Monroe County Water Authority

Memorandum

To: Board Members Date: July 3, 2024

From: Nicholas Noce, Executive Director

Subject: **Regular Board Meeting – Thursday, July 11, 2024 @ 9:00 a.m.**
Board Room, 475 Norris Drive

AGENDA ITEMS:

1. Personnel Items:

   - There is an item on the Agenda marking the retirement of Joseph Parravano, Jr. We appreciate his many years of dedicated service to the Authority and wish him a happy and fulfilling retirement.

   - Promotional Appointment of Michael Salisbury to the title of Labor Foreman in the Operations Department. Mr. Salisbury has been with the Authority for fifteen years. A recommendation memorandum is enclosed for Board review.

   - Promotional Appointment of Ryan Bonacchi to the title of Plant Mechanic in the Production/Transmission Department. Mr. Bonacchi has been with the Water Authority for over twenty years and possesses the skills and knowledge to fufill this position. See memorandum enclosed.

   - Promotional Appointment of John Palermo to the title of Plant Mechanic in the Production/Transmission Department. Mr. Palermo has been with the Water Authority for over twenty years and possesses the skills and knowledge to fufill this position. See memorandum enclosed.

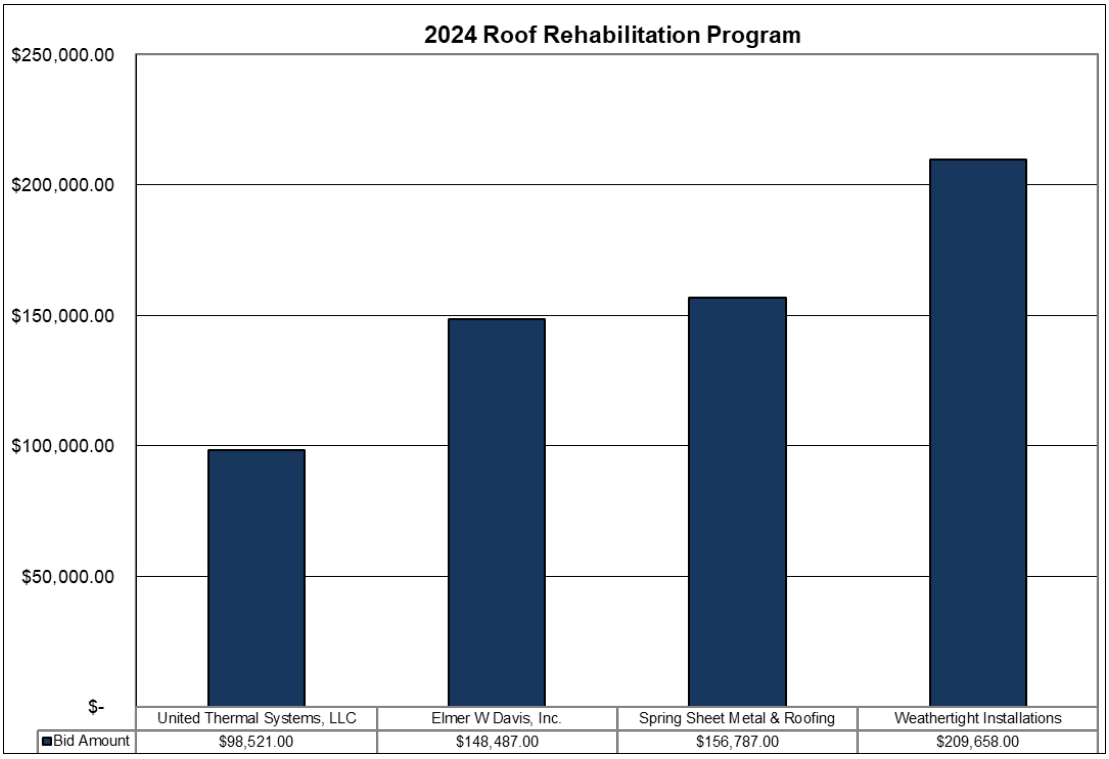
2. There is an item on the agenda for the purchase of two 48" Concrete Pipe Adapters from the low, responsive responsible bidder.

3. There is an item on the agenda to award a contract for Dumpster Services to the low, responsive responsible bidder.

4. There is an item on the agenda to authorize the purchase of tires utilizing the New York State Contract.

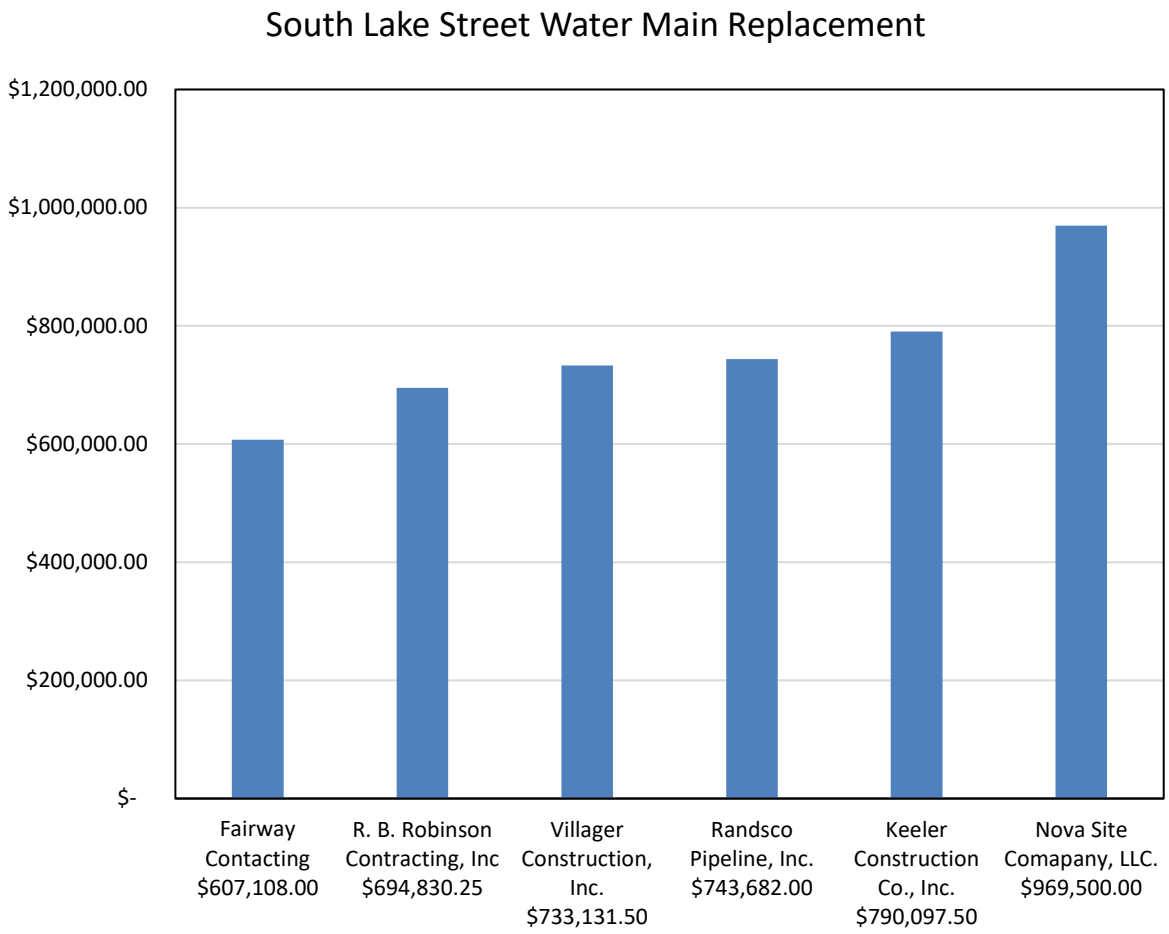
5. There is an item on the Agenda to award a unit price contract for the 2024 Roof Rehabilitation Program project in the Town of Webster. The project involves the installation of approximately 8,300 SF of silicone coating on the concrete roofs at the Webster Lake Water Pump Station and Screen Building on Lake Road in the Town of Webster. There were four bids submitted. Our

recommendation is to award this work to the lowest, responsible, responsive bidder United Thermal Systems, LLC in the bid amount of $98,521.



6. There is an item on the Agenda to award a unit price contract for the South Lake Road Water Main Replacement project in the Town of Pavilion. The project involves furnishing and installing approximately 2,500 linear feet of 8" ductile iron water main and appurtenances on South Lake Road, NYS Route 19.

   There were six bids submitted. Our recommendation is to award this work to the lowest responsive, responsible bidder, Fairway Contracting in the bid amount of $607,108.



7. There is an item on the agenda to authorize Amendment 3 to the Service Line Material Inventory Services project with Arcadis of New York (Arcadis). The services under this amendment include construction administration and inspection Services for additional vacuum excavation efforts the Water Authority is undertaking, funding application assistance for service line replacements under the Bipartisan Infrastructure Law (BIL), and to develop pitcher filter and tap sampling standard operating procedures.

   In 2023 Arcadis created an initial service line material inventory from all of the data provided by MCWA as well as other outside sources available. The Water Authority issued a vacuum excavation contract that allowed Arcadis staff to verify the water service material and gather additional data that could be used in the creation of a predictive model. The predictive modeling efforts have provided results predicting the service material where it is currently unknown. Additional field investigation is required to continue to validate the model results and improve its accuracy. The results of the modeling and additional vacuum excavation efforts will be used to prioritize

services to be replaced and identify lead service lines for lead and copper tap sampling. This information will also be utilized in the grant funding applications for service line replacements.

8. There is an item on the agenda to authorize the use of the New York State Contract for DSL/Low-Bandwidth Internet and Cable services.

9. There is an item on the agenda for the acceptance of the Cost of Service Study.

10. The Authority's standard procurement compliance resolution.

There may be additional items placed on the Agenda not finalized for this mailing.

BOARD DISCUSSION/NOTIFICATION ITEMS

- In Board Folders for Review:
  - Routine Monthly Informational Reports and/or Updates

There may be additional items presented for discussion and/or notification.

NN/dlh
Enclosures

cc: Executive Staff

Monroe County Water Authority

Memorandum

To: Nicholas A. Noce, Executive Director Date: July 1, 2024

From: Stephen T. Trotta, Director of Operations ST

Subject: Recommendation for Promotion Copies: D. Hendrickson

I would like to recommend the promotion of Michael Salisbury to the position of Labor Foreman in the Facilities, Fleet and Operations Department, working in leak detection.

Mr. Salisbury has been working in the Operations area for over fifteen years and I feel he would be a good fit for this position. Michael has been working out of title for the last several months doing leak detection, he has the skills necessary for this title.

Michael's appointment will be effective July 15, 2024, at an hourly rate of $40.13

(Dis)Approved: _____ _____
Deputy Executive Director Date

(Dis)Approved: _____ 7/2/24
Executive Director Date

Board Resolution: _____

Monroe County Water Authority

Memorandum

To:	Nicholas A. Noce	Date:	July 1, 2024
From:	Christopher J. LaManna, P.E. CJL	File:	Personnel
Subject:	Recommendation for Promotional Appointment - Plant Mechanic Ryan Bonacchi	Copies:	D. Hendrickson L. Magguilli N. Satter

I recommend the promotional appointment of Ryan Bonacchi to the position of Plant Mechanic in the Production and Transmission Department. The Department has a need for this position in the Mechanical Maintenance group based at the Shoremont Water Treatment Plant. Mr. Bonacchi has been with the Authority since 2003 and has performed well. He has the required experience and has demonstrated the capabilities necessary to meet the requirements of the Plant Mechanic position. He is reachable on the Civil Service exam list for appointment to this title.

If approved at the July 11, 2024 Board meeting, Mr. Bonacchi's appointment to Plant Mechanic will be effective July 15, 2024 at an hourly rate of $40.76.

Approved: Christopher J LaManna — Director of Production and Transmission — 7/1/24 — Date

(Dis)Approved: Nicholas Noce — Executive Director — 7/2/24 — Date

Board Resolution: _____

Monroe County Water Authority

Memorandum

To:	Nicholas A. Noce	Date:	July 1, 2024
From:	Christopher J. LaManna, P.E. CJL	File:	Personnel
Subject:	Recommendation for Promotional Appointment - Plant Mechanic John Palermo	Copies:	D. Hendrickson L. Magguilli N. Satter

I recommend the promotional appointment of John Palermo to the position of Plant Mechanic in the Production and Transmission Department. The Department has a need for this position in the Mechanical Maintenance group based at the Shoremont Water Treatment Plant. Mr. Palermo has been with the Authority since 2003 and has performed well. He has the required experience and has demonstrated the capabilities necessary to meet the requirements of the Plant Mechanic position. He is reachable on the Civil Service exam list for appointment to this title.

If approved at the July 11, 2024 Board meeting, Mr. Palermo's appointment to Plant Mechanic will be effective July 15, 2024 at an hourly rate of $40.76.

Approved: Christopher J LaManna — Director of Production and Transmission — 7/1/24 — Date

(Dis)Approved: [signature] — Executive Director — 7/2/24 — Date

Board Resolution: _____

MONROE COUNTY WATER AUTHORITY
P.O. Box 10999 • 475 Norris Drive • Rochester, N.Y. 14610-0999
Phone: (585) 442-2000 Fax (585) 442-0220

To: Steve Trotta Date: 06/14/2024

From: Laurel Neff File: WA 052410

Subject: **Recommendation for Bid Award** Copies:

Bids were received on June 14, 2024 for **48" Concrete Adapters.** The apparent low responsive responsible bidder was Thompson Pipe Group Pressure, Inc., with a bid of $24,730.00.

No other bids were received. Bid packages were also sent to Blair Supply Corp. and Technology International.

I recommend that the bid be awarded to the low responsive, responsible bidder.

/ln

(Dis)Approved by _____ 6-27-24
Department Head Date

(Dis)Approved by Laurel Neff 6/26/24
Purchasing Date

(Dis)Approved by _____ 7/1/24
Executive Director Date

(Dis)Approved by _____ _____
Executive Assistant/Board Date

Monroe County Water Authority

Memorandum

To: Steve Trotta

Date: 06/27/24

From: Laurel Neff

File: WA 062411

Subject: **Recommendation for Bid Award**

Copies:

Bids were received on June 27, 2024 for **Dumpster Service.** The apparent low responsive responsible bidder was Waste Management with a base annual cost of $10,008 (see bid tab for extra charges). The estimated total annual cost will be $20,000. No other bids were received.

Bid packets were sent to Suburban Disposal, Casella Waste Systems, Tiger Companies and Landmark Equipment Rental but no bids were received.

I recommend that the bid be awarded to the low responsive, responsible bidder.

/ln

(Dis)Approved by _____ Department Head — 6-27-24 Date

(Dis)Approved by Laurel Neff Purchasing — 6/27/2024 Date

(Dis)Approved by _____ Executive Director — 7/1/24 Date

(Dis)Approved by _____ Executive Assistant/Board — _____ Date

WA 062411 **DUMPSTER SERVICE**

		Waste Management	Casella Waste Systems	Suburban Disposal	Tiger Companies	Landmark Equipment Rental
		Annual Total				
475 Norris Drive; Rochester, NY 14610 location						
8 Yard Dumpster, Service Weekly		$ 1,800.00	NO BID	NO BID	NO BID	NO BID
6 Yard Cardboard Only Dumpster, Service Weekly		$ 1,164.00	NO BID	NO BID	NO BID	NO BID
40 Yard Open Construction/Demolition Dumpster, Service Weekly		$ 1,200.00	NO BID	NO BID	NO BID	NO BID
4799 Dewey Ave; Rochester NY 14612 location						
8 Yard Dumpster, Service Weekly		$ 1,800.00	NO BID	NO BID	NO BID	NO BID
6 Yard Cardboard Only Dumpster, Service Weekly		$ 1,164.00	NO BID	NO BID	NO BID	NO BID
205 Norris Drive; Rochester, NY 14610 location						
6 Yard Cardboard Only Dumpster, Service Weekly		$ 960.00	NO BID	NO BID	NO BID	NO BID
1325 Paul Road; Churchville, NY 14428						
8 Yard Dumpster, Service Bi-Weekly		$ 960.00	NO BID	NO BID	NO BID	NO BID
593 Basket Road; Webster, NY 14580						
8 Yard Dumpster, Service Bi-Weekly		$ 960.00	NO BID	NO BID	NO BID	NO BID
	TOTAL:	$ 10,008.00	NO BID	NO BID	NO BID	NO BID

***Additional Services and Costs as Needed**	
Extra Pickup for 8 Yard Dumpsters	$100.00/pick
Extra Pickup for 6 Yard Cardboard Dumpsters	$100.00/pick
Service Charge Per Haul For 40 Yard Dumpster	$250.00/haul
Disposal Fee Per Ton for 40 Yard Dumpster	$71.00/ton

Monroe County Water Authority

Memorandum

To: Nicolas. A. Noce, Executive Director
Laurie Neff, Purchasing

Date: June 27, 2024

From: Stephen M. Savage, P.E., Director of Engineering

File: 23-028 #3

Subject: July 11, 2024 Board Meeting - Agenda Item
2024 Roof Rehabilitation Program

Copies: D. Hendrickson
T. Stevens, P.E.
J. Sullivan
T. Ferguson, P.E.
S. Priem, P.E.

Attached are the results of the bid opening on June 27, 2024 for the above project. The project involves the installation of approximately 8,300 SF of silicone coating on the concrete roofs at the Webster Lake Water Pump Station and Screen Building on Lake Road in the Town of Webster. Four contractors submitted bids ranging from $98,521 to $209,658; the Engineer's estimate was $132,800.

The bids contained several minor informalities which did not change the bid results as noted in the attached bid tabulation sheet.

United Thermal Systems, LLC submitted the lowest responsive bid of $98,521. Staff has conducted a thorough review of the bid package including experience, financial status, references, and other related items as required, indicating that they are capable of completing the work.

Based on staff review of United Thermal Systems, LLC's qualifications, it is my recommendation that the Board authorize the Executive Director to award this unit price contract to the lowest responsive, responsible bidder United Thermal Systems, LLC for the amount of $98,521.

(Dis) Approved by: _____ 7/2/24
Purchasing — Date

(Dis) Approved by: _____ 7/2/24
Executive Director — Date

Attachments: Bid Tabulation Sheet

2024 Roof Rehabilitation Program

I certify that this Tabulation is a true representation of bids received on Thursday, June 27, 2024 at 11:00 a.m. for this contract.

By: Justin Sullivan

Date: 6/27/2024

Engineering No.: 23-028
Authorization No.: 144-400
Bid Opening: Thursday, June 27, 2024 at 11:00 a.m.

Item No.	Description	Estimated Quantity	Unit	Engineer's Estimate		United Thermal Systems, LLC 2939 Lockport Road Niagara Falls, NY 14305 (716) 285-0216 thutchinson@unitedthermalsystems.com		Elmer W Davis, Inc. 1217 Clifford Avenue Rochester, NY 14621 (585) 546-2846 mhuffman@elmerdavis.com		Spring Sheet Metal & Roofing 678 Clinton Avenue South Rochester, NY 14620 (585) 244-7730 jorb@ssmrc.com		Weathertight Installations 5497 East Lake Road Conesus, NY 14435 (585) 737-8900 wtiinstall@gmail.com	
				Unit Cost	Estimated Cost	Unit Cost	Estimated Cost	Unit Cost	Estimated Cost	Unit Cost	Estimated Cost	Unit Cost	Estimated Cost
1.0	Webster Lake Water Pump Station Concrete Roof and Screen Building Concrete Slab Coating	8,300	SF	$ 16.00	$ 132,800.00	$ 11.87	$ 98,521.00	$ 17.89	$ 148,487.00	$ 18.89	$ 156,787.00	$ 25.26	$ 209,658.00
	Total Bid Price				**$ 132,800.00**		**$ 98,521.00**		**$ 148,487.00**		**$ 156,787.00**		**$ 209,658.00**
						1st Low Bidder		2nd Low Bidder		3rd Low Bidder		4th Low Bidder	

Bid Informalities:

United Thermal Systems, LLC

1.) Multiplication of the estimated quantity and unit price in words does not match extended total in figures and in words. The corrected total is $98,521.00. This informality does not change the Bid results.

Elmer W. Davis, Inc.

1.) Multiplication of the estimated quantity and unit price in words does not match extended total in figures and in words. The corrected Bid amount is $148,487.00. This informality does not change Bid results.
2.) White out used on name line in Bid Acknowledgement, Corporate Resolution, and Offerer/Bidder Disclosure in Section 7. These informalities do not change the Bid results.

Spring Sheet Metal and Roofing

1.) Unit price in words is written in words as the multiplication of the estimated quantity and unit price in figures. Multiplication of the estimated quantity and unit price in figures does not match extended total in words. The corrected Bid amount is $156,787.00. This informality does not change the Bid results.
2.) White out used in Corporate Resolution an Bidder Qualifications. This informality does not change the Bid results.

Weathertight Installations

1.) Unit price in words is written in figures as the multiplication of the estimated quantity and unit price figures. Multiplication of estimated quantity and unit price in figures does not match extended total in figures. The corrected Bid amount is $209,658.00. These informalities do not change the Bid results.
2.) Corporate Resolution not completed and left blank. This informality does not change the Bid results.

Monroe County Water Authority

Memorandum

To: Nicholas Noce, Executive Director
Laurie Neff, Purchasing

From: Stephen M. Savage, P.E., Director of Engineering

Date: June 27, 2024

File: 23-030 #3

Subject: July 11, 2024 Board Meeting - Agenda Item
South Lake Street Water Main Replacement

Copies: D. Hendrickson
T. Stevens, P.E.
M. Smith
T. Ferguson, P.E.
S. Priem, P.E.

Attached are the results of the bid opening on June 27, 2024 for the above project. The project involves the replacement of approximately 2,500 LF of 8" cast iron water main with 8" ductile iron pipe along South Lake Street in the Town of Pavilion. Six contractors submitted bids ranging from $607,108 to $969,500; the Engineer's estimate was $678,492.

There were several minor informalities that did not change the bid results as noted in the attached bid tabulation sheet.

Fairway Contracting submitted the lowest bid of $607,108. Fairway Contracting is from Orchard Park, NY and has over 30 years of experience completing pipe line installations and meets the required qualifications. Our staff has conducted a thorough review of the bid package including experience, financial status, references, and other related items as required, indicating that they are capable of completing the work.

Based on staff review of Fairway Contracting's qualifications, it is my recommendation that the Board authorize the Executive Director to award this contract to the lowest responsive, responsible bidder Fairway Contracting for the amount of $607,108.

(Dis) Approved by: Laurel Neff
Purchasing — Date: 7/2/24

(Dis) Approved by:
Executive Director — Date: 7/2/24

Attachments: Bid Tabulation Sheet

South Lake Street Water Main Replacement

I certify that this tabulation is a true representation of bids received on June 27, 2024 at 10:00 a.m. for this contract.

Date: 6/27/24

Eng. No.: 23-030
Bid Opening: June 27, 2024 at 10:00 a.m.

Item No.	Description	Estimated Quantity	Unit	Engineers Estimate Unit Price	Engineers Estimate Amount	Fairway Contracting PO Box 352 Orchard Park, NY 14127 matthewjharting@aol.com (716) 652-4886 Unit Price	Fairway Contracting Amount	R. B Robinson Contracting, Inc 535 Ithaca Rd Candor, NY 13743 brad@robinsoncontracting.com (607) 659-5153 Unit Price	R. B Robinson Contracting, Inc Amount	Villager Construction, Inc. 425 Old Macedon Ctr. Rd. Fairport, NY 14450 Tlawless@villagerd.com (585) 223-7697 Unit Price	Villager Construction, Inc. Amount	Randsco Pipeline, Inc 740 Quaker Road Macedon, NY 14502 randscopipeline@yahoo.com (585) 746-4467 Unit Price	Randsco Pipeline, Inc Amount	Keeler Construction Co., Inc. 13519 West Lee Road Albion, NY 14411 Mkeeler@Keelerconstruction.com (585) 589-4481 Unit Price	Keeler Construction Co., Inc. Amount	Nova Site Company, LLC 6 Lana Court West Seneca, NY 14224 info@novasiteco.com (716) 877-0435 Unit Price	Nova Site Company, LLC Amount
1.0	6" Ductile Iron Water Main	17	LF	$100.00	$ 1,700.00	$ 91.00	$ 1,547.00	$ 110.00	$ 1,870.00	$ 40.00	$ 680.00	$100.00	$ 1,700.00	$102.00	$ 1,734.00	$400.00	$ 6,800.00
2.0	8" Ductile Iron Water Main	2,418	LF	$140.00	$ 338,240.00	$ 116.50	$ 281,464.00	$ 120.00	$ 289,920.00	$ 132.00	$ 318,912.00	$160.00	$ 386,560.00	$140.00	$ 338,240.00	$157.00	$ 379,312.00
3.1	6" M.J. Ductile Iron Bend: 45 Degrees	1	EA	$800.00	$ 800.00	$ 376.00	$ 376.00	$ 2,000.00	$ 2,000.00	$ 570.00	$ 570.00	$500.00	$ 500.00	$700.00	$ 700.00	$1.00	$ 1.00
4.1	8" M.J. Ductile Iron Bend: 22 1/2 Degrees	1	EA	$800.00	$ 800.00	$ 499.00	$ 499.00	$ 2,100.00	$ 2,100.00	$ 660.00	$ 660.00	$500.00	$ 500.00	$800.00	$ 800.00	$1.00	$ 1.00
4.2	8" M.J. Ductile Iron Bend: 45 Degrees	8	EA	$800.00	$ 6,400.00	$ 505.00	$ 4,040.00	$ 2,300.00	$ 18,400.00	$ 755.00	$ 6,040.00	$600.00	$ 4,800.00	$850.00	$ 6,800.00	$1.00	$ 8.00
4.3	8" M.J. Ductile Iron Bend: 90 Degrees	2	EA	$800.00	$ 1,600.00	$ 563.00	$ 1,126.00	$ 2,600.00	$ 5,200.00	$ 740.00	$ 1,480.00	$600.00	$ 1,200.00	$1,450.00	$ 2,900.00	$1.00	$ 2.00
5.0	8" Restrained Joint Ductile Iron Water Main	142	LF	$85.00	$ 12,070.00	$ 211.00	$ 29,962.00	$ 110.00	$ 15,620.00	$ 75.00	$ 10,650.00	$70.00	$ 9,940.00	$162.00	$ 23,004.00	$290.00	$ 41,180.00
6.0	6" Tie-in Connection & Abandonment	18	LF	$500.00	$ 9,000.00	$ 315.00	$ 5,040.00	$ 500.00	$ 9,000.00	$ 790.00	$ 12,640.00	$400.00	$ 6,480.00	$700.00	$ 11,200.00	$612.00	$ 9,792.00
7.0	8" x 6" Reducer	3	EA	$800.00	$ 1,600.00	$ 427.00	$ 854.00	$ 1,700.00	$ 3,400.00	$ 820.00	$ 1,640.00	$600.00	$ 1,200.00	$400.00	$ 800.00	$1.00	$ 2.00
8.0	6" x 6" Tapping Sleeve, Valve & Tap	1	EA	$8,000.00	$ 8,000.00	$ 11,158.00	$ 11,158.00	$ 10,000.00	$ 10,000.00	$ 10,500.00	$ 10,500.00	$6,500.00	$ 6,500.00	$7,600.00	$ 7,600.00	$44,872.60	$ 44,872.60
9.0	8" Gate Valve	2	EA	$2,500.00	$ 5,000.00	$ 3,566.00	$ 7,132.00	$ 4,200.00	$ 8,400.00	$ 2,800.00	$ 5,600.00	$3,000.00	$ 6,000.00	$3,100.00	$ 6,200.00	$4,100.00	$ 8,200.00
10.0	Perpendicular Hydrant Assembly	4	EA	$7,500.00	$ 30,000.00	$ 8,585.00	$ 34,340.00	$ 9,600.00	$ 38,400.00	$ 8,200.00	$ 32,800.00	$7,500.00	$ 30,000.00	$9,800.00	$ 39,200.00	$9,200.00	$ 36,800.00
11.0	Polyethylene Encasement	3,449	LF	$4.00	$ 9,796.00	$ 2.00	$ 4,898.00	$ 3.00	$ 7,347.00	$ 1.50	$ 3,673.50	$4.00	$ 9,796.00	$3.50	$ 8,571.50	$1.60	$ 3,918.40
12.0	1" Corporation	28	EA	$800.00	$ 22,400.00	$ 502.00	$ 14,056.00	$ 300.00	$ 8,400.00	$ 790.00	$ 22,120.00	$800.00	$ 22,400.00	$240.00	$ 6,720.00	$3,500.00	$ 98,000.00
13.1	1" Copper Installation by Open Cut in Lawn	241	LF	$60.00	$ 14,460.00	$ 27.00	$ 6,507.00	$ 65.00	$ 15,665.00	$ 77.00	$ 18,557.00	$40.00	$ 9,640.00	$29.00	$ 6,989.00	$1.00	$ 241.00
13.2	1" Copper Installation by Open Cut in Pavement	117	LF	$90.00	$ 10,530.00	$ 40.00	$ 4,680.00	$ 70.00	$ 8,190.00	$ 81.00	$ 9,477.00	$80.00	$ 9,360.00	$60.00	$ 7,020.00	$1.00	$ 117.00
13.3	1" Copper Installation by Non-Open Cut	747	LF	$70.00	$ 52,290.00	$ 62.00	$ 46,314.00	$ 54.00	$ 40,338.00	$ 92.00	$ 68,724.00	$60.00	$ 44,820.00	$65.00	$ 48,555.00	$1.00	$ 747.00
14.0	1" Curb Stops in Lawn or Pavement	28	EA	$1,200.00	$ 33,600.00	$ 780.00	$ 21,840.00	$ 310.00	$ 8,680.00	$ 1,300.00	$ 36,400.00	$1,000.00	$ 28,000.00	$1,050.00	$ 29,400.00	$3,000.00	$ 84,000.00
15.0	Type 2 Select Fill - No. 2 Crusher Run Stone	187	CY	$45.00	$ 7,515.00	$ 48.00	$ 8,016.00	$ 42.00	$ 7,014.00	$ 53.00	$ 8,851.00	$45.00	$ 7,515.00	$50.00	$ 8,350.00	$50.00	$ 8,350.00
16.0	Temporary Asphalt	369	SF	$5.00	$ 1,845.00	$ 5.00	$ 1,845.00	$ 6.75	$ 2,490.75	$ 6.00	$ 2,214.00	$5.00	$ 1,845.00	$5.00	$ 1,845.00	$5.00	$ 1,845.00
17.0	Street Asphalt	111	CF	$20.00	$ 2,220.00	$ 20.00	$ 2,220.00	$ 24.00	$ 2,664.00	$ 30.00	$ 3,330.00	$20.00	$ 2,220.00	$60.00	$ 6,660.00	$20.00	$ 2,220.00
18.0	Driveway Asphalt	328	CF	$22.00	$ 7,216.00	$ 22.00	$ 7,216.00	$ 25.50	$ 8,364.00	$ 56.00	$ 18,368.00	$22.00	$ 7,216.00	$60.00	$ 19,680.00	$22.00	$ 7,216.00
19.0	Lawn Restoration	17,120	SF	$1.50	$ 25,695.00	$ 1.50	$ 25,695.00	$ 1.50	$ 25,695.00	$ 1.50	$ 25,695.00	$3.50	$ 59,955.00	$2.80	$ 47,964.00	$1.50	$ 25,695.00
20.0	Field Restoration	4,300	SF	$1.00	$ 4,300.00	$ 1.00	$ 4,300.00	$ 1.05	$ 4,515.00	$ 1.00	$ 4,300.00	$1.00	$ 4,300.00	$2.80	$ 12,040.00	$1.00	$ 4,300.00
21.0	Horizontal Directional Drilling with 16" DIPS HDPE Casing Pipe	45	LF	$140.00	$ 6,300.00	$ 400.00	$ 18,000.00	$ 600.00	$ 27,000.00	$ 623.00	$ 28,125.00	$200.00	$ 9,000.00	$600.00	$ 27,000.00	$1,650.00	$ 74,250.00
22.0	Bore Without Casing for 3" Water Main	20	LF	$275.00	$ 5,500.00	$ 250.00	$ 5,000.00	$ 450.00	$ 9,000.00	$ 225.00	$ 4,500.00	$125.00	$ 2,500.00	$350.00	$ 7,000.00	$320.00	$ 6,400.00
23.0	Jacking and Boring With 16" Steel Casing Pipe	77	LF	$400.00	$ 30,800.00	$ 420.00	$ 32,340.00	$ 700.00	$ 53,900.00	$ 570.00	$ 43,890.00	$600.00	$ 46,200.00	$850.00	$ 65,450.00	$1,173.00	$ 90,473.00
24.0	Water Main Abandonment	1	EA	$7,500.00	$ 7,500.00	$ 5,628.00	$ 5,628.00	$ 7,500.00	$ 7,500.00	$ 4,400.00	$ 4,400.00	$5,000.00	$ 5,000.00	$10,000.00	$ 10,000.00	$8,400.00	$ 8,400.00
25.0	Valve Box Abandonment	2	EA	$550.00	$ 1,100.00	$ 300.00	$ 600.00	$ 800.00	$ 1,600.00	$ 540.00	$ 1,080.00	$300.00	$ 600.00	$1,200.00	$ 2,400.00	$325.00	$ 650.00
26.0	Hydrant Abandonment	4	EA	$800.00	$ 3,200.00	$ 500.00	$ 2,000.00	$ 800.00	$ 3,200.00	$ 1,100.00	$ 4,400.00	$500.00	$ 2,000.00	$600.00	$ 2,400.00	$310.00	$ 1,240.00
27.0	Hold Utility Pole	3	EA	$800.00	$ 2,400.00	$ 1,000.00	$ 3,000.00	$ 300.00	$ 900.00	$ 1,000.00	$ 3,000.00	$200.00	$ 600.00	$250.00	$ 750.00	$3,650.00	$ 10,950.00
							$ -		$ -		$ -		$ -		$ -		$ -
40.0	Rock Removal	50	CY	$20.00	$ 1,000.00	$ 20.00	$ 1,000.00	$ 70.00	$ 3,500.00	$ 20.00	$ 1,000.00	$20.00	$ 1,000.00	$20.00	$ 1,000.00	$20.00	$ 1,000.00
41.0	Rock Drilling	50	LF	$20.00	$ 1,000.00	$ 20.00	$ 1,000.00	$ 140.00	$ 7,000.00	$ 20.00	$ 1,000.00	$20.00	$ 1,000.00	$20.00	$ 1,000.00	$20.00	$ 1,000.00
42.0	Exploratory Excavation	20	CY	$20.00	$ 400.00	$ 20.00	$ 400.00	$ 30.00	$ 600.00	$ 20.00	$ 400.00	$20.00	$ 400.00	$20.00	$ 400.00	$20.00	$ 400.00
43.0	Exploratory Excavation - Sheeted	20	CY	$30.00	$ 600.00	$ 30.00	$ 600.00	$ 60.00	$ 1,200.00	$ 30.00	$ 600.00	$30.00	$ 600.00	$30.00	$ 600.00	$30.00	$ 600.00
44.0	8" M.J. Bend: 11 1/4 Degree	1	EA	$800.00	$ 800.00	$ 800.00	$ 800.00	$ 2,000.00	$ 2,000.00	$ 800.00	$ 800.00	$800.00	$ 800.00	$800.00	$ 800.00	$800.00	$ 800.00
45.0	6" M.J. Solid Sleeves	1	EA	$300.00	$ 300.00	$ 300.00	$ 300.00	$ 1,800.00	$ 1,800.00	$ 300.00	$ 300.00	$300.00	$ 300.00	$700.00	$ 700.00	$300.00	$ 300.00
46.0	8" M.J. Solid Sleeve	1	EA	$315.00	$ 315.00	$ 315.00	$ 315.00	$ 1,650.00	$ 1,650.00	$ 315.00	$ 315.00	$315.00	$ 315.00	$850.00	$ 850.00	$315.00	$ 315.00
47.1	6" Anchor Pipe: 12", 18" or 24"	1	EA	$300.00	$ 300.00	$ 300.00	$ 300.00	$ 625.00	$ 625.00	$ 300.00	$ 300.00	$300.00	$ 300.00	$500.00	$ 500.00	$300.00	$ 300.00
47.2	6" Anchor Pipe: 3', 4' or 6'	1	EA	$375.00	$ 375.00	$ 375.00	$ 375.00	$ 1,000.00	$ 1,000.00	$ 375.00	$ 375.00	$375.00	$ 375.00	$1,700.00	$ 1,700.00	$375.00	$ 375.00
48.1	Hydrant Extensions: 6", 12" or 18"	1	EA	$300.00	$ 300.00	$ 300.00	$ 300.00	$ 1,500.00	$ 1,500.00	$ 300.00	$ 300.00	$300.00	$ 300.00	$1,050.00	$ 1,050.00	$300.00	$ 300.00
48.2	Hydrant Extensions: 24", 30" or 36"	1	EA	$375.00	$ 375.00	$ 375.00	$ 375.00	$ 2,000.00	$ 2,000.00	$ 375.00	$ 375.00	$375.00	$ 375.00	$1,300.00	$ 1,300.00	$375.00	$ 375.00
49.0	Type 1 Select Fill - No. 1 Crusher Run Stone	25	CY	$25.00	$ 625.00	$ 25.00	$ 625.00	$ 41.50	$ 1,037.50	$ 25.00	$ 625.00	$25.00	$ 625.00	$55.00	$ 1,375.00	$25.00	$ 625.00
50.0	Type 3 Select Fill - Run-of-Bank Gravel	25	CY	$16.00	$ 400.00	$ 16.00	$ 400.00	$ 38.00	$ 950.00	$ 16.00	$ 400.00	$16.00	$ 400.00	$45.00	$ 1,125.00	$16.00	$ 400.00
51.0	Type 4 Select Fill - Sand	30	CY	$15.00	$ 450.00	$ 15.00	$ 450.00	$ 27.50	$ 825.00	$ 95.00	$ 2,850.00	$15.00	$ 450.00	$55.00	$ 1,650.00	$15.00	$ 450.00
52.0	Type 5 Select Fill - Controlled Density Fill	20	CY	$50.00	$ 1,000.00	$ 50.00	$ 1,000.00	$ 205.00	$ 4,100.00	$ 152.00	$ 3,040.00	$50.00	$ 1,000.00	$230.00	$ 4,600.00	$50.00	$ 1,000.00
53.0	Concrete Gutter	40	SF	$10.00	$ 400.00	$ 10.00	$ 400.00	$ 65.00	$ 2,600.00	$ 10.00	$ 400.00	$10.00	$ 400.00	$50.00	$ 2,000.00	$10.00	$ 400.00
54.0	Concrete Sidewalk	30	CF	$40.00	$ 1,200.00	$ 40.00	$ 1,200.00	$ 125.00	$ 3,750.00	$ 40.00	$ 1,200.00	$40.00	$ 1,200.00	$70.00	$ 2,100.00	$40.00	$ 1,200.00
55.0	Valve Nut Extension Stems	1	EA	$25.00	$ 25.00	$ 25.00	$ 25.00	$ 270.00	$ 270.00	$ 25.00	$ 25.00	$25.00	$ 25.00	$25.00	$ 25.00	$25.00	$ 25.00
56.0	Parallel Hydrant Assembly	1	EA	$4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 11,000.00	$ 11,000.00	$ 4,000.00	$ 4,000.00	$4,000.00	$ 4,000.00	$11,000.00	$ 11,000.00	$4,000.00	$ 4,000.00
57.0	Temporary Construction Fencing	50	LF	$5.00	$ 250.00	$ 5.00	$ 250.00	$ 5.00	$ 250.00	$ 5.00	$ 250.00	$5.00	$ 250.00	$5.00	$ 250.00	$5.00	$ 250.00
58.0	Tree Fertilization	2	EA	$250.00	$ 500.00	$ 250.00	$ 500.00	$ 250.00	$ 500.00	$ 250.00	$ 500.00	$250.00	$ 500.00	$250.00	$ 500.00	$250.00	$ 500.00
59.0	Erosion Control - Straw Bales and Silt Fence	50	LF	$4.00	$ 200.00	$ 4.00	$ 200.00	$ 10.00	$ 500.00	$ 4.00	$ 200.00	$4.00	$ 200.00	$4.00	$ 200.00	$4.00	$ 200.00
60.0	Erosion Control - Drainage Structure Inlet Protection	2	EA	$300.00	$ 600.00	$ 300.00	$ 600.00	$ 300.00	$ 600.00	$ 300.00	$ 600.00	$300.00	$ 600.00	$300.00	$ 600.00	$300.00	$ 600.00
			Total Bid Price		$678,492.00		$807,100.00		$894,830.25		$733,131.50		$743,882.00		$790,087.30		$969,500.00
						1st Low Bidder		2nd Low Bidder		3rd Low Bidder		4th Low Bidder		5th Low Bidder		6th Low Bidder	

Bid Informalities

1) Fairway Contracting did not fill out their Corporate Resolution or give supporting documentation.
2) R. B. Robinson submitted the bid document unbound but clipped together by a binder clip.
3) R. B. Robinson made multiple additions to prices of bid items with out initialing the change.
4) Villager Construction made a minor math error in adding the total bid price resulting in their Total Bid Price being $20.00 lower. This did not effect the overal ranking of the bids.
5) Nova Site Company, LLC. Did not fill out their Corporate Resolution or give supporting documentation.
6) Nova Site Company, LLC's bid bond did not correctly name the Project.
7) Nova Site Company, LLC. made a math error in adding the total bid price resulting in their Total Bid Price being $1,900 lower. This did not effect the overal ranking of the bids.

Spectrum ENTERPRISE

SERVICE AGREEMENT (SA)
Pursuant to NYS OGS TCS Contract PS68706

THIS SERVICE AGREEMENT ("Service Agreement"), is executed upon the date of the last signature set forth in the signature block below and is by and between **Time Warner Cable Northeast, LLC d/b/a Spectrum,** on behalf of those operating subsidiaries providing the Service(s) hereunder ("Spectrum") and Customer (as shown below) and is governed by and subject to **the terms and conditions of the New York State Office of General Services Telecommunications Connectivity Services Contract No. PS68706, as amended (the "NYS OGS TCS Contract").** Except as specifically modified herein, all other terms and conditions of the NYS OGS TCS Contract shall remain unamended and in full force and effect. The effective date ("Effective Date") is the date Customer receives a completion notice from Spectrum.

Spectrum Enterprise Contact Information
Contact: Michael Arbore Telephone: 585-736-3742 Email: michael.arbore@charter.com

Customer Information		
Customer Name NYS TCS – Monroe County Water Authority OGS		Order # 14361830
Address Po Box 10999 Rochester NY 14610		
Telephone (585) 442-2000		Email: larry.magguilli@mcwa.com
Contact Name Larry Magguilli	Telephone (585) 442-2000	Email: larry.magguilli@mcwa.com
Billing Address Po Box 10999 Rochester NY 14610		
Billing Contact Name Justin Moore	Telephone (585) 442-2001	Email: justin.moore@mcwa.com

NEW AND REVISED SERVICES - Fairport

Service Description	Order Term	Quantity	Monthly Recurring Charge(s)	Total Monthly Recurring Charge(s)
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				$94.99

Spectrum ENTERPRISE

NEW AND REVISED SERVICES - Lima				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

NEW AND REVISED SERVICES - Akron				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

NEW AND REVISED SERVICES - Rochester				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

NEW AND REVISED SERVICES - Honeoye Falls				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

Spectrum ENTERPRISE

NEW AND REVISED SERVICES - Scottsville				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				$94.99

NEW AND REVISED SERVICES - Scottsville				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				$94.99

NEW AND REVISED SERVICES - Rochester				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				$94.99

NEW AND REVISED SERVICES - Churchville				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				$94.99

NEW AND REVISED SERVICES - Le Roy [redacted]				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

NEW AND REVISED SERVICES - Le Roy [redacted]				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

NEW AND REVISED SERVICES - Le Roy [redacted]				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

NEW AND REVISED SERVICES - Fairport [redacted]				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

Spectrum ENTERPRISE

NEW AND REVISED SERVICES - Corfu				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

NEW AND REVISED SERVICES - Corfu				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

NEW AND REVISED SERVICES - Honeoye Falls				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

NEW AND REVISED SERVICES - Rochester				
Service Description	**Order Term**	**Quantity**	**Monthly Recurring Charge(s)**	**Total Monthly Recurring Charge(s)**
1 Static IP	Month to Month	1	$10.00	$10.00
Spectrum Business Internet	Month to Month	1	$84.99	$84.99
TOTAL*				**$94.99**

Spectrum ENTERPRISE

ONE TIME CHARGE(S) - Honeoye Falls			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Construction Fee	1	$18,317.00	$18,317.00
Standard Installation	1	$99.00	$99.00
TOTAL*			**$18,416.00**

ONE TIME CHARGE(S) - Fairport			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Lima			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Akron			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Rochester			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

Spectrum ENTERPRISE

ONE TIME CHARGE(S) - Honeoye Falls			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Scottsville			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Scottsville			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Rochester			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Churchville			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Le Roy			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

Spectrum ENTERPRISE

ONE TIME CHARGE(S) - Le Roy			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Le Roy			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Fairport			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S)- Corfu			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Corfu			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

ONE TIME CHARGE(S) - Rochester			
Service Description	**Quantity**	**One Time Charge(s)**	**Total One Time Charge(s)**
Standard Installation	1	$99.00	$99.00
TOTAL*			**$99.00**

1. **TOTAL CHARGE(S). TOTAL MONTHLY RECURRING CHARGES AND TOTAL ONE-TIME CHARGES ARE DUE IN ACCORDANCE WITH THE NYS OGS TCS CONTRACT.**
2. **THE RATES AND CHARGES SET FORTH IN THIS SA DO NOT INCLUDE, BUT ARE SUBJECT TO TAXES, SURCHARGES AND FEE CHARGES AS SET FORTH IN THE NYS OGS TCS CONTRACT.**
3. **CUSTOMER WILL NOT BE ELIGIBLE TO RECEIVE ANY OTHER ADDITIONAL DISCOUNTS, PROMOTIONS AND/OR CREDITS.**
4. **SPECIAL TERMS. [NONE]**

By signing below, the signatory represents they are duly authorized to execute this Service Order

CUSTOMER: NYS TCS – Monroe County Water Authority OGS	**Time Warner Cable Northeast, LLC D/B/A Spectrum**
Signature: _____	Signature: _____
Printed Name: _____	Printed Name: _____
Title: _____	Title: _____
Date: _____	Date: _____

Cost of Service Study

July 2, 2024

Amawalk
Consulting Group LLC

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1 Executive Summary

Background

The Monroe County Water Authority (the "Authority" or the "MCWA") retained the Amawalk Consulting Group ("Amawalk") to prepare a Cost of Service ("COS") study and Report for the Water System of the Authority. The purpose of the study is twofold: 1) to assess the adequacy of rates and charges for the upcoming fiscal year (2025) and for the following four years (2026 through 2029), and 2) to consider whether the rate structure of the Authority provides for a fair and equitable distribution of the cost of water service among the customers of the MCWA. This chapter of the Report provides a brief summary of the key findings, options available to the Authority and our recommendations, as appropriate. The period of 2024 to 2029 is defined as the "study period".

Findings

- The Authority's current water rates[1] are very competitive with the rates of other water utilities in New York State. The Authority's charges are the sixth lowest out of seventeen (17) surveyed New York State peer water utilities in terms of annual Single Family Residential (SFR) bills. The total minimum charge (the base charge, or fixed charge, plus minimum usage) for such SFR customers is the lowest compared with the peers. Annual MCWA charges for an assumed Commercial class customer are the lowest of the same seventeen utilities.

- The credit rating of the Authority is outstanding, with Standard & Poor's and Moody's assigning "AA+" and "Aa1" ratings, respectively, to the bonds of the MCWA. The benefit of such strong ratings is that when the Authority has to borrow funds it can do so at lower interest rates compared to utilities with less favorable ratings. Lower interest rates reduce the annual interest cost on borrowed funds, helping to keep the Authority's water rates competitive. The Report provides examples of the ratings of peer utilities.

- One of the factors contributing to the strong credit rating, as well as competitive water rates, is the past and current MCWA practice of primarily using cash generated from customer payments for capital improvements and repairs and replacements instead of issuing debt to pay for most investments (the use of debt is a common practice in the water industry). Using cash from annual receipts in this manner improves the coverage on debt service[2] and provides some cash flow flexibility in the event that water sales fluctuate in a given year. In addition, another benefit of this long-term practice is that the Authority's total outstanding debt is relatively modest at $130 million[3], or about 30% of the depreciated value of Water System assets. This relatively low debt level also supports the credit rating and provides flexibility for the MCWA to issue additional debt, where appropriate.

[1] The rate comparison was prepared by Amawalk in January 2024.
[2] Coverage is typically computed as revenues less operating expenses and less required deposits (if any), divided by debt service. It is a standard measure of the ability to pay debt service that is looked for by the rating agencies and investors.
[3] As of December 31, 2023.

- In our review of the period of 2024 through 2029, we find that the operating expenses for the Water System are generally expected to increase each year consistent with inflation; i.e., there are no extraordinary increases anticipated at this time. This finding may have to be amended over time as federal and state regulatory requirements for water quality change and new regulations are implemented.

- Capital investments in each year during 2024 through 2029 are expected to be higher than the levels of prior years in order to sustain the long-term reliability and quality of the Authority's Water System; this focus on system reinvestment is consistent with good industry practice. The MCWA's relatively low level of unbilled water is a reflection of effective operations and maintenance practices as well as infrastructure replacements and capital improvements.

- The MCWA is self-sustaining and has to pay all of its obligations in any given year; no other entity is responsible for paying the Authority's bills. Thus, it is essential for the Authority to keep cash-on-hand in the event that sales decline in a given year or large unexpected expenses occur. Within the last decade the water industry has experienced fluctuations in water sales and periods of instability in the financial markets; it is important to be prepared for uncertain times. Reasonable cash reserves also support the strength of the credit rating and such reserves can be invested in highly-rated securities to earn interest for the benefit of ratepayers. As described herein, current cash reserves are stronger than five years ago at the time of the previous COS study; as noted herein, we suggest that reserves should be maintained during 2024-2029 at a level that is appropriate to support the annual budget and credit rating of the MCWA.

- Long-term water use per household is declining in the northeast and mid-Atlantic portions of the U.S., affecting virtually all water utilities. In the MCWA service area, it is assumed that the number of retail customers will increase by 1,000 each year from 2026 through 2029. With that expectation, the Authority assumes that the total number of gallons sold in each year will remain relatively flat for the foreseeable future.

- Separate from the long-term consumption trend, water sales to customers can vary from year to year due to weather conditions and other factors. In 2020, sales were 6.8% higher from the prior year, followed by relatively flat usage in 2021 and 2022 compared to the previous year. Consumption in 2023 was 6.7% lower than in 2022. These year-to-year fluctuations support the need for prudent sales assumptions and mitigating measures that include cash reserves. The Authority's budgeting assumptions for water sales are reasonable.

- About 59% of the Authority's anticipated costs in 2025 are fixed; relatively independent from changes in customer demand. In the same year, about 23% of the MCWA's total revenue is from fixed charges. The fixed revenue reduces the overall dependency of total revenues on customer demand with its resulting fluctuations. Fixed charges are billed to customers based on meter size; the charges increase with the increasing size of meters. The current MCWA ratios of larger meters to smaller meters are based on water industry guidelines for the relative capacity of the meters.

- Quarterly customers pay a uniform rate per 1,000 gallons of water consumption. Customers that qualify to use the monthly rate schedule are billed monthly and currently pay the same unit rate as quarterly customers for the first 125,000 gallons per month and then pay a lower unit rate for all usage in excess of 125,000 gallons.

- The projected retail revenues from quarterly customers (residential and small commercial) are reasonably close to the calculated cost of service; revenues from this customer class make up a substantial part of total MCWA revenues, projected to be about 79% in 2025. Receipts from the Base Charge from quarterly customers are about 22% of total revenues; the significant receipts from the Base Charge help keep the consumption-based charge lower than would otherwise be needed.

- The results of our analysis show an under-assessment of the cost of service to monthly customers and to wholesale customers under the existing rates. In part, this can be attributed to the relatively low contribution of Base Charge revenues to the total revenues from these customer classes. In 2025 receipts from Base Charges as percentage of total revenues are projected to be about 0.8% from monthly customers and about 0.2% from wholesale customers. The cost of service also reflects current allocations of MCWA costs to its respective service functions. Therefore, it is appropriate to consider assigning a greater portion of the cost of service to monthly and wholesale customers recognizing that there are competing policy objectives to consider in making any changes.

- The revenues generated by Out-of-County Landfill Class, Out-of-County Class, Western Genesee County Wholesale, Western Genesee County Retail and the Town of Richmond classes of customers vary somewhat from the calculated cost of service but the differences are not substantial.

- The Authority charges outside-of-County customers a 10% premium in its rates. We find this practice to be reasonable based on both industry standards as presented by the American Water Works Association as well as actual practices by peer utilities. In fact, there are multiple water utilities that charge a premium greater than 10%.

- Receipts from current private fire protection services are comparable to the computed total cost of fire protection service; also reflecting current allocations of MCWA costs to its respective service functions. Fire protection revenues of other utilities can be significant. For example, the Erie County Water Authority, the Suffolk County Water Authority, and the Onondaga County Water Authority generate from 2.7% to 3.6% of their total annual revenues from all fire protection charges[4]. By comparison, MCWA generates about 1.4% of its revenues only from private fire protection fees. As a result, the Authority's rates for retail customers compare even more favorably with other utilities when one considers the limited revenue provided by fire protection fees.

[4] Based on 2023 actual results for Onondaga and 2024 budgets for Suffolk County Water and Erie County Water.

Recommendations

- As the Authority's cash receipts permit, the MCWA should continue its practice of paying for capital investments in its water system through the proceeds of customer payments as well as limited bond issuance, where appropriate. This recommendation reflects an effort to balance multiple objectives: reasonable annual increases in rates, continue building an appropriate level of working capital and optimizing the long-term financial position of the MCWA. Excluding transfers from Renewal and Replacement ("R&R") Fund, General Fund and Capital Improvement ("CI") Fund, the total construction funding needs over the six-year period are $185.4 million. The Report presents a Base Case of 100% cash-financing of all capital improvements and an alternative scenario of 75% cash-financing for the Authority to consider.

- Increases in retail and wholesale rates will be needed each year for the period of 2025 through 2029. The size of the increases depends somewhat on the amount of cash-financed capital construction versus any portion that is debt-financed. Under our Base Case assumption of 100% capital financing with cash, the overall projected increases in rates-related revenues in each year vary from 5.6% to 5.9%, averaging about 5.8%. This pace of annual increases is relatively reasonable given: a) the assumed rate of inflation in operating expenses of 3.0% to 4.0% per year, b) the very competitive rates that the Authority currently charges (relatively modest percentage increases on competitive charges), and c) the annual percentage increases in rates of peer water utilities in recent years are fairly comparable. Increases are recommended in each year to minimize the potential need for larger "catch-up" increases in later years.

- We recommend that the Authority continue to set aside funds in the Rate Stabilization Fund ("RSF") each year to strengthen its working capital so that the available reserves be built-up and then sustained at a minimum of 60 to 90 days of total annual Water System revenue requirements during the study period and a long-range target of 90 to 120 days. Interest earnings on the working capital reserves will provide additional revenue for the Water System. The amount of funds set aside in the RSF is determined and documented during the Authority's annual budget process and transferred into the fund at the end of the Fiscal Year if sufficient funds are available. This is a prudent practice; all bills are paid first.

- No changes are recommended for the structure of Base Charges. Increases in the rates for Base Charges are recommended in each year, consistent with the overall annual percentage increases in rates noted above.

- No changes are proposed in the rate structure for quarterly customers; i.e., a Base Charge plus a charge for water consumed. If the Authority makes cost of service-related changes to rates for monthly and wholesale customers resulting in an increase in receipts from such customer classes as discussed below, there will be a modest adjustment to rates for quarterly customers during the study period.

- The two-tier structure for monthly customers continues to make sense. The Report identifies points supporting both the status quo as well as potential adjustments. Most

importantly, the cost of service analysis shows that revenues from monthly customers are less than the cost of service attributable to this class. The Authority can consider a number of options, including: a) eliminating the two-tier structure, b) continuing to offer the same two-tier structure with a lower rate in the second block of the rate schedule to offer an economic incentive for non-residential use (recognizing that it will not fully recover the cost of service), or c) retaining the two-tier structure but altering the second tier. These options could include a modest increase in the second block of the rate schedule for monthly customers or adjusting the tier level at which a lower unit rate begins.

- Adjustments to wholesale rates are recommended so that revenues better reflect the cost of service. The adjustment could be implemented in a single year with a significant percentage increase or phased-in over multiple years as discussed herein.

- The cost allocations of MCWA prepared as part of this study have been reviewed by Amawalk and have been found to be reasonable.

- The current cost allocations show fire protection costs for both public and private service are lower than previous projections. Pending further analysis, it is suggested that no increase be made to current rates for private fire protection services; a downward adjustment may be appropriate in the future if further analysis by the Authority confirms this finding.

2 Introduction

2.1 Study Background

The MCWA retained Amawalk to prepare a Cost of Service study for its Water System (defined in the next paragraph). The purpose of the study was described in the Executive Summary. This chapter of the Report begins with a brief overview of the Authority and its facilities and services as well as its current water rates and charges. It also provides an outline of the study methodology and the structure of the Report.

2.2 The Water System and MCWA Customer Base

The Authority operates and manages a regional water supply and distribution system (the "Water System") that includes three active water treatment plants, 49 pumping stations, 51 storage tanks and two storage reservoirs. The transmission and distribution system includes approximately 3,500 miles of water mains, 36,500 valves and 27,000 hydrants. The MCWA provides service to over 190,000 retail accounts as well as to 52 metered accounts for wholesale customers. The Authority's customers are located in all of the towns and villages in Monroe County and certain municipalities in Ontario, Genesee, Livingston, Orleans, and Wayne Counties. In 1999, the MCWA enabling legislation was amended to allow the Authority to provide wholesale and retail service throughout all of Genesee County as part of Genesee County's strategy to develop a coordinated, comprehensive, integrated public water system.

About 88% of the Authority's water sales (in terms of gallons and excluding the City of Rochester) are to retail customers; i.e., MCWA delivers water directly to their property and then bills each account for water service. Retail customers receive fire protection services that results from the benefits of having water storage, water mains, hydrants and related appurtenances. The remaining 12% of the Authority's sales are to wholesale customers, whereby the MCWA delivers water to another water system such as the Sea Breeze Water District which is then responsible for distributing the water to individual customers and billing those customers for the usage. The MCWA bills each wholesale customer for the measured consumption as well as a fixed charge for the water meter.

2.3 Authority Rates and Charges

The Authority's customer rates are shown in Table 2-1.

All customers are charged a fixed fee based on the size of the water meter plus a charge per quantity of water used. The fixed fee based on meter size is uniform for all customers. Over 99% of retail customers are billed quarterly – these are comprised of residential and small commercial properties. Quarterly customers pay the same rate per 1,000 gallons of water use regardless of how much water is used. About 400 customers are billed on a monthly basis under a two-tier rate schedule whereby they pay the same unit rate as quarterly customers for the first 125,000 gallons per month and then pay a lower unit rate for all usage in excess of 125,000 gallons. Wholesale

customers within Monroe County are charged a lower rate per 1,000 gallons than retail customers since the Authority incurs no cost in distributing water or directly serving customers within wholesale jurisdictions. There are different rates for certain retail and wholesale customers as illustrated in the Table below due to different service levels and agreements. These are noted later in the Report.

Table 2-1: Water Rates of the Authority

Commodity Charge ($ per 1000 Gallons)

Customer	Rate ($)
Residential	4.01
Non-Residential	
First 125,000 Each Month	4.01
Each Additional 1,000 Gallons	2.86
Out-of-County Landfill Class	4.01
Out-of-County Class	4.40
Western Genesee County Class	7.48
Town of Richmond Class	6.14
Wholesale Class	2.39
Wholesale Out-of-County Class	2.63
Wholesale Western Genesee County Class	5.77
Wholesale Town of Canadice	4.37

Current Base Charges

Meter Size	Current Base Charge/Day ($)
5/8"	0.27
3/4"	0.27
1"	0.68
1 1/2"	1.35
2"	2.16
3"	4.32
4"	6.75
6"	13.50
8"	21.60
10"+	56.70

2.4 Comparison of Water Rates and Charges

In January 2024, Amawalk performed a survey of the rates and rate structures of water systems in New York State to compare the Authority's charges and certain rate structure components with those of other water systems. Table 2-2 presents the results of the survey in the form of charges for a single family residential customer that is assumed to have a 5/8" meter and to use 70,000 gallons of water per year. Some residential customers will use more than this quantity of water each year and some will use less water, but the 70,000 gallon figure provides a reasonable basis for comparison.

Table 2-2 illustrates the total annual water charge for such a customer for water systems across the State together with the portion of the annual water charge that is fixed. The minimum charges that are applied by many water systems are also illustrated.

Table 2-2: Comparison of Residential Water Charges With Peer Utilities

Comparison of January 2024 Water Charges - Single Family Residential Customers
(All amounts in $)

	Annual Fixed Charge	Annual Consumption-Based Charge	Annual Minimum Charge	Annual Total Charge	Fixed Charge as % of Total	Min Charge as % of Total	Basis for Fixed Charge
City of Syracuse	0	315	175	315	0%	56%	N/A
Albany Water Board	0	320	136	320	0%	43%	N/A
City of Watertown	0	355	162	355	0%	46%	N/A
City of Binghamton	51	315	156	366	14%	43%	Capital Improvement Fee By Meter Size
Suffolk County Water Authority	208	163	208	371	56%	56%	Quality & Treatment Charge Per Bill
Monroe County Water Authority	**99**	**281**	**99**	**379**	**26%**	**26%**	**Base Charge by Meter Size**
City of Rochester	115	277	115	393	29%	29%	Base Charge by Meter Size
New York City	0	420	179	420	0%	43%	N/A
Niagara Falls Water Board	15	419	233	434	3%	54%	Demand Charge by Meter Size
Erie County Water Authority	111	325	278	436	25%	64%	Infrast Invest Charge by Meter Size
Yonkers	235	204	235	440	54%	54%	Basic Service Charge Per Bill
Western Nassau Water Authority	0	454	259	454	0%	57%	N/A
Buffalo Water Board	220	235	220	455	48%	48%	Capacity Charge by Meter Size
Elmira Water Board	0	456	175	456	0%	38%	N/A
Onondaga County Water Authority	178	281	178	459	39%	39%	Base System Fee by Meter Size
City of Poughkeepsie	11	477	153	488	2%	31%	Charges by Meter Size
Mohawk Valley Water Authority	153	401	319	554	28%	58%	Base System Fee by Meter Size
Average	82	335	193	417	20%	46%	

Notes
Charges are based on rates in effect in January 2024
Charges assume a single family residential customer using 5/8" meter and 70,000 gallons of water per year
Minimum charges include fixed charges

Current MCWA residential rates are very competitive with peers in NY State; the sixth lowest out of 17 surveyed; the total minimum charge (the base/fixed charge + minimum use) is the lowest, by a significant margin.

To compare the Authority's charges for Commercial customers, we assumed an account with a 4" meter and 55 million gallons of water use per year (or about 150,600 gallons per day); the results are shown in Table 2-3.

Table 2-3: Comparison of Commercial Water Charges With Peer Utilities

Comparison of January 2024 Water Charges - Commercial Customers
(All amounts in $)

	Annual Fixed Charge	Annual Consumption-Based Charge	Annual Minimum Charge	Annual Total Charge	Fixed Charge as % of Total	Min Charge as % of Total	Basis for Fixed Charge
Monroe County Water Authority	**2,464**	**159,025**	**2,464**	**161,489**	**2%**	**2%**	**Base Charge by Meter Size**
City of Rochester	4,958	163,270	4,958	168,228	3%	3%	Base Charge by Meter Size
Suffolk County Water Authority	208	177,570	208	177,778	0%	0%	Quality & Treatment Charge Per Bill
Buffalo Water Board	5,489	174,105	5,489	179,594	3%	3%	Capacity Charge by Meter Size
City of Syracuse	0	201,872	175	201,872	0%	0%	N/A
Niagara Falls Water Board	400	206,928	233	207,328	0%	0%	Demand Charge by Meter Size
Mohawk Valley Water Authority	3,816	205,624	319	209,440	2%	0%	Base System Fee by Meter Size
Onondaga County Water Authority	4,446	213,950	4,446	218,396	2%	2%	Base System Fee by Meter Size
City of Watertown	0	223,820	3,282	223,820	0%	1%	N/A
Erie County Water Authority	2,172	229,350	5,474	231,522	1%	2%	Infrast Invest Charge by Meter Size
City of Binghamton	326	242,653	431	242,979	0%	0%	Capital Improvement Fee By Meter Size
Western Nassau Water Authority	0	329,728	6,469	329,728	0%	2%	N/A
New York City	0	330,147	179	330,147	0%	0%	N/A
Yonkers	235	344,618	235	344,854	0%	0%	Basic Service Charge Per Bill
Elmira Water Board	0	358,088	584	358,088	0%	0%	N/A
City of Poughkeepsie	106	375,000	6,756	375,106	0%	2%	Charges by Meter Size
Albany Water Board	0	548,529	0	548,529	0%	0%	N/A
Average	1,448	263,781	2,453	265,229	1%	1%	

Notes
Charges are based on rates in effect in January 2024
Charges assume a commercial customer using 4" meter and 55 million gallons of water per year
Minimum charges include fixed charges

Table 2-3 shows that annual MCWA charges for such a Commercial customer are the lowest of the same seventeen utilities.

Amawalk also surveyed fire protection charges – not all peers bill separately for private fire charges. The results are shown in Table 2-4 below.

Table 2-4: Comparison of Annual Fees for Private Fire Protection Services ($)

Comparison of January 2024 Quarterly Private Fire Protection Charge
(All amounts in $)

	Service Size 4 inch	6 inch	8 inch
Elmira Water Board	$ 24.00	$ 34.00	$ 44.00
NYC Water Board	$ 47.08	$ 70.63	$ 94.12
City of Watertown	$ 35.58	$ 71.61	$ 107.16
City of Syracuse	$ 47.50	$ 95.00	$ 120.00
Erie County Water Authority	$ 54.00	$ 99.00	$ 162.00
Niagara Falls Water Board	$ 42.00	$ 95.00	$ 167.50
Monroe County Water Authority	**$ 59.45**	**$ 108.10**	**$ 172.95**
Albany Water Board	$ 75.00	$ 137.50	$ 182.50
Onondaga County Water Authority	$ 87.77	$ 176.54	$ 286.24
Mohawk Valley Water Authority	$ 95.40	$ 190.79	$ 305.27
City of Rochester	$ 91.00	$ 180.00	$ 357.00
Western Nassau Water Authority	$ 198.53	$ 405.65	$ 811.10
Buffalo	$ 516.77	$ 1,033.54	$ 1,033.54
Average	$ 105.70	$ 207.49	$ 295.64

The preceding table shows that MCWA fire protection charges are in the middle of peers, below the average.

2.5 The Authority's Rate Covenant & Bond Ratings

The Authority has legal documents that support the ability to issue debt and repay the holders of the bonds that it issues. These documents place certain requirements on the MCWA including those that affect reserve funds and debt service coverage. Among the many components of the documents is the Rate Covenant. A brief summary of the Rate Covenant is provided below.

> The Indenture provides that the Authority shall fix, establish and collect, or cause to be fixed, established and collected, rates, tolls, rents and other charges for the water distributed by it and for any services or facilities sold, furnished or supplied by the Water System or any part thereof, which rates, tolls, rents and charges shall be sufficient in each fiscal year of the Authority to produce Revenues in such fiscal year which together with other moneys which lawfully may be applied to the purpose, will be equal to at least the sum of (a) 1.2 times debt service for such fiscal year on all Bonds less amounts to be received from the County of Monroe or the County of Genesee during such year pursuant to any contract between the Authority and the County of Monroe or the County of Genesee which specifically obligates the particular county to pay debt service on one or more Series of Bonds (*see*, "**OUTSTANDING BONDS**"), (b) the necessary expenses of operating, maintaining, renewing and replacing the Water System and maintaining the Debt Service Reserve Accounts in the Bond Fund, and (c) the additional amounts, if any, required to pay all other charges or liens whatsoever payable from the Revenues in such fiscal year. (*See*, "**SECURITY AND SOURCES OF PAYMENTS – Additional Bonds Test and Certain Other Indenture Provisions**" and "**OUTSTANDING BONDS**.")

The preceding terms are as defined in the Official Statements for the Authority's bonds. As we consider the budgeted revenues and expenditures for the study period, it will be important to consider the ability of the Authority to achieve its commitments under the Rate Covenant.

Achieving the debt service coverage requirement of the Rate Covenant is mandatory in each year. Surpassing the minimum coverage is essential for stronger ratings on Authority obligations. As noted in the Executive Summary, the credit rating of the Authority at the time of this Report is outstanding. Maintaining or surpassing the current credit ratings is an important consideration; the assumed coverage ratio for study purposes is provided in chapter 3. Examples of the ratings of peer utilities are presented below.

Figure 2-1: Examples of Credit Ratings: MCWA and Peers

Utility	Standard & Poor's	Moody's	Fitch
Suffolk County Water Authority	AAA		AAA
Erie County Water Authority	AA+		AA+
Monroe County Water Authority	**AA+**	**Aa1**	
Onondaga County Water Authority		Aa2	
Mohawk Valley Water Authority	A+	Aa3	
Buffalo Water Financial Authority	A+		
Niagara Falls Water Finance Authority	A		

The credit ratings shown above were identified from publicly available information and may have changed since the time of the bond offerings.

2.6 Study Methodology

There are "generally accepted" water industry principles or guidelines regarding the development of water rates and charges. The methodology that we use follows the guidelines set forth in the American Water Works Association Manual M1, *Principles of Water Rates, Fees, and Charges*.

There are a number of important principles to consider in rate-setting for water systems. A few examples are listed below.

- Sufficient revenues must be raised by rates and charges and other sources of revenue in order to satisfy the annual revenue requirements of the water system;
- Rates and charges should be equitable and fair, in the sense that charges levied on different users reflect, as closely as practicable, the costs incurred in providing water service;
- The rate structure should be relatively simple and easy to administer;
- Rates should be understandable to the customer; and
- The rate structure should encourage the wise use of water resources.

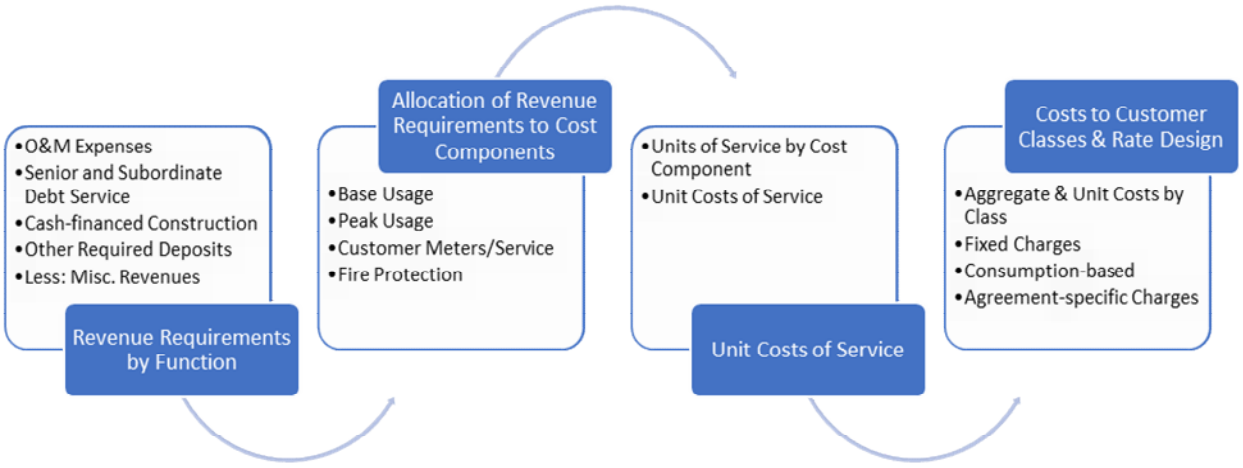
The first principle is critical: revenues from user charges together with other sources of revenue must recover all costs in each year and satisfy commitments to bondholders as reflected in the rate covenant. Consistently exceeding the requirements of the rate covenant by a wide margin is very important to support a strong credit rating.

Each water system is different so utility management may add to the above list of principles to reflect local priorities and needs. For example, relatively smooth long-term increases in rates may be desired to avoid large fluctuations from year to year in rate increases. Others may have water supply limitations that support a strong conservation element to rate-setting.

Some utilities try to utilize water rates as an incentive for economic development. From the Authority's perspective, it has an outstanding source of water in Lake Ontario and a relatively low marginal cost of water (i.e., the incremental cost to deliver the next 1,000 gallons above the typical daily consumption is low). These factors support the use of water pricing to encourage economic development.

The cost of service process that we utilize includes four steps: 1) development of revenue requirements, 2) allocation of functional costs to cost components (i.e., basic and peak usage, customer meters/service and fire protection), 3) determination of the units of service and costs per unit of service, and 4) distribution of costs to customer classes and rate design. Figure 2-2 summarizes the process.

Figure 2-2: Study Methodology



The revenue requirements represent the total costs of the Water System, less revenues from sources other than rates. The operating expenses of the Authority, as a component of the revenue requirements, are shown in the MCWA budget for labor (i.e., salaries and wages, fringe benefits, pension) and non-labor (e.g., power, chemicals, purchased water) categories and by function (e.g., supply, treatment, laboratory and water transmission under Production/Transmission, distribution operations & maintenance, structures & grounds, valves/leak detection, warehouse under Distribution). Debt service and cash-financed capital construction costs are assigned to the functions based on how capital-related funds were used or will be used, as applicable.

The allocation of net revenue requirements into customer classes is accomplished in two steps. First, net revenue requirements are grouped by service categories into cost components. The cost components are typically: capacity-related, volume/commodity-related, fire protection-related and customer-related. The following step allocates the cost components to each of the customer classes of service (quarterly, monthly, wholesale and fire protection). Cost components are allocated to each class of service based upon the relative demand or usage of the specific cost component by each customer class. For example, the costs of customer service could be allocated proportionally to each class of service based upon the total number of customers in that class of service and/or by meters or equivalent meters. After the service characteristics and costs of each class of customers have been defined in proportion to their service demands, rates can be developed to recover the allocated cost responsibilities from each customer class.

In rate design our focus will be on rate schedules that reflect the differences in services provided to different classes of customers as well as the policies and preferences of the Authority. It is

important to note that rate design is a "zero sum" game; that is, the amount of money to be raised from rates will not change, regardless of the rate design. Shifting even a small amount of cost away from one class means that one or more other classes will see a corresponding increase in costs. There are multiple rate designs that comply with industry practice and will withstand challenge. Our approach is reasonable in considering both industry practice and the specific needs of the Authority.

Amawalk wishes to express its appreciation for the assistance provided by representatives of the Authority in support of the study. The data used in our analysis that is specific to MCWA was provided by the Authority. Information regarding current policies and practices was also provided to Amawalk by Authority representatives.

2.7 Basis of Presentation

The base year that Amawalk used in conducting this study is 2024. When preparing a cost of service study, it is also prudent to review the projected revenues and revenue requirements for future periods to assess whether significant changes are expected that could affect the study findings. The projections will also illustrate the changes in revenues and rates that may be needed in future years. The study examined the period of 2025 through 2029.

The Authority's fiscal year coincides with the calendar year; January 1st through December 31st.

The projections of revenues, revenue requirements and rates shown in the study are presented on a cash basis. Most publicly-owned water utilities use a "cash basis" approach to setting rates. The cash basis is practical; the Authority cannot pay its employees, vendors or bondholders with accrued revenue – it must have cash to make such payments. The Authority's commitments to bondholders, in terms of making debt service payments and meeting the requirements of its rate covenant, and its performance in achieving those commitments are computed on a cash basis. From an accounting perspective, the Authority reports its actual results on an accrual basis.

2.8 Report Structure

The Report is presented in six chapters:

1. Executive Summary
2. Introduction
3. Revenue Requirements
4. Cost of Service
5. Rates and Charges
6. Appendix

Chapters 3 through 5 include appropriate tables and/or charts together with accompanying text. The Appendix provides key assumptions, computations and other data.

The next chapter presents the revenue requirements for the Authority.

3 Revenue Requirements

3.1 Overview

A revenue requirements analysis identifies the components of the annual cash needs of the Authority and determines the adequacy of the revenues from existing water rates to meet the requirements. The revenue requirements reflect the Authority's expectations of what it will need to spend each year to achieve its mission. The revenue requirements are also intended to satisfy the rate covenant and produce financial results that are appropriate for a highly-rated water utility.

In parts 3.2 through 3.8 of this chapter, the individual pieces of the revenue requirements are presented, including the key assumptions relating to each. Part 3.9 summarizes net revenue requirements to be raised from rates during the study period. In part 3.10, the revenues under existing rates are summarized to illustrate the gap between requirements and receipts without changes in rates. We then present the anticipated revenues under the projected increases in rates during the study period. The major components of the requirements are summarized below.

Figure 3-1: Current and Projected Revenue Requirements

3.2 Operation and Maintenance Expenses

The Authority incurs expenses each year to operate and maintain the Water System ("O&M expenses"). Routine and non-routine maintenance is essential to optimizing the ability of the

Water System to reliably deliver high quality water to customers. The customers that receive this service are then expected to pay their bills, thus providing the Authority with the revenues that it needs to pay its expenses and other obligations.

The budgeted O&M expenses for 2024 serve as the base from which projections of expenses in future years are made. The key assumptions that were used in projecting O&M expenses for 2025 through 2029 are summarized below.

- It is assumed that no significant acquisitions of water systems, facilities or service delivery responsibilities will occur during the study period – in the event that such an opportunity were to arise in the future, it is again anticipated that the incremental revenues from new customers will offset the incremental expenses and other costs.
- Staffing levels are assumed to be relatively constant during the study period.
- Labor costs (salaries and wages) are assumed to increase at the rate of 4.0% in 2025 and then at the rate of 3.0% per year in 2026 through 2029.
- Fringe benefits other than retirement are assumed to increase at the rate of 4.0% annually.
- Retirement-related fringe benefits are assumed to increase 16.0% in 2025 based on anticipated 2025 costs, and then at the rate of 3.0% annually thereafter.
- Non-labor expenses other than power and water purchases are assumed to increase at the rate of 3.0% annually, including lead and copper.
- Power costs are assumed to decrease 5.5% in 2025 due to adjustment downward from the 2024 budget and then increase at the rate of 3.0% annually thereafter.
- Water purchase costs are assumed to increase at a rate equal to the prior year rate adjustment by the Authority – beginning with a 5.4% increase in 2025 based on the 2024 rate increase and assuming a minimum increase of 3.5% per year.
- The terms and conditions of Authority water purchases from the City are set by agreement (as defined below); no significant changes in MCWA capital investments beyond what is contained in the Authority's Capital Improvement Program ("CIP") are anticipated in the projections and water exchange expenses are assumed to be calculated pursuant to the agreement.

The assumptions used in projecting O&M expenses are based on expectations at time of this Report. In the event that the Authority incurs extraordinary expenses beyond the projections provided herein, such as financial impacts from potential new regulations for lead and copper or other matters affecting water utilities, the Authority will evaluate its options for funding such expenses at the appropriate time.

The Authority's secondary source of water supply is the City of Rochester's Hemlock Lake – Canadice Lake supply system. Pursuant to a 1978 agreement, the City and the Authority agreed to exchange water at production cost for thirty (30) years. The agreement was extended and then renegotiated in 2011 for a twenty-five (25) year term. The Authority and the City each have the right to take up to twenty-six (26) MGD from each other's transmission mains. The Authority was initially a net supplier of water to the City. However, due to the composition of its customers and a long-term decline in population, the City's requirements under the agreement have declined over the years, and the Authority has been a net purchaser of water. The water exchange rate is calculated annually by formula; the rate in 2024 was $0.58 per 1,000 gallons.

Table 3-1 presents a summary of the budgeted 2024 and the projected 2025-2029 O&M expenses for the Water System.

Table 3-1: Operation and Maintenance Expenses 2024 – 2029

	2024	2025	2026	2027	2028	2029
Labor-Related Expenses						
Total Gross Payroll (A.), (B.), (C.)	20,227,400	21,036,496	21,667,591	22,317,619	22,987,147	23,676,762
Less: Transfers to Construction	(1,562,000)	(1,624,480)	(1,673,214)	(1,723,411)	(1,775,113)	(1,828,367)
Plus: Gross Fringe Benefits	11,125,080	11,570,083	12,032,887	12,514,202	13,014,770	13,535,361
Less: FB Transfers to Construction	(1,093,400)	(1,137,136)	(1,182,621)	(1,229,926)	(1,279,123)	(1,330,288)
Total Net Labor Expenses	28,697,080	29,844,963	30,844,642	31,878,483	32,947,681	34,053,468
Expenses Other Than Labor (D.)						
Administration	5,151,524	5,580,110	5,747,513	5,919,938	6,097,537	6,280,463
Production/Transmission	4,731,339	4,873,279	5,019,478	5,170,062	5,325,164	5,484,919
Engineering	3,893,418	4,010,221	4,130,527	4,254,443	4,382,076	4,513,539
Facilities, Fleet & Operations	7,358,257	7,579,007	7,806,377	8,040,568	8,281,785	8,530,239
Finance & Business Services	3,158,002	3,252,742	3,350,324	3,450,834	3,554,359	3,660,990
Power (E.)	5,083,100	4,803,530	4,947,635	5,096,064	5,248,946	5,406,415
Water Purchases - City (F.)	1,680,000	1,771,093	1,868,503	1,971,270	2,084,618	2,204,484
Water Purchases - ECWA (F.)	360,000	379,520	400,393	422,415	446,704	472,389
City Agreement - Capital	243,000	243,000	243,000	243,000	243,000	243,000
Total Expenses Other Than Labor	31,658,640	32,492,500	33,513,750	34,568,595	35,664,190	36,796,437
Total Operating Expenses	60,355,720	62,337,463	64,358,392	66,447,079	68,611,870	70,849,904

(A.) Gross payroll is assumed to increase at the rate of 4.0% per year in 2025 and 3% per year thereafter.
(B.) Fringe benefits are assumed to increase at the rate of 4% annually.
(C.) Retirement costs are assumed to increase at the rate of 16% per year in 2025 and 3% per year thereafter.
(D.) Non-labor expenses other than power and water purchases are assumed to increase at the rate of 3.0% annually.
(E.) Power costs are assumed to decrease at the rate of 5.5% per year in 2025 and then increase at the rate of 3.0% per year thereafter.
(F.) Water purchase costs are assumed to increase annually at the rate of prior year MCWA rate increase, with a minimum assumed annual increase of 3.5%.

Transfers to Construction represent labor-related costs for personnel that are assigned to construction projects; the costs for such personnel are reflected in the CIP, not as an operating expense.

The preceding table illustrates the projected O&M expenses in summary form; the Authority's budget documents provide a breakdown of the individual components of expenses. Amawalk used the detailed breakdown of expenses for 2024 as the starting point for the allocation of costs to functional categories. The cost allocations are presented in the Appendix to this Report.

The average annual rate of increase in O&M expenses over the study period is 3.3%. Based on our experience, the assumed rates of increase in O&M expenses are reasonable and comparable to assumptions used by other water utilities.

3.3 Capital Improvement Program and Sources of Funds

The Authority classifies its capital investment projects into two general types: Renewals and Replacements for existing assets ("R&R") and Capital Improvements for new facilities ("CI"). Together, the two types of improvements form the Authority's CIP, which is summarized in Table 3-2.

Table 3-2: CIP 2024 – 2029

	2024	2025	2026	2027	2028	2029
Renewal & Replacement (R&R)						
Production/Transmission	5,670,000	6,525,000	6,625,000	6,485,000	7,135,000	8,035,000
Engineering (A.)	10,450,000	11,390,000	12,150,000	13,410,000	12,740,000	13,670,000
Facilities, Fleet & Operations	4,998,250	5,334,200	5,245,300	5,140,500	5,566,500	5,449,900
Finance & Business Services	4,683,618	3,640,000	3,065,000	3,065,000	3,065,000	3,775,000
Less: Funding from R&R Fund	(3,645,770)	-	-	-	-	-
Less: Funding from General Fund	(6,000,000)	-	-	-	-	-
Subtotal	16,156,098	26,889,200	27,085,300	28,100,500	28,506,500	30,929,900
Capital Improvement (CI)						
Production/Transmission	1,050,000	1,400,000	450,000	450,000	700,000	450,000
Engineering	1,850,000	400,000	1,900,000	400,000	3,150,000	5,400,000
Facilities, Fleet & Operations	100,000	-	-	-	-	-
Finance & Business Services	50,000	70,000	50,000	70,000	50,000	70,000
Less: Funding from CI Fund	(220,000)	-	-	-	-	-
Subtotal	2,830,000	1,870,000	2,400,000	920,000	3,900,000	5,920,000
Total CIP	18,986,098	28,759,200	29,485,300	29,020,500	32,406,500	36,849,900

(A.) Costs include the renewal and replacement of existing water mains, residential water meter replacement and the rehabilitation of water storage facilities.

All amounts in the table above represent construction and construction-related costs such as engineering design and construction observation.

From time to time the MCWA may make incremental investments to provide wholesale or retail service to areas that it currently either does not serve or serves only in part. Past practice and future expectations are that such incremental investments and related increases in operating expenses will be paid for through revenues generated by the customers receiving those additional services with little or no impact on existing customers. At the time of this Report, there were no material expansions or acquisitions planned.

In the event that the Authority incurs extraordinary capital investments beyond the projections provided herein, such as financial impacts from potential new regulations for lead and copper or other matters affecting water utilities, the Authority will evaluate its options for funding such improvements when and if they should occur.

The funding for the CIP may come from the following sources: a) cash receipts from rate revenues, b) the proceeds of Authority bonds, and c) cash on hand. From time to time there may be opportunities to use the proceeds of loans from the New York State Environmental Facilities Corporation ("NYS EFC") but at the time of this Report no loans were assumed to be available.

The Authority has traditionally used cash from customer payments as the primary source of its capital investment funds, with the exception being large projects such as the Eastside Water Supply Project which was financed primarily with the proceeds of bonds. This practice has impacted the MCWA debt level in a positive way and avoided large annual debt service payments. The Authority's total outstanding debt is relatively modest at $130 million, or about 30% of the depreciated value of Water System assets.

Certain capital investments have long service lives such as water mains. One argument in favor of using the proceeds of debt to finance such assets is that the users of those mains in year 1, in year 15 and in year 30 will each share in not only the benefits but also the costs if 30-year financing is used to pay for them. A policy decision for the Authority to consider is how much of the CIP should be cash-financed versus how much should be paid for through the proceeds of debt. The selected mix of these funding sources impacts the needed revenues and rates in each year as well as debt service coverage. A principal argument against the use of debt is the cost of interest on any bonds issued; using cash requires no interest.

Our Base Case for analytical purposes assumes all capital investments are financed using cash from customer rates and from a drawdown of the balance in the Construction Fund. The tables that follow incorporate the Base Case. Later in this chapter, we will also look at an option using 75% cash-financing. A summary of the anticipated sources and uses of CIP funds for the Base Case is presented in Table 3-3.

Table 3-3: Sources and Uses of CIP Funds (Base)

	2024	2025	2026	2027	2028	2029
Sources of Funds						
Proceeds from the Sale of MCWA Bonds (A.)	-	-	-	-	-	-
Less: Deposits to Reserve Funds	-	-	-	-	-	-
Less: Costs of Issuance	-	-	-	-	-	-
Net Proceeds from the Sale of MCWA Bonds	-	-	-	-	-	-
Cash-Financed Capital (B.)	18,986,098	23,537,820	26,485,300	29,020,500	30,406,500	36,849,900
Total Deposits to Construction Fund	18,986,098	23,537,820	26,485,300	29,020,500	30,406,500	36,849,900
Uses of Funds						
Opening Balance - Construction Fund	13,221,380	13,221,380	8,000,000	5,000,000	5,000,000	3,000,000
Total Deposits to Construction Fund	18,986,098	23,537,820	26,485,300	29,020,500	30,406,500	36,849,900
Total Withdrawals from Construction Fund	(18,986,098)	(28,759,200)	(29,485,300)	(29,020,500)	(32,406,500)	(36,849,900)
Ending Balance - Construction Fund	13,221,380	8,000,000	5,000,000	5,000,000	3,000,000	3,000,000

(A.) Amounts and timing of bond issuance are subject to change based on market conditions and other factors.
(B.) Amounts provided by annual revenues of the system.

We made assumptions for the opening balance and closing balance in the Construction Fund in each year under the Base Case. If the Authority wishes to modify the balances maintained in the Construction Fund in any year, revenue requirements may be affected.

3.4 Capital Improvements to be Funded from Rate Revenues

Table 3-2 shows that the CIP will total $175.5 million over the period of 2024 through 2029. This total is net of withdrawals in 2024 of $3.6 million from the R&R Fund, $6.0 million from the Construction Fund and $220,000 from the CI Fund. A portion of the cost of the CIP is assumed to be paid from a drawdown of the Construction Fund balance; the remaining $165.3 million is expected to come from customer revenues under the Base Case. There are no assumed proceeds of debt over the study period in the Base Case.

The use of rate revenues to fund the CIP continues the past practice of the Authority that has resulted in a very modest amount of debt outstanding. Cash-financed construction is included in the annual revenue requirements of the Authority and is not a required payment for purposes of

the rate covenant in the computation of debt service coverage (resulting in stronger debt service coverage). Please see 3.11 of this chapter for additional information regarding the role of coverage in the revenue requirements.

3.5 Debt Service Payments

Debt service reflects the anticipated payment of principal and interest on both the outstanding bonds of the Authority as well as bonds whose issuance is anticipated during the study period.

At the time of this study, the Authority had six (6) series of outstanding bonds: the Series 2007, the Series 2010B, the Series 2012, the Series 2013, the Series 2017, and the Series 2020, totaling $130,350,000 in principal as of December 31, 2023. The purpose of each is briefly summarized below.

In May 2000, the Authority and Genesee County entered into an agreement pursuant to which the Authority constructed and financed thirty-five miles of water mains together with three pump stations and three storage tanks to serve Genesee County. The cost was financed by the 2001 Bonds, which were refunded by the 2007 Bonds issued to the NYS EFC. Genesee County has agreed to pay the debt service on these bonds under the terms of the Amended and Restated Water Development & Supply Agreement of 2018; both the debt service on these bonds and the County payments are reflected in the revenue requirements of the MCWA.

The Series 2010B Bonds were issued for the following purposes: (i) finance the construction of the 50 million gallon per day water treatment plant and related appurtenances and improvements in the Towns of Webster and Penfield in the amount of about $91.2 million, (ii) make deposits to capitalize a portion of the interest payable, (iii) pay the premium for a Debt Service Reserve Insurance Policy, and (iv) pay the costs of issuance of the Series 2010B Bonds. The 2010B Bonds were issued on a taxable basis as “Build America Bonds” with a pledge that the United States Treasury would pay 35% of the interest payable in each year. Due to the effects of federal sequestration, the actual Treasury payments are about 29% of the interest due per year.

The Series 2012 Bonds were issued for the following purposes: (i) finance the cost of development, acquisition, and construction of certain improvements and additions to the Water System in the amount of about $6.3 million, (ii) fund a deposit to the Debt Service Reserve Account, and (iii) pay the costs of issuance of the Series 2012 Bonds.

The Series 2013 Bonds were issued for the following purposes: (i) finance the cost of development, acquisition, and construction of certain improvements and additions to the Water System, (ii) fund a deposit to the Debt Service Reserve Account, and (iii) pay the costs of issuance of the Series 2013 Bonds.

In December, 2017, the Authority closed the $3,950,000 Water System Revenue Refunding Bonds, Series 2017. The refunding resulted in a net present value savings of $344,928. The Series 2017 Bonds were issued to (i) advance refund a portion of the outstanding principal balance of the Authority’s Series 2010 Bonds and (ii) pay costs of issuance of the Series 2017 Bonds.

In April 2020, the Authority issued $21,920,000 Water System Revenue Bonds, Series 2020. The Series 2020 Bonds were issued to (i) finance the cost of development, acquisition, and construction of certain improvements and additional to the Water System, (ii) finance the cost of Genesee County Projects and (iii) pay the cost of issuance of the Series 2020 Bonds.

Debt service on potential future Authority bonds reflects the following assumptions, recognizing that no debt issuances are assumed for year 2025 through 2029 in the Base Case:

- Bonds to be issued in 2025 are assumed to carry an interest rate of 5.5%.
- Bonds to be issued in 2026 through 2029 are assumed to carry interest rates of 6.0%.
- All bonds are assumed to be for a 31 year term, with interest only payable in the first year and then level principal and interest payments each year for the remaining 30 years.
- The sizing of each bond issue reflects the amounts needed for construction plus 1% of those amounts for the cost of issuance and an allowance of 9% for deposits to the Debt Service Reserve.
- The amounts needed in each year for the Authority's CIP are shown in Table 3-3 in the line "Net Proceeds from the Sale of MCWA Bonds".

For the Base Case, a summary of the projected debt service on both outstanding bonds and anticipated future bonds is presented in Table 3-4.

Table 3-4: Projected Debt Service

	2024	2025	2026	2027	2028	2029
Outstanding Bonds						
Series 2007	1,078,663	1,074,568	1,070,614	1,061,896	1,118,049	1,062,310
Series 2010 B	7,753,600	7,693,274	7,631,758	7,567,736	7,495,892	7,426,222
Series 2012	429,138	432,388	429,888	431,888	433,138	433,712
Series 2013	941,535	847,272	849,067	850,599	852,177	853,453
Series 2017	369,750	373,000	375,500	372,250	373,500	366,900
Series 2020	1,260,825	1,259,575	1,262,200	1,258,700	1,259,075	1,258,200
Subtotal	11,833,511	11,680,077	11,619,027	11,543,069	11,531,831	11,400,797
Anticipated Future Bonds						
Series 2024 Authority Bonds	-	-	-	-	-	-
Series 2025 Authority Bonds	-	-	-	-	-	-
Series 2026 Authority Bonds	-	-	-	-	-	-
Series 2027 Authority Bonds	-	-	-	-	-	-
Series 2028 Authority Bonds	-	-	-	-	-	-
Series 2029 Authority Bonds	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Total Debt Service	11,833,511	11,680,077	11,619,027	11,543,069	11,531,831	11,400,797

(A.) Debt service for Authority Bonds assumes a 31 year term, interest only in the first year and equal annual principal and interest payments in each year thereafter. The assumed interest rate on bonds is 5.5% in 2025 and 6.0% thereafter.
The amount of bonds to be issued includes an allowance for the cost of issuance and deposits to the debt service reserve fund.
(B.) Series 2020 Authority Bonds includes $20 million dedicated for Genesee County expansion project that the County pays for.

As shown above, there are no anticipated future bonds for 2025 through 2029 under the Base Case.

3.6 Subordinated Obligations

There are no subordinated obligations outstanding or planned at this time.

3.7 Deposits to Reserves

It is important to determine whether or not deposits have to be made to either restricted or unrestricted accounts from rate revenues that are not otherwise accounted-for in O&M expenses, cash-financed construction or other revenue requirements. As specified in the Indenture, the Authority has six (6) funds that can be routinely used:

(a) Water System Revenue Fund, to be held by the Authority;
(b) Operating and Maintenance Fund, to be held by the Authority;
(c) Bond Fund, to be held by the Trustee;
(d) Subordinated Indebtedness Fund, to be held by the Authority;
(e) General Fund, to be held by the Authority; and
(f) Capital Improvement Fund, to be held by the Trustee.

All operating expenses of the Authority are paid from the Operating and Maintenance Fund. Moneys are transferred from the Revenue Fund as required to pay the operating expenses. The Authority's O&M fund provides cash flow that is used to pay the Authority's bills. The General Fund can be used for any purpose of the Authority including the financing of renewal and replacement projects. The Capital Improvement Fund is used for current and budgeted capital projects.

The Authority has a reserve fund specified in the Indenture relating to reserves to pay debt service.

> The Debt Service Reserve Account Requirement for each Series of Bonds shall be that amount, if any, required in the Supplemental Indenture providing for the issuance of such Series of Bonds as the Debt Service Reserve Account Requirement for such Series of Bonds.

It is our understanding that deposits to the Debt Service Reserve Account are discretionary. The Authority has advised that the Debt Service Reserve is appropriately funded through a combination of funds and sureties in the accounts. At the time of issuance of the Series 2010 Bonds, deposits were made to the Debt Service Reserve Account. Deposits were previously made as part of the issuance of the Series 1993 B Bonds. A surety was used for the Series 2007, 2010A Bonds and the 2010 B Bonds. Deposits from the proceeds of bonds to Debt Service Reserve Accounts are assumed to be required for each of the bonds that would potentially be issued in 2025 through 2029. Therefore, no additional deposits to restricted reserves are anticipated to be necessary from rate revenues during the study period.

The MCWA is self-sustaining and has to pay all of its obligations in any given year; no other entity is responsible for paying the Authority's bills. Thus, it is essential for the Authority to keep cash-on-hand in the event that sales decline in a given year or large unexpected expenses occur. Reasonable cash reserves also support the strength of the credit rating and such reserves can be invested in highly-rated securities to earn interest for the benefit of rate payers. Other highly-

rated utilities have significant levels of cash-on-hand, often measured in days of O&M expenses on hand.

Amawalk respectfully suggests that there is a need to continue to increase the Authority's unrestricted cash on hand for the purposes described above. We suggest a working capital target of at least 60 to 90 days of Water System total revenue requirements during the study period and a long-range target of 90 to 120 days. The MCWA has been building its fund balances gradually through amounts designated in each year's budget for Rate Stabilization Fund ("RSF" or Net Balance From Operations as we show in Table 3-6). Our Base Case scenario continues to include an allowance for working capital as shown in each year for 2024 through 2029.

3.8 Revenues from Other Sources

The Authority receives revenue from the following sources:

- Genesee County service fee – payments toward debt service on bonds issued for improvements to provide water to Genesee County;
- Late charges – interest and penalties on the late payment of customer bills;
- Fees for miscellaneous services – payments for services provided by the Authority to the customer such as special meter readings;
- Cell tower lease income – lease payments from cell phone providers for the use of Authority facilities;
- Interest income – these represent interest earnings on available funds of the Authority;
- Central facility charges – payments from other parties for their share of the Authority's Central Facility; and
- Subsidy payments from the federal government for the 2010 Build America Bonds.

The last source of miscellaneous revenue, subsidy payments, was received for the first time in 2011. The subsidy payments were anticipated to be 35% of the interest payable on the bonds in each year; but that figure has been reduced to about 29% by the federal government. Subsidy payments will decline each year as principal is repaid and the interest on outstanding principal declines.

In addition to the above, the MCWA charges private fire protection fees – these charges are separate from water use. Annual private fire protection revenue is currently assumed to remain constant through 2029 as described herein.

The expected Miscellaneous Revenues for each year of the Base Case are presented below in Table 3-5.

Table 3-5: Miscellaneous Revenues 2024 – 2029

	2024	2025	2026	2027	2028	2029
Central Facility Charges	37,000	37,000	37,000	37,000	37,000	37,000
Genesee County Payments	2,080,013	2,070,043	2,072,339	2,059,997	2,116,649	2,060,410
Late Charges	972,200	972,200	972,200	972,200	972,200	972,200
Fire Protection Service	1,348,500	1,348,500	1,348,500	1,348,500	1,348,500	1,348,500
Interest Income	350,000	350,000	350,000	350,000	350,000	350,000
Income from Cell Site Leases	219,000	219,000	219,000	219,000	219,000	219,000
Miscellaneous Income	502,500	502,500	502,500	502,500	502,500	502,500
Subsidy Payments	1,633,286	1,578,720	1,522,111	1,459,725	1,394,756	1,327,205
Subtotal	7,142,499	7,077,963	7,023,650	6,948,921	6,940,605	6,816,814

3.9 Summary of the Revenue Requirements

Each of the components of the revenue requirements is summarized in Table 3-6 which presents the projected total revenue requirements and the net revenue requirements (to be met through rate revenue) for the study period under the Base Case.

Table 3-6: Total and Net Revenue Requirements 2024 – 2029

	2024	2025	2026	2027	2028	2029
Operating Expenses						
Administration	6,714,534	7,205,640	7,427,577	7,656,403	7,892,334	8,135,593
Production/Transmission	18,416,009	18,651,454	19,288,921	19,949,435	20,639,874	21,355,856
Engineering	7,318,398	7,572,200	7,811,502	8,058,468	8,313,349	8,576,401
Facilities, Fleet & Operations	17,654,917	18,287,533	18,873,647	19,478,843	20,103,756	20,749,037
Finance & Business Services	10,008,862	10,377,636	10,713,745	11,060,928	11,419,558	11,790,018
City Agreement - Capital	243,000	243,000	243,000	243,000	243,000	243,000
Total Operating Expenses	60,355,720	62,337,463	64,358,392	66,447,079	68,611,870	70,849,904
Capital Program						
Renewal & Replacement	16,156,098	26,889,200	27,085,300	28,100,500	28,506,500	30,929,900
Capital Improvement Plan (CIP)	2,830,000	1,870,000	2,400,000	920,000	3,900,000	5,920,000
Less: Funding from Construction Fund	-	(5,221,380)	(3,000,000)	-	(2,000,000)	-
Less: Funding from Bonds	-	-	-	-	-	-
Total Cash Capital Program	18,986,098	23,537,820	26,485,300	29,020,500	30,406,500	36,849,900
Senior Debt Service	11,833,511	11,680,077	11,619,027	11,543,069	11,531,831	11,400,797
Subordinated Indebtedness	-	-	-	-	-	-
Net Balance from Operations (RSF)	1,999,999	529,035	693,452	1,726,091	4,166,038	1,831,729
Total Revenue Requirements	93,175,328	98,084,395	103,156,171	108,736,739	114,716,239	120,932,330
Less: Miscellanenous Revenues						
(exclude private fire protection revenues)	5,793,999	5,729,463	5,675,150	5,600,421	5,592,105	5,468,314
Net Revenue Requirements	87,381,329	92,354,932	97,481,020	103,136,317	109,124,135	115,464,016

From 2024 to 2029, the projected increase in the total annual revenue requirements to be raised from rates (Net Revenue Requirements) is $28.1 million; the average annual rate of increase in the Net Revenue Requirements is 5.7%.

It is noted that the annual Net Balance From Operations shown above varies from about $529,000 in 2025 to about $4.2 million in 2028. We assume that each of those year-ending balances is added to the Rate Stabilization Fund ("RSF") of the Authority; a source of working

capital and reserves. With a projected 2024 year-ending RSF balance of $13.7 million and the inclusion of the cumulative additions above, the total RSF balance will be $22.7 million in 2029 or about 69 days of total revenue requirements in that year.

3.10 Projected Revenues

Revenues at Existing Rates

The first step in analyzing the adequacy of revenues is to project rate revenues and other revenues at present rate levels. For this baseline, no increases in user rates and no changes in the existing rate structure were assumed in 2025 through 2029 and funds for capital improvements are all raised from customer rates. Table 3-7 illustrates the results of such a scenario.

Table 3-7: Cash Flow at Existing Rates Assuming No Rate Increases

	2024	2025	2026	2027	2028	2029
Total Water Revenue	93,175,328	93,339,984	93,394,145	93,427,891	93,528,048	93,512,732
Total Operating Expenses	60,355,720	62,337,463	64,315,380	66,357,183	68,464,970	70,640,908
Net Revenues Available for Debt Service	32,819,608	31,002,521	29,078,766	27,070,708	25,063,078	22,871,824
Total Debt Service	11,833,511	11,680,077	11,619,027	11,543,069	11,531,831	11,400,797
Debt Service Coverage	2.77	2.65	2.50	2.35	2.17	2.01
Balance	20,986,097	19,322,444	17,459,739	15,527,639	13,531,247	11,471,027
Cash Capital Program	18,986,098	23,537,820	26,485,300	29,020,500	30,406,500	36,849,900
Net Balance from Operations	1,999,999	(4,215,376)	(9,025,561)	(13,492,861)	(16,875,253)	(25,378,873)
Transfer from/(Deposit to) RSF	(1,999,999)	4,215,376	9,025,561	13,492,861	16,875,253	25,378,873
Cumulative Balance for RSF	13,749,999	9,534,623	509,061	(12,983,800)	(29,859,053)	(55,237,926)
Cumulative Balance: Days of Total Rev Requirements		37	2	(51)	(117)	(216)
Combined Debt Service Coverage	2.77	2.65	2.50	2.35	2.17	2.01

The results indicate that, in the absence of rate increases, there will be a significant shortage of funds over the time period of 2025 through 2029.

Most importantly, debt service coverage levels, while strong in 2025, would decline significantly over time. Cash-financed construction could be reduced and capital could be funded through debt but that approach would be inconsistent with Authority policy for cash-financed capital adversely affect debt service coverage. Thus, from the perspective of both the adequacy of funds and the need to maintain strong levels of coverage, increases in the Authority's rates and revenues are recommended in each year during the study period.

Water Rate Revenues and Projected Increases

Table 3-8 presents the projected revenues for the study period under the Base Case. Table 3-8 reflects changes in rates and revenues prior to considering the cost of service results; i.e.,

increases are applied across-the-board and not yet adjusted for cost of service considerations. The assumed annual changes in the customer base are relatively minor as summarized below.

- A net increase of about 3,100 combined quarterly and monthly retail customers in 2025, an annual increase of 1,000 quarterly retail customers per year from 2026 through 2029, and no change in the number of monthly customers from 2026 through 2029;
- No net annual change in water consumption by quarterly customers based on both the increase in the number of customers each year offset by the long-term trend towards lower average consumption per household; and
- No change in consumption by monthly customers and wholesale customers.

Nearly all of the annual increase in rate-related revenue is attributable to the effects of rate increases.

Another critical factor in the rate projections is the anticipated debt service coverage in each year. Given the excellent credit ratings of the Authority, it was assumed that a target coverage of 2.50 would be used throughout the study period. In Table 3-9 we illustrate the results of the coverage computation in each year.

Table 3-8: Base Case Budgeted (2024) and Projected (2025 – 2029) Revenues

	2024	2025	2026	2027	2028	2029
Water Revenues						
Total Water Revenues	86,032,829	91,006,432	96,132,520	101,787,817	107,775,635	114,115,516
Other Water Revenue	7,142,499	7,077,963	7,023,650	6,948,921	6,940,605	6,816,814
Total Water Revenue	93,175,328	98,084,395	103,156,171	108,736,739	114,716,239	120,932,330

Total rate-related revenues for the Authority are projected to be $86.0 million in 2024. Total rate-related revenues are projected to increase to $114.1 million in 2029, reflecting an average annual rate of increase of 5.8%.

Rate-setting options for retail and wholesale customers are discussed in chapter 5.

3.11 Projected Cash Flows and Debt Service Coverage

To summarize: the annual revenue requirements consist of operation and maintenance expenses; debt service on bonds issued or loans received to finance capital replacements and improvements; cash-financed capital expenditures; cash for needed deposits; and additional cash needs (if any) to satisfy debt service coverage. The calculation of the annual cost of service to be recovered from rate revenue reflects net revenue requirements remaining after all other sources of revenue are taken into consideration.

The projected cash flows and debt service coverage reflect the total revenue requirements of the Water System and the projected revenues including the effects of the projected annual increases

in rates. Table 3-9 illustrates the projected cash flows and debt service coverage for the study period. Given there is no subordinate obligation anticipated during the study period, combined debt service coverage equal to senior debt service coverage.

Table 3-9: Base Case Budgeted/Projected Cash Flow & Debt Service Coverage 2024 – 2029

	2024	2025	2026	2027	2028	2029
Total Water Revenue	93,175,328	98,084,395	103,156,171	108,736,739	114,716,239	120,932,330
Total Operating Expenses	60,355,720	62,337,463	64,358,392	66,447,079	68,611,870	70,849,904
Net Revenues Available for Debt Service	32,819,608	35,746,932	38,797,779	42,289,660	46,104,369	50,082,426
Total Debt Service	11,833,511	11,680,077	11,619,027	11,543,069	11,531,831	11,400,797
Debt Service Coverage	2.77	3.06	3.34	3.66	4.00	4.39
Balance	20,986,097	24,066,855	27,178,752	30,746,591	34,572,538	38,681,629
Cash Capital Program	18,986,098	23,537,820	26,485,300	29,020,500	30,406,500	36,849,900
Net Balance from Operations	1,999,999	529,035	693,452	1,726,091	4,166,038	1,831,729
Transfer from/(Deposit to) RSF	(1,999,999)	(529,035)	(693,452)	(1,726,091)	(4,166,038)	(1,831,729)
Cumulative Balance for RSF	13,749,999	14,279,034	14,972,486	16,698,576	20,864,614	22,696,343
Cumulative Balance: Days of Total Rev Requirements		53	53	56	66	69
Combined Debt Service Coverage	2.77	3.06	3.34	3.66	4.00	4.39

We recommend that the Authority continue to set aside funds in each year to strengthen its RSF. Interest earnings on the RSF will provide additional revenue for the Water System.

For study purposes, we have incorporated the results of the Base Case (100% cash-financed capital) in developing revenue requirements and the cost of service.

Table 3-10 below summarizes the key parameters of the Base Case versus an alternative option (defined as Alternative A) of 75% cash-financing for capital accompanied by 25% proceeds of debt, beginning in 2025. The change in how capital improvements are financed is the only difference between these options affecting revenue requirements and rates. Guiding factors in each option include a 2.50 minimum debt service coverage in each year for 2025 through 2029 and the ability to build a comparable working capital balance. The 100% cash-financed Base Case requires higher overall rate increases than the 75% cash-financed option during 2025 through 2029 but the Base Case has less long-term debt and lower resulting debt service payments over the long-term.

Table 3-10: Comparison of the Base Case With Alternative A

	2024	2025	2026	2027	2028	2029
Base Case (100% Cash-Financed Capital)						
Overall Rate Increase	5.42%	5.50%	5.50%	5.75%	5.75%	5.75%
Net Balance from Operations	1,999,999	529,035	693,452	1,726,091	4,166,038	1,831,729
Cumulative Balance	13,749,999	14,279,034	14,972,486	16,698,576	20,864,614	22,696,343
Combined Coverage	2.77	3.06	3.34	3.66	4.00	4.39
Alternative A (75% Cash-Financed Capital)						
Rate Increase	5.42%	3.00%	3.50%	4.00%	4.00%	5.00%
Net Balance from Operations	1,999,999	4,256,939	2,944,525	2,279,458	2,512,824	19,810
Cumulative Balance	13,749,999	18,006,938	20,951,464	23,230,922	25,743,745	25,763,555
Combined Coverage	2.77	2.88	2.90	2.94	2.95	3.06

3.12 Summary

Our Base Case, which is utilized for the remainder of the Report, assumes that 100% of the MCWA CIP is financed through customer rates. This represents a policy decision; if the Authority selects an alternative mix of cash and debt financing, we would be pleased to update the analysis to reflect the change. The Base Case and mix of cash and debt financing option incorporate annual deposits for working capital. The Base Case is used in the cost of service and rate analysis.

4 Cost of Service

4.1 Introduction

In chapter 3 we defined the current and projected revenue requirements by year including the projected needs for percentage increases in rate-related revenue. In chapter 4, we take the revenue requirements for 2025 and, together with the units of service, calculate unit costs and the costs attributable to the Authority's customer classes. We then compare revenues by class with the costs by class; a "fair and equitable" approach to rate-making means that revenues from each of those classes should approximate the corresponding costs to serve. Based on the findings of this chapter, alternate approaches to rate-setting are discussed in chapter 5.

The analysis and Report follows the base extra capacity methodology described in American Water Works Association's Principles of Water Rates, Fees, and Charges - AWWA Manual M1 for allocating water system revenue requirements. Costs related to the consumption of water are allocated based on base use and peak use, as well as whether such consumption relates to both wholesale and retail usage, or solely to retail customers. Costs not related to consumption are allocated to customer service and fire protection, where they can be recovered based on factors representing meter size and hydrant and/or fire line size. The analysis begins with a definition of customer classes, water demand and units of service.

4.2 Customer Demand and Units of Service

The Authority has three basic classes of service, plus fire protection, with corresponding rate schedules for each:

- Retail Quarterly: residential & small commercial
- Retail Monthly: typically larger, non-residential
- Wholesale

The Retail Quarterly rate for consumption is uniform; i.e., customers are charged the same rate per 1,000 gallons of use regardless of how much water they use. Quarterly customers represent over 99% of all accounts but, due to their smaller size, they reflect about 76% of total annual water use. Our assumed annual use for a single family residential customer is 70,000 gallons.

The Retail Monthly rate schedule has two tiers as illustrated in Table 2-1. It is noted that some customers are billed monthly using the Retail Quarterly rate schedule; those customers and their usage are included within the Retail Quarterly statistics. In addition, there is also an inside Monroe County versus outside of Monroe County rate differential of 10% (for a total rate than is 110% of the in-County rate); that differential applies to both retail and wholesale rates.

Within the Wholesale class, there is a basic rate that applies to most customers and separate rates that reflect customer-specific provisions; e.g., for Western Genesee County, Richmond and Canadice.

Table 4-1 below summarizes the projected average annual consumption for Retail Quarterly, Retail Monthly and Wholesale customers. The consumption levels by class are assumed to remain constant from 2024 through 2029. Table 4-2 illustrates the number of meters by meter size by customer class. The number of retail meters is assumed to change from 2024 to 2025 to 191,800 for quarterly customers and 375 for monthly customers. The number of Retail Quarterly meters is assumed to increase by 1,000 per year from 2026 through 2029. No changes are assumed in the number of Retail Monthly and Wholesale meters from 2026 through 2029.

Table 4-1: Consumption by Customer Class

	2025 Projected Consumption (MG)	Peaking Factor
Quarterly Customers	13,005	1.75
Monthly Customers	2,332	1.60
Wholesale	1,884	1.75
Total Consumption	17,221	

Within the Retail Monthly class, the largest three customers had 30.8% and 26.4% of all consumption by monthly customers in 2022 and 2023, respectively. The largest ten customers had 48.2% and 39.5% of all consumption by monthly customers in 2022 and 2023, respectively. Thus, it is apparent that there are a limited number of large customers that drive a significant portion of the total usage by Retail Monthly customers.

Table 4-2: Number of Meters by Meter Size by Customer Class (2024)

	5/8"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"+	Total
Quarterly Customers	182,812	154	3,954	1,633	1,244	11	5	8	-	-	189,821
Monthly Customers	-	-	5	32	139	20	56	88	11	24	375
Wholesale	6	-	7	-	-	1	5	22	7	3	51
Total	182,818	154	3,966	1,665	1,383	32	66	118	18	27	190,247
Equivalency - MCWA	1.0	1.0	2.5	5.0	8.0	16.0	25.0	50.0	80.0	210.0	
Equivalency - AWWA	1.0	1.0	2.5	5.0	8.0	16.0	25.0	50.0	80.0	210.0	

The preceding Table shows meter equivalencies at the bottom. These are measures to show the relative differential between different size meters. The first row is used by the Authority to assess its fixed charges; i.e., the charge for a 1" meter is 2.5 times that for a 5/8" or 3/4" meter and the charge for a 2" meter is 8.0 times the charge of the small meters. The factors used in the second row are from AWWA Manual M1 reflecting relative differences in the capacity of meters of varying size. MCWA is using the same ratios as the AWWA capacity ratios.

4.3 Cost of Service

The cost of service analysis utilizes a three-part approach: a) the presentation of costs according to Water System functions; i.e., the type of operational activity that the cost is associated with, b)

the allocation of functionalized costs to service components, and c) the distribution of the allocated costs to customer classes.

4.3.1 Costs by Water System Function

The budgeted (2024) and projected (2025 – 2029) revenue requirements of the Authority were summarized in Table 3-6.

O&M expenses represent about 62% of the total revenue requirements over the period of 2024 through 2029. The listing of O&M expenses by function (i.e., Administration, Production/Transmission, Engineering, Facilities, Fleet & Operations, Business Services and City Agreement) was prepared using the detailed budget breakdown of the MCWA for its O&M expenses.

Capital costs to be paid from rate revenue are broken down by line item and assigned to functions by the Authority.

Debt Service is assigned to functions based on the relative use of the proceeds of the bonds. For example, the Series 2010B Bonds were used to finance the Eastside Water Supply Project which constructed facilities for water supply, production, storage and transmission; these are facilities that benefit all customers: wholesale and retail. The debt service on those bonds represents 65% of total debt service in 2024 through 2029.

Net Balance From Operations represents the recommendation for RSF contributions. It is allocated to functions and later to service components based on the ratio of all other revenue requirements.

Miscellaneous Revenue is subtracted from the Total Revenue Requirements to arrive at Net Revenue Requirements. Such revenue is also allocated to functions and later to service components based on the ratio of all other revenue requirements.

A summary of the allocation of revenue requirements is provided in the Appendix.

4.3.2 Allocation of Costs to Service Components

The second step is to classify costs according to the service being provided. The following service components are used:

Base-Related Costs

Base costs are those costs which tend to vary with the total quantity of water consumed by a customer under average load (demand) conditions such as chemical use at a treatment plant. Costs associated with peak demands are not included in base costs but rather are considered extra capacity. Base costs include O&M expenses for water supply, treatment, pumping and distribution as well as capital costs associated with average demand conditions.

Extra Capacity-Related Costs
Extra capacity costs are those associated with meeting above average demand (or above the base use), i.e., satisfying the peak demand requirements of the customers. For example, water storage facilities and water mains must be appropriately sized for peak demand. Both O&M expenses and capital costs associated with above average demand are included.

In the prior cost of service studies for the Authority, it was determined that using peak day demand as the basis for the extra-capacity assignment was appropriate. This study continues to use this approach.

Customer-Related Costs
Customer costs are those which vary with the number of customers of the Water System or with the size of the customer's service line and meter. Such costs do not vary with changes in water consumption. Customer costs may also be further assigned as either uniform or weighted. An example of a fixed customer cost is the preparation of bills and the postage for mailing bills. Within the Retail Quarterly customer base, this cost typically does not vary from customer to customer. However, Monthly and Wholesale customers require greater work than Quarterly customers; e.g., 12 bills per year instead of four. An example of weighted customer costs are items such as meter installation and maintenance expenses, where a large customer may require a significantly more expensive meter and perhaps more maintenance than a single family residential customer.

Fire Protection-Related Costs
These costs are related to fire protection function including water mains, storage, pumping, fire hydrants and appurtenances for fire protection purposes. The upfront cost of oversizing of many water mains to accommodate fire flows has not been considered in this analysis.

The service components are summarized below:

- Base – W/R: Base costs that benefit both wholesale and retail customers;
- Base – R: Base costs that benefit only or primarily retail customers;
- Xcap – W/R: Extra capacity costs that benefit both wholesale and retail customers;
- Xcap – R: Extra capacity costs that benefit only or primarily retail customers;
- CA: Costs assignable to customer accounts that are more related to the number of accounts than customer size;
- MS: Costs assignable to customer accounts that are more related to customer size (meters and services); and
- FP: Costs assignable to fire protection.

The O&M expense allocations were primarily prepared by representatives of the Authority that are responsible for and familiar with Water System O&M. Amawalk prepared the remaining allocations using CIP-related data provided by the MCWA, estimates of fire protection services as well as other information. A summary of the major allocations to service components is presented below.

Table 4-3: Allocation Factors

MCWA: Allocation Factors

	Base		Extra Capacity		Customer Related		
	W&R	R - Only	W&R	R- Only	CA	MS	Fire
Operating Expenses							
Administration Office and Security	41.8%	22.5%	22.5%	12.2%	0.0%	0.0%	1.0%
Administration Safety (52)	41.8%	22.5%	22.5%	12.2%	0.0%	0.0%	1.0%
Production Office (60)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Plant Operations (61)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Laboratory (62)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Transmission (63)	41.3%	22.3%	22.3%	12.0%	0.0%	0.0%	2.0%
Maintenance (64)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Central Facility (65)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
CORFU Operations (67)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Engineering Office (70)	41.8%	22.5%	22.5%	12.2%	0.0%	0.0%	1.0%
FFO Office (80)	41.3%	22.3%	22.3%	12.0%	0.0%	0.0%	2.0%
Structures & Grounds Maintenance (81)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Automotive Equipment Repair (82)	41.8%	22.5%	22.5%	12.2%	0.0%	0.0%	1.0%
Distribution SYS Operations (83)	41.8%	22.5%	22.5%	12.2%	0.0%	0.0%	1.0%
System Maintenance (84)	41.8%	22.5%	22.5%	12.2%	0.0%	0.0%	1.0%
Valves/Leak Detection (85)	37.5%	20.3%	20.3%	10.9%	0.0%	0.0%	11.0%
Warehouse/Equipment Repair (86)	41.8%	22.5%	22.5%	12.2%	0.0%	0.0%	1.0%
Dispatch (88)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Business Services (90)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Customer Services (91)	29.9%	16.2%	16.2%	8.7%	29.0%	0.0%	0.0%
Finance and Accounting (92)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Meter Services (93)	32.9%	17.8%	17.8%	9.6%	0.0%	22.0%	0.0%
Information Technology (94)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Security (95)	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
City Agreement - Capital	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%

	Base		Extra Capacity		Customer Related		
	W&R	R - Only	W&R	R- Only	CA	RMS	Fire
CIP Allocation							
Renewal & Replacement							
Production/Transmission	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Engineering	41.8%	22.5%	22.5%	12.2%	0.0%	0.0%	1.0%
Facilities, Fleet & Operations	38.4%	20.7%	20.7%	11.2%	0.0%	0.0%	9.0%
Finance & Business Services	15.6%	8.4%	8.4%	4.5%	0.0%	63.0%	0.0%
Capital Improvement							
Production/Transmission	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Engineering	40.5%	21.9%	21.9%	11.8%	0.0%	0.0%	4.0%
Facilities, Fleet & Operations	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%
Finance & Business Services	42.2%	22.8%	22.8%	12.3%	0.0%	0.0%	0.0%

			Extra Capacity		Customer Related		
	Base - W/R	Base - R	W/R	R	W/R	R	Fire
Debt Service							
Allocation							
2007 Bond Proceeds	56.7%		41.3%				2.0%
2010 Bond Proceeds	56.7%		41.3%				2.0%
2010B Bond Proceeds	56.7%		41.3%				2.0%
2012 Bond Proceeds	23.8%	10.4%	5.5%	8.5%	0.7%	39.3%	11.7%
2013 Bond Proceeds	56.7%		41.3%				2.0%
2017 Bond Proceeds	56.7%		41.3%				2.0%
2020 Bond Proceeds	56.7%		41.3%				2.0%
Subordinate Debt	30.7%	27.1%	22.4%	19.8%			

In addition to the Allocation Factors in Table 4-3, we note the following:

1. Debt Service on Anticipated Future Bonds: The Base Case assumes that the Authority will not issue bonds during the study period. If there were debt service on bonds issued by the MCWA to support the CIP, debt service is assigned based on the same factors as shown above in CIP from Rates.

2. Cash for the RSF: The amounts are assigned to cost components based on the ratio of all other revenue requirements.

3. Total Revenue Requirements – These figures reflects the sum of all costs above.

4. Less: Miscellaneous Revenues.
   - Central Facility Charges – Revenue from users of the facility are assigned 100% to Base – W/R.
   - Genesee County Payments and Subsidy Payments – County payments are an offset to the projected debt service on Genesee County-related improvements; subsidy payments are from the federal government and apply solely to the 2010B Bonds – both are classified as 56.7% for Base – W/R, 41.3% for Base – R, and 2% for FP.
   - Late Charges and Miscellaneous Income – This revenue is applied to retail customers only, 57.8% to Base – R and 42.2% to Xcap – R.
   - Interest Income – Revenues are assigned to offset cost components based on the ratio of all revenue requirements.
   - Income from Cell Site Leases – These revenues are not attributable to the costs of customers or fire protection. Revenues are assigned: 15% for Base – W/R, 48% for Base – R, 9% to Xcap – W/R, and 28% to Xcap – R.

5. Net Revenue Requirements – These figures reflect the item 3 subtotals less the offsetting miscellaneous revenue in item 4.

The results of this analysis provide 2025 costs for each cost component. These costs can then be assigned to customer classes.

4.4 Allocation of Revenue Requirements to Customer Classes

The classified revenue requirements were allocated to the classes of service using the following allocation factors.

- Base
- Extra Capacity
- Customer Service
- Equivalent Meter
- Fire Protection

A brief overview of the basis for each allocation factor is presented below.

Base

Base costs were allocated to the customer classes of service on the basis of projected 2025 water sales. The anticipated 2024 water sales are provided in the Authority's budget; no change is assumed for 2025 and in future years. The base allocation factor takes into account the expected average day sales, plus assumed losses (unbilled water) of 15%. The loss rate is reasonable compared to water industry experience.

Extra Capacity

The extra capacity allocation factor is based on the difference between average day (base) use and peak day use for each of the three classes of service. Peak day use by class of service was determined based on a review of the peaking factors with the Authority; the factors used are 1.75 for Retail Quarterly and Wholesale and 1.60 for Retail Monthly classes. The average day use was then deducted from estimated peak day demand of each class to estimate the extra capacity requirements by class.

Customer

As noted earlier, customer costs are those which vary with the number of customers on the Water System, billing frequency, or with the size of the customer's meter. Customer costs may be classified as either uniform or weighted. Uniform costs are allocated by the number of customers in each class. The weighted customer factor is for billing frequency and for meters and services. A weighted average number of meters and services was computed using the AWWA suggested weighting values for meters of different sizes, under a meter capacity ratio.

Fire Protection

The allocation factor for public fire protection expenses is based on information presented in the previous cost of service studies. The fire flow rates used within the allocation factor were based upon information provided by the Authority. It was assumed that minimum fire flow requirements for a residential customer are 750 gallons per minute (gpm) and 3,000 gpm for a larger commercial/industrial customer. For purposes of this study, fire protection costs are not assigned to wholesale customers. Realistically, it is recognized that the water provided by the MCWA to wholesale accounts can be used for firefighting. The minimum fire flow requirements are then multiplied by the number of customers in each class of service, and the assumed duration of the fire, to determine the fire flow requirements for each class of service.

The computation of the preceding allocation factors is presented in the Appendix.

4.5 Summary of Results

The allocation factors presented in the previous part of this chapter are multiplied times the net revenue requirements by cost component (i.e., Base-W/R, Base-R, Extra Capacity-W/R, etc.) to arrive at the costs of service to be allocated to Retail Quarterly, Retail Monthly and Wholesale customers as well as Customer-Related and Fire Protection. The Allocation of Revenue Requirements table shown below presents a summary of the results. The numbers are shown inclusive of revenues recovered from base charges.

Table 4-4: Allocation of Revenue Requirements for 2025

Classification Components	Net Revenue Requirements	Quarterly Customers	Monthly Customers	Wholesale	Allocation Factor
Base					
Wholesale/Retail	38,922,563	29,393,643	5,270,740	4,258,179	Base-W/R
Retail	17,751,729	15,052,568	2,699,161	-	Base-R
Total Base	56,674,291	44,446,211	7,969,901	4,258,179	
Extra Capacity					
Wholesale/Retail	21,819,579	16,936,461	2,429,578	2,453,540	Xcap-W/R
Retail	9,430,254	8,247,176	1,183,078	-	Xcap-R
Total Extra Capacity	31,249,833	25,183,637	3,612,656	2,453,540	
Customer-Related					
Customer Accounts	588,116	568,853	10,010	9,254	CS&A
Meter & Services	2,522,411	2,347,421	147,769	27,221	MS
Total Customer-Related	3,110,527	2,916,274	157,779	36,474	
Direct Fire Protection-Related	1,320,280	1,299,947	20,333	-	FP
Net Revenue Requirement	92,354,932	73,846,069	11,760,669	6,748,194	

The Net Revenue Requirement shown above is from Table 3-6. It is noted that the fire protection revenue needs are the gross amount; prior to subtracting revenue from private fire protection fees. The total direct fire protection costs are allocated to Retail Quarterly and Retail Monthly customers.

The Summary of the Cost of Service Analysis table presented below compares the projected 2024 revenues by customer class with the computed cost of service for 2025.

Table 4-5: Summary of the Cost of Service Analysis

	Total	Quarterly Customers	Monthly Customers	Wholesale
Revenues at 2024 Rates	87,381,329	74,136,001	9,092,998	4,152,330
2025 Allocated Revenue Requirement	92,354,932	73,846,069	11,760,669	6,748,194
Subtotal Balance of Funds	4,973,603	(289,932)	2,667,671	2,595,864

The above table shows that revenues and revenue requirements for quarterly customers are reasonably well-balanced. It also shows that the cost to serve monthly and wholesale customers is greater than the revenues being provided by these classes of customers.

The Appendix presents the calculation of average unit rates and customer costs per meter equivalent and per meter.

Tables 2-2 and 2-3 illustrated that the Authority's minimum charge (the fixed charge acts as a minimum) is much lower than the average of the surveyed water systems. The cost of service

analysis shows that many Authority costs are relatively fixed. The Authority's total fixed costs as a percentage of total annual costs are much higher than the percentage of revenue being generated by fixed charges. Table 4-6 shows potential revenue components without changes to the rate structure as well as components of fixed costs in 2025 and 2029. The third column in each year, cumulative fixed percentage, illustrates the total percentage of Authority costs that are fixed if certain operating expenses, together with debt service and cash-financed construction are added together in the definition of fixed costs. The overall percentage of Authority costs that are not affected by changes in water consumption, the number of customers or other factors, is roughly 59% in 2025 and 66% in 2029. By comparison, the Authority is receiving about 23% of its revenues from fixed charges in 2025 and is anticipated to increase slightly to 24% in 2029. It is a policy decision for the MCWA to consider whether any changes should be made to the relative portion of fixed charge revenue versus consumption-based revenue. This policy decision is discussed further in the next Section of the Report.

Table 4-6: Fixed and Variable Revenues and Costs

Fixed and Variable Revenues and Costs

Revenues	2025 $	2025 %	2029 $	2029 %
Consumption-Based	68,073,475	69%	84,932,031	70%
Fixed	22,932,957	23%	29,183,485	24%
Misc. Revenues	7,077,963	7%	6,816,814	6%
Total Revenues	98,084,395	100%	120,932,330	100%

Cost of Service	2025 $	2025 %	2025 Cumulative Fixed %	2029 $	2029 %	2029 Cumulative Fixed %
Fixed Expenses						
Administration Security	1,247,330			1,406,397		
Engineering	7,572,200			8,576,401		
Distribution Maint. - Structures	1,699,289			1,931,332		
Distribution Maint. - Vehicle	2,407,313			2,722,856		
Business Services - Business	997,610			1,131,094		
Business Services - Customer	2,013,880			2,289,139		
Business Services - Finance	1,148,637			1,307,285		
Business Services - Meters	2,143,175			2,436,358		
Business Services - IT	3,571,632			4,054,767		
Subtotal Fixed Expenses	22,801,067	23%	23%	25,855,630	22%	26%
Subtotal Variable Expenses	39,536,396	41%		44,994,275	38%	
Debt Service	11,680,077	12%	35%	11,400,797	10%	35%
Cash Capital	23,537,820	24%	59%	36,849,900	31%	66%
Total	97,555,360	100%	59%	119,100,601	100%	66%

Note: Fixed costs do not include administration and certain other direct or allocated expenses.
Debt service includes subordinated debt service and coverage.

4.6 Conclusions

Base on the cost of service analysis, the following conclusions are noted.

- The projected total revenues from Retail Quarterly customers reasonably approximate the cost of service for all Retail customers.

- The results of our analysis show an under-assessment of the cost of service to monthly and wholesale customers; i.e., projected revenues are lower than the projected cost of service.

- The Authority charges only for private fire protection services; the cost of public fire protection is reflected within the Authority's Retail rates. The cost allocations prepared for this study show fire protection costs for both public and private service that are lower than previous projections. Amawalk concludes that further analyses of Authority functions and cost allocations are warranted to ensure that all fire protection-related costs are being captured and assigned to fire protection. As a result, it would be appropriate to maintain the current fire protection rates and charges in 2025 (i.e., no increase from 2024) pending the results of the analyses.

5 Rates and Charges

5.1 Rate Structure and Rate Options

The final step in the study process is the analysis and design of water rates: the overall level of the revenues to be raised by customer class and the rate structure and rates for recovering those revenues. Rate design should take into consideration the rate-setting objectives of the Authority. Among the potential objectives are the following: raise sufficient funds to meet all obligations, encourage economic development and provide for an equitable distribution of the costs of service to customer classes. However, it is recognized that there are many other potential objectives and no single rate structure can satisfy all objectives simultaneously. Trade-offs may have to be made. There is no single industry-accepted structure for setting water rates and no single rate structure can satisfy every potential objective.

The existing structure of the Authority reflects common practice in the water industry: a) a fixed charge for all customers based on meter size, b) Retail Quarterly (smaller) customers pay a uniform volume rate regardless of their volume of use, c) Retail Monthly customers pay a uniform rate for water use up to a threshold amount and then a lower uniform rate for the quantity of consumption above the threshold, and d) Wholesale customers pay a uniform consumption-based rate regardless of their volume of use.

5.2 Rate Structure Options

Recognizing the preceding comments and based on the findings outlined in the preceding chapters, we present the following rate structure options and related discussion points for consideration:

- **Retain the Existing Rate Structure:**
  - The existing structure works well in terms of customer acceptance and payment of bills; no significant complaints
  - Over 23% of total receipts are from fixed charges, contributing to the stability of revenues by mitigating a portion of fluctuations in sales and ensuring that low usage customers contribute towards the fixed costs of service
  - Similar to the structure used by other NY State utilities
  - Industry trend is towards uniform or inclining block rates to conserve water resources but the vast majority of water systems do not have a Great Lake as a source
  - The Authority has water to sell and the lower unit rate in the second tier for Retail Monthly customers could encourage economic development
  - Retail Monthly customers and wholesale customers pay a much lower % of their total bills through fixed charges than quarterly users
  - If the Authority accepts the cost of service findings regarding monthly and wholesale revenues and costs and desires to maintain the existing rate structure, then changes in rates for Retail Monthly and Wholesale classes could be

implemented either all at once in 2025 or phased-in over multiple years so that revenues from these classes are more closely aligned with the cost of service. The options are presented later in this Section

- **Option A - Modify the Existing Structure for All Customers by Changing the Fixed Charge**
  - The Authority's previous change from a meter cost basis to a capacity basis for fixed charges helped increase the amounts that monthly and wholesale customers pay for fixed charges, but it does not bridge the gap between what monthly and wholesale customers pay for fixed charges and the proportionally greater amount that quarterly customers pay, when viewed as a charge per 1,000 gallons of water used
  - There are certainly more fixed costs that could be recovered from an increase to fixed charges or a separate "infrastructure-related" fixed charge but if the basis for the charge is meter size on a capacity basis, it will likely serve to widen the gap between what monthly and wholesale customers pay for fixed charges and what quarterly customers pay, when viewed as a charge per 1,000 gallons of water used
  - The greater the percentage of revenues recovered from fixed charges, the less the incentive for customers to conserve water
  - A broad benefit of this Option is to increase total fixed charge revenue and lessen reliance on usage rates - depending on how it is implemented the effect would be to somewhat lower the rate of increase of consumption-based rates in future years relative to the existing rate structure
  - We respectfully suggest that there are no significant drivers supporting a change to the fixed charge

- **Option B1 - Modify the Rate Structure for Quarterly Customers**
  - About 90% of bills are between 0 and 25,000 gallons per quarter - the vast majority of customers are small
  - Authority rates are very competitive
  - The existing structure is simple, easy to understand, works well, and generates no significant complaints
  - The revenues generated under the existing structure and rates are relatively comparable to the calculated cost of service
  - A seasonal or inclining block rate structure could be considered but there are no significant drivers supporting such a change

- **Option B2 - Modify the Rate Structure for Monthly Customers**
  - The existing structure is simple, easy to understand, works well in terms of customer acceptance and payment of bills; and generates no significant complaints
  - The revenues generated under the existing structure and rates are less than the calculated cost of service
  - We suggest three potential structural modifications that could be considered by the Authority to increase the revenue from monthly customers: a) increase the tier threshold above 125,000 gallons/month (thereby increasing the volume of use

subject to the higher Tier 1 rate; b) increase the unit rate for Tier 2 at a pace that is higher than the average increase in rates which would reduce the discount offered for greater consumption; and c) create uniform rates so that all large commercial customers pay the same unit rate, with a higher uniform rate than the weighted average of the current two tier structure

- The lower unit rate in Tier 2 is currently about 71% of the value of the first tier, providing an economic incentive for commercial customers to do business in Monroe County. It reflects the ability of the MCWA to draw water from Lake Ontario, a reliable source of water. Modifications a) and b) above would reduce the economic incentive and c) would reduce or eliminate that incentive
- If there is interest in the preceding modifications, a selected approach could be implemented all at once in 2025 or phased-in over a period of years
- Additional revenue generated from changes to the monthly customer rate structure would benefit quarterly customer revenue needs and rates

Examples of the practices of other utilities that are relevant to Option B2 are presented below.

- The Mohawk Valley Water Authority has multiple rate tiers with the highest tier representing 175,000 gallons per month and a unit rate that is about 68% of the previous tier.
- Erie County Water Authority charges larger customers a uniform rate for water consumption of $4.17 per 1,000 gallons which is about 90% of the rate for smaller customers.
- The City of Rochester utilizes four tiers with the first threshold being 300,000 gallons per month where the unit rate changes from $3.96 per 1,000 gallons to $3.56, or 90%. For usage between 1 million gallons per month and 13 million, the unit rate is $2.77 per 1,000 or 70% of the first tier. A user over 13 million gallons per month would pay a much lower rate.
- Syracuse has a minimum charge, followed by two tiers with the first threshold being almost 150,000 gallons per month where the rate changes from $3.37 per 1,000 gallons to $2.72, or 81%.

The preceding illustrations show that there is no uniformity in the number of tiers that are used or the percentage changes in rates between tiers. The Authority uses a two-tier structure for Retail Monthly customers with a second tier rate that is about 71% of the first tier rate. Such a structure is reasonably consistent with the approaches used by other water utilities including the examples shown above.

The next Section presents preliminary rates for the existing rate structure using a) an across-the-board increase in rates and b) changes in rates to better reflect the cost of service, either all at once or using a phase-in approach. Subsequent sections review other retail rates, the Out-of-County Surcharge, Wholesale Rates and Fire Protection.

5.3 Rates and Charges for 2025

If the Authority decides to retain the existing rate structure and distribution of rates, it could consider an across-the-board increase of rates and charges of 5.5% in 2025 relative to the existing 2024 rates. However, this approach would not reflect the potential changes to better align revenues with the cost of service. If the Authority wishes to retain the existing rate structure and implement the majority of the cost of service findings at once in 2025, adjustments to rates would be needed and those adjustments would vary by customer class; some of the percentage adjustments would be significant: retail monthly customers and wholesale customers would need to pay significantly higher rates.

Alternatively, the Authority could consider a phase-in of the cost of service recommendations over multiple years: for example, rates could be increased at a greater than average pace over an approved number of years for wholesale customers so that over time the revenues from this class of customers will better reflect the cost to serve this class.

Table 5-1 presents both the existing 2024 rates and the potential rates for 2025 based on the projected revenue requirements as outlined in this Report and the first year of a potential five-year phase-in of the increase in consumption-based rates to better align revenues and costs. The percentage increase in wholesale rates differs from the increases in retail rates. Recognizing that budgeted revenue requirements in 2025 will likely differ from the projected amounts, the potential rates as shown may differ as well from the rates actually implemented.

Table 5-1: Current Rates and Preliminary Projected Phase-In Rates for 2025

Consumption-Based ($ Per 1,000 Gallons)	2024	2025
Residential	4.01	4.22
Non-Residential		
First 125,000 Each Month	4.01	4.22
Each Additional 1,000 Gallons	2.86	3.01
Out-of-County Landfill Class	4.01	4.22
Out-of-County Class	4.40	4.64
Western Genesee County Class	7.48	8.11
Town of Richmond Class	6.14	6.39
Wholesale Class	2.39	2.69
Wholesale Out-of-County Class	2.63	2.96
Wholesale Western Genesee County Class	5.77	6.58
Wholesale Town of Canadice	4.37	4.70

Meter Size	FY 2024 Base Charge/Day ($)	Proposed FY 2025: Base Charge/Day ($)
5/8"	0.27	0.28
3/4"	0.27	0.28
1"	0.68	0.72
1 1/2"	1.35	1.42
2"	2.16	2.28
3"	4.32	4.56
4"	6.75	7.12
6"	13.50	14.24
8"	21.60	22.79
10"+	56.70	59.82

The approach of phasing-in the implementation of cost of service-related adjustments in consumption-based rates will enable the customers with larger than average increases to better accommodate the increases in charges. The use of a phased implementation of rate adjustments represents a policy decision for the Authority.

The next part of this Section reviews the potential impacts of rate changes on classes of customers.

5.4 Other Retail Rate Structures - Consumption

5.4.1 Western Genesee County Retail Rates

The Authority currently charges $7.48 per 1,000 gallons for retail use in Genesee County, which reflects a difference of $3.47 per 1,000 gallons compared to the basic 2024 retail rate in Monroe County of $4.01 per 1,000 gallons. The cost of producing water and purchasing water for Genesee County customers is much higher than the Authority's average cost of production, resulting in a higher unit rate.

In 5.6.2 of this chapter, we compute a preliminary 2025 retail rate for Western Genesee County. The suggested 2025 rate reflects a phasing-in of the cost of service so that over the next five years, percentage increases in rates will be somewhat higher than the overall average resulting in revenues that will be more closely aligned over time with the cost of service.

5.4.2 Town of Richmond Retail Rates

The Authority currently lists a unit rate of $6.14 per 1,000 gallons for retail use in the Town of Richmond, which is $2.13 per 1,000 gallons higher than the basic retail rate of $4.01 per 1,000 gallons. There are two factors that result in a rate differential, the first being a water purchase adjustment pursuant to the terms of the agreement between the Town and the Authority:

> "As long as the Authority's cost to purchase water from the City of Rochester at the Authority's Richmond Connection exceeds the Authority's cost to purchase water from the city of Rochester at other locations, the Town shall pay a surcharge to the Commodity

> Rate in an amount equal to one-hundred and ten percent (110%) of the amount by which the Authority's cost to purchase water from the City of Rochester at the Authority's Richmond Connection from time to time exceeds the Commodity Rate under the Current Rate Schedule…"

The Authority has advised that the current differential is $1.59 per 1,000 gallons. Adding the $1.59 figure to the proposed 2025 retail quarterly rate of $4.22 per 1,000 yields a rate of $5.81 per 1,000 gallons. The final step in the calculation is to add the 10% factor for outside-of-County customers (reviewed in the next section): 110% times $5.81 per 1,000 gallons results in a unit price of $6.39 per 1,000 gallons for 2025.

5.5 Outside-of-County

5.5.1 Out-of-County Surcharge

The Authority charges outside-of-County customers a 10% premium in its rates, both at the retail level and for wholesale customers. We find this practice to be reasonable based on both industry standards as presented by AWWA in Manual M1 as well as actual practices by peer utilities. The M1 Manual references the risks that a water system owner undertakes in providing service to "non-owners" and the concept that it is appropriate to compensate the owner for the risks and other considerations. As illustrated in Table 5-2, there are multiple water utilities that charge a premium to outside customers and there are examples greater than 10%. Some utilities state the ratio while others just reflect the differential in the rate schedules. It is possible that some utilities include some incremental service costs in developing their ratios but it is clear that some multiplier of an owners' rate is common practice in the industry.

Table 5-2: Rates for Outside Service

Utility	State	Rates for Outside Service
Village of Springville	NY	200%
Village of East Aurora	NY	150%
Village of Nyack	NY	120%
Town of Crawford	NY	300%
City of Binghamton	NY	130%-150%
City of Watertown	NY	120%
City of Fort Worth	TX	125%
Milwaukee Water Works	WI	125%
City of Syracuse	NY	150%
Niagara Falls Water Board	NY	267%

5.5.2 Out-of-County Landfill Rates

From the agreement executed by the Authority: "The rates for all customers in the Village and the Town of Bergen, whether industrial, municipal, commercial or residential will be charged at the same rate charged to Monroe residential customers..."

Based on our findings regarding the reasonableness of the Retail Quarterly rates, the Out-of-County Landfill rates conform to the agreement and are reasonable.

5.6 Wholesale Rate Structures

5.6.1 Basic Wholesale Rates

Most wholesale customers pay for water under a uniform rate per 1,000 gallons, currently set at $2.39. Wholesale Out-of-County customers currently pay $2.63 per 1,000 gallons reflecting the surcharge discussed previously. It is our conclusion that the revenues generated from wholesale customers as a class are less than the calculated cost of service. We suggest the following options for consideration by the Authority:

- The MCWA could consider increasing the wholesale rate gradually at a level higher than the annual retail rate increases in order for the wholesale revenues to gradually increase and be better aligned over time with the calculated cost of service; i.e., a phased-in approach.
- Alternatively, the Authority could consider an increase in the rate for wholesale customers all at once in 2025 to better align the expected revenues with the cost of service, followed by annual increases in rates each year in 2026 through 2029 that more closely align with retail rate increases.
- The potential 2025 rate shown in Table 5-1 reflects the assumption of a five-year phase-in of higher wholesale rates to better match revenues with the cost of service. Other scenarios including a different number of years for the phase-in can be considered. This represents a policy decision for the Authority.

The option of phasing-in expected rate increases provides a measure of stability to wholesale customers. If implemented, the Authority could consider revisiting the cost of service in 2027 (earlier than usual) to assess at that time whether costs and revenues from wholesale customers are appropriately aligned and whether further rate adjustments are needed for 2028.

5.6.2 Western Genesee County Rates

The Authority currently charges a unit rate of $5.77 per 1,000 gallons for wholesale use in Genesee County, which is $3.38 per 1,000 gallons higher than the basic wholesale rate of $2.39 per 1,000 gallons. There are three principal factors that result in a rate differential: a) the need to purchase water from the Erie County Water Authority ("ECWA") solely for the benefit of Western Genesee County at a unit rate that is higher than the Authority's average cost of production, b) the need to operate and maintain the Corfu water treatment plant of the MCWA which also has a greater unit cost of production compared to the Authority's average cost of production, and c) the need to incorporate a factor for the difference between the total of production and purchased water volumes compared to the actual sales to customers.

The ECWA purchased water cost is projected to be about $379,520 in 2025. Corfu costs are estimated to be about $178,707, yielding a total of $558,227 for water supply expenses in 2025. We assume a 15% differential between the total of Corfu production plus ECWA purchased

water (based on a five-year average volume 2019 through 2023 or 132 million gallons per year) and the actual sales to customers. Based on this sales volume, a unit rate of $4.971 per 1,000 gallons is calculated solely for the supply of treated water; it does not include provisions for a portion of the cost of the MCWA water transmission and administration.

The calculated average production and transmission cost for the Authority is $1.078 per 1,000 gallons, yielding an increment of $3.893 per 1,000 gallons for Western Genesee customers. Adding the proposed retail quarterly rate in 2025 of $4.220 per 1,000 gallons to the increment of $3.893 yields a total rate of $8.113 per 1,000 gallons for retail service. Similarly, adding the proposed wholesale rate in 2025 of $2.686 per 1,000 gallons to the increment of $3.893 yields a total rate of $6.579 per 1,000 gallons for wholesale service. The suggested 2025 rates are included in Table 5-1. The Western Genesee wholesale rate in 2025 and in upcoming years is impacted by the phasing of the increases in the basic wholesale rate.

5.6.3 Town of Canadice Rates

The Authority currently charges a unit rate of $4.37 per 1,000 gallons for wholesale use in the Town, which is $1.98 per 1,000 gallons higher than the current basic wholesale rate of $2.39 per 1,000 gallons. As in the case of Richmond, there are two factors that result in a rate differential, the first being a water purchase adjustment pursuant to the terms of the agreement between the Town and the Authority, which results in a currently computed price of $1.59 per 1,000 gallons. Adding the $1.59 per 1,000 gallons figure to the 2025 proposed wholesale rate of $2.69 per 1,000 yields a rate of $4.28 per 1,000 gallons. The final step in the calculation is to add the 10% factor for outside-of-County customers: 110% times $4.28 per 1,000 gallons results in a unit price of $4.70 per 1,000 gallons for 2025.

5.7 Fire Protection

The Authority does not bill separately for public fire protection; a practice used by some utilities (e.g., through a hydrant charge) which produces revenues that serve to offset what has to be raised from general user rates. Fire protection revenues of other utilities can be significant. For example, the Erie County Water Authority, the Suffolk County Water Authority and the Onondaga County Water Authority generate from 2.7% to 3.6% of their total annual revenues from fire protection charges. By comparison, the Monroe County Water Authority generates about 1.4% of its revenues only from private fire protection fees. As a result, the Authority's rates for retail customers compare even more favorably with other water utilities when one considers the limited revenue provided by fire protection fees.

The Authority has the option to consider implementing public fire protection fees (e.g., through hydrant charges to local jurisdictions) to recover all or part of the cost of service. Alternatively, the MCWA could continue to recover the public fire protection cost of service in full or in part through retail rates and charges. Either practice is acceptable in the water industry.

The overall computed revenues from private fire protection services and the total costs for fire protection services for both private and public are relatively comparable. The current cost allocations show fire protection costs for both public and private service that are lower than previous projections. Pending further analysis, it is suggested that no increase be made to the

current rates for private fire protection services; a downward adjustment may be appropriate in the future if further analysis by the Authority confirms this finding.

6 Appendix

6.1 Appendix: Glossary

Allocation:
Method of grouping costs based on a specific proportion. For example, assigning net revenue requirements to each cost component (e.g. base, extra capacity, fire protection) based on their respective proportional contribution to the specific service-related category (e.g. transmission, distribution).

Net Revenue Requirement:
Annual net revenue requirements reflect the cost of providing water services that would need to be recovered from water rates. The annual revenue requirements consist of: operation and maintenance expenses; debt service on bonds issued or loans received to finance capital replacements, improvements and expansions; cash-financed capital expenditures; cash needs to provide coverage; and less miscellaneous revenues. More information on net revenue requirements are provided in chapter 5.

Base-Related Costs
Base costs are those costs which tend to vary with the total quantity of water consumed by a customer under average load (demand) conditions such as chemical use at a treatment plant. Costs associated with peak demands are not included in base costs but rather are considered extra capacity. Base costs include O&M expenses for water supply, treatment, pumping and distribution as well as capital costs associated with average demand conditions.

Extra Capacity-Related Costs
Extra capacity costs are those associated with meeting above average demand (or above the base use), that vary with meeting the maximum demand requirements of the customers. Both O&M expenses and capital costs associated with above average demand are included. Water storage facilities and water mains must be appropriately sized for peak demand.

Customer-Related Costs
Customer costs are those which vary with the number of customers of the Water System or with the size of the customer's service line and meter such as metering costs. Such costs do not vary with changes in water consumption. Customer costs may also be further assigned as either uniform or weighted. An example of a fixed customer cost is postage for mailing bills. This cost does not vary from customer to customer, regardless of the size or consumption characteristics of the customer. An example of weighted customer costs are items such as meter installation and maintenance expenses, where a large customer may require a significantly more expensive meter than a single family residential customer.

Fire Protection-Related Costs
These costs are related to fire protection function including fire hydrants and distribution storage reservoirs or tanks for fire protection purposes. The oversizing of mains for fire protection is not considered in this analysis.
Base Year:

The Authority's budget for fiscal year 2024 was used as the base for projecting results in future years.

Projection Years:
For the purpose of this study results for fiscal years 2025 through 2029 are projected.

Study Period:
2024 through 2029 are collectively referred to as the study period.

6.2 Supporting Calculations

This section provides revenue requirement projections, cost of service allocations and rate calculations for the Base Case.

Revenues

	Budgeted 2024	2025	2026	2027	2028	2029
SOURCES OF REVENUES	**28.1%**					
Rate Revenues						
Quarterly Customers						
Base Charge	20,458,256	21,949,669	23,277,636	24,743,777	26,301,562	27,956,684
Consumption Charges	52,350,012	55,229,263	58,266,872	61,617,217	65,160,207	68,906,919
Subtotal	72,808,268	77,178,932	81,544,508	86,360,994	91,461,769	96,863,603
Monthly Customers						
Base Charge	842,881	764,828	806,893	853,289	902,354	954,239
First 125,000	2,440,947	2,575,199	2,716,835	2,873,053	3,038,254	3,212,953
Consumption Charges	5,788,403	6,106,765	6,442,637	6,813,089	7,204,842	7,619,120
Subtotal	9,072,231	9,446,792	9,966,365	10,539,431	11,145,449	11,786,312
Water Districts						
Base Charge	207,071	218,460	230,475	243,728	257,742	272,562
Consumption Charges	3,945,259	4,162,248	4,391,172	4,643,664	4,910,675	5,193,039
Subtotal	4,152,330	4,380,708	4,621,647	4,887,392	5,168,417	5,465,601
Subtotal Rate Revenues	86,032,829	91,006,432	96,132,520	101,787,817	107,775,635	114,115,516
Miscellaneous Revenues						
Central Facility Charges	37,000	37,000	37,000	37,000	37,000	37,000
Victor Payments	-	-	-	-	-	-
County Share of 1993 B Debt Service	-	-	-	-	-	-
Genesee County Payments	2,080,013	2,070,043	2,072,339	2,059,997	2,116,649	2,060,410
Late Charges	972,200	972,200	972,200	972,200	972,200	972,200
Fire Protection Service	1,348,500	1,348,500	1,348,500	1,348,500	1,348,500	1,348,500
Interest Income	350,000	350,000	350,000	350,000	350,000	350,000
Income from Cell Site Leases	219,000	219,000	219,000	219,000	219,000	219,000
Miscellaneous Income	502,500	502,500	502,500	502,500	502,500	502,500
Subsidy Payments	1,633,286	1,578,720	1,522,111	1,459,725	1,394,756	1,327,205
Subtotal Misc. Revenues	7,142,499	7,077,963	7,023,650	6,948,921	6,940,605	6,816,814
TOTAL REVENUES	93,175,328	98,084,395	103,156,171	108,736,739	114,716,239	120,932,330

Operating Expenses - Summary

Labor-Related Expenses	Budgeted 2024	2025	2026	2027	2028	2029
Gross Payroll						
Administration	1,008,390	1,048,726	1,080,187	1,112,593	1,145,971	1,180,350
Production/Transmission	4,294,690	4,466,478	4,600,472	4,738,486	4,880,641	5,027,060
Engineering	2,758,050	2,868,372	2,954,423	3,043,056	3,134,348	3,228,378
Facilities, Fleet & Operations	7,199,070	7,487,033	7,711,644	7,942,993	8,181,283	8,426,721
Finance & Business Services	4,967,200	5,165,888	5,320,865	5,480,491	5,644,905	5,814,252
Additional Labor	-	-	-	-	-	-
Total Gross Payroll	20,227,400	21,036,496	21,667,591	22,317,619	22,987,147	23,676,762
Less: Transfers to Construction	(1,562,000)	(1,624,480)	(1,673,214)	(1,723,411)	(1,775,113)	(1,828,367)
Plus: Gross Fringe Benefits	11,125,080	11,570,083	12,032,887	12,514,202	13,014,770	13,535,361
Less: FB Transfers to Construction	(1,093,400)	(1,137,136)	(1,182,621)	(1,229,926)	(1,279,123)	(1,330,288)
Additional Pension Contributions	-	-	-	-	-	-
Total Net FB Expenses	10,031,680	10,432,947	10,850,265	11,284,276	11,735,647	12,205,073
Additional Labor	-	-	-	-	-	-
Total Net Labor Expenses	28,697,080	29,844,963	30,844,642	31,878,483	32,947,681	34,053,468
Expenses Other Than Labor						
Administration	5,151,524	5,580,110	5,747,513	5,919,938	6,097,537	6,280,463
Production/Transmission	4,731,339	4,873,279	5,019,478	5,170,062	5,325,164	5,484,919
Power	5,083,100	4,803,530	4,947,635	5,096,064	5,248,946	5,406,415
Engineering	3,893,418	4,010,221	4,130,527	4,254,443	4,382,076	4,513,539
Facilities, Fleet & Operations	7,358,257	7,579,007	7,806,377	8,040,568	8,281,785	8,530,239
Finance & Business Services	3,158,002	3,252,742	3,350,324	3,450,834	3,554,359	3,660,990
Additional Labor	-	-	-	-	-	-
Water Purchases - City	1,680,000	1,771,093	1,868,503	1,971,270	2,084,618	2,204,484
Water Purchases - ECWA	360,000	379,520	400,393	422,415	446,704	472,389
City Agreement - Capital	243,000	243,000	243,000	243,000	243,000	243,000
Less: Benefits Paid w/Exist Funds	-					
Total Expenses Other Than Labor	31,658,640	32,492,500	33,513,750	34,568,595	35,664,190	36,796,437
Total Operating Expenses	60,355,720	62,337,463	64,358,392	66,447,079	68,611,870	70,849,904

Debt Service

	2024	2025	2026	2027	2028	2029
Outstanding Bonds						
Series 2007	1,078,663	1,074,568	1,070,614	1,061,896	1,118,049	1,062,310
Series 2010 B	7,753,600	7,693,274	7,631,758	7,567,736	7,495,892	7,426,222
Series 2012	429,138	432,388	429,888	431,888	433,138	433,712
Series 2013	941,535	847,272	849,067	850,599	852,177	853,453
Series 2017	369,750	373,000	375,500	372,250	373,500	366,900
Series 2020	1,260,825	1,259,575	1,262,200	1,258,700	1,259,075	1,258,200
Less: Capitalized Interest			-	-	-	-
Subtotal	11,833,511	11,680,077	11,619,027	11,543,069	11,531,831	11,400,797
Anticipated Future MCWA Bonds						
Year Bonds						
2023 -	-	-	-	-	-	-
2024 -		-	-	-	-	-
2025 -			-	-	-	-
2026 -				-	-	-
2027 -					-	-
2028 -						-
2029 -						
Subtotal -	-	-	-	-	-	-
Anticipated Future EFC Loans	-	-	-	-	-	-
Total Debt Service	11,833,511	11,680,077	11,619,027	11,543,069	11,531,831	11,400,797
Subordinated Indebtedness	-	-	-	-	-	-

CIP and Sources and Uses of Funds

2024 Budgeted Capital Improvement Program (CIP)

	2024	2025	2026	2027	2028	2029
Renewal & Replacement (R&R)						
Administration	-	-	-	-	-	-
Production/Transmission	5,670,000	6,525,000	6,625,000	6,485,000	7,135,000	8,035,000
Security	-	-	-	-	-	-
Engineering	10,450,000	11,390,000	12,150,000	13,410,000	12,740,000	13,670,000
Facilities, Fleet & Operations	4,998,250	5,334,200	5,245,300	5,140,500	5,566,500	5,449,900
Finance & Business Services	4,683,618	3,640,000	3,065,000	3,065,000	3,065,000	3,775,000
Less: Funding from R&R Fund	(3,645,770)					
Less: Funding from General Fund	(6,000,000)	-	-	-	-	-
Subtotal	16,156,098	26,889,200	27,085,300	28,100,500	28,506,500	30,929,900
Capital Improvement (CI)						
Administration	-	-	-	-	-	-
Production/Transmission	1,050,000	1,400,000	450,000	450,000	700,000	450,000
Security	-	-	-	-	-	-
Engineering	1,850,000	400,000	1,900,000	400,000	3,150,000	5,400,000
Facilities, Fleet & Operations	100,000	-	-	-	-	-
Finance & Business Services	50,000	70,000	50,000	70,000	50,000	70,000
Less: Funding from General Fund	-					
Less: Funding from CI Fund	(220,000)	-	-	-	-	-
Subtotal	2,830,000	1,870,000	2,400,000	920,000	3,900,000	5,920,000
Total CIP	18,986,098	28,759,200	29,485,300	29,020,500	32,406,500	36,849,900
Total Construction Needs	18,986,098	28,759,200	29,485,300	29,020,500	32,406,500	36,849,900

Sources and Uses of Funds

	2024	2025	2026	2027	2028	2029
Bonds						
Proceeds from the Sale of Bonds	-	-	-	-	-	-
Less: Deposits to Reserve Funds	-	-	-	-	-	-
Less: Costs of Issuance	-	-	-	-	-	-
Less: Deposits to Capitalized Interest Fund	-	-	-	-	-	-
Deposits to the Construction Fund	-	-	-	-	-	-
Construction Fund						
Opening Balance	13,221,380	13,221,380	8,000,000	5,000,000	5,000,000	3,000,000
Deposits from Cash from Rates	18,986,098	23,537,820	26,485,300	29,020,500	30,406,500	36,849,900
Deposits from USEPA Grant	-	-	-	-	-	-
Deposits from EFC Principal Forgiveness Loans	-	-	-	-	-	-
Deposits from New Construction	-	-	-	-	-	-
Deposits from EFC SRF Loans	-	-	-	-	-	-
Deposits from the New Construction Fund		-	-	-	-	-
Proceeds from Previous Bonds						
Deposits from Bond Proceeds	-	-	-	-	-	-
Withdrawals for Construction	(18,986,098)	(28,759,200)	(29,485,300)	(29,020,500)	(32,406,500)	(36,849,900)
Closing Balance	13,221,380	8,000,000	5,000,000	5,000,000	3,000,000	3,000,000

Financial Summary

	Budget 2024	2025	2026	2027	2028	2029
Rate Increases		5.50%	5.50%	5.75%	5.75%	5.75%
Revenues						
Rate Revenues	86,032,829	91,006,432	96,132,520	101,787,817	107,775,635	114,115,516
Miscellaneous Revenues	7,142,499	7,077,963	7,023,650	6,948,921	6,940,605	6,816,814
Total Revenues	93,175,328	98,084,395	103,156,171	108,736,739	114,716,239	120,932,330
Operating Expenses						
Administration	6,714,534	7,205,640	7,427,577	7,656,403	7,892,334	8,135,593
Production/Transmission	18,416,009	18,651,454	19,288,921	19,949,435	20,639,874	21,355,856
Engineering	7,318,398	7,572,200	7,811,502	8,058,468	8,313,349	8,576,401
Facilities, Fleet & Operations	17,654,917	18,287,533	18,873,647	19,478,843	20,103,756	20,749,037
Finance & Business Services	10,008,862	10,377,636	10,713,745	11,060,928	11,419,558	11,790,018
Additional Labor	-	-	-	-	-	-
Additional Pension Contributions	-	-	-	-	-	-
Less: Benefits Paid w/Exist Funds	-	-	-	-	-	-
City Agreement - Capital	243,000	243,000	243,000	243,000	243,000	243,000
Total Operating Expenses	60,355,720	62,337,463	64,358,392	66,447,079	68,611,870	70,849,904
Capital Program						
Renewal & Replacement	16,156,098	26,889,200	27,085,300	28,100,500	28,506,500	30,929,900
Capital Improvement Plan (CIP)	2,830,000	1,870,000	2,400,000	920,000	3,900,000	5,920,000
Less: Funding from Construction Fund	-	(5,221,380)	(3,000,000)	-	(2,000,000)	-
Less: Funding from Bonds	-	-	-	-	-	-
Total Cash Capital Program	18,986,098	23,537,820	26,485,300	29,020,500	30,406,500	36,849,900
Senior Debt Service	11,833,511	11,680,077	11,619,027	11,543,069	11,531,831	11,400,797
Subordinated Indebtedness	-	-	-	-	-	-
Total Expenses	91,175,329	97,555,360	102,462,719	107,010,648	110,550,201	119,100,601
Net Balance from Operations	1,999,999	529,035	693,452	1,726,091	4,166,038	1,831,729
Transfer from/(Deposit to) RSF	(1,999,999)	(529,035)	(693,452)	(1,726,091)	(4,166,038)	(1,831,729)
Senior Debt Service Coverage	2.77	3.06	3.34	3.66	4.00	4.39
Subordinate Debt Service Coverage	N/A	N/A	N/A	N/A	N/A	N/A
Combined Debt Service Coverage	2.77	3.06	3.34	3.66	4.00	4.39

Capacity and Other Allocation Factors

Development of the Base Capacity Allocation Factor

	Average Day Demand						
	2025 Projected Consumption (MG)	15% Losses (MG)*	Net Water Projection (MG)	Base Consumption (MGD)	% of Total	Base Consumption (MGD)	% of Total Without Wholesale
Quarterly Customers	13,005	1,951	14,956	40.97	75.52%	40.97	84.79%
Monthly Customers	2,332	350	2,682	7.35	13.54%	7.35	15.21%
Wholesale	1,884	283	2,167	5.94	10.94%	-	0.00%
Total Consumption	17,221	2,583	19,804	54.26	100.00%	48.32	100.00%

*The 2023 MCWA Unaccounted-For Water Report illustrates the non-revenue water as % of total water production at about 18% in 2023. Based on the results provided by the report, 15% unmetered water would be a prudent figure to use for the purpose of cost of service study.

Development of the Extra Capacity Allocation Factor

	Maximum Day Demand						
	2025 Projected Daily Consumption (MGD)	Peaking Factor	Peak Day Use (MGD)	Total Extra Capacity (MGD)	% of Total	Total Extra Capacity (MGD)	% of Total Without Wholesale
Quarterly Customers	40.97	1.75	71.71	30.73	77.62%	30.73	87.45%
Monthly Customers	7.35	1.60	11.76	4.41	11.13%	4.41	12.55%
Wholesale	5.94	1.75	10.39	4.45	11.24%	-	0.00%
Total Consumption	54.26		93.85	39.59	100.00%	35.14	100.00%

General Factor Base vs. Xcap 57.8%

Development of the Customer Allocation Factor

	Actual Customer		Customer Service & Accounting			Meters & Services	
	2025 Number of Meters	% of Total	Weighting Factor	Weighted Customer Meters	% of Total	Weighted Customer Meters	% of Total
Quarterly Customers	191,800	99.78%	1.00	191,800	96.72%	211,669	93.06%
Monthly Customers	375	0.20%	9.00	3,375	1.70%	13,325	5.86%
Wholesale	52	0.03%	60.00	3,120	1.57%	2,455	1.08%
Total	192,227	100.00%		198,295	100.00%	227,448	100.00%

Allocation of Revenue Requirements Based on 2025 Projection

		Base		Extra Capacity		Customer Related		Fire
	2025	Base - W/R	Base - R	Xcap - W/R	Xcap - R	Customer Acct (CA)	Meters & Services (MS)	Direct Fire Protection (FP)
ADMINISTRATION								
Office	5,958,310	2,487,677	1,343,005	1,343,005	725,039	-	-	59,583
Safety	1,247,330	520,778	281,149	281,149	151,782	-	-	12,473
Total Administration	7,205,640	3,008,454	1,624,154	1,624,154	876,821	-	-	72,056
Production								
Office								
Lead & Copper	185,400	78,189	42,211	42,211	22,788	-	-	-
Other Expenses	700,755	295,530	159,546	159,546	86,133	-	-	-
Plant Operations								
Power	3,415,608	1,440,468	777,656	777,656	419,828	-	-	-
Purchased Water	1,771,093	746,925	403,237	403,237	217,693	-	-	-
Other Expenses	3,580,936	1,510,192	815,297	815,297	440,149	-	-	-
Subtotal Plant Operations	8,767,637	3,697,585	1,996,191	1,996,191	1,077,670	-	-	-
Laboratory	1,106,276	466,551	251,874	251,874	135,977	-	-	-
Transmission								
Power	1,374,314	567,999	306,642	306,642	165,545	-	-	27,486
Other Expenses	2,826,270	1,168,087	630,608	630,608	340,442	-	-	56,525
Subtotal Transmission	4,200,584	1,736,086	937,249	937,249	505,987	-	-	84,012
Maintenance	2,965,286	1,250,553	675,128	675,128	364,477	-	-	-
Central Facility	167,290	70,551	38,088	38,088	20,562	-	-	-
Corfu Operations								
Purchased Water	379,520	160,055	86,408	86,408	46,649	-	-	-
Other Expenses	178,707	75,366	40,688	40,688	21,966	-	-	-
	558,227	235,422	127,096	127,096	68,614	-	-	-
Total Production Expense	18,651,454	7,830,468	4,227,383	4,227,383	2,282,209	-	-	84,012
ENGINEERING								
Lead & Copper	20,600	8,601	4,643	4,643	2,507	-	-	206
Other Expenses	7,551,600	3,152,897	1,702,134	1,702,134	918,919	-	-	75,516
Total Engineering	7,572,200	3,161,498	1,706,777	1,706,777	921,426	0	-	75,722
FACILITIES, FLEET & OPERATIONS								
Administration								
Lead & Copper	20,600	8,514	4,596	4,596	2,481	-	-	412
Other Expenses	735,128	303,826	164,024	164,024	88,551	-	-	14,703
Structures & Grounds Maintenance	1,699,289	716,643	386,889	386,889	208,867	-	-	-
Automotive Equipment Repair	2,407,313	1,005,086	542,609	542,609	292,935	-	-	24,073
Distribution Operations	1,554,478	649,016	350,380	350,380	189,157	-	-	15,545
Distribution Maint West	8,598,452	3,589,972	1,938,094	1,938,094	1,046,306	-	-	85,985
Valves/Leak Detection	2,180,465	818,417	441,833	441,833	238,530	-	-	239,851
Warehouse	362,664	151,417	81,745	81,745	44,131	-	-	3,627
Dispatch	729,144	307,503	166,009	166,009	89,622	-	-	-
Total Facilities, Fleet & Operations	18,287,533	7,550,395	4,076,181	4,076,181	2,200,581	-	-	384,195
FINANCE & BUSINESS SERVICES								
Business Services	997,610	420,723	227,133	227,133	122,621	-	-	-
Customer Services	2,013,880	603,014	325,545	325,545	175,750	584,025	-	-
Finance and Accounting	1,148,637	484,416	261,519	261,519	141,184	-	-	-
Meter Services	2,143,175	704,998	380,603	380,603	205,473	-	471,499	-
Information Technology	3,571,632	1,506,268	813,179	813,179	439,006	-	-	-
Security	502,702	212,005	114,454	114,454	61,789	-	-	-
Total Business Services	10,377,636	3,931,425	2,122,432	2,122,432	1,145,823	584,025	471,499	-
MISCELLANEOUS REVENUE REQUIREMENTS								
City Agreement - Capital	243,000	102,481	55,326	55,326	29,868	-	-	-
TOTAL OPERATION AND MAINTENANCE EXPENSE	62,337,463	25,584,721	13,812,253	13,812,253	7,456,729	584,025	471,499	615,985

*

Allocation of Revenue Requirements Based on 2025 Projection

		Base		Extra Capacity		Customer Related		Fire
	2025	Base - W/R	Base - R	Xcap - W/R	Xcap - R	Customer Acct (CA)	Meters & Services (MS)	Direct Fire Protection (FP)
Renewal & Replacement (R&R)								
Production/Transmission	6,525,000	2,751,796	1,485,593	1,485,593	802,017	-	-	-
Engineering	11,390,000	4,755,482	2,567,310	2,567,310	1,385,997	-	-	113,900
Facilities, Fleet & Operations	5,334,200	2,047,134	1,105,173	1,105,173	596,642	-	-	480,078
Finance & Business Services	3,640,000	567,987	306,636	306,636	165,541	-	2,293,200	-
Subtotal	26,889,200	10,122,400	5,464,712	5,464,712	2,950,198	-	2,293,200	593,978
Capital Improvement (CI)								
Production/Transmission	1,400,000	590,424	318,748	318,748	172,080	-	-	-
Engineering	400,000	161,945	87,428	87,428	47,199	-	-	16,000
Business Services & Other	70,000	29,521	15,937	15,937	8,604	-	-	-
Subtotal	1,870,000	781,889	422,113	422,113	227,884	-	-	16,000
Total CIP	28,759,200	10,904,289	5,886,826	5,886,826	3,178,081	-	2,293,200	609,978
Less: Funding from Construction Fund	(5,221,380)	(1,979,730)	(1,068,783)	(1,068,783)	(576,997)	-	(416,342)	(110,745)
Total Construction Needs	23,537,820	8,924,560	4,818,042	4,818,042	2,601,084	-	1,876,858	499,233
Debt Service								
Outstanding Bonds								
Series 2007	1,074,568	608,825	-	444,252	-			21,491
Series 2010 B	7,693,274	4,358,827	-	3,180,582	-			153,865
Series 2012	432,388	103,009	45,134	23,732	36,875	3,136	169,957	50,545
Series 2013	847,272	480,044	-	350,282	-			16,945
Series 2017	373,000	211,333	-	154,207	-	-	-	7,460
Series 2020	1,259,575	713,645	-	520,738	-	-	-	25,192
Subtotal	11,680,077	6,475,683	45,134	4,673,793	36,875	3,136	169,957	275,499
Subtotal Revenue Requirements	97,555,360	40,984,963	18,675,429	23,304,088	10,094,688	587,161	2,518,313	1,390,717
Net Balance from Operations	529,035	222,258	101,275	126,376	54,743	3,184	13,657	7,542
Total Revenue Requirements	98,084,395	41,207,222	18,776,704	23,430,464	10,149,431	590,345	2,531,970	1,398,259
Less: Miscellaneous Revenues								
Central Facility Charges	37,000	37,000						
Genesee County Payments	2,070,043	1,172,838	-	855,805	-	-	-	41,401
Late Charges	972,200		562,067		410,133			
Interest Income	350,000	147,506	67,274	82,690	35,738	2,229	9,559	5,004
Income from Cell Site Leases	219,000	32,850	105,120	19,710	61,320			
Miscellaneous Income	502,500		290,515		211,985			
Subsidy Payments	1,578,720	894,465	-	652,680	-	-	-	31,574
	5,729,463	2,284,659	1,024,976	1,610,885	719,176	2,229	9,559	77,979
Net Revenue Requirements	92,354,932	38,922,563	17,751,729	21,819,579	9,430,254	588,116	2,522,411	1,320,280

Base Case Unit Rate Calculations - Base Charge

Calculation of Fixed Revenues

Meter Size	FY 2024 Base Charge/Day ($)	Proposed FY 2025: Base Charge/Day ($)	Proposed FY 2025 Base Charge Revenues ($)
5/8"	0.27	0.28	18,684,000
3/4"	0.27	0.28	15,739
1"	0.68	0.72	1,042,265
1 1/2"	1.35	1.42	862,970
2"	2.16	2.28	1,150,933
3"	4.32	4.56	53,261
4"	6.75	7.12	171,521
6"	13.50	14.24	613,317
8"	21.60	22.79	149,730
10"+	56.70	59.82	589,526
			23,333,260

Base Case Unit Rate Calculations - Consumption Charge

Allocation of Variable Revenue Requirements

Classification Components	Net Revenue Requirements	Quarterly Customers	Monthly Customers	Wholesale	Allocation Factor
Base					
Wholesale/Retail	38,922,563	29,393,643	5,270,740	4,258,179	Base-W/R
Retail	17,751,729	15,052,568	2,699,161	-	Base-R
Total Base	56,674,291	44,446,211	7,969,901	4,258,179	
Extra Capacity					
Wholesale/Retail	21,819,579	16,936,461	2,429,578	2,453,540	Xcap-W/R
Retail	9,430,254	8,247,176	1,183,078	-	Xcap-R
Total Extra Capacity	31,249,833	25,183,637	3,612,656	2,453,540	
Customer-Related					
Customer Accounts	588,116	568,853	10,010	9,254	CS&A
Meter & Services	2,522,411	2,347,421	147,769	27,221	MS
Total Customer-Related	3,110,527	2,916,274	157,779	36,474	
Direct Fire Protection-Related	1,320,280	1,299,947	20,333	-	FP
Less: Private Fire Protection	(1,348,500)	(1,327,733)	(20,767)	-	FP
Less: Revenues Recovered from Base Charges	(22,932,957)	(21,949,669)	(764,828)	(218,460)	
Net Consumption Revenue Requirement	68,073,475	50,568,667	10,975,074	6,529,734	

Summary of the Cost of Service Analysis

	Total	Quarterly Customers	Monthly Customers	Wholesale
Revenues at 2024 Rates	86,032,829	72,808,268	9,072,231	4,152,330
2025 Allocated Revenue Requirement	91,006,432	72,518,336	11,739,902	6,748,194
Subtotal Balance of Funds	4,973,603	(289,932)	2,667,671	2,595,864
2025 % Change Over 2024 Rates	5.78%	-0.40%	29.40%	62.52%