CHARLES TOWN UTILITY BOARD
AGENDA

WEDNESDAY, JULY 26, 2023

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

CALL TO ORDER

1. **APPROVAL OF MINUTES**
   a. Approval of July 12, 2023 Regular Meeting Minutes
   UB Minutes 2023.07.12.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 or discussion.

   The public is invited to attend this meeting in person or via webcast (www.ctubwv.com- Board Meetings - Meeting Agendas and Minutes 2023) or by accessing the following zoom link:

   https://us06web.zoom.us/j/82958343525?pwd=Q2dqbEJZRllCM3NjV1ZhSDkzZUNJUT09

   Meeting ID: 829 5834 3525
   Passcode: 471608
   +1 301 715 8592 US

3. **UNFINISHED BUSINESS**

4. **NEW BUSINESS**
   a. RK&K - Collection System Project Update
   b. Gannett Fleming - Class Cost of Service Presentation
   Gannett Fleming Presentation.pdf
   c. John Deere Mini Excavator Purchase and Trade
   James River Quote.pdf
   Budget.pdf
   d. GDF - Task Order - WTP Process Solids, Recycle and Sanitary Forcemain Design
   GDF Task Order.pdf

5. **MANAGER REPORTS**

a. Utility Manager Report
b. Chairman Report

6. **APPROVAL OF BILLS**
   a. July 26, 2023
      Board Report 2023.07.26.pdf

7. **ADJOURNMENT**

8. **INFORMATION ONLY**
   a. Next Meeting - August 9, 2023 at 4:00 P.M.
      PSC Submission 07.20.2023.pdf

Charles Town Utility Board
Regular Board Meeting
July 12, 2023

The Charles Town Utility Board held a regular meeting on July 12, 2023 at 4:00 P.M. Members of the Board present were Robert Trainor, Chairman; Duke Pierson, Vice Chairman; Tommy Stocks, Treasurer, and Heidi Parker, Board Member. Also present were Kristen Stolipher, Utility Manager; April Shultz, Assistant Utility Manager; Ashley Stottlemyer, Secretary; and Robert Rodecker, Legal Counsel.

CALL TO ORDER

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

APPROVAL OF MINUTES

Approval of June 28, 2023 Regular Meeting Minutes

The Chairman called for changes or corrections to the June 28, 2023 regular meeting minutes.

Action: **With no objections from the Board, the minutes were approved as presented.**

PUBLIC COMMENT

The Board received a public comment from Nicola Bastian.

OLD BUSINESS

Stonecrest and Aspen Greens – Draft Letter to Developer

Mrs. Stolipher provided the draft letter for the Boards review as discussed at the last meeting.

Action: **Motion made by Mr. Stocks, second by Mrs. Parker, the Board unanimously approved sending the letter as presented.**

NEW BUSINESS

Lead and Copper Presentation

Alan Marchun from the WV Bureau of Public Health gave a brief presentation on the Lead and Copper Rule set forth by the EPA. Also present were Chris Eckenrode from Gwin Dobson Foreman and Chris Hutzler, the Chief Operator of CTUB's water plant, to answer questions from the Board. Mr. Marchun stated CTUB is in compliance and no public or private lead service lines have been identified in the CTUB system to date. Mr. Eckenrode reviewed the details of Zinc Orthophosphate which is introduced at the water plant as a corrosion inhibitor to prevent leaching of lead into the system.

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

RK&K – Task Order No. 22 – Greenfield Forcemain Upgrade Plans

Rhiannon Dodge from RK&K provided a high-level overview to upgrade the existing force main that runs from the Greenfield subdivision to tie in on the west side of Rt. 340. At a previous board meeting, RK&K provided an assessment for several developments, including Kings Crossing and Hillside, to tie into this force main. Mrs. Stolipher mentioned the cost estimate of $447,000.00 would be funded by capacity improvement fees. With the Board's approval, she would like to move forward with putting this project out to bid.

Action: **Motion made by Mr. Pierson, second by Mr. Stocks, the Board unanimously approved moving forward with Task Order No. 22 – Greenfield Forcemain Upgrade Plans.**

GDF - Renewal and Replacement Project Resolution No. 9 - Contractor Pay Application No. 9

Mrs. Stolipher included the contractor application for payment no. 9 in the amount of $432,539.77 for work completed. Mr. Eckenrode provided a brief update on the project's progress.

Action: **Motion made by Mr. Stocks, second by Mr. Pierson, the Board unanimously approved the Contractor Pay Application No. 9.**

Belt Press Belt Purchase

Mrs. Stolipher mentioned the existing belt on the belt press needs to be replaced as the new centrifuge to replace the belt press is at least 14 months from operation. She located a replacement for $11, 276.89 with an estimated delivery time of nine weeks.

Action: **Motion made by Mr. Pierson, second by Mr. Stocks, the Board unanimously approved the new belt press belt purchase.**

MANAGER REPORTS

Utility Manager Report

Mrs. Stolipher briefed the Board on this month's sewer and water efforts including the continuing efforts of hydrant painting and repairs. She also mentioned at the next meeting Gannett Fleming will present the Class Cost of Service Study and RK&K will provide an update on the Collections Project.

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

Chairman Report

The Chairman mentioned the City made an offer to a new City Manager and anticipates an August 14th start date.

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

APPROVAL OF BILLS

July 12, 2023

Action: **With no objections from the Board, the payment of the bills were approved.**

INFORMATION ONLY

The next regular meeting is scheduled for Wednesday, July 26, 2023 at 4:00 P.M. at 661 S. George Street.

There being no further business at this time, the Board adjourned the meeting at 4:53 P.M.

_____	_____
Robert M. Trainor	Ashley Stottlemyer
Chairman	Secretary

CHARLES TOWN UTILITY BOARD - WASTEWATER
COMPARISON OF COST OF SERVICE TO REVENUES UNDER PRESENT RATES AND REVENUES UNDER PROPOSED RATE OPTIONS A THROUGH C

Customer Classification	COST OF SERVICE Amount (Schedule D)	Percent	CURRENT RATES Revenues, Present Rates Amount	Percent	OPTION A - 2,500 GALLON MINIMUM Revenues, Proposed Rates Amount	Percent	Amount	Percent Increase	OPTION B - 1,000 GALLON MINIMUM Revenues, Proposed Rates Amount	Percent	Amount	Percent Increase	OPTION C - 1,500 GALLON MINIMUM Revenues, Proposed Rates Amount	Percent	Amount	Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(6)	(7)	(8)	(9)	(6)	(7)	(8)	(9)
Residential	$ 4,430,416	71.8%	$ 4,469,478	72.4%	$ 4,439,377	72.0%	$ (30,101)	-0.7%	$ 4,453,308	72.2%	$ (16,170)	-0.4%	$ 4,426,988	71.8%	$ (42,490)	-1.0%
Non-Residential	1,739,392	28.2%	1,700,329	27.6%	1,729,938	28.0%	29,609	1.7%	1,716,336	27.8%	16,007	0.9%	1,742,325	28.2%	41,996	2.5%
Total Sales	6,169,808	100.0%	6,169,807	100.0%	6,169,315	100.0%	$ (492)	0.0%	6,169,644	100.0%	$ (163)	0.0%	6,169,313	100.0%	$ (494)	0.0%
Other Revenues	124,000		124,000		124,000		-	0.0%	124,000		-	0.0%	124,000		-	0.0%
Total	$ 6,293,808		$ 6,293,807		$ 6,293,315		$ (492)	0.0%	$ 6,293,644		$ (163)	0.0%	$ 6,293,313		$ (494)	0.0%

CHARLES TOWN UTILITY BOARD - WASTEWATER

OPTION A - RATE EQUALIZATION 2,000 GALLON MONTHLY MINIMUM

COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT RATES

FOR THE YEAR ENDING JUNE 30, 2024

Customer Classification	Cost of Service		Revenues, Present Rates		Revenues, Proposed Rates		Proposed Increase	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential	$ 4,430,416	71.8%	$ 4,469,478	72.4%	$ 4,439,377	72.0%	$ (30,101)	-0.7%
Non-Residential	1,739,392	28.2%	1,700,329	27.6%	1,729,938	28.0%	29,609	1.7%
Total Sales	6,169,808	100.0%	6,169,807	100.0%	6,169,315	100.0%	$ (492)	0.0%
Other Revenues	124,000		124,000		124,000		-	0.0%
Total	$ 6,293,808		$ 6,293,807		$ 6,293,315		$ (492)	0.0%

CHARLES TOWN UTILITY BOARD
OPTION A - RATE EQUALIZATION 2,000 GALLON MINIMUM
COMPARISON OF PRESENT AND PROPOSED RATES

Charles Town and Ranson

	2022/2023 Rates	2023/2024 Rates
Minimum Charge - All Meter Sizes	$ 29.58	$ 30.48
Consumption Charges (per 1000 gallons)		
First 2,000 gallons	-	-
Next 8,000 gallons	$ 10.640	$ 11.530
Over 10,000 gallons	$ 9.670	$ 11.530

Ranson

Minimum Charge - All Meter Sizes	$ 29.58	$ 30.48
Consumption Charges (per 1000 gallons)		
First 2,000 gallons	-	-
Next 8,000 gallons	$ 10.640	$ 11.530
Over 10,000 gallons	$ 9.670	$ 11.530

Jefferson County

Minimum Charge - All Meter Sizes	$ 30.72	$ 30.48
Consumption Charges (per 1000 gallons)		
First 2,000 gallons	-	-
Next 8,000 gallons	$ 14.290	$ 11.530
Over 10,000 gallons	$ 13.980	$ 11.530
Flat Rate	$ 52.16	$ 45.47

Average Bills Charles Town and Ranson:	Average Bill, Present Rates	Average Bill, Proposed Rates	Dollar Increase/(Decrease)	Percentage Increase/(Decrease)
Residential at 3,300 gallons	$ 43.41	$ 45.47	$ 2.06	4.74%
Non-Residential at 8,450 gallons	98.21	104.85	6.64	6.76%
Race Course at 1,159,000 Monthly	11,225.53	13,370.69	2,145.16	19.11%
Jefferson County:				
Residential at 3,300 gallons	$ 49.30	$ 45.47	$ (3.83)	-7.77%
Non-Residential at 8,450 gallons	122.89	104.85	(18.04)	-14.68%

CHARLES TOWN UTILITY BOARD
OPTION A
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
CITY AND RANSON - MONTHLY

CONSUMPTION GALLONS	BILLS UNDER 2022/2023 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 29.58	$ 30.48	$ 0.90	3.04%	2.43%
1,000	29.58	30.48	0.90	3.04%	16.31%
2,000	29.58	30.48	0.90	3.04%	38.71%
2,500 *	34.90	36.25	1.35	3.85%	50.05%
3,000	40.22	42.01	1.79	4.45%	59.47%
3,300 **	43.41	45.47	2.06	4.74%	64.46%
4,000	50.86	53.54	2.68	5.27%	74.08%
5,000	61.50	65.07	3.57	5.80%	84.54%
6,000	72.14	76.60	4.46	6.18%	89.97%
7,000	82.78	88.13	5.35	6.46%	93.21%
8,000	93.42	99.66	6.24	6.68%	95.23%
8,450 **	98.21	104.85	6.64	6.76%	95.81%
9,000	104.06	111.19	7.13	6.85%	96.45%
10,000	114.70	122.72	8.02	6.99%	97.20%
11,000	124.37	134.25	9.88	7.94%	97.69%
12,000	134.04	145.78	11.74	8.76%	98.05%
13,000	143.71	157.31	13.60	9.46%	98.31%
14,000	153.38	168.84	15.46	10.08%	98.51%
15,000	163.05	180.37	17.32	10.62%	98.68%
20,000	211.40	238.02	26.62	12.59%	99.04%
30,000	308.10	353.32	45.22	14.68%	99.32%
40,000	404.80	468.62	63.82	15.77%	99.49%
50,000	501.50	583.92	82.42	16.43%	99.65%
60,000	598.20	699.22	101.02	16.89%	99.73%
70,000	694.90	814.52	119.62	17.21%	99.77%
100,000	985.00	1,160.42	175.42	17.81%	99.86%
200,000	1,952.00	2,313.42	361.42	18.52%	99.96%
300,000	2,919.00	3,466.42	547.42	18.75%	99.99%
400,000	3,886.00	4,619.42	733.42	18.87%	100.00%

*Median Usage Bill.
**Average Residential Bill.
*** Average Non-Residential Bill.

CHARLES TOWN UTILITY BOARD
OPTION A
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
COUNTY - MONTHLY

CONSUMPTION GALLONS	BILLS UNDER 2022/2023 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT O BILLS
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 30.72	$ 30.48	$ (0.24)	-0.78%	0.87%
1,000	30.72	30.48	(0.24)	-0.78%	10.10%
2,000	30.72	30.48	(0.24)	-0.78%	29.20%
2,900 *	43.58	40.86	(2.72)	-6.25%	50.07%
3,000	45.01	42.01	(3.00)	-6.67%	52.03%
3,300 **	49.30	45.47	(3.83)	-7.77%	57.37%
4,000	59.30	53.54	(5.76)	-9.71%	68.62%
5,000	73.59	65.07	(8.52)	-11.58%	79.79%
6,000	87.88	76.60	(11.28)	-12.84%	87.19%
7,000	102.17	88.13	(14.04)	-13.74%	91.68%
8,000	116.46	99.66	(16.80)	-14.43%	94.25%
8,450 **	122.89	104.85	(18.04)	-14.68%	94.95%
9,000	130.75	111.19	(19.56)	-14.96%	95.79%
10,000	145.04	122.72	(22.32)	-15.39%	96.75%
11,000	159.02	134.25	(24.77)	-15.58%	97.40%
12,000	173.00	145.78	(27.22)	-15.73%	97.87%
13,000	186.98	157.31	(29.67)	-15.87%	98.19%
14,000	200.96	168.84	(32.12)	-15.98%	98.41%
15,000	214.94	180.37	(34.57)	-16.08%	98.58%
20,000	284.84	238.02	(46.82)	-16.44%	98.99%
30,000	424.64	353.32	(71.32)	-16.80%	99.18%
40,000	564.44	468.62	(95.82)	-16.98%	99.35%
50,000	704.24	583.92	(120.32)	-17.09%	99.46%
60,000	844.04	699.22	(144.82)	-17.16%	99.53%
100,000	1,403.24	1,160.42	(242.82)	-17.30%	99.71%

*Median Usage Bill.
**Average Residential Bill.
*** Average Non-Residential Bill.

CHARLES TOWN UTILITY BOARD - WASTEWATER

OPTION B - RATE EQUALIZATION WITH 1,000 GALLON MONTHLY MINIMUM

COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT RATES

FOR THE YEAR ENDING JUNE 30, 2024

Customer Classification	Cost of Service		Revenues, Present Rates		Revenues, Proposed Rates		Proposed Increase	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential	$ 4,430,416	71.8%	$ 4,469,478	72.4%	$ 4,427,099	71.8%	$ (42,379)	-0.9%
Non-Residential	1,739,392	28.2%	1,700,329	27.6%	1,742,210	28.2%	41,881	2.5%
Total Sales	6,169,808	100.0%	6,169,807	100.0%	6,169,309	100.0%	$ (498)	0.0%
Other Revenues	124,000		124,000		124,000		-	0.0%
Total	$ 6,293,808		$ 6,293,807		$ 6,293,309		$ (498)	0.0%

CHARLES TOWN UTILITY BOARD
OPTION B - RATE EQUALIZATION PROPOSED 1,000 GALLON MINIMUM
COMPARISON OF PRESENT AND PROPOSED RATES

	2022/2023 Rates	2023/2024 Rates
Charles Town and Ranson		
Minimum Charge - All Meter Sizes	$ 29.58	$ 19.52
Consumption Charges (per 1000 gallons)		
First 2,000 gallons/1000 gallons	$ -	$ -
Next 8,000 gallons/9,000 gallons	$ 10.640	$ 12.200
Over 10,000 gallons	$ 9.670	$ 12.200
Ranson		
Minimum Charge - All Meter Sizes	$ 29.58	$ 19.52
Consumption Charges (per 1000 gallons)		
First 2,000 gallons/1000 gallons		$ -
Next 8,000 gallons/9,000 gallons	$ 10.640	$ 12.200
Over 10,000 gallons	$ 9.670	$ 12.200
Jefferson County		
Minimum Charge - All Meter Sizes	$ 30.72	$ 19.52
Consumption Charges (per 1000 gallons)		
First 2,000 gallons/1000 gallons	$ -	$ -
Next 8,000 gallons/9,000 gallons	$ 14.290	$ 12.200
Over 10,000 gallons	$ 13.980	$ 12.200
Flat Rate	$ 52.16	$ 47.58

Average Bills Charles Town and Ranson:	Average Bill, Present Rates	Average Bill, Proposed Rates	Dollar Increase/(Decrease)	Percentage Increase/(Decrease)
Residential at 3,300 gallons	$ 43.41	$ 47.58	$ 4.17	9.60%
Non-Residential at 8,450 gallons	98.21	110.41	12.20	12.42%
Race Course at 940,000 Monthly	9,107.80	11,475.32	2,367.52	25.99%
Jefferson County:				
Residential at 3,300 gallons	$ 49.30	$ 47.58	$ (1.72)	-3.48%
Non-Residential at 8,450 gallons	122.89	110.41	(12.48)	-10.16%

CHARLES TOWN UTILITY BOARD
OPTION B
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
CITY AND RANSON - MONTHLY

CONSUMPTION GALLONS	BILLS UNDER 2022/2023 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 29.58	$ 19.52	$ (10.06)	-34.01%	2.43%
1,000	29.58	19.52	(10.06)	-34.01%	16.31%
2,000	29.58	31.72	2.14	7.23%	38.71%
2,500 *	34.90	37.82	2.92	8.37%	50.05%
3,000	40.22	43.92	3.70	9.20%	59.47%
3,300 **	43.41	47.58	4.17	9.60%	64.46%
4,000	50.86	56.12	5.26	10.34%	74.08%
5,000	61.50	68.32	6.82	11.09%	84.54%
6,000	72.14	80.52	8.38	11.62%	89.97%
7,000	82.78	92.72	9.94	12.01%	93.21%
8,000	93.42	104.92	11.50	12.31%	95.23%
8,450 **	98.21	110.41	12.20	12.42%	95.81%
9,000	104.06	117.12	13.06	12.55%	96.45%
10,000	114.70	129.32	14.62	12.75%	97.20%
11,000	124.37	141.52	17.15	13.79%	97.69%
12,000	134.04	153.72	19.68	14.68%	98.05%
13,000	143.71	165.92	22.21	15.45%	98.31%
14,000	153.38	178.12	24.74	16.13%	98.51%
15,000	163.05	190.32	27.27	16.72%	98.68%
20,000	211.40	251.32	39.92	18.88%	99.04%
30,000	308.10	373.32	65.22	21.17%	99.32%
40,000	404.80	495.32	90.52	22.36%	99.49%
50,000	501.50	617.32	115.82	23.09%	99.65%
60,000	598.20	739.32	141.12	23.59%	99.73%
70,000	694.90	861.32	166.42	23.95%	99.77%
100,000	985.00	1,227.32	242.32	24.60%	99.86%
200,000	1,952.00	2,447.32	495.32	25.38%	99.96%
300,000	2,919.00	3,667.32	748.32	25.64%	99.99%
400,000	3,886.00	4,887.32	1,001.32	25.77%	100.00%

*Median Usage Bill.
**Average Residential Bill.
*** Average Non-Residential Bill.

CHARLES TOWN UTILITY BOARD
OPTION B
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
COUNTY - MONTHLY

CONSUMPTION GALLONS	BILLS UNDER 2022/2023 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 30.72	$ 19.52	$ (11.20)	-36.46%	0.87%
1,000	30.72	19.52	(11.20)	-36.46%	10.10%
2,000	30.72	31.72	1.00	3.26%	29.20%
2,900 *	43.58	42.70	(0.88)	-2.02%	50.07%
3,000	45.01	43.92	(1.09)	-2.42%	52.03%
3,300 **	49.30	47.58	(1.72)	-3.48%	57.37%
4,000	59.30	56.12	(3.18)	-5.36%	68.62%
5,000	73.59	68.32	(5.27)	-7.16%	79.79%
6,000	87.88	80.52	(7.36)	-8.38%	87.19%
7,000	102.17	92.72	(9.45)	-9.25%	91.68%
8,000	116.46	104.92	(11.54)	-9.91%	94.25%
8,450 **	122.89	110.41	(12.48)	-10.16%	94.95%
9,000	130.75	117.12	(13.63)	-10.42%	95.79%
10,000	145.04	129.32	(15.72)	-10.84%	96.75%
11,000	159.02	141.52	(17.50)	-11.00%	97.40%
12,000	173.00	153.72	(19.28)	-11.14%	97.87%
13,000	186.98	165.92	(21.06)	-11.26%	98.19%
14,000	200.96	178.12	(22.84)	-11.37%	98.41%
15,000	214.94	190.32	(24.62)	-11.45%	98.58%
20,000	284.84	251.32	(33.52)	-11.77%	98.99%
30,000	424.64	373.32	(51.32)	-12.09%	99.18%
40,000	564.44	495.32	(69.12)	-12.25%	99.35%
50,000	704.24	617.32	(86.92)	-12.34%	99.46%
60,000	844.04	739.32	(104.72)	-12.41%	99.53%
100,000	1,403.24	1,227.32	(175.92)	-12.54%	99.71%

*Median Usage Bill.
**Average Residential Bill.
*** Average Non-Residential Bill.

CHARLES TOWN UTILITY BOARD - WASTEWATER

OPTION C - RATE EQUALIZATION WITH 1,500 GALLON MONTHLY MINIMUM

COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT RATES

FOR THE YEAR ENDING JUNE 30, 2024

Customer Classification	Cost of Service		Revenues, Present Rates		Revenues, Proposed Rates		Proposed Increase	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential	$ 4,430,416	71.8%	$ 4,469,478	72.4%	$ 4,426,988	71.8%	$ (42,490)	-1.0%
Non-Residential	1,739,392	28.2%	1,700,329	27.6%	1,742,325	28.2%	41,996	2.5%
Total Sales	6,169,808	100.0%	6,169,807	100.0%	6,169,313	100.0%	$ (494)	0.0%
Other Revenues	124,000		124,000		124,000		-	0.0%
Total	$ 6,293,808		$ 6,293,807		$ 6,293,313		$ (494)	0.0%

CHARLES TOWN UTILITY BOARD
OPTION C - RATE EQUALIZATION PROPOSED 1,500 GALLON MINIMUM
COMPARISON OF PRESENT AND PROPOSED RATES

	2022/2023 Rates	2023/2024 Rates	
Charles Town and Ranson			
Minimum Charge - All Meter Sizes	$ 29.58	$ 25.17	$ 16.78000000
Consumption Charges (per 1000 gallons)			
First 2,000 gallons/1,500 gallons	$ -	$ -	
Next 8,000 gallons/8,500 gallons	$ 10.640	$ 11.910	
Over 10,000 gallons	$ 9.670	$ 11.910	
Ranson			
Minimum Charge - All Meter Sizes	$ 29.58	$ 25.17	
Consumption Charges (per 1000 gallons)			
First 2,000 gallons/1,500 gallons		$ -	
Next 8,000 gallons/8,500 gallons	$ 10.640	$ 11.910	
Over 10,000 gallons	$ 9.670	$ 11.910	
Jefferson County			
Minimum Charge - All Meter Sizes	$ 30.72	$ 25.17	
Consumption Charges (per 1000 gallons)			
First 2,000 gallons/1,500 gallons	$ -	$ -	
Next 8,000 gallons/8,500 gallons	$ 14.290	$ 11.910	
Over 10,000 gallons	$ 13.980	$ 11.910	
Flat Rate	$ 52.16	$ 52.56	

Average Bills Charles Town and Ranson:	Average Bill, Present Rates	Average Bill, Proposed Rates	Dollar Increase/(Decrease)	Percentage Increase/(Decrease)
Residential at 3,300 gallons	$ 43.41	$ 46.61	$ 3.20	7.36%
Non-Residential at 8,450 gallons	98.21	107.94	9.74	9.91%
Race Course at 940,000 Monthly	9,107.80	11,208.66	2,100.86	23.07%
Jefferson County:				
Residential at 3,300 gallons	$ 49.30	$ 46.61	$ (2.69)	-5.45%
Non-Residential at 8,450 gallons	122.89	107.94	(14.95)	-12.16%

CHARLES TOWN UTILITY BOARD
OPTION C
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
CITY AND RANSON - MONTHLY

CONSUMPTION GALLONS	BILLS UNDER 2022/2023 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 29.58	$ 25.17	$ (4.41)	-14.91%	2.43%
1,000	29.58	25.17	(4.41)	-14.91%	16.31%
2,000	29.58	31.13	1.55	5.22%	38.71%
2,500 *	34.90	37.08	2.18	6.25%	50.05%
3,000	40.22	43.04	2.82	7.00%	59.47%
3,300 **	43.41	46.61	3.20	7.36%	64.46%
4,000	50.86	54.95	4.09	8.03%	74.08%
5,000	61.50	66.86	5.36	8.71%	84.54%
6,000	72.14	78.77	6.63	9.18%	89.97%
7,000	82.78	90.68	7.90	9.54%	93.21%
8,000	93.42	102.59	9.17	9.81%	95.23%
8,450 **	98.21	107.94	9.74	9.91%	95.81%
9,000	104.06	114.50	10.44	10.03%	96.45%
10,000	114.70	126.41	11.71	10.20%	97.20%
11,000	124.37	138.32	13.95	11.21%	97.69%
12,000	134.04	150.23	16.19	12.07%	98.05%
13,000	143.71	162.14	18.43	12.82%	98.31%
14,000	153.38	174.05	20.67	13.47%	98.51%
15,000	163.05	185.96	22.91	14.05%	98.68%
20,000	211.40	245.51	34.11	16.13%	99.04%
30,000	308.10	364.61	56.51	18.34%	99.32%
40,000	404.80	483.71	78.91	19.49%	99.49%
50,000	501.50	602.81	101.31	20.20%	99.65%
60,000	598.20	721.91	123.71	20.68%	99.73%
70,000	694.90	841.01	146.11	21.03%	99.77%
100,000	985.00	1,198.31	213.31	21.66%	99.86%
200,000	1,952.00	2,389.31	437.31	22.40%	99.96%
300,000	2,919.00	3,580.31	661.31	22.66%	99.99%
400,000	3,886.00	4,771.31	885.31	22.78%	100.00%

*Median Usage Bill.
**Average Residential Bill.
*** Average Non-Residential Bill.

CHARLES TOWN UTILITY BOARD
OPTION C
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
COUNTY - MONTHLY

CONSUMPTION GALLONS	BILLS UNDER 2022/2023 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 30.72	$ 25.17	$ (5.55)	-18.07%	0.87%
1,000	30.72	25.17	(5.55)	-18.07%	10.10%
2,000	30.72	31.13	0.41	1.32%	29.20%
2,900 *	43.58	41.84	(1.74)	-3.99%	50.07%
3,000	45.01	43.04	(1.97)	-4.39%	52.03%
3,300 **	49.30	46.61	(2.69)	-5.45%	57.37%
4,000	59.30	54.95	(4.36)	-7.34%	68.62%
5,000	73.59	66.86	(6.74)	-9.15%	79.79%
6,000	87.88	78.77	(9.11)	-10.37%	87.19%
7,000	102.17	90.68	(11.50)	-11.25%	91.68%
8,000	116.46	102.59	(13.88)	-11.91%	94.25%
8,450 **	122.89	107.94	(14.95)	-12.16%	94.95%
9,000	130.75	114.50	(16.26)	-12.43%	95.79%
10,000	145.04	126.41	(18.64)	-12.85%	96.75%
11,000	159.02	138.32	(20.71)	-13.02%	97.40%
12,000	173.00	150.23	(22.78)	-13.16%	97.87%
13,000	186.98	162.14	(24.85)	-13.29%	98.19%
14,000	200.96	174.05	(26.92)	-13.39%	98.41%
15,000	214.94	185.96	(28.99)	-13.49%	98.58%
20,000	284.84	245.51	(39.34)	-13.81%	98.99%
30,000	424.64	364.61	(60.04)	-14.14%	99.18%
40,000	564.44	483.71	(80.74)	-14.30%	99.35%
50,000	704.24	602.81	(101.44)	-14.40%	99.46%
60,000	844.04	721.91	(122.14)	-14.47%	99.53%
100,000	1,403.24	1,198.31	(204.94)	-14.60%	99.71%

*Median Usage Bill.
**Average Residential Bill.
***Average Non-Residential Bill.

CHARLES TOWN UTILITY BOARD
WATER OPERATIONS
COMPARISON OF COST OF SERVICE TO REVENUES UNDER PRESENT RATES AND REVENUES UNDER PROPOSED RATE OPTIONS A THROUGH D

Customer Classification	COST OF SERVICE Amount (Schedule B)	Percent	CURRENT RATES Revenues, Present Rates Amount	Percent	OPTION A - 2,500 GALLON MINIMUM Revenues, Proposed Rates Amount	Percent	Amount	Percent Increase	OPTION B - 1,000 GALLON MINIMUM Revenues, Proposed Rates Amount	Percent	Amount	Percent Increase	OPTION C - 1,500 GALLON MINIMUM Revenues, Proposed Rates Amount	Percent	Amount	Percent Increase	OPTION D - 1,500 GALLON MINIMUM, NO THIRD BLOCK Revenues, Proposed Rates Amount	Percent	Amount	Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(14)	(15)	(16)	(17)
Residential	$ 3,078,519	67.0%	$ 2,663,438	67.4%	$ 3,091,474	67.3%	428,036	16.1%	$ 3,095,048	67.4%	431,611	16.2%	$ 3,095,455	67.4%	432,018	16.2%	$ 3,087,856	67.3%	424,419	15.9%
Commercial	1,280,466	27.9%	1,131,033	28.6%	1,308,721	28.5%	177,688	15.7%	1,304,955	28.4%	173,923	15.4%	1,303,790	28.4%	172,757	15.3%	1,312,444	28.6%	181,411	16.0%
Race Track	232,569	5.1%	159,423	4.0%	191,241	4.2%	31,818	20.0%	191,241	4.2%	31,818	20.0%	191,241	4.2%	31,818	20.0%	191,241	4.2%	31,818	20.0%
Total Sales	$ 4,591,554	100.0%	$ 3,953,893	100.0%	$ 4,591,435	100.0%	$ 637,542		$ 4,591,245	100.0%	$ 637,351	16.1%	$ 4,590,486	100.0%	$ 636,593		$ 4,591,541	100.0%	$ 637,648	
Other Revenues	143,000		143,000		143,000				143,000				143,000				143,000			
Total	$ 4,734,554		$ 4,096,893		$ 4,734,435				$ 4,734,245				$ 4,733,486				$ 4,734,541			

CHARLES TOWN UTILITY BOARD
COMPARISON OF MONTHLY BILLS UNDER PRESENT RATES AND PROPOSED RATES OF OPTIONS A THROUGH D FOR THE AVERAGE AND MEDIAN RESIDENTIAL CUSTOMER AND THE TOP TEN COMMERCIAL CUSTOMERS

						Option A - 2,500 Gallon Minimum				Option B - 1,000 Gallon Minimum				Option C - 1,500 Minimum				Option D - 1,500 Min, Eliminate 2nd Block			
Rank	Account/Customer	Avg. Monthly Usage (Gals.)	Meter Size	Present Minimum	Present Bill	Minimum*	Proposed Bill	Dollar Increase	Percent Increase	Proposed Minimum	Proposed Bill	Dollar Increase	Percent Increase	Proposed Minimum	Proposed Bill	Dollar Increase	Percent Increase	Proposed Minimum	Proposed Bill	Dollar Increase	Percent Increase
Residential Customers																					
1	Median Residential Usage	2,700	5/8"	2,500	$ 27.89	2,500	32.94	5.05	18.10%	1,000	37.10	9.21	33.01%	1,500	36.18	8.29	29.72%	1,500	35.96	8.07	28.94%
2	Average Residential Usage	3,300	5/8"	2,500	34.09	2,500	40.26	6.17	18.10%	1,000	49.46	15.38	45.10%	1,500	44.22	10.13	29.72%	1,500	43.96	9.87	28.94%
Top 10 Commercial Customers																					
1	Race Track	940,000	N/A	N/A	$ 4,568.40	N/A	$ 5,480.20	$ 911.80	19.96%	N/A	$ 5,480.20	$ 911.80	19.96%	N/A	$ 5,480.20	$ 911.80	19.96%	N/A	$ 5,480.20	$ 911.80	19.96%
2	103-001035-00	800,000	1.5"	12,940	5,553.50	12,940	6,338.50	785.00	14.14%	5,180	7,982.00	2,428.50	43.73%	7,760	7,323.90	1,770.40	31.88%	7,760	6,939.60	1,386.10	24.96%
3	205-000120-00	400,000	5/8"	2,500	2,865.40	2,500	3,222.50	357.10	12.46%	1,000	4,050.00	1,184.60	41.34%	1,500	3,719.90	854.50	29.82%	1,500	3,567.60	702.20	24.51%
4	103-001085-02	310,000	2"	21,754	2,152.90	21,754	2,521.40	368.50	17.12%	8,700	3,165.30	1,012.40	47.03%	13,050	2,909.00	756.10	35.12%	13,050	2,808.90	656.00	30.47%
5	105-001497-00	300,000	3"	42,942	2,171.40	42,942	2,443.50	272.10	12.53%	17,180	3,067.00	895.60	41.25%	25,770	2,818.90	647.50	29.82%	25,770	2,724.60	553.20	25.48%
6	202-001445-00	260,000	3"	42,942	1,893.80	42,942	2,131.90	238.10	12.57%	17,180	2,673.80	780.00	41.19%	25,770	2,458.50	564.70	29.82%	25,770	2,387.40	493.60	26.06%
7	202-001040-00	230,000	4"	80,159	1,685.60	80,159	1,898.20	212.60	12.61%	32,060	2,358.02	672.42	39.89%	48,100	2,188.20	502.60	29.82%	48,100	2,134.50	448.90	26.63%
8	302-000500-03	210,000	2"	21,754	1,458.90	21,754	1,742.40	283.50	19.43%	8,700	2,182.30	723.40	49.59%	13,050	2,008.00	549.10	37.64%	13,050	1,965.90	507.00	34.75%
9	105-001496-01	180,000	3"	42,942	1,338.60	42,942	1,508.70	170.10	12.71%	17,180	1,887.40	548.80	41.00%	25,770	1,737.70	399.10	29.82%	25,770	1,713.00	374.40	27.97%
10	104-001451-00	170,000	5/8"	2,500	1,269.20	2,500	1,430.80	161.60	12.73%	1,000	1,789.10	519.90	40.96%	1,500	1,647.60	378.40	29.81%	1,500	1,628.70	359.50	28.32%

*Same minimum as current rate structure.

CHARLES TOWN UTILITY BOARD
SUMMARY OF USAGE BLOCK ANALYSIS

	FOR ALL RATE OPTIONS					OPTION A			OPTION B			OPTION C			OPTION D		
Blocking	Total No. of Bills	No. of Bills	Percent of Bills >10,000	No. of Bills	Percent of Bills >40,000	No. of Bills	Percent of Bills <Min.	Proposed Minimum	No. of Bills	Percent of Bills <Min.	Proposed Minimum	No. of Bills	Percent of Bills <Min.	Proposed Minimum	No. of Bills	Percent of Bills <Min.	Proposed Minimum
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Residential	66,617	65,443	1.76%	66,575	0.06%	30,324	45.52%	2,500	9,215	13.83%	1,000	15,550	23.34%	1,500	15,550	23.34%	1,500
Commercial																	
All Commecial	18,567	17,571	5.36%	18,170	2.14%	12,706	68.43%		4,173	22.48%		6,091	32.81%		6,091	32.81%	
Meter Size																	
5/8"	16,921	16,699	1.31%	16,905	0.09%	11,817	69.84%	2,500	3,609	21.33%	1,000	5,397	31.90%	1,500	5,397	31.90%	1,500
3/4"	72	69	4.17%	72	0.00%	50	69.44%	3,750	31	43.06%	1,500	42	58.33%	2,250	42	58.33%	2,250
1"	652	441	32.36%	587	9.97%	363	55.67%	6,251	222	34.05%	2,500	265	40.64%	3,750	265	40.64%	3,750
1 1/2"	316	171	45.89%	264	16.46%	185	58.54%	12,940	136	43.04%	5,180	158	50.00%	7,760	158	50.00%	7,760
2"	516	179	65.31%	329	36.24%	266	51.55%	21,754	163	31.59%	8,700	215	41.67%	13,050	215	41.67%	13,050
3"	60	12	80.00%	13	78.33%	13	21.67%	42,942	12	20.00%	17,180	13	21.67%	25,770	13	21.67%	25,770
4"	30	-	100.00%	-	100.00%	12	40.00%	80,159	-	0.00%	32,060	1	3.33%	48,100	1	3.33%	48,100

CHARLES TOWN UTILITY BOARD
WATER OPERATIONS
OPTION A - RATE EQUALIZATION 2,500 GALLON MONTHLY MINIMUM
COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES
FOR THE TEST YEAR ENDED JUNE 30,2024

Customer Classification	Cost of Service Amount (Schedule B)	Cost of Service Percent	Revenues, Present Rates Amount	Revenues, Present Rates Percent	Revenues, Proposed Rates Amount	Revenues, Proposed Rates Percent	Proposed Increase Amount	Proposed Increase Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential	$ 3,078,519	67.0%	$ 2,663,438	67.4%	$ 3,091,474	67.3%	$ 428,036	16.1%
Commercial	$ 1,280,466	27.9%	1,131,033	28.6%	1,308,721	28.5%	177,688	15.7%
Race Track	$ 232,569	5.1%	159,423	4.0%	191,241	4.2%	31,818	20.0%
Total Sales	4,591,554	100.0%	3,953,893	100.0%	4,591,435	100.0%	637,542	16.1%
Other Revenues	143,000		143,000		143,000		-	0.0%
Total	$ 4,734,554		$ 4,096,893		$ 4,734,435		$ 637,542	15.6%

CHARLES TOWN UTILITY BOARD
OPTION A - RATE EQUALIZATION 2,500 GALLON MINIMUM
COMPARISON OF PRESENT AND PROPOSED RATES

Charles Town and Race Track

	2022/2023 Rates	2023/2024 Rates	
Minimum Charges			
5/8-inch and 5/8 x 3/4-inch	$ 25.83	$ 30.50	2,500
3/4-inch	38.74	45.75	3,750
1-inch	64.57	76.26	6,251
1 1/2-inch	129.14	151.01	12,940
2-inch	206.62	238.01	21,754
3-inch	387.42	441.02	42,942
4-inch	645.70	730.93	80,159
6-inch	1,291.40	1,455.72	173,199
Consumption Charges (per 1000 gallons)			
First 10,000 gallons	$ 10.330	$ 12.200	
Next 30,000 gallons	8.790	9.870	
Over 40,000 gallons	6.940	7.790	
PNGI Contract Rate (All Consumption)	$ 4.860	$ 5.830	

Jefferson County

Minimum Charge - All Meter Sizes	$ 47.10	$ -	
5/8-inch and 5/8 x 3/4-inch		30.50	
3/4-inch		45.75	
1-inch		76.26	
1 1/2-inch		151.01	
2-inch		238.01	
3-inch		441.02	
4-inch		730.93	
6-inch		1,455.72	
Consumption Charges (per 1000 gallons)			
First 5,000 gallons	$ 18.840	$ -	
Over 5,000 gallons	17.640	-	
First 10,000 gallons		$ 12.200	
Next 30,000 gallons		9.870	
Over 40,000 gallons		7.790	
Bulk Water Rate		7.790	

Average Bills	Average Bill, Present Rates	Average Bill, Proposed Rates	Dollar Increase/(Decrease)	Percentage Increase/(Decrease)
Charles Town and Ranson:				
Residential at 3,300 gallons	$ 34.09	$ 40.26	$ 6.17	18.10%
Non-Residential at 5,600 gallons	57.85	68.32	10.47	18.10%
Race Course at 940,000 Monthly	4,568.40	5,480.20	911.80	19.96%
Jefferson County:				
Residential at 3,300 gallons	$ 62.17	$ 40.26	(21.91)	-35.24%
Non-Residential at 5,600 gallons	104.78	68.32	(36.46)	-34.80%

CHARLES TOWN UTILITY BOARD
OPTION A - RATE EQUALIZATION 2,500 GALLON MINIMUM
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
CITY AND RANSON - MONTHLY
FOR A RESIDENTIAL 5/8-INCH METER

CONSUMPTION GALLONS	BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS***
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 25.83	$ 30.50	$ 4.68	18.10%	1.41%
1,000	25.83	30.50	4.68	18.10%	13.83%
2,000	25.83	30.50	4.68	18.10%	34.23%
2,700 *	27.89	32.94	5.05	18.10%	49.58%
3,000	30.99	36.60	5.61	18.10%	55.57%
3,300 **	34.09	40.26	6.17	18.10%	66.71%
4,000	41.32	48.80	7.48	18.10%	72.77%
5,000	51.65	61.00	9.35	18.10%	83.65%
6,000	61.98	73.20	11.22	18.10%	90.24%
7,000	72.31	85.40	13.09	18.10%	93.98%
8,000	82.64	97.60	14.96	18.10%	96.21%
9,000	92.97	109.80	16.83	18.10%	97.49%
10,000	103.30	122.00	18.70	18.10%	98.24%
11,000	112.09	131.87	19.78	17.65%	98.75%
12,000	120.88	141.74	20.86	17.26%	99.06%
13,000	129.67	151.61	21.94	16.92%	99.29%
14,000	138.46	161.48	23.02	16.63%	99.43%
15,000	147.25	171.35	24.10	16.37%	99.54%
20,000	191.20	220.70	29.50	15.43%	99.78%
30,000	279.10	319.40	40.30	14.44%	99.89%
40,000	367.00	418.10	51.10	13.92%	99.94%
50,000	436.40	496.00	59.60	13.66%	99.97%
60,000	505.80	573.90	68.10	13.46%	99.99%

*Median Residential Usage
**Average Residential Usage
**Reflects cumulative percentage of actual Residential bills by usage level.

CHARLES TOWN UTILITY BOARD
OPTION A - RATE EQUALIZATION 2,500 GALLON MINIMUM
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
CITY AND RANSON - MONTHLY
FOR A COMMERCIAL 5/8-INCH METER

CONSUMPTION GALLONS	BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS***
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 25.83	$ 30.50	$ 4.68	18.10%	3.60%
1,000	25.83	30.50	4.68	18.10%	21.33%
1,909 *	25.83	30.50	4.68	18.10%	50.20%
2,000	25.83	30.50	4.68	18.10%	53.75%
3,000	30.99	36.60	5.61	18.10%	78.96%
4,000	41.32	48.80	7.48	18.10%	86.17%
5,000	51.65	61.00	9.35	18.10%	95.09%
5,600 **	57.85	68.32	10.47	18.10%	96.11%
6,000	61.98	73.20	11.22	18.10%	96.51%
7,000	72.31	85.40	13.09	18.10%	97.52%
8,000	82.64	97.60	14.96	18.10%	98.00%
9,000	92.97	109.80	16.83	18.10%	98.44%
10,000	103.30	122.00	18.70	18.10%	98.69%
11,000	112.09	131.87	19.78	17.65%	98.91%
12,000	120.88	141.74	20.86	17.26%	99.06%
13,000	129.67	151.61	21.94	16.92%	99.18%
14,000	138.46	161.48	23.02	16.63%	99.30%
15,000	147.25	171.35	24.10	16.37%	99.47%
20,000	191.20	220.70	29.50	15.43%	99.72%
30,000	279.10	319.40	40.30	14.44%	99.86%
40,000	367.00	418.10	51.10	13.92%	99.91%
50,000	436.40	496.00	59.60	13.66%	99.95%
60,000	505.80	573.90	68.10	13.46%	99.96%
70,000	575.20	651.80	76.60	13.32%	99.98%
100,000	783.40	885.50	102.10	13.03%	99.99%
200,000	1,477.40	1,664.50	187.10	12.66%	100.00%

*Median Commercial Usage
**Average Commercial Usage
***Reflects cumulative percentage of actual Commercial bills by usage level.

CHARLES TOWN UTILITY BOARD
OPTION A - RATE EQUALIZATION 2,500 GALLON MINIMUM
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
COUNTY - MONTHLY
FOR ALL METER SIZES

CONSUMPTION GALLONS	BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS**
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 47.10	$ 30.50	$ (16.60)	-35.24%	1.60%
1,000	47.10	30.50	(16.60)	-35.24%	15.56%
2,000	47.10	30.50	(16.60)	-35.24%	35.93%
3,000	56.52	36.60	(19.92)	-35.24%	59.64%
3,300 *	62.17	43.92	(18.25)	-29.36%	71.49%
4,000	75.36	48.80	(26.56)	-35.24%	76.22%
5,000	94.20	61.00	(33.20)	-35.24%	85.02%
6,000	111.84	73.20	(38.64)	-34.55%	88.87%
7,000	129.48	85.40	(44.08)	-34.04%	93.24%
8,000	147.12	97.60	(49.52)	-33.66%	95.78%
9,000	164.76	109.80	(54.96)	-33.36%	96.95%
10,000	182.40	122.00	(60.40)	-33.11%	97.96%
11,000	200.04	131.87	(68.17)	-34.08%	98.76%
12,000	217.68	141.74	(75.94)	-34.89%	99.05%
13,000	235.32	151.61	(83.71)	-35.57%	99.35%
14,000	252.96	161.48	(91.48)	-36.16%	99.49%
15,000	270.60	171.35	(99.25)	-36.68%	99.64%
20,000	358.80	220.70	(138.10)	-38.49%	99.93%
30,000	535.20	319.40	(215.80)	-40.32%	99.99%
40,000	711.60	418.10	(293.50)	-41.25%	99.99%
50,000	888.00	496.00	(392.00)	-44.14%	99.99%
60,000	1,064.40	573.90	(490.50)	-46.08%	99.99%

*Average Residential Usage
**Reflects cumulative percentage of actual Residential bills by usage level.

CHARLES TOWN UTILITY BOARD
WATER OPERATIONS
OPTION B - RATE EQUALIZATION WITH 1,000 GALLON MONTHLY MINIMUM
COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES
FOR THE TEST YEAR ENDED JUNE 30,2024

Customer Classification	Cost of Service Amount (Schedule B)	Cost of Service Percent	Revenues, Present Rates Amount	Revenues, Present Rates Percent	Revenues, Proposed Rates Amount	Revenues, Proposed Rates Percent	Proposed Increase Amount	Proposed Increase Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential	$ 3,078,519	67.0%	$ 2,663,438	67.4%	$ 3,095,048	67.4%	$ 431,611	16.2%
Commercial	$ 1,280,466	27.9%	1,131,033	28.6%	1,304,955	28.4%	173,923	15.4%
Race Track	$ 232,569	5.1%	159,423	4.0%	191,241	4.2%	31,818	20.0%
Total Sales	4,591,554	100.0%	3,953,893	100.0%	4,591,245	100.0%	637,351	16.1%
Other Revenues	143,000		143,000		143,000		-	0.0%
Total	$ 4,734,554		$ 4,096,893		$ 4,734,245		$ 637,351	15.6%

CHARLES TOWN UTILITY BOARD
OPTION B - RATE EQUALIZATION PROPOSED 1,000 GALLON MINIMUM
COMPARISON OF PRESENT AND PROPOSED RATES

Charles Town and Race Track

	2022/2023 Rates	2023/2024 Rates	Proposed Minimum By Meter Size (gallons)
Minimum Charges - 2,500 gals. ==> 1,000 gals.			
5/8-inch and 5/8 x 3/4-inch	$ 25.83	$ 13.74	1,000
3/4-inch	38.74	20.61	1,500
1-inch	64.57	34.35	2,500
1 1/2-inch	129.14	71.17	5,180
2-inch	206.62	119.54	8,700
3-inch	387.42	226.86	17,180
4-inch	645.70	412.27	32,060
6-inch	1,291.40	799.02	69,280
Consumption Charges (per 1000 gallons)			
First 10,000 gallons	$ 10.330	$ 13.740	
Next 30,000 gallons/Over 10,000 gallons (proposed)	8.790	12.460	
Over 40,000 gallons/No Third Block (proposed)	6.940	9.830	
PNGI Contract Rate (All Consumption)	$ 4.860	$ 5.830	

Jefferson County

Minimum Charges - 2,500 gals. ==> 1,000 gals.	$ 47.10	$ -	
5/8-inch and 5/8 x 3/4-inch		13.74	1,000
3/4-inch		20.61	1,500
1-inch		34.35	2,500
1 1/2-inch		71.17	5,180
2-inch		119.54	8,700
3-inch		226.86	17,180
4-inch		412.27	32,060
6-inch		799.02	69,280
Consumption Charges (per 1000 gallons)			
First 5,000 gallons	$ 18.840	$ -	
Over 5,000 gallons	17.640	-	
First 10,000 gallons		$ 13.740	
Next 30,000 gallons		12.460	
Over 40,000 gallons		9.830	
Bulk Water Rate		9.830	

Average Bills Charles Town and Ranson:	Average Bill, Present Rates	Average Bill, Proposed Rates	Dollar Increase/(Decrease)	Percentage Increase/(Decrease)
Residential at 3,300 gallons	$ 34.09	$ 45.34	$ 11.25	33.01%
Non-Residential at 5,600 gallons	57.85	76.94	19.10	33.01%
Race Course at 940,000 Monthly	4,568.40	5,480.20	911.80	19.96%
Jefferson County:				
Residential at 3,300 gallons	$ 62.17	$ 45.34	$ (16.83)	-27.07%
Non-Residential at 5,600 gallons	104.78	76.94	(27.84)	-26.57%

CHARLES TOWN UTILITY BOARD
OPTION B - 1,000 GALLON MINIMUM
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
CITY AND RANSON - MONTHLY
FOR A RESIDENTIAL 5/8-INCH METER

CONSUMPTION GALLONS	BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS***
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 25.83	$ 13.74	$ (12.09)	-46.80%	1.41%
1,000	25.83	13.74	(12.09)	-46.80%	13.83%
2,000	25.83	27.48	1.66	6.41%	34.23%
2,700 *	27.89	37.10	9.21	33.01%	49.58%
3,000	30.99	41.22	10.23	33.01%	55.57%
3,300 **	34.09	49.46	15.38	45.10%	66.71%
4,000	41.32	54.96	13.64	33.01%	72.77%
5,000	51.65	68.70	17.05	33.01%	83.65%
6,000	61.98	82.44	20.46	33.01%	90.24%
7,000	72.31	96.18	23.87	33.01%	93.98%
8,000	82.64	109.92	27.28	33.01%	96.21%
9,000	92.97	123.66	30.69	33.01%	97.49%
10,000	103.30	137.40	34.10	33.01%	98.24%
11,000	112.09	149.86	37.77	33.70%	98.75%
12,000	120.88	162.32	41.44	34.28%	99.06%
13,000	129.67	174.78	45.11	34.79%	99.29%
14,000	138.46	187.24	48.78	35.23%	99.43%
15,000	147.25	199.70	52.45	35.62%	99.54%
20,000	191.20	262.00	70.80	37.03%	99.78%
30,000	279.10	386.60	107.50	38.52%	99.89%
40,000	367.00	511.20	144.20	39.29%	99.94%
50,000	436.40	609.50	173.10	39.67%	99.97%
60,000	505.80	707.80	202.00	39.94%	99.99%

*Median Residential Usage
**Average Residential Usage
***Reflects cumulative percentage of actual Residential bills by usage level.

CHARLES TOWN UTILITY BOARD
OPTION B - 1,000 GALLON MINIMUM
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
CITY AND RANSON - MONTHLY
FOR A COMMERCIAL 5/8-INCH METER

CONSUMPTION GALLONS	BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS**
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 25.83	$ 13.74	$ (12.09)	-46.80%	3.60%
1,000	25.83	13.74	(12.09)	-46.80%	21.33%
1,909 *	25.83	26.23	0.40	1.57%	50.20%
2,000	25.83	27.48	1.66	6.41%	53.75%
3,000	30.99	41.22	10.23	33.01%	78.96%
4,000	41.32	54.96	13.64	33.01%	86.17%
5,000	51.65	68.70	17.05	33.01%	95.09%
5,600 **	57.85	76.94	19.10	33.01%	96.11%
6,000	61.98	82.44	20.46	33.01%	96.51%
7,000	72.31	96.18	23.87	33.01%	97.52%
8,000	82.64	109.92	27.28	33.01%	98.00%
9,000	92.97	123.66	30.69	33.01%	98.44%
10,000	103.30	137.40	34.10	33.01%	98.69%
11,000	112.09	149.86	37.77	33.70%	98.91%
12,000	120.88	162.32	41.44	34.28%	99.06%
13,000	129.67	174.78	45.11	34.79%	99.18%
14,000	138.46	187.24	48.78	35.23%	99.30%
15,000	147.25	199.70	52.45	35.62%	99.47%
20,000	191.20	262.00	70.80	37.03%	99.72%
30,000	279.10	386.60	107.50	38.52%	99.86%
40,000	367.00	511.20	144.20	39.29%	99.91%
50,000	436.40	609.50	173.10	39.67%	99.95%
60,000	505.80	707.80	202.00	39.94%	99.96%
70,000	575.20	806.10	230.90	40.14%	99.98%
100,000	783.40	1,101.00	317.60	40.54%	99.99%
200,000	1,477.40	2,084.00	606.60	41.06%	100.00%

*Median Commercial Usage
**Average Commercial Usage
***Reflects cumulative percentage of actual Commercial 5/8"-meter sized bills by usage level.

CHARLES TOWN UTILITY BOARD
OPTION B - 1,000 GALLON MINIMUM
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
COUNTY - MONTHLY
FOR ALL METER SIZES

CONSUMPTION GALLONS	BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS**
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 47.10	$ 13.74	$ (33.36)	-70.83%	1.60%
1,000	47.10	13.74	(33.36)	-70.83%	15.56%
2,000	47.10	27.48	(19.62)	-41.66%	35.93%
3,000	56.52	41.22	(15.30)	-27.07%	59.64%
3,600 *	67.82	49.46	(18.36)	-27.07%	71.49%
4,000	75.36	54.96	(20.40)	-27.07%	76.22%
5,000	94.20	68.70	(25.50)	-27.07%	85.02%
6,000	111.84	82.44	(29.40)	-26.29%	88.87%
7,000	129.48	96.18	(33.30)	-25.72%	93.24%
8,000	147.12	109.92	(37.20)	-25.29%	95.78%
9,000	164.76	123.66	(41.10)	-24.95%	96.95%
10,000	182.40	137.40	(45.00)	-24.67%	97.96%
11,000	200.04	149.86	(50.18)	-25.08%	98.76%
12,000	217.68	162.32	(55.36)	-25.43%	99.05%
13,000	235.32	174.78	(60.54)	-25.73%	99.35%
14,000	252.96	187.24	(65.72)	-25.98%	99.49%
15,000	270.60	199.70	(70.90)	-26.20%	99.64%
20,000	358.80	262.00	(96.80)	-26.98%	99.93%
30,000	535.20	386.60	(148.60)	-27.77%	99.99%
40,000	711.60	511.20	(200.40)	-28.16%	99.99%
50,000	888.00	609.50	(278.50)	-31.36%	99.99%
60,000	1,064.40	707.80	(356.60)	-33.50%	99.99%

*Average Residential Usage
**Reflects cumulative percentage of actual Residential bills by usage level.

CHARLES TOWN UTILITY BOARD
WATER OPERATIONS
OPTION C - RATE EQUALIZATION WITH 1,500 GALLON MONTHLY MINIMUM
COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES
FOR THE TEST YEAR ENDED JUNE 30,2024

Customer Classification	Cost of Service Amount (Schedule B)	Cost of Service Percent	Revenues, Present Rates Amount	Revenues, Present Rates Percent	Revenues, Proposed Rates Amount	Revenues, Proposed Rates Percent	Proposed Increase Amount	Proposed Increase Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential	$ 3,078,519	67.0%	$ 2,663,438	67.4%	$ 3,095,455	67.4%	$ 432,018	16.2%
Commercial	$ 1,280,466	27.9%	1,131,033	28.6%	1,303,790	28.4%	172,757	15.3%
Race Track	$ 232,569	5.1%	159,423	4.0%	191,241	4.2%	31,818	20.0%
Total Sales	4,591,554	100.0%	3,953,893	100.0%	4,590,486	100.0%	636,593	16.1%
Other Revenues	143,000		143,000		143,000		-	0.0%
Total	$ 4,734,554		$ 4,096,893		$ 4,733,486		$ 636,593	15.5%

CHARLES TOWN UTILITY BOARD
OPTION C - RATE EQUALIZATION PROPOSED 1,500 GALLON MINIMUM
COMPARISON OF PRESENT AND PROPOSED RATES

Charles Town and Race Track

	2022/2023 Rates	2023/2024 Rates	Proposed Minimum By Meter Size (gallons)
Minimum Charges - 2,500 gals. ==> 1,500 gals.			
5/8-inch and 5/8 x 3/4-inch	$ 25.83	$ 20.10	1,500
3/4-inch	38.74	30.15	2,250
1-inch	64.57	50.25	3,750
1 1/2-inch	129.14	103.98	7,760
2-inch	206.62	168.80	13,050
3-inch	387.42	313.94	25,770
4-inch	645.70	549.28	48,100
6-inch	1,291.40	1,052.22	103,920
Consumption Charges (per 1000 gallons)			
First 10,000 gallons	$ 10.330	$ 13.400	
Next 30,000 gallons	8.790	11.410	
Over 40,000 gallons	6.940	9.010	
PNGI Contract Rate (All Consumption)	$ 4.860	$ 5.830	

Jefferson County

Minimum Charges - 2,500 gals. ==> 1,000 gals.	$ 47.10	$ -	
5/8-inch and 5/8 x 3/4-inch		20.10	1,500
3/4-inch		30.15	2,250
1-inch		50.25	3,750
1 1/2-inch		103.98	7,760
2-inch		168.80	13,050
3-inch		313.94	25,770
4-inch		549.28	48,100
6-inch		1,052.22	103,920
Consumption Charges (per 1000 gallons)			
First 5,000 gallons	$ 18.840	$ -	
Over 5,000 gallons	17.640	-	
First 10,000 gallons		$ 13.400	
Next 30,000 gallons		11.410	
Over 40,000 gallons		9.010	
Bulk Water Rate		9.010	

Average Bills	Average Bill, Present Rates	Average Bill, Proposed Rates	Dollar Increase/(Decrease)	Percentage Increase/(Decrease)
Charles Town and Ranson:				
Residential at 3,300 gallons	$ 34.09	$ 44.22	$ 10.13	29.72%
Non-Residential at 5,600 gallons	57.85	75.04	17.19	29.72%
Race Course at 940,000 Monthly	4,568.40	5,480.20	911.80	19.96%
Jefferson County:				
Residential at 3,300 gallons	$ 62.17	$ 44.22	$ (17.95)	-28.87%
Non-Residential at 5,600 gallons	104.78	75.04	(29.74)	-28.39%

CHARLES TOWN UTILITY BOARD
OPTION C - 1,500 GALLON MINIMUM
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
CITY AND RANSON - MONTHLY
FOR A RESIDENTIAL 5/8-INCH METER

CONSUMPTION GALLONS		BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS**
(1)		(2)	(3)	(4)	(5)	(6)
0		$ 25.83	$ 20.10	$ (5.73)	-22.17%	1.41%
1,000		25.83	20.10	(5.73)	-22.17%	13.83%
2,000		25.83	26.80	0.98	3.78%	34.23%
2,700	*	27.89	36.18	8.29	29.72%	49.58%
3,000		30.99	40.20	9.21	29.72%	55.57%
3,300	**	34.09	44.22	10.13	29.72%	66.71%
4,000		41.32	53.60	12.28	29.72%	72.77%
5,000		51.65	67.00	15.35	29.72%	83.65%
6,000		61.98	80.40	18.42	29.72%	90.24%
7,000		72.31	93.80	21.49	29.72%	93.98%
8,000		82.64	107.20	24.56	29.72%	96.21%
9,000		92.97	120.60	27.63	29.72%	97.49%
10,000		103.30	134.00	30.70	29.72%	98.24%
11,000		112.09	145.41	33.32	29.73%	98.75%
12,000		120.88	156.82	35.94	29.73%	99.06%
13,000		129.67	168.23	38.56	29.74%	99.29%
14,000		138.46	179.64	41.18	29.74%	99.43%
15,000		147.25	191.05	43.80	29.75%	99.54%
20,000		191.20	248.10	56.90	29.76%	99.78%
30,000		279.10	362.20	83.10	29.77%	99.89%
40,000		367.00	476.30	109.30	29.78%	99.94%
50,000		436.40	566.40	130.00	29.79%	99.97%
60,000		505.80	656.50	150.70	29.79%	99.99%

*Median Residential Usage
**Average Residential Usage
***Reflects cumulative percentage of actual Residential bills by usage level.

CHARLES TOWN UTILITY BOARD
OPTION C - 1,500 GALLON MINIMUM
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
CITY AND RANSON - MONTHLY
FOR A COMMERCIAL 5/8-INCH METER

CONSUMPTION GALLONS	BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS***
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 25.83	$ 20.10	$ (5.73)	-22.17%	3.60%
1,000	25.83	20.10	(5.73)	-22.17%	21.33%
1,909 *	25.83	25.58	(0.24)	-0.95%	50.20%
2,000	25.83	26.80	0.98	3.78%	53.75%
3,000	30.99	40.20	9.21	29.72%	78.96%
4,000	41.32	53.60	12.28	29.72%	86.17%
5,000	51.65	67.00	15.35	29.72%	95.09%
5,600 **	57.85	75.04	17.19	29.72%	96.11%
6,000	61.98	80.40	18.42	29.72%	96.51%
7,000	72.31	93.80	21.49	29.72%	97.52%
8,000	82.64	107.20	24.56	29.72%	98.00%
9,000	92.97	120.60	27.63	29.72%	98.44%
10,000	103.30	134.00	30.70	29.72%	98.69%
11,000	112.09	145.41	33.32	29.73%	98.91%
12,000	120.88	156.82	35.94	29.73%	99.06%
13,000	129.67	168.23	38.56	29.74%	99.18%
14,000	138.46	179.64	41.18	29.74%	99.30%
15,000	147.25	191.05	43.80	29.75%	99.47%
20,000	191.20	248.10	56.90	29.76%	99.72%
30,000	279.10	362.20	83.10	29.77%	99.86%
40,000	367.00	476.30	109.30	29.78%	99.91%
50,000	436.40	566.40	130.00	29.79%	99.95%
60,000	505.80	656.50	150.70	29.79%	99.96%
70,000	575.20	746.60	171.40	29.80%	99.98%
100,000	783.40	1,016.90	233.50	29.81%	99.99%
200,000	1,477.40	1,917.90	440.50	29.82%	100.00%

*Median Commercial Usage
**Average Commercial Usage
***Reflects cumulative percentage of actual Commercial bills by usage level.

CHARLES TOWN UTILITY BOARD
OPTION C - 1,500 GALLON MINIMUM
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
COUNTY - MONTHLY
FOR ALL METER SIZES

CONSUMPTION GALLONS	BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS**
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 47.10	$ 20.10	$ (27.00)	-57.32%	1.60%
1,000	47.10	20.10	(27.00)	-57.32%	15.56%
2,000	47.10	26.80	(20.30)	-43.10%	35.93%
3,000	56.52	40.20	(16.32)	-28.87%	59.64%
3,600 *	67.82	48.24	(19.58)	-28.87%	71.49%
4,000	75.36	53.60	(21.76)	-28.87%	76.22%
5,000	94.20	67.00	(27.20)	-28.87%	85.02%
6,000	111.84	80.40	(31.44)	-28.11%	88.87%
7,000	129.48	93.80	(35.68)	-27.56%	93.24%
8,000	147.12	107.20	(39.92)	-27.13%	95.78%
9,000	164.76	120.60	(44.16)	-26.80%	96.95%
10,000	182.40	134.00	(48.40)	-26.54%	97.96%
11,000	200.04	145.41	(54.63)	-27.31%	98.76%
12,000	217.68	156.82	(60.86)	-27.96%	99.05%
13,000	235.32	168.23	(67.09)	-28.51%	99.35%
14,000	252.96	179.64	(73.32)	-28.98%	99.49%
15,000	270.60	191.05	(79.55)	-29.40%	99.64%
20,000	358.80	248.10	(110.70)	-30.85%	99.93%
30,000	535.20	362.20	(173.00)	-32.32%	99.99%
40,000	711.60	476.30	(235.30)	-33.07%	99.99%
50,000	888.00	566.40	(321.60)	-36.22%	99.99%
60,000	1,064.40	656.50	(407.90)	-38.32%	99.99%

*Average Residential Usage
**Reflects cumulative percentage of actual Residential bills by usage level.

CHARLES TOWN UTILITY BOARD
WATER OPERATIONS
OPTION D - RATE EQUALIZATION WITH 1,500 GALLON MONTHLY MINIMUM, ELIMINATE SECOND BLOCK
COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES
FOR THE TEST YEAR ENDED JUNE 30,2024

Customer Classification	Cost of Service Amount (Schedule B)	Cost of Service Percent	Revenues, Present Rates Amount	Revenues, Present Rates Percent	Revenues, Proposed Rates Amount	Revenues, Proposed Rates Percent	Proposed Increase Amount	Proposed Increase Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential	$ 3,078,519	67.0%	$ 2,663,438	67.4%	$ 3,087,856	67.3%	$ 424,419	15.9%
Commercial	$ 1,280,466	27.9%	1,131,033	28.6%	1,312,444	28.6%	181,411	16.0%
Race Track	$ 232,569	5.1%	159,423	4.0%	191,241	4.2%	31,818	20.0%
Total Sales	4,591,554	100.0%	3,953,893	100.0%	4,591,541	100.0%	637,648	16.1%
Other Revenues	143,000		143,000		143,000		-	0.0%
Total	$ 4,734,554		$ 4,096,893		$ 4,734,541		$ 637,648	15.6%

CHARLES TOWN UTILITY BOARD
OPTION D - RATE EQUALIZATION PROPOSED 1,500 GALLON MINIMUM, ELIMINATE SECOND USAGE BLOCK
COMPARISON OF PRESENT AND PROPOSED RATES

Charles Town and Race Track

	2022/2023 Rates	2023/2024 Rates	Proposed Minimum By Meter Size (gallons)
Minimum Charges - 2,500 gals. ==> 1,500 gals.			
5/8-inch and 5/8 x 3/4-inch	$ 25.83	$ 19.98	1,500
3/4-inch	38.74	29.97	2,250
1-inch	64.57	49.95	3,750
1 1/2-inch	129.14	103.36	7,760
2-inch	206.62	173.83	13,050
3-inch	387.42	343.26	25,770
4-inch	645.70	601.08	48,100
6-inch	1,291.40	1,071.65	103,920
Consumption Charges (per 1000 gallons)			
First 10,000 gallons	$ 10.330	$ 13.320	
Next 30,000 gallons	8.790	13.320	
Over 40,000 gallons	6.940	8.430	
PNGI Contract Rate (All Consumption)	$ 4.860	$ 5.830	

Jefferson County

Minimum Charges - 2,500 gals. ==> 1,000 gals.	$ 47.10	$ -	
5/8-inch and 5/8 x 3/4-inch		19.98	1,500
3/4-inch		29.97	2,250
1-inch		49.95	3,750
1 1/2-inch		103.36	7,760
2-inch		173.83	13,050
3-inch		343.26	25,770
4-inch		601.08	48,100
6-inch		1,071.65	103,920
Consumption Charges (per 1000 gallons)			
First 5,000 gallons	$ 18.840	$ -	
Over 5,000 gallons	17.640	-	
First 10,000 gallons		$ 13.320	
Next 30,000 gallons		13.320	
Over 40,000 gallons		8.430	
Bulk Water Rate		8.430	

Average Bills Charles Town and Ranson:	Average Bill, Present Rates	Average Bill, Proposed Rates	Dollar Increase/(Decrease)	Percentage Increase/(Decrease)
Residential at 3,300 gallons	$ 34.09	$ 43.96	$ 9.87	28.94%
Non-Residential at 5,600 gallons	57.85	74.59	16.74	28.94%
Race Course at 940,000 Monthly	4,568.40	5,480.20	911.80	19.96%
Jefferson County:				
Residential at 3,300 gallons	$ 62.17	$ 43.96	$ (18.22)	-29.30%
Non-Residential at 5,600 gallons	104.78	74.59	(30.19)	-28.81%

CHARLES TOWN UTILITY BOARD
OPTION D - 1,500 GALLON MINIMUM, ELIMINATE SECOND RATE BLOCK
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
CITY AND RANSON - MONTHLY
FOR A RESIDENTIAL 5/8-INCH METER

CONSUMPTION GALLONS	BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS**
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 25.83	$ 19.98	$ (5.85)	-22.63%	1.41%
1,000	25.83	19.98	(5.85)	-22.63%	13.83%
2,000	25.83	26.64	0.82	3.16%	34.23%
2,700 *	27.89	35.96	8.07	28.94%	49.58%
3,000	30.99	39.96	8.97	28.94%	55.57%
3,300 **	34.09	43.96	9.87	28.94%	66.71%
4,000	41.32	53.28	11.96	28.94%	72.77%
5,000	51.65	66.60	14.95	28.94%	83.65%
6,000	61.98	79.92	17.94	28.94%	90.24%
7,000	72.31	93.24	20.93	28.94%	93.98%
8,000	82.64	106.56	23.92	28.94%	96.21%
9,000	92.97	119.88	26.91	28.94%	97.49%
10,000	103.30	133.20	29.90	28.94%	98.24%
11,000	112.09	146.52	34.43	30.72%	98.75%
12,000	120.88	159.84	38.96	32.23%	99.06%
13,000	129.67	173.16	43.49	33.54%	99.29%
14,000	138.46	186.48	48.02	34.68%	99.43%
15,000	147.25	199.80	52.55	35.69%	99.54%
20,000	191.20	266.40	75.20	39.33%	99.78%
30,000	279.10	399.60	120.50	43.17%	99.89%
40,000	367.00	532.80	165.80	45.18%	99.94%
50,000	436.40	617.10	180.70	41.41%	99.97%
60,000	505.80	701.40	195.60	38.67%	99.99%

*Median Residential Usage
**Average Residential Usage
***Reflects cumulative percentage of actual Residential bills by usage level.

CHARLES TOWN UTILITY BOARD
OPTION D - 1,500 GALLON MINIMUM, ELIMINATE SECOND RATE BLOCK
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
CITY AND RANSON - MONTHLY
FOR A COMMERCIAL 5/8-INCH METER

CONSUMPTION GALLONS	BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS***
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 25.83	$ 19.98	$ (5.85)	-22.63%	3.60%
1,000	25.83	19.98	(5.85)	-22.63%	21.33%
1,909 *	25.83	25.43	(0.40)	-1.54%	50.20%
2,000	25.83	26.64	0.82	3.16%	53.75%
3,000	30.99	39.96	8.97	28.94%	78.96%
4,000	41.32	53.28	11.96	28.94%	86.17%
5,000	51.65	66.60	14.95	28.94%	95.09%
5,600 **	57.85	74.59	16.74	28.94%	96.11%
6,000	61.98	79.92	17.94	28.94%	96.51%
7,000	72.31	93.24	20.93	28.94%	97.52%
8,000	82.64	106.56	23.92	28.94%	98.00%
9,000	92.97	119.88	26.91	28.94%	98.44%
10,000	103.30	133.20	29.90	28.94%	98.69%
11,000	112.09	146.52	34.43	30.72%	98.91%
12,000	120.88	159.84	38.96	32.23%	99.06%
13,000	129.67	173.16	43.49	33.54%	99.18%
14,000	138.46	186.48	48.02	34.68%	99.30%
15,000	147.25	199.80	52.55	35.69%	99.47%
20,000	191.20	266.40	75.20	39.33%	99.72%
30,000	279.10	399.60	120.50	43.17%	99.86%
40,000	367.00	535.25	168.25	45.84%	99.91%
50,000	436.40	619.55	183.15	41.97%	99.95%
60,000	505.80	703.85	198.05	39.15%	99.96%
70,000	575.20	788.15	212.95	37.02%	99.98%
100,000	783.40	1,041.05	257.65	32.89%	99.99%
200,000	1,477.40	1,884.05	406.65	27.52%	100.00%

*Median Commercial Usage
**Average Commercial Usage
***Reflects cumulative percentage of actual Commercial bills by usage level.

CHARLES TOWN UTILITY BOARD
OPTION D - 1,500 GALLON MINIMUM, ELIMINATE SECOND RATE BLOCK
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
COUNTY - MONTHLY
FOR ALL METER SIZES

CONSUMPTION GALLONS	BILLS UNDER 2021/2022 RATES	BILLS UNDER 2023/2024 RATES	INCREASE AMOUNT	INCREASE PERCENT	PERCENT OF BILLS**
(1)	(2)	(3)	(4)	(5)	(6)
0	$ 47.10	$ 19.98	$ (27.12)	-57.58%	1.60%
1,000	47.10	19.98	(27.12)	-57.58%	15.56%
2,000	47.10	26.64	(20.46)	-43.44%	35.93%
3,000	56.52	39.96	(16.56)	-29.30%	59.64%
3,600 *	67.82	47.95	(19.87)	-29.30%	71.49%
4,000	75.36	53.28	(22.08)	-29.30%	76.22%
5,000	94.20	66.60	(27.60)	-29.30%	85.02%
6,000	111.84	79.92	(31.92)	-28.54%	88.87%
7,000	129.48	93.24	(36.24)	-27.99%	93.24%
8,000	147.12	106.56	(40.56)	-27.57%	95.78%
9,000	164.76	119.88	(44.88)	-27.24%	96.95%
10,000	182.40	133.20	(49.20)	-26.97%	97.96%
11,000	200.04	146.52	(53.52)	-26.75%	98.76%
12,000	217.68	159.84	(57.84)	-26.57%	99.05%
13,000	235.32	173.16	(62.16)	-26.42%	99.35%
14,000	252.96	186.48	(66.48)	-26.28%	99.49%
15,000	270.60	199.80	(70.80)	-26.16%	99.64%
20,000	358.80	266.40	(92.40)	-25.75%	99.93%
30,000	535.20	399.60	(135.60)	-25.34%	99.99%
40,000	711.60	535.25	(176.36)	-24.78%	99.99%
50,000	888.00	619.55	(268.46)	-30.23%	99.99%
60,000	1,064.40	703.85	(360.56)	-33.87%	99.99%

*Average Residential Usage
**Reflects cumulative percentage of actual Residential bills by usage level.

JAMES RIVER EQUIPMENT

245 YARDMASTER COURT • STEPHENSON, VA 22656 • PHONE (540) 667-9777

7/19/2023
QUOTE EXPIRES 7/29/2023
PRICE IS SUBJECT TO CHANGE

CITY OF CHARLES TOWN
CHARLES TOWN, WV 25414

QUOTE

(1) 2023 JOHN DEERE 17G MINI EXCAVATOR

OPEN ROPS/ NO CAB
JD MANUAL WEDGE STYLE COUPLER
FOLD IN BLADE ENDS
RETRACTIABLE TRACK SYSTEM

STANDARD WARRNTY:
24 MONTHS OR 2000 HOURS FULL MACHINE WARRANTY.

LIST PRICE	$40,331.00
SOURCEWELL CONTRACT #011723-JDC 27%	-$10,889.37
TOTAL	$29,441.63

OPTIONS:

EXTENDED POWER TRAIN & HYDRAULIC WARRANTY	$500.00
TERM OF 60 MONTHS OR 2500 HOURS	
EPIROC BREAKER SB 102 HYD BREAKER	$7,850.00

ADD ON COST PER THE SOURCEWELL CONTRACT:

FREIGHT IN TO DEALER & OUT TO CUSTOMER	$2,500.00
PREDELLIVERY INSPECTION	$800.00
12’ TAG MANUFACTURING BUCKET W/TEETH	$615.00
MACHINE TOTAL PRICE	$41,706.63
LESS TRADE JOHN DEERE 320 SKID STEER WITH BUCKET	-$12,000.00

TOTAL PRICE DUE **$29,706.63**

CHARLES TOWN UTILITY BOARD
WATER FUND
FISCAL YEAR 2024 CAPITAL EXPENDITURE FUND

DESCRIPTION	BUDGET
RENEWAL & REPLACEMENT ACCOUNT (Balance as of 3/31/2023)	789,398
REQUIRED R&R FUND CONTRIBUTIONS (Remainder of FY 2023)	27,963
REQUIRED R&R FUND CONTRIBUTIONS FY 2024	106,175
WATER SURETY POLICY ACCOUNT (Balance as of 3/31/2023)	101,229
CAPITAL IMPROVEMENT FUNDS (Balance as of 3/31/2023)	3,617,854
PROJECTED CIF FUNDING FY 2024	941,386
TOTAL FUNDS AVAILABLE FOR CAPITAL IMPROVEMENTS	**$ 5,584,004**
FY 2024 ANTICIPATED CAPITAL EXPENDITURES	
ASSET MANAGEMENT SOFTWARE IMPLEMENTATION	35,000
BILLING & ACCOUNTING SOFTWARE IMPLEMENTATION	25,000
FLEET TRUCKS	150,000
VALVE MAINTENANCE TRAILER	100,000
SAFETY EQUIPMENT	50,000
METER REPLACEMENT	150,000
WTP RIVER INTAKE VFD INSTALLATION	232,900
TOTAL CAPITAL EXPENDITURES	**$ 742,900**

DRAFT

WTP AND DISTRIBUTION SYSTEM CAPITAL IMPROVEMENTS
FY 2024

PROJECT NAME	
PHASE A PROJECTS - APPENDIX A	$ 2,120,000
TOTAL CAPITAL IMPROVEMENT PROJECT	**$ 2,120,000**

1.) Refer to Appendix A for the breakdown of the Phase A water projects that are planned for FY 2024.

CHARLES TOWN UTILITY BOARD
SEWER FUND
FISCAL YEAR 2024 CAPITAL EXPENDITURE BUDGET

DESCRIPTION	BUDGET
RENEWAL & REPLACEMENT ACCOUNT (Balance as of 3/31/2023)	$ 774,119
REQUIRED R&R FUND CONTRIBUTIONS (Remainder of FY 2023)	44,400
REQUIRED R&R FUND CONTRIBUTIONS FY 2024	162,400
ALLOCATED TO R&R PROJECT FROM R&R FUND	(500,000)
CAPITAL IMPROVEMENT FUNDS (Balance as of 3/31/2023)	4,540,813
PROJECTED FUNDING (Remained of FY 2023)	99,620
PROJECTED FUNDING FY 2024	1,198,370
ALLOCATED TO R&R PROJECT FROM CIF FUNDS	(1,170,163)
ALLOCATED TO COLLECTION SYSTEM PROJECT FROM CIF FUNDS	(2,000,000)
TOTAL FUNDS AVAILABLE FOR CAPITAL IMPROVEMENTS	**$ 3,149,559**
CAPITAL EXPENDITURES	
ASSET MANAGEMENT SOFTWARE IMPLEMENTATION	$ 35,000
BILLING & ACCOUNTING SOFTWARE IMPLEMENTATION	25,000
FLEET TRUCKS	80,000
STANDARD WORK FLEET	60,000
OFFICE STANDARD FLEET	20,000
REPLACEMENT PUMPS	100,000
MANHOLE SUPPLIES FOR REHAB	75,000
PUMP STATION REPAIRS/REHABILITATION	200,000
COLLECTION SYSTEM REPAIRS/REHABILTATION	125,000
TOTAL CAPITAL EXPENDITURES	**$ 580,000**

WWTP AND COLLECTION SYSTEM CAPITAL IMPROVEMENT PROJECTS
(Current - FY 2024)

PROJECT NAME	
RENEWAL & REPLACEMENT PROJECT	$10,291,891
2022 COLLECTION SYSTEM PROJECT	7,662,113
TOTAL CAPITAL IMPROVEMENT PROJECT EXPENDITURES	**$17,954,004**

1.) Detailed project budgets are tracked in the form Schedule B

2.) Refer to Appendix A for addition information regarding future projects planned through year 2031.

DRAFT

GD&F
GWIN
DOBSON &
FOREMAN
ENGINEERS

July 21, 2023

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

RE: Engineering Services Proposal
WTP Process Solids, Recycle and Sanitary Forcemain Design

Dear Mrs. Stolipher:

Per your request, Gwin, Dobson & Foreman, Inc. (GD&F) is pleased to present the following proposal (Task Order) to design, permit and bid the water treatment plant process solids, recycle and sanitary sewer forcemain project.

Understanding of the Project

Per CTUB request, GD&F performed a site visit on June 13, 2023, to access the current process solids, recycle and sanitary sewer issues at the Water Treatment Plant. Refer to the attached "CTUB WTP Process Solids to Sewer System Notes" dated June 13, 2023.

Proposed Services

GD&F will provide the following services:

- Assess the capacity and head condition of the existing Thickened Sludge Pumps.
- Design a new forcemain (including flow meter) from the Thickened Sludge Pump building and tie-in to a proposed Kings Crossing Development manhole.
- Design VFDs for the Thickened Sludge Pumps along with associated wiring and control.
- Design new Sludge Thickener level sensor and tie into SCADA.
- Design a new duplex sanitary sewer pump station, valve vault and forcemain to replace the existing on-lot septic system including all electrical requirements.
- Design replacement recycle tank submersible pumps and VFDs.
- Design mechanical piping modifications in basement and add new flow meter and turbidimeter on recycle line.
- Design new recycle discharge line to existing gravity thickener tank.
- Prepare and submit PWS and sanitary sewer permits.
- Prepare specifications and a cost estimate.
- Assist in bid phase of project.

Services that are not included:

- HOP permit
- Permit Fees

Proposed Schedule

GD&F will begin immediately upon written authorization from the Board and will complete the design by December 2023. The Kings Crossing forcemain will be designed within two (2) weeks.

Proposed Cost

GD&F will provide the above scope of services for an estimated, not-to-exceed, fee of $43,000. Invoices will be submitted on a monthly basis based on GDF current standard rates. Payment will be made on an accrued hourly basis plus expenses. The expenses include direct expenses such as mileage, printing/copying, etc. as necessary to complete the services. Payment is due within thirty (30) days of invoicing.

Estimated Engineering Fees:

Three (3) Forcemain Designs = $5,000
Sanitary Sewer Pump Station Design = $4,000
Mechanical Piping Design = $7,500
Electrical Design = $9,000
Specifications = $5,000
Cost Estimate = $2,000
Permitting = $4,000
Bid Phase = $4,000
Project Management = $2,500

Total Estimated Design and Bidding Cost = $43,000

We appreciate the opportunity to submit this proposal. To authorize the services, please complete the following authorization section of this proposal and return a signed copy to our office. If you have any questions, please contact our office at your convenience.

Respectfully submitted,
GWIN, DOBSON & FOREMAN, INC.

Christopher M. Eckenrode

Christopher M. Eckenrode, P.E.
Senior Project Engineer

CME/amk
23067/Ltr/ESP_7-21-23.doc
cc: File

ACCEPTANCE OF PROPOSAL

The Charles Town Utility Board hereby accepts the above service and cost proposal.

_____ _____
Authorized Representative Date

_____
Attest/Witness

CTUB WTP PROCESS SOLIDS TO SEWER SYSTEM

CME SITE VISIT NOTES

JUNE 13, 2023

Filters and Recycle Tank

The conventional filter backwash water enters a below grade recycle tank that has a maximum capacity of 69,350 gallons. This tank consists of two (2) submersible pumps which periodically pump the backwash wastewater back to the plant raw water line as they maintain a level in the tank. On average, one (1) conventional filter backwashes each day while producing approximately 22,000 gallons of backwash wastewater. There is no filter to waste capability at the plant. At worst case, two (2) filters would backwash within a 24-hour period thus producing about 44,000 gallons of backwash wastewater. There are several continuous instrument drains and floor drains that also enter the recycle tank. The total volume that enters the recycle tank each day is currently unknow due to lack of metering. There is no separate meter on the recycle line and the recycle line is tied into the raw water line prior to the raw water magnetic flow meter. The recycle tank also features a submersible mixer to keep the solids suspended; however, this mixer is normally turned off.

GDF Recommendation

The recycle tank submersible pumps should be replaced with new submersible pumps and placed on variable frequency drives. A new magnetic flow meter should be installed on the recycle line. The EPA has a 10% recycle rule, in which at no time should the plant be recycling more than 10% of the total raw water flow rate. It is also recommended to inject the recycle water after the plant raw water meter. Programming should be implemented such that at no time the recycle pumps will exceed 10% of the plant raw water flow rate. This is especially important since the river intake pumps will soon be placed on VFDs and will be slowed down at times. A gravity thickener tank level sensor should also be added and tied into the SCADA.

Also, a line and two (2) plug valves should be added such that the recycle line can be directed into the existing 13,000 gallon sludge holding tank (gravity thickener). This will allow the operators to periodically waste some of the backwash solids as they accumulate in the tank. Also, a turbidimeter and a sample tap should be added to the recycle line for water quality monitoring.

Settled Solids

Each of the two (2) sedimentation basins features a vacuum sludge collection system which produces about 10,000 gallons per day of settled solids. Generally, only one (1) basin is wasted per day, thus the total amount of solids generated is 10,000 gallons. The solids are pumped via two (2) settled solids pumps into a 13,000 gallon sludge holding tank (gravity thickener). The sludge holding tank is then pumped into a tanker truck via two (2) thickened solids pumps and hauled to the Charles Town WWTP where it is dumped into a digester. The existing settled solids pumps are 15 HP and are on VFDs, the thickened sludge pumps are 10 HP and are not on VFDs. There are no meters on any of the sludge lines.

GDF Recommendation

The existing constant speed thickened solids pumps are rated for about 100 GPM @ 35' TDH. Since the proposed sanitary sewer manhole for the new Kings Crossing development will be located directly across Charles Town Road, hydraulic calculations indicate that these existing pumps can be used to convey the settled solids to manhole E1 located near the centerline of proposed Aragon Drive. A new 4" forcemain should be constructed from the existing thickened solids pump station to the nearest Kings Crossing sanitary sewer gravity manhole E1. A magnetic flow meter should be added on this line inside the existing CTUB pump building. New thickened solids pump VFDs should be provided and installed inside the existing electrical building near the high service pumps.

WTP On-lot Septic System

There is an existing on-lot septic tank and drain field located to the south of the Treatment Plant. This excepts flow from various fixtures and floor drains inside the treatment plant. It is worth noting that the operators keep the sink in the laboratory running continuously, which discharges to the septic system.

GDF Recommendation

A new E/One type duplex sanitary sewer pump station should be added to the WTP site and the existing septic system removed. This pump station should be tied into the proposed 4" diameter thickened solids forcemain, prior to the line crossing Charles Town Road. The pump station should be designed to overcome the pressure of the thickened solids pumps.

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT	AMOUNT

APPROVED BY: _____

APPROVED BY: _____

This Packet: $ 142,844.83

WV DHHS, check dated 7/17/23: 300.00

Total: $ 143,144.83

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
	CLEANING 6/01 - 7/20/23	SEWER FUND	SEWER		879.98
	CLEANING 6/01 - 7/20/23	SEWER FUND	SEWER		180.00
				TOTAL:	1,939.95
GERALD TAYLOR CO., INC.	PUMP / TRANSPORT	WATER FUND	WATER		291.13
	PUMP / TRANSPORT	WATER FUND	WATER		779.69
	PUMP / TRANSPORT	WATER FUND	WATER		521.04
	SUPERVAC	SEWER FUND	SEWER		2,650.60
	TRANSPORT	SEWER FUND	SEWER		831.60
				TOTAL:	5,074.06
THE CI THORNBURG CO, INC.	SRII TRPL	WATER FUND	WATER		9,738.40
				TOTAL:	9,738.40
HD SUPPLY INC	PUMP, DESICCANTCART, CHEMK	WATER FUND	WATER		1,933.20
	CHEMKEY	WATER FUND	WATER		106.50
	HYDRANT MARKERS	WATER FUND	WATER		1,133.29
	SERVUSPRMBOOTS, GLOVES	SEWER FUND	SEWER		741.46
	CHERNE TEST BAIL PLUG	SEWER FUND	SEWER		563.89
	HIP WADER BOOTS	SEWER FUND	SEWER		232.16
	WIKALS-10LVLTRNSMTRLVLGRD	SEWER FUND	SEWER		881.42
				TOTAL:	5,591.92
WV BUREAU OF PUBLIC HEALTH	A.HALE CLS I WW CERT	SEWER FUND	SEWER		125.00
	S.FARIAS CLSS I WW CERT	SEWER FUND	SEWER		125.00
	B.CARPER CLSS S WW CERT	SEWER FUND	SEWER		100.00
	A.HALE CLSS S WW CERT	SEWER FUND	SEWER		100.00
				TOTAL:	450.00
ZETA SOLUTIONS, LLC	KEMIRA PAX-XL8	WATER FUND	WATER		12,366.00
				TOTAL:	12,366.00

FUND TOTALS	
50 WATER FUND	55,486.56
60 SEWER FUND	87,358.27
GRAND TOTAL:	142,844.83

TOTAL PAGES: 3

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT	AMOUNT
JAMES RIVER EQUIPMENT	NWSWRSVC- 800 N MILDRED	SEWER FUND	NON-DEPARTMENTAL	7,556.75
			TOTAL:	7,556.75
KAY CASTO & CHANEY PLLC	GENERAL: THRU 6/30/23	WATER FUND	WATER	1,202.50
	CLLCTNSYSTM: THRU 6/30/23	SEWER FUND	NON-DEPARTMENTAL	2,405.00
	GENERAL: THRU 6/30/23	SEWER FUND	SEWER	1,202.50
	APNGRN: THRU 6/30/23	SEWER FUND	SEWER	1,950.00
	LCSTHLLGLFCLB: THRU 6/30/2	SEWER FUND	SEWER	747.50
			TOTAL:	7,507.50
KM ELECTRICAL SOLUTIONS LLC	CMPRSSRTMR & EXFN RPLCMNT	SEWER FUND	SEWER	6,055.00
	PONDS	SEWER FUND	SEWER	4,600.00
			TOTAL:	10,655.00
MCKINNEY'S AUTO REPAIR	SEWER VEHICLE SERVICE	SEWER FUND	SEWER	136.76
			TOTAL:	136.76
DONALD MICKEY	7/12 MWNG SMMTPT & PLYGRND	WATER FUND	WATER	137.50
	7/12 MWNG SMMTPT & PLYGRND	SEWER FUND	SEWER	137.50
			TOTAL:	275.00
LOGICAL CONCEPTS, INC	PS MONITORING 2023	SEWER FUND	SEWER	168.71
			TOTAL:	168.71
PACE ANALYTICAL SERVICES, LLC	TESTING: CT	SEWER FUND	SEWER	87.90
	TESTING: CT SMI-ANNL	SEWER FUND	SEWER	348.10
	TESTING: CT WKLY	SEWER FUND	SEWER	225.70
	TESTING: TUSC WKLY	SEWER FUND	SEWER	135.80
	TESTING: JCPSD IU04 QRTLY	SEWER FUND	SEWER	114.80
	TESTING: TUSC WKLY	SEWER FUND	SEWER	135.80
	TESTING: CT WKLY	SEWER FUND	SEWER	225.70
	TESTING: CT	SEWER FUND	SEWER	87.90
			TOTAL:	1,361.70
PARKSON CORPORATION	TWWTP	SEWER FUND	SEWER	5,506.89
	TWWTP	SEWER FUND	SEWER	5,506.89
			TOTAL:	11,013.78
ROSS H BARE	TWWTP	SEWER FUND	SEWER	240.00
	WAR ADMIRAL PS	SEWER FUND	SEWER	5,471.68
	TWWTP	SEWER FUND	SEWER	600.00
	HUNTFIELD PS	SEWER FUND	SEWER	8,679.56
	CTWWTP	SEWER FUND	SEWER	360.00
	MULT PS	SEWER FUND	SEWER	600.00
			TOTAL:	15,951.24
SG PLUMBING, INC.	300 S SEMINARY ST	WATER FUND	WATER	1,887.89
	112 E 1ST AVE	WATER FUND	WATER	2,719.95
	410 E WASHINGTON ST	WATER FUND	WATER	1,300.00
			TOTAL:	5,907.84
STEPTOE & JOHNSON PLLC	GENERAL ENVIRONMENTAL	SEWER FUND	SEWER	7,675.00
			TOTAL:	7,675.00
SVG COMMERCIAL CLEANING LLC	CLEANING 6/01 - 7/20/23	WATER FUND	WATER	699.97
	CLEANING 6/01 - 7/20/23	WATER FUND	WATER	180.00

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
ALS GROUP USA CORP	TESTING	WATER FUND	WATER		160.00
				TOTAL:	160.00
APPLE VALLEY TIRE	LAWNMOWER TRAILER	SEWER FUND	SEWER		105.35
				TOTAL:	105.35
AUTOZONE	FUEL CAP SEWER VEHICLE	SEWER FUND	SEWER		19.79
				TOTAL:	19.79
BIEDLER'S ELECTRIC MOTOR REPAIR, INC.	COUPLING CTWWTP	SEWER FUND	SEWER		1,294.06
				TOTAL:	1,294.06
CHAMPION INDUSTRIES, INC	PRINTING SVCS JUN	WATER FUND	WATER		1,283.33
	POSTAGE 4 PRINTING SVCS JU	WATER FUND	WATER		2,829.32
	PRINTING SVCS JUN	SEWER FUND	SEWER		1,283.32
	POSTAGE 4 PRINTING SVCS JU	SEWER FUND	SEWER		2,829.33
				TOTAL:	8,225.30
CHARLES TOWN UTILITY BOARD	SEC DEP XFR 1/1/23 - 6/30/	SEWER FUND	NON-DEPARTMENTAL		7,191.05
				TOTAL:	7,191.05
CORE & MAIN	PIPE, FLG, FLANGE, PIPESUP	WATER FUND	WATER		5,027.11
				TOTAL:	5,027.11
COYNE CHEMICAL	AMMONIUM SULFATE 40% NSF	WATER FUND	WATER		1,560.00
				TOTAL:	1,560.00
CRYSTAL SPRINGS	MNTHLY SVC@ 661 & 842	WATER FUND	WATER		185.54
	MNTHLY SVC@ 661 & 842	SEWER FUND	SEWER		119.39
				TOTAL:	304.93
CUMMINS, INC	ATS TRBLSHTG WTP	WATER FUND	WATER		1,052.45
	TRBLSHTG: WTP	WATER FUND	WATER		1,499.73
	CTWWTP CNTRLBRD	SEWER FUND	SEWER		4,352.48
				TOTAL:	6,904.66
DENNIS SALES & SERVICE, INC	PM: RGLTRS @ WTP	WATER FUND	WATER		1,447.00
				TOTAL:	1,447.00
WV DEPT OF HEALTH & HUMAN SERVICES	BACTERIOLOGICAL TEST	WATER FUND	WATER		140.00
				TOTAL:	140.00
EAST MOUNTAIN HEALTH PHYSICIANS, INC	R.PACE HEP B VACCINE	WATER FUND	WATER		99.00
				TOTAL:	99.00
EASTCOM ASSOCIATES, INC	METERED MAGNETIC LOCATOR	WATER FUND	WATER		2,264.00
				TOTAL:	2,264.00
GUTTMAN ENERGY	W/E 7/16/23	WATER FUND	WATER		737.02
	W/E 7/16/23	SEWER FUND	SEWER		890.19
	W/E 7/16/23	SEWER FUND	SEWER		75.76
				TOTAL:	1,702.97
GANNETT FLEMING VALUATION & RATE CONSU	WA & WW COST SVC STUDY	WATER FUND	WATER		2,205.00
	WA & WW COST SVC STUDY	SEWER FUND	SEWER		825.00
				TOTAL:	3,030.00

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

INTERIM CHAIRMAN
City of Charles Town
Mayor
Bob
Trainor

VICE CHAIRMAN
City of Ranson
Mayor
Duke
Pierson

TREASURER
Thomas
Stocks

SECRETARY
Ashley
Stottlemyer

Board Member
Jefferson
Whitten

Board Member
Heidi
Parker

UTILITY MANAGER
Kristen
Stolipher

July 20, 2023

West Virginia Public Service Commission
Attn: Karen Buckley, Executive Secretary
201 Brooks Street
P.O. Box 812
Charleston, West Virginia 25323

Re: Case No. 23-0555-W-GI

Dear Ms. Buckley:

Enclosed for filing on behalf of the Charles Town Utility Board, please find the requested information in response to the Commission's General Investigation into the maintenance and testing of hydrants.

Should you have any questions, please do not hesitate to contact me.

Regards,

Kristen M. Stolipher
Utility General Manager

PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

At a session of the PUBLIC SERVICE COMMISSION OF WEST VIRGINIA in the City of Charleston on the 30th day of June 2023.

CASE NO. 23-0555-W-GI

GENERAL INVESTIGATION INTO
MAINTENANCE AND TESTING
OF FIRE HYDRANTS

COMMISSION ORDER

The Commission opens a general investigation to examine the maintenance and testing of fire hydrants.

DISCUSSION

The Public Service Commission was created by the legislature for the purpose of exercising regulatory authority over public utilities to serve the interests of the public. Its function is to require such entities to perform in a manner designed to safeguard the interests of the public and the utilities (Boggs v. Public Serv. Comm'n, 154 W. Va. 146, 174 S.E.2d 331(1970)).

The Commission has jurisdiction over water utilities in the State, many of which own fire hydrants and serve private fire hydrants. It is the responsibility of the owner of fire hydrants to identify and mark fire hydrants that are inoperable or unavailable for use by an entity providing fire suppression services in a fire emergency (W.Va. Code § 8-19-22). Further, water utilities are required to "establish and maintain adequate and suitable facilities, safety appliances or other suitable devices, and shall perform such service in respect thereto as shall be reasonable, safe and sufficient for the security and convenience of the public, and the safety and comfort of its employees, and in all respects just and fair, and without any unjust discrimination or preference" (W.Va. Code § 24-3-1). Thus, whether a fire hydrant is owned by a public utility or served by a utility, the utility has responsibilities to assure that the hydrants will perform adequately.

The primary purpose of a fire hydrant is fire suppression. However, hydrants serve other useful functions such as providing a method of testing the distribution's flow capabilities, providing a means of flushing the system mains, street cleaning, water quality testing, and sewer cleaning. If adequate flow cannot be delivered by

a particular hydrant, that hydrant is not fulfilling its purpose as part of the water distribution system.

Although the Commission has no requirements for water pressure or volume for fire protection, the West Virginia Department of Health and Human Resources requires that:

> When fire protection is to be provided, the recommended system design shall be such that fire flows and facilities are in accordance with the requirements of the [Insurance Services Office]. Under no circumstances shall fire flows be less than two hundred fifty (250) gallons per minute.

(W. Va. CSR § 64-77-10.2.e; *see also* Bever v. Morgantown Utility Board, Case No. 05-0086-W-C, at 9-10, 20, 24, 26, 33).

The Commission seeks information specified on Attachment A to this Order, from utilities that own hydrants and/or service privately owned hydrants regarding their inspection and maintenance of all existing hydrants.

FINDINGS OF FACT

1. Fire hydrants serve functions such as providing fire suppression, a method of testing the distribution's flow capabilities, providing a means of flushing the system mains, street cleaning, water quality testing, and sewer cleaning.

2. If adequate flow cannot be delivered by a particular hydrant, that hydrant is not fulfilling its purpose as part of the water distribution system.

3. The Commission has determined that the maintenance and testing of fire hydrants should be examined.

CONCLUSIONS OF LAW

1. The Commission has jurisdiction over water utilities in the State.

2. Although the Commission has no requirements for water pressure or volume for fire protection, the West Virginia Department of Health and Human Resources requires that:

> When fire protection is to be provided, the recommended system design shall be such that fire flows and facilities are in accordance with the requirements of the [Insurance Services

Office]. Under no circumstances shall fire flows be less than two hundred fifty (250) gallons per minute.

(W. Va. CSR § 64-77-10.2.e; *see also* Bever v. Morgantown Utility Board, Case No. 05-0086-W-C, at 9-10, 20, 24, 26, 33).

3. It is the responsibility of the owner of the hydrant to identify and mark fire hydrants that are inoperable or unavailable for use by an entity providing fire suppression services in a fire emergency (W.Va. Code § 8-19-22).

4. If adequate flow cannot be delivered by a particular hydrant, or the hydrant is not operable to provide adequate flows, that hydrant is not fulfilling its purpose as part of the water distribution system and the utility owning or serving the hydrant is not providing adequate service.

4. It is reasonable to open a general investigation of the maintenance and testing procedures of fire hydrants and require public utility owners of hydrants or that serve private hydrants to provide information.

5. Notice of this general investigation should be provided to all public utility owners of fire hydrants or that serve private hydrants, and the public.

ORDER

IT IS THEREFORE ORDERED that the Commission opens a general investigation on the maintenance and testing procedures of fire hydrants.

IT IS FURTHER ORDERED that on or before July 28, 2023, all public utility owners of fire hydrants or that serve private fire hydrants shall provide the information requested in Attachment A.

IT IS FURTHER ORDERED that the Executive Secretary publish a copy of Attachment B once in newspapers of general circulation in each of the following cities: Beckley, Bluefield, Charleston, Clarksburg, Elkins, Fairmont, Huntington, Keyser, Lewisburg, Logan, Martinsburg, Morgantown, Moundsville, Parkersburg, Point Pleasant, Weirton, and Wheeling. The Executive Secretary shall thereafter file proof of publication of each notice in this proceeding.

IT IS FURTHER ORDERED that the Executive Secretary serve a copy of this Order on all water utilities providing service in West Virginia, by electronic service, or by United States First Class Mail, and on Staff by hand delivery.

A True Copy, Teste,

Karen Buckley

Karen Buckley, Executive Secretary

RAB/ksf
230555c.sca

Attachment A

Public Service Commission of West Virginia (PSC) Questionnaire on Fire Hydrants							
Name of Utility	Charles Town Utility Board						
Person responding or person to contact for questions or additional information							
Name	Kristen M. Stolipher						
Phone	304-725-2316						
Email	kstolipher@ctubwv.com						
Date	July 5, 2023						
Please answer the following questions and, where required, attach explanations or separate reports							
1	Total number of utility owned public fire protection hydrants?						429
2	Total Number of privately owned hydrants located on utility owned mains and service lines?						0
3	Total number of privately owned hydrants located on customer service piping?						1
4	Provide the tariff rate for public fire protection hydrants.						
						Check Whichever is Applicable	
		Fixed total rate	$ _____	per	Month _____ Year _____		N/A
		Rate per hydrant	$ _____	per	Month _____ Year _____		N/A
		Other rate structure (explain)					
	Annual public fire service revenue		$ _____				N/A
	Annual private fire service revenue		$ _____				N/A
5	Provide the number of hydrants on mains smaller than six-inches.						3
6	Provide the number of hydrants older than fifty years.						15
7	Provide the age of oldest hydrants on your system.						62
8	Do you have written hydrant maintenance practices? (If "Yes" Provide an attachment describing your hydrant maintenance practices.)						YES
9	On average, over the last five years, how many hydrants do you inspect per year?						250
10	Attach reports for your hydrant inspections for the past five years.						
11	How many person-hours are spent per year (on average over the last five years) on hydrant inspections and maintenance?						1,280
12	What is the last five-year average annual internal and external cost of hydrant maintenance & replacement?						$25,000
13	What is the total number of existing hydrants removed and replaced over the last five years?						15

Public Service Commission of West Virginia (PSC) Questionnaire on Fire Hydrants			
Name of Utility			
14	What is the total number of existing hydrants removed and NOT replaced over the last five years?		0
15	What is the total number of new hydrants (factory new or rebuilt) installed over the last ten years (include new locations AND replacements)?		32
16	Do you routinely conduct flow tests on hydrants?		Yes
17	How do you perform flow tests or determine flow rates?	Check All That Apply	
		Physical On-Site Flow Testing	X
		Hydraulic Model	X
		Other (If checked, provide an attached explanation)	
18	What is the minimum flow rate available from hydrants in your system?		530
19	Has ISO flow tested any hydrants on your system in the past year?		No
20	Has a fire department or other agency flow tested any hydrants on your system in the past year?		Unknown
21	Attach copies of flow test reports over the last year from ISO, Fire Departments or other Agencies.		N/A
22	Have there been any formal fire service complaints filed over the last ten years with the Public Service commission?		No
23	If there have been any formal complaints filed over the last ten years with the Public Service Commission, provide the PSC case numbers for the complaints.		No
24	Have there been any complaints other than formal PSC complaints regarding fire service filed with you, or any fire department or other agency?		No
25	If there have been any such complaints filed over the last ten years, provide a description of the complaint and resolution.		N/A
26	On a scale of 0 to 10, with 0 being very poor and 10 being near-perfect, how do you rate your hydrant actual inspection and testing programs and practices?		8
27	Provide on a separate attachment a general description of any serious issues or problems that you believe are affecting fire hydrants on your system.		N/A

PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

CASE NO. 23-0555-W-GI

GENERAL INVESTIGATION INTO
MAINTENANCE AND TESTING
OF FIRE HYDRANTS

Testing and Maintenance of Fire Hydrants

On June 30, 2023, the Public Service Commission of West Virginia (Commission) opened a general investigation into the maintenance and testing of fire hydrants. Public utilities that own fire hydrants or serve privately owned fire hydrants must provide responsive information as specified in the June 30, 2023 Order to the Executive Secretary of the Commission, Karen Buckley, at P.O. Box 812, Charleston, WV 25323, by July 28, 2023. Interested parties may review the order opening the general investigation online at http://www.psc.state.wv.us/

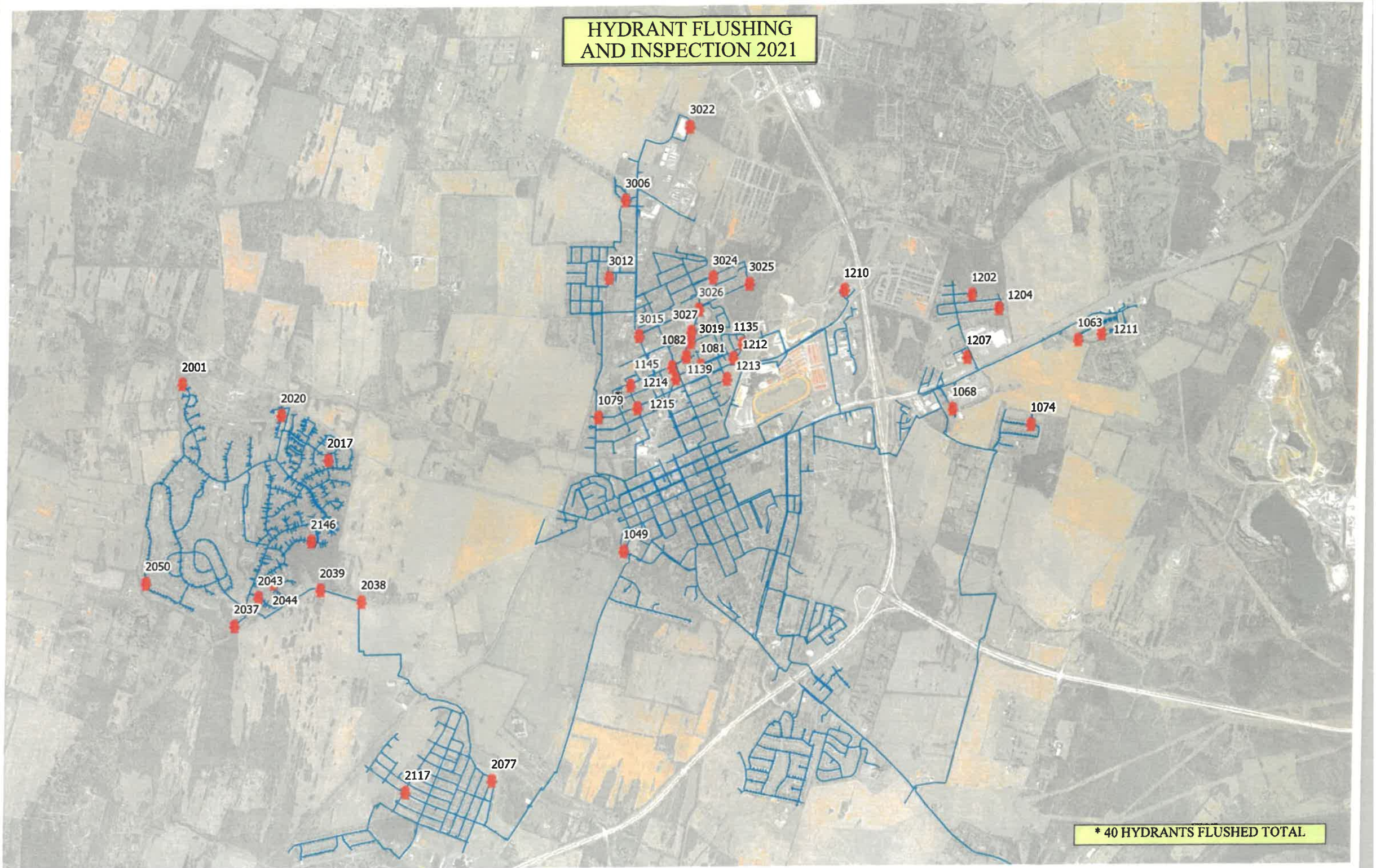
PUBLIC SERVICE COMMISSION OF WEST VIRGINIA

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

Supplemental Information

The attached documents are included as supplemental information regarding CTUB's inspection and flushing protocols as well as the last several years of maintenance records.

HYDRANT FLUSHING AND INSPECTION 2021



* 40 HYDRANTS FLUSHED TOTAL

CTUB HYDRANT FLUSHING AND INSPECTION MAP 2022

Date Exported: 8/15/2022
10:27 AM

N MILDRED ST
ROUTE 9
ROUTE 9
FLOWING SPRINGS RD
HERSHERDSTOWN PIKE
WILLIAM L WILSON FWY
WILLIAM L WILSON FWY
FLOWING SPRINGS RD
E WASHINGTON ST
WASHINGTON ST
S FAIRFAX BLVD
W WASHINGTON ST
S GEORGE ST
MIDDLEWAY PIKE
SUMMIT POINT RD
BERRYVILLE PIKE
BERRYVILLE PIKE
BERRYVILLE PIKE
CHARLES TOWN RD
KABLETOWN RD
ROUTE 9 ROUTE 9

N

Waterline
Hydrants

71 HYDRANTS FLUSHED IN 2022 AS OF 8/15/22

CTUB HYDRANT FLUSHING AND INSPECTION MAP 2023

Date Exported 7/20/2023 9:49 AM

N

Road
Waterline
Hydrants

165 HYDRANTS FLUSHED AND INSPECTED TO DATE IN 2023

Charles Town Utility Board

Hydrant Flushing

Flushing procedures:

1. Valves are opened and closed slowly to prevent water hammer.
2. Direct water away from traffic, pedestrians, underground utility vaults and private lands.
3. Confirm, that storm drain or natural water courses can handle the flow.
4. Flushing velocity should be at minimum 2.5 ft/sec, but 5.0 ft/sec is preferred in order to achieve suitable biofilm removal.
5. Open hydrants or blowoffs for a period long enough (5-10) minutes) to stir up deposits inside the watermain. Then flush until water is clear (sometime 30 minutes or longer).
6. Assure that system pressures in other parts of the distribution system do not drop below 20 psi.
7. Dechlorination may be required.
8. Record data.

Flushing Program Plan

Goal

The purpose of the flushing program is to provide a safe high quality water supply to the customers of the Charles Town Utility Board. Debris can enter and accumulate in a water distribution system. Disinfectant residuals can deplete due to low usage and disinfectants may combine with materials in the system to form undesirable byproducts. Each of these situations may be corrected by an adequate flushing program.

Policy

The Utility has identified all dead-ends in its distribution system. About 20 sites are placed in the flushing list annually based on the diameter of pipe, time and volume required to the minimum chlorine residual and bacteriological results.

Flushing is conducted during periods of low water demand. Prior to flushing, CTUB will notify the customers who may be affected of the dates and times of the flushing through the website.

Plan of Action

1. A systematic flushing of the entire distribution system will be conducted annually or more often if required to maintain water quality. Individual sites will be flushed as needed. The flushing program will ensure that:

    a. Dead end and low usage mains are flushed periodically.
    b. Drinking water standards are met.
    c. Sediment and air are removed.
    d. The required chlorine residual is maintained.

2. In some instances specific areas of the distribution system may need to be flushed more frequently to correct problems. These problems may include but are not limited to the following:

    a. Air in the lines
    b. Sediment in the lines
    c. Maintaining the free chlorine residual
    d. Taste, odor or color problems

3. Flushing will be performed by CTUB personnel.

4. Following line repairs, main lines will be flushed to remove air and sediment from the repaired section of line. If disinfection is necessary to comply with the system requirements, contact Water Plant Operators immediately. Leak Repair standard operating procedures, the line will be flushed to remove the high chlorine content. During flushing, water containing high chlorine concentrations will be flushed on relatively flat ground so as not to contaminate a receiving stream or body of water.

5. Flushing should continue until the following conditions are met:

    a. The total chlorine residual reaches a minimum of 1.0 mg/l (or according to pH)
    b. No air is detected
    c. Water is clear with no visible
    d. No objectionable taste or order remains

6. Flushing will be performed so as to ensure a minimum velocity of 2.5 ft/sec to adequately scour the interior of the main.

Record Keeping

Records of each flushing will be maintained by the Utility. These records will include the following:

- Date
- Time
- Location
- Persons responsible
- Length of flushing
- The total chlorine residual after flushing
- Amount of water used for flushing
- Other information deemed as useful to the Utility.

Hydrant ID	Flow (Gallons)	Static PSI	Flush Date/Inspection date	Operable	Paint Condition	CL2 Residual	Valve Accessible	Valve Operational	Residual PSI
1001									
1002	840	50	8/26/2021 0:00	1					
1003	840	50	8/27/2021 0:00	1					
1004	840	60	6/16/2023 12:35	1	2	1.23	1	1	25
1005									
1006									
1007	1000	60	8/30/2021 0:00	1					
1008	840	56	6/2/2023 16:08	1	2	1.14	1	1	25
1009	840	60	5/23/2023 14:05	1	2	0.82	1	1	25
1010	930	50	8/30/2021 0:00	1					
1011									
1012	920	50	5/23/2023 14:48	1	2	1.17	1	1	30
1013	840	25	8/5/2022 0:00	1		2.2			
1014	840	46	5/2/2023 17:13	1	3	82	2	2	25
1015	920		8/25/2021 0:00	1					
1016				1					
1017	920	42	5/24/2023 18:16	1	3	2.13	2	2	30
1018	840	52	5/12/2023 12:50	1	2	1.52	1	1	25
1019	920	56	6/5/2023 14:07	1	1	1.62	1	1	30
1020	1000	60	5/23/2023 15:16	1	2	1.8	1	1	35
1021	920	52	5/12/2023 14:05	1	2		1	1	30
1022	920	52	8/12/2022 0:00	1	3	0.62			
1023	920	60	6/15/2023 15:20	1	3	1.23	2	2	30
1024	1000	35	8/5/2022 0:00	1		1.2			
1025	1000	35	7/29/2022 0:00	1		4.1			
1026	920	50	6/5/2023 13:35	1	2	1.75	1	1	30
1027	1130	64	5/18/2023 14:36	1	2	1.16	1	1	45
1028	1060	58	5/12/2023 16:49	1	2	1.95	1	1	40
1029	1130	45	6/23/2022 0:00	1		1.1			
1030	1190	50	6/23/2022 0:00	1		1.46			
1031	1190	70	5/12/2023 17:20	1	1	1.52	2	2	50
1032	1250	75	8/26/2021 0:00	1					
1033	1190	68	5/18/2023 15:07	1	2	1.25	1	1	50
1034	1000	50	8/24/2021 0:00	1					
1035									
1036									
1037									

1038									
1039	920	44	5/31/2023 13:02	1	2	1.14	1	1	30
1040	840	44	5/31/2023 12:27	1	2	1.14	1	1	25
1041	920	50	6/8/2023 15:15	1	2	1.33	1	1	30
1042	1000	56	5/15/2023 15:13	1	3	1.58	1	2	35
1043									
1044	840	42	6/15/2023 13:46	1	3	1.03	1	1	25
1045	1000	50	8/24/2021 0:00	1					
1046	920	30	7/22/2022 0:00	1		2.7			
1047			5/15/2023 14:39	1	2		1	1	
1048	1060	58	6/15/2023 13:17	1	3	1.37	1	1	40
1049	1060	40	7/22/2022 0:00	1		2.3			
1050									
1051	530	10	8/5/2022 0:00	1		3.2			
1052	1000	56	6/2/2023 15:21	1	2	1.15	1	1	35
1053	920	30	8/5/2022 0:00	1		2.3			
1054	840	58	5/12/2023 12:12	1	2	1.53	1	2	25
1055	1130	67	6/16/2023 14:58	1	2	1.39	1	1	45
1056	840	70	5/12/2023 15:46	1	3	1.82	1	2	25
1057	1190	50	7/29/2022 0:00	1		4.2			
1058	1060	40	6/23/2022 0:00	1		1.15			
1059	1130	74	5/11/2023 14:46	1	1	0.85	1	2	45
1060	1250	72	6/1/2023 13:39	1	2	0.41	1	1	55
1061									
1062	1190		6/23/2022 0:00	1		1			
1063	1060	50	8/20/2021 0:00	1					
1064									
1065									
1066									
1067									
1068	1060	65	8/20/2021 0:00						
1069									
1070									
1071									
1072									
1073									

1074	1060	40	7/29/2022 0:00	1		0.4			
1075			12/30/1899 12:00:00 AM						
1076	840	25	8/5/2022 0:00	1		2.3			
1077	840	47	8/12/2022 0:00	1	3	1.05			
1078	920	54	6/14/2023 13:01	1	3	0.49	2	2	30
1079	1000	35	8/5/2022 0:00	1		7.5			
1080									
1081	840	25	8/8/2022 0:00	1		7.3			
1082			8/18/2021 0:00						
1083	1000	55	8/12/2022 0:00	1	3	0.34			
1084	1140	75	8/26/2021 0:00	1					
1085	1130	72	5/31/2023 16:14	1	3	0.95	1	1	45
1086				2					
1087	920	40	8/27/2021 0:00	1					
1088	840	42	8/12/2022 0:00	1	3	1.06			
1089	840	28	4/21/2023 18:06	1	1	0.65	1	1	25
1090	750	50	5/15/2023 16:16		2	1.14	1	1	20
1091	840	58	6/8/2023 13:42	1	2	0.87	2	2	25
1092									
1093	650	15	6/23/2022 0:00	1		1.49			
1094			8/12/2022 0:00			3.6			
1095	1060	56	5/15/2023 16:58	1	3	1.33	1	2	40
1096			5/2/2023 15:26	2	3				
1097	750	42	6/7/2023 17:15	1	2	0.95	2	2	20
1098	650	45	5/15/2023 16:56	1					
1099	840	25	8/12/2022 0:00	1		2.7			
1100	1000	48	5/15/2023 17:38	1	2	1.14	1	1	35
1101	1000	50	8/27/2021 0:00	1					
1102	1060	48	5/1/2023 14:16	1	2	0.94	1	1	40
1103	100	46	5/2/2023 14:12	1	2	0.62	2	2	40
1104	920	34	5/1/2023 16:05	1	2	0.81	2	2	30
1105			5/22/2023 12:59		2		1	1	
1106	750	46	5/16/2023 12:21	1	2	0.55	1	1	20
1107	840	25	8/5/2022 0:00	1		3.1			
1109	750	26	5/2/2023 15:40	1	2		1	2	20

1110	840	45	8/26/2021 0:00	1					
1111				1					
1112			6/14/2023 15:44		3				
1115	750	20	8/5/2022 0:00	1		2.6			
1116	1000	46	5/2/2023 14:46	1	2	0.94	2	2	35
1117	920	30	8/5/2022 0:00	1		4.5			
1119	650	15	6/23/2022 0:00	1		1.24			
1120									
1121	750	44	5/1/2023 13:52	1	1	0.71	1	1	20
1122		46	4/21/2023 16:19	2	1		1	1	
1123	1000	48	6/9/2023 14:20	1	2	1.27	1	2	35
1124	1000	46	6/8/2023 14:38	1	1	1.08	1	1	35
1125	1060	52	5/1/2023 13:08	1	1	0.88	2	2	40
1126	1000	40	6/7/2023 16:31	1	2	1.31	1	1	35
1127		10	8/12/2022 0:00	1		2.7			
1128	1000	40	4/21/2023 17:04	1	2	0.12	1	1	35
1129	1060	46	6/7/2023 15:56	1	1	1.39	1	1	40
1130									
1131									
1132	840	40	6/14/2023 15:22	1	3	1.42	1	1	25
1133	920	30	8/5/2022 0:00	1		3			
1134	1060	40	8/5/2022 0:00	1		6			
1135			8/18/2021 0:00						
1136	1000	46	5/24/2023 13:06	1	2	0.43	2	2	35
1137	1000	46	5/9/2023 16:43	1	2	0.97	1	1	46
1138									
1139			8/18/2021 0:00						
1140	1000	35	8/5/2022 0:00	1		2.7			
1141	1000	35	8/12/2022 0:00	1		3.1			
1142	920	42	5/1/2023 15:07	1	3	0.87	1	1	30
1143	1000	52	6/7/2023 13:08	1	1	0.39	1	1	35
1144	1130	62	6/16/2023 16:15	1	2	0.26	1	1	45

1145			8/18/2021 0:00						
1146	840	32	5/24/2023 13:39	1	3	0.47	1	1	25
1147	840	25	8/5/2022 0:00	1		0.9			
1148			6/9/2023 14:41	2	3		1	1	
1149	530	48	8/26/2022 0:00	1	1	0.4			
1150	920	38	5/2/2023 16:12	1	2	0.41	1	1	
1151	920	30	8/12/2022 0:00	1		2.7			
1152									
1153	750	20	7/29/2022 0:00	1		2.6			
1154									
1155	1000	44	5/4/2023 18:01	1	1	0.48	1	1	35
1156									
1157	1000	54	5/15/2023 13:30	1	1	1.45	1	1	35
1158									
1159	1060	56	8/12/2022 0:00	1	3	0.17			
1160	1000	52	8/12/2022 0:00	1	3	0.15			
1161									
1162									
1163	920	60	8/12/2022 0:00	1	3	0.55			
1164	1130		8/25/2021 0:00	1					
1165	1250	80	2/11/2023 16:44	1	1	0.56	1	1	55
1166	920	68	2/11/2023 17:17	1	1	0.51	2	2	30
1167	840	40	5/9/2023 16:01	1	1	1.15	1	1	25
1168									
1169	840	30	5/12/2023 14:36	1	1	0.27	1	1	25
1170									
1171									
1172	1000	60	8/30/2021 0:00	1					
1173									
1174	1000	62	8/12/2022 0:00	1	1	0.35			
1175	840	56	6/16/2023 14:33	1	1	1.26	2	2	25
1176	840	62	6/15/2023 16:58	1	2	1.16	1	1	25
1177	920	58	6/5/2023 15:10	1	2	1.75	1	1	30

1178	920	56	6/2/2023 18:03	1	1	0.99	1	1	30
1179									
1180	1000	46	5/19/2023 14:06	1	1	0.7	1	1	35
1181	1060	40	6/23/2022 0:00	1		0.25			
1182	920	30	8/5/2022 0:00	1		7.6			
1183									
1184	920	40	6/8/2023 12:24	1	3	0.82	2	2	30
1185	750	44	5/4/2023 14:52	1	2	1.29	1	1	25
1187	1000	45	8/26/2022 0:00	1	3	0.1			
1188	1060	52	5/19/2023 13:32	1	2	0.33	1	2	40
1189	1000	46	6/7/2023 13:40	1	1	0.41	1	1	35
1190				1					
1191	1130	45	8/5/2022 0:00	1		3.1			
1192	1130	58	5/4/2023 15:36	1	2		1	1	45
1193	920	58	5/12/2023 13:21	1	2		1	1	30
1194	1000	58	6/2/2023 17:38	1	2	1.42	1	1	35
1195									
1196	1060	72	5/31/2023 16:58	1	3	0.58	1	1	40
1197			5/31/2023 16:56						
1198	920	64	6/1/2023 12:24	1	2	0.69	1	1	30
1199									
1200	840	60	5/11/2023 14:10	1	3	0.57	1	1	25
1201	1190	74	6/1/2023 13:00	1	3	0.26	1	1	50
1202	920	30	6/23/2022 0:00	1		0.7			
1203	1000	35	6/23/2022 0:00	1		0.28			
1204	840	25	6/23/2022 0:00	1					
1205									
1206	920	46	6/13/2023 16:52	1	1	1.93	1	1	30
1207		70	7/28/2021 0:00						
1208	840	70	5/11/2023 13:18	1	3	0.57	1	1	25
1209	920	44	6/13/2023 16:14	1	1	1.41	1	1	30
1210	920	30	7/29/2022 0:00	1		0.6			
1211	1130	70	8/17/2021 0:00	1					
1212			8/18/2021 0:00						

1213			8/18/2021 0:00	2					
1214	1000	35	8/5/2022 0:00	1		7.4			
1215			8/18/2021 0:00						
1216	1060	40	7/29/2022 0:00	1		0.8			
1217	840	44	5/4/2023 16:35	1	1	1.28	2	2	25
1218				1					
1219									
1220	1000	42	5/31/2023 14:16	1	1	2.12	1	2	35
1221	1000	44	6/16/2023 15:38	1	1	1.4	1	1	35
1222	840	42	5/19/2023 15:41	1	1	1.41	1	1	25
1223	840	38	5/19/2023 14:44	1	2	1.35	1	1	25
1224	920	30	7/29/2022 0:00	1		3.6			
1225	1000	46	6/6/2023 18:11	1	3	1.43	1	1	35
1226	920	50	5/31/2023 18:00	1	2	1.78	1	1	30
1227									
1228									
1229	920	44	6/6/2023 17:28	1	1	1.55	2	2	30
1230	1130	66	6/13/2023 17:27	1	2	1.9	1	1	45
1231									
1232	1000	62	6/9/2023 16:42	1	1	1.6	1	1	35
1233	1000	60	6/5/2023 14:38	1	1	1.57	1	1	35
1234	920	60	5/23/2023 15:45	1	2	1.09	1	2	30
1235	1060	40	6/23/2022 0:00	1		1.54			
1236									
1237									
1238	920	48	8/15/2023 12:37	1	2	0.75	1	1	30
1239	750	20	8/12/2022 0:00	1		2.9			
1240	920	64	6/9/2023 17:08	1	1	1.5	1	1	30
1241	920	50	5/15/2023 13:58	1	1	1.47	1	1	30
1242	840	56	6/15/2023 17:25	1	2	1.31	1	1	25
1243	740	46	6/13/2023 12:38	1	3	0.63	2	2	20
1244	840	25	8/5/2022 0:00	1		2.8			
1245	750	42	5/9/2023 17:50	1	3	1.42	1	1	20
1245	1060	70	9/20/2022 15:40	1	1	0.79			
1246	1000	56	6/14/2023 13:32	1	1	0.96	1	1	35
1247	920	40	6/14/2023 14:37	1	1	0.78	1	1	30
2001	920	30	7/1/2022 0:00	1		1			

2002									
2003									
2004	920	62	5/22/2023 14:39	1	2	0.95	1	1	30
2005	840	62	6/1/2023 16:14	1	2	1.33	1	1	25
2006	920	62	6/13/2023 15:30	1	2	1.31	1	1	30
2007	650	42	8/19/2022 0:00	1	3	0.8			
2008	1000	35	7/1/2022 0:00	1		3.8			
2009									
2010	920	58	5/22/2023 15:16	1	3	0.64	1	1	30
2011	920	60	6/5/2023 18:07	1	2	1.21	1	1	30
2012									
2013									
2014									
2015	630	55	8/19/2022 0:00	1	3	1.8			
2016	840	25	8/19/2022 0:00	1		0.16			
2017	650	60	7/28/2021 0:00	1					
2018	750	64	5/22/2023 13:31	1	3	1.21	1	1	20
2019	920	58	5/11/2023 17:09	1	3	1.09	1	1	30
2020	1190	50	8/19/2022 0:00	1		0.03			
2021	1060	80	5/22/2023 14:09	1	1	1.34	1	1	40
2022	1130	45	8/19/2022 0:00	1		0.08			
2023	920	78	6/13/2023 14:21	1	2	1.31	1	1	30
2024	1000	72	6/1/2023 16:46		2	1.37	1	1	35
2025	1000	78	8/19/2022 0:00	1	3	1.3			
2026	1060	71	8/19/2022 0:00	1	3	1.3			
2027	1000	72	5/22/2023 16:12	1	2	1.17	2	2	35
2028									
2029	1000	64	6/5/2023 17:40	1	2	1.29	1	1	35
2030	1130	45	8/19/2022 0:00	1		0.39			
2031	1000	69	8/19/2022 0:00	1	3	2.8			
2032	1130	76	6/13/2023 14:59	1	3	1.51	1	1	45
2033	1060	82	8/19/2022 0:00	1	3	1			
2034	1060	70	5/11/2023 17:41	1	3	1.36	1	1	40
2035	1190	82	8/26/2022 0:00	1	3	1.7			
2036	1060	72	5/22/2023 16:48	1	2	1.5	1	1	45
2037	920	30	7/1/2022 0:00	1					
2038		74	7/28/2021 0:00	1					

2039	1000	55	8/23/2021 0:00	1					
2040									
2041									
2042	1190	78	5/22/2023 17:27	1	2	1.15	1	1	50
2043	1000	68	8/19/2022 0:00	1	3	1.5			
2044	840	64	8/19/2022 0:00	1	3	1.5			
2045	1000	35	7/1/2022 0:00	1	3	3.8			
2046									
2047									
2048	1250	74	8/19/2022 0:00	1	3	0.6			
2049	1000	35	7/1/2022 0:00	1		1.1			
2050	1030	58	8/19/2022 0:00	1	3	0			
2051	1250	82	8/19/2022 0:00	1	3	1.9			
2052	1130	80	8/26/2022 0:00	1	3	1.8			
2053									
2054									
2055									
2056									
2057	920	64	6/1/2023 15:14	1	2	1.01	1	2	30
2058	1190	78	6/1/2023 14:48	1	2	1.37	2	2	50
2059									
2060	1350	80	5/23/2023 18:09	1	2	0.99	1	2	65
2061									
2062	1190	78	6/5/2023 17:07	1	3	1.18	1	1	50
2063									
2064	1405	88	6/6/2023 15:10	1	1	1.63	1	2	70
2065	1455	88	5/18/2023 16:40	1	1	0.85	1	1	75
2066									
2067									
2068									
2069	1500	80	6/23/2022 0:00	1		0.59			
2070	1500	94	6/2/2023 14:25	1	3	1.17	1	1	80
2071									
2072									
2073	1300	80	8/23/2021 0:00	1					
2074									
2075									
2076									
2077									

2078									
2079									
2080									
2081									
2082	1250	82	8/12/2022 0:00	1	3	0.8			
2083									
2084	1300	70	6/6/2023 14:06	1	1	0.94	1	1	60
2085									
2086	1130	70	5/18/2023 16:19	1	2	0.75	1	1	45
2087									
2088									
2089									
2090									
2091									
2092									
2093									
2094	1190	60	8/23/2021 0:00	1					
2095									
2096	1300	80	5/23/2023 17:32	1	3	0.77	1	1	60
2097	1190	70	8/12/2022 0:00	1	3	0			
2098	1190	74	6/6/2023 13:00	1	1	1.12	1	1	50
2099	1300	60	6/23/2022 0:00	1		0.98			
2100	1300	60	6/23/2022 0:00	1		0.35			
2101	1250	88	6/9/2023 17:42	1	1	0.91	1	1	55
2102									
2103	1190	70	6/6/2023 13:33	1	2	1.33	1	1	50
2104	1250	80	5/23/2023 16:57	1	1	0.63	1	2	55
2105									
2106									
2107	1405	70	6/23/2022 0:00	1		0.74			
2108									
2109									
2110									
2111									
2112									
2113	1250	74	6/2/2023 13:54	1	2	0.99	1	1	55
2114									
2115									
2116									
2117									
2118									

2119									
2120	920	50	8/23/2021 0:00	1					
2121	1130	45	8/19/2022 0:00	1		0.2			
3001	750	20	7/22/2022 0:00	1		1.7			
3002	750	20	7/22/2022 0:00	1		0.8			
3003									
3004	650	36	5/24/2023 14:20	1	2	0.77	2	2	15
3005	850	66	5/10/2023 18:04	1	1	1.47	1	1	25
3006	840	40	8/26/2022 0:00	1	3	1.5			
3007	750	32	5/10/2023 17:22	1	1	0.87	1	1	20
3008	1000	48	8/26/2022 0:00	1	3	0.7			
3009	650	54	5/10/2023 16:32		1	1.09	1	1	15
3010	750	52	5/10/2023 14:41	1	3	1.32	1	1	20
3011	530	40	5/24/2023 16:51	1	3	1.16	1	2	10
3012	750	40	7/29/2021 0:00	1					
3013	920	48	5/3/2023 16:00	1	3	0.41	1	1	30
3014	530	10	7/22/2022 0:00	1		1.6			
3015			8/18/2021 0:00	1					
3016	530	48	5/24/2023 12:26	1	2	80	1	1	10
3017	650	15	8/5/2022 0:00	1		2.2			
3018	840	60	5/24/2023 17:49	1	2	1.72	2	2	25
3019			8/18/2021 0:00	1					
3020	750	50	11/3/2021 0:00	1					
3021									
3022	840	50	7/28/2021 0:00	1					
3023	840	48	5/24/2023 16:13	1	3	0.99	1	1	25
3024	530	10	8/18/2021 0:00	1		1.1			
3025	530	10	7/22/2022 0:00	1		0.5			
3026			8/18/2021 0:00	1					
3027			8/18/2021 0:00	1					
3028	840	25	7/29/2022 0:00	1		2.6			
3029									
3030									
3031	530	44	5/10/2023 12:44	1	3	0.86	1	1	10
3032	650	58	5/10/2023 13:41	1	1	1.2	1	1	15
3033	530	40	5/10/2023 14:09	1	2	0.75	1	1	10
	840	32	5/4/2023 17:10	1	2	1.48	1	1	25

	1190	64	6/6/2023 16:11	1	1	1.51	1	1	50
	1190	64	6/6/2023 16:42	1	1	1.61	1	1	50
	1190	66	6/8/2023 18:25	1	1	1.08	1	1	50
	1160	56	6/9/2023 12:26	1	1	0.82	1	1	40
	1060	56	6/9/2023 13:46	1	1	1.81	1	1	40
	1160	60	6/13/2023 18:05	1	1	1.77	1	2	40
	1130	62	6/14/2023 17:04	1	1	1.25	1	2	45
	1250	78	6/14/2023 17:35	1	1	1.47	1	1	55
	1030	46	7/1/2018						36
	1060	46	7/2/2018						39
	1030	47	7/3/2018						36
	650	46	7/4/2018						15
	650	46	7/5/2018						15
	650	46	7/6/2018						15
	650	40	7/7/2018						15
	650	50	7/8/2018						15
	650	40	7/9/2018						15
	750	50	7/10/2018						20
	750	40	7/11/2018						20
	1060	50	7/12/2018						40
	960	48	7/13/2018						25
	920	47	7/14/2018						30
	920	42	7/15/2018						30
	960	42	7/16/2018						33
	940	42	7/17/2018						32
	1060	50	7/18/2018						40
	1000	50	7/19/2018						35