CHARLES TOWN UTILITY BOARD
AGENDA

WEDNESDAY, OCTOBER 26, 2022

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

CALL TO ORDER

1. **APPROVAL OF MINUTES**
   a. Approval of October 12, 2022 Special Meeting Minutes
      2022.10.12 UB Minutes.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 Meetings - Meeting Agendas and Minutes 2022) or by accessing the following zoom link:

   https://us06web.zoom.us/j/84111745081?pwd=eDZQYjNibjlJdWQ2VjdEL05hYklNdz09

   Meeting ID: 841 1174 5081
   Passcode: 260315
   +1 301 715 8592 US

3. **UNFINISHED BUSINESS**
   a. Leak Adjustment Policy Discussion
      Draft Exempt Meter Policy.pdf

4. **NEW BUSINESS**
   a. Water Capacity Improvement Fee Discussion
      2022-06-01 - CTUB Water - Tech Memo - FINAL DRAFT.pdf
      2022-06-15 - CTUB Water - Tech Memo - FINAL DELIVERABLE.pdf
      2022-09-20 - CTUB Water - Tech Memo- FINAL DELIVERABLE.pdf
   b. Greenfield Forcemain Upgrade
      Greenfield FM Upgrade - Task Order 22.pdf

5. **MANAGER REPORTS**
   a. Utility Manager Report

Revenue & Expense September.pdf

b. Chairman Report

6. **APPROVAL OF BILLS**
   a. October 26, 2022
      2022.10.26 Board Report.pdf

7. **ADJOURNMENT**

8. **INFORMATION ONLY - NEXT MEETING NOVEMBER 16, 2022, 4:00 P.M.**

Charles Town Utility Board
Special Board Meeting
October 12, 2022

The Charles Town Utility Board held a special meeting on October 12, 2022 at 4:00 P.M. Members of the Board present were John Barkley, Duke Pierson, Tommy Stocks and Jeff Whitten. Also present were Kristen Stolipher, April Shultz, Hoy Shingleton and Ashley Stottlemyer.

CALL TO ORDER

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

APPROVAL OF MINUTES

Approval of September 28, 2022 Regular Meeting Minutes

The Chairman called for changes or corrections to the September 28, 2022 regular meeting minutes.

Action: **Motion by Mr. Pierson, second by Mr. Stocks, the Board unanimously approved the minutes as presented.**

PUBLIC COMMENT

The Board received a public comment from Elizabeth Ricketts.

NEW BUSINESS

Leak Adjustment Policy Discussion

Mrs. Stolipher provided in the packet the current leak adjustment policy which does not allow adjustments for pool fillings or irrigation. Based on public comments received last month, she provided documentation for the Board to review on allowing for these two adjustments. Staff recommended customers purchase a separate water meter for irrigation and provide specific criteria for a once per year pool filling credit. The Board provided discussion and were in agreement that customers should be required to purchase a separate meter from CTUB for irrigation and pool filling purposes. Staff will draft an amendment to the leak adjustment policy for the Board to consider at the next meeting.

Action: **Motion by Mr. Stocks, second by Mr. Pierson, the Board unanimously approved staff amending the current leak adjustment policy to allow for a separate water meter for irrigation and pool fillings.**

Sawgrass Drive – Cingular Wireless 3rd Lease Amendment

Mrs. Stolipher explained that page 9 of the packet was amended with revised language. She mentioned this 3rd lease amendment increases the rent $275.00 per month. Mr. Shingleton reviewed the agreement finding no issues. Mike Hofe reviewed the structural design finding no issues.

Action: **Motion made by Mr. Stocks, second by Mr. Pierson, the Board unanimously approved the Cingular Wireless 3rd Lease Amendment.**

Keyes Ferry Road – T-Mobile 4th Lease Amendment

Mrs. Stolipher stated the 4th lease amendment increases the rent $200.00 per month. Mr. Shingleton and Mr. Hofe reviewed the agreement finding no issues.

Action: **Motion made by Mr. Whitten, second by Mr. Pierson, the Board unanimously approved the T-Mobile 4th Lease Amendment.**

Kings Crossing Development Water and Sewer Alternate Mainline Extension Agreements

Mrs. Stolipher provided the Kings Crossing development has proposed 404 residential units located directly across from the water plant on Charles Town Road. The Board reviewed the draft agreements. The water connection would be along Charles Town Road, but the sewer would require extensive necessary offsite improvements which would be paid for by the developer. Both Mr. Shingleton and the developer have reviewed the agreements.

Action: **Motion made by Mr. Stocks, second by Mr. Pierson, the Board unanimously approved the water Alternate Mainline Extension Agreement for Kings Crossing.**

Action: **Motion made by Mr. Pierson, second by Mr. Whitten, the Board unanimously approved sewer Alternate Mainline Extension Agreement for Kings Crossing.**

MANAGER REPORTS

Utility Manager Report

Mrs. Stolipher briefed the Board on this month's sewer and water efforts including the submission of the PSC Annual Reports, progress on the water grant for the security cameras, and the City Council discussion on the water capacity improvement fee in the draft water tariff. City Council invited the Board to a workshop on October 17th to discuss these fees. Mrs. Stolipher will be out of town for that workshop, but encouraged the Board to attend.

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

Chairman Report

The Chairman mentioned again of the City Council workshop on October 17th at 6:00 P.M. and invited all Board members to attend to discuss the water capacity improvement fee.

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

APPROVAL OF BILLS

October 12, 2022

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

INFORMATION ONLY

The next regular meeting is scheduled for Wednesday, October 26th at 4:00 P.M. at 661 S. George Street.

UNFINISHED BUSINESS

PSC Case Updates - Possible Executive Session Under: WV State Code Section §6-9A-4(b)(9) - To consider matters involving or affecting the purchase, sale or lease of property, advance construction planning, the investment of public funds or other matters involving commercial competition, which if made public, might adversely affect the financial or other interest of the state or any political subdivision and involving contract matters.

- WV PSC Case No. 21-0260-S-DU Shenandoah Junction Public Sewer
- WV PSC Case No. 21-0818-S-DU Cave Road Utilities, LLC
- WV PSC Case No. 22-0370-S-PC-PW Cave Road Utilities, LLC/Jefferson Utilities, Inc. Transfer of Sewer Utility
- WV PSC Case No. 22-0369-W-PC-PW Cave Road Utilities, LLC/Jefferson Utilities, Inc. Transfer of Water Utility

Action: **Motion by Mr. Pierson, second by Mr. Stocks, the Board unanimously approved convening into Executive Session at 4:37 P.M.**

The Board declared executive session over at 5:15 P.M with no action.

Action: **Motion by Mr. Pierson, second by Mr. Whitten, the Board unanimously approved the motion to adjourn.**

There being no further business at this time, the Board adjourned the meeting at 5:16 P.M.

_____
John Barkley
Chairman

_____
Ashley Stottlemyer
Secretary

Charles Town
Utility Board

661 S. George Street, Suite 101 Charles Town, WV 25414
Phone: (304) 725-2316 ♦ Fax: (304) 725-7150 ♦ Web: www.ctubwv.com

UTILITY BOARD

CHAIRMAN
City of Charles Town
City Manager
John Barkley

VICE CHAIRMAN
City of Ranson
Mayor
Duke Pierson

TREASURER
Thomas Stocks

INTERIM SECRETARY
Ashley Stottlemyer

Board Member
Jefferson Whitten

UTILITY MANAGER
Kristen Stolipher

October 28, 2022

Exempt Meter Policy

The Charles Town Utility Board (CTUB) does not allow adjustments to sewer charges on customer bills for lawn and garden watering, or filling swimming pools, hot tubs or saunas.

Customers may apply for a second exempt water meter to measure water used for lawn watering or pool/hot tub filling.

"Exempt Meter" shall mean a second potable water meter installed by a water utility to serve a single customer which is exclusively connected to water facilities which do not return the potable water passing through such meter to the sanitary sewer system and are from a tap on the water main that is not the same tap as the house meter uses.

The installation of an Exempt Meter for a residential customer is permitted provided:

(1) The Exempt Meter and all appurtenant facilities are subject to CTUB's initial and subsequent inspection to confirm that potable water is not returned to the sanitary sewer system.

(2) All Exempt Meters must be installed on a tap on the water main that is not the same tap as the house meter uses.

(3) CTUB will not impose sanitary sewer charges on potable water passing through an Exempt Meter.

(4) The Charles Town Utility Board shall consider on a case-by-case basis requests for deduct or Exempt Meters for commercial or industrial customers.

(5) A security deposit fee of $50.00 and the associated costs for Exempt Meter of nine hundred and fifty dollars ($975.00) must be paid at the time of application. This cost includes the tap, radio, meter box and meter and inspection of exempt meter line installation (by Customer).

(6) Installation of all water lines or devices beyond the curb shall be the sole responsibility and expense of the customer.

(7) CTUB will inspect the installation (by customer) and install the meter.

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APPLICATION FOR WATER IRRIGATION/POOL METER

Charles Town Utility Board
661 S George Street, Charles Town, WV 25414
www.ctubwv.com

1.) "Irrigation/Pool Service" is a service exclusively used for the purposes of landscaping, yard irrigation, or filling swimming pools, providing that none of the water returns to the sanitary sewer system.

2.) A back-flow preventer is required to protect the public water supply. Failure to install this devise will initiate an interruption of service.

3.) Exempt meter shall be on a separate tap.

4.) Installation of water lines or devices beyond the curb shall be the sole responsibility and expense of the customer.

5.) A deposit of $50.00 and the cost for the meter of $975.00 must be paid at the time of application.

Note: CTUB does not guarantee that a meter can be installed at all locations requested. If conditions in the field create an additional expense, the customer will be notified and given the option to pay the additional expense or terminate the project with all prepaid fees being refunded. Larger than 5/8" irrigation meter requested and associated costs shall be reviewed with Billing Manager.

Name	First	MI	Last	
Picture ID Required	**Drivers License #**	State	Number	

Address for Service	Number Street	Apt#	City	
	Development or Apartment Name	Lot		

Address for Bill	Number Street	City	State	Zip
	Apt #	**Home/Cell Phone**	( ) -	

Email Address		**Secondary Phone**	( ) -

Own/Rent		**Landlord Name**		**Phone**	( ) -

Date Service is to Start	M M / D D / Y Y Y Y	***Service can be stopped or started during business hours only.***

I HEREBY AUTHORIZE SERVICE TO BE ESTABLISHED IN MY NAME AT THE ABOVE PROPERTY LOCATION AND AGREE TO PAY FOR SERVICE UNTIL DISCONTINUED BY MY REQUEST IN WRITING

Signature _____ Date _____

PLEASE MAKE CHECKS PAYABLE TO "*CHARLES TOWN UTILITY BOARD* " AND RETURN WITH APPLICATION

OFFICE USE ONLY - DO NOT WRITE BELOW

Account Number	NUMBER		
Irrigation Meter Water Deposit Collected	AMOUNT	RECEIPT NUMBER	
Meter Fee Collected	AMOUNT	RECEIPT NUMBER	
Clerk			

Dewberry

DRAFT

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

Date: June 2, 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 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, $12.54 million in non-growth related costs were identified and $43.95 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 $14.56 million at an anticipated weighted average bond interest rate of 3.97 percent. The resulting net growth-related costs (including the credit) are $29.39 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	$43,946,697	Dollars
Debt Principal Credit	$(14,556,904)	Dollars
Net Growth Related Costs	$29,389,793	Dollars
Calculated CIF	4,564	Per EDU
Calculated CIF	29.64	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 $4,564. Each commercial or industrial user would be assessed $29.64 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 $5,644, 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 $22.69 per gpd.

Dewberry confirmed the CTUB CIF methodology per AWWA Manual M1 standards and concluded that a CIF of $4,564 per EDU or $29.64 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 slightly below the mean CIF value and slightly 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

DRAFT

6/2/2022

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	Value for Local Growth Related Improvement
Prior Projects															
2016 Water Projects - WTP Improvements	2016	30	$ 7,695,000.00	$ 7,695,000		1.170	$ 9,003,150	20%	$ 7,202,520	100%	85.7%	14.3%	1	$ 6,173,589	$ 1,028,931
		Sub Total	$ 7,695,000	$ 7,695,000			$ 9,003,150		$ 7,202,520					$ 6,173,589	$ 1,028,931
Current & Future 10-Year CIP Projects (Opinions of Probable Cost)															
Charles Town Racetrack	2022	30	$ 88,000	$ 88,000		1.0000	$ 88,000	0%	$ 88,000	100%	50%	50%		$ 44,000	$ 44,000
5th Street Hydrant	2022	30	$ 7,000	$ 7,000		1.0000	$ 7,000	0%	$ 7,000	100%	70%	30%		$ 4,900	$ 2,100
6th Avenue Hydrant	2022	30	$ 7,000	$ 7,000		1.0000	$ 7,000	0%	$ 7,000	100%	70%	30%		$ 4,900	$ 2,100
S. Mildred Hydrants	2022	30	$ 9,000	$ 9,000		1.0000	$ 9,000	0%	$ 9,000	100%	70%	30%		$ 6,300	$ 2,700
7th Avenue	2023	30	$ 35,000	$ 35,000		1.0325	$ 36,138	0%	$ 36,138	100%	70%	30%		$ 25,296	$ 10,841
W. Avis Hydrant	2023	30	$ 9,000	$ 9,000		1.0325	$ 9,293	0%	$ 9,293	100%	70%	30%		$ 6,505	$ 2,788
W. Academy Tie	2023	30	$ 88,000	$ 88,000		1.0325	$ 90,860	0%	$ 90,860	100%	70%	30%		$ 63,602	$ 27,258
Main Zone Maintenance	2023	30	$ 28,000	$ 28,000		1.0325	$ 28,910	0%	$ 28,910	100%	100%	0%		$ 28,910	$ -
Northern High Zone Maintenance	2023	30	$ 2,000	$ 2,000		1.0325	$ 2,065	0%	$ 2,065	100%	100%	0%		$ 2,065	$ -
Huntfield Zone Maintenance	2023	30	$ 10,000	$ 10,000		1.0325	$ 10,325	0%	$ 10,325	100%	100%	0%		$ 10,325	$ -
Ameritech Street	2023	30	$ 333,000	$ 333,000		1.0325	$ 343,823	0%	$ 343,823	100%	70%	30%		$ 240,676	$ 103,147
N. Mildred Street B	2024	30	$ 200,000	$ 200,000		1.0661	$ 213,211	0%	$ 213,211	100%	10%	90%		$ 21,321	$ 191,890
Burns St. PS Upgrade	2024	30	$ 3,526,000	$ 3,526,000		1.0661	$ 3,758,914	0%	$ 3,758,914	100%	10%	90%		$ 375,891	$ 3,383,023
Well Development/Spring Source Construction	2024	30	$ 1,480,000	$ 1,480,000		1.0661	$ 1,577,763	0%	$ 1,577,763	100%	25%	75%		$ 394,441	$ 1,183,322
Church Street	2025	30	$ 595,000	$ 595,000		1.1007	$ 654,918	0%	$ 654,918	100%	25%	75%		$ 163,730	$ 491,189
South George Street	2025	30	$ 279,000	$ 279,000		1.1007	$ 307,096	0%	$ 307,096	100%	80%	20%		$ 245,677	$ 61,419
Water Street	2025	30	$ 2,400,000	$ 2,400,000		1.1007	$ 2,641,687	0%	$ 2,641,687	100%	70%	30%		$ 1,849,181	$ 792,506
Route 340	2025	30	$ 1,173,000	$ 1,173,000		1.1007	$ 1,291,125	0%	$ 1,291,125	100%	0%	100%		$ -	$ 1,291,125
Huntwell West (Formerly American Heritage)	2026	30	$ 2,695,000	$ 2,695,000		1.1365	$ 3,062,803	0%	$ 3,062,803	100%	0%	100%		$ -	$ 3,062,803
N. Mildred Street A	2026	30	$ 648,000	$ 648,000		1.1365	$ 736,436	0%	$ 736,436	100%	20%	80%		$ 147,287	$ 589,149
E. 10th St.	2026	30	$ 298,000	$ 298,000		1.1365	$ 338,670	0%	$ 338,670	100%	70%	30%		$ 237,069	$ 101,601
Huntfield	2027	30	$ 210,000	$ 210,000		1.1734	$ 246,416	0%	$ 246,416	100%	0%	100%		$ -	$ 246,416
Fritts & Old Town Ranson	2028	30	$ 1,295,000	$ 1,295,000		1.2115	$ 1,568,954	0%	$ 1,568,954	100%	0%	100%		$ -	$ 1,568,954
Magnolia Springs	2028	30	$ 1,085,000	$ 1,085,000		1.2115	$ 1,314,529	0%	$ 1,314,529	100%	0%	100%		$ -	$ 1,314,529
Norborne Greene	2028	30	$ 7,000	$ 7,000		1.2115	$ 8,481	0%	$ 8,481	100%	0%	100%		$ -	$ 8,481
Charles Town Infill	2028	30	$ 35,000	$ 35,000		1.2115	$ 42,404	0%	$ 42,404	100%	0%	100%		$ -	$ 42,404
Windmill Crossing	2028	30	$ 7,000	$ 7,000		1.2115	$ 8,481	0%	$ 8,481	100%	0%	100%		$ -	$ 8,481
Augustine Ave. PS Discharge	2029	30	$ 298,000	$ 298,000		1.2509	$ 372,775	0%	$ 372,775	100%	0%	100%		$ -	$ 372,775
Locust Hill	2029	30	$ 2,400,000	$ 2,400,000		1.2509	$ 3,002,214	0%	$ 3,002,214	100%	0%	100%		$ -	$ 3,002,214
Roper/Stolipher	2029	30	$ 1,243,000	$ 1,243,000		1.2509	$ 1,554,897	0%	$ 1,554,897	100%	0%	100%		$ -	$ 1,554,897
Augustine Ave. PS Upgrade	2029	30	$ 780,000	$ 780,000		1.2509	$ 975,720	0%	$ 975,720	100%	0%	100%		$ -	$ 975,720
Intake Construction Cost	2030	30	$ 1,265,000	$ 1,265,000		1.2916	$ 1,633,846	0%	$ 1,633,846	100%	10%	90%		$ 163,385	$ 1,470,461
WTP Upgrade	2031	30	$ 17,505,000	$ 17,505,000		1.3336	$ 23,343,859	0%	$ 23,343,859	100%	10%	90%		$ 2,334,386	$ 21,009,473
		Sub Total	$ 40,040,000	$ 40,040,000			$ 49,287,612		$ 49,287,612					$ 6,369,846	$ 42,917,765
		Totals	$ 47,735,000	$ 47,735,000			$ 58,290,762		$56,490,132					$ 12,543,435	**$ 43,946,697**

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	$ 43,946,697		
Debit Principal Credit	$ (14,556,904)	(See Attachment B)	
Net Growth Related Costs	$ 29,389,793		
Calculated Capacity Improvement Fee	**$ 4,564**	per EDU	
Calculated Capacity Improvement Fee	$ 29.64	per gpd	

	Year	Capital Costs by Year	Growth Costs by Year
	2022	$ 111,000	$ 50,900
	2023	$ 521,413	$ 144,034
	2024	$ 5,549,889	$ 4,758,235
	2025	$ 4,894,827	$ 2,636,239
	2026	$ 4,137,909	$ 3,753,553
	2027	$ 246,416	$ 246,416
	2028	$ 2,942,848	$ 2,942,848
	2029	$ 5,905,605	$ 5,905,605
	2030	$ 1,633,846	$ 1,470,461
	2031	$ 23,343,859	$ 21,009,473
Not Included	2032	$ -	$ -
Not Included	2033	$ -	$ -
Not Included	2034	$ -	$ -
Not Included	2035	$ -	$ -
Not Included	2036	$ -	$ -
	TOTAL	$ 49,287,612	$ 42,917,765

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

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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)	$ 0	$ (28,284)	$ (27,204)
2024	$ (29,147)	$ (13,347)	$ (42,494)	$ (39,311)
2025	$ (30,036)	$ (50,705)	$ (80,740)	$ (71,840)
2026	$ (30,952)	$ (109,478)	$ (140,430)	$ (120,179)
2027	$ (31,896)	$ (113,857)	$ (145,753)	$ (119,971)
2028	$ (32,869)	$ (154,885)	$ (187,754)	$ (148,642)
2029	$ (33,871)	$ (256,197)	$ (290,069)	$ (220,874)
2030	$ (34,904)	$ (282,483)	$ (317,387)	$ (232,447)
2031	$ (35,969)	$ (658,202)	$ (694,171)	$ (488,983)
2032	$ (37,066)	$ (684,530)	$ (721,596)	$ (488,893)
2033	$ (38,196)	$ (711,911)	$ (750,108)	$ (488,804)
2034	$ (39,361)	$ (740,388)	$ (779,749)	$ (488,718)
2035	$ (40,562)	$ (770,003)	$ (810,565)	$ (488,634)
2036	$ (41,799)	$ (800,803)	$ (842,603)	$ (488,551)
2037	$ (43,074)	$ (832,836)	$ (875,910)	$ (488,471)
2038	$ (44,388)	$ (866,149)	$ (910,537)	$ (488,392)
2039	$ (45,742)	$ (900,795)	$ (946,536)	$ (488,316)
2040	$ (47,137)	$ (936,827)	$ (983,963)	$ (488,241)
2041	$ (48,574)	$ (974,300)	$ (1,022,874)	$ (488,168)
2042	$ (50,056)	$ (1,013,272)	$ (1,063,328)	$ (488,097)
2043	$ (51,583)	$ (1,053,803)	$ (1,105,385)	$ (488,028)
2044	$ (53,156)	$ (1,095,955)	$ (1,149,111)	$ (487,961)
2045	$ (54,777)	$ (1,139,793)	$ (1,194,570)	$ (487,895)
2046	$ -	$ (1,185,385)	$ (1,185,385)	$ (465,657)
2047	$ -	$ (1,232,800)	$ (1,232,800)	$ (465,791)
2048	$ -	$ (1,282,112)	$ (1,282,112)	$ (465,926)
2049	$ -	$ (1,333,396)	$ (1,333,396)	$ (466,060)
2050	$ -	$ (1,386,732)	$ (1,386,732)	$ (466,195)
2051	$ -	$ (1,442,202)	$ (1,442,202)	$ (466,329)
2052	$ -	$ (1,499,890)	$ (1,499,890)	$ (466,464)
2053	$ -	$ (1,559,885)	$ (1,559,885)	$ (466,598)
2054	$ -	$ (1,578,990)	$ (1,578,990)	$ (454,278)
2055	$ -	$ (1,522,717)	$ (1,522,717)	$ (421,360)
2056	$ -	$ (1,399,578)	$ (1,399,578)	$ (372,498)
2057	$ -	$ (1,455,561)	$ (1,455,561)	$ (372,605)
2058	$ -	$ (1,395,484)	$ (1,395,484)	$ (343,586)
2059	$ -	$ (1,142,803)	$ (1,142,803)	$ (270,629)
2060	$ -	$ (1,136,499)	$ (1,136,499)	$ (258,859)
Total Debt Principal Credit (Growth Related Portion)				**$ (14,556,904)**

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

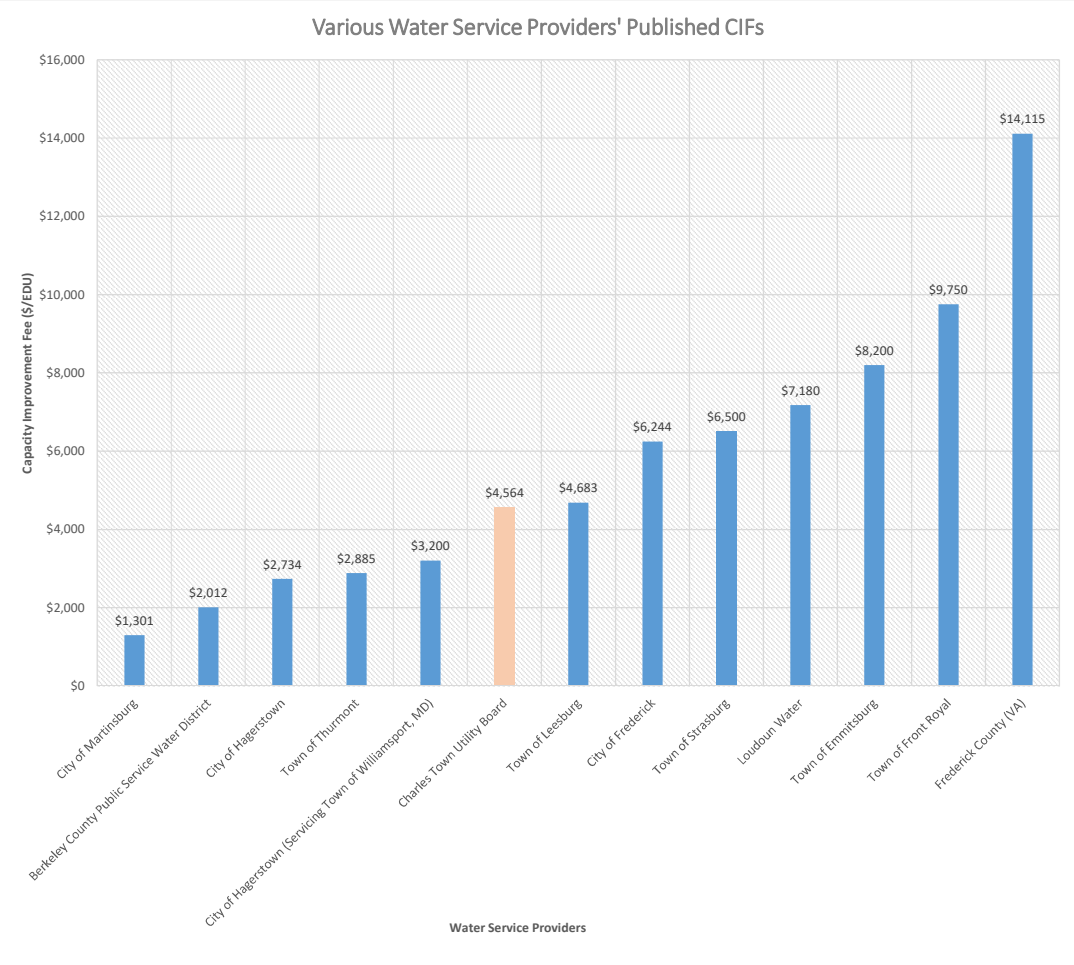
Service Provider	Geographic Region	Number of Customers	Primary Water Source (Ground/Surface)	Effective Date of CIF	Published CIF ($/EDU)	Flow per EDU (gpd)	Normalized CIF ($/gpd)
West Virginia							
Charles Town Utility Board	Jefferson County, WV	5,890	Surface	2022	$4,564	154	$29.64
Berkeley County 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

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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	$4,564
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: $5,644

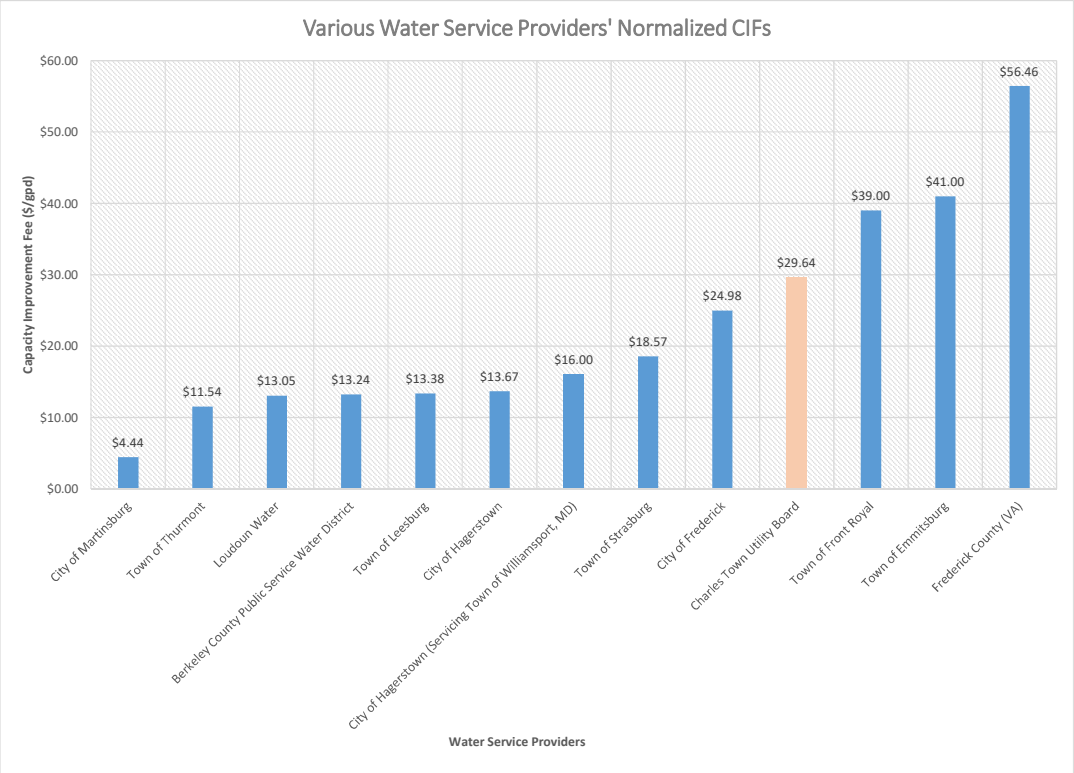


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ATTACHMENT E - VARIOUS WATER SERVICE PROVIDERS' NORMALIZED CIFS

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	$29.64
Town of Front Royal	$39.00
Town of Emmitsburg	$41.00
Frederick County (VA)	$56.46

Mean Dollars per GPD: $22.69



Dewberry

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

Date: June 15, 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, $14.10 million in non-growth related costs were identified and $53.33 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 $18.03 million at an anticipated weighted average bond interest rate of 3.98 percent. The resulting net growth-related costs (including the credit) are $35.30 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	$53,329,807	Dollars
Debt Principal Credit	$(18,034,765)	Dollars
Net Growth Related Costs	$35,295,042	Dollars
Calculated CIF	5,481	Per EDU
Calculated CIF	35.59	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 $5,481. Each commercial or industrial user would be assessed $35.59 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 $5,714, 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 $23.15 per gpd.

Dewberry confirmed the CTUB CIF methodology per AWWA Manual M1 standards and concluded that a CIF of $5,481 per EDU or $35.59 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 slightly 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

6/15/2022

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	Value for 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	2022	40	$ 88,000	$ 88,000		1.0000	$ 88,000	0%	$ 88,000	100%	50%	50%		$ 44,000	$ 44,000
5th Street Hydrant	2022	40	$ 7,000	$ 7,000		1.0000	$ 7,000	0%	$ 7,000	100%	70%	30%		$ 4,900	$ 2,100
6th Avenue Hydrant	2022	40	$ 7,000	$ 7,000		1.0000	$ 7,000	0%	$ 7,000	100%	70%	30%		$ 4,900	$ 2,100
S. Mildred Hydrants	2022	40	$ 9,000	$ 9,000		1.0000	$ 9,000	0%	$ 9,000	100%	70%	30%		$ 6,300	$ 2,700
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%	10%	90%		$ 221,170	$ 1,990,530
N. Mildred Street B	2024	40	$ 200,000	$ 200,000		1.0833	$ 216,653	0%	$ 216,653	100%	10%	90%		$ 21,665	$ 194,988
Burns St. PS Upgrade	2024	30	$ 3,526,000	$ 3,526,000		1.0833	$ 3,819,591	0%	$ 3,819,591	100%	10%	90%		$ 381,959	$ 3,437,632
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%	10%	90%		$ 178,252	$ 1,604,265
Huntwell West (Formerly American Heritage)	2026	40	$ 2,695,000	$ 2,695,000		1.1735	$ 3,162,481	0%	$ 3,162,481	100%	0%	100%		$ -	$ 3,162,481
N. Mildred Street A	2026	40	$ 648,000	$ 648,000		1.1735	$ 760,404	0%	$ 760,404	100%	20%	80%		$ 152,081	$ 608,323
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%	10%	90%		$ 9,388	$ 84,489
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%	10%	90%		$ 170,972	$ 1,538,752
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%	10%	90%		$ 2,866,392	$ 25,797,526
		Sub Total	$ 46,401,000	$ 46,401,000			$ 59,614,411		$ 59,614,411					$ 7,401,479	$ 52,212,933
		Totals	$ 54,096,000	$ 54,096,000			$ 69,387,061		$67,432,531					$ 14,102,724	**$ 53,329,807**

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	$ 53,329,807		
Debt Principal Credit	$ (18,034,765)	(See Attachment B)	
Net Growth Related Costs	$ 35,295,042		
Calculated Capacity Improvement Fee	**$ 5,481**	per EDU	
Calculated Capacity Improvement Fee	$ 35.59	per gpd	

	Year	Capital Costs by Year	Growth Costs by Year
	2022	$ 111,000	$ 50,900
	2023	$ 2,737,304	$ 2,135,722
	2024	$ 5,639,476	$ 4,835,043
	2025	$ 6,796,340	$ 4,304,593
	2026	$ 4,366,453	$ 3,960,201
	2027	$ 256,481	$ 256,481
	2028	$ 4,797,396	$ 4,626,424
	2029	$ 6,246,043	$ 6,246,043
	2030	$ -	$ -
	2031	$ 28,663,918	$ 25,797,526
Not Included	2032	$ -	$ -
Not Included	2033	$ -	$ -
Not Included	2034	$ -	$ -
Not Included	2035	$ -	$ -
Not Included	2036	$ -	$ -
	TOTAL	$ 59,614,411	$ 52,212,933

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)	$ 0	$ (28,284)	$ (27,202)
2024	$ (29,147)	$ (44,244)	$ (73,391)	$ (67,880)
2025	$ (30,036)	$ (110,541)	$ (140,576)	$ (125,044)
2026	$ (30,952)	$ (173,348)	$ (204,300)	$ (174,771)
2027	$ (31,896)	$ (180,282)	$ (212,178)	$ (174,563)
2028	$ (32,869)	$ (250,068)	$ (282,937)	$ (223,867)
2029	$ (33,871)	$ (359,214)	$ (393,085)	$ (299,115)
2030	$ (34,904)	$ (373,582)	$ (408,487)	$ (298,937)
2031	$ (35,969)	$ (823,988)	$ (859,956)	$ (605,241)
2032	$ (37,066)	$ (856,947)	$ (894,013)	$ (605,126)
2033	$ (38,196)	$ (891,225)	$ (929,421)	$ (605,013)
2034	$ (39,361)	$ (926,874)	$ (966,235)	$ (604,902)
2035	$ (40,562)	$ (963,949)	$ (1,004,511)	$ (604,793)
2036	$ (41,799)	$ (1,002,507)	$ (1,044,306)	$ (604,687)
2037	$ (43,074)	$ (1,042,607)	$ (1,085,681)	$ (604,582)
2038	$ (44,388)	$ (1,084,311)	$ (1,128,699)	$ (604,479)
2039	$ (45,742)	$ (1,127,684)	$ (1,173,425)	$ (604,378)
2040	$ (47,137)	$ (1,172,791)	$ (1,219,928)	$ (604,279)
2041	$ (48,574)	$ (1,219,703)	$ (1,268,277)	$ (604,182)
2042	$ (50,056)	$ (1,268,491)	$ (1,318,547)	$ (604,087)
2043	$ (51,583)	$ (1,319,231)	$ (1,370,813)	$ (603,993)
2044	$ (53,156)	$ (1,372,000)	$ (1,425,156)	$ (603,902)
2045	$ (54,777)	$ (1,426,880)	$ (1,481,657)	$ (603,812)
2046	$ -	$ (1,483,955)	$ (1,483,955)	$ (581,601)
2047	$ -	$ (1,543,313)	$ (1,543,313)	$ (581,713)
2048	$ -	$ (1,605,046)	$ (1,605,046)	$ (581,825)
2049	$ -	$ (1,669,248)	$ (1,669,248)	$ (581,937)
2050	$ -	$ (1,736,017)	$ (1,736,017)	$ (582,049)
2051	$ -	$ (1,805,458)	$ (1,805,458)	$ (582,161)
2052	$ -	$ (1,877,676)	$ (1,877,676)	$ (582,273)
2053	$ -	$ (1,952,784)	$ (1,952,784)	$ (582,385)
2054	$ -	$ (1,887,393)	$ (1,887,393)	$ (541,338)
2055	$ -	$ (1,753,604)	$ (1,753,604)	$ (483,713)
2056	$ -	$ (1,634,379)	$ (1,634,379)	$ (433,570)
2057	$ -	$ (1,699,754)	$ (1,699,754)	$ (433,653)
2058	$ -	$ (1,564,789)	$ (1,564,789)	$ (383,939)
2059	$ -	$ (1,305,821)	$ (1,305,821)	$ (308,135)
2060	$ -	$ (1,358,054)	$ (1,358,054)	$ (308,194)
Total Debt Principal Credit (Growth Related Portion)			**$**	**(18,034,765)**

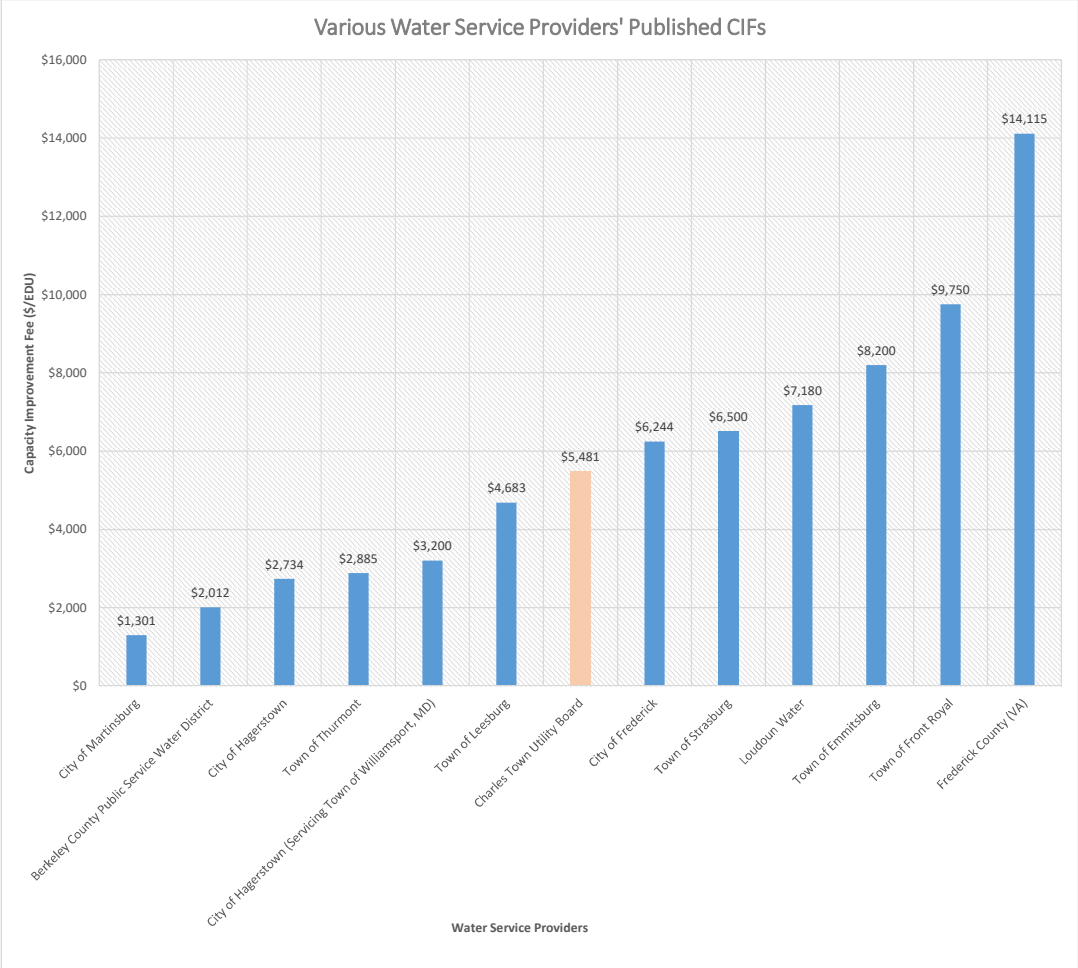
ATTACHMENT C - VARIOUS WATER SERVICE PROVIDERS IN THE REGION AND THEIR CIFS

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	$5,481	154	$35.59
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
Town of Leesburg	$4,683
Charles Town Utility Board	$5,481
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

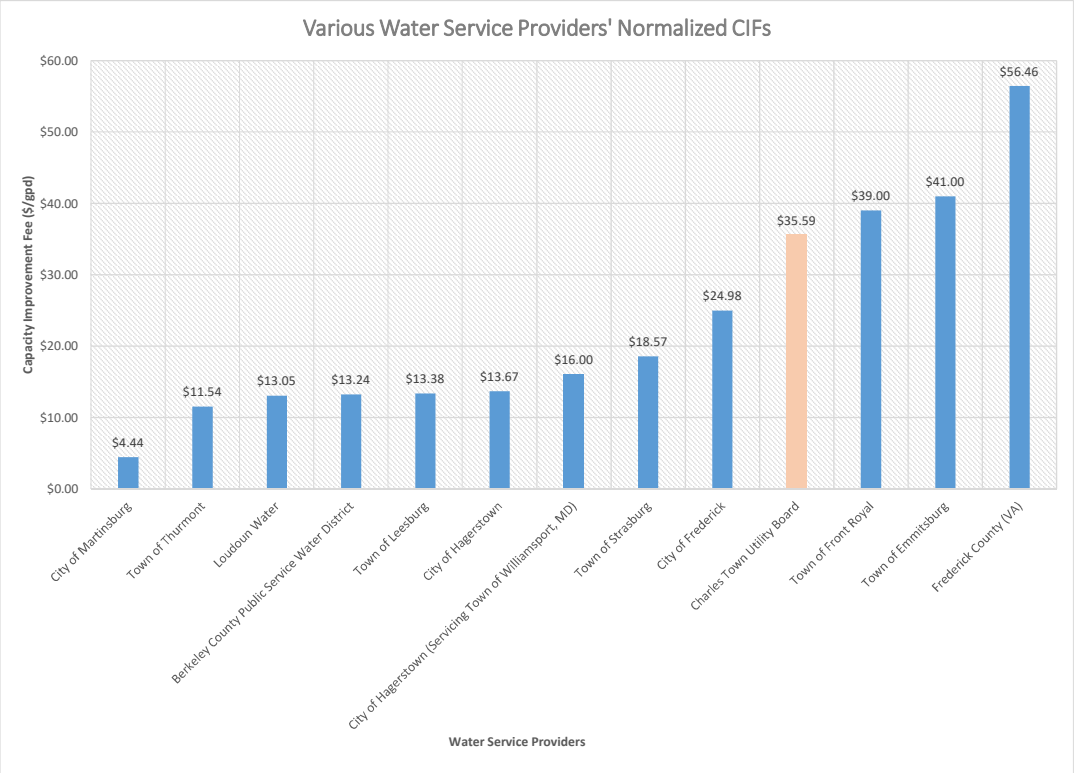
Mean Fee: $5,714



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	$35.59
Town of Front Royal	$39.00
Town of Emmitsburg	$41.00
Frederick County (VA)	$56.46

Mean Dollars per GPD: $23.15



Dewberry

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

Date: September 20, 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 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, $21.14 million in non-growth related costs were identified and $40.25 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 $13.34 million at an anticipated weighted average bond interest rate of 3.97 percent. The resulting net growth-related costs (including the credit) are $26.91 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	$40,251,893	Dollars
Debt Principal Credit	$(13,342,067)	Dollars
Net Growth Related Costs	$26,909,862	Dollars
Calculated CIF	4,179	Per EDU
Calculated CIF	27.14	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 $4,179. Each commercial or industrial user would be assessed $27.14 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 $5,614, 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 $22.50 per gpd.

Dewberry confirmed the CTUB CIF methodology per AWWA Manual M1 standards and concluded that a CIF of $4,179 per EDU or $27.14 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

9/20/2022

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	Value for 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	2022	40	$ 88,000	$ 88,000		1.0000	$ 88,000	0%	$ 88,000	100%	50%	50%		$ 44,000	$ 44,000
5th Street Hydrant	2022	40	$ 7,000	$ 7,000		1.0000	$ 7,000	0%	$ 7,000	100%	70%	30%		$ 4,900	$ 2,100
6th Avenue Hydrant	2022	40	$ 7,000	$ 7,000		1.0000	$ 7,000	0%	$ 7,000	100%	70%	30%		$ 4,900	$ 2,100
S. Mildred Hydrants	2022	40	$ 9,000	$ 9,000		1.0000	$ 9,000	0%	$ 9,000	100%	70%	30%		$ 6,300	$ 2,700
7th Avenue	2023	40	$ 35,000	$ 35,000		1.0325	$ 36,138	0%	$ 36,138	100%	70%	30%		$ 25,296	$ 10,841
W. Avis Hydrant	2023	40	$ 9,000	$ 9,000		1.0325	$ 9,293	0%	$ 9,293	100%	70%	30%		$ 6,505	$ 2,788
W. Academy Tie	2023	40	$ 88,000	$ 88,000		1.0325	$ 90,860	0%	$ 90,860	100%	70%	30%		$ 63,602	$ 27,258
Main Zone Maintenance	2023	40	$ 28,000	$ 28,000		1.0325	$ 28,910	0%	$ 28,910	100%	100%	0%		$ 28,910	$ -
Northern High Zone Maintenance	2023	40	$ 2,000	$ 2,000		1.0325	$ 2,065	0%	$ 2,065	100%	100%	0%		$ 2,065	$ -
Huntfield Zone Maintenance	2023	40	$ 10,000	$ 10,000		1.0325	$ 10,325	0%	$ 10,325	100%	100%	0%		$ 10,325	$ -
Ameritech Street	2023	40	$ 333,000	$ 333,000		1.0325	$ 343,823	0%	$ 343,823	100%	70%	30%		$ 240,676	$ 103,147
New Well / Spring Sources	2023	30	$ 2,125,000	$ 2,125,000		1.0325	$ 2,194,063	0%	$ 2,194,063	100%	30%	70%		$ 658,219	$ 1,535,844
N. Mildred Street B	2024	40	$ 200,000	$ 200,000		1.0661	$ 213,211	0%	$ 213,211	100%	30%	70%		$ 63,963	$ 149,248
Burns St. PS Upgrade	2024	30	$ 3,526,000	$ 3,526,000		1.0661	$ 3,758,914	0%	$ 3,758,914	100%	30%	70%		$ 1,127,674	$ 2,631,240
Well Development/Spring Source Construction	2024	40	$ 1,480,000	$ 1,480,000		1.0661	$ 1,577,763	0%	$ 1,577,763	100%	25%	75%		$ 394,441	$ 1,183,322
Church Street	2025	40	$ 595,000	$ 595,000		1.1007	$ 654,918	0%	$ 654,918	100%	25%	75%		$ 163,730	$ 491,189
South George Street	2025	40	$ 279,000	$ 279,000		1.1007	$ 307,096	0%	$ 307,096	100%	80%	20%		$ 245,677	$ 61,419
Water Street	2025	40	$ 2,400,000	$ 2,400,000		1.1007	$ 2,641,687	0%	$ 2,641,687	100%	70%	30%		$ 1,849,181	$ 792,506
Route 340	2025	40	$ 1,173,000	$ 1,173,000		1.1007	$ 1,291,125	0%	$ 1,291,125	100%	0%	100%		$ -	$ 1,291,125
Raw Water Intake	2025	30	$ 1,581,000	$ 1,581,000		1.1007	$ 1,740,212	0%	$ 1,740,212	100%	30%	70%		$ 522,063	$ 1,218,148
N. Mildred Street A	2026	40	$ 648,000	$ 648,000		1.1365	$ 736,436	0%	$ 736,436	100%	30%	70%		$ 220,931	$ 515,505
E. 10th St.	2026	40	$ 298,000	$ 298,000		1.1365	$ 338,670	0%	$ 338,670	100%	70%	30%		$ 237,069	$ 101,601
Membrane / GAC Pilot	2026	30	$ 80,000	$ 80,000		1.1365	$ 90,918	0%	$ 90,918	100%	30%	70%		$ 27,275	$ 63,643
Huntfield	2027	40	$ 210,000	$ 210,000		1.1734	$ 246,416	0%	$ 246,416	100%	0%	100%		$ -	$ 246,416
Fritts & Old Town Ranson	2028	40	$ 1,295,000	$ 1,295,000		1.2115	$ 1,568,954	0%	$ 1,568,954	100%	0%	100%		$ -	$ 1,568,954
Magnolia Springs	2028	40	$ 1,085,000	$ 1,085,000		1.2115	$ 1,314,529	0%	$ 1,314,529	100%	0%	100%		$ -	$ 1,314,529
Norborne Greene	2028	40	$ 7,000	$ 7,000		1.2115	$ 8,481	0%	$ 8,481	100%	0%	100%		$ -	$ 8,481
Charles Town Infill	2028	40	$ 35,000	$ 35,000		1.2115	$ 42,404	0%	$ 42,404	100%	0%	100%		$ -	$ 42,404
Windmill Crossing	2028	40	$ 7,000	$ 7,000		1.2115	$ 8,481	0%	$ 8,481	100%	0%	100%		$ -	$ 8,481
WTP Design	2028	30	$ 1,345,000	$ 1,345,000		1.2115	$ 1,629,531	0%	$ 1,629,531	100%	30%	70%		$ 488,859	$ 1,140,672
Augustine Ave. PS Discharge	2029	40	$ 298,000	$ 298,000		1.2509	$ 372,775	0%	$ 372,775	100%	0%	100%		$ -	$ 372,775
Locust Hill	2029	40	$ 2,400,000	$ 2,400,000		1.2509	$ 3,002,214	0%	$ 3,002,214	100%	0%	100%		$ -	$ 3,002,214
Roper/Stolipher	2029	40	$ 1,243,000	$ 1,243,000		1.2509	$ 1,554,897	0%	$ 1,554,897	100%	0%	100%		$ -	$ 1,554,897
Augustine Ave. PS Upgrade	2029	30	$ 780,000	$ 780,000		1.2509	$ 975,720	0%	$ 975,720	100%	0%	100%		$ -	$ 975,720
WTP Upgrade	2031	30	$ 20,000,000	$ 20,000,000		1.3336	$ 26,671,076	0%	$ 26,671,076	100%	30%	70%		$ 8,001,323	$ 18,669,753
		Sub Total	$ 43,706,000	$ 43,706,000			$ 53,572,904		$ 53,572,904					$ 14,437,885	$ 39,135,019
		Totals	$ 51,401,000	$ 51,401,000			$ 63,345,554		$61,391,024					$ 21,139,130	**$ 40,251,893**

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	$ 40,251,893		
Debt Principal Credit	$ (13,342,067)	(See Attachment B)	
Net Growth Related Costs	$ 26,909,826		
Calculated Capacity Improvement Fee	**$ 4,179**	per EDU	
Calculated Capacity Improvement Fee	$ 27.14	per gpd	

	Year	Capital Costs by Year	Growth Costs by Year
	2022	$ 111,000	$ 50,900
	2023	$ 2,715,475	$ 1,679,878
	2024	$ 5,549,889	$ 3,963,810
	2025	$ 6,635,038	$ 3,854,387
	2026	$ 1,166,024	$ 680,749
	2027	$ 246,416	$ 246,416
	2028	$ 4,572,379	$ 4,083,520
	2029	$ 5,905,605	$ 5,905,605
	2030	$ -	$ -
	2031	$ 26,671,076	$ 18,669,753
Not Included	2032	$ -	$ -
Not Included	2033	$ -	$ -
Not Included	2034	$ -	$ -
Not Included	2035	$ -	$ -
Not Included	2036	$ -	$ -
	TOTAL	$ 53,572,904	$ 39,135,019

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)	$ 0	$ (28,284)	$ (27,204)
2024	$ (29,147)	$ (29,291)	$ (58,438)	$ (54,060)
2025	$ (30,036)	$ (89,864)	$ (119,899)	$ (106,682)
2026	$ (30,952)	$ (96,273)	$ (127,225)	$ (108,878)
2027	$ (31,896)	$ (100,124)	$ (132,020)	$ (108,667)
2028	$ (32,869)	$ (162,662)	$ (195,530)	$ (154,798)
2029	$ (33,871)	$ (265,143)	$ (299,014)	$ (227,685)
2030	$ (34,904)	$ (275,749)	$ (310,653)	$ (227,516)
2031	$ (35,969)	$ (600,970)	$ (636,939)	$ (448,668)
2032	$ (37,066)	$ (625,008)	$ (662,074)	$ (448,566)
2033	$ (38,196)	$ (650,009)	$ (688,205)	$ (448,466)
2034	$ (39,361)	$ (676,009)	$ (715,371)	$ (448,368)
2035	$ (40,562)	$ (703,049)	$ (743,611)	$ (448,272)
2036	$ (41,799)	$ (731,171)	$ (772,971)	$ (448,178)
2037	$ (43,074)	$ (760,418)	$ (803,492)	$ (448,086)
2038	$ (44,388)	$ (790,835)	$ (835,223)	$ (447,995)
2039	$ (45,742)	$ (822,468)	$ (868,210)	$ (447,907)
2040	$ (47,137)	$ (855,367)	$ (902,504)	$ (447,821)
2041	$ (48,574)	$ (889,582)	$ (938,156)	$ (447,736)
2042	$ (50,056)	$ (925,165)	$ (975,221)	$ (447,654)
2043	$ (51,583)	$ (962,172)	$ (1,013,754)	$ (447,573)
2044	$ (53,156)	$ (1,000,659)	$ (1,053,814)	$ (447,494)
2045	$ (54,777)	$ (1,040,685)	$ (1,095,462)	$ (447,417)
2046	$ -	$ (1,082,312)	$ (1,082,312)	$ (425,167)
2047	$ -	$ (1,125,605)	$ (1,125,605)	$ (425,290)
2048	$ -	$ (1,170,629)	$ (1,170,629)	$ (425,412)
2049	$ -	$ (1,217,454)	$ (1,217,454)	$ (425,535)
2050	$ -	$ (1,266,152)	$ (1,266,152)	$ (425,658)
2051	$ -	$ (1,316,798)	$ (1,316,798)	$ (425,781)
2052	$ -	$ (1,369,470)	$ (1,369,470)	$ (425,904)
2053	$ -	$ (1,424,249)	$ (1,424,249)	$ (426,026)
2054	$ -	$ (1,386,217)	$ (1,386,217)	$ (398,817)
2055	$ -	$ (1,249,004)	$ (1,249,004)	$ (345,620)
2056	$ -	$ (1,289,835)	$ (1,289,835)	$ (343,289)
2057	$ -	$ (1,341,428)	$ (1,341,428)	$ (343,389)
2058	$ -	$ (1,205,240)	$ (1,205,240)	$ (296,745)
2059	$ -	$ (942,166)	$ (942,166)	$ (223,116)
2060	$ -	$ (979,853)	$ (979,853)	$ (223,180)
Total Debt Principal Credit (Growth Related Portion)				**$ (13,342,067)**

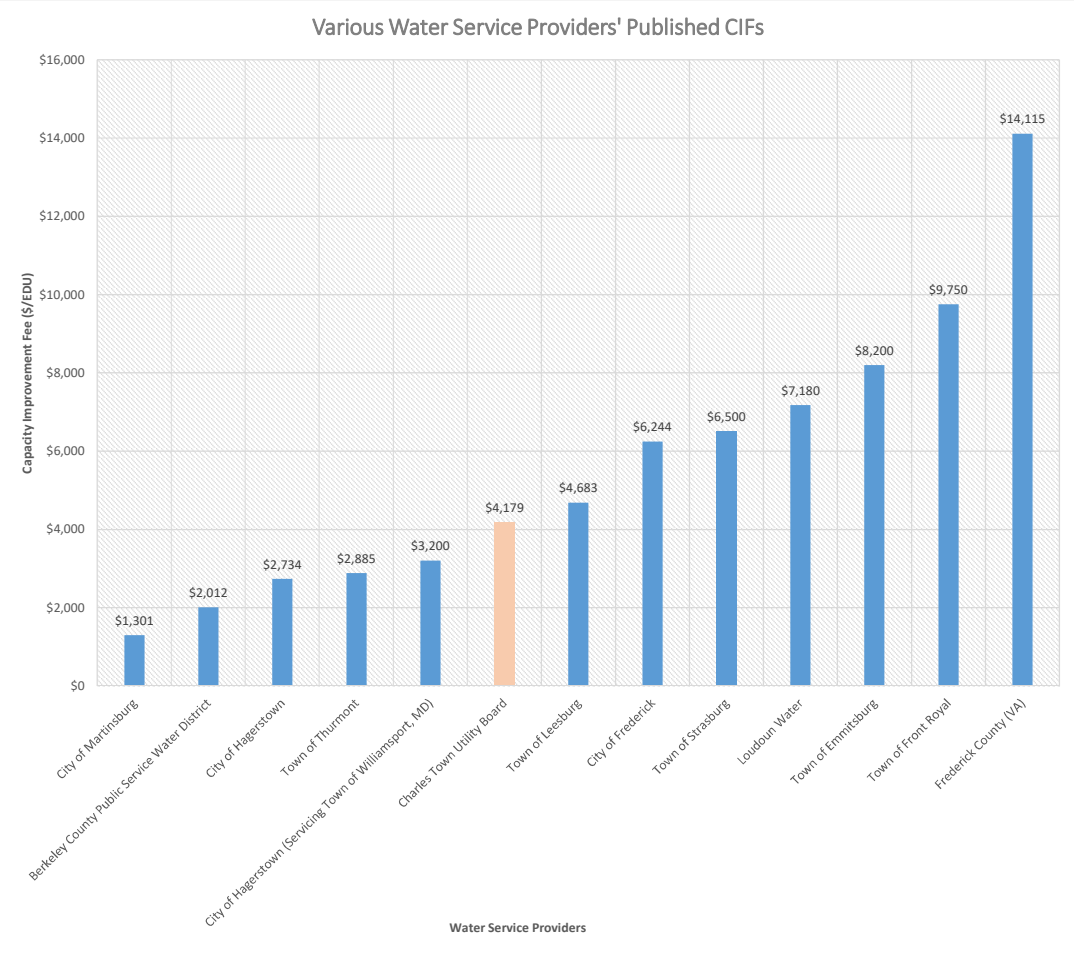
ATTACHMENT C - VARIOUS WATER SERVICE PROVIDERS IN THE REGION AND THEIR CIFS

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	$4,179	154	$27.14
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	$4,179
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

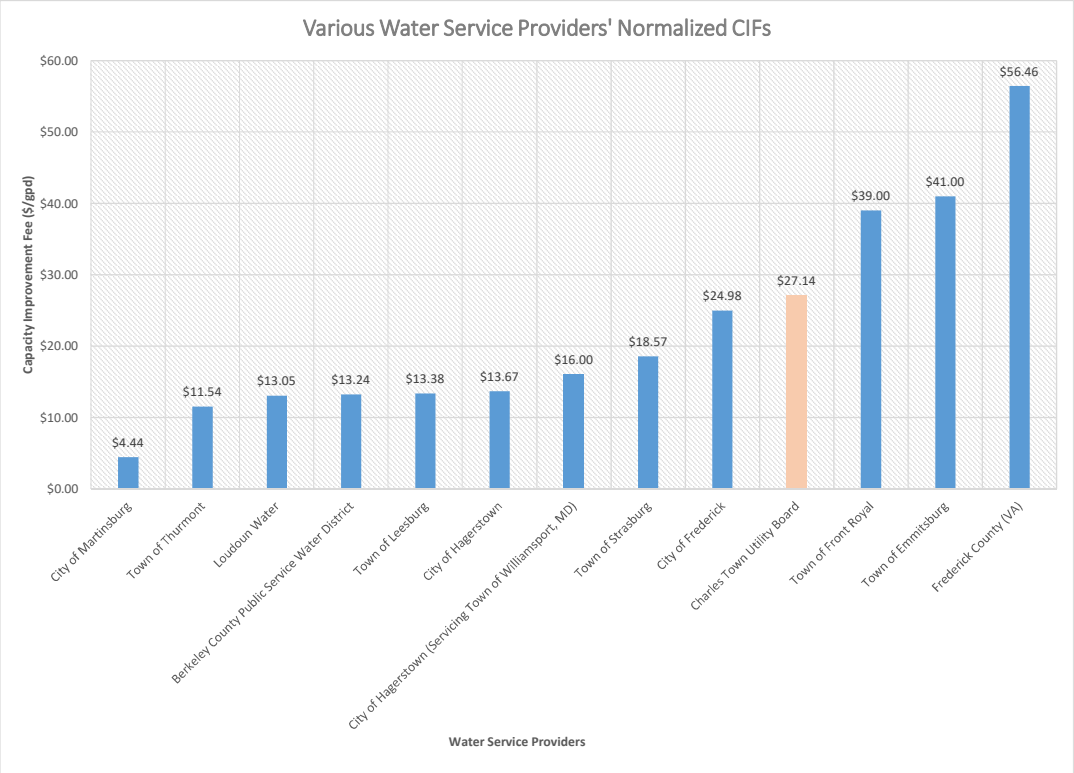
Mean Fee: $5,614



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	$27.14
Town of Front Royal	$39.00
Town of Emmitsburg	$41.00
Frederick County (VA)	$56.46

Mean Dollars per GPD: $22.50



CHARLES TOWN UTILITY BOARD
WATER/SEWER SYSTEMS UPGRADE PROJECTS

RUMMEL, KLEPPER & KAHL, LLP

TASK NO. 22

PROFESSIONAL ENGINEERING & SURVEYING SERVICES

GREENFIELD FORCE MAIN UPGRADE

October 18, 2022

Being a part of Agreement Between
Charles Town Utility Board and Rummel, Klepper & Kahl, LLP
dated November 13, 2019

This Task No. 22 dated October 18, 2022, to the Agreement between Charles Town Utility Board (CTUB) and Rummel, Klepper, and Kahl, LLP (RK&K) dated November 13, 2019, is to provide professional engineering and surveying services for designing the upgrade to the existing 2,600 LF Greenfield Force Main from the existing 4" to a 6" as discussed within the King's Crossing Sewer Model Report dated September 9, 2022.

Scope of Services

The following summarizes RK&K's services as part of this Task:

Design Phase Services

1. RK&K will perform the necessary field surveys to locate existing rights-of-way and property lines, utilities, topographic features, and other relevant information in accordance with Section 3.1.11 of the Agreement.
2. RK&K will prepare preliminary plans in accordance with Section 2.2 of the Agreement for the Greenfield Force Main Upgrade as described in the King's Crossing Sewer Model Report.
3. RK&K will submit the preliminary design to the CTUB Staff for review, approval, and authorization to proceed to final design plans.
4. RK&K will prepare the plans, specifications, and contract document in accordance with Charles Town Utility Board standards.
5. RK&K will contact environmental review agencies and other stakeholders to obtain clearances for construction of project in accordance with Section 2.3 of the Agreement.
6. RK&K will perform courthouse research (online) along with preparing the necessary easement plat(s) and description(s) for the project.
7. With concurrence from CTUB Staff on the preliminary design, RK&K will proceed with preparing and submitting final design to the CTUB Staff for review and approval.
8. Upon receipt of CTUB Staff final design comments, RK&K will revise the final design, incorporating review comments.
9. Bidding and Construction Phase Services are excluded from this Task Order.

Schedule

Subject to weather and CTUB review time, RK&K anticipates ninety (90) days to perform the field survey, preparation of drawings, etc. from issuance of notice to proceed. Impacts to the schedule may occur outside of RK&K's and CTUB's ability to control (i.e. weather, permitting, etc.).

Estimated Person-Hours per Phase by Category, Engineer's Consultant Costs and Other Direct Costs

A labor derivation is attached as Page 3 which includes RK&K's estimated person-hours by category and other direct costs anticipated to complete the work for this project.

Materials and Resources Required of CTUB

- CTUB will be responsible for providing available mapping to facilitate RK&K's design.
- CTUB will be responsible for paying any permitting and regulatory agency fees.

Estimated Not-To-Exceed Fee

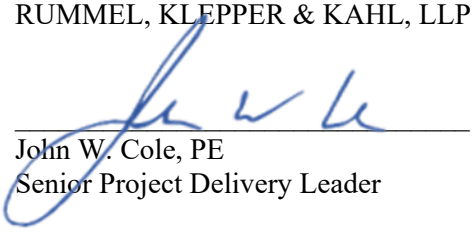
RK&K will provide the scope of services described above at an amount equal to Engineer's Direct Labor Costs times a factor of 2.8 for the services of Engineer's personnel engaged on the Project, plus Reimbursable Expenses.

The total estimated Not-to-Exceed fee to perform the work is $52,900.00.

Authorization

This Task No. 22, CTUB Greenfield Force Main Upgrade, dated October 18, 2022, and being a part of the Agreement between Charles Town Utility Board and Rummel, Klepper & Kahl, LLP for Engineering Services for Water/Sewer Systems Upgrade Projects dated November 13, 2019, is approved by the following duly authorized officials:

Engineer: RUMMEL, KLEPPER & KAHL, LLP



_____ 10/18/2022

John W. Cole, PE — Date
Senior Project Delivery Leader

Owner: CHARLES TOWN UTILITY BOARD

_____ _____

John Barkley — Date
Chairman

FEE DERIVATION FOR RK&K - 10/18/2022

GREENFIELD FORCE MAIN UPGRADE DESIGN PHASE SERVICES

		RK&K Labor Task	Manager	Project Engineer	Mechanical Engineer	Engineer	CADD Operator	Licensed Surveyor	Survey Technician	Survey Crew (2-man)	Totals
Preliminary Design Phase	1	Kickoff meeting (virtual)	1	2							3
	2	Coordination Calls (2 calls)	2	4	2						8
	3	Site evaluation		8		2					10
	4	Survey		2					4	40	46
	5	Easements		2					20		22
	6	Utility Permit Evaluation	2	12							14
	7	Sewer Line Title Page - 1 sheet		1			4				5
	8	Sewer Line General Notes - 1 sheet		2			6				8
	9	Sewer Line Control / Sequence of Construction - 1 sheet		4	4		8				16
	10	Sewer Line Relocation Plan Sheets (40 scale) - 3 sheets		4		8	48				60
	11	Pump Station Valve Vault Plan - 1 sheet		1	8	2					11
	12	Erosion & Sediment Control notes - 1 sheet		2			8				10
	13	Traffic Control plan sheet - 1 sheet		1		4	12				17
	14	Details (Connection, Standard, E&S, etc) - 4 sheets			4	4	12				20
	15	Utility Review Meeting (1 meeting)	1	2							3
	16	Construction Cost Estimate		6							6
	17	Quality Control/Quality Assurance	2	1							3
		Subtotal - Labor Hours	**8**	**54**	**18**	**20**	**98**	**0**	**24**	**40**	**262**
										Subtotal Labor Costs	**$ 31,600.00**
										Total Non-Labor Direct Costs	**$ 200.00**
										Total Fee - Preliminary Design Phase	**$ 31,800.00**

		RK&K Labor Task	Manager	Project Engineer	Mechanical Engineer	Engineer	CADD Operator	Licensed Surveyor	Survey Technician	Survey Crew (2-man)	Totals
Final Design	1	Coordination Calls (2 calls)	2	4	2						8
	2	Easements		2				4	30		36
	3	Sewer Line Title Page - 1 sheet		1			2				3
	4	Sewer Line General Notes - 1 sheet		2			4				6
	5	Sewer Line Control / Sequence of Construction - 1 sheet		2	2		6				10
	6	Sewer Line Relocation Plan Sheets (40 scale) - 3 sheets		4		4	12				20
	7	Pump Station Valve Vault Plan - 1 sheet		1	4	2					7
	8	Erosion & Sediment Control notes - 1 sheet		1		2	6				9
	9	Traffic Control plan sheet - 1 sheet		2		4	16				22
	10	Details (Connection, Standard, E&S, etc) - 4 sheets			4	4	16				24
	11	Health Department Permitting		16		8					24
	12	Utility Review Meeting (1 meeting)	1	2							3
	13	Construction Cost Estimate	1	6							7
	14	Quality Control/Quality Assurance	2	2							4
		Subtotal - Labor Hours	**6**	**45**	**12**	**24**	**62**	**4**	**30**	**0**	**183**
										Subtotal Labor Costs	**$ 20,900.00**
										Total Non-Labor Direct Costs	**$ 200.00**
										Total Fee - Final Design Phase	**$ 21,100.00**
										Total Design Fee	**$ 52,900.00**

Charles Town Water Department
Revenue & Expense Summary
9/30/2022

Annual Budget		Y-T-D Budget	Y-T-D Actual	Difference
	REVENUES			
2,650,000	Metered Sales - Residential	662,500	666,307	3,807
1,340,000	Metered Sales - Commercial	335,000	328,775	(6,225)
105,000	Metered Sales - Glen Haven/Cavaland	26,250	25,828	(422)
20,000	Sale for Resale - Bulk Water	5,000	9,588	4,588
80,000	Forfieted Discounts	20,000	20,541	541
30,000	Misc. Service Rev - Reconnection / Tap Fees	7,500	5,925	(1,575)
525,000	Tank Lot Rental Income	131,250	177,019	45,769
8,000	Interest Income	2,000	2,350	350
2,000	Sinking Fund Income	500	2,061	1,561
85,000	Miscellaneous Income	21,250	7,555	(13,695)
0	Grant Revenue - OEHS SWAP EWM	-	11,080	11,080
0	CIF & CAC Revenue	-	132,680	132,680
0	Checking Acct @ 6/30/22	-	635,062	635,062
4,845,000	**TOTAL REVENUES**	1,211,250	2,024,772	813,522
	EXPENSES			
15,000	Supplies & Expense	3,750	9,606	5,856
20,000	Maint of Water Source	5,000	1,480	(3,520)
350,000	Operation Labor - WTP	87,500	96,008	8,508
125,000	Power & Fuel - WTP	31,250	36,976	5,726
6,000	Power & Fuel - WTP GH/CAV	1,500	965	(535)
130,000	Chemicals	32,500	41,118	8,618
40,000	Testing	10,000	12,351	2,351
20,000	Supplies & Expense - WTP	5,000	7,474	2,474
10,000	Supplies & Expense - GH/CAV	2,500	1,091	(1,409)
100,000	Maint of Water Treatment Plant	25,000	15,202	(9,798)
10,000	Maint of Water Plant - GH/CAV	2,500	-	(2,500)
446,000	Maintenance Labor	111,500	113,183	1,683
20,000	Supplies & Expense - Maint	5,000	5,484	484
100,000	Maint Dist Reservior & Standpipes	25,000	8,740	(16,260)
150,000	Maint of Mains	37,500	5,516	(31,984)
200,000	Maint of Services	50,000	30,453	(19,547)
175,000	Maint of Meters	43,750	35,565	(8,185)
20,000	Maint of Hydrants	5,000	2,844	(2,156)
162,000	Accounting & Collecting Labor	40,500	46,011	5,511
20,000	Supplies & Expense - Acct & Collect	5,000	4,648	(352)
15,000	Bad Debt Expense	3,750	(461)	(4,211)
125,000	Admin & General Salaries	31,250	30,446	(804)
187,000	Employee Insurance & Benefits	46,750	39,536	(7,214)
97,000	Employee Pension Expense	24,250	22,807	(1,443)
83,000	Payroll Taxes - FICA Tax Expense	20,750	22,034	1,284
10,000	OPEB (other post empl benefits)	2,500	2,812	312
15,000	Employee 457 Expense	3,750	4,199	449

Charles Town Water Department
Revenue & Expense Summary
9/30/2022

114,000	Office Supplies & Other Expense	28,500	23,764	(4,736)
15,000	Maintenance of General Property	3,750	695	(3,055)
45,000	Contractual Services - Engineering	11,250	9,904	(1,346)
20,000	Contractual Services - Accounting	5,000	-	(5,000)
15,000	Contractual Services - Legal	3,750	6,437	2,687
85,000	Contractual Services - Other	21,250	20,939	(311)
55,000	Transportation Expense	13,750	15,907	2,157
80,000	Property Insurance	20,000	36,559	16,559
35,000	Injuries & Damages	8,750	10,749	1,999
20,000	Regulatory Commission Expense	5,000	2,099	(2,901)
6,000	Bond Administration Fees	1,500	985	(515)
10,000	Misc General Expense	2,500	430	(2,070)
1,165,000	Depreciation Expense	291,250	291,250	-
445,000	Interest on Long Term debt	111,250	129,719	18,469
78,000	Amortization of Debt Discount & Exp	19,500	19,500	-
4,839,000	**TOTAL EXPENSES**	1,209,750	1,165,026	(44,724)

6,000	Excess (Deficit)	1,500	859,745	
	Reconciliation to Cash:			
	Cash Balance @ 6/30/22		635,062	
	Disbursements To Date		(1,367,033)	
	Expenses		1,165,026	
	Deposits To Date		1,368,735	
	Revenues		(2,024,772)	
	CASH BALANCE @ 9/30/2022		636,764	
			636,764	Water Operating
			(0)	
	Water Capacity Improvement Fees		2,861,224	
	Water Renewal & Replacement		806,542	
	Water Working Capital Fund		383,478	

Charles Town Sewer Department
Revenue & Expense Summary
9/30/2022

Annual Budget		Y-T-D Budget	Y-T-D Actual	Difference
	REVENUES			
2,400,000	CTUB Service Revenue	600,000	604,799	4,799
1,440,000	Sewer Service Revenue - Ranson	360,000	338,539	(21,461)
2,485,000	Sewer Service Revenue - JCPSD	621,250	633,115	11,865
40,000	Customer Forfieted Discounts	10,000	10,007	7
25,000	Customer Forfieted Discounts- RA	6,250	6,012	(238)
40,000	Customer Forfieted Discounts- PSD	10,000	10,770	770
40,000	Misc. Sewer Revenues	10,000	4,214	(5,786)
0	CIF & CAC Revenues	-	117,401	117,401
8,000	Interest Income	2,000	3,235	1,235
2,000	Sinking Fund Income	500	1,526	1,026
0	Checking Acct @ 6/30/22	-	2,351,976	2,351,976
6,480,000	**TOTAL REVENUES**	1,620,000	4,081,594	2,461,594
	EXPENSES			
20,000	Supplies & Expense	5,000	684	(4,316)
50,000	Maint of Service Connections	12,500	4,599	(7,901)
250,000	Maint of Collecting & Trans. Mains	62,500	105,115	42,615
370,000	Operation Labor	92,500	87,114	(5,386)
135,000	Power & Fuel	33,750	30,464	(3,286)
25,000	Supplies & Expense	6,250	4,915	(1,335)
250,000	Maint of Pump Stations	62,500	49,588	(12,912)
244,000	Operation Labor	61,000	77,558	16,558
130,000	Power - CT Plant	32,500	30,703	(1,797)
80,000	Power - TUI	20,000	17,996	(2,004)
10,000	Power - Deerfield	2,500	1,670	(830)
155,000	Chemical Expense - CT	38,750	36,045	(2,705)
20,000	Chemical Expense - TUI	5,000	3,488	(1,512)
35,000	Testing - CT	8,750	10,923	2,173
7,000	Testing - TUI	1,750	5,085	3,335
102,000	Supplies & Expense	25,500	28,934	3,434
120,000	Maint. Burns Farm	30,000	23,091	(6,909)
200,000	Maint. Treatment Plant - CT	50,000	7,794	(42,206)
90,000	Maint. Treatment Plant - TUI	22,500	4,207	(18,293)
15,000	Maint. Treatment Plant - Deerfield	3,750	1,024	(2,726)
212,000	Billing, Collecting & Accounting Labor	53,000	59,028	6,028
150,000	Billing Fees Expense	37,500	22,578	(14,922)
15,000	Bad Debt Expense	3,750	5,509	1,759
188,000	Admin. & General Salaries	47,000	58,199	11,199
170,000	Employee Insurance & Benefits	42,500	41,893	(607)
92,000	Employee Pension Expense	23,000	22,979	(21)
78,000	Payroll Taxes - FICA Tax Expense	19,500	21,577	2,077
8,000	OPEB (other post empl. benefits)	2,000	3,068	1,068
14,000	Employee 457 Expense	3,500	3,976	476
135,000	Office Supplies & Expense	33,750	27,210	(6,540)

Charles Town Sewer Department
Revenue & Expense Summary
9/30/2022

35,000	Maint. of General Property	8,750	50	(8,700)
60,000	Contractual Services - Engineering	15,000	8,056	(6,944)
32,000	Contractual Services - Accounting	8,000	375	(7,625)
170,000	Contractual Services - Legal	42,500	73,882	31,382
83,000	Contractual Services - Other	20,750	4,673	(16,077)
65,000	Transportation Expense	16,250	20,877	4,627
110,000	Insurance	27,500	36,559	9,059
32,000	Worker's Comp	8,000	9,923	1,923
30,000	Regulatory Commission Expense	7,500	1,158	(6,342)
65,000	Bond Administration Fees	16,250	12,319	(3,931)
10,000	Misc. General Expense	2,500	1,544	(956)
1,985,000	Depreciation Expense	496,250	496,250	-
325,000	Interest on Long Term Debt	81,250	6,052	(75,198)
57,000	Amort. Of Debt Discount & Expense	14,250	14,250	-
6,429,000	**TOTAL EXPENSES**	1,607,250	1,482,983	(124,267)
51,000	**Excess (Deficit)**	12,750	2,598,611	
	Reconciliation to Cash:			
	Cash Balance @ 6/30/22		2,351,976	
	Disbursements To Date		(1,540,081)	
	Expenses		1,482,983	
	Deposits To Date		1,632,546	
	Revenues		(4,081,594)	
	CASH BALANCE 9/30/2022		2,444,441	
			2,444,441	Sewer Operating
			0	
	Sewer Capacity Improvement Fees		3,833,890	
	Sewer Renewal & Replacement		744,946	
	Sewer Working Capital Fund		705,669	

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT	AMOUNT

========== FUND TOTALS ==========	
50 WATER FUND	92,712.64
60 SEWER FUND	100,530.92
GRAND TOTAL:	193,243.56

TOTAL PAGES: 4

APPROVED BY: _____

APPROVED BY: _____

This Packet: $ 193,243.56

Security Deposit Refund: 125.13

Total: $ 193,368.69

Note:

Highlighted invoices are for the R&R Project;

Highlighted invoices are to be reimbursed with Renewal & Replacement account;

Highlighted invoices are to be reimbursed with Water Surety account

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
	SEALS & LABOR	SEWER FUND	SEWER		2,814.00
				TOTAL:	8,314.00
ROBERTS OXYGEN COMPANY, INC.	YEARLY RENTAL RENEWAL	WATER FUND	WATER		350.00
	YEARLY RENTAL RENEWAL	WATER FUND	WATER		1,200.00
				TOTAL:	1,550.00
ROSS H BARE	SVC CLLS CT & TUSC WWTPS	SEWER FUND	SEWER		6,693.50
	SVC CLLS CT & TUSC WWTPS	SEWER FUND	SEWER		480.56
				TOTAL:	7,174.06
SHENANDOAH SALES & SERVICE, INC.	WATER VEHICLE SERVICE	WATER FUND	WATER		1,851.18
	SEWER VEHICLE SERVICE	SEWER FUND	SEWER		585.37
	SEWER VEHICLE SERVICE	SEWER FUND	SEWER		143.68
	SEWER VEHICLE INSPECTIONS	SEWER FUND	SEWER		28.00
	SEWER VEHICLE SERVICE	SEWER FUND	SEWER		365.99
	SEWER VEHICLE SERVICE	SEWER FUND	SEWER		275.50
				TOTAL:	3,249.72
ROBBIE SHIPE	PER DIEM: 11/13 - 11/18/22	SEWER FUND	SEWER		295.00
				TOTAL:	295.00
STEPTOE & JOHNSON PLLC	GENERAL ENVIRONMENTAL	SEWER FUND	SEWER		7,050.00
				TOTAL:	7,050.00
GERALD TAYLOR CO., INC.	PUMP / TRANSPORT	WATER FUND	WATER		537.37
	PUMP / TRANSPORT	WATER FUND	WATER		879.43
				TOTAL:	1,416.80
THE CI THORNBURG CO, INC.	CHLORINE	WATER FUND	WATER		2,340.00
				TOTAL:	2,340.00
TROJAN TECHNOLOGIES GROUP ULC	INTERFACE	SEWER FUND	SEWER		2,229.35
				TOTAL:	2,229.35
WV BUREAU OF PUBLIC HEALTH	R.SHIPE SLS2 WW CERT RNWL	SEWER FUND	SEWER		150.00
	J.BURRIS MULT CERT RNWL	SEWER FUND	SEWER		175.00
				TOTAL:	325.00

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT	AMOUNT
			TOTAL:	200.42
GUTTMAN ENERGY	W/E 10/09/22	WATER FUND	WATER	948.03
	W/E 10/16/22	WATER FUND	WATER	452.10
	W/E 10/23/22	WATER FUND	WATER	1,046.69
	W/E 10/09/22	SEWER FUND	SEWER	585.10
	W/E 10/09/22	SEWER FUND	SEWER	53.58
	W/E 10/16/22	SEWER FUND	SEWER	768.47
	W/E 10/23/22	SEWER FUND	SEWER	817.67
			TOTAL:	4,671.64
GWIN DOBSON & FOREMAN INC	WA RETAINER SVCS	WATER FUND	WATER	655.20
	WWTP UPGRADE	SEWER FUND	NON-DEPARTMENTAL	14,256.09
	WWTP UPGRADE	SEWER FUND	NON-DEPARTMENTAL	4,002.50
			TOTAL:	18,913.79
HACH COMPANY	AA REAGENT SET	WATER FUND	WATER	744.92
			TOTAL:	744.92
INWOOD QUARRY, INC.	I10 PICKUPS: 10/07/22	WATER FUND	WATER	352.84
	C1 PICKUPS: 10/20/22	WATER FUND	WATER	563.44
			TOTAL:	916.28
THE JOURNAL	MAINTPSTN AD: 9/28-10/9 &	WATER FUND	WATER	728.14
			TOTAL:	728.14
KAY CASTO & CHANEY PLLC	PSC RPRSNT: THRU 9/30/22	SEWER FUND	SEWER	435.00
	SHEN JCT: THRU 9/30/22	SEWER FUND	SEWER	743.50
	CAVE RD: THRU 9/30/22	SEWER FUND	SEWER	527.50
	CAVE RD & JUI: THRU 9/30/2	SEWER FUND	SEWER	527.50
	CAVE RD & JUI: THRU 9/30/2	SEWER FUND	SEWER	527.50
	WVAWC, JUI, VW&S, SHNJCT:	SEWER FUND	SEWER	2,294.00
			TOTAL:	5,055.00
J.C. KUNKLE & ASSOCIATES, A.C.	PROFF SVCS 7/16 - 10/12/22	WATER FUND	WATER	3,800.00
	PROFF SVCS 7/16 - 10/12/22	SEWER FUND	SEWER	10,875.00
			TOTAL:	14,675.00
L/B WATER SERVICE, INC	BUTTERFLY VALVE & PARTS	WATER FUND	NON-DEPARTMENTAL	7,261.47
	BUTTERFLY VALVE & PARTS	WATER FUND	NON-DEPARTMENTAL	7,311.60
			TOTAL:	14,573.07
MID ATLANTIC STORAGE SYSTEMS	LFTRNTL RPR LCSTHLL WT	WATER FUND	WATER	2,447.17
			TOTAL:	2,447.17
PACE ANALYTICAL SERVICES, LLC	TESTING: CT WKLY	SEWER FUND	SEWER	192.22
	TESTING: JCPSD IU04	SEWER FUND	SEWER	89.05
	TESTING: CT	SEWER FUND	SEWER	243.26
	TESTING: TUSC	SEWER FUND	SEWER	484.36
	TESTING: CT	SEWER FUND	SEWER	64.07
			TOTAL:	1,072.96
PARKSON CORPORATION	TRNNWHLASSMBLY,BSHNG,RTNGR	SEWER FUND	SEWER	4,814.87
			TOTAL:	4,814.87
PRECISION PUMP & VALVE SERVICE, INC.	SEALS & LABOR	SEWER FUND	SEWER	5,500.00

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT	AMOUNT
APPLE VALLEY TIRE	4 TIRES MAINT DUMP TRUCK	WATER FUND	WATER	3,591.00
			TOTAL:	3,591.00
APPLIED INDUSTRIAL TECHNOLOGIES	TWWTP SCRN PRTS	SEWER FUND	SEWER	1,043.06
			TOTAL:	1,043.06
ARDEN EQUIPMENT REPAIR, INC.	MOWER REPAIR	WATER FUND	WATER	2,368.54
			TOTAL:	2,368.54
BIEDLER'S ELECTRIC MOTOR REPAIR, INC.	BLWRMTR FOR CTWWTP	SEWER FUND	SEWER	14,196.49
			TOTAL:	14,196.49
BRODY CARPER	PER DIEM 10/30 - 11/04/22	SEWER FUND	SEWER	295.00
			TOTAL:	295.00
CEDARCHEM, LLC	2,250G CEDARCLEAR 1757	WATER FUND	WATER	10,697.20
			TOTAL:	10,697.20
CHARLES TOWN SEWER	SEPTEMBER FUNDING	SEWER FUND	NON-DEPARTMENTAL	13,641.53
			TOTAL:	13,641.53
CHARLES TOWN WATER	SEPTEMBER FUNDING	WATER FUND	NON-DEPARTMENTAL	10,170.43
			TOTAL:	10,170.43
CITY ELECTRIC SUPPLY CO	OVERLOAD RELAY	SEWER FUND	SEWER	170.00
			TOTAL:	170.00
COLLIN COLE	REIMB WWTP SPPLY ON PRSNL	SEWER FUND	SEWER	399.00
			TOTAL:	399.00
CORE & MAIN	GAI LUD10D REBUILD KIT	WATER FUND	WATER	1,127.00
	SSBNDEPXYCTD, BLLCRPSTPCCX	WATER FUND	WATER	339.30
	CPLG, FLGACCRRFF, WRPARNDS	WATER FUND	WATER	507.44
	TPTBLNDFLGDIMP, FLGACCRRFF	WATER FUND	WATER	110.83
	CPLG, FLGACCRRFF, WRPARNDS	SEWER FUND	SEWER	281.88
			TOTAL:	2,366.45
COYNE CHEMICAL	HYDRFLSLCACD,AMMNMSFT,SDMP	WATER FUND	WATER	3,938.35
	CP-837, AMMONIUMSULFATE40%	WATER FUND	WATER	3,845.69
			TOTAL:	7,784.04
WV DEPT OF HEALTH & HUMAN SERVICES	BACTERIOLOGICAL TEST	WATER FUND	WATER	160.00
	BACTERIOLOGICAL TEST	WATER FUND	WATER	160.00
	BACTERIOLOGICAL TEST	WATER FUND	WATER	160.00
			TOTAL:	480.00
EASTCOM ASSOCIATES, INC	SENSORS & SOFTWARE LMX100	WATER FUND	NON-DEPARTMENTAL	16,040.00
	CPLTDLD DGTL WA LEAK DETEC	WATER FUND	NON-DEPARTMENTAL	3,214.00
			TOTAL:	19,254.00
ELM SHOES, INC	BOOTS	WATER FUND	WATER	2,612.86
	BOOTS	SEWER FUND	SEWER	1,416.77
			TOTAL:	4,029.63
FRONTIER COMMUNICATIONS	304-876-9970-121914-4	WATER FUND	WATER	99.82
	304-876-2120-111514-4	WATER FUND	WATER	100.60