Board unanimously approved the December 13, 2023 minutes as presented.**

PUBLIC COMMENT

Public comment was received from Jacquelyn Milliron.

UNFINISHED BUSINESS

Jefferson Crossing Pump Station Evaluation

Last month a request was received from the owner of the Jefferson Crossing Shopping Center to take ownership of a pump station located behind the Martins grocery store. Mrs. Stolipher included in the packet a draft letter to the developer providing a high-level evaluation of the station and the costs associated with necessary upgrades to bring it up to CTUB standards totaling an estimated $55,425.00. Mrs. Stolipher will send the letter and bring back to the Board once a response is received.

Mr. Whitten mentioned the owner is a client of his and will recuse himself from any discussions on this matter.

Action: **No action required by the Board.**

NEW BUSINESS

Renewal & Replacement Project Resolution No. 15 – Contractor Pay Application No. 15

Mrs. Stolipher included the contractor application for payment no. 15 in the amount of $167,019.32 for work completed.

Action: **Motion made by Mr. Whitten, second by Mr. Pierson, the Board unanimously approved Resolution No. 15.**

RK&K Collection System Project Update

Rhiannon Dodge from RK&K provided an update on the project relating to scheduling, permitting and an updated project cost of $8,283,000.00. Mrs. Stolipher mentioned the cost progression has been discussed at numerous board meetings and will not affect the current rates. The project is proposed to be complete by March 2026. The Board provided discussions.

Action: **No action required by the Board.**

RK&K Task Order 19 – Scope of Work Change 5

Rhiannon Dodge presented task order No. 5 to provide wetland delineation services to meet the requirements for the Army Corps of Engineers permit anticipating an additional three months to complete. The total estimate not-to-exceed fee to perform the work is $21,000.00.

Action: Motion made by Mr. Pierson, second by Mr. Stocks, with discussion by the Board, the Board unanimously approved Task Order 19 – Scope of Work change 5.

RK&K Greenfield Forcemain Project – Bid Tabulations and Notice of Award

Mrs. Stolipher provided the bid opening was held on December 21, 2023 and W.F.Delauter & Son, Inc. was the lowest bidder out of the three submissions. The contract price was $953,055.98. Mrs. Stolipher mentioned there have been six project addendums since the initial design and DOH boring modifications which have contributed to the increase in cost estimates. She added the funding for this project will come from Capacity Improvement Fees. John Cole and Mrs. Dodge, from RK&K, were available for questions.

The Board provided discussions. They had concerns regarding the bid estimates and who would ultimately be the lowest bidder if the existing casings can be utilized. Mrs. Stolipher will address this issue with the attorney.

Action: Motion made by Mr. Pierson, second by Mr. Whitten, the Board unanimously approved the lowest bid from W.F. Delauter not to exceed the bid provided by Greenridge Contractors, Inc. pending review by Council.

Summit Point Utilities

Jared Frederick and Jeff Johnson from Summit Point Raceway, provided a presentation on the Summit Point Raceway facilities and the need for public water and sewer utilities. Jim Linsenmeyer from the WV Economic Development Office and Edwina Benites from the Jefferson County Development Authority were present to promote this endeavor and offer any necessary assistance. The Board provided discussions. Mrs. Stolipher will work with Summit Point, JCDA and the State to explore grant funding opportunities.

Action: No action required by the Board.

NPDES Permit Modifications - Possible Executive Session Under: WV State Code Section §6-9A-4(b)(12) to discuss any matter which, by express provision of federal law or state statute or rule of court is rendered confidential or to discuss a matter of potential Litigation.

Action: This item was moved to the end of the meeting.

Utility Manager Performance Evaluation Review – Possible Executive Session Under: WV State Code Section 6-9A-4(b)(2)(A)- Matters arising from the appointment, employment of an employee.

This item will be discussed at the next Board meeting.

Action: This item will be discussed next meeting.

MANAGER REPORTS

Utility Manager Report

Mrs. Stolipher provided the water and sewer rate adjustments second readings were passed by City Council on January 2nd and will submit the tariff revisions to the Public Service Commission. She also mentioned the Source Water Protection Plan is required to be updated by May 1, 2024 so she has asked

Dewberry to provide a proposal to complete that work. Mrs. Stolipher will also begin working on updating the sewer strategic plan for adoption in April.

Action: **No action required by the Board.**

Chairman Report

The Chairman thanked Mrs. Stolipher for the work she has put forth towards rate equalization. He also requested the Board provide him with their evaluations on Mrs. Stolipher by January 12th to discuss at the next Board meeting.

Action: **No action required by the Board.**

APPROVAL OF BILLS

January 10, 2024

Action: **Motion made by Mr. Pierson, second by Mr. Stocks, the Board unanimously approved the payment of the bills.**

EXECUTIVE SESSION

NPDES Permit Modifications - Possible Executive Session Under: WV State Code Section §6-9A-4(b)(12) to discuss any matter which, by express provision of federal law or state statute or rule of court is rendered confidential or to discuss a matter of potential Litigation.

Action: **Motion by Mr. Pierson, second by Mr. Stocks, the Board unanimously approved convening into Executive Session at 5:08 P.M. to discuss NPDES permit modifications. Mayor Bob Trainor and Attorney Richard Lewis were invited to the discussions.**

Action: **Motion made by Mr. Pierson, second by Mr. Whitte, the Board unanimously approved returning to public session. Executive session was declared over at 5:45 P.M.**

Mrs. Parker requested adding an agenda item to the next meeting to discuss Capacity Improvement Fee's.

ADJOURNMENT

There being no further business at this time, the Board adjourned the meeting.

Action: **Motion by Mr. Pierson, second by Mr. Stocks, the Board unanimously adjourned the meeting at 5:47 P.M.**

INFORMATION ONLY

The next meeting is scheduled for Wednesday, January 24, 2024 at 4:00 P.M. at 661 S. George Street.

_____ _____

John Nissel, Chairman

Ashley Stottlemyer, Secretary

Locust Hill Unit Owners Association, Inc.

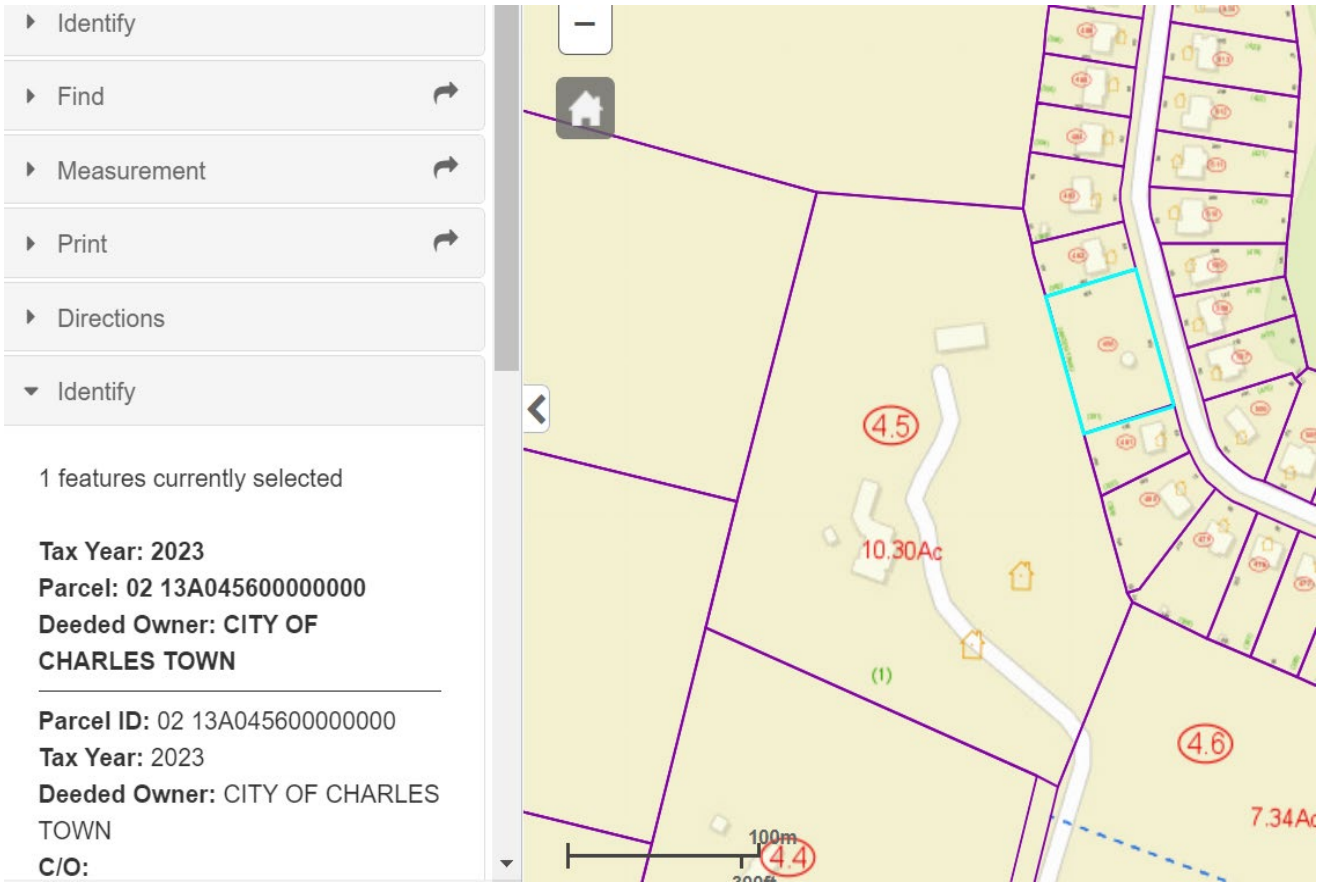
Clagett Management WV VA LLC
115 N. Queen Street, Martinsburg, WV 25420
Office 304-596-6630 FAX 304-596-6635

January 9, 2024

Re: City of Charles Town, Parcel 02 13A0456

The Board of Directors for Locust Hill UOA respectfully requests consideration and approval of a deed of easement by the City Council on the the subject parcel to install a non-permanent bus shelter for Jefferson County students residing within Locust Hill UOA. The subject parcel located within Locust Hill UOA that abuts Sawgrass Drive is partially occupied by the fenced water tower maintained and operated by the CTUB, and has served as a bus stop for students for over 10 years.

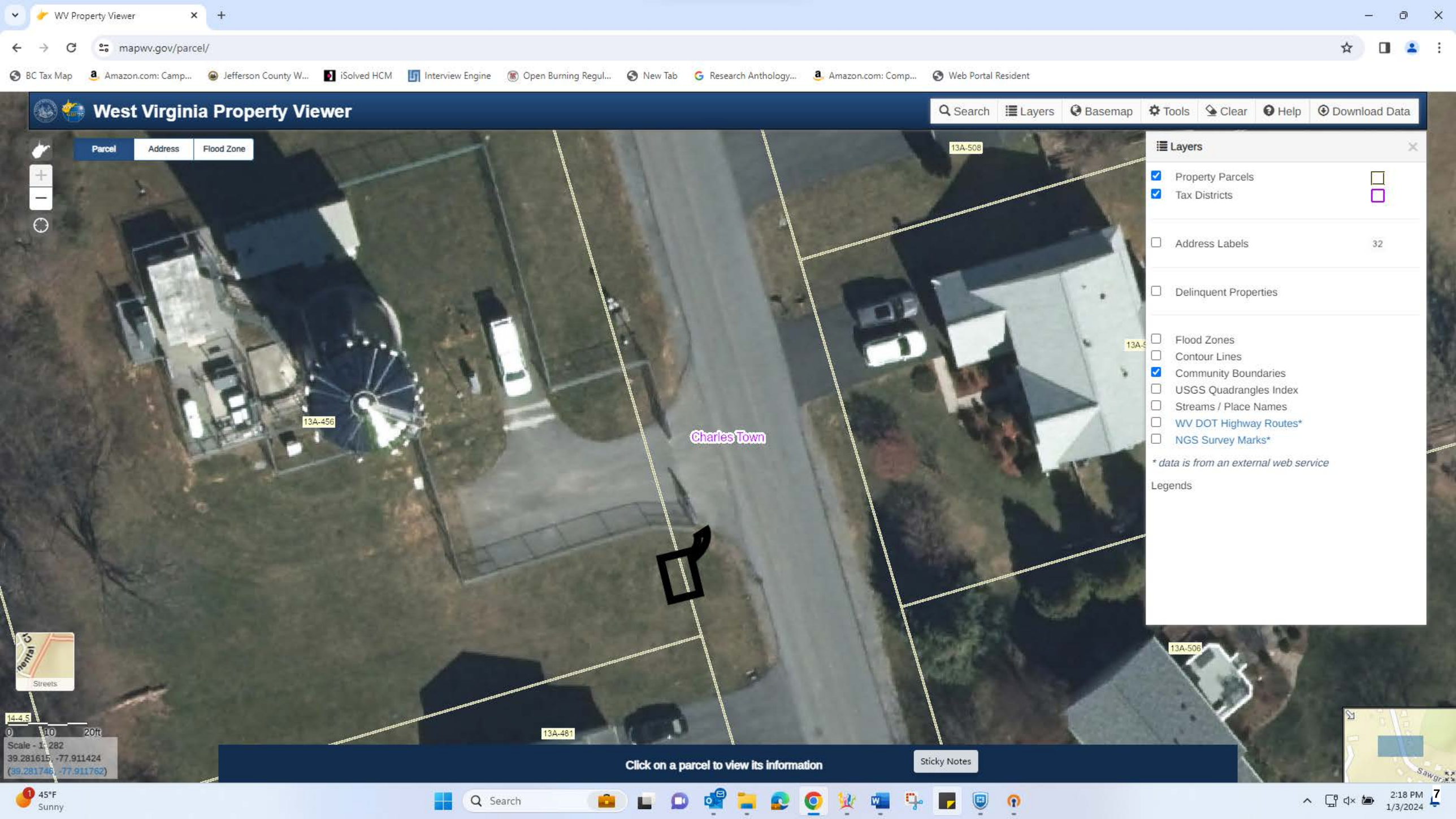
Pending approval by the CTUB and City Council, the Locust Hill UOA Board has approved the purchase and installation of an 8x10 bus salt box style shelter constructed of pressure treated wood, T111 siding stained chestnut brown with black shingle roof with a 16" x 10' bench on the inside for sitting. There could also be a 4'x8' platform to bridge the storm swale, or a gravel path from the asphalt apron to the shelter, if preferred. The site base for the shelter will be landscape timbers filled with crushed stone approximately 8"-12" larger than the dimensions of the bus shelter.



Please advise if a representative of the Association should be present for any meetings that will be scheduled to discuss this request and provide the date/time so we may plan to attend.

On behalf of the Board of Directors for Locust Hill UOA, Inc.

Renee Sanders
Community Manager, CMCA, AMS
rsanders@clagett.com
304-596-6630 x1109


WV Property Viewer
mapwv.gov/parcel/
BC Tax Map
Amazon.com: Camp...
Jefferson County W...
iSolved HCM
Interview Engine
Open Burning Regul...
New Tab
Research Anthology...
Amazon.com: Comp...
Web Portal Resident
West Virginia Property Viewer
Search
Layers
Basemap
Tools
Clear
Help
Download Data
Parcel
Address
Flood Zone
13A-508
13A-456
Charles Town
13A-506
13A-481
Layers
Property Parcels
Tax Districts
Address Labels
32
Delinquent Properties
Flood Zones
Contour Lines
Community Boundaries
USGS Quadrangles Index
Streams / Place Names
WV DOT Highway Routes*
NGS Survey Marks*
* data is from an external web service
Legends
Streets
Scale - 1:282
39.281615, -77.911424
(39.281746, -77.911762)
Click on a parcel to view its information
Sticky Notes
45°F
Sunny
Search
2:18 PM
1/3/2024

Dewberry Engineers Inc.
8401 Arlington Boulevard
Fairfax, VA 22031-4666
703.849.0100
703.849.0118 fax
www.dewberry.com

Date: December 11, 2023
To: Charles Town Utility Board
From: Dewberry Engineers Inc.
Subject: Valve Assessment Program Framework

Program Background

Dewberry has been commissioned by the Charles Town Utility Board (CTUB) to establish a comprehensive valve assessment program in accordance with the guidelines outlined in the American Water Works Association (AWWA) Manual M44, titled "Distribution Valves: Selection, Installation, Field Testing, and Maintenance, Third Edition." The primary aim of this program is to ensure the regular exercising of valves, timely identification of maintenance requirements, and the implementation of effective maintenance procedures. It will further offer insights into recommended workflows to enhance field data collection for CTUB. The accompanying system maps include a prioritized plan for valve operation.

A critical part of maintaining a successful program will be the collection and recording of accurate data. The program will include an excel based tool for recording data that can be tied directly to GIS data. This tool will include databases for Valve Asset Inventory, Valve Consequence Failure Matrix, Valve Probability of Failure Matrix, and a Total Risk Score Matrix.

Information contained in this program is in compliance with American Water Works Association (AWWA) Manual M44, Distribution Valves: Selection, Installation, Field Testing, and Maintenance, Third Edition.

Initial Prioritization Methodology

As per the AWWA Manual M44 guidelines, an initial prioritization approach has been formulated for valve exercising. The primary criterion for prioritization will be the size of valves. Three distinct priority levels, namely Priority 1, Priority 2, and Priority 3, have been defined based on the proximity to large water mains. For this initial prioritization, a large water is a water main with a nominal diameter of 10” or larger. Valves are prioritized by proximity as follows:

1. Priority 1 valves are located within 50 ft of a large water main
2. Priority 2 valves are located within 500 ft of a large water main
3. Priority 3 valves are located greater than 500 ft from a large water main

These priority levels will dictate the frequency of valve exercising, with Priority 1 valves being the highest priority and Priority 3 valves requiring less frequent attention. These priorities are visually represented on the Program Maps, with Priority 1 valves denoted in red, Priority 2 in yellow, and Priority 3 in green. Field crews should begin with index grids containing the most high-priority valves and proceed to grids with lower-priority valves. To simplify this process, the index grids are color coded based on the average valve priority within the grid.

Future Prioritization Methodology

As the valve assessment program progresses, it is recommended that the prioritization methodology transition towards a data-driven approach, in line with AWWA Manual M44. Collected data will feed into a risk score tool, which will objectively prioritize valves based on their risk score. Valves with the highest risk scores will be exercised first and most frequently, moving away from size-based prioritization. The tool includes the following sections.

Valve Asset Inventory

In accordance with AWWA Manual M44, the valve asset inventory is a list of each valve and their respective attributes. It has been determined by CTUB that the included attributes can realistically be established. This inventory provides information on each valve's attributes, including size, location, and type. It does not include any risk related data. To avoid data entry inconsistencies, in cell drop down lists have been included. The drop-down options can be edited in future versions of the tool based on Program feedback.

Valve Consequence of Failure Matrix

This matrix evaluates the consequences to the water distribution system should a valve fail. A weighted scoring system (ranging from 1 to 5) assesses four critical aspects of consequence, including Function (30%), Redundancy (40%), Critical Needs (15%), and Community Impact (15%). The resulting Consequence Score is calculated based on these ratings and weight factors, with a high score indicating valves with the most significant negative impact upon failure. Each of the sections are further explained below :

1. Function (30%)
    a. This is a measure of functionality of the valve as it relates to the type of water line the valve serves. Valves located on a transmission main should receive a high score and valves on distribution mains with a low customer count should receive a low score.
2. Redundancy (40%)
    a. This is a measure of the redundancy of the valve. Valves with no redundancy should receive a high score and valves with significant redundancy should receive a high score.
3. Critical Needs (15%)
    a. This is a measure of the critical needs of the valve as it relates to the customers impacted by an outage. High critical impact customers such as hospitals should receive a high ranking and low critical impact customers such as low usage industrial customers should receive a low score.
4. Community (15%)
    a. This is a measure of the community impact to a valve in the event of a failure. Valves with the potential for widespread impact should receive a high rating and valves with a limited impact should receive a low rating.

It should be acknowledged that ratings are subjective to an extent and a clear understanding of each category should be understood among all staff to ensure consistent ratings. To avoid data entry inconsistencies, in cell drop down lists have been included.

Once a rating is entered for each section, an aggregate Consequence Score will be calculated for each valve. This score will range between 0 and 50 and will be calculated by summing the product of each sections rating and weight factor and multiplying the total by 10. A high Consequence Score indicates valves with the highest negative consequences in the event of a failure.

Valve Probability of Failure Matrix

The Probability of Failure Matrix assesses the likelihood of valve failure based on specific attributes, adhering to the AWWA Manual M44 guidelines. Three sections are scored (1 to 5), covering Age (35%), Type (15%), and Work History (50%). The resulting Probability Score indicates the potential for valve failure, with a high score signifying valves at the highest risk. Each of the sections are further discussed as below :

1. Age (35%)
    a. This is a measure of the age of each valve and should be rated as follows:
        i. 60+ years old: 5
        ii. 50-59 years old: 4
        iii. 40-49 years old: 3
        iv. 30-39 years old: 2

v. 20-29 years old: 1
vi. <20 years old: 0

2. Type (15%)
    b. This is the likeliness of failure based on the type of valve with valves known to fail at a higher rate receiving a higher rating. Valves should be rated as follows:
        i. Cone: 5
        ii. Piton: 4
        iii. Gate: 3
        iv. Ball: 2
        v. Butterfly: 1
3. Work History (50%)
    c. This is a measure of the frequency of maintenance work being required by a valve. Valves with a history of repeated maintenance needs should receive a high rating. Valves that have never had required maintenance should receive a low rating.

The Age and Type scores will automatically be calculated based on data entered in the Valve Inventory tab. The work history score will be manually selected. It should be acknowledged that this rating is subjective to an extent and a clear understanding of this category should be understood among all staff to ensure consistent ratings. To avoid data entry inconsistencies, in cell drop down lists have been included.

Once a rating is entered for each section, an aggregate Probability Score will be calculated for each valve. This score will range between 0 and 50 and will be calculated by summing the product of each sections rating and weight factor and multiplying the total by 10. A high Probability Score indicates valves with the highest potential for failure.

Valve Total Risk Score

In accordance with the AWWA Manual M44, the Total Risk Score is employed to determine the new priority for each valve. The Consequence and Probability scores are multiplied to establish a Raw Risk Score, which then determines the priority for each valve as follows:

1. Priority 1 Valves: Top 25% Raw Risk Score
2. Priority 2 Valves: Middle 50% Raw Risk Score
3. Priority 3 Valves: Bottom 25% Raw Risk Score

Maintaining the Priority 1-3 ranking based on percentiles of the Raw Risk Score will help minimize the impact of subjective rating sections.

Standard Operating Procedure

The program's standard operating procedure adheres to the AWWA Manual M44 guidelines. It recommends a three-year cycle for exercising all valves in the system, with Priority 1 valves exercised annually, Priority 2 valves every two years, and Priority 3 valves every three years. During valve exercising and data collection, specific protocols should be followed.

Valve Exercising Preparation

Before testing, field crews are instructed to confirm and record valve locations, type, size, installation year, and accessibility. This information is essential for efficient valve exercising.

Prior to testing, confirm and record the following:

1. Valve Locations
    a. Address
    b. X-Coordinate
    c. Y-Coordinate
2. Valve Manufacturer and Type

3. Valve and Associated Pipe Size
4. Year Installed
5. Valve Accessibility Type (valve box, vault, buried, etc.)

Valve Exercising Protocol

The protocol outlines the steps to be followed for each valve exercising, including initiating with the lowest required torque, addressing difficult-to-operate valves, and recording turning points and torque requirements.

Use the following steps to exercise each valve. When operating a valve, use the lowest torque possible, do not force a valve.

1. Begin with the lowest torque required to turn the valve
2. If the valve is difficult to operate
    a. Apply low torque in the closed, then open, then closed direction up to 20 times to free the valve before increasing torque
    b. Proceed to step 4
3. If the valve is difficult to operate AND hasn't been operated for an extended period
    a. Begin with the lowest amount of torque required to turn the valve in the closed direction moving through 5 to 10 rotations
    b. Reverse (to the open direction) for 2 to 3 rotations
    c. Reverse again (to closed direction) and rotate 5 to 10 more turns
    d. Repeat until full closure is attained
    e. Proceed to step 4
4. Rotate the valve to the fully open position
5. Rotate the valve to the fully closed position and record the total turns and torque required
6. Rotate the valve to the fully open position and record the total turns and torque required

Data Entry Protocol

Field crews are guided on how to collect and enter data into excel-based data collection tools, including the Valve Asset Inventory and Probability of Failure Matrix.

As each valve is exercised, the following data should be collected and entered into the following excel based data collection tools.

1. Valve Asset Inventory
    a. Direction to Close (in-cell dropdown)
    b. Turns required to fully close/open the valve
    c. Torque required to exercise the valve
    d. Mechanism used to exercise the valve
    e. Date of service
2. Consequence of Failure Matrix
    a. Function, Redundancy, Critical Needs and Community ratings (in-cell dropdowns)
3. Probability of Failure Matrix
    a. Work History rating (in-cell dropdown)

Once data is collected, Consequence, Probability, and Total Risk scores are recalculated, and the GIS valves shapefile data is updated. Program Maps, which include revised prioritization, should be reproduced on an annual basis to comply with AWWA Manual M44.

Advanced Technology Integration

In the pursuit of operational excellence, CTUB has embarked on a progressive Valve Assessment Program, guided by the principles outlined in the AWWA Manual M44. A pivotal component of this program is the Valve Inventory process, where current methodologies, relying on cell phones and tablets, have demonstrated efficacy. However, the evolving nature of CTUB's objectives calls for an exploration of cutting-edge technology to augment accuracy, efficiency, and future scalability.

The present approach involves field crews utilizing cell phones and tablets for on-site activities related to valve reconnaissance. This includes gathering XY coordinates, capturing site conditions through photographs, and subsequently transferring this crucial site intelligence to GIS for maintaining valves in a 5-year rotation cycle. Undoubtedly proactive, this method has served well in the initial stages of the Valve Assessment Program.

While the existing approach has its merits, challenges arise in the accuracy of XY coordinate collection, particularly when relying on consumer-grade devices. The limitations of these tools could impede the program's effectiveness as CTUB advances. The implementation of state-of-the-art technologies, such as Trimble GPS devices and the Esri Field Maps application, presents an opportunity to overcome these challenges and elevate the valve assessment program to new heights.

Recommendations

To enhance the accuracy and efficiency of valve information collection in the field, CTUB is encouraged to adopt the following strategies:

1. Trimble GPS Devices:
    a. Integrate Trimble GPS devices into field operations for precise XY coordinate collection.
    b. Leverage the high-accuracy positioning capabilities of Trimble to ensure reliable and consistent spatial data.
    c. Establish comprehensive SOPs for field crews on the effective use of Trimble devices.
2. Esri Field Maps Application
    a. Implement the Esri Field Maps application for seamless data collection and integration with GIS.
    b. Leverage the user-friendly interface and advanced mapping capabilities of Esri Field Maps to enhance field crew productivity.
3. Standard Operating Procedures (SOPs):
    a. Develop comprehensive SOPs specifically tailored for field crews, outlining the use of new technologies.
    b. Provide training and resources to ensure that field crews are adept at utilizing Trimble GPS devices and Esri Field Maps effectively.
    c. Foster a culture of continuous learning and adaptation within the field crews.
4. Real-time Data Entry:
    a. Enable real-time data entry capabilities to streamline the transfer of field-collected information into the GIS system.
    b. Embrace technologies that facilitate instant data synchronization, reducing the lag between field activities and GIS updates.
5. Continuous Training and Evaluation:
    a. Establish a continuous training program to keep field crews updated on the latest technology tools.
    b. Regularly evaluate the effectiveness of the new procedures and technologies through feedback loops and performance assessments.
    c. Ensure seamless communication channels between field crews and GIS

The integration of Trimble GPS devices and Esri Field Maps into CTUB's Valve Assessment Program offers substantial benefits:

1. Enhanced Accuracy:
    a. Improved precision in XY coordinates ensures the reliability of spatial data.
    b. Mitigates discrepancies in valve locations, reducing the margin of error.
2. Efficiency Gains:
    a. Streamlined data entry processes lead to faster updates in the GIS system.
    b. Reduces manual intervention, minimizing the risk of data entry errors.
3. Advanced Mapping:
    a. Utilizing Esri Field Maps enhances visualization and mapping capabilities for better decision-making.
    b. Provides a comprehensive and dynamic view of the distribution system.

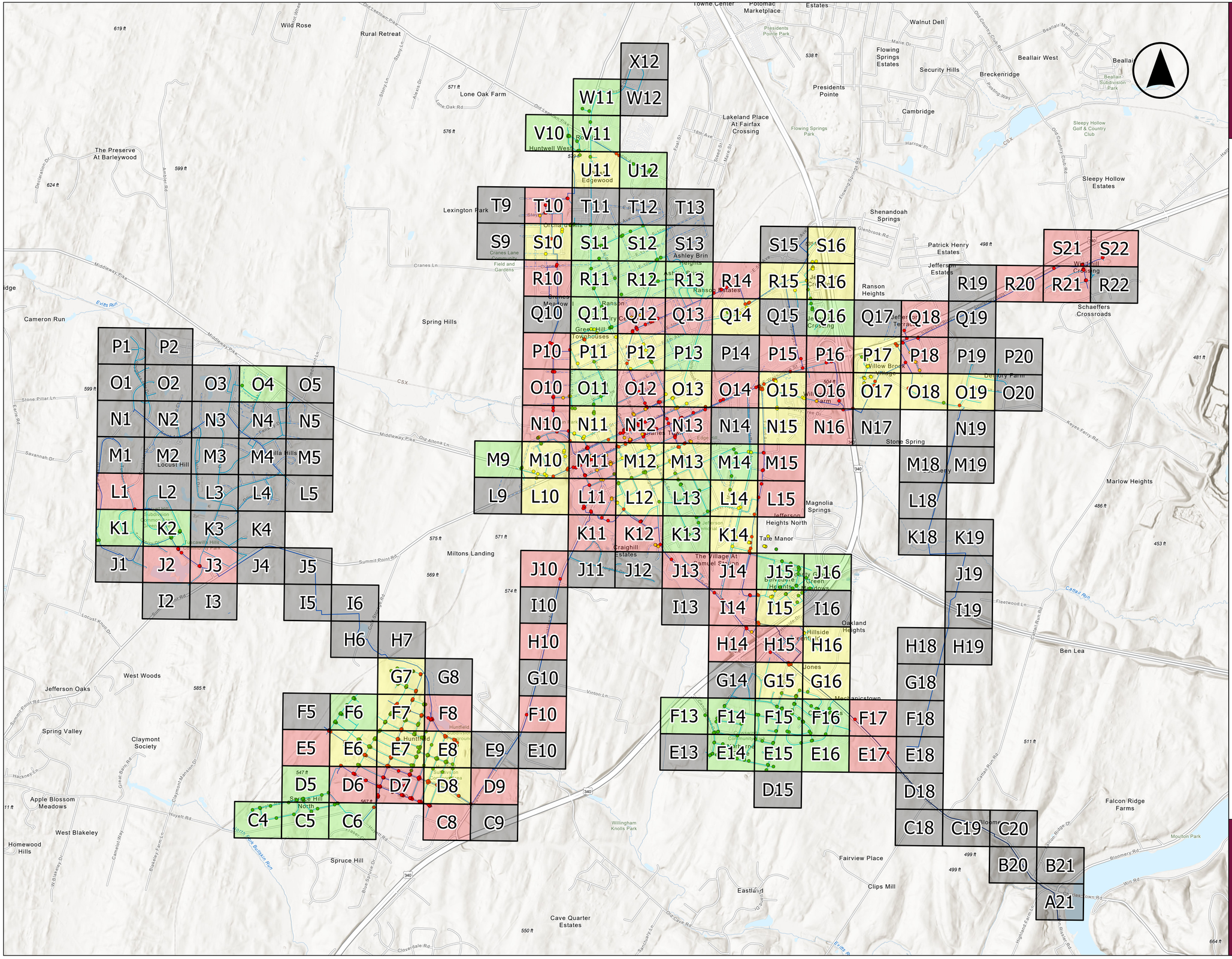
4. Future-Ready Approach:
    a. Embracing cutting-edge technology positions CTUB for continued success as the Valve Assessment Program evolves.
    b. Embraces a forward-thinking mindset, fostering adaptability to emerging technologies.

The seamless integration of Trimble GPS devices and the Esri applications into CTUB's Valve Assessment Program represents not just an upgrade but a strategic investment in operational efficiency, accuracy, and adaptability. The collaborative synergy between field crews and cutting-edge technologies not only addresses existing challenges but positions CTUB as a pioneering force in water utility management. This holistic approach aligns perfectly with CTUB's commitment to excellence, innovation, and sustained advancements in providing a reliable water supply to the community.

Attachments

Attachment A: Valve Assessment Program Index Map
Attachment B: Valve Assessment Program Maps
Attachment C: Valve Assessment Program Priority Matrix

Charles Town Utility Board
Valve Rotation Program
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C5
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C19
C20
B20
B21
A21
Wild Rose
Rural Retreat
Lone Oak Farm
Towne Center
Potomac Marketplace
Estates
Walnut Dell
Presidents Pointe Park
Flowing Springs Estates
Security Hills
Breckenridge
Beallair West
Presidents Pointe
Cambridge
Lakeland Place At Fairfax Crossing
Flowing Springs Park
Sleepy Hollow Golf & Country Club
Sleepy Hollow Estates
The Preserve At Barleywood
Lexington Park
Shenandoah Springs
Patrick Henry Estates
Jefferson Estates
Ranson Heights
Windmill Crossing
Schaeffers Crossroads
Cameron Run
Spring Hills
Ranson
Jefferson Terrace
Willow Brook Village
Demory Farm
Stone Spring
Marlow Heights
Magnolia Springs
Jefferson Heights North
Tate Manor
Craighill Estates
The Village At Samuel Station
Green Meadows
Oakland Heights
Hillside
Jones
Ben Lea
Mechanicstown
West Woods
Jefferson Oaks
Spring Valley
Claymont Society
Apple Blossom Meadows
West Blakeley
Homewood Hills
Spruce Hill
Spruce Hill North
Miltons Landing
Willingham Knolls Park
Fairview Place
Clips Mill
Eastland
Cave Quarter Estates
Falcon Ridge Farms
Moulton Park
Bloomery
Middleway Pike
Old Altona Ln
Summit Point Rd
Huyett Rd
Hunt Rd
Vinton Ln
Cattail Run
Cattail Run Rd
Keyes Ferry Rd
Bloomery Rd
Will Rd
Old Cave Rd
Cloverdale Rd
Sanctuary Ln
Fleetwood Ln
Ridge Dr
Blue Spruce Dr
Cow Shoe Rd
Locust Knoll Dr
Stone Pillar Ln
Savannah Dr
Hackney Ln
Great Barn Rd
Claymont Mansion Dr
Cornelio Way
Blakeley Farm Ln
Yk Blakeley Dr
Declaration Dr
Annlyn Rd
Stony Ln
Alexis Dr
Lone Oak Rd
Old Country Club Rd
Beallair Manor Dr
Floating Way
Beallair Subdivision Park
Maple Dr
Harrow Pl
Frost St
Main St
Flowing Springs Rd
Glenbrook Rd
Jefferson Memorial Forest
Edgewood
Edge Hill
Ranson Meadow I
Ranson Estates
Cranes Lane
Field and Gardens
Huntfield
Subdivision Common Area
Subdivision Common Green
Locust Hill
Locust Hill Subdivision Common Area
Locust Hill Subdivision Common Green
Locust Hill Community Park
Locust Hill Subdivision

STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES
Bureau for Public Health
Office of Environmental Health Services

Sherri A. Young, DO, MBA, FAAFP
Interim Cabinet Secretary

Matthew Q. Christiansen, MD, MPH
Commissioner & State Health Officer

January 5, 2024

Charles Town Utility Board
842 S. George Street
Charles Town WV 25404

Re: Source Water Protection Plan Update
Charles Town Utility Board
PWSID: WV3301905
Region 3

In accordance with W.Va.Code §16-1-9c, Source Water Protection Plans (SWPP) are to be updated every three years. The 2021 SWPP updates have been approved. Future SWPP updates are required every three years by submission deadlines staggered by region in accordance with W.Va.Code. §64-3-16. **Region 3 will be required to submit a fully updated SWPP via the SWAP portal no later than May 1, 2024.**

To make the source water protection plan updates more convenient, The Bureau of Public Health, Office of Environmental Health Services has created an online portal to access and update the SWPP. The portal can be accessed via this link: https://apps.wv.gov/OEHS/SourceWater

New users need to go to https://apps.wv.gov/accounts to create a SWPP portal account. New users must also contact us as when you create an account so we can finish your account setup. We will also send you a user guide that will help walk you through the process of using our portal.

The Source Water Protection Plan User Guide has been updated. The Guide can be located here: https://oehs.wvdhhr.org/media/x2afezdi/swpp-user-guide-2024.pdf

For returning users, SWPP portal user passwords expire every 90 days, so unless you have logged in recently, the first thing you will have to do is reset your password. Email spam filters sometimes catch the password reset email, so be sure to check your email spam folder when resetting it.

A 2023-2024 Confidentiality Agreement is enclosed with this letter. If you have not completed a Confidentiality Agreement within the last 6 months, or if you wish to change the personnel listed on the agreement, please complete, and submit the form.

Should you have any questions pertaining to this letter and its contents, please contact Mr. Reuben J. Gillispie at (304) 352-5003, Reuben.J.Gillispie@wv.gov .

Sincerely,

For Reuben J. Gillispie, Program Manager
Source Water Assessment & Protection

Cc: Jason Frame, Director OEHS
Meredith J. Vance, OEHS EED Director

RETURN TO: DEWBERRY ENGINEERS INC.
8401 Arlington Boulevard
Fairfax, VA 22031
703.560.6366 phone | 703.468.2212 fax

CLIENT: CHARLES TOWN UTILITY BOARD
661 South George Street, Suite 101
Charles Town, WV 25414
304.724.7080 phone

PROJECT INFORMATION

Name: Source Water Protection Plan Update
Dewberry PM: R. Kincheloe
Dewberry BU: 1651
Task Order Number: 05
Task Order Date: January 5, 2024

A. Method of Payment and Contract Amount

The projected hours and estimated fee for this project are summarized in Attachment "A" and shall not exceed $16,500 without written permission from CTUB. Payment will be in accordance with the agreed hourly rate schedule on a monthly basis and based upon actual expenditures for the project.

B. Terms and Conditions

The standard terms and conditions for this Task Order are pursuant to the Engineering Services Agreement (dated September 26, 2018) for Dewberry's Services performed under this Agreement.

C. Description of Services

Services covered by this Task Order will be performed in accordance with the Attachments referenced above. This Task Order supersedes all prior agreements and understandings and may only be changed by written amendment executed by both parties. Dewberry will not be required to render services until this Agreement is signed, returned and the applicable retainer, if appropriate, is paid in full. Dewberry is an equal opportunity employer and, as such, complies with Section 202 of Executive Order 11246 as amended.

Authorized Signatures:

CTUB Charles Town Utility Board		ENGINEER Dewberry Engineers Inc.
	Authorized Signature	
Kristen M. Stolipher	Print Name	Richard Kincheloe
Utility General Manager	Title	Senior Associate
	Date	January 5, 2024

PURPOSE OF PROJECT

Dewberry proposes to provide services and support to the Charles Town Utility Board in updating the existing Source Water Protection Plan (SWPP) to meet the May 1, 2024 submittal deadline. Public Notice and public involvement are anticipated to complete this task.

Task 1A – Public Involvement

Dewberry will provide a draft Public Notice to the Client for review and comment. Dewberry will make edits and provide a final version for posting in a local paper or other approved news outlet.

Dewberry will prepare a one-page informational brochure (including a comment section) in electronic PDF format for client review and comment. Dewberry will make any required edits and once approved, Dewberry will provide 50 copies for use at the public meeting and provide the electronic version to the Client for posting on the City website or project page. Dewberry will also prepare a sign-in sheet and directional signs for the meeting. This Task assumes one Dewberry representative will be in attendance.

Task 1B – B. SWPP Update & Updated Database Reviews

Dewberry will utilize the prior SWPP information to reflect changes from the previously approved SWPP, including any process change descriptions. The Protection Team contacts will be updated as necessary to reflect 2024 contact information.

Dewberry will update the Potential Sources of Significant Contamination (PSSC) portion of the previously prepared SWPP to provide updated data reviews within mapped source water protection area to assess recent spills, hazardous or petroleum materials storage areas, and other contamination sources utilizing the EPA EnviroAtlas and other available data to identify potential new sources that could have adverse impacts to the Source Watershed. This is noted as the Prioritization Module in the SWPP system.

Dewberry will update the feasibility study to include any new permits, regulatory changes, and will review Threatened and Endangered (T&E) species databases including the U.S. Fish and Wildlife Service (USFWS) Information Planning and Consultation (IPaC) database to assess if the feasibility study would need to address any newly identified protected species, areas or habitats, and incorporate new cost assumptions as approved by CTUB. If determined to be necessary, Dewberry will also coordinate with West Virginia Division of Natural Resources (DNR).

Dewberry will upload this data to the West Virginia Department of Health and Human Resources (WVDHHR) SWAP Map application to prepare the updated SWPP. If necessary, Dewberry will update the Emergency Response Plan and Early Warning Monitoring system to address potential sources and actions not addressed in the existing SWPP. Dewberry will verify the contacts in the Communications Plan are relevant and update any changes.

It is assumed the Client will provide existing processes and contact data as necessary.

Task 1C – Client Coordination

Dewberry assumes 4 Client coordination meetings in addition to the public involvement included in Task A. Public Involvement. All 4 meetings are assumed to be virtual, for no longer than one hour each.

CONDITIONS

The scope and fee are conditioned on the following:

1. Field data collection is excluded from this task.
2. Dewberry may rely upon the accuracy of the information provided by the CTUB.
3. Due to the unique nature of this assignment, Dewberry's liability shall be limited to the fees paid to it by CTUB for this Task Order.
4. Updated rates for 2024 as listed in Attachment B apply to this and future task orders.
5. This scope of work excludes the following services:
    a. Process modeling, and mapping
    b. Source water delineation and mapping (assumes done previously)
    c. Sampling and analysis
    d. Contingency Plan (assumes done previously and no updates are required)
    e. Public Notice Publication fees
    f. Public Hearing Venue and stenographer fees
    g. Transcript and comment responses based on Public Involvement
    h. Database review fees
    i. Additional databases not noted in the Tasks above
    j. Groundwater source protection planning (assumes not applicable)

ATTACHMENT A

TASK ORDER NUMBER 05 **CHARLES TOWN UTILITY BOARD, Source Water Protection Plan Update** 1/5/2024

		Staff-Hours by Work Breakdown Structure							
WBS Item	**Labor Role**	**Sr. Project Manager**	**Senior Engineer**	**Environmental Professional VII**	**Environmental Professional IV**	**Environmental Professional I**	**Admin. Professional**	**Total Hours**	**Total Est. Cost**
	Billing Code	EN9	EN5	OP7	OP4	OP1	AP3		
	Hourly Rate	$305.00	$195.00	$235.00	$170.00	$105.00	$115.00		
1A	Public Involvement	4		4	12	10	2	32	$ 5,480
1B	SWPP Update & Updated Database Reviews	4	8	4	24	16		56	$ 9,480
1C	Client Coordination	2		2	4			8	$ 1,760
								0	$ -
								0	$ -
								0	$ -
	Total Labor Hours	**10**	**8**	**10**	**40**	**26**	**2**	**96**	
	Total Labor Cost	**$ 3,050**	**$ 1,560**	**$ 2,350**	**$ 6,800**	**$ 2,730**	**$ 230**		**$ 16,720**
	Other Direct Costs and Subconsultants								
	Reproduction								
	Other Direct Costs (Travel, Mileage, Misc.)								$ 230
	Subtotal ODCs and Subconsultants								**$ 230**
	Total Estimated Costs								**$ 16,950**

Standard Hourly Billing Rate Schedule

Dewberry	Hourly Rates
Professional	
Principal	$350.00
Architect I,II,III	$110.00, $125.00, $145.00
Architect IV,V,VI	$165.00, $185.00, $205.00
Architect VII,VIII,IX	$230.00, $250.00, $280.00
Interior Designer I,II,III,IV	$100.00, $120.00, $130.00, $165.00
Engineer I,II,III	$115.00, $135.00, $155.00
Engineer IV,V,VI	$170.00, $195.00, $225.00
Engineer VII,VIII,IX	$250.00, $275.00, $305.00
Geographer/GIS I,II,III	$95.00, $105.00, $125.00
Geographer/GIS IV,V,VI	$145.00, $165.00, $185.00
Geographer/GIS VII,VIII,IX	$215.00, $250.00, $290.00
Professional I,II,III	$105.00, $125.00, $150.00
Professional IV,V,VI	$170.00, $190.00, $210.00
Professional VII,VIII,IX	$235.00, $260.00, $290.00
Technical	
Designer I,II,III	$110.00, $135.00, $160.00
Designer IV,V,VI	$180.00, $200.00, $220.00
CADD Technician I,II,III,IV,V	$80.00, $100.00, $120.00, $140.00, $175.00
Surveyor I,II,III	$68.00, $83.00, $98.00
Surveyor IV,V,VI	$115.00, $125.00, $145.00
Surveyor VII,VIII,IX	$160.00, $190.00, $235.00
Technical I,II,III	$85.00, $105.00, $130.00
Technical IV,V,VI	$140.00, $155.00, $180.00
Emergency Management	
Emergency Management I, II, III	$85.00, $110.00, $140.00
Emergency Management IV, V, VI	$170.00, $220.00, $280.00
Construction	
Construction Professional I,II,III	$125.00, $155.00, $185.00
Construction Professional IV,V,VI,VII	$215.00, $240.00, $285.00, $320.00
Inspector I,II,III	$85.00, $110.00, $140.00
Inspector IV,V,VI,VII	$160.00, $180.00, $205.00, $240.00
Survey Field Crews	
Fully Equipped 1, 2, 3 Person Crews	$145.00, $175.00, $230.00
With Laser Scanner 1, 2 Person	$195.00, $225.00
Administration	
Admin Professional I,II,III,IV	$70.00, $95.00, $115.00, $145.00
Non-Labor Direct Costs	Cost + 15%

** Company Confidential and Proprietary

Dewberry

TECHNICAL MEMORANDUM

WASTEWATER CAPACITY IMPROVEMENT FEE (CIF) ANALYSIS AND BENCHMARKING STUDY

Date: December 29, 2021

To: Ms. Kristen M. Stolipher, Utility General Manager, Charles Town Utility Board (CTUB)

From: Martin A. Kazmierczak, PE, PMP, Senior Project Manager, Senior Associate, Dewberry Engineers, Inc. (Dewberry)

Subject: Wastewater CIF Validation and Benchmarking Study

Background

On March 15, 2019, the Charles Town Utility Board (CTUB) authorized Dewberry Engineers, Inc. (Dewberry) to proceed with a Capacity Improvement Fee (CIF) analysis for the CTUB and a benchmarking study of other similar district's CIFs.

Disclaimer

In evaluating the CIF presented in this report, Dewberry has used "generally accepted" engineering and rate-making principles. This statement, should not, however, be construed as a legal opinion with respect to West Virginia Law. Dewberry recommends that CTUB have appropriate legal counsel review the CIF set forth in this Technical Memorandum for compliance with West Virginia Law.

Overview of Capacity Improvement Fees

Capacity improvement fees are generally defined as follows:

"One time charges assessed against new wastewater (and/or water) customers or developers/builders to recover a proportional share of capital costs incurred to provide capacity for the new utility customers.[1]"

This service capacity may be already constructed, funded, and available in existing facilities, or the service capacity may be planned and included as future capital projects in a capital improvements plan (CIP). The application of such fees has generally occurred in areas that are experiencing relatively rapid growth and development. CIFs seek to recognize equity between historical and new customers where new capital required for expanding a water system to accommodate growth is often more costly per unit of capacity than the historical costs for the original infrastructure benefitting the existing customers. CIFs are generally adopted to add equity so that "growth pays for growth" and so that existing customers do not subsidize new growth through their user rates.[2]

Capacity Fee Evaluation

Dewberry reviewed data provided by CTUB, including the following:

- Planned capital projects currently underway or planned to be implemented over the next 10 years, including sewer main improvements, pump station improvements, and treatment plant improvements and the costs associated with each.
- The anticipated useful life of historical and planned assets.
- The timing of existing and future projected bond issuances.
- The historical cost for projects constructed between 2011 and 2020.

[1] *Water and Wastewater Financing and Pricing,* Chapter 5, George A. Raftelis, CPA, 2015, CRC Press.

[2] Ibid.

While some CIFs use upwards of 20-year planning horizons for future capital projects, CTUB elected to only include projects in a 10-year planning horizon.

Dewberry applied construction cost indices from *Engineering News Record (ENR)* to determine the current asset value for historical assets and to project costs for planned capital projects over the next 10 years. Based on the ENR Index over the last 5 years, a 3.25% annual inflation rate for future construction costs was applied in the CIF evaluation. For historical assets, the asset was also depreciated to account for a reduction in asset value over time. Historical projects that were not undertaken specifically to improve system-wide capacity were not included.

The growth-related percentage for each historical or planned CIP project was determined in consultation with CTUB based upon the project's intended purpose and use.

In aggregate, $31.2 million in non-growth related costs were identified and $42.4 million in growth-related costs as shown in Attachment A. The non-growth related costs are not applied in the CIF determination.

A debt principal credit calculation was performed on existing and future projected bond-financed projects included in the CIF so that new customers paying the CIF are not charged twice – once when the CIF is paid, and a second time when user rates are paid over time to help retire the debt.[3] The debt principal credit calculation is shown in Attachment B and totals $16.75 million at an anticipated weighted average bond interest rate of 2.99 percent. The resulting net growth-related costs (including the credit) are $25.6 million.

Upon implementing the capital improvements, the excess capacity in the sewer system and treatment system will be 1.39 million gallons per day (MGD) based on the CTUB's records. In applying the current flow per EDU of 159 gpd, 8,742 new EDUs are accommodated with the excess capacity available through implementation of the historical and planned projects.

The resulting Capacity Improvement Fee can therefore be determined as follows:

Parameter	Value	Units
Current Sewer & Treatment System Flow	1.46	MGD
Sewer System & Treatment System Design Capacity	2.85	MGD
Excess Capacity Available	1,390,000	gpd
Flow per Equivalent Dwelling Unit (EDU)	159	gpd per EDU
EDUs Supported by Excess Capacity	8,742	EDUs
Growth Related Costs per Capital Improvement Plan	42,373,051	Dollars
Debt Principal Credit	($16,754,702)	Dollars
Net Growth Related Costs	$25,618,349	Dollars
Calculated CIF	$2,930	Per EDU
Calculated CIF	18.43	Per gpd

Under these assumptions, each new residential EDU would be assessed a fee of $2,930. Each commercial or industrial user would be assessed $18.43 per gpd of capacity.

Care should be exercised by CTUB in the exact wording of their CIF resolution to avoid misapplication or misuse.

[3] *Water and Wastewater Financing and Pricing,* Chapter 5, George A. Raftelis, CPA, 2015, CRC Press.

Comparable Sewer Service Providers

Comparable Water Service Providers were reviewed by looking at various utilities within a 50-mile radius of Jefferson County that have implemented a CIF (or similar fee), and those that serve populations generally between 1,000 and 100,000 customers.

Summary of CIFs for Various Sewer Service Providers

Using available public records, Dewberry researched the CIFs in place for sewer service providers and the time periods they went into effect. A table summarizing this information with a list of the sewer service providers and their CIFs is shown in Attachment C.

During Dewberry's research, it was also found that sewer service providers used varying amounts of wastewater discharge for one equivalent dwelling unit (EDU) in the calculations of their CIF. These varying flows per EDU are provided in Attachment C. For ease of comparison, Dewberry calculated a normalized CIF price expressed in terms of cost per gallon per day ($ per gpd) of sewer (the CIF charge divided by the respective flow per EDU) to normalize the fees.

Results

Dewberry found that there are several sewer service providers within the state of West Virginia that currently impose a CIF, such as the City of Martinsburg and the Berkeley County Public Service Sewer District. Many other sewer service providers from the nearby geographic regions of Virginia and Maryland include, but are not limited to, the City of Frederick, City of Hagerstown, and the Town of Leesburg. The CIFs for these providers ranged from $2,260 to $8,711, with a mean of $4,881, including the proposed CIF for CTUB. Similarly, the normalized price per gpd, based on the service provider's CIF and respective flow per EDU, ranged from $9.04 to $40.00 per gpd, with a mean of $18.04 per gpd.

Dewberry validated the CTUB CIF methodology per AWWA Manual M1 standards and concluded that a CIF of $2,930 per EDU or $18.43 per gpd was appropriate for CTUB (based on 159 gallons as the utility's flow per EDU). Attachment D shows a table and graph of the published CIFs of sewer service providers, ordered least to greatest, in comparison to that of CTUB. Attachment E, similarly, shows a table and a graph of the normalized CIF of these varying sewer service providers, ordered least to greatest, in comparison to that of CTUB.

In summary, the CTUB proposed CIF falls well below the mean CIF value, but aligns closely with the mean normalized CIF price of those identified in the region.

Attachments

1. **Attachment A – Capacity Improvement Fee Analysis**
2. **Attachment B – Debt Principal Credit Calculation**
3. **Attachment C – Various Sewer Service Providers in the Region and their CIFs**
4. **Attachment D – Various Sewer Service Providers' Published CIFs**
5. **Attachment E – Various Sewer Service Providers' Normalized CIFs**

Attachment A
Charles Town Utility Board
Wastewater Capacity Improvement Fee Analysis

12/22/2021

Name of Improvement	Year Completed or Proposed	Useful Life Yrs	Total Cost of Project	Local Cost to CTUB	Notes	ENR Factor Relative to 2021	Local Replacement Value	Depreciation Percentage Relative to 2021	Replacement Cost New Less Depreciation	Percent System Improvement	Percent Non-Growth Related	Percent Growth Related	Notes	Value for Local Non-Growth System Improvement	Value for Local Growth Related Improvement
Prior Projects															
Tuscawilla Project	2011	30	$ 15,147,192	$ 15,147,192		1.340	$ 20,297,237	33%	$ 13,531,492	100%	42.0%	58.0%	1	$ 5,683,226	$ 7,848,265
Huntfield Project	2013	30	$ 1,500,000	$ 1,500,000		1.270	$ 1,905,000	27%	$ 1,397,000	100%	64.9%	35.1%	2	$ 906,498	$ 490,502
CTWWTP Phase 1 and Tuscawilla Effluent line	2014	40	$ 5,140,290	$ 5,140,290		1.240	$ 6,373,960	18%	$ 5,258,517	100%	71.4%	28.6%	3	$ 3,756,083	$ 1,502,433
2016 Sewer Projects	2016	40	$ 3,895,000	$ 3,895,000		1.170	$ 4,557,150	13%	$ 3,987,506	100%	65.0%	35.0%		$ 2,591,879	$ 1,395,627
		Sub Total	$ 25,682,482	$ 25,682,482			$ 33,133,347		$ 24,174,514					$ 12,937,687	$ 11,236,828
Current & Future 10-Year CIP Projects (Opinions of Probable Cost)															
CTWWTP Renovation Project	2022	30	$ 7,515,200	$ 7,515,200		1.0325	$ 7,759,444	0%	$ 7,759,444	100%	90%	10%		$ 6,983,500	$ 775,944
Collections System project	2022	30	$ 4,861,000	$ 4,861,000		1.0325	$ 5,018,983	0%	$ 5,018,983	100%	70%	30%		$ 3,513,288	$ 1,505,695
Fairfax Parallel line	2023	40	$ 2,500,000	$ 2,500,000		1.0661	$ 2,665,141	0%	$ 2,665,141	100%	0%	100%		$ -	$ 2,665,141
Evitts Run collector line	2025	40	$ 6,250,000	$ 6,250,000		1.1365	$ 7,102,975	0%	$ 7,102,975	100%	0%	100%		$ -	$ 7,102,975
Collections System Upgrade	2027	40	$ 3,250,000	$ 3,250,000		1.2115	$ 3,937,529	0%	$ 3,937,529	100%	70%	30%		$ 2,756,270	$ 1,181,259
CTWWTP Upgrades and Expansion	2030	30	$ 13,800,000	$ 13,800,000	4	1.3336	$ 18,403,043	0%	$ 18,403,043	100%	10%	90%		$ 1,840,304	$ 16,562,738
Collections Project and Pump Stations Project	2031	30	$ 3,250,000	$ 3,250,000		1.3769	$ 4,474,906	0%	$ 4,474,906	100%	70%	30%		$ 3,132,435	$ 1,342,472
		Sub Total	$ 41,426,200	$ 41,426,200			$ 49,362,019		$ 49,362,019					$ 18,225,796	$ 31,136,223
		Totals	$ 67,108,682	$ 67,108,682			$ 82,495,366		$73,536,534					$ 31,163,483	**$ 42,373,051**

Capacity Improvement Fee Determination		
Current Sewer & Treatment System Flow	1.46	MGD
Sewer System & Treatment System Design Capacity	2.85	MGD
Excess Capacity Available	1,390,000	gpd
Flow per Equivalent Dwelling Unit (EDU)	159	gpd/EDU
EDUs Supported by Excess Capacity	8,742	EDUs
Growth Related Costs per Capital Improv. Plan	$ 42,373,051	
Debt Principal Credit	$ (16,754,702)	(See Attachment B)
Net Growth Related Costs	$ 25,618,349	
Calculated Capacity Improvement Fee	**$ 2,930**	per EDU
Calculated Capacity Improvement Fee	$ 18.43	per gpd

	Year	Capital Costs by Year	Growth Costs by Year
	2022	$ 12,778,427	$ 2,281,639
	2023	$ 2,665,141	$ 2,665,141
	2024	$ -	$ -
	2025	$ 7,102,975	$ 7,102,975
	2026	$ -	$ -
	2027	$ 3,937,529	$ 1,181,259
	2028	$ -	$ -
	2029	$ -	$ -
	2030	$ 18,403,043	$ 16,562,738
	2031	$ 4,474,906	$ 1,342,472
Not Included	2032	$ -	$ -
Not Included	2033	$ -	$ -
Not Included	2034	$ -	$ -
Not Included	2035	$ -	$ -
Not Included	2036	$ -	$ -
	TOTAL	$ 49,362,019	$ 31,136,223

Notes:
1. Based on Current Average Daily Flow of 0.21 MGD and Design Capacity of 0.5 MGD
2. Based on Current Combined Average Daily Flow of 1.46 MGD and Design Capacity of 2.25 MGD
3. Based on Current Average Daily Flow of 1.25 MGD and Design Capacity of 1.75 MGD
4. Based on Future Design Capacity of 2.35 MGD

Attachment B
Debt Principal Credit Calculation

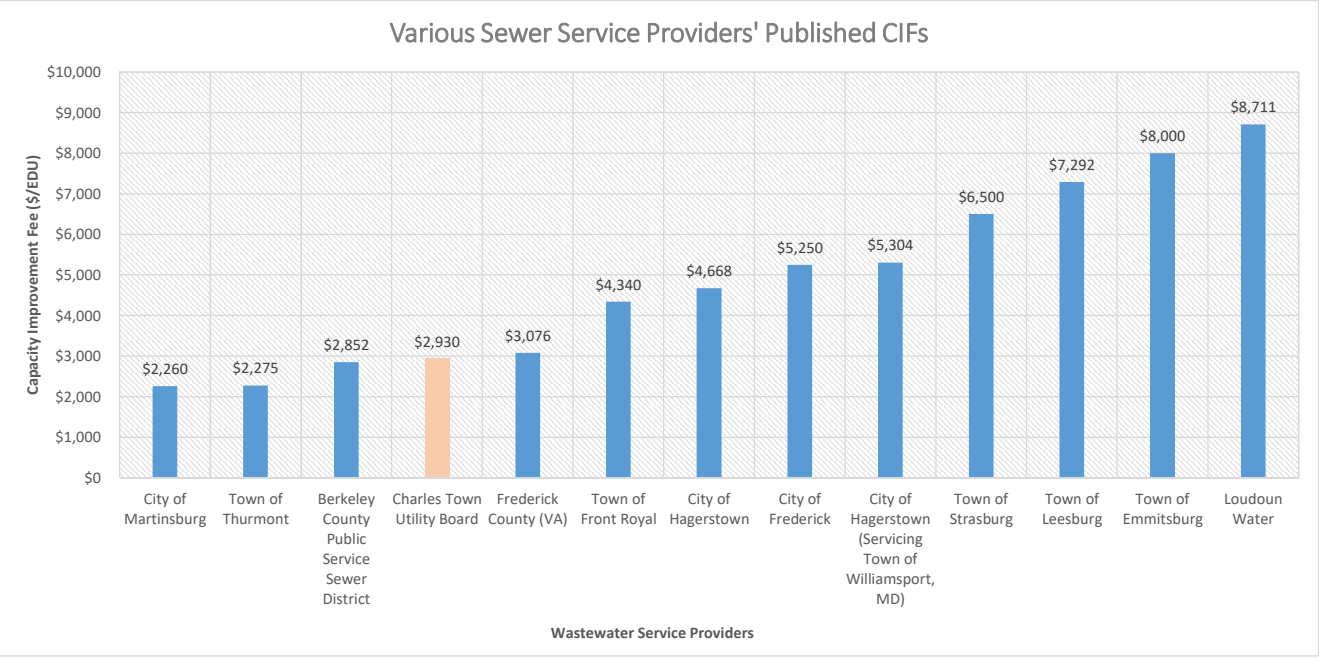
Year	Total Existing Debt Principal (Growth-Related Portion)	Projected New Debt Principal (Growth-Related Portion)	Total Debt Service Principal (Growth-Related Portion)	Present Value of Debt Service Principal (Growth-Related Portion)
2022	$ (392,858)	$ (17,503)	$ (410,361)	$ (410,361)
2023	$ (394,060)	$ (18,203)	$ (412,263)	$ (400,295)
2024	$ (395,290)	$ (18,931)	$ (414,221)	$ (390,519)
2025	$ (396,549)	$ (115,557)	$ (512,106)	$ (468,786)
2026	$ (397,836)	$ (120,179)	$ (518,015)	$ (460,429)
2027	$ (399,154)	$ (124,986)	$ (524,140)	$ (452,348)
2028	$ (400,503)	$ (129,986)	$ (530,488)	$ (444,534)
2029	$ (401,883)	$ (135,185)	$ (537,068)	$ (436,982)
2030	$ (403,295)	$ (382,313)	$ (785,608)	$ (620,648)
2031	$ (404,741)	$ (406,696)	$ (811,437)	$ (622,442)
2032	$ (406,221)	$ (422,964)	$ (829,185)	$ (617,591)
2033	$ (407,736)	$ (439,882)	$ (847,619)	$ (612,992)
2034	$ (409,288)	$ (457,478)	$ (866,765)	$ (608,640)
2035	$ (410,876)	$ (475,777)	$ (886,653)	$ (604,530)
2036	$ (412,502)	$ (494,808)	$ (907,310)	$ (600,655)
2037	$ (414,168)	$ (514,600)	$ (928,768)	$ (597,009)
2038	$ (415,873)	$ (535,184)	$ (951,057)	$ (593,589)
2039	$ (417,620)	$ (556,591)	$ (974,211)	$ (590,387)
2040	$ (419,408)	$ (578,855)	$ (998,264)	$ (587,400)
2041	$ (128,395)	$ (602,009)	$ (730,404)	$ (417,309)
2042	$ (130,272)	$ (626,090)	$ (756,362)	$ (419,593)
2043	$ (114,639)	$ (651,133)	$ (765,772)	$ (412,480)
2044	$ (63,768)	$ (677,179)	$ (740,946)	$ (387,521)
2045	$ (65,521)	$ (704,266)	$ (769,787)	$ (390,917)
2046	$ -	$ (732,436)	$ (732,436)	$ (361,151)
2047	$ -	$ (761,734)	$ (761,734)	$ (364,692)
2048	$ -	$ (792,203)	$ (792,203)	$ (368,269)
2049	$ -	$ (823,891)	$ (823,891)	$ (371,880)
2050	$ -	$ (856,847)	$ (856,847)	$ (375,527)
2051	$ -	$ (891,121)	$ (891,121)	$ (379,210)
2052	$ -	$ (869,997)	$ (869,997)	$ (359,473)
2053	$ -	$ (904,797)	$ (904,797)	$ (362,998)
2054	$ -	$ (940,989)	$ (940,989)	$ (366,558)
2055	$ -	$ (667,689)	$ (667,689)	$ (252,544)
2056	$ -	$ (694,396)	$ (694,396)	$ (255,021)
2057	$ -	$ (722,172)	$ (722,172)	$ (257,522)
2058	$ -	$ (751,059)	$ (751,059)	$ (260,047)
2059	$ -	$ (781,102)	$ (781,102)	$ (262,597)
2060	$ -	$ (28,351)	$ (28,351)	$ (9,254)
Total Debt Principal Credit (Growth Related Portion)				**$ (16,754,702)**

ATTACHMENT C - VARIOUS SEWER SERVICE PROVIDERS IN THE REGION AND THEIR CIFS

Service Provider	Geographic Region	Number of Customers	Effective Date of CIF	Published CIF ($/EDU)	Flow per EDU (gpd)	Normalized CIF ($/gpd)
West Virginia						
Charles Town Utility Board	Jefferson County, WV	8,015	PENDING	$2,930	159	$18.43
Berkeley County Public Service Sewer District	Berkeley County, WV	22,970	May 28, 2019 - Present	$2,852	130	$21.94
City of Martinsburg	Berkeley County, WV	6,500	June 1, 2020 - Present	$2,260	250	$9.04
Maryland						
City of Frederick	Frederick County, MD	48,000	December 5, 2019	$5,250	250	$21.00
City of Hagerstown	Washington County, MD	89,000	July 1, 2020 - Present	$4,668	200	$23.34
City of Hagerstown (Servicing Town of Williamsport, MD)	Washington County, MD	2,139	July 1, 2020 - Present	$5,304	200	$26.52
Town of Thurmont	Frederick County, MD	6,200	2013 - Present	$2,275	250	$9.10
Town of Emmitsburg	Frederick County, MD	2,821	2014 - Present	$8,000	200	$40.00
Virginia						
Frederick County (VA)	Frederick County, VA	16,393	2017 - Present	$3,076	250	$12.30
Town of Strasburg	Shenandoah County, VA	2,479	2017 - Present	$6,500	350	$18.57
Town of Leesburg	Loudoun County, VA	16,038	2015 - Present	$7,292	350	$20.83
Loudoun Water	Loudoun County, VA	82,387	2020 - Present	$8,711	275	$31.68
Town of Front Royal	Warren County, VA	6,000	2013 - Present	$4,340	250	$17.36

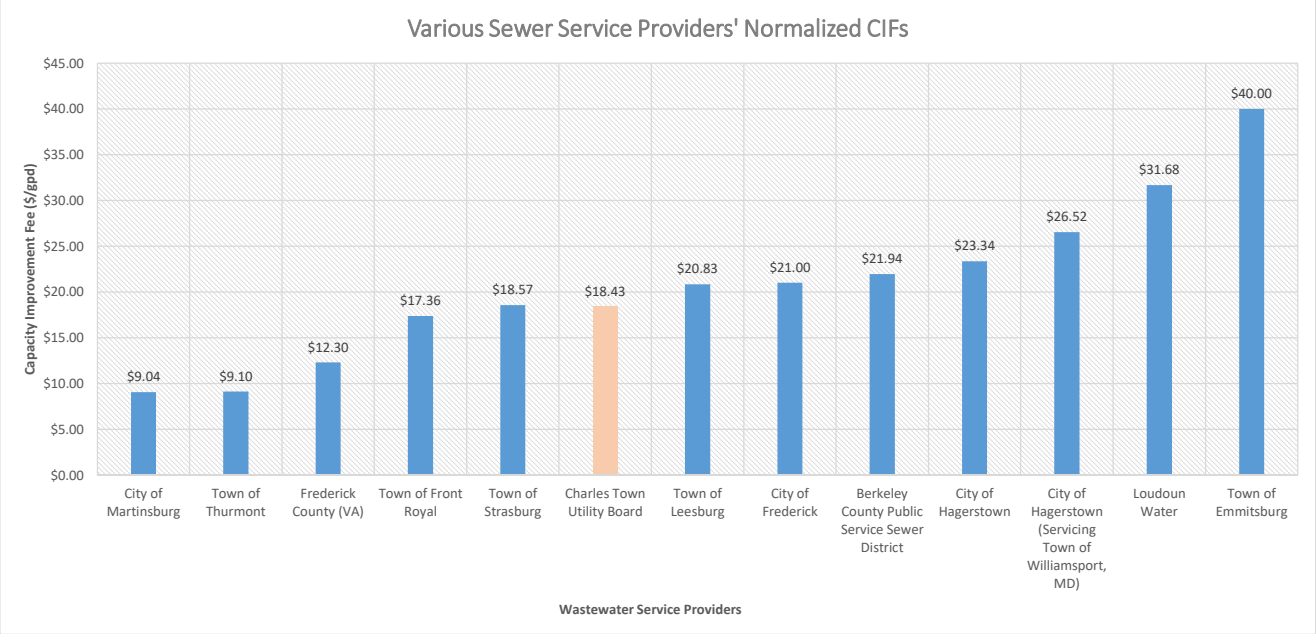
ATTACHMENT D - VARIOUS SEWER SERVICE PROVIDERS' PUBLISHED CIFS

Service Provider	Published CIF ($/EDU)
City of Martinsburg	$2,260
Town of Thurmont	$2,275
Berkeley County Public Service Sewer District	$2,852
Charles Town Utility Board	$2,930
Frederick County (VA)	$3,076
Town of Front Royal	$4,340
City of Hagerstown	$4,668
City of Frederick	$5,250
City of Hagerstown (Servicing Town of Williamsport, MD)	$5,304
Town of Strasburg	$6,500
Town of Leesburg	$7,292
Town of Emmitsburg	$8,000
Loudoun Water	$8,711
Mean Fee:	$4,881



ATTACHMENT E - VARIOUS SEWER SERVICE PROVIDERS' NORMALIZED CIFS

Service Provider	$/GPD
City of Martinsburg	$9.04
Town of Thurmont	$9.10
Frederick County (VA)	$12.30
Town of Front Royal	$17.36
Town of Strasburg	$18.57
Charles Town Utility Board	$18.43
Town of Leesburg	$20.83
City of Frederick	$21.00
Berkeley County Public Service Sewer District	$21.94
City of Hagerstown	$23.34
City of Hagerstown (Servicing Town of Williamsport, MD)	$26.52
Loudoun Water	$31.68
Town of Emmitsburg	$40.00
Mean Dollars per GPD:	$18.04



Dewberry

TECHNICAL MEMORANDUM
WATER CAPACITY IMPROVEMENT FEE (CIF) ANALYSIS AND BENCHMARKING STUDY

Date: October 28, 2022

To: Ms. Kristen M. Stolipher, Utility General Manager, Charles Town Utility Board (CTUB)

From: Martin A. Kazmierczak, PE, PMP, Principal Engineer, Senior Associate, Dewberry Engineers, Inc. (Dewberry)

Subject: Water CIF Validation and Benchmarking Study

Background

The Charles Town Utility Board (CTUB) authorized Dewberry Engineers, Inc. (Dewberry) to proceed with a Capacity Improvement Fee (CIF) analysis for the CTUB and a benchmarking study of other similar district's CIFs.

Disclaimer

In evaluating the CIF presented in this report, Dewberry has used "generally accepted" engineering and rate-making principles. This statement should not, however, be construed as a legal opinion with respect to West Virginia Law. Dewberry recommends that CTUB have appropriate legal counsel review the CIF set forth in this Technical Memorandum for compliance with West Virginia Law.

Overview of Capacity Improvement Fees

Capacity improvement fees are generally defined as follows:

"One time charges assessed against new wastewater (and/or water) customers or developers/builders to recover a proportional share of capital costs incurred to provide capacity for the new utility customers.[1]"

This service capacity may be already constructed, funded, and available in existing facilities, or the service capacity may be planned and included as future capital projects in a capital improvements plan (CIP). The application of such fees has generally occurred in areas that are experiencing relatively rapid growth and development. CIFs seek to recognize equity between historical and new customers where new capital required for expanding a water system to accommodate growth is often more costly per unit of capacity than the historical costs for the original infrastructure benefitting the existing customers. CIFs are generally adopted to add equity so that "growth pays for growth" and so that existing customers do not subsidize new growth through their user rates.[2]

Capacity Fee Evaluation

Dewberry reviewed data provided by, or developed in conjunction with, CTUB including the following:

- The timing of capital projects to be implemented over the next 10 years, including water main improvements, pump station improvements, storage tank improvements, and treatment plant improvements, and the costs associated with each.
- The anticipated useful life of historical and planned assets.
- The timing of existing and future projected bond issuances.
- The historical cost for water treatment projects constructed in 2016.
- Existing water treatment plant production data.

[1] *Water and Wastewater Financing and Pricing,* Chapter 5, George A. Raftelis, CPA, 2015, CRC Press.

[2] Ibid.

While some CIFs use upwards of 20-year planning horizons for future capital projects, CTUB elected to only include projects in a 10-year planning horizon.

Dewberry applied construction cost indices from *Engineering News Record (ENR)* to determine the current asset value for historical assets and to project costs for planned capital projects over the next 10 years. Based on the ENR Index over the last 5 years, a 4.08% annual inflation rate for future construction costs was applied in the CIF evaluation. For historical assets, the asset was also depreciated to account for a reduction in asset value over time. Historical projects that were not undertaken specifically to improve system-wide capacity were not included.

The growth-related percentage for each historical or planned CIP project was determined in consultation with CTUB based upon the project's intended purpose and use.

In aggregate, $21.88 million in non-growth related costs were identified and $42.39 million in growth-related costs as shown in Attachment A. The non-growth related costs are not applied in the CIF determination.

A debt principal credit calculation was performed on existing and future projected bond-financed projects included in the CIF so that new customers paying the CIF are not charged twice – once when the CIF is paid, and a second time when user rates are paid over time to help retire the debt.[3] The debt principal credit calculation is shown in Attachment B and totals $14.07 million at an anticipated weighted average bond interest rate of 3.97 percent. The resulting net growth-related costs (including the credit) are $28.32 million.

Upon implementing the capital improvements, the equivalent average day excess capacity available in the water treatment and distribution system will be 0.99 million gallons per day (MGD) based on the CTUB's water production records. In applying the current flow per EDU of 154 gpd, 6,439 new EDUs are accommodated with the excess capacity available through implementation of the historical and planned projects.

The resulting Capacity Improvement Fee can therefore be determined as follows:

Parameter	Value	Units
Expanded Plant Capacity (Max. Day)	3.80	MGD
Current Average Plant Demand	1.70	MGD
Current Ratio of Max. Day to Average Day	1.41	
Current Max. Day Demand	2.40	MGD
Max. Day Capacity Available	1.40	MGD
Equivalent Average Day Excess Capacity Available	0.99	MGD
Average Demand Per EDU	154	gpd per EDU
Number of EDUs Supported	6,439	EDUs
Growth Related Costs per Capital Improvement Plan	$42,393,767	Dollars
Debt Principal Credit	$(14,070,771)	Dollars
Net Growth Related Costs	$28,322,996	Dollars
Calculated CIF	4,399	Per EDU
Calculated CIF	28.56	Per gpd

[3] *Water and Wastewater Financing and Pricing,* Chapter 5, George A. Raftelis, CPA, 2015, CRC Press.

Under these assumptions, each new residential EDU would be assessed a fee of $4,399. Each commercial or industrial user would be assessed $28.56 per gpd of capacity.

Care should be exercised by CTUB in the exact wording of their CIF resolution to avoid misapplication or misuse.

Comparable Water Service Providers

Comparable Water Service Providers were reviewed by looking at various utilities within a 50-mile radius of Jefferson County that have implemented a CIF (or similar fee), and those that serve populations generally between 1,000 and 100,000 customers.

Summary of CIFs for Various Water Service Providers

Using available public records, Dewberry researched the CIFs in place for water service providers and the time periods they went into effect. A table summarizing this information with a list of the water service providers and their CIFs is shown in Attachment C.

During Dewberry's research, it was also found that water service providers used varying amounts of water flow for one equivalent dwelling unit (EDU) in the calculations of their CIF. These varying flows per EDU are provided in Attachment C. For ease of comparison, Dewberry calculated a normalized CIF price expressed in terms of cost per gallon per day ($ per gpd) of water (the CIF charge divided by the respective flow per EDU) to normalize the fees.

Results

Dewberry found that there are several water service providers within the state of West Virginia that currently impose a CIF, such as the City of Martinsburg and the Berkeley County Public Service Water District. Many other water service providers from the nearby geographic regions of Virginia and Maryland include, but are not limited to, the City of Frederick, City of Hagerstown, and the Town of Leesburg. The CIFs for these providers ranged from $1,301 to $14,115, with a mean of $5,631, including the proposed CIF for CTUB. Similarly, the normalized price per gpd, based on the service provider's CIF and respective flow per EDU, ranged from $4.44 to $56.46 per gpd, with a mean of $22.61 per gpd.

Dewberry confirmed the CTUB CIF methodology per AWWA Manual M1 standards and concluded that a CIF of $4,399 per EDU or $28.56 per gpd was appropriate for CTUB (based on 154 gallons as the utility's demand per EDU). Attachment D shows a table and graph of the published CIFs of water service providers, ordered least to greatest, in comparison to that of CTUB. Attachment E, similarly, shows a table and a graph of the normalized CIFs of these varying water service providers, ordered least to greatest, in comparison to that of CTUB.

In summary, compared to others in the region, the CTUB proposed CIF is below the mean CIF value and above the mean normalized CIF value.

Dewberry

TECHNICAL MEMORANDUM
WATER CAPACITY IMPROVEMENT FEE (CIF) ANALYSIS AND BENCHMARKING STUDY

Attachments

1. **Attachment A – Capacity Improvement Fee Analysis**
2. **Attachment B – Debt Principal Credit Calculation**
3. **Attachment C – Various Water Service Providers in the Region and their CIFs**
4. **Attachment D – Various Water Service Providers' Published CIFs**
5. **Attachment E – Various Water Service Providers' Normalized CIFs**

Attachment A
Charles Town Utility Board
Water Capacity Improvement Fee Analysis

10/28/2022

Name of Improvement	Year Completed or Proposed	Useful Life Yrs	Total Cost of Project	Local Cost to CTUB	Notes	ENR Factor Relative to 2022	Local Replacement Value	Depreciation Percentage Relative to 2022	Replacement Cost New Less Depreciation	Percent System Improvement	Percent Non-Growth Related	Percent Growth Related	Notes	Value for Local Non-Growth System Improvement	Local Growth Related Improvement
Prior Projects															
2016 Water Projects - WTP Improvements	2016	30	$ 7,695,000.00	$ 7,695,000		1.270	$ 9,772,650	20%	$ 7,818,120	100%	85.7%	14.3%	1	$ 6,701,246	$ 1,116,874
		Sub Total	$ 7,695,000	$ 7,695,000			$ 9,772,650		$ 7,818,120					$ 6,701,246	$ 1,116,874
Current & Future 10-Year CIP Projects (Opinions of Probable Cost)															
Charles Town Racetrack	2023	40	$ 88,000	$ 88,000		1.0408	$ 91,590	0%	$ 91,590	100%	50%	50%		$ 45,795	$ 45,795
5th Street Hydrant	2023	40	$ 7,000	$ 7,000		1.0408	$ 7,286	0%	$ 7,286	100%	70%	30%		$ 5,100	$ 2,186
6th Avenue Hydrant	2023	40	$ 7,000	$ 7,000		1.0408	$ 7,286	0%	$ 7,286	100%	70%	30%		$ 5,100	$ 2,186
S. Mildred Hydrants	2023	40	$ 9,000	$ 9,000		1.0408	$ 9,367	0%	$ 9,367	100%	70%	30%		$ 6,557	$ 2,810
7th Avenue	2023	40	$ 35,000	$ 35,000		1.0408	$ 36,428	0%	$ 36,428	100%	70%	30%		$ 25,500	$ 10,928
W. Avis Hydrant	2023	40	$ 9,000	$ 9,000		1.0408	$ 9,367	0%	$ 9,367	100%	70%	30%		$ 6,557	$ 2,810
W. Academy Tie	2023	40	$ 88,000	$ 88,000		1.0408	$ 91,590	0%	$ 91,590	100%	70%	30%		$ 64,113	$ 27,477
Main Zone Maintenance	2023	40	$ 28,000	$ 28,000		1.0408	$ 29,142	0%	$ 29,142	100%	100%	0%		$ 29,142	$ -
Northern High Zone Maintenance	2023	40	$ 2,000	$ 2,000		1.0408	$ 2,082	0%	$ 2,082	100%	100%	0%		$ 2,082	$ -
Huntfield Zone Maintenance	2023	40	$ 10,000	$ 10,000		1.0408	$ 10,408	0%	$ 10,408	100%	100%	0%		$ 10,408	$ -
Ameritech Street	2023	40	$ 333,000	$ 333,000		1.0408	$ 346,586	0%	$ 346,586	100%	70%	30%		$ 242,610	$ 103,976
New Well / Spring Sources	2023	30	$ 2,125,000	$ 2,125,000		1.0408	$ 2,211,700	0%	$ 2,211,700	100%	30%	70%		$ 663,510	$ 1,548,190
N. Mildred Street B	2024	40	$ 200,000	$ 200,000		1.0833	$ 216,653	0%	$ 216,653	100%	30%	70%		$ 64,996	$ 151,657
Burns St. PS Upgrade	2024	30	$ 3,526,000	$ 3,526,000		1.0833	$ 3,819,591	0%	$ 3,819,591	100%	30%	70%		$ 1,145,877	$ 2,673,714
Well Development/Spring Source Construction	2024	40	$ 1,480,000	$ 1,480,000		1.0833	$ 1,603,232	0%	$ 1,603,232	100%	25%	75%		$ 400,808	$ 1,202,424
Church Street	2025	40	$ 595,000	$ 595,000		1.1275	$ 670,840	0%	$ 670,840	100%	25%	75%		$ 167,710	$ 503,130
South George Street	2025	40	$ 279,000	$ 279,000		1.1275	$ 314,562	0%	$ 314,562	100%	80%	20%		$ 251,649	$ 62,912
Water Street	2025	40	$ 2,400,000	$ 2,400,000		1.1275	$ 2,705,908	0%	$ 2,705,908	100%	70%	30%		$ 1,894,136	$ 811,773
Route 340	2025	40	$ 1,173,000	$ 1,173,000		1.1275	$ 1,322,513	0%	$ 1,322,513	100%	0%	100%		$ -	$ 1,322,513
Raw Water Intake	2025	30	$ 1,581,000	$ 1,581,000		1.1275	$ 1,782,517	0%	$ 1,782,517	100%	30%	70%		$ 534,755	$ 1,247,762
N. Mildred Street A	2026	40	$ 648,000	$ 648,000		1.1735	$ 760,404	0%	$ 760,404	100%	30%	70%		$ 228,121	$ 532,282
E. 10th St.	2026	40	$ 298,000	$ 298,000		1.1735	$ 349,692	0%	$ 349,692	100%	70%	30%		$ 244,784	$ 104,908
Membrane / GAC Pilot	2026	30	$ 80,000	$ 80,000		1.1735	$ 93,877	0%	$ 93,877	100%	30%	70%		$ 28,163	$ 65,714
Huntfield	2027	40	$ 210,000	$ 210,000		1.2213	$ 256,481	0%	$ 256,481	100%	0%	100%		$ -	$ 256,481
Fritts & Old Town Ranson	2028	40	$ 1,295,000	$ 1,295,000		1.2712	$ 1,646,165	0%	$ 1,646,165	100%	0%	100%		$ -	$ 1,646,165
Magnolia Springs	2028	40	$ 1,085,000	$ 1,085,000		1.2712	$ 1,379,220	0%	$ 1,379,220	100%	0%	100%		$ -	$ 1,379,220
Norborne Greene	2028	40	$ 7,000	$ 7,000		1.2712	$ 8,898	0%	$ 8,898	100%	0%	100%		$ -	$ 8,898
Charles Town Infill	2028	40	$ 35,000	$ 35,000		1.2712	$ 44,491	0%	$ 44,491	100%	0%	100%		$ -	$ 44,491
Windmill Crossing	2028	40	$ 7,000	$ 7,000		1.2712	$ 8,898	0%	$ 8,898	100%	0%	100%		$ -	$ 8,898
WTP Design	2028	30	$ 1,345,000	$ 1,345,000		1.2712	$ 1,709,724	0%	$ 1,709,724	100%	30%	70%		$ 512,917	$ 1,196,807
Augustine Ave. PS Discharge	2029	40	$ 298,000	$ 298,000		1.3230	$ 394,264	0%	$ 394,264	100%	0%	100%		$ -	$ 394,264
Locust Hill	2029	40	$ 2,400,000	$ 2,400,000		1.3230	$ 3,175,281	0%	$ 3,175,281	100%	0%	100%		$ -	$ 3,175,281
Roper/Stolipher	2029	40	$ 1,243,000	$ 1,243,000		1.3230	$ 1,644,531	0%	$ 1,644,531	100%	0%	100%		$ -	$ 1,644,531
Augustine Ave. PS Upgrade	2029	30	$ 780,000	$ 780,000		1.3230	$ 1,031,966	0%	$ 1,031,966	100%	0%	100%		$ -	$ 1,031,966
WTP Upgrade	2031	30	$ 20,000,000	$ 20,000,000		1.4332	$ 28,663,918	0%	$ 28,663,918	100%	30%	70%		$ 8,599,175	$ 20,064,742
		Sub Total	$ 43,706,000	$ 43,706,000			$ 56,456,459		$ 56,456,459					$ 15,179,567	$ 41,276,892
		Totals	$ 51,401,000	$ 51,401,000			$ 66,229,109		$64,274,579					$ 21,880,813	**$ 42,393,767**

Capacity Improvement Fee Determination

Expanded Plant Capacity (Max. Day):	3.80	MGD
Current Average Plant Demand:	1.70	MGD
Current Ratio of Max. Day to Average Day:	1.41	
Current Max. Day Demand:	2.40	MGD
Max. Day Capacity Available:	1.40	MGD
Equivalent Average Day Excess Capacity Available:	0.99	MGD
Average Demand Per EDU:	154	gpd/EDU
Number of EDUs Supported:	6,439	EDUs
Growth Related Costs per Capital Improv. Plan	$ 42,393,767	
Debt Principal Credit	$ (14,070,771)	(See Attachment B)
Net Growth Related Costs	$ 28,322,996	
Calculated Capacity Improvement Fee	**$ 4,399**	per EDU
Calculated Capacity Improvement Fee	$ 28.56	per gpd

	Year	Capital Costs by Year	Growth Costs by Year
	2022	$ -	$ -
	2023	$ 2,852,833	$ 1,746,358
	2024	$ 5,639,476	$ 4,027,795
	2025	$ 6,796,340	$ 3,948,089
	2026	$ 1,203,972	$ 702,904
	2027	256,481	$ 256,481
	2028	$ 4,797,396	$ 4,284,479
	2029	$ 6,246,043	$ 6,246,043
	2030	$ -	$ -
	2031	$ 28,663,918	$ 20,064,742
Not Included	2032	$ -	$ -
Not Included	2033	$ -	$ -
Not Included	2034	$ -	$ -
Not Included	2035	$ -	$ -
Not Included	2036	$ -	$ -
	TOTAL	$ 56,456,459	$ 41,276,892

Notes:
1. Based on current plant max. demand of 2.4 MGD versus current plant capacity of 2.8 MGD.

Attachment B
Debt Principal Credit Calculation

Year	Total Existing Debt Principal (Growth-Related Portion)	Projected New Debt Principal (Growth-Related Portion)	Total Debt Service Principal (Growth-Related Portion)	Present Value of Debt Service Principal (Growth-Related Portion)
2022	$ (27,447)	$ -	$ (27,447)	$ (27,447)
2023	$ (28,284)	$ -	$ (28,284)	$ (27,204)
2024	$ (29,147)	$ (29,228)	$ (58,375)	$ (54,002)
2025	$ (30,036)	$ (90,979)	$ (121,014)	$ (107,675)
2026	$ (30,952)	$ (97,337)	$ (128,289)	$ (109,789)
2027	$ (31,896)	$ (101,231)	$ (133,127)	$ (109,579)
2028	$ (32,869)	$ (166,593)	$ (199,462)	$ (157,911)
2029	$ (33,871)	$ (274,811)	$ (308,683)	$ (235,048)
2030	$ (34,904)	$ (285,804)	$ (320,708)	$ (234,880)
2031	$ (35,969)	$ (635,317)	$ (671,286)	$ (472,863)
2032	$ (37,066)	$ (660,729)	$ (697,795)	$ (472,768)
2033	$ (38,196)	$ (687,159)	$ (725,355)	$ (472,674)
2034	$ (39,361)	$ (714,645)	$ (754,006)	$ (472,583)
2035	$ (40,562)	$ (743,231)	$ (783,793)	$ (472,494)
2036	$ (41,799)	$ (772,960)	$ (814,759)	$ (472,407)
2037	$ (43,074)	$ (803,878)	$ (846,952)	$ (472,322)
2038	$ (44,388)	$ (836,033)	$ (880,421)	$ (472,239)
2039	$ (45,742)	$ (869,475)	$ (915,216)	$ (472,158)
2040	$ (47,137)	$ (904,254)	$ (951,391)	$ (472,078)
2041	$ (48,574)	$ (940,424)	$ (988,998)	$ (472,001)
2042	$ (50,056)	$ (978,041)	$ (1,028,097)	$ (471,925)
2043	$ (51,583)	$ (1,017,163)	$ (1,068,745)	$ (471,851)
2044	$ (53,156)	$ (1,057,849)	$ (1,111,005)	$ (471,779)
2045	$ (54,777)	$ (1,100,163)	$ (1,154,940)	$ (471,709)
2046	$ -	$ (1,144,170)	$ (1,144,170)	$ (449,466)
2047	$ -	$ (1,189,936)	$ (1,189,936)	$ (449,596)
2048	$ -	$ (1,237,534)	$ (1,237,534)	$ (449,726)
2049	$ -	$ (1,287,035)	$ (1,287,035)	$ (449,856)
2050	$ -	$ (1,338,517)	$ (1,338,517)	$ (449,985)
2051	$ -	$ (1,392,057)	$ (1,392,057)	$ (450,115)
2052	$ -	$ (1,447,739)	$ (1,447,739)	$ (450,245)
2053	$ -	$ (1,505,649)	$ (1,505,649)	$ (450,375)
2054	$ -	$ (1,471,077)	$ (1,471,077)	$ (423,232)
2055	$ -	$ (1,333,430)	$ (1,333,430)	$ (368,982)
2056	$ -	$ (1,377,946)	$ (1,377,946)	$ (366,740)
2057	$ -	$ (1,433,064)	$ (1,433,064)	$ (366,846)
2058	$ -	$ (1,291,524)	$ (1,291,524)	$ (317,990)
2059	$ -	$ (1,013,804)	$ (1,013,804)	$ (240,080)
2060	$ -	$ (1,054,356)	$ (1,054,356)	$ (240,149)
Total Debt Principal Credit (Growth Related Portion)				**$ (14,070,771)**

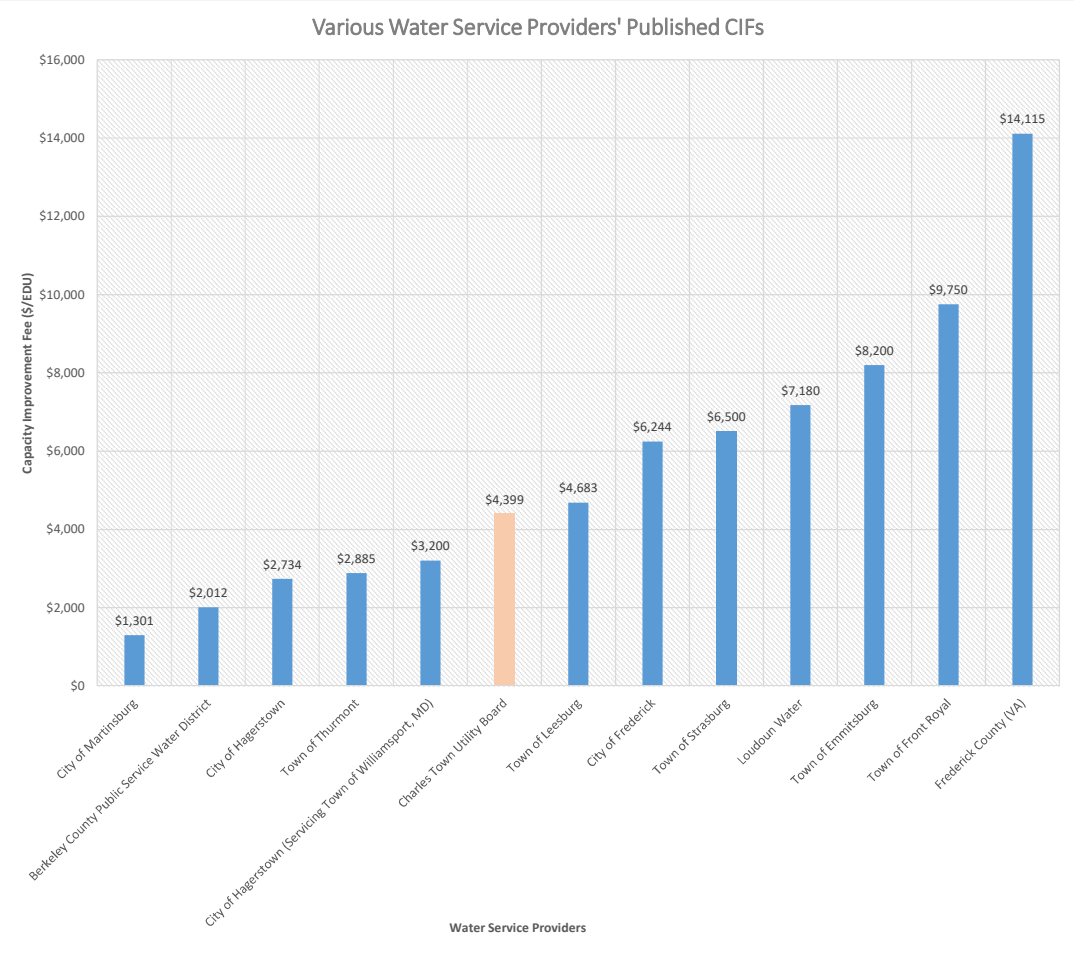
ATTACHMENT C - VARIOUS WATER SERVICE PROVIDERS IN THE REGION AND THEIR CIFS

Service Provider	Geographic Region	Number of Customers	Primary Water Source (Ground/Surface)	Effective Date of CIF	Published CIF ($/EDU)	Flow per EDU (gpd)	Normalized CIF ($/gpd)
West Virginia							
Charles Town Utility Board	Jefferson County, WV	5,890	Surface	2022	$4,399	154	$28.56
Berkeley County Public Service Water District	Berkeley County, WV	27,000	Surface	2019 - Present	$2,012	152	$13.24
City of Martinsburg	Berkeley County, WV	6,500	Ground	2020 - Present	$1,301	293	$4.44
Maryland							
City of Frederick	Frederick County, MD	48,000	Surface	2011 - Present	$6,244	250	$24.98
City of Hagerstown	Washington County, MD	89,000	Surface	July 1, 2020 - Present	$2,734	200	$13.67
City of Hagerstown (Servicing Town of Williamsport, MD)	Washington County, MD	2,139	Ground	2017 - Present	$3,200	200	$16.00
Town of Thurmont	Frederick County, MD	6,200	Ground	2013 - Present	$2,885	250	$11.54
Town of Emmitsburg	Frederick County, MD	2,821	Surface	2014 - Present	$8,200	200	$41.00
Virginia							
Frederick County (VA)	Frederick County, VA	15,911	Surface	2019 - Present	$14,115	250	$56.46
Town of Strasburg	Shenandoah County, VA	2,684	Surface	2019 - Present	$6,500	350	$18.57
Town of Leesburg	Loudoun County, VA	18,174	Surface Ground	2016 - Present	$4,683	350	$13.38
Loudoun Water	Loudoun County, VA	82,387	Surface	2020 - Present	$7,180	550	$13.05
Town of Front Royal	Warren County, VA	6,000	Surface	2013 - Present	$9,750	250	$39.00

ATTACHMENT D - VARIOUS WATER SERVICE PROVIDERS' PUBLISHED CIFS

Service Provider	Published CIF ($/EDU)
City of Martinsburg	$1,301
Berkeley County Public Service Water District	$2,012
City of Hagerstown	$2,734
Town of Thurmont	$2,885
City of Hagerstown (Servicing Town of Williamsport, MD)	$3,200
Charles Town Utility Board	$4,399
Town of Leesburg	$4,683
City of Frederick	$6,244
Town of Strasburg	$6,500
Loudoun Water	$7,180
Town of Emmitsburg	$8,200
Town of Front Royal	$9,750
Frederick County (VA)	$14,115

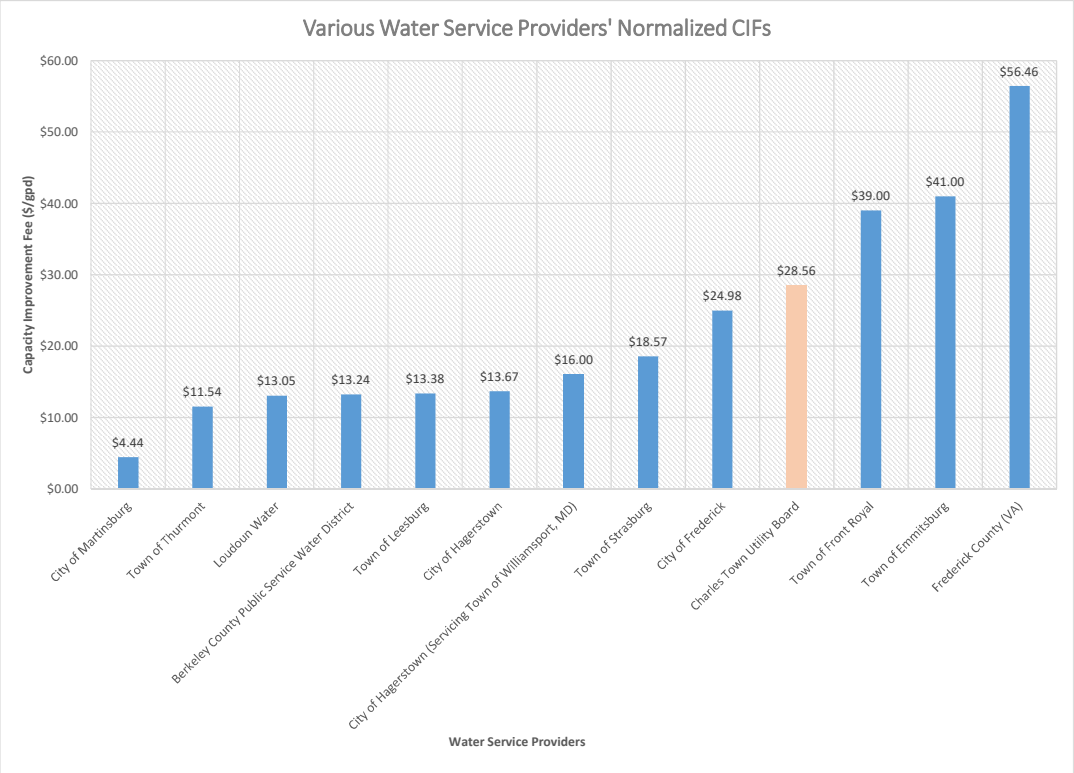
Mean Fee: $5,631



ATTACHMENT E - VARIOUS WATER SERVICE PROVIDERS' NORMALIZED CIFS

Service Provider	$/GPD
City of Martinsburg	$4.44
Town of Thurmont	$11.54
Loudoun Water	$13.05
Berkeley County Public Service Water District	$13.24
Town of Leesburg	$13.38
City of Hagerstown	$13.67
City of Hagerstown (Servicing Town of Williamsport, MD)	$16.00
Town of Strasburg	$18.57
City of Frederick	$24.98
Charles Town Utility Board	$28.56
Town of Front Royal	$39.00
Town of Emmitsburg	$41.00
Frederick County (VA)	$56.46

Mean Dollars per GPD: $22.61



CIF Account Detail

Funds Allocated and Previously Paid from CIF Acct:

RK&K - King's Crossing and Hillside Review	$ 27,805.74	
RK&K - Greenfield Force Main Upgrades Task Order #22	$ 52,969.42	
RK&K - Greenfield Force Main Upgrades Task Order #22 - Change No. 1 Bidding	$ 14,826.91	
WVDOH Permit - Greenfield Force Main	$ 4,212.50	
	$ 99,814.57	
Balance as of 1/18/2024:		$ 6,094,017
Less: Funds Allocated and Not Paid from CIF Acct		
Renewal & Replacement Project	$ (1,170,163)	
Collection System Project	$ (2,000,000)	
Greenfield Forcemain Upgrade Plans - (Bid 1/10/2024 BM)	$ (953,056)	
Greenfield Forcemain Construction Administration (9/13/2023 BM)	$ (17,000)	$ (4,140,219)
Balance available for future projects as of 1/18/2018:		**$ 1,953,798**

ROCKWOOL

01/18/2024

Ms. Kristen Stolipher
Utility General Manager
Charles Town Utility Board
661 South George Street, Suite 101
Charles Town, WV 25414

Re: Request for Permit Modification

Dear **Ms. Stolipher,**

ROCKWOOL hereby requests that the Charles Town Utility Board apply for a modification of its NPDES permit to allow an increase in the maximum daily flow from our facility.

Please find attached a description of the process and necessary changes.

Sincerely,

Mark Graves
Director of Operations.

Facility Description and Details of the Reverse Osmosis System

ROCKWOOL consists of a 338,000-sqaure-foot manufacturing facility on 130 acres located at 665 Northport Avenue, Kearneysville in Jefferson County, West Virginia. The plant produces mineral wool insulation for building insulation, customized solutions for industrial applications and similar applications.

The input water for this facility comes from West Virginia American Water (WVAM) formerly known as Jefferson Utilities, Inc. (JUI). Water used in the industrial manufacturing process is primarily for cooling and is recirculated until evaporated. There is no discharge from the manufacturing process area.

Water that is discharged to the non-domestic wastewater stream does not contact any portion of the manufacturing processes. The plant processes that will discharge non-domestic wastewater are the effluent from the Reverse Osmosis (RO) Process and effluent from the Water Softening Process.

The RO Process takes water from West Virginia American Water and further purify it by sending the water through a water softener, carbon filter and then through the RO unit. The RO permeate water is used within the manufacturing process where ultra filtered water is necessary and ultimately used as cooling water and evaporated.

The RO Process shown in the simplified diagram below, is a water treatment process that removes constituents such as metals and salts from the WVAM supplied water by using pressure to force water molecules through a semipermeable membrane. During this process, the constituents are filtered out as the RO reject stream. In the reject stream the original WVAM constituents are concentrated compared to incoming WVAM supply but nothing is added from the manufacturing process.

Due to the hardness of the WVAM supply, as much as 450ppm, an additional separate softener unit is used for manufacturing processes and is ultimately evaporated. The effluent from the softening process is water softener waste only and added salt from the softening process with no water from the manufacturing process added.

Effluent from the RO Process provides a maximum effluent stream of 26,000 gallons per day. Effluent from the separate Water Softening Process provides a maximum effluent stream of 4,000 gallons per day. Effluent from both processes will be discharged to the Charles Town WWTP. The non-domestic wastewater discharge will be metered and sampled on-site before entering the common waste stream which is pumped out via an on-site pump station.

Prior to plant construction it was estimated that the facility will discharge a maximum of fourteen thousand nine hundred (14,900) gallons of non-domestic water per day. The facility was granted a maximum of seventeen thousand (17000) gallons per day via permit No 0022349.

A review of the as built systems that encompass the Reverse Osmosis process was conducted and the attached Water Balance Diagram which provides an overview of water flow in this facility. ROCKWOOL has not added any other water consumers to our system/facility since the submission of the original permit application.

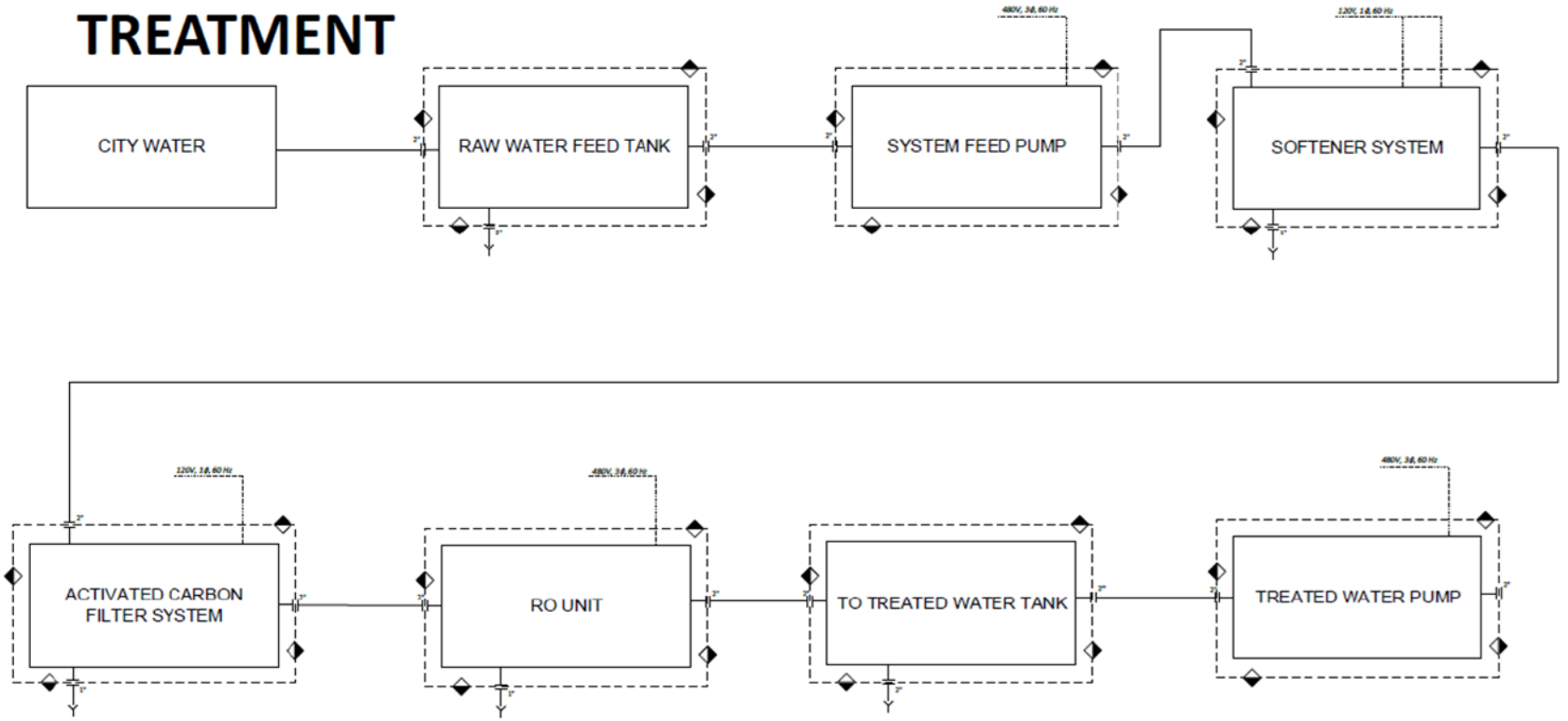
As a result of the water received from WVAM, ROCKWOOL has no other option but to regenerate more water for use within our process. Incoming water quality from the WVAM is not measured by the facility, however, we found that the RO system is forced to purify more water from the utility so that it can be utilized for cooling of our systems.

Increased presence of personnel on site will also contribute to per day discharge from our sanitary systems. This is not something that ROCKWOOL can quantify in terms of gallons, but it is a contributing factor to the overall volume being discharged to Charles Town Utility Board.

The mass loading was calculated based on the available flow rates and we found that a maximum of 30,000 gpd will be discharged as non-domestic wastewater. The remaining portion will leave the facility through evaporation.

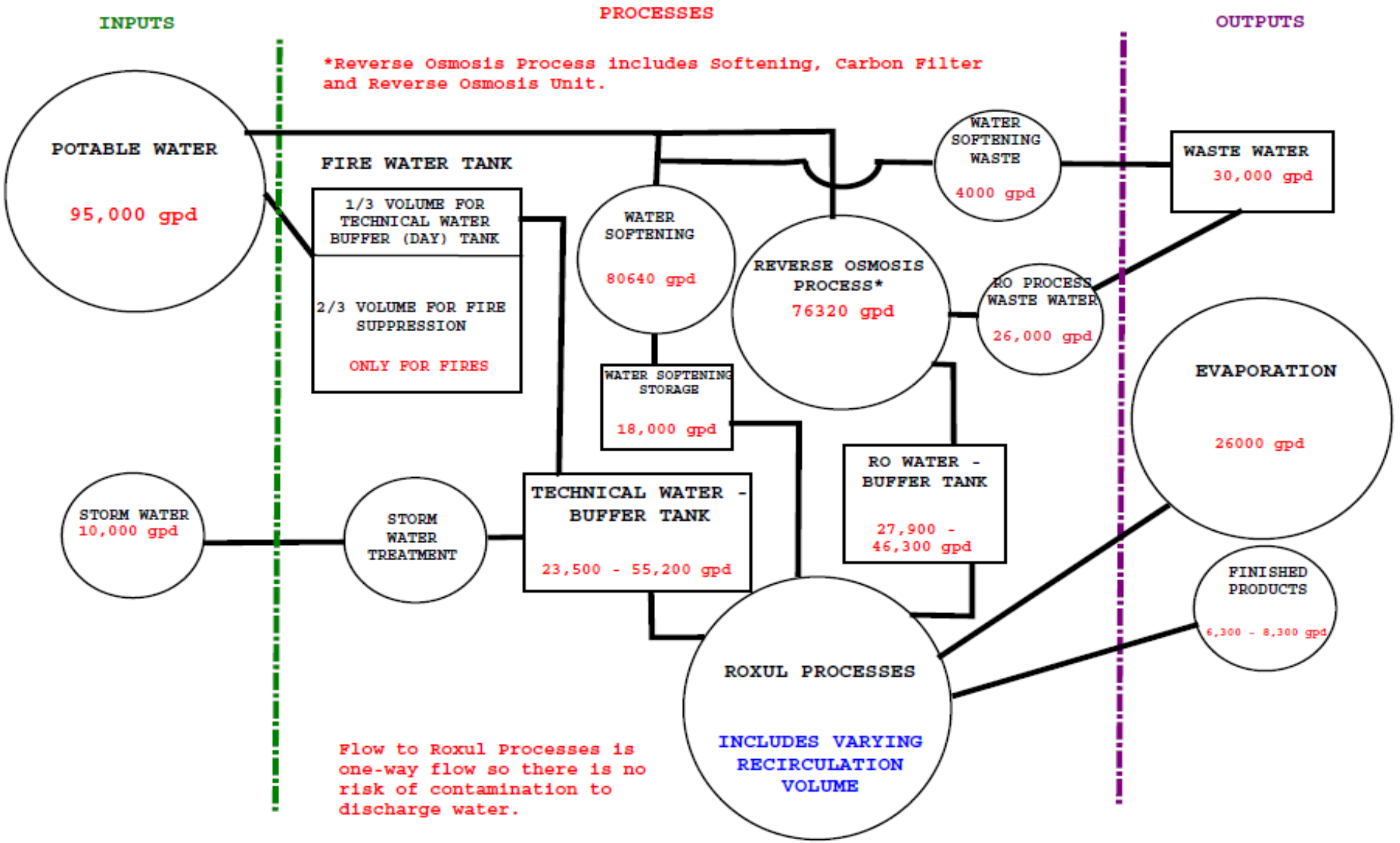
The source water for the facility will be provided by WVAM.

PROCESS FLOW DIAGRAM FOR WATER TREATMENT



ROCKWOOL

ROCKWOOL's WATER BALANCE DIAGRAM



West Virginia Department of Environmental Protection

Personal Information Policy Statement

We will process your personal information (email address, mailing address and/or telephone number) in accordance with the State of West Virginia's Privacy Policy for appropriate and customary business purposes. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. The Division of Water and Waste Management will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact the DEP's Chief Privacy officer at depprivacyofficer@wv.gov.

PRETREATMENT SECTION: INDUSTRIAL USERS (IU)

NOTE: COMPLETE THIS SECTION FOR <u>EACH</u> INDUSTRIAL DISCHARGER. MAKE ADDITIONAL COPIES FOR ADDITIONAL IUS. ALL FIELDS ARE REQUIRED TO BE FILLED OUT.

1. Name of Industrial User (IU): ROXUL USA Inc. d/b/a ROCKWOOL

2. Facility Address of IU : 665 Northport Avenue, Kearneysville, WV 25430

3. Mailing Address of IU : 665 Northport Avenue, Kearneysville, WV 25430

4. Name of IU Facility Contact: Stacey Phillips

5. Telephone Number of IU Facility Contact: (681) 247-0824

6. Has the non-domestic wastewater from this IU been previously regulated or permitted?

   (✘) Yes (☐) No

   If so, by whom? West Virginia Department of Environmental Protection

7. IU's Standard Industrial Classification (SIC) Code: 3296

8. Is the IU classified as a Categorical User according to 40 CFR 403?

   (☐) Yes (✘) No Unknown (☐)

   If so, list Category from 40 CFR 405-471.

9. Give a description of the activities and processes performed at the IU's facility that contribute to the non-domestic wastewater. Please attach MSDSs of materials used. If this is a modification to an existing IU, describe the nature of the proposed modification.

The plant produces mineral wool insulation for buildings.The facility receives makeup water from West Virginia American Water and the makeup water must be filtered through a reverse osmosis and water softening system before it can be used by the manufacturing facility. Once it is filtered, the water is used in the manufacturing process primarily for cooling and then recirculated until evaporated. Non-domestic wastewater stream does not contact any part of the manufacturing process. Prior to plant construction, our estimated flow rate was 14,900gpd. A review of the as built facility shows that the Reverse Osmosis process and non-domestic wastewater provides a maximum effluent stream of 30,000gpd. No additonal water consumers were installed since initial permit application.

PRETREATMENT SECTION: INDUSTRIAL USERS (IU) Continued

NOTE: COMPLETE THIS SECTION FOR <u>EACH</u> INDUSTRIAL DISCHARGER. MAKE ADDITIONAL COPIES FOR ADDITIONAL IUS. ALL FIELDS ARE REQUIRED TO BE FILLED OUT.

10. Is the subject non-domestic wastewater pretreated by the IU?

( ) Yes (✘) No

If so, describe method(s) of pretreatment. Be as specific as possible. _____

11. Provide the MAXIMUM Daily Flow of non-domestic wastewater to the POTW from this IU.

Maximum Daily Flow Rate: 30,000 GPD ( ) Measured (✘) Estimated

12. If this IU is an existing discharger already regulated by the existing NPDES permit, review the previous 12 months of monitoring data for this IU and answer the following:

Average Flow Rate (Last 12 Months): _____ GPD

Has the POTW submitted all of the required reports and analytical data of the IU to the WV DEP? (✘) Yes ( ) No

Has the IU been inspected by the POTW in the past 12 months? (✘) Yes ( ) No

13. List any other additional information. (Such as instances of noncompliance by the IU)

The months of September, October and November in calendar year 2023 the Industrial User had several days exceeding the maximum daily flow paramters. The maximum daily flow for the Industrial User is 17,000 gpd. The IU in September had a maximum daily flow of 51,472 GPD, October maximum daily flow of 25,538 GPD and November maximum daily flow was 25,766 GPD.

Charles Town Water Department
Revenue & Expense Summary
11/30/2023

Annual Budget		Y-T-D Budget	Y-T-D Actual	Difference
	REVENUES			
2,664,000	Metered Sales - Residential	1,110,000	1,234,424	124,424
1,340,000	Metered Sales - Commercial	558,333	582,892	24,558
100,000	Metered Sales - Glen Haven/Cavaland	41,667	43,013	1,346
20,000	Sale for Resale - Bulk Water	8,333	16,525	8,191
85,000	Forfieted Discounts	35,417	31,370	(4,046)
38,000	Misc. Service Rev - Reconnection / Tap Fees	15,833	12,775	(3,058)
565,000	Tank Lot Rental Income (Non-Operating)	235,417	212,238	(23,178)
23,000	Interest Income (Non-Operating)	9,583	24,650	15,067
20,000	Sinking Fund Income (Non-Operating)	8,333	8,106	(228)
50,000	Miscellaneous Income (Non-Operating)	20,833	17,666	(3,167)
0	CIF & CAC Revenue (Non-Operating)	-	614,147	614,147
4,905,000	**TOTAL REVENUES**	2,043,750	2,797,805	754,055
	EXPENSES			
15,000	WS - Materials & Supplies Expense	6,250	1,298	(4,952)
20,000	WS - Maint of Water Source	8,333	4,606	(3,727)
380,129	WT - Salaries & Wages - Operations Labor	158,387	153,705	(4,682)
140,000	WT - Power & Fuel	58,333	56,457	(1,877)
8,400	WT - Power & Fuel - GH/CAV	3,500	1,968	(1,532)
170,000	WT - Chemical Expense	70,833	65,407	(5,426)
55,000	WT - Testing	22,917	5,851	(17,066)
25,000	WT - Materials & Supplies Expense	10,417	9,081	(1,336)
4,000	WT - Materials & Supplies Expense - GH/CAV	1,667	1,169	(498)
39,500	WT - Sludge Hauling	16,458	16,484	26
90,000	WT - Maint of Water Treatment Plant	37,500	9,377	(28,123)
5,000	WT - Maint of Water Plant - GH/CAV	2,083	-	(2,083)
34,000	WT - Licenses & Subscriptions	14,167	201	(13,965)
389,144	TD - Salaries & Wages - Maintenance Labor	162,143	163,904	1,761
20,000	TD - Materials & Supplies Expense	8,333	5,856	(2,477)
50,000	TD - Maint of Dist Reservior & Standpipes	20,833	16,838	(3,995)
120,000	TD - Maint of Mains	50,000	18,829	(31,171)
150,000	TD - Maint of Services	62,500	94,791	32,291
180,000	TD - Maint of Meters	75,000	88,186	13,186
15,000	TD - Maint of Hydrants	6,250	33,834	27,584
197,629	CA - Salaries & Wages	82,345	74,074	(8,272)
40,000	CA - Billing Expense	16,667	27,467	10,800
64,500	CA - Licenses & Subscriptions (includes Sensus)	26,875	2,111	(24,764)
10,000	CA - Bad Debt Expense	4,167	4,697	531
130,607	GA - Salaries & Wages	54,420	54,522	102
2,500	GA - Director Compensation	1,042	1,075	33
221,784	GA - Employee Insurance & Benefits	92,410	78,823	(13,587)
98,776	GA - Employee Pension Expense	41,157	37,715	(3,441)
83,959	GA - Payroll Taxes - FICA Tax Expense	34,983	34,472	(510)
18,101	GA - Employee 457 Expense	7,542	8,197	655

Charles Town Water Department
Revenue & Expense Summary
11/30/2023

65,000	GA - Office Supplies & Expense	27,083	30,431	3,348
15,000	GA - Computer - Technology Expense	6,250	5,043	(1,207)
15,000	GA - Maint. of General Property	6,250	3,802	(2,448)
30,000	GA - Licenses & Subscriptions	12,500	1,876	(10,624)
20,000	GA - Contractual Services - Engineering	8,333	1,571	(6,763)
20,000	GA - Contractual Services - Accounting	8,333	6,850	(1,483)
20,000	GA - Contractual Services - Legal	8,333	20,073	11,739
20,000	GA - Contractual Services - Other	8,333	14,385	6,052
15,000	GA - Rental of Building	6,250	2,550	(3,700)
78,000	GA - Transportation Expense	32,500	23,742	(8,758)
85,000	GA - Insurance	35,417	41,554	6,137
35,000	GA - Worker's Comp	14,583	8,187	(6,396)
20,000	GA - Regulatory Commission Expense	8,333	3,244	(5,090)
6,000	GA - Bond Administration Fees	2,500	981	(1,519)
10,000	GA - Misc. General Expense	4,167	2,193	(1,973)
0	Advertising & Publication Expense	-	240	240
425,000	Interest on Long Term Debt (Non-Operating)	177,083	127,350	(49,734)
1,165,000	Depreciation Expense (Non-Cash)	485,417	485,417	-
0	Amortization Expense (Non-Cash)	-	-	-
4,822,029	**TOTAL EXPENSES**	2,009,179	1,850,485	(158,694)
82,971	Excess (Deficit)	34,571	947,320	

Reconciliation to Cash:

Cash Balance @ 6/30/23	650,664	
Disbursements To Date	(2,295,428)	
Expenses	1,850,485	
Deposits To Date	2,394,147	
Revenues	(2,797,805)	
CASH BALANCE @ 11/30/2023	749,383	
	749,383	Water Operating
	(0)	
Water Capacity Improvement Fees	4,695,188	
Water Renewal & Replacement	865,479	
Water Working Capital Fund	386,013	

Charles Town Sewer Department
Revenue & Expense Summary
11/30/2023

Annual Budget		Y-T-D Budget	Y-T-D Actual	Difference
	REVENUES			
2,432,000	CTUB Service Revenue	1,013,333	1,092,378	79,044
1,414,000	Ranson Revenue	589,167	699,821	110,655
2,526,000	JCPSD Revenue	1,052,500	1,127,424	74,924
42,000	Customer Forfieted Discounts	17,500	17,143	(357)
30,000	Customer Forfieted Discounts- RA	12,500	12,853	353
52,000	Customer Forfieted Discounts- PSD	21,667	20,574	(1,093)
25,000	Misc. Sewer Revenues (Non-Operating)	10,417	16,685	6,269
27,000	Interest Income (Non-Operating)	11,250	34,494	23,244
90,000	Sinking Fund Income (Non-Operating)	37,500	96,203	58,703
0	CIF & CAC Revenues (Non-Operating)	-	820,400	820,400
6,638,000	**TOTAL REVENUES**	2,765,833	3,937,975	1,172,142
	EXPENSES			
20,000	CS - Materials & Supplies Expense	8,333	1,738	(6,596)
55,000	CS - Maint of Service Connections	22,917	24,927	2,010
220,000	CS - Maint of Collecting & Trans. Mains	91,667	37,782	(53,884)
402,006	PS - Salaries & Wages	167,502	162,136	(5,367)
135,000	PS - Power & Fuel	56,250	54,613	(1,637)
25,000	PS - Materials & Supplies Expense	10,417	7,671	(2,745)
40,000	PS - Sludge Hauling	16,667	26,149	9,482
210,000	PS - Maint of Pump Stations	87,500	37,295	(50,205)
313,509	TD - Salaries & Wages	130,629	136,099	5,470
135,000	TD - Power - CT Plant	56,250	55,500	(750)
90,000	TD - Power - TUI	37,500	31,279	(6,221)
10,000	TD - Power - Deerfield	4,167	1,518	(2,648)
175,000	TD - Chemical Expense - CT	72,917	52,468	(20,448)
20,000	TD - Chemical Expense - TUI	8,333	10,846	2,513
35,000	TD - Testing - CT	14,583	13,597	(986)
12,000	TD - Testing - TUI	5,000	3,840	(1,160)
80,000	TD - Materials & Supplies Expense	33,333	28,083	(5,251)
5,000	TD - Sludge Hauling - CT	2,083	1,964	(119)
13,000	TD - Sludge Hauling - TUI	5,417	11,974	6,558
110,000	TD - Maint. Burns Farm	45,833	46,540	707
200,000	TD - Maint. Treatment Plant - CT	83,333	99,789	16,456
90,000	TD - Maint. Treatment Plant - TUI	37,500	63,510	26,010
15,000	TD - Maint. Treatment Plant - Deerfield	6,250	597	(5,653)
246,780	CA - Billing & Acct Labor	102,825	96,608	(6,217)
60,000	CA - Billing Expense	25,000	31,723	6,723
40,000	CA - Licenses & Subscriptions	16,667	2,111	(14,556)
15,000	CA - Bad Debt Expense	6,250	6,665	415
205,113	GA - Salaries & Wages	85,464	85,661	197
2,500	GA - Director Compensation	1,042	1,075	33
256,412	GA - Employee Insurance & Benefits	106,838	84,218	(22,620)
105,067	GA - Employee Pension Expense	43,778	42,329	(1,449)

Charles Town Sewer Department
Revenue & Expense Summary
11/30/2023

89,307	GA - Payroll Taxes - FICA Tax Expense	37,211	37,275	64
17,608	GA - Employee 457 Expense	7,336	7,720	383
75,000	GA - Office Supplies & Expense	31,250	31,441	191
18,000	GA - Computer - Technology Expense	7,500	5,846	(1,654)
30,000	GA - Maint. of General Property	12,500	6,682	(5,818)
30,000	GA - Licenses & Subscriptions	12,500	4,209	(8,291)
35,000	GA - Contractual Services - Engineering	14,583	1,430	(13,153)
40,000	GA - Contractual Services - Accounting	16,667	5,200	(11,467)
180,000	GA - Contractual Services - Legal	75,000	44,014	(30,986)
25,000	GA - Contractual Services - Other	10,417	4,960	(5,457)
15,000	GA - Rental of Building	6,250	2,550	(3,700)
85,000	GA - Transportation Expense	35,417	30,467	(4,949)
110,000	GA - Insurance	45,833	41,554	(4,279)
35,000	GA - Worker's Comp	14,583	7,558	(7,025)
30,000	GA - Regulatory Commission Expense	12,500	1,719	(10,781)
55,000	GA - Bond Administration Fees	22,917	12,157	(10,760)
10,000	GA - Misc. General Expense	4,167	4704	538
0	GA - Advertising & Publication Expense	-	741	741
320,000	Interest on Long Term Debt (Non-Operating)	133,333	5,784	(127,549)
2,042,000	Depreciation Expense (Non-Cash)	850,833	850,833	-
0	Amortization Expense (Non-Cash)	-	-	-
6,583,300	**TOTAL EXPENSES**	2,743,042	2,367,152	(375,890)
54,700	**Excess (Deficit)**	22,791	1,570,823	
	Reconciliation to Cash:			
	Cash Balance @ 6/30/23		2,544,101	
	Disbursements To Date		(5,976,262)	
	Expenses		2,367,152	
	Deposits To Date		6,165,081	
	Revenues		(3,937,975)	
	CASH BALANCE 11/30/2023		2,732,920	
			2,732,920	Sewer Operating
			0	
	Sewer Capacity Improvement Fees		5,759,645	
	Sewer Renewal & Replacement		348,706	
	Sewer Working Capital Fund		710,334	

Charles Town Water Department
Revenue & Expense Summary
12/31/2023

Annual Budget		Y-T-D Budget	Y-T-D Actual	Difference
	REVENUES			
2,664,000	Metered Sales - Residential	1,332,000	1,469,052	137,052
1,340,000	Metered Sales - Commercial	670,000	696,705	26,705
100,000	Metered Sales - Glen Haven/Cavaland	50,000	50,373	373
20,000	Sale for Resale - Bulk Water	10,000	18,581	8,581
85,000	Forfieted Discounts	42,500	37,123	(5,377)
38,000	Misc. Service Rev - Reconnection / Tap Fees	19,000	14,925	(4,075)
565,000	Tank Lot Rental Income (Non-Operating)	282,500	248,443	(34,057)
23,000	Interest Income (Non-Operating)	11,500	55,851	44,351
20,000	Sinking Fund Income (Non-Operating)	10,000	18,084	8,084
50,000	Miscellaneous Income (Non-Operating)	25,000	20,246	(4,754)
0	CIF & CAC Revenue (Non-Operating)	-	732,920	732,920
4,905,000	**TOTAL REVENUES**	2,452,500	3,362,304	909,804
	EXPENSES			
15,000	WS - Materials & Supplies Expense	7,500	1,554	(5,946)
20,000	WS - Maint of Water Source	10,000	13,492	3,492
380,129	WT - Salaries & Wages - Operations Labor	190,065	182,301	(7,764)
140,000	WT - Power & Fuel	70,000	66,720	(3,280)
8,400	WT - Power & Fuel - GH/CAV	4,200	2,484	(1,716)
170,000	WT - Chemical Expense	85,000	86,839	1,839
55,000	WT - Testing	27,500	7,457	(20,043)
25,000	WT - Materials & Supplies Expense	12,500	10,551	(1,949)
4,000	WT - Materials & Supplies Expense - GH/CAV	2,000	1,411	(589)
39,500	WT - Sludge Hauling	19,750	21,879	2,129
90,000	WT - Maint of Water Treatment Plant	45,000	29,119	(15,881)
5,000	WT - Maint of Water Plant - GH/CAV	2,500	2,990	490
34,000	WT - Licenses & Subscriptions	17,000	201	(16,799)
389,144	TD - Salaries & Wages - Maintenance Labor	194,572	194,200	(372)
20,000	TD - Materials & Supplies Expense	10,000	7,387	(2,613)
50,000	TD - Maint of Dist Reservior & Standpipes	25,000	17,050	(7,950)
120,000	TD - Maint of Mains	60,000	20,443	(39,557)
150,000	TD - Maint of Services	75,000	98,998	23,998
180,000	TD - Maint of Meters	90,000	104,252	14,252
15,000	TD - Maint of Hydrants	7,500	33,834	26,334
197,629	CA - Salaries & Wages	98,815	87,415	(11,400)
40,000	CA - Billing Expense	20,000	32,870	12,870
64,500	CA - Licenses & Subscriptions (includes Sensus)	32,250	2,437	(29,813)
10,000	CA - Bad Debt Expense	5,000	4,581	(419)
130,607	GA - Salaries & Wages	65,304	64,409	(895)
2,500	GA - Director Compensation	1,250	1,175	(75)
221,784	GA - Employee Insurance & Benefits	110,892	93,980	(16,912)
98,776	GA - Employee Pension Expense	49,388	44,947	(4,441)
83,959	GA - Payroll Taxes - FICA Tax Expense	41,980	40,809	(1,171)
18,101	GA - Employee 457 Expense	9,051	9,790	740

Charles Town Water Department
Revenue & Expense Summary
12/31/2023

65,000	GA - Office Supplies & Expense	32,500	35,890	3,390
15,000	GA - Computer - Technology Expense	7,500	5,729	(1,771)
15,000	GA - Maint. of General Property	7,500	5,829	(1,671)
30,000	GA - Licenses & Subscriptions	15,000	2,892	(12,108)
20,000	GA - Contractual Services - Engineering	10,000	1,571	(8,429)
20,000	GA - Contractual Services - Accounting	10,000	6,850	(3,150)
20,000	GA - Contractual Services - Legal	10,000	35,936	25,936
20,000	GA - Contractual Services - Other	10,000	14,765	4,765
15,000	GA - Rental of Building	7,500	2,550	(4,950)
78,000	GA - Transportation Expense	39,000	33,596	(5,404)
85,000	GA - Insurance	42,500	62,301	19,801
35,000	GA - Worker's Comp	17,500	9,627	(7,873)
20,000	GA - Regulatory Commission Expense	10,000	3,244	(6,756)
6,000	GA - Bond Administration Fees	3,000	2,782	(218)
10,000	GA - Misc. General Expense	5,000	2,316	(2,684)
0	Advertising & Publication Expense	-	1,187	1,187
425,000	Interest on Long Term Debt (Non-Operating)	212,500	191,857	(20,643)
1,165,000	Depreciation Expense (Non-Cash)	582,500	582,500	-
0	Amortization Expense (Non-Cash)	-	-	-
4,822,029	**TOTAL EXPENSES**	2,411,015	2,286,995	(124,019)
82,971	Excess (Deficit)	41,486	1,075,309	

Reconciliation to Cash:

Cash Balance @ 6/30/23	650,664	
Disbursements To Date	(2,796,846)	
Expenses	2,286,995	
Deposits To Date	2,847,213	
Revenues	(3,362,304)	
CASH BALANCE @ 12/31/2023	701,031	
	701,031	Water Operating
	(0)	
Water Capacity Improvement Fees	4,837,194	
Water Renewal & Replacement	891,114	
Water Working Capital Fund	387,904	

Charles Town Sewer Department
Revenue & Expense Summary
12/31/2023

Annual Budget		Y-T-D Budget	Y-T-D Actual	Difference
	REVENUES			
2,432,000	CTUB Service Revenue	1,216,000	1,310,931	94,931
1,414,000	Ranson Revenue	707,000	767,631	60,631
2,526,000	JCPSD Revenue	1,263,000	1,421,064	158,064
42,000	Customer Forfieted Discounts	21,000	20,309	(691)
30,000	Customer Forfieted Discounts- RA	15,000	15,575	575
52,000	Customer Forfieted Discounts- PSD	26,000	24,325	(1,675)
25,000	Misc. Sewer Revenues (Non-Operating)	12,500	17,229	4,729
27,000	Interest Income (Non-Operating)	13,500	68,708	55,208
90,000	Sinking Fund Income (Non-Operating)	45,000	114,765	69,765
0	CIF & CAC Revenues (Non-Operating)	-	1,010,264	1,010,264
6,638,000	**TOTAL REVENUES**	3,319,000	4,770,800	1,451,800
	EXPENSES			
20,000	CS - Materials & Supplies Expense	10,000	1,930	(8,070)
55,000	CS - Maint of Service Connections	27,500	25,311	(2,189)
220,000	CS - Maint of Collecting & Trans. Mains	110,000	38,731	(71,269)
402,006	PS - Salaries & Wages	201,003	187,296	(13,706)
135,000	PS - Power & Fuel	67,500	64,955	(2,545)
25,000	PS - Materials & Supplies Expense	12,500	8,563	(3,937)
40,000	PS - Sludge Hauling	20,000	29,785	9,785
210,000	PS - Maint of Pump Stations	105,000	58,507	(46,493)
313,509	TD - Salaries & Wages	156,755	157,525	771
135,000	TD - Power - CT Plant	67,500	67,335	(165)
90,000	TD - Power - TUI	45,000	38,735	(6,265)
10,000	TD - Power - Deerfield	5,000	1,801	(3,199)
175,000	TD - Chemical Expense - CT	87,500	62,694	(24,806)
20,000	TD - Chemical Expense - TUI	10,000	10,846	846
35,000	TD - Testing - CT	17,500	14,924	(2,576)
12,000	TD - Testing - TUI	6,000	4,689	(1,311)
80,000	TD - Materials & Supplies Expense	40,000	30,060	(9,940)
5,000	TD - Sludge Hauling - CT	2,500	1,964	(536)
13,000	TD - Sludge Hauling - TUI	6,500	12,919	6,419
110,000	TD - Maint. Burns Farm	55,000	54,774	(226)
200,000	TD - Maint. Treatment Plant - CT	100,000	139,860	39,860
90,000	TD - Maint. Treatment Plant - TUI	45,000	80,630	35,630
15,000	TD - Maint. Treatment Plant - Deerfield	7,500	602	(6,898)
246,780	CA - Billing & Acct Labor	123,390	113,906	(9,484)
60,000	CA - Billing Expense	30,000	37,146	7,146
40,000	CA - Licenses & Subscriptions	20,000	2,437	(17,563)
15,000	CA - Bad Debt Expense	7,500	6,530	(970)
205,113	GA - Salaries & Wages	102,557	101,122	(1,435)
2,500	GA - Director Compensation	1,250	1,175	(75)
256,412	GA - Employee Insurance & Benefits	128,206	98,505	(29,701)
105,067	GA - Employee Pension Expense	52,533	49,470	(3,063)

Charles Town Sewer Department
Revenue & Expense Summary
12/31/2023

89,307	GA - Payroll Taxes - FICA Tax Expense	44,653	43,487	(1,166)
17,608	GA - Employee 457 Expense	8,804	9,079	276
75,000	GA - Office Supplies & Expense	37,500	36,938	(562)
18,000	GA - Computer - Technology Expense	9,000	6,709	(2,291)
-	GA - Tool Expense	-	2,322	2,322
30,000	GA - Maint. of General Property	15,000	6,682	(8,318)
30,000	GA - Licenses & Subscriptions	15,000	5,225	(9,775)
35,000	GA - Contractual Services - Engineering	17,500	2,454	(15,046)
40,000	GA - Contractual Services - Accounting	20,000	5,200	(14,800)
180,000	GA - Contractual Services - Legal	90,000	48,932	(41,068)
25,000	GA - Contractual Services - Other	12,500	5,150	(7,350)
15,000	GA - Rental of Building	7,500	2,550	(4,950)
85,000	GA - Transportation Expense	42,500	43,821	1,321
110,000	GA - Insurance	55,000	62,301	7,301
35,000	GA - Worker's Comp	17,500	8,887	(8,613)
30,000	GA - Regulatory Commission Expense	15,000	1,719	(13,281)
55,000	GA - Bond Administration Fees	27,500	25,201	(2,299)
10,000	GA - Misc. General Expense	5,000	5261	261
0	GA - Advertising & Publication Expense	-	861	861
320,000	Interest on Long Term Debt (Non-Operating)	160,000	303,262	143,262
2,042,000	Depreciation Expense (Non-Cash)	1,021,000	1,021,000	-
0	Amortization Expense (Non-Cash)	-	-	-
6,583,300	**TOTAL EXPENSES**	3,291,650	3,151,770	(139,880)
54,700	**Excess (Deficit)**	27,350	1,619,030	

	Reconciliation to Cash:		
	Cash Balance @ 6/30/23	2,544,101	
	Disbursements To Date	(7,100,145)	
	Expenses	3,151,770	
	Deposits To Date	6,783,861	
	Revenues	(4,770,800)	
	CASH BALANCE 12/31/2023	2,227,817	
		2,227,817	Sewer Operating
		-	
	Sewer Capacity Improvement Fees	5,947,429	
	Sewer Renewal & Replacement	380,956	
	Sewer Working Capital Fund	713,814	

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT	AMOUNT
			TOTAL:	5,000.00
XYLEM WATER SOLUTIONS U.S.A., INC.	SVC CLL: GDWN @ RIVER INTA WATER FUND	WATER		2,591.33
			TOTAL:	2,591.33

FUND TOTALS		
50	WATER FUND	69,369.89
60	SEWER FUND	63,709.40
	GRAND TOTAL:	133,079.29

TOTAL PAGES: 3

APPROVED BY: _____

APPROVED BY: _____

This Packet:	$ 133,079.29
City of Ranson, check dated 1/10/24:	3,874.79
City of Charles Town, check dated 1/10/24:	18,565.30
Neal O Nilsen, check dated 1/10/24:	8,730.02
Security Deposit refunds, checks dated 1/10/24:	910.21
Kay Casto & Chaney PLLC, check dated 1/12/24:	4,871.80
Mulford Construction Company Inc, check dated 1/17/24:	5,570.79
Total:	$ 175,602.20

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
GWIN DOBSON & FOREMAN INC	KNGS XNG WTP SLDGEFRCMN TI	WATER FUND	NON-DEPARTMENTAL		7,257.25
	CNTR HLLW PS	SEWER FUND	NON-DEPARTMENTAL		1,549.60
	WWTP UPGRADES	SEWER FUND	NON-DEPARTMENTAL		1,726.40
	ADMIN ORDER	SEWER FUND	SEWER		650.00
				TOTAL:	11,183.25
KAY CASTO & CHANEY PLLC	WTRRATEINCREASE: THRU 12/3	WATER FUND	WATER		187.50
	MDDLWYDVLPMNT: THRU 12/31/	WATER FUND	WATER		3,412.50
	CLLCTNSYSTM: THRU 12/31/23	SEWER FUND	NON-DEPARTMENTAL		260.60
	GENERAL: THRU 12/31/23	SEWER FUND	SEWER		270.50
	SWRRATEINCREASE: THRU 12/3	SEWER FUND	SEWER		187.50
				TOTAL:	4,318.60
MCKINNEY'S AUTO REPAIR	OIL CHANGE SEWER VEHICLE	SEWER FUND	SEWER		114.96
				TOTAL:	114.96
MISS UTILITY OF WV, INC.	MESSAGE FEES: DEC	WATER FUND	WATER		163.10
	MESSAGE FEES: DEC	SEWER FUND	SEWER		163.10
				TOTAL:	326.20
PACE ANALYTICAL SERVICES, LLC	TESTING: WV0022349/001	SEWER FUND	SEWER		226.20
	TESTING: WV002349/002	SEWER FUND	SEWER		128.80
	TESTING: CT	SEWER FUND	SEWER		103.70
	TESTING: CT WKLY	SEWER FUND	SEWER		264.20
				TOTAL:	722.90
PHONETICS, INC	GH/CAV ETHERNET RNWL	WATER FUND	WATER		166.80
				TOTAL:	166.80
SG PLUMBING, INC.	149 STAYMAN DR	WATER FUND	WATER		1,600.00
				TOTAL:	1,600.00
GERALD TAYLOR CO., INC.	PUMP / TRANSPORT	WATER FUND	WATER		1,080.44
	SUPERVAC	SEWER FUND	SEWER		1,990.68
	PUMP / TRANSPORT	SEWER FUND	SEWER		1,049.40
				TOTAL:	4,120.52
THE CI THORNBURG CO, INC.	TRANSCEIVER	WATER FUND	WATER		5,373.00
	PILOT VALVE UNIT	WATER FUND	WATER		3,679.78
	CALAMP 140-5018-502 VIPER	WATER FUND	WATER		2,115.14
				TOTAL:	11,167.92
TYLER TECHNOLOGIES	ERP PRO	WATER FUND	WATER		13,414.27
	ERP PRO	SEWER FUND	SEWER		13,414.27
				TOTAL:	26,828.54
HD SUPPLY INC	HRMTR ASHLYBRN,11TH,FRRST,	SEWER FUND	SEWER		251.65
	TRANSMITTER SUBMERS CAGED	SEWER FUND	SEWER		1,674.19
				TOTAL:	1,925.84
WV BUREAU OF EMPLOYMENT PROGRAMS	BENEFITS FOR QTR 12/31/23	WATER FUND	WATER		26.32
	BENEFITS FOR QTR 12/31/23	SEWER FUND	SEWER		26.32
				TOTAL:	52.64
WV RURAL WATER ASSOCIATION	VOTING DUES	WATER FUND	WATER		2,500.00
	VOTING DUES	SEWER FUND	SEWER		2,500.00

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
3RD TIME TRUCKING	HAULING	WATER FUND	WATER		137.65
	HAULING	WATER FUND	WATER		137.66
	HAULING	WATER FUND	WATER		286.97
	HAULING	WATER FUND	WATER		286.96
	HAULING	SEWER FUND	SEWER		133.00
				TOTAL:	982.24
IRVIN DUANE SHUTLER	S SAMUEL & S GEORGE MAIN D	WATER FUND	WATER		625.00
				TOTAL:	625.00
AMERIGAS PROPANE LP	TANK RENTAL: SOUTH PAW	SEWER FUND	SEWER		160.53
				TOTAL:	160.53
CARMEUSE LIME & STONE	HYDRATE CHEMICAL BULK	SEWER FUND	SEWER		7,000.36
	HYDRATE CHEMICAL BULK	SEWER FUND	SEWER		4,767.60-
	HYDRATE CHEMICAL BULK	SEWER FUND	SEWER		565.65
				TOTAL:	2,798.41
CHAMPION INDUSTRIES, INC	PRINTING SVCS DEC	WATER FUND	WATER		1,322.03
	POSTAGE 4 PRINTING SVCS DE	WATER FUND	WATER		2,978.45
	PRINTING SVCS DEC	SEWER FUND	SEWER		1,322.02
	POSTAGE 4 PRINTING SVCS DE	SEWER FUND	SEWER		2,978.46
				TOTAL:	8,600.96
CHARLES TOWN SEWER	DEC FUNDING	SEWER FUND	NON-DEPARTMENTAL		16,302.69
				TOTAL:	16,302.69
CHARLES TOWN WATER	DEC FUNDING	WATER FUND	NON-DEPARTMENTAL		11,143.16
				TOTAL:	11,143.16
CORE & MAIN	STOCK	WATER FUND	WATER		4,899.24
	STOCK	WATER FUND	WATER		1,201.76
	STOCK	SEWER FUND	SEWER		2,816.65
	STOCK	SEWER FUND	SEWER		3,574.94
	MTR PIT BULLET, PVCSDR35 S	SEWER FUND	SEWER		1,752.60
				TOTAL:	14,245.19
WV DEPT OF HEALTH & HUMAN SERVICES	BACTERIOLOGICAL TEST	WATER FUND	WATER		140.00
	BACTERIOLOGICAL TEST	WATER FUND	WATER		140.00
				TOTAL:	280.00
EAST MOUNTAIN HEALTH PHYSICIANS, INC	CH SCRNG, AS & JW VACCINAT	WATER FUND	WATER		418.00
				TOTAL:	418.00
ERM & ASSOCIATES LLC	ESMNT ACQSTN 2023CLLCTNSYS	SEWER FUND	NON-DEPARTMENTAL		3,033.65
				TOTAL:	3,033.65
TRISHA S FOWLER	1/10, 1/12, 1/17/24	WATER FUND	WATER		300.00
	1/10, 1/12, 1/17/24	SEWER FUND	SEWER		300.00
				TOTAL:	600.00
GUTTMAN ENERGY	W/E 1/07/24	WATER FUND	WATER		913.63
	W/E 1/14/24	WATER FUND	WATER		871.95
	W/E 1/07/24	SEWER FUND	SEWER		962.63
	W/E 1/14/24	SEWER FUND	SEWER		1,021.75
				TOTAL:	3,769.96